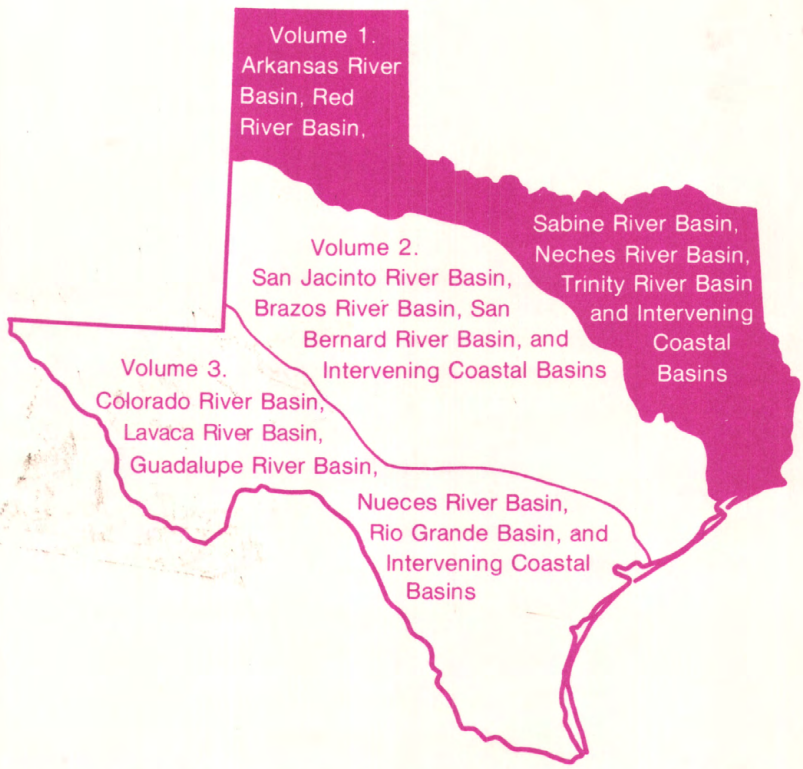
Water Resources Data Texas Water Year 1984

Volume 1. Arkansas River Basin, Red River Basin, Sabine River Basin, Neches River Basin, Trinity River Basin and Intervening Coastal Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-84-1
Prepared in cooperation with the State of Texas
and with other agencies

CALENDAR FOR WATER YEAR 1984

1983

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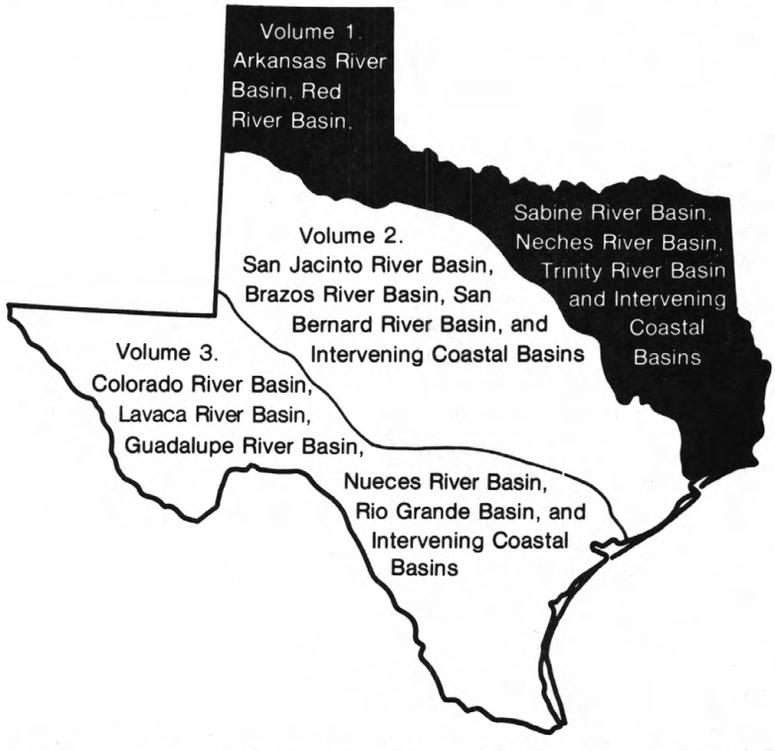
Water Resources Data
Texas
Water Year 1984

Volume 1. Arkansas River Basin, Red River Basin, Sabine River Basin, Neches River Basin, Trinity River Basin and Intervening Coastal Basins

by H.D. Buckner, E.R. Carrillo, and H.J. Davidson



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-84-1
Prepared in cooperation with the State of Texas
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

William P. Clark, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U. S. Geological Survey
300 East 8th Street
Austin, Texas 78701

1985

Preface

This volume of the annual hydrologic data report of Texas is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. Records of streamflow and quality-of-water data required to provide the hydrologic information needed by State, local and Federal agencies, and the private sector for developing and managing land and water resources in Texas are contained in 3 volumes:

Volume 1. Arkansas River Basin, Red River Basin, Sabine River Basin, Neches River Basin, Trinity River Basin, and intervening and adjacent Coastal Basins

Volume 2. San Jacinto River Basin, Brazos River Basin, San Bernard River Basin, and intervening Coastal Basins

Volume 3. Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Nueces River Basin, Rio Grande Basin, and intervening Coastal Basins

This report is the culmination of a concerted effort by dedicated personnel of the Texas District, U.S. Geological Survey, who collected, compiled, analyzed, verified, and organized the data, typed, edited, and assembled the report, and who assured that the information contained here in accurate, complete, and adheres to Geological Survey policy and established guidelines.

This report was prepared in cooperation with the State of Texas and other agencies under the supervision of C. W. Boning, District Chief.

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Prepared in cooperation with the State of Texas and with other agencies.

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Surface-water data for the 1984 water year for Texas are presented in three volumes, appropriately identified as to content by river basins. Data in each volume consist of records of stage, discharge, and water quality of streams and canals; and stage, contents, and water quality of lakes and reservoirs. Also included are crest-stage and flood-hydrograph partial-record stations, reconnaissance partial-record stations, and low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous meas urements. Records for a few pertinent stations in bordering States are also included. 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 Texas.

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FOR WHICH RECORDS ARE PUBLISHED

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WATER RESOURCES DATA, TEXAS, WATER YEAR 1984

VOLUME 1
ARKANSAS RIVER BASIN, RED RIVER BASIN, SABINE RIVER BASIN, NECHES RIVER BASIN, TRINITY RIVER BASIN, AND INTERVENING AND ADJACENT COASTAL BASINS

INTRODUCTION

Surface-water data for Texas for the 1984 water year are presented in three volumes, appropriately identified by river basins. Data in each volume consist of records of stage, discharge, and water quality of streams and canals; and stage, contents, and water quality of lakes and reservoirs. Records for a few pertinent stations in bordering states are also included. These data represent that part of the National Water Data System operated by the U.S. Geological Survey in cooperation with State and Federal agencies in Texas.

Records of discharge (or stage) of streams and contents (or stage) of lakes and reservoirs were first published in a series of Geological Survey Water-Supply Papers entitled, "Surface Water Supply of the United States." Through water year 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 temperature, and suspended sediment were published from 1941 to 1971 in an annual series of water-supply papers entitled, "Quality of Surface Waters of 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, Virginia 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow and water quality are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report TX-84-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

COOPERATION

Federal agencies that assisted the Geological Survey in the collection of data in this report in the form of funds or services in 1984 are:

Corps of Engineers, U.S. Army.

International Boundary and Water Commission, United States and Mexico, U.S. Section.

National Park Service.

U.S. Bureau of Reclamation.

Organizations that assisted in the collection of data in this report through joint funding agreements through the Texas Department of Water Resources or through direct joint funding agreements with the Gological Survey are:

Texas Department of Water Resources, H. D. Davis, Executive Director; the cities of Abilene, Alice, Arlington, Austin, Brady, Cleburne, Clyde, Corpus Christi, El Paso, Gainesville, Garland, Graham, Houston, Lubbock, Nacogdoches, San Angelo, San Antonio, and Wichita Falls; Athens Municipal Water Authority; Bexar, Medina, and Atascosa Counties Water Control and Improvement District No. 1; Bistone Municipal Water Supply District; Brazos River Authority; Brown County Water Improvement District No. 1; Coastal Bend Council of Governments; Coastal Industrial Water Authority; Colorado River Municipal Water District; Dallas County; Dallas Public Works Department; Dallas/Fort Worth Airport; Dallas Utilities Water Department; Edwards Underground Water District; Franklin County Water District; Galveston County; Greenbelt Municipal and Industrial Water Authority; Guadalupe-Blanco River Authority; Harris County Flood Control District; Harris-Galveston Coastal Subsidence District; Lavaca-Navidad River Authority; Lower Colorado River Authority; Lower Neches Valley Authority; MacKenzie Municipal Water Authority; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; Orange County; Pecos River Commission; Red Bluff Water Power Control District; Reeves County Water Improvement District No. 1; Sabine River Authority of Texas; Sabine River Compact Administration; San Antonio City Public Service Board; San Antonio City Water Board; San Antonio River Authority; San Jacinto River Authority; Tarrant County Water Control and Improvement District No. 1; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; Upper Trinity Basin Water Quality Compact; West Central Texas Municipal Water District; Wichita County Water Improvement District No. 2; and Wood County.

HYDROLOGIC CONDITIONS

Large variations in rainfall and runoff characterize the usual hydrologic conditions in Texas. In the eastern part of the State, streams generally are deep with wide alluvial flood plains, and streamflow is perennial. In the western part of the State, streams generally flow through arroyos, and streamflow principally is ephemeral.

Major weather developments in Texas during the 1984 water year include Hurricane Tico, that affected parts of western Texas and the Texas Panhandle during October 1983, and a lingering drought, nurtured by one of the driest spring seasons in Texas history. Hurricane Tico originated in the eastern Pacific Ocean, crossed central Mexico, and entered Texas near the mouth of the Pecos River in mid-October, spreading substantial rainfall along its path through western and northwestern Texas. The extreme drought, that had plagued western Texas during the summer of 1983, spread eastward into south and central Texas by the late spring of 1984, and by late summer had expanded to include north-central and eastern Texas. Much of the southern one-half of Texas received little more than an inch of rain during the entire summer. Scores of communities enforced water rationing to preserve dwindling water supplies in the State's lakes and underground reservoirs. Even though drought conditions existed for much of the 1984 water year, cumulative precipitation was near normal across the State, except for the southern and western extremities, where yearly rainfall totals were actually greater than normal.

Conservation storage in 71 selected reservoirs throughout the State, with a combined conservation capacity of 31,987,890 acre-feet, decreased from 78 percent at the end of September 1983, to 66 percent at the end of September 1984. Records from these 71 reservoirs show that contents increased in only 4, decreased in 66, and remained the same in 1.

Dissolved-solids concentrations in most streams in the State are inversely related to water discharge. During years when precipitation and runoff are deficient, streamflow commonly is much more mineralized than years when precipitation and runoff are normal or excessive. However, for streams where discharge is controlled by reservoirs, the mineralization of the water may remain relatively constant, despite large fluctuations in precipitation and runoff.

The area for which water-resources data are presented in volume 1 includes the Texas Panhandle and extends across north-central and eastern Texas to the northeastern Texas Gulf Coast. Normal annual precipitation in this area ranges from about 17 inches in the western part of the Texas Panhandle to more than 56 inches in the extreme southeastern part of the State. Annual runoff ranges from less than 1.0 inch in parts of the Panhandle to as much as 15 inches in southeastern Texas. A map of Texas indicating the area covered by volume 1, and the location of selected streamflow and water-quality stations in the area are shown in figure 1.

Streamflow

At the beginning of 1984 water year, drought conditions existed in the Texas Panhandle and in much of north-central Texas, but streamflow rates were about normal in the remainder of the area. In mid October, intense rains from the remnants of

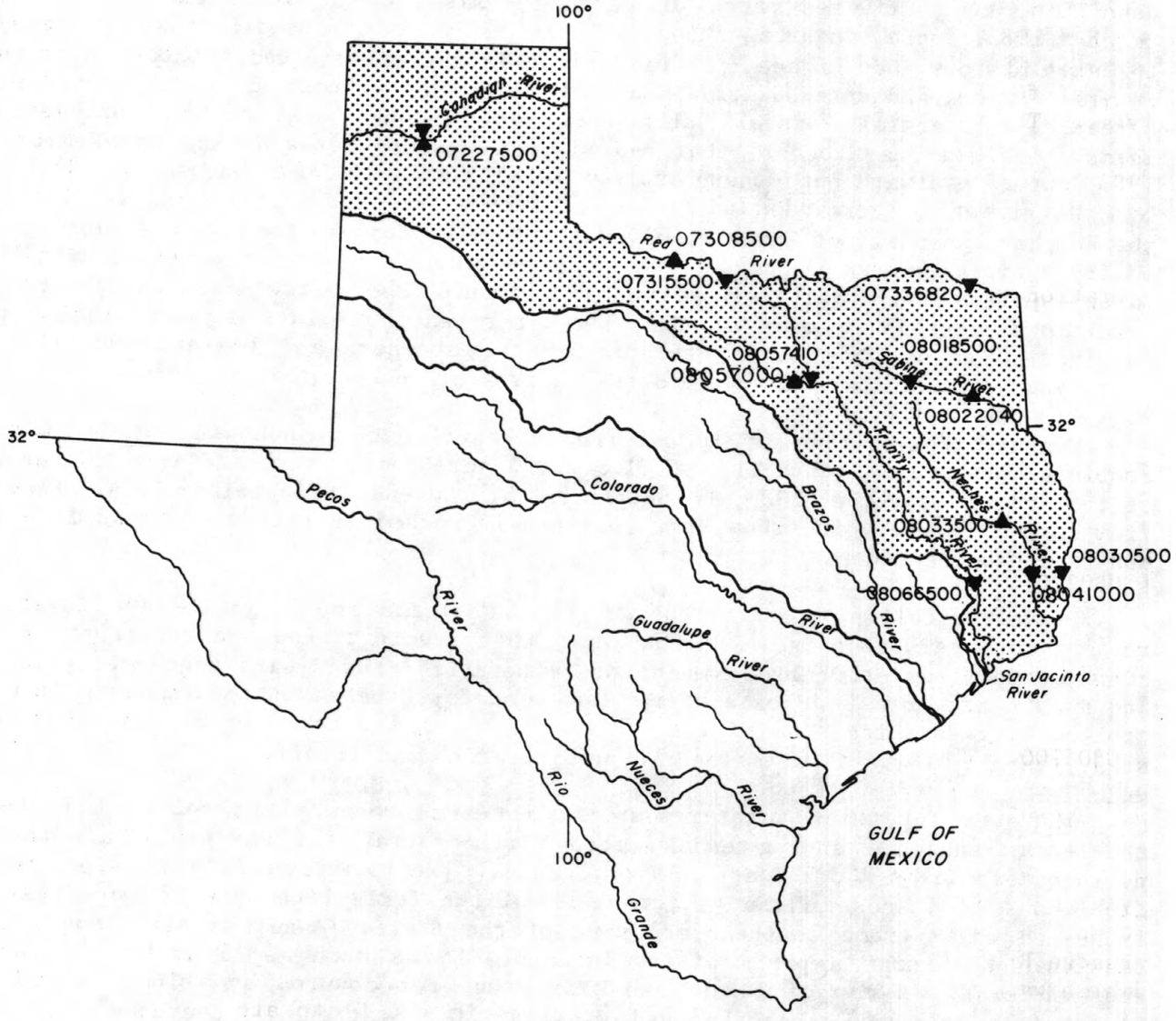

Figure 1.--Area of Texas covered by volume 1 and location of selected streamflow and water-quality stations in volume 1.

Hurricane Tico caused record flooding on the Red River upstream from Lake Texoma. By early November, runoff rates had returned to normal in the Panhandle and in the upstream reaches of the upper Red River. Runoff remained near normal until late April when drought conditions again occurred. The drought conditions that existed in north-central Texas at the beginning of the water-year intensified through the winter and spring and by late summer, extended from the Panhandle to the Sabine River in eastern Texas. At the end of the water year, runoff was deficient throughout the entire area with the exception of the downstream reachers of the lower Sabine and the Neches Rivers, where normal conditions existed.

Runoff at the index station "Neches River near Rockland, Texas" was excessive (within the highest 25 percent of record) during the first 6 months, less than normal for the next 3 months, and near normal for the last 3 months of the water year. The following table shows a comparison of runoff data for the 1984 water year with runoff for the period of record at four selected stations (fig. 1) in volume 1:

Station name and number		Discharge during 1984 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
		Max.	Min.	Avg.	Max.	Min.	Avg.
07227500	Canadian River near Amarillo, Tex.	4,320	0	38	135,000	0	325 (1925,1939-84)
07308500	Red River near Burkburnett, Tex.	166,000	.45	1,385	166,000	0	864 (1961-84)
08022040	Sabine River at Beckville, Tex.	8,380	1.3	956	123,000	2.4	2,204 (1961-84)
*08033500	Neches River near Rockland, Tex.	7,480	66	1,355	49,800	1.6	1,947 (1961-84)
08057000	Trinity River at Dallas, Tex.	13,000	215	694	184,000	1.2	1,520 (1904-84)

*Hydrologic index station.

At the other three index stations in the State, runoff during the 1984 water year ranged from excessive for the North Concho River near Carlsbad for the first 6 months to deficient for the last 6 months of the water year. Runoff for North Bosque River near Clifton was deficient for the entire water year except for March, which was normal. The Guadalupe River was deficient for the entire year. Monthly mean discharges for the four index stations in the State are plotted against the median of the long term monthly means in figure 2.

Conservation storage from 31 selected reservoirs in this area (volume 1) of the State, with a total combined conservation capacity of 19,114,840 acre-feet, decreased from 86 percent at the end of September 1983, to 78 percent at the end of September 1984. Records from the 31 reservoirs show that contents increased in 2 decreased in 28, and remained the same in 1.

Water Quality

Records of discharge-weighted-average concentrations of dissolved solids for the 1984 water year are compared in the following table with those for the 1979-84 water years for selected long-term daily or continuous stations in the Arkansas, Red, Sabine, Neches, and Trinity River basins:

Station identification		Mean discharge (cubic feet per second)		Discharge-weighted-average concentration of dissolved solids (milligrams per liter)	
		1984	1979-84	1984	1979-84
Arkansas River basin					
07227500	Canadian River near Amarillo, Tex.	38	184	1,100	638
Red River basin					
07315500	Red River near Terral, OK.	2,590	1,819	1,320	1,310
07336820	Red River near DeKalb, Tex.	8,206	10,520	436	395
Sabine River basin					
08018500	Sabine River near Mineola, Tex.	239	507	159	144
08030500	Sabine River near Ruliff, Tex.	6,914	6,973	62	69
Neches River basin					
08041000	Neches River at Evadale, Tex.	5,417	5,438	82	80
Trinity River basin					
08057410	Trinity River below Dallas, Tex.	970	2,291	366	256
08066500	Trinity River at Romayor, Tex.	3,280	6,346	202	184

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 (SI) on the inside of the back cover.

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data in its WATSTORE data system. These revisions were made to achieve consistency in terminology. They do not represent a change in the way the codes have been used in the part or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year, and therefore, it first appears in that publication. Definitions on which the terminology is based are included in the "Definitions" sections of this report.

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, about 326,000 gallons, or 1,233 cubic meters.

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

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 with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL (milliliters) 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 in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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.

Biomass pigment ratio is the ratio of organic mass in mg/m^3 (milligrams per square meter) to the mass of chlorophyll a, in mg/m^3.

Bottom material: See Bed material.

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

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-ft, 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, and unless otherwise indicated is computed on the basis of a level pool. The computation does not include bank storage.

Control designates a feature downstream from a 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.

Cubic foot 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 foor 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. This rate is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

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

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

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

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

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

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

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

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

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

Gage height (G.HT.) 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.

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

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

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

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

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

ND is used in some of the tables of pesticide data as an abbreviation for "Not Detected." Analyses in which this term is reported were made by the U.S. Environmental Protection Agency laboratory in Bay Saint Louis, Mississippi.

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 either by 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:

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

The particle-size ditribution 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.

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

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides and herbicides, which control insects and plants respectively, and 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 of 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 baceria, 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.

Recoverable from bottom material refers to 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 usuage, and quantity and intensity of precipitation.

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

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

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

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

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

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigation.

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 in the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as 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.

Suspended, recoverable refers to the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total refers to the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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 numbers 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 a substance in solution or suspension that passes a stream section during a 24-hour day.

Total refers to 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 water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

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

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

Total, recoverable refers to 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.

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 example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

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

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.

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports.

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station 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 station numbering system is not used at miscellaneous sites where only random water-quality samples or discharge measurements are taken. The complete number for each station consists of eight digits, such as 08123800. The first two digits, 08 or 07, identify the river basin as previously published in the series of water-supply papers on the Surface Water Supply of the United States. The digits 07 indicate the Lower Mississippi River basin, and the digits 08 indicate the Western Gulf of Mexico Basins. The remaining six digits of the station number are sequential in downstream order.

All records for a drainage basin that extends across State boundaries can be arranged in downstream order by assembling the pages from the appropriate State reports by station number.

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

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

Radiochemical program is a network of regularly sampled gaging stations where additional samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The basic data collected at gaging stations consist of (1) records of stage; (2) measurements of discharge of streams and canals; and (3) stage, surface area, and contents of lakes and 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 basic data in determining the daily flow or volume of water in storage. Records of stage are obtained

from 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 5-, 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is often determined by sounding at many points.

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 mesurements, 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; monthly and yearly mean discharges are computed from the daily values. 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 the hydrologists or observers) are used in applying the gage heights to the rating tables.

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

For a lake- or reservoir-gaging station, a capacity table giving the contents for any stage is prepared from a stage-area relation curve defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes in contents are 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. However, the change in contents is not affected to the same extent.

At 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. For such periods, the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly values. For gaging stations on streams or canals, a table showing the daily, monthly, and yearly discharge is given. For a gaging station on a reservoir, a table showing the daily contents is given. Tables of daily or maximum and minimum daily gage heights are included for some gaging stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current water year is shown on the inside of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations, except those partial-record stations published in tabular form in the back of the report, gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging stations and the drainage areas are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies (U.S. Water Resources Council, 1968). 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 for 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; "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a 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 "DEFINITIONS OF TERMS" on page 11.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow at 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 statistic to have little significance. 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 maximum 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, it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations additional peak discharges are listed under EXTREMES FOR THE CURRENT YEAR; if they are all independent peaks above a selected base. The time of occurrence of the peaks and corresponding gage heights are also listed. 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 separate paragraphs following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily mean 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 generally 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 significant statistics for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the

maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables in the back of the report. 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 (or) 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 and samples collected within a short time period to investigate the seepage and (or) pollutant gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements and analyses are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges 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 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/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 because of the effects of diversion, municipal and industrial effluents consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values for cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made. Adjustments for evaporation from a reservoir are not included in the published changes in reservoir contents, unless it is so stated.

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 Texas District Office in Austin. Most gaging-station records are available in computer-usable form, and many statistical analyses have been made.

Records of discharge collected by agencies other than the Geological Survey

The International Boundary and Water Commission, United States and Mexico, operates all gaging stations on the Rio Grande and near the mouth of its principal tributaries at and below El Paso, Texas. Records collected at these stations are published in annual bulletins by the Commission and may be obtained from the International Boundary and Water Commission, United States Section, 4171 N. Mesa, Building C Suite 310, El Paso, Texas 79902.

EXPLANATION OF SURFACE-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.

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

Water analysis

Most methods for collecting and analyzing water samples are described in U.S. Geological Survey Techniques of Water Resources Investigations listed below.

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 loads.

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 the reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is probably 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 biocarbonate.

At stream-gaging stations where daily samples are obtained, tables are included to show monthly and annual weighted averages of specific conductance; weighted average concentrations of dissolved solids, chloride, sulfate, hardness; and loads of dissolved solids, chloride, and sulfate. The weighted averages have been computed by using the daily records of specific conductance and developing regression relationships between each water-quality parameter and specific conductance.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean value 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.

At some stations where continuous or daily records of specific conductance are obtained, concentrations of selected chemical constituents have been computed from regression relationships between specific conductance and the chemical constituents. The weighted average, monthly and annual concentrations and/or loads of these constituents may be published in this report. For each station where this has been done, a statement so indicating has been included in the remarks section of the station description.

Water temperature

Water temperatures are measured at most of the water-quality stations. Water temperatures are also taken at time of discharge measurements at gaging stations. At sites at which daily samples are taken, the water temperature is taken about the same time each day. Large streams have a small diurnal temperature change; but small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams and reservoirs may be affected by waste-heat discharges.

At stations where digital recording thermographs are present, the records published consist of maximum, minimum, and mean temperatures for each day and the monthly averages.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected twice daily or, in some instances, hourly. The published values of sediment discharges for days of rapidly changing flow or concentrations were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days in which the published value of sediment discharge 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-sediment discharge relations, sediment concentrations observed immediately before and after 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 and in estimating 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.

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven 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, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

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

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

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

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

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

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

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

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

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

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

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

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 p.

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

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 p.

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

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

4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 p.
4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 p.
4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 p.
4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 p.
5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M. W. Skougstad and others: USGS--TWRI Book 5, Chapter A1. 1979. 626 p.
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 p.
5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 p.
5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 p.
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 p.
5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 p.
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 p.

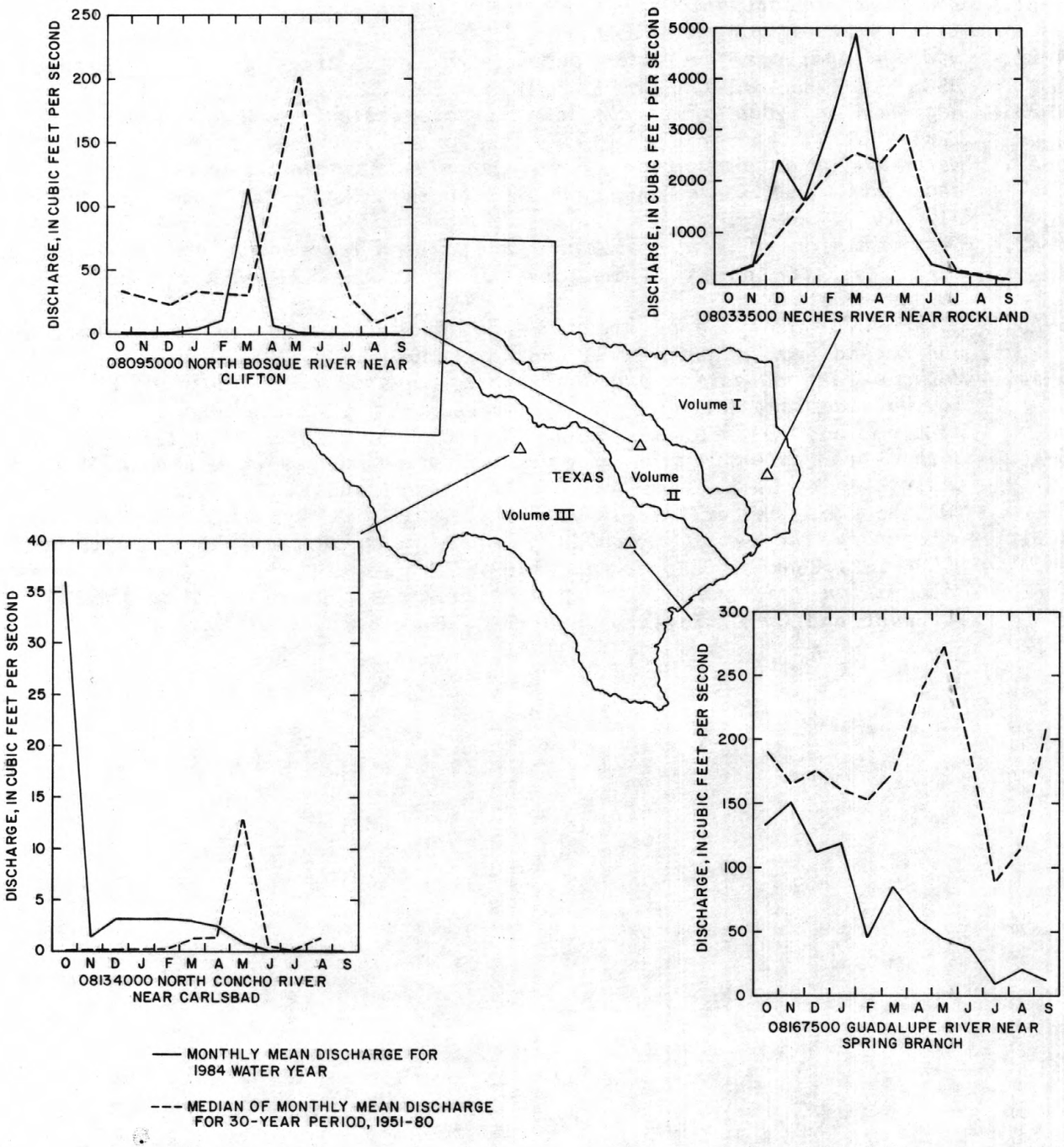

FIGURE 2.--COMPARISON OF MONTHLY MEAN DISCHARGE AT FOUR LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1984 WATER YEAR WITH MEDIAN OF THE MONTHLY MEAN DISCHARGE FOR THE PERIOD 1951-80.

07227000 CANADIAN RIVER AT LOGAN, NM

LOCATION.--Lat 35°21°25", long 103°25°03", in NE1/4 NE1/4 sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,100 ft upstream from bridge on U.S. Highway 54, 0.7 mi south of Logan, 1.4 mi upstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 2.0 mi downstream from Ute Dam, 4.3 mi upstream from Revuelto Creek, and at mile 672.0.

DRAINAGE AREA.--11,141 mi^2, of which 1,100 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1904 to November 1905 (gage heights and discharge measurements only), December 1908 to September 1909, February 1910, April to July 1910, August 1910 to September 1911 (gage heights and discharge measurements only), October 1911 to May 1914, January to May 1924, September 1924 to July 1925, January 1927 to April 1934, August 1934 to current year. Monthly discharge only for some periods, published in WSP 1311. Records for December 1909, January 1910, and May to July 1934, published in WSP 267, 287, and 762 are unreliable and should not be used. Published as South Canadian River June to September 1904.

REVISED RECORDS.--WSP 1087: 1935-36. WSP 1117: Drainage area. WSP 1281: 1912, 1932(M), 1934, 1945-47, 1949-50. WSP 1311: 1931(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,668.1 ft National Geodetic Vertical Datum of 1929. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Records fair. Flow regulated by Conchas Lake, 45 mi upstream and Ute Reservoir, 2 mi upstream. Diversions for irrigation of about 90,000 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1909, 1912-13, 1927-38) prior to completion of Conchas dam, 392 ft^3/s (284,000 acre-ft/yr); 24 years (water years 1939-62) prior to completion of Ute Dam, 257 ft^3/s (186,200 acre-ft/yr); 22 years (water years 1963-84) regulated, 38.0 ft^3/s (27,530 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge, 219,000 ft^3/s Sept. 22, 1941 (gage height, 29.3 ft from floodmarks), from rating curve extended above 75,000 ft^3/s; no flow at times prior to completion of Ute Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft^3/s Sept. 30, 1904 (gage height, about 36.5 ft, site and datum used in 1909), from rating curve extended above 14,000 ft^3/s, from Ninth Biennial Report of State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 387 ft^3/s Aug. 23 (gage height, 2.43 ft); minimum, 0.47 ft^3/s Nov. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.7	.77	1.4	1.8	2.0	2.6	1.9	1.4	2.1	1.7	
2	1.2	1.7	1.1	1.4	1.8	2.0	2.8	1.8	1.6	2.1	1.7	
3	1.2	1.8	1.1	1.5	1.8	2.0	2.3	1.8	2.1	2.7	1.7	
4	1.2	1.8	.99	1.5	1.8	2.0	2.2	1.8	1.4	2.3	1.7	
5	1.2	1.8	.95	1.5	1.8	2.0	2.2	1.8	1.4	2.0	1.6	
6	1.0	1.8	.98	1.5	1.8	2.0	2.2	1.8	1.4	1.8	1.6	
7	1.1	1.9	.98	1.6	1.5	2.1	2.2	1.8	1.8	1.7	5.1	
8	1.1	1.7	.97	1.6	1.8	2.1	2.2	1.8	1.5	1.7	7.9	
9	1.2	1.7	1.0	1.5	2.1	2.0	2.2	1.8	1.2	1.7	6.3	
10	1.2	1.9	1.0	1.5	2.0	2.1	2.1	1.8	1.4	1.6	8.1	
11	1.1	1.7	1.1	1.5	2.0	2.0	2.1	1.8	1.5	1.6	9.1	
12	1.2	1.5	1.1	1.6	2.0	2.0	2.1	1.8	1.4	1.6	9.0	
13	1.4	1.4	1.1	1.6	2.0	2.1	2.1	1.8	2.2	2.4	9.0	
14	1.6	1.3	1.1	1.6	1.7	2.0	2.1	1.8	2.6	1.8	9.0	
15	1.4	1.3	1.1	1.6	1.8	2.0	1.9	1.8	2.0	1.8	8.9	
16	1.5	1.1	1.2	1.7	1.9	1.9	1.9	1.8	2.0	6.4	8.7	
17	1.7	.77	1.2	1.7	1.9	1.9	1.9	2.0	2.0	4.0	8.7	
18	1.8	.77	1.6	1.7	1.9	1.8	1.9	2.1	2.1	1.8	8.7	
19	2.0	.91	1.4	1.7	2.0	1.9	1.8	1.8	2.0	2.0	8.7	
20	5.7	.81	1.4	1.6	1.7	2.0	1.8	1.8	2.1	1.5	8.7	
21	2.8	.81	1.8	1.6	2.0	2.0	1.8	1.8	2.0	1.4	8.7	
22	1.6	.81	1.6	1.6	1.9	2.1	1.7	1.7	2.0	1.4	8.7	
23	1.5	.86	1.6	1.7	2.1	2.1	1.7	1.8	2.0	1.5	10	
24	1.3	.81	1.4	1.7	2.1	2.0	1.7	1.7	2.0	1.5	2.8	
25	1.4	.81	1.2	1.7	1.9	1.8	1.6	1.7	2.0	1.5	4.7	
26	1.5	.77	1.3	1.7	2.1	1.8	1.5	1.7	2.0	1.5	9.3	
27	1.6	.81	1.5	1.8	1.7	2.1	1.6	1.7	2.0	1.6	9.3	
28	1.5	.81	1.7	1.8	2.1	1.9	1.8	1.8	2.1	1.5	9.3	
29	2.0	.81	1.5	1.8	2.0	1.9	2.2	1.6	2.0	1.7	9.3	
30	1.6	.77	1.5	1.8	---	2.2	1.9	1.6	2.1	1.6	9.3	
31	1.6	---	1.5	1.8	---	2.1	---	1.4	---	1.5	---	
TOTAL	49.4	37.43	38.74	50.3	55.0	61.9	60.1	55.1	55.3	61.3	---	
MEAN	1.59	1.25	1.25	1.62	1.90	2.00	2.00	1.78	1.84	1.98	---	
MAX	5.7	1.9	1.8	1.8	2.1	2.2	2.8	2.1	2.6	6.4	---	
MIN	1.0	.77	.77	1.4	1.5	1.8	1.5	1.4	1.2	1.4	---	
AC-FT	98	74	77	100	109	123	119	109	110	122	---	

CAL YR 1983 TOTAL 7138.27 MEAN 19.6 MAX 270 MIN .77 AC-FT 14160
WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'29", long 103°23'37", in SW1/4NW1/4 sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi upstream from bridge on State Highway 39, 1.9 mi southeast of Logan, and at mile 2.3.

DRAINAGE AREA.--786 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 3,665 ft, from topographic map. Prior to Jan. 16, 1981, at site 320 ft upstream at datum 0.56 ft higher.

REMARKS.--Water-discharge records fair. Low flows supplemented by surface and ground water return from irrigation in vicinity of Tucumcari.

AVERAGE DISCHARGE.--25 years, 44.4 ft^3, 32,170 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft^2/s July 9, 1960, gage height, 14.3 ft, site and datum then in use; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft^3/s Sept. 18, 1946 (gage height, 9.04 ft, at site 180 ft downstream at different datum), from unpublished records collected by Bureau of Reclamation.

A peak of 26,100 ft^3/s, date unknown (gage height, 12.9 ft, at former site and datum), was measured by slope-area method in May 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft^3/s Aug. 13 at 1145 hours (gage height, 10.35 ft); no other peak above base of 3,500 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	6.8	1.9	4.6	2.8	.60	50	55	.35	97	33	
2	8.0	7.8	15	71	2.1	.50	261	29	.32	75	201	
3	5.6	7.9	279	101	1.7	.50	61	18	.91	288	47	
4	4.0	5.1	54	68	1.7	.40	20	11	1.9	175	143	
5	3.7	4.2	15	31	1.6	.40	9.6	8.5	2.0	139	45	
6	4.6	3.4	11	15	1.5	.40	6.9	6.6	1.2	66	14	
7	5.3	3.1	4.6	10	1.5	.30	6.5	4.8	.45	13	244	
8	5.6	2.3	3.7	7.3	1.6	.30	5.4	5.3	.21	13	389	
9	6.9	1.9	3.2	4.6	1.5	.20	4.8	4.7	.22	10	155	
10	9.8	1.9	2.5	3.2	1.4	.20	3.8	3.0	.18	10	81	
11	11	1.9	2.0	3.4	1.4	.20	2.8	2.5	.16	4.3	78	
12	14	1.5	1.8	2.9	1.3	.10	2.3	2.7	.09	4.3	95	
13	12	1.3	1.5	1.9	1.3	.10	4.1	3.1	.09	4.3	2650	
14	13	1.2	1.4	1.5	1.2	.06	4.1	3.7	198	4.3	432	
15	11	1.1	1.0	2.0	1.2	.06	3.8	6.1	84	10	60	
16	12	1.0	1.0	2.6	1.1	.04	5.2	12	85	50	14	
17	11	1.1	1.1	2.8	1.0	.03	5.9	114	57	250	3.6	
18	21	1.6	1.0	3.0	1.0	.04	5.9	267	206	100	1.4	
19	31	88	.90	4.0	.90	.06	7.6	256	179	29	.73	
20	509	41	.90	4.8	.90	.04	18	146	228	35	.30	
21	340	9.1	.80	6.5	.80	.04	19	49	143	10	.09	
22	201	4.8	.70	19	.80	.12	19	28	89	6.2	.01	
23	88	4.3	.60	30	.80	2.8	17	15	47	4.0	489	
24	41	3.9	.80	37	.70	11	15	9.9	19	1.9	207	
25	24	3.1	1.0	38	.70	26	10	5.4	10	1.5	224	
26	18	1.9	6.0	20	.70	11	6.8	3.5	9.4	2.1	59	
27	14	1.2	4.0	9.8	.70	54	7.4	2.7	6.3	2.1	22	
28	9.4	1.1	1.5	5.9	.60	105	9.7	1.6	6.2	1.9	17	
29	6.6	1.8	1.0	4.3	.60	21	237	1.2	4.5	1.9	10	
30	6.3	2.1	1.0	3.1	---	16	127	.89	3.6	2.0	8.2	
31	7.6	---	2.0	2.9	---	105	---	.53	---	3.2	---	
TOTAL	1464.4	217.4	421.90	521.1	35.10	356.49	956.6	1076.72	1383.08	1414.0	---	
MEAN	47.2	7.25	13.6	16.8	1.21	11.5	31.9	34.7	46.1	45.6	---	
MAX	509	88	279	101	2.8	105	261	267	228	288	---	
MIN	3.7	1.0	.60	1.5	.60	.03	2.3	.53	.09	1.5	---	
AC-FT	2900	431	837	1030	70	707	1900	2140	2740	2800	---	

CAL YR 1983 TOTAL 7504.47 MEAN 20.6 MAX 880 MIN .00 AC-FT 14890
WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1959 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 19...	1100	30	1150	8.3	14.0	--	--	290	150	65	32
DEC 21...	1100	--	--	--	.0	--	--	--	--	--	--
MAR 14...	1130	.10	3500	8.2	15.5	8.4	98	340	31	63	45
APR 25...	1600	11	1690	8.6	21.0	8.6	101	400	190	76	51
JUL 19...	1230	49	690	8.4	26.5	7.2	102	61	0	16	5.0
AUG 30...	1600	--	--	--	33.0	--	--	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 19...	150	4	5.3	380	44	.50	4.6	770	801	65	97
DEC 21...	--	--	--	--	--	--	--	--	96	--	81
MAR 14...	690	17	4.7	480	750	.90	8.9	2200	8	.00	92
APR 25...	230	5	7.5	610	77	.70	3.5	1200	202	6.0	89
JUL 19...	130	8	3.0	150	26	.50	9.1	420	9810	1300	99
AUG 30...	--	--	--	--	--	--	--	--	41	--	97

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, NM
(National stream-quality accounting network station)

LOCATION.--Lat 35°23'35", long 103°02'30", in SW1/4 sec. 32, T.14 N., R.37 E., Quay County, Hydrologic Unit 11080006, 0.1 mi upstream from New Mexico-Texas State line, 5.5 mi downstream from Rana Canyon and 14.7 mi north of Glenrio.

DRAINAGE AREA.--12,616 mi^2.

PERIOD OF RECORD.--1969-73, 1975 to current year.

REMARKS.--Discharge measurements were made at the time water-quality samples were collected.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 18...	1200	18	4130	8.5	19.5	170	8.9	110	390	540	380
DEC 20...	1130	6.1	>8000	7.7	.0	15	11.6	91	K0	K27	--
MAR 13...	1100	6.6	>8000	7.8	14.5	12	10.0	111	--	--	700
APR 24...	1320	12	--	8.4	23.5	35	8.3	112	--	--	630
JUL 18...	1200	133	1210	8.5	28.0	6100	7.5	108	--	4000	44
AUG 29...	1300	40	2460	8.3	30.0	180	7.6	114	--	--	290

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT 18...	160	72	48	680	16	7.0	440	970	.60	6.9	2380
DEC 20...	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	430	140	85	1800	30	9.3	460	2700	.60	11	5410
APR 24...	380	120	81	1500	27	8.7	390	2200	.60	9.6	4710
JUL 18...	0	11	3.9	230	16	3.0	110	220	.50	7.8	653
AUG 29...	100	69	28	540	14	6.3	240	760	.40	9.0	1790

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	2400	--	<.10	.020	.90	.110	.020	<.010	202	9.8	96
DEC 20...	--	--	--	--	.40	<.010	--	--	188	3.1	76
MAR 13...	5400	56	.25	.040	.40	.020	.010	.010	31	.55	92
APR 24...	4500	--	.12	.020	.70	.020	.020	.020	58	1.9	90
JUL 18...	660	--	.51	.070	10	12.0	.010	.010	19300	6930	99
AUG 29...	1800	--	.20	.110	.30	.200	<.010	.010	320	35	97

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, NM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 18...	1200	1	<100	<10	<1	<1	1	2	90	4
APR 24...	1320	1	200	<10	<1	1	<1	<1	30	<1
JUL 18...	1200	8	84	2.0	<1	<1	<3	2	19	4
AUG 29...	1300	3	500	<10	<1	<1	1	3	50	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 18...	110	10	<.1	5	23	<1	<1	1800	16	10
APR 24...	200	40	<.1	4	<1	1	<1	--	42	30
JUL 18...	34	2	.1	<10	<1	<1	<1	300	49	9
AUG 29...	60	<10	.4	<1	2	<1	<1	1800	27	<10

07227500 CANADIAN RIVER NEAR AMARILLO, TX

LOCATION.--Lat 35°28'13", long 101°52'45", Potter County, Hydrologic Unit 11090105, on left bank at downstream side of southbound lane of bridge on U.S. Highways 87 and 287, 1,500 ft downstream from Pitcher Creek, 1.4 mi downstream from East Amarillo Creek, 1.7 mi downstream from Panhandle and Santa Fe Railway Co. bridge, 19 mi north of Amarillo, and 537.7 mi upstream from mouth.

DRAINAGE AREA.--19,445 mi , of which 4,069 mi probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1924 to December 1925, January 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,989.16 ft National Geodetic Vertical Datum of 1929. Jan. 16, 1924, to Dec. 31, 1925, and Apr. 3 to June 1, 1938, nonrecording gage at site of old bridge 20 ft upstream at same datum. June 2 to Dec. 5, 1938, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records poor. At times, low flow is maintained by release of sewage effluent from the Amarillo disposal plant into East Amarillo Creek, a tributary to the Canadian River. Some regulation by Conchas and Ute Reservoirs in New Mexico, total capacity 439,700 acre-ft. Conchas Canal and Bell Ranch Canal divert water from Conchas Reservoir for irrigation.

AVERAGE DISCHARGE.--47 years (water years 1925, 1939-84), 325 ft^3/s (235,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 135,000 ft^3/s July 25, 1941 (gage height, 15.7 ft), from rating curve extended above 100,000 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of 24 ft; a higher stage probably occurred during flood in October 1904, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,320 ft^3/s Aug. 15 at 0100 hours (gage height, 5.10 ft), no peak above base of 14,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	8.7	2.60	4.0	22.0	11.0	58.0	72.0	2.5	14.00	.54	63.00
2	.05	5.8	2.00	5.0	20.0	11.0	426.0	53.0	2.3	15.00	.54	53.00
3	.06	7.8	3.00	7.0	15.0	9.2	221.0	62.0	2.8	24.00	111.00	44.00
4	.07	6.5	1.40	9.0	9.8	4.9	111.0	62.0	2.5	26.00	292.00	36.00
5	.08	9.9	1.30	9.5	7.1	3.7	113.0	53.0	2.3	30.00	132.00	25.00
6	.11	9.4	1.10	14.0	5.3	3.1	103.0	44.0	2.5	16.00	78.00	17.00
7	.13	8.0	1.10	10.0	7.6	6.3	73.0	30.0	2.5	9.20	53.00	11.00
8	.15	7.2	1.60	12.0	8.5	6.4	57.0	21.0	2.5	6.20	44.00	7.40
9	.21	5.7	1.30	11.0	11.0	4.4	43.0	16.0	2.5	3.60	111.00	6.40
10	.18	6.5	1.40	10.0	9.0	4.5	40.0	11.0	31.0	2.80	53.00	5.50
11	.16	6.7	4.30	8.0	8.1	5.6	33.0	9.0	798.0	2.30	39.00	4.40
12	.17	7.2	4.50	8.0	7.5	6.8	27.0	6.9	259.0	1.70	168.00	3.50
13	.22	3.8	3.40	8.0	8.7	6.0	23.0	4.6	113.0	1.20	537.00	3.00
14	.17	1.8	1.80	7.0	11.0	5.1	19.0	3.0	65.0	1.10	261.00	2.90
15	.19	3.1	.83	6.0	7.6	3.8	16.0	2.5	39.0	1.10	1450.00	2.50
16	.27	5.0	.60	5.0	5.7	4.7	15.0	2.4	31.0	1.10	425.00	2.50
17	.29	3.6	.40	4.0	5.1	3.9	14.0	2.6	31.0	.95	302.00	2.30
18	.37	3.3	.30	3.0	3.0	3.5	13.0	2.5	26.0	188.00	229.00	2.30
19	3.20	4.7	.30	3.0	2.7	2.7	12.0	2.5	63.0	155.00	157.00	2.20
20	43.00	2.9	.20	3.0	6.1	4.5	11.0	3.8	44.0	78.00	128.00	1.80
21	50.00	2.7	.20	3.0	7.7	17.0	8.3	46.0	51.0	61.00	109.00	1.70
22	15.00	2.4	.20	4.0	7.8	19.0	8.1	73.0	55.0	53.00	93.00	1.90
23	11.00	3.4	.20	5.0	4.6	19.0	8.4	70.0	57.0	36.00	87.00	1.40
24	14.00	2.4	.20	7.0	4.5	18.0	8.0	45.0	63.0	23.00	261.00	1.10
25	30.00	3.3	.20	12.0	4.5	21.0	6.8	30.0	68.0	16.00	506.00	.99
26	31.00	2.3	.50	14.0	14.0	14.0	4.8	20.0	51.0	10.00	435.00	1.60
27	19.00	1.4	.60	14.0	9.6	40.0	3.8	11.0	39.0	2.30	235.00	3.30
28	13.00	2.0	.40	23.0	8.2	37.0	6.2	9.2	31.0	1.20	170.00	3.30
29	8.20	1.9	.30	25.0	8.1	43.0	23.0	7.1	25.0	.95	235.00	2.00
30	7.30	2.0	.50	24.0	---	43.0	102.0	5.0	19.0	.73	132.00	2.90
31	10.00	---	2.00	21.0	---	45.0	---	3.3	---	.63	87.00	---
TOTAL	257.65	141.4	38.73	298.5	249.8	427.1	1607.4	783.4	1981.4	782.06	6921.08	315.89
MEAN	8.31	4.71	1.25	9.63	8.61	13.8	53.6	25.3	66.0	25.2	223	10.5
MAX	50	9.9	4.5	25	22	45	426	73	798	188	1450	63
MIN	.05	1.4	.20	3.0	2.7	2.7	3.8	2.4	2.3	.63	.54	.99
AC-FT	511	280	77	592	495	847	3190	1550	3930	1550	13730	627

CAL YR 1983 TOTAL 19334.74 MEAN 53.0 MAX 675 MIN .00 AC-FT 38350
WTR YR 1984 TOTAL 13804.41 MEAN 37.7 MAX 1450 MIN .05 AC-FT 27380

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1948 to October 1949, February 1950 to current year. Chemical and biochemical analyses: January 1969 to current year. Pesticide analyses: October 1968 to September 1981.

PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: October 1950 to current year.
WATER TEMPERATURES: August 1949 to current year.
SUSPENDED SEDIMENT DISCHARGE: August 1949 to September 1952.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,870 micromhos July 11, 1983; minimum daily, 346 micromhos Oct. 29, 1964.
WATER TEMPERATURES (1949-76): Maximum daily, 39.0°C July 7, 1973; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,210 micromhos May 19; minimum daily, 498 micromhos Oct. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 21...	1045	2.7	2320	8.1	9.5	25	3.0	16.7	167	3.0	430
JAN 26...	1130	12	2450	8.2	5.5	30	22	15.3	137	>22	440
MAR 22...	1030	17	1850	7.9	9.0	560	62	11.6	114	>79	270
MAY 10...	0915	12	4680	8.1	13.0	250	140	11.4	124	11	620
JUL 16...	1030	1.1	4210	8.0	25.0	12	5.1	11.1	152	1.9	630
AUG 20...	1215	136	1730	8.1	27.5	2500	240	7.6	109	1.4	200

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 21...	190	110	37	330	7	9.4	240	320	430	1.2	12
JAN 26...	180	110	40	350	8	11	260	340	440	1.4	25
MAR 22...	0	62	28	250	7	15	300	210	270	1.7	28
MAY 10...	460	140	66	770	14	8.8	160	670	1100	.70	14
JUL 16...	460	160	55	690	12	5.4	170	500	1000	.50	19
AUG 20...	69	50	18	290	9	5.1	130	200	330	.30	9.0

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 21...	1400	7	7	3.8	.460	4.3	1.20	1.7	2.9	2.00	7.6
JAN 26...	1500	45	24	.33	.170	.50	13.0	5.0	18	5.70	21
MAR 22...	1000	140	86	.36	.240	.60	1.40	35	36	5.20	60
MAY 10...	2900	240	34	--	.060	<.10	.070	5.9	6.0	.020	8.9
JUL 16...	2500	11	6	--	<.010	<.10	.150	.35	.50	.030	2.3
AUG 20...	980	1160	80	.07	.330	.40	.070	3.9	4.0	.750	6.7

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
MAR 22...	1030	5	77	<1	<10	6	36
JUL 16...	1030	3	<100	<1	<10	<1	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAR 22...	<1	430	<.1	<1	<1	29
JUL 16...	<1	190	<.1	<1	<1	10

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	257.65	1070	627	436	190	133	130	94	170
NOV.	1983	141.4	1910	1130	432	360	138	250	95	310
DEC.	1983	38.73	1640	976	102	310	32	210	22	270
JAN.	1984	298.5	2410	1440	1160	480	385	320	260	390
FEB.	1984	249.8	3900	2380	1610	850	573	550	373	630
MAR.	1984	427.1	3120	1880	2170	650	746	430	495	500
APR.	1984	1607.4	2950	1780	7750	610	2650	410	1760	480
MAY	1984	783.4	3910	2390	5050	850	1800	550	1170	630
JUNE	1984	1981.4	1770	1060	5660	350	1850	230	1260	290
JULY	1984	782.06	2290	1370	2890	450	944	300	641	370
AUG.	1984	6921.08	1110	655	12200	200	3770	140	2630	180
SEPT	1984	315.89	2930	1770	1510	610	518	400	344	480
TOTAL		13804.41	**	**	41000	**	13500	**	9150	**
WTD.AVG.		38	1840	1100	**	360	**	250	**	300

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	1310	1310	3650	3110	3050	3170	3020	3450	3150	4710	1930
2	515	1650	1450	2340	3220	3530	2240	3650	3510	3100	4940	2280
3	498	1780	1260	1990	3920	3710	2480	4000	2880	2700	2840	2520
4	500	1920	940	1500	4680	4390	2740	4060	3200	2460	1190	2800
5	505	1400	875	972	5050	4480	2700	4860	3550	1710	1240	3100
6	515	1450	755	1570	4950	4560	3610	3300	3870	1690	1300	3530
7	675	1570	1000	1720	4740	3950	3430	3230	4160	1820	1390	3810
8	741	1660	1360	1960	4520	3740	2900	3710	4250	1960	1860	4280
9	700	1820	1610	2170	4400	3660	3010	4140	4400	2730	1140	4710
10	950	1790	2110	2020	4550	3650	4310	4590	3910	3450	1990	4960
11	1080	1870	1540	1880	4980	3220	4330	4770	907	4300	2450	4870
12	1280	1940	1470	1630	3650	3150	4300	4980	1110	5170	1320	4750
13	1000	2280	1560	1610	3760	3470	4290	5060	1320	4970	1000	4630
14	1120	2620	1640	1840	3890	3740	4550	5150	1550	4620	1190	4840
15	1670	2410	1780	2150	4010	4230	4750	4640	1950	4440	600	4620
16	1450	2020	1820	2030	4200	4010	5080	4740	2740	4200	810	4140
17	1950	2090	1970	2050	4360	4340	5020	4720	3530	4530	1090	4110
18	1750	2120	2060	2070	4350	4610	5100	5030	3970	2420	1260	4140
19	1200	2250	2180	2040	4400	4470	4970	5210	3210	2240	1540	4160
20	625	2370	2250	2030	3200	3420	5000	5160	3720	1940	1760	4180
21	530	2450	2270	2060	3060	1880	4940	4550	3550	1870	1850	4160
22	675	2680	2190	2030	3520	1820	4900	4100	3460	1900	1940	4100
23	761	2500	2240	2070	3830	1990	4870	3910	3320	2100	2450	3760
24	1150	2630	2060	2410	4010	2450	4840	3560	3110	2540	1690	3620
25	1590	2390	1820	2630	4240	2120	5170	3250	2330	2830	552	3650
26	1650	1980	1580	2480	3320	2890	3600	3600	2110	3160	740	3890
27	1560	2250	2460	2570	3390	3250	2920	3860	2230	3490	1470	3700
28	1480	2540	2650	2750	3580	3010	3730	4110	2340	3610	1980	3620
29	1290	2760	2810	3210	4020	3360	2210	4370	2690	3840	1220	4240
30	1340	2460	2320	3460	---	3450	2150	4650	2950	4020	1430	4790
31	1150	---	4000	3550	---	3300	---	4890	---	4330	1510	---
MEAN	1050	2100	1850	2210	4030	3450	3910	4290	2980	3140	1690	3930

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	16.0	1.0	---	14.0	18.0	8.0	---	18.0	21.0	---	21.0
2	19.0	18.0	---	---	12.0	21.0	16.0	---	15.0	31.0	---	20.0
3	18.0	19.0	---	5.0	14.0	20.0	---	27.0	19.0	33.0	---	18.0
4	15.0	---	---	6.0	13.0	13.0	---	15.0	17.0	---	---	17.0
5	12.0	---	---	7.0	14.0	14.0	8.0	15.0	18.0	---	20.0	16.0
6	16.0	---	12.0	7.0	16.0	---	10.0	16.0	---	22.0	22.0	---
7	---	---	15.0	10.0	---	---	13.0	15.0	24.0	21.0	23.0	---
8	---	23.0	14.0	11.0	---	17.0	10.0	---	---	20.0	21.0	29.0
9	---	15.0	14.0	7.0	16.0	20.0	10.0	---	23.0	21.0	22.0	33.0
10	---	17.0	16.0	---	17.0	19.0	6.0	---	---	20.0	---	33.0
11	25.0	18.0	---	---	12.0	7.0	---	---	16.0	21.0	---	---
12	23.0	20.0	---	7.0	13.0	7.0	---	16.0	21.0	22.0	---	---
13	25.0	20.0	---	7.0	15.0	9.0	11.0	17.0	20.0	---	---	33.0
14	25.0	18.0	---	---	17.0	---	10.0	18.0	20.0	---	28.0	24.0
15	24.0	---	---	5.0	---	---	10.0	18.0	---	---	28.0	23.0
16	25.0	---	---	4.0	---	8.0	9.0	17.0	---	---	29.0	27.0
17	22.0	17.0	---	---	8.0	---	10.0	18.0	---	---	28.0	31.0
18	---	9.0	---	---	5.0	11.0	12.0	---	---	28.0	30.0	---
19	---	12.0	---	---	2.0	7.0	11.0	---	---	29.0	30.0	---
20	15.0	5.0	2.0	2.0	3.0	5.0	---	---	---	31.0	32.0	18.0
21	18.0	8.0	---	2.0	2.0	7.0	---	---	---	31.0	---	19.0
22	20.0	9.0	1.0	.0	3.0	8.0	---	27.0	---	30.0	23.0	19.0
23	23.0	---	.0	1.0	4.0	---	---	19.0	---	32.0	22.0	18.0
24	17.0	---	.0	2.0	---	---	28.0	30.0	30.0	---	23.0	19.0
25	19.0	10.0	1.0	3.0	---	---	23.0	27.0	29.0	---	---	19.0
26	---	8.0	2.0	2.0	---	---	23.0	26.0	---	31.0	28.0	---
27	---	1.0	2.0	---	---	---	21.0	30.0	---	30.0	32.0	---
28	12.0	1.0	---	---	14.0	15.0	18.0	---	20.0	---	---	12.0
29	11.0	3.0	.0	---	15.0	19.0	15.0	---	22.0	---	---	10.0
30	11.0	2.0	2.0	---	---	---	20.0	---	21.0	---	24.0	10.0
31	11.0	---	4.0	7.0	---	---	---	16.0	---	---	23.0	---
MEAN	18.5	12.0	5.5	5.0	11.0	13.0	13.5	20.5	21.0	26.5	25.5	21.5

07227900 LAKE MEREDITH NEAR SANFORD, TX

LOCATION.--Lat 35°42'38", long 101°33'03", Hutchinson County, Hydrologic Unit 11090106, in outlet tower near right end of dam on Canadian River, 1.2 mi northwest of Sanford, and 508.5 mi upstream from mouth.

DRAINAGE AREA.--20,220 mi², of which 4,172 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Aug. 16, 1965, nonrecording gage read daily at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 6,410 ft long. The dam was completed and storage began in October 1964. The service spillway is an uncontrolled concrete drop inlet located near the left end of dam. The spillway discharges into a 22-foot-diameter conduit that is designed to discharge 19,300 ft³/s at an elevation of 3,004.9 ft. The flood-control outlet works consist of three 12- by 15-foot gates that open into three 15.5-foot concrete conduits. The flood-control works are located just to the left of the service spillway near the left end of dam. The dam was built by the U.S. Bureau of Reclamation for the Canadian River Municipal Water Authority for flood control, municipal, and industrial supply for the cities of Amarillo, Borger, Brownfield, Lamesa, Levelland, Lubbock, O'Donnell, Pampa, Plainview, Slaton, and Tahoka. The area-capacity curves are based on sediment resurvey in May 1980 by U.S. Bureau of Reclamation. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	3,011.0	-
Design flood	3,004.9	2,409,900
Crest of drop inlet	2,965.0	1,382,500
Top of conservation pool	2,936.5	839,200
Crest of flood-control outlet works (invert)	2,894.0	300,400
Lowest gated outlet (invert)	2,850.0	42,320

COOPERATION.--Record of elevations and diversions furnished by the Canadian River Municipal Water Authority. The area-capacity curves were furnished by the U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 546,100 acre-ft Apr. 28, 1973 (elevation, 2,914.91 ft); minimum since first appreciable storage, 165,500 acre-ft May 27, 1981 (elevation, 2,876.17 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 404,300 acre-ft Oct. 1 at 2400 hours (elevation, 2,904.73 ft); minimum, 325,100 acre-ft Sept. 30 (elevation, 2,896.73 ft).

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

2,896.0	318,400	2,902.0	376,000
2,898.0	337,000	2,904.0	396,600
2,900.0	356,100	2,906.0	418,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	404300	395900	387400	379900	374100	367900	363300	357600	347400	346500	332100	339300
2	404100	395800	386900	379900	373700	367600	362800	357700	346500	346200	331600	339000
3	404100	395700	386900	379600	373700	367400	362800	357300	346300	345800	331200	338700
4	403000	395400	386700	379600	373700	367200	362800	357000	346100	345400	330900	338500
5	402700	395300	386400	379300	373300	367000	362800	356700	345500	345400	330800	338000
6	402300	394900	386600	379200	373200	366800	363800	356600	345200	345300	330500	337500
7	402000	394900	386200	379000	372800	366400	363900	356400	345600	344900	330200	336400
8	401600	394100	386000	378800	373000	366300	363700	356100	344200	343900	329900	335800
9	401600	393900	385900	378600	372900	365800	363600	355800	343400	343200	329500	335300
10	401600	393700	385600	378600	372800	365700	363500	355400	345700	343400	330800	335000
11	400400	393400	385200	379600	372400	365600	363500	355100	350000	342000	332100	334400
12	400200	392900	384700	378200	372400	365100	363400	354600	350500	341600	332200	333800
13	400200	392600	384800	377900	372200	365000	363200	354400	350600	341100	332600	333200
14	399600	392300	384400	377700	371800	364700	362800	354000	350400	340500	332700	332200
15	399200	392000	384000	377500	371600	364500	362300	353700	350300	339900	334400	332200
16	398700	391700	384000	377300	371300	364500	361900	353300	350400	339600	334800	331800
17	398500	391300	383600	376900	371600	364300	361600	352900	350100	338900	334800	331300
18	398100	391200	383400	377000	370700	364300	361000	352600	350000	338600	334500	330800
19	398300	390500	383600	376600	370300	363900	360800	352300	349800	338100	334300	330400
20	398800	390500	382300	376600	370200	363500	360600	352000	349800	337700	334100	329700
21	398700	390400	382100	376600	369900	363100	360300	351800	349600	337300	333700	329200
22	398500	390000	382000	376600	369500	363100	359900	351200	349400	336800	334000	328500
23	398100	390000	381800	376600	369200	363500	359700	351200	348900	336300	336600	328100
24	397700	390000	381600	376600	369200	363100	359400	350600	349000	335600	337100	327700
25	397600	389800	381400	375700	368900	362800	359400	350100	348800	335300	338400	326800
26	397100	389900	381300	375200	369200	362600	359000	350000	348500	335700	340300	326400
27	397000	389900	381100	375000	369200	363300	358000	349400	348200	334600	340600	325800
28	396900	388400	381100	374800	368400	362900	357400	349000	347700	334100	340600	325600
29	396400	387800	380800	374500	368100	363000	358000	348700	347300	333700	340600	325400
30	396300	387600	380000	374400	---	363200	358000	348100	346800	333200	340400	325100
31	396000	---	380000	374300	---	363000	---	347600	---	332600	339900	---
MAX	404300	395900	387400	379900	374100	367900	363900	357700	350600	346500	340600	339300
MIN	396000	387600	380000	374300	368100	362600	357400	347600	343400	332600	329500	325100
(†)	2903.94	2903.14	2902.40	2901.83	2901.22	2900.70	2900.19	2899.12	2899.03	2897.54	2898.31	2896.73
(‡)	-8700	-8400	-7600	-5700	-6200	-5100	-5000	-10400	-800	-14200	+7300	-14800
(††)	4816	3880	5002	5863	4900	5585	6197	80098	6675	8975	7433	7716

CAL YR 1983 MAX 464000 MIN 380000 ‡ -68900 †† 73022
WTR YR 1984 MAX 404300 MIN 325100 ‡ -79600 †† 75051

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.
†† Diversions, in acre-feet, for municipal and industrial uses.

07227900 LAKE MEREDITH NEAR SANFORD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JAN 03...	1100	1640	3.0	230	47	53	23	250

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JAN 03...	7	5.8	180	220	280	.80	5.1	950

ARKANSAS RIVER BASIN

07227920 DIXON CREEK NEAR BORGER, TX

LOCATION.--Lat 35°39'53", long 101°21'02", Hutchinson County, Hydrologic Unit 11090106, on right bank at downstream side of bridge on State Highway 152, 2.4 mi east of Borger, and 7.6 mi upstream from mouth.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,834.84 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No known diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 1.94 ft^3/s (1,410 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,640 ft^3/s May 26, 1977 (gage height, 8.99 ft), from rating curve extended above 25 ft^3/s on basis of slope-conveyance studies; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft^3/s Aug. 23 at 0830 hours (gage height, 6.14 ft), no peak above base of 500 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.06	.00	.02	.05	.08	.01	.04	.42	.00	.00	.02
2	.00	.08	.00	.04	.03	.05	1.1	.19	.08	.00	.00	.00
3	.00	.12	.00	.03	.04	.05	.04	.08	.06	.00	.00	.00
4	.00	.03	.00	.03	.04	.03	.04	.10	.13	.00	.00	.00
5	.00	.02	.00	.04	.04	.03	.13	.18	.10	.00	.00	.00
6	.00	.03	.00	.04	.05	.03	.36	.23	.02	.00	.00	.00
7	.00	.03	.00	.04	.08	.03	.43	.06	.00	.00	.00	.00
8	.00	.07	.00	.07	.05	.02	.22	.04	.00	.00	.00	.00
9	.07	.00	.00	.05	.06	.03	.16	.24	.00	.00	.00	.00
10	.00	.00	.00	.04	.09	.04	.45	.49	1.8	.00	.00	.00
11	.00	.00	.00	.03	.07	.03	.35	.51	.19	.00	1.9	.00
12	.00	.01	.00	.02	.07	.04	.24	.48	.00	.00	3.1	.00
13	.00	.02	.00	.01	.07	.12	.10	.59	.00	.00	.03	.00
14	.00	.01	.00	.00	.19	.34	.08	.52	.00	.00	.00	.00
15	.00	.00	.00	.00	.06	.27	.07	.51	.00	.00	.00	.00
16	.00	.02	.00	.00	.04	.03	.08	.47	.00	.00	.00	.00
17	.00	.02	.00	.00	.05	.04	.26	.45	.00	.00	.00	.00
18	.00	.02	.00	.00	.10	.04	.25	.43	.00	.00	.00	.00
19	.01	.00	.00	.00	.07	.02	.14	.35	.00	.00	.00	.00
20	.91	.00	.00	.00	.07	.03	.17	.29	.00	.00	.00	.00
21	.12	.02	.00	.00	.08	.05	.02	.48	.00	.00	.00	.00
22	.01	.00	.00	.00	.22	.03	.02	.45	.00	.00	2.5	.00
23	.06	.00	.00	.00	.12	.04	.11	.45	.13	.00	25	.00
24	.03	.00	.00	.00	.12	.02	.17	.51	4.8	.00	3.3	.00
25	.02	.00	.00	.01	.22	.05	.34	.36	.00	.00	.07	.00
26	.02	.01	.00	.02	.20	.03	.29	.23	.00	.00	.06	.00
27	.05	.00	.00	.04	.08	.34	.03	.49	.00	.00	.06	.00
28	.07	.00	.00	.06	.07	.02	.01	.18	.00	.00	.06	.00
29	.02	.00	.00	.07	.08	.02	.70	.09	.00	.00	.05	.00
30	.02	.00	.00	.06	---	.04	.02	.18	.00	.00	.03	.00
31	.03	---	.00	.03	---	.02	---	.40	---	.00	.02	---
TOTAL	1.44	.57	.00	.75	2.51	2.01	6.39	10.07	7.73	.00	36.18	.02
MEAN	.046	.019	.000	.024	.087	.065	.21	.32	.26	.000	1.17	.001
MAX	.91	.12	.00	.07	.22	.34	1.1	.59	4.8	.00	25	.02
MIN	.00	.00	.00	.00	.03	.02	.01	.04	.00	.00	.00	.00
AC-FT	2.9	1.1	.00	1.5	5.0	4.0	13	20	15	.00	72	.04

CAL YR 1983 TOTAL 306.59 MEAN .84 MAX 27 MIN .00 AC-FT 608
WTR YR 1984 TOTAL 67.67 MEAN .18 MAX 25 MIN .00 AC-FT 134

07228000 CANADIAN RIVER NEAR CANADIAN, TX
(National stream-quality accounting network)

LOCATION.--Lat 35°56'06", long 100°22'13", Hemphill County, Hydrologic Unit 11090106, near left bank on downstream side of pier of bridge on U.S. Highways 60 and 83, 600 ft downstream from Panhandle and Santa Fe Railway Co. bridge, 1.2 mi downstream from Red Deer Creek, 1.6 mi northeast of Canadian, and 433.9 mi upstream from mouth.

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

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,301.50 ft National Geodetic Vertical Datum of 1929. July 1, 1924, to Aug. 31, 1925, and Apr. 21 to Dec. 15, 1938, nonrecording gage; Dec. 16, 1938, to Sept. 30, 1953, water-stage recorder and nonrecording gages; all at site 300 ft upstream at same datum.

REMARKS.--Water-discharge records fair. Extreme low flow is maintained by springs which enter the river about 600 ft above gage. Some regulation and diversions from Lake Meredith (station 07227900) 75 mi upstream. Gage-height telemeter at station.

AVERAGE DISCHARGE.--26 years (water years 1939-64) prior to completion of Lake Meredith, 549 ft^3/s (397,800 acre-ft/yr); 20 years (water years 1965-84) regulated, 87.7 ft^3/s (63,540 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft^3/s Sept. 23, 1941 (gage height, 9.8 ft), from graph based on gage readings, from rating curves for two channels extended above 8,000 and 54,000 ft^3/s; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 20.0 ft Oct. 2, 1904. Floods of May 2, 1914, and Oct. 5, 1923, reached stages of 12 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft^3/s June 11 at 0930 hours (gage height, 4.70 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	16	31	17	69	66	180	88	14.0	17.00	.09	3.00
2	.00	19	32	20	67	65	190	95	15.0	18.00	.11	1.60
3	.08	18	36	26	59	63	190	93	17.0	15.00	.15	3.90
4	.02	16	39	32	61	62	168	82	18.0	13.00	.16	4.70
5	.03	16	35	61	61	61	124	77	14.0	13.00	.22	2.90
6	.00	17	32	103	63	60	99	91	11.0	13.00	.21	1.00
7	.03	19	37	106	65	60	89	85	9.3	11.00	.22	.34
8	.02	21	35	89	67	59	84	71	7.8	7.90	.29	.28
9	.05	18	35	74	81	58	66	59	7.4	6.30	.34	.24
10	.12	17	35	70	84	57	85	47	10.0	5.10	.86	.22
11	.08	18	35	75	79	56	110	40	547.0	5.40	4.20	.18
12	.02	19	33	71	61	56	123	39	149.0	6.80	5.10	.17
13	.08	20	38	66	61	57	103	39	91.0	6.30	6.10	.17
14	.16	22	38	60	63	61	85	37	50.0	4.40	6.60	.19
15	.29	22	33	50	59	65	73	37	35.0	2.80	6.20	.23
16	.19	23	30	50	57	70	69	36	26.0	2.00	5.50	.27
17	.16	24	20	40	59	74	70	37	20.0	2.40	4.30	.30
18	.37	25	16	35	59	74	70	37	19.0	2.10	2.30	.28
19	.94	25	13	30	60	74	71	38	22.0	1.10	.87	.26
20	4.80	25	12	30	59	73	68	37	34.0	.30	.47	.32
21	6.40	24	11	30	59	73	67	33	33.0	.12	.53	.33
22	5.20	24	10	40	58	79	64	31	25.0	.04	.50	.42
23	7.40	26	9	60	58	83	64	35	21.0	.00	2.20	.22
24	9.40	27	9	86	57	86	61	29	97.0	.00	2.50	.26
25	8.70	28	8	97	56	89	60	25	28.0	.01	11.00	.27
26	8.40	27	9	134	56	93	56	24	32.0	.09	19.00	.31
27	9.10	19	10	129	60	100	53	22	28.0	.11	19.00	.49
28	10.00	16	11	127	63	110	50	19	26.0	.12	14.00	.51
29	11.00	36	10	114	64	130	68	19	21.0	.12	14.00	.51
30	13.00	36	12	97	---	150	85	18	18.0	.14	9.30	.51
31	14.00	---	15	84	---	170	---	17	---	.08	6.10	---
TOTAL	110.04	663	729	2103	1825	2434	2745	1437	1445.5	153.73	142.42	24.38
MEAN	3.55	22.1	23.5	67.8	62.9	78.5	91.5	46.4	48.2	4.96	4.59	.81
MAX	14	36	39	134	84	170	190	95	547	18	19	4.7
MIN	.00	16	8.0	17	56	56	50	17	7.4	.00	.09	.17
AC-FT	218	1320	1450	4170	3620	4830	5440	2850	2870	305	282	48

CAL YR 1983	TOTAL	34770.05	MEAN	95.3	MAX	8030	MIN	.00	AC-FT	68970
WTR YR 1984	TOTAL	13812.07	MEAN	37.7	MAX	547	MIN	.00	AC-FT	27400

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1968 to current year. Pesticide analyses: October 1971 to September 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURES: October 1974 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,480 micromhos Aug. 12, 1979; minimum daily, 461 micromhos Sept. 8, 1980.
WATER TEMPERATURES: Maximum daily, 39.0°C June 28, 1979; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV 14...	1300	22	2900	8.1	14.0	1.5	11.8	127	.2	K26
JAN 23...	0915	60	2900	7.8	1.0	3.5	12.5	97	1.7	K38
MAR 20...	1400	73	3010	8.1	14.0	10	14.0	150	1.2	K20
MAY 07...	0830	79	3130	8.2	14.5	18	11.3	122	4.7	K81
JUL 17...	1130	.30	2390	8.2	30.0	6.1	10.5	153	2.7	230
AUG 21...	0945	.64	950	7.8	23.5	3.4	7.9	102	2.0	K30

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV 14...	80	460	240	100	50	450	9	12	220	200
JAN 23...	290	570	310	140	54	400	8	9.7	260	240
MAR 20...	K33	520	270	120	53	410	8	12	250	230
MAY 07...	110	530	310	120	56	440	9	11	220	240
JUL 17...	K93	310	120	63	38	380	10	7.1	190	120
AUG 21...	K60	250	11	69	19	110	3	3.6	240	28

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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV 14...	730	2.2	20	1670	1700	--	<.010	<.10	<.10	.040
JAN 23...	690	2.1	29	1970	1700	.59	.010	.60	.58	.690
MAR 20...	670	2.9	23	1720	1700	--	<.010	.10	<.10	.050
MAY 07...	730	2.4	14	1840	1700	--	<.010	<.10	<.10	.020
JUL 17...	590	1.6	19	1340	1300	--	<.010	<.10	<.10	.040
AUG 21...	150	1.0	31	520	560	--	.020	<.10	<.10	.040

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 14...	.060	.86	.90	.020	.010	.020	13	.77	73
JAN 23...	.670	.41	1.1	.060	.050	.040	33	5.3	53
MAR 20...	.030	.65	.70	.090	.050	.030	39	7.7	64
MAY 07...	.020	1.1	1.1	.150	.010	.020	51	11	75
JUL 17...	.030	.56	.60	.060	<.010	<.010	10	.00	58
AUG 21...	.020	.26	.30	.050	.010	.020	25	.04	42

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 14...	1300	2	100	<10	1	<1	1	2	60	3
MAR 20...	1400	2	200	<10	<1	<1	<1	1	50	<1
MAY 07...	0830	2	<100	<10	<1	2	5	2	30	<1
AUG 21...	0945	3	510	1	<1	<1	<3	3	37	5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 14...	90	40	<.1	4	3	1	<1	1800	9	10
MAR 20...	100	40	<.1	4	<1	1	<1	2100	14	10
MAY 07...	110	20	<.1	5	6	1	<1	2300	14	10
AUG 21...	54	360	<.1	<10	1	<1	<1	1	<6	13

07235000 WOLF CREEK AT LIPSCOMB, TX

LOCATION.--Lat 36°14'19", long 100°16'31", Lipscomb County, Hydrologic Unit 11100203, on right bank at downstream side of State Highway 305, 0.3 mi north of Lipscomb, 0.6 mi downstream from Sand Creek, 2 mi upstream from Plum Creek, and 61.2 mi upstream from mouth.

DRAINAGE AREA.--697 mi^2, of which 222 mi^2 probably is noncontributing.

PERIOD OF RECORD.--October 1937 to September 1942, October 1961 to current year. Prior to 1941, monthly discharges only, published in WSP 1311.
Water-quality records: Chemical and biochemical analyses: May 1980.

REVISED RECORDS.--WSP 1311: 1938-39, drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 2,371.29 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 25, 1938, nonrecording gage, Feb. 25, 1938, to Sept. 30, 1942, water-stage recorder at present site at datum 5.77 ft higher.

REMARKS.--Records fair. Small diversions upstream from station for irrigation and recreation.

AVERAGE DISCHARGE.--28 years (water years 1938-42, 1962-84), 15.5 ft^3/s (0.44 in/yr), 11,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s Oct. 21, 1941 (gage height, 11.57 ft, present datum), from rating curve extended above 14,000 ft^3/s on basis of velocity-area studies; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 15.5 ft June 23, 1957, present site and datum, from floodmarks. A flood in May 1955 reached a stage of 12.1 ft, present site and datum, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 475 ft^3/s June 26 at 1430 hours (gage height, 6.27 ft), no peak above of 500 ft^3/s; minimum, no flow Dec. 23-25 due to freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.44	1.2	.40	1.7	1.1	2.7	2.6	.56	6.3	.48	.20
2	.48	.44	1.2	.50	1.5	1.2	4.2	2.3	.55	5.3	.44	.25
3	.58	.40	1.3	.60	1.3	1.1	4.2	3.2	.59	4.5	.44	.27
4	.46	.39	1.3	.70	1.3	1.1	3.8	2.9	.59	5.9	.40	.24
5	.39	.37	1.3	1.6	1.3	1.1	3.6	2.7	.46	4.7	.37	.24
6	.39	.45	1.2	1.5	1.2	1.0	3.6	2.6	.46	3.9	.41	.22
7	.39	.53	1.1	1.5	1.1	.95	3.4	2.2	.40	3.2	.49	.20
8	.44	.61	1.1	1.5	.95	.95	3.4	1.9	.35	2.6	1.1	.19
9	.46	.63	1.1	1.4	1.0	1.0	3.0	1.9	.35	2.3	.93	.20
10	.45	.63	1.1	1.8	1.1	.95	2.9	1.7	.42	2.1	.95	.17
11	.43	.63	1.1	1.9	1.1	.95	3.2	1.5	.75	2.1	.98	.15
12	.40	.69	1.1	1.9	1.1	1.0	3.0	1.4	.55	2.0	.93	.15
13	.40	.70	1.1	1.6	1.1	1.1	2.9	1.3	.44	1.7	.82	.15
14	.41	.69	1.1	1.4	1.1	1.1	2.7	1.4	.47	1.5	.64	.18
15	.37	.69	1.1	1.3	1.2	1.0	2.5	1.2	.47	1.5	.59	.19
16	.41	.72	.90	1.3	1.1	.92	2.3	1.1	.40	1.6	.49	.19
17	.56	.75	.80	1.4	1.2	1.1	2.3	1.1	.38	1.4	.46	.20
18	.48	.73	.60	.80	1.5	1.2	2.3	1.1	.37	1.3	.38	.21
19	.55	.69	.40	.50	1.4	1.2	2.3	1.3	.44	1.1	.35	.21
20	1.0	.76	.30	.40	1.2	1.2	2.3	1.3	.59	1.0	.37	.19
21	.88	.87	.20	.30	1.1	1.2	2.3	1.2	.50	.86	.32	.20
22	.71	.88	.10	.30	1.1	1.1	2.3	1.0	.42	.80	.47	.21
23	.55	.88	.00	.60	1.0	1.3	2.2	1.0	.38	.69	.44	.23
24	.52	.91	.00	.80	1.0	1.7	2.2	.92	.88	.58	.37	.24
25	.53	1.0	.00	1.1	.99	1.9	2.1	.87	7.7	.63	.33	.23
26	.48	1.1	.20	1.9	1.0	2.0	1.9	.88	133	.66	.33	.25
27	.48	1.1	.50	2.1	.95	2.1	1.7	.85	33	.58	.29	.33
28	.44	1.1	.40	2.5	.95	2.5	1.6	.81	17	.57	.27	.30
29	.44	1.1	.20	2.4	1.0	2.2	2.3	.81	11	.78	.25	.22
30	.44	1.2	.20	2.0	---	2.1	2.9	.72	8.1	.70	.21	.21
31	.42	---	.30	1.8	---	2.6	---	.61	---	.52	.20	---
TOTAL	15.42	22.08	22.50	39.80	33.54	41.92	82.1	46.37	221.57	63.37	15.50	6.42
MEAN	.50	.74	.73	1.28	1.16	1.35	2.74	1.50	7.39	2.04	.50	.21
MAX	1.0	1.2	1.3	2.5	1.7	2.6	4.2	3.2	133	6.3	1.1	.33
MIN	.37	.37	.00	.30	.95	.92	1.6	.61	.35	.52	.20	.15
CFSM	.001	.002	.002	.003	.002	.003	.006	.003	.02	.004	.001	.000
IN.	.00	.00	.00	.00	.00	.00	.01	.00	.02	.00	.00	.00
AC-FT	31	44	45	79	67	83	163	92	439	126	31	13

CAL YR 1983 TOTAL 771.47 MEAN 2.11 MAX 35 MIN .00 CFSM .004 IN .06 AC-FT 1530
WTR YR 1984 TOTAL 610.59 MEAN 1.67 MAX 133 MIN .00 CFSM .004 IN .05 AC-FT 1210

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX
(National stream-quality accounting network)

LOCATION.--Lat 34°50'15", long 101°24'49", Armstrong County, Hydrologic Unit 11120103, on left bank at downstream side of bridge on Farm Road 284, 13 mi northeast of Wayside, 26 mi south of Claude, and at mile 1,145.

DRAINAGE AREA.--4,211 mi , of which 3,281 mi probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,463.74 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Several small diversions above station.

AVERAGE DISCHARGE.--17 years, 27.0 ft^3/s (19,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,000 ft^3/s Aug. 28, 1968 (gage height, 13.0 ft, from floodmark); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,400 ft^3/s June 11 at 0200 hours (gage height, 12.49 ft), no other peak above base of 6,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.99	.34	19.00	.60	.42	.99	.12	.00	15.0	3.1	.88
2	.00	1.10	.54	4.50	.49	.39	5.10	.18	.05	22.0	2.7	142.00
3	.00	1.00	.62	2.70	.49	.46	.85	.11	.00	13.0	5.5	29.00
4	.00	.87	.40	2.00	.49	.40	.45	.09	.06	14.0	3.7	8.20
5	.00	.95	.29	1.50	.49	.35	.42	.11	.00	10.0	2.0	3.80
6	.04	.84	.31	1.10	.55	.34	.36	.11	.00	8.3	1.6	2.40
7	.04	.65	.33	.81	.49	.38	93.00	.09	.00	6.1	1.4	1.80
8	.03	.65	.32	.73	1.10	.31	19.00	.09	.00	5.1	6.7	1.70
9	44.00	.38	.33	.81	.92	.28	1.80	.09	.00	3.9	9.7	2.60
10	1.90	.45	.33	.66	.64	.31	.53	.09	144.00	3.8	9.9	3.10
11	.28	.45	.27	.66	.35	.43	.32	.07	6560.00	4.1	104.0	2.90
12	.12	.41	.36	.54	.37	.51	.17	.08	387.00	4.2	94.0	2.30
13	.08	.46	.33	.54	.41	.38	.12	.06	288.00	3.3	48.0	2.40
14	.06	.41	.25	.50	.39	.28	.08	.06	107.00	2.4	23.0	3.10
15	.05	.34	.34	.45	.30	.22	.10	.05	64.00	2.3	12.0	3.60
16	.25	.37	.30	.50	.29	.27	.11	.04	39.00	2.6	7.2	3.60
17	.85	.31	.25	.45	.34	.32	.13	.05	205.00	3.1	4.9	4.20
18	318.00	.39	.22	.40	.24	.40	.14	1.70	478.00	3.4	3.9	3.40
19	291.00	.33	.20	.40	.24	.24	.13	.72	161.00	3.5	3.5	3.10
20	1080.00	.29	.20	.45	.32	.23	.15	.08	165.00	3.7	2.9	3.70
21	222.00	.24	.15	.50	.41	.24	.11	.02	101.00	4.1	3.8	3.00
22	33.00	.63	.10	.70	.41	.40	.10	.00	82.00	4.6	5.7	3.10
23	8.60	.49	.10	.80	.29	1.00	.10	.00	67.00	4.9	6.5	2.50
24	4.90	.35	.10	1.10	.32	.53	.11	.00	63.00	19.0	6.8	2.30
25	3.40	.33	.10	1.20	.35	.35	.10	.00	53.00	27.0	108.0	2.00
26	2.70	.50	.10	.90	2.30	.35	.08	.00	47.00	14.0	27.0	2.90
27	1.80	.33	.15	.60	1.00	1.30	.07	.00	38.00	8.7	10.0	6.40
28	1.50	.37	.20	.60	.58	.69	.09	.00	32.00	6.0	3.7	4.40
29	1.40	.38	.15	.54	.46	.37	.12	.00	24.00	8.7	2.5	7.60
30	1.40	.32	.15	.39	---	.61	.11	.00	17.00	8.1	1.5	4.30
31	1.30	---	1.00	.54	---	1.90	---	.00	---	4.8	1.2	---
TOTAL	2018.70	15.58	8.83	46.57	15.63	14.66	124.94	4.01	9122.11	243.7	526.4	266.28
MEAN	65.1	.52	.28	1.50	.54	.47	4.16	.13	304	7.86	17.0	8.88
MAX	1080	1.1	1.0	19	2.3	1.9	93	1.7	6560	27	108	142
MIN	.00	.24	.10	.39	.24	.22	.07	.00	.00	2.3	1.2	.88
AC-FT	4000	31	18	92	31	29	248	8.0	18090	483	1040	528

CAL YR 1983 TOTAL 2721.31 MEAN 7.46 MAX 1080 MIN .00 AC-FT 5400
WTR YR 1984 TOTAL 12407.41 MEAN 33.9 MAX 6560 MIN .00 AC-FT 24610

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1981.
WATER TEMPERATURES: October 1968 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 51,100 micromhos July 30, 1978; minimum daily, 417 micromhos July 10, 1975.
WATER TEMPERATURES: Maximum daily, 38.0°C Oct. 14, 1968, June 13, 1975; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
21...	1400	.23	26600	8.6	16.5	.80	9.8	124	.2	K89	K29	2700
JAN												
26...	0830	1.1	17400	7.9	.5	<.10	15.1	124	.8	K60	K55	2200
MAR												
21...	1300	.33	30800	8.0	20.0	2.1	10.8	147	.7	<4	K20	2800
MAY												
09...	1630	.10	51300	8.0	27.0	10	16.0	268	1.2	K20	K40	4500
JUL												
16...	1345	2.3	41500	8.0	32.5	1.6	7.6	134	1.4	84	350	3300
AUG												
20...	1545	2.5	37300	7.9	34.0	1.6	6.7	120	1.2	K8	K20	4400

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
21...	2600	760	200	5100	44	73	140	1400	9000	.90	27
JAN											
26...	2100	650	150	3300	32	41	140	1800	5200	1.0	27
MAR											
21...	2600	750	210	6900	59	82	130	2800	10000	.80	26
MAY											
09...	4400	1200	350	11000	74	140	120	3200	19000	.80	31
JUL											
16...	3200	920	250	8700	68	140	150	3000	14000	.80	30
AUG											
20...	4300	1300	280	7600	52	110	110	3000	13000	.80	29

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
21...	18300	17000	<.10	.130	.50	<.010	<.010	.030	7	.00	96
JAN											
26...	11900	11000	<.10	.150	.30	<.010	<.010	.030	3	.00	67
MAR											
21...	20500	21000	.67	.550	.20	.020	.010	.020	5	.00	93
MAY											
09...	15900	35000	<.10	.350	.30	.010	.010	.030	5	.00	31
JUL											
16...	28400	27000	<.10	.270	.40	.010	<.010	<.010	2	.01	29
AUG											
20...	25600	25000	<.10	.400	.30	<.010	.010	<.010	8	.05	79

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 21...	1400	3	100	<10	2	<1	39	5	180	1
MAR 21...	1300	2	100	10	<1	<1	<1	1	100	6
MAY 09...	1630	5	200	<10	<1	<1	<1	2	160	<1
AUG 20...	1545	5	200	<10	<1	<1	<1	4	120	4

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 21...	190	180	<.1	5	26	1	<1	7000	120	30
MAR 21...	160	230	<.1	3	<1	1	<1	16000	110	20
MAY 09...	170	230	<.1	4	<1	<1	<1	29000	200	20
AUG 20...	140	290	<.1	6	3	2	<1	17000	160	30

07298100 MACKENZIE RESERVOIR NEAR SILVERTON, TX

LOCATION.--Lat 34°32'43", long 101°26'16", Briscoe County, Hydrologic Unit 11120104, at upstream side of dam on Tule Creek, 0.9 mi upstream from Rock Creek, 9.5 mi northwest of Silverton, and 22.7 mi upstream from mouth.

DRAINAGE AREA.--1,053 mi², of which 904 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR TX-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Freese and Nichols, Inc., Consulting Engineers bench mark).

REMARKS.--The reservoir is formed by a rolled earthfill dam 2,100 ft long. The dam was completed in August 1974 and storage began in June 1974. The uncontrolled spillway is an open cut channel just beyond the right end of dam. The service spillway is an uncontrolled ogee-type weir across a concrete chute at the right end of dam. A 30-inch gated outlet concrete pipe discharges into a valve vault at the downstream toe of the dam and then into the creek bed downstream. When facilities are completed, water will be used for municipal, industrial, and recreational purposes by the cities of Floydada, Silverton, and Tulia. Figures given herein represent total content. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	3,127.0	-
Crest of spillway	3,111.0	57,770
Crest of spillway with ogee weir	3,100.0	46,080
Lowest gated outlet (invert)	2,961.0	17

COOPERATION.--The area and capacity tables 1-A and 1-C are furnished by the MacKenzie Municipal Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,710 acre-ft June 30, July 1, 1982 (elevation, 3,047.60 ft); minimum, 598 acre-ft Oct. 1, 2, 1974 (elevation, 2,980.61 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,000 acre-ft Oct. 22 at 2000 hours (elevation, 3,045.91 ft); minimum, 12,400 acre-ft Sept. 30 at 2400 hours (elevation, 3,039.29 ft).

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

3,039.0	12,300	3,043.0	13,820
3,040.0	12,670	3,044.0	14,220
3,041.0	13,050	3,045.0	14,620
3,042.0	13,430	3,046.0	15,030

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14380	14970	14760	14490	14800	14690	14510	14310	14000	13540	13180	12850
2	14380	14970	14760	14480	14780	14700	14510	14310	13970	13520	13160	12860
3	14370	14970	14770	14480	14780	14710	14510	14310	13950	13500	13150	12850
4	14360	14960	14770	14480	14770	14680	14510	14300	13920	13480	13130	12830
5	14360	14960	14750	14490	14770	14660	14520	14300	13890	13470	13120	12820
6	14360	14960	14750	14490	14770	14650	14530	14280	13870	13440	13100	12800
7	14360	14960	14760	14490	14780	14650	14530	14240	13850	13420	13080	12780
8	14340	14960	14760	14500	14750	14630	14530	14230	13820	13400	13070	12770
9	14390	14920	14740	14480	14750	14640	14530	14240	13790	13360	13080	12750
10	14380	14910	14750	14480	14760	14620	14510	14230	13770	13330	13090	12740
11	14360	14910	14740	14480	14750	14620	14520	14210	13740	13310	13080	12720
12	14350	14910	14730	14470	14730	14640	14510	14210	13720	13300	13100	12700
13	14350	14920	14730	14470	14730	14640	14500	14200	13720	13280	13100	12680
14	14340	14900	14730	14470	14750	14640	14480	14180	13700	13270	13080	12650
15	14340	14890	14710	14470	14730	14640	14470	14170	13680	13270	13080	12630
16	14330	14890	14700	14470	14720	14620	14460	14150	13660	13270	13070	12610
17	14350	14880	14680	14470	14730	14620	14460	14140	13660	13260	13050	12600
18	14660	14870	14670	14470	14710	14610	14460	14140	13650	13260	13030	12590
19	14780	14860	14660	14520	14700	14590	14450	14140	13680	13260	13020	12570
20	14960	14850	14650	14560	14690	14590	14430	14140	13700	13260	13010	12550
21	14970	14850	14630	14600	14700	14560	14400	14150	13690	13250	12990	12540
22	14990	14840	14620	14660	14710	14550	14400	14130	13670	13250	12980	12520
23	14990	14820	14610	14710	14680	14530	14390	14120	13650	13250	12950	12510
24	14980	14820	14590	14750	14700	14530	14400	14110	13650	13240	12950	12490
25	14980	14820	14580	14800	14680	14540	14380	14090	13630	13240	12950	12460
26	14980	14800	14570	14800	14710	14520	14360	14080	13650	13230	12930	12440
27	14980	14770	14550	14800	14690	14520	14330	14070	13620	13230	12920	12430
28	14970	14780	14540	14800	14680	14500	14320	14060	13600	13250	12910	12430
29	14970	14780	14530	14800	14680	14510	14310	14040	13580	13230	12900	12410
30	14960	14760	14510	14800	---	14510	14320	14020	13560	13210	12880	12400
31	14960	---	14500	14800	---	14510	---	14010	---	13200	12870	---
MAX	14990	14970	14770	14800	14800	14710	14530	14310	14000	13540	13180	12860
MIN	14330	14760	14500	14470	14680	14500	14310	14010	13560	13200	12870	12400
(†)	3045.83	3045.34	3044.70	3045.43	3045.14	3044.72	3044.24	3043.47	3042.33	3041.39	3040.53	3039.29
(‡)	+570	-200	-260	+300	-120	-170	-190	-310	-450	-360	-330	-470

CAL YR 1983 MAX 14990 MIN 14140 †† -180
WTR YR 1984 MAX 14990 MIN 12400 †† -1990

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

07298100 MACKENZIE RESERVOIR NEAR SILVERTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1974 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JAN 03...	1800	570	3.0	170	3	38	19	48

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JAN 03...	2	15	170	100	12	1.6	.9	340

07298200 TULE CREEK NEAR SILVERTON, TX

LOCATION.--Lat 34°32'36", long 101°25'46", Briscoe County, Hydrologic Unit 11120104, on downstream side of bridge on State Highway 207, 0.1 mi downstream from Rock Creek, 1.0 mi downstream from MacKenzie Dam, 8.8 mi northwest of Silverton, 17.7 mi downstream from South Tule Draw, and 21.7 mi upstream from mouth.

DRAINAGE AREA.--1,150 mi^2, of which 960 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1964 to current year.
Water-quality records: Chemical analyses: October 1967 to September 1975. Water temperatures: October 1967 to September 1969.

REVISED RECORDS.--WDR TX 80-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 2,852.44 ft State Department of Highways and Public Transportation datum.

REMARKS.--Records poor. Since June 1974, flow is regulated by MacKenzie Reservoir 1.0 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years (water years 1965-73) prior to completion of MacKenzie Dam, 9.24 ft^3/s (6,690 acre-ft/yr); 11 years (water years 1974-84) regulated, 2.47 ft^3/s (1,790 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft^3/s May 20, 1977 (gage height, 14.5 ft, from floodmarks); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, occurred in 1892 (stage and discharge unknown); second highest stage occurred September 1926 (stage and discharge unknown); third highest stage occurred May 10, 1934, gage height, 20.3 ft (discharge unknown), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,460 ft^3/s Oct. 18 at 2100 hours (gage height, 9.82 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.04	.20	1.20	1.90	2.30	.00	.00	.00	.00	.0
2	.00	.05	.08	.40	.29	1.40	7.30	.00	.00	.64	.00	3.9
3	.00	.05	.16	.55	.09	1.20	2.90	.08	.00	.00	.00	.0
4	.00	.05	.13	.27	.07	.90	.68	.02	.00	.00	.00	.0
5	.00	.05	.10	.02	.14	.20	.39	.00	.00	.00	.00	.0
6	.00	.10	.10	.01	.18	.20	.20	.00	.00	.00	.00	.0
7	.00	.10	.08	.01	.20	.20	3.30	.00	.00	.00	.00	.0
8	.00	.05	.10	.02	.40	.20	2.40	.00	.00	.00	.00	.0
9	6.80	.00	.10	.13	.90	.20	1.20	.00	.00	.00	.00	.0
10	.00	.00	.10	.02	.90	.15	.40	.00	.00	.00	25.00	.0
11	.00	.00	.10	.05	.55	.20	.24	.00	.00	.00	.00	.0
12	.00	.00	.10	.01	.10	.90	.05	.00	.00	.00	4.70	.0
13	.00	.00	.12	.00	.10	.74	.00	.00	.00	.00	.08	.0
14	.00	.00	.14	.00	.20	.55	.00	.00	.00	.00	.00	.0
15	.00	.00	.10	.00	.10	.20	.00	.00	.00	.00	.00	.0
16	8.50	.00	.08	.00	.01	.10	.00	.00	.00	.00	.00	.0
17	3.50	.00	.08	.00	.04	.20	.00	.00	.02	.00	.00	.0
18	584.00	.00	.08	.00	.05	.74	.00	2.20	.06	.00	.00	.0
19	174.00	.00	.04	.00	.01	.20	.00	.00	1.70	.00	.00	.0
20	73.00	.00	.00	.00	.01	.10	.00	.00	1.20	.00	.00	.0
21	1.00	.00	.00	.00	.02	.15	.00	.00	.00	.00	.00	.0
22	.10	.00	.00	.00	.20	.19	.00	.00	.00	.00	.00	.0
23	.10	.01	.00	.02	.10	.15	.00	.00	.00	.00	3.90	.0
24	.10	.05	.00	.04	.05	.16	.00	.00	.00	.00	2.50	.0
25	.10	.03	.00	.06	.15	.20	.00	.00	.00	.00	.00	.0
26	.05	.04	.00	.14	2.20	.29	.00	.00	18.00	.00	.00	.0
27	.03	.04	.00	.99	5.50	.77	.00	.00	.18	.00	.00	.0
28	.01	.03	.00	2.10	4.50	1.70	.00	.00	.00	3.00	.00	.0
29	.01	.04	.00	2.10	2.40	.76	.00	.00	.00	.01	.00	.0
30	.00	.05	.00	1.60	---	.23	.00	.00	.00	.00	.00	.0
31	.00	---	.05	1.40	---	2.10	---	.00	---	.00	.00	---
TOTAL	851.30	.76	1.88	10.14	20.66	17.18	21.36	2.30	21.16	3.65	36.18	3.9
MEAN	27.5	.025	.061	.33	.71	.55	.71	.074	.71	.12	1.17	.13
MAX	584	.10	.16	2.1	5.5	2.1	7.3	2.2	18	3.0	25	3.9
MIN	.00	.00	.00	.00	.01	.10	.00	.00	.00	.00	.00	.00
AC-FT	1690	1.5	3.7	20	41	34	42	4.6	42	7.2	72	7.7

CAL YR 1983 TOTAL 1862.40 MEAN 5.10 MAX 584 MIN .00 AC-FT 3690
WTR YR 1984 TOTAL 990.47 MEAN 2.71 MAX 584 MIN .00 AC-FT 1960

07299540 PRAIRIE DOG TOWN FORK RED RIVER NEAR CHILDRESS, TX
(National stream-quality accounting network station)

LOCATION.--Lat 34°34'09", long 100°11'37", Childress County, Hydrologic Unit 11120105, on left bank at downstream side of bridge on U.S. Highways 62 and 83, 3.1 mi downstream from Salt Creek, 10.0 mi north of Childress, and at mile 1,061.

DRAINAGE AREA.--7,725 mi², of which 4,769 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1964 to March 1965 (gage heights only), April 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,628.4 ft State Department of Highways and Public Transportation datum.

REMARKS.--Water-discharge records poor. Many small diversions above station. Flow is affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 20,010 acre-ft. These structures control runoff from 95.2 mi².

AVERAGE DISCHARGE.--19 years (water years 1966-84), 102 ft³/s (73,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,400 ft³/s May 28, 1978 (gage height, 13.47 ft, from floodmark), from rating curve extended above 33,000 ft³/s; maximum gage height, 13.94 ft May 21, 1977; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 16.9 ft in May or June 1957, from information by local residents and State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 19	1730	10,600	9.85
June 11	2100	*14,100	10.17

Minimum daily discharge, 0.08 ft³/s Aug. 19, 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.0	36.0	4.2	11.0	14.0	9.2	36.00	1.50	5.6	1.60	.96	.62
2	26.0	42.0	5.8	12.0	17.0	9.1	54.00	3.80	14.0	1.20	.96	.17
3	30.0	48.0	59.0	14.0	12.0	9.0	33.00	2.70	26.0	1.00	.75	.11
4	12.0	68.0	67.0	45.0	9.7	8.9	26.00	1.20	88.0	.90	.32	42.00
5	3.9	84.0	44.0	47.0	8.2	8.8	28.00	2.20	36.0	.90	.20	35.00
6	99.0	124.0	33.0	29.0	8.2	8.8	28.00	2.20	12.0	.90	.20	12.00
7	471.0	150.0	26.0	20.0	6.8	8.8	64.00	.75	9.7	.90	.17	1.50
8	249.0	110.0	26.0	11.0	30.0	8.7	129.00	.40	8.2	.90	.14	.62
9	225.0	42.0	19.0	8.9	119.0	8.6	48.00	.62	8.2	.80	1.50	.62
10	262.0	26.0	11.0	7.0	49.0	8.6	33.00	.40	6.8	.80	235.00	.40
11	218.0	17.0	6.8	5.6	30.0	8.6	26.00	.50	1340.0	.80	250.00	.32
12	175.0	21.0	5.6	5.0	28.0	8.5	21.00	.62	1680.0	.80	250.00	.26
13	140.0	21.0	4.6	3.8	28.0	8.4	17.00	.96	383.0	.80	346.00	.40
14	78.0	14.0	4.6	3.5	21.0	8.4	17.00	.96	638.0	.70	193.00	.32
15	45.0	21.0	5.4	3.5	17.0	8.4	14.00	.75	502.0	.70	58.00	.20
16	46.0	26.0	5.0	4.0	17.0	8.3	8.20	.75	440.0	.70	9.70	.32
17	463.0	21.0	5.0	4.0	17.0	8.2	5.60	1.50	386.0	.70	.96	.40
18	595.0	17.0	4.5	3.0	12.0	8.2	4.60	1.80	732.0	.70	.14	.40
19	5670.0	14.0	4.0	3.0	12.0	8.1	3.20	33.00	790.0	.70	.08	.40
20	5940.0	14.0	4.0	5.0	11.0	8.0	4.60	1.80	713.0	.70	.11	.75
21	4740.0	14.0	3.5	10.0	11.0	8.0	3.20	1.50	709.0	.70	.08	.40
22	2120.0	28.0	3.5	18.0	10.0	8.0	2.20	1.20	309.0	.70	.08	.75
23	806.0	95.0	3.5	50.0	10.0	7.9	2.20	1.20	156.0	.75	.11	.62
24	366.0	71.0	3.5	51.0	9.8	7.9	2.70	1.50	70.0	.40	180.00	.50
25	144.0	52.0	3.5	50.0	9.6	7.9	2.70	.96	30.0	.50	250.00	.32
26	80.0	35.0	5.0	40.0	9.5	8.2	2.20	.75	10.0	.62	72.00	.17
27	45.0	20.0	9.0	19.0	9.4	17.0	1.20	2.20	4.0	.75	139.00	.40
28	33.0	9.8	10.0	17.0	9.3	48.0	1.20	674.00	3.0	.62	174.00	.50
29	28.0	13.0	9.0	19.0	9.3	30.0	2.70	68.00	2.5	42.00	42.00	.40
30	26.0	7.1	9.5	12.0	---	17.0	.62	28.00	2.0	4.60	21.00	.75
31	28.0	---	10.0	23.0	---	48.0	---	12.00	---	1.20	30.00	---
TOTAL	23200.9	1260.9	414.5	554.3	554.8	379.5	621.12	849.72	9114.0	70.04	2256.46	101.62
MEAN	748	42.0	13.4	17.9	19.1	12.2	20.7	27.4	304	2.26	72.8	3.39
MAX	5940	150	67	51	119	48	129	674	1680	42	346	42
MIN	3.9	7.1	3.5	3.0	6.8	7.9	.62	.40	2.0	.40	.08	.11
AC-FT	46020	2500	822	1100	1100	753	1230	1690	18080	139	4480	202

CAL YR 1983 TOTAL 38400.01 MEAN 105 MAX 5940 MIN .00 AC-FT 76170
WTR YR 1984 TOTAL 39377.86 MEAN 108 MAX 5940 MIN .08 AC-FT 78110

07299540 PRAIRIE DOG TOWN FORK RED RIVER NEAR CHILDRESS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1968 to current year. Chemical and biochemical analyses: January 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1982.
WATER TEMPERATURES: July 1968 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 98,100 micromhos June 18, July 8, and Aug. 9, 1970; minimum daily, 3,000 micromhos Aug. 13, 1971.
WATER TEMPERATURES: Maximum daily 40.0°C July 24, 1980; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
15...	1215	19	55000	7.1	14.0	5.9	10.8	138	.9	K31	2500	4500
JAN												
23...	1530	58	49200	7.9	10.0	.80	11.6	134	1.4	<10	K73	3900
MAR												
26...	1545	7.9	63400	6.6	15.0	3.1	9.2	129	1.8	<4	K6	4900
MAY												
07...	1415	12	76700	7.9	23.0	4.6	7.6	129	1.6	<4	<4	5300
JUL												
17...	1800	.70	77900	8.0	35.0	6.3	6.9	143	2.2	K14	K63	5600
AUG												
21...	1600	.20	74300	8.1	37.0	19	8.2	172	3.3	K8	K14	5300

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
15...	4400	1300	310	12000	81	34	120	2400	21000	.60	12
JAN											
23...	3700	1100	270	11000	80	32	120	3100	17000	.60	11
MAR											
26...	4800	1400	340	14000	90	38	110	3800	23000	.70	10
MAY											
07...	5300	1500	380	20000	120	41	95	4700	31000	.70	10
JUL											
17...	5500	1600	390	19000	110	44	70	4700	30000	.80	11
AUG											
21...	5200	1500	360	18000	110	43	59	4600	29000	.70	8.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
15...	39800	37000	.13	.320	.80	.010	.010	.040	68	3.5	31
JAN											
23...	35300	33000	.39	.420	.20	<.010	<.010	.030	61	9.6	62
MAR											
26...	44900	43000	.11	.100	.40	.020	.010	.040	45	.96	83
MAY											
07...	56200	58000	<.10	.510	.50	.010	.010	.020	23	.75	43
JUL											
17...	57600	56000	<.10	.600	.80	.010	<.010	<.010	20	.04	83
AUG											
21...	54800	54000	<.10	1.20	<.20	.030	<.010	.010	28	.02	90

07299540 PRAIRIE DOG TOWN FORK RED RIVER NEAR CHILDRESS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 15...	1215	2	<100	<10	<1	<1	1	1	190	<1
MAR 26...	1545	1	200	<10	<1	<1	<1	<1	190	8
MAY 07...	1415	2	500	210	<1	<1	<1	1	240	<1
AUG 21...	1600	3	100	<10	<1	<1	<1	5	310	5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 15...	200	180	<.1	6	1	1	<1	18000	320	30
MAR 26...	230	170	<.1	4	<1	1	<1	21000	400	40
MAY 07...	250	160	.1	8	1	2	<1	30000	200	40
AUG 21...	230	100	<.1	7	1	<1	<1	25000	400	40

07299570 RED RIVER NEAR QUANAH, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 34°24'47", long 99°44'03", Hardeman County, Hdrologic Unit 11130101, on right bank at downstream side of bridge on State Highway 6, 8 mi north of Quanah, 30 mi upstream from Salt Fork Red River, and at mile 1,030.

DRAINAGE AREA.--8,321 mi², of which 4,769 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1959 to September 1982 (continuous-record station), October 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--22,100 ft³/s Oct. 20 (gage height, 11.31 ft).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1973. Pesticide analyses: March 1968 to September 1973. Sediment records: May 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	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
OCT							
20...	1520	12500	--	21300	719000	--	--
21...	1515	2900	15.0	16100	126000	--	--
JUN							
12...	1325	2750	25.0	41000	304000	39	48
12...	1430	2750	25.0	44000	327000	39	51
13...	1330	500	29.5	20800	28100	57	72

DATE	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. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT							
20...	--	--	--	45	--	--	--
21...	--	--	--	75	--	--	--
JUN							
12...	61	71	76	86	93	98	100
12...	63	72	77	83	90	99	100
13...	84	90	92	94	98	99	100

07299670 GROESBECK CREEK AT STATE HIGHWAY 6 NEAR QUANAH, TX

LOCATION.--Lat 34°21'16", long 99°44'24", Hardeman County, Hydrologic Unit 11130101, near left bank on downstream side of bridge on State Highway 6, 2 mi downstream from confluence of North and South Groesbeck Creeks, 4 mi north of Quanah, and 9 mi upstream from mouth.

DRAINAGE AREA.--303 mi².

PERIOD OF RECORD.--November 1961 to current year. Prior to October 1974, published as "at State Highway 283".

GAGE.--Water-stage recorder. Datum of gage is 1,425.69 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several diversions upstream from station for farm and ranch use and for a gypsum wallboard plant. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years (water years 1963-84), 14.3 ft³/s (0.64 in/yr), 10,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s Oct. 20, 1983 (gage height, 24.78 ft), from rating curve extended above 7,970 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest stage occurred in June 1891; highest stage since 1891 occurred in September 1929; other large floods are reported to have occurred in 1912, 1936, 1946, 1951, 1955, and 1957, from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 20	0500	*18,000	24.78
Aug. 25	0930	1,650	16.17

Minimum discharge, 1.8 ft³/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	42	10	8.5	7.3	7.1	7.5	6.5	3.5	2.9	3.8	2.4
2	2.3	34	10	9.0	7.2	7.2	8.0	6.8	3.4	3.1	3.0	2.1
3	2.6	22	10	9.2	7.1	7.3	7.9	6.5	3.5	3.3	4.2	3.9
4	2.5	17	10	11	7.1	7.3	7.3	6.4	3.6	3.0	4.2	6.0
5	2.0	15	11	11	7.1	7.1	7.2	6.1	4.0	3.1	4.2	4.3
6	2.5	16	10	10	7.1	7.1	7.5	6.2	4.3	3.1	4.3	2.7
7	2.7	15	9.6	8.5	7.1	7.0	8.8	5.9	3.9	2.9	4.5	2.2
8	3.3	15	9.6	7.9	7.3	6.9	9.9	5.4	3.5	2.7	5.3	3.0
9	4.1	13	9.3	7.9	8.0	7.0	8.9	5.3	3.2	2.6	6.5	3.6
10	3.0	12	9.3	7.7	7.6	6.9	7.8	5.3	3.1	2.9	6.3	3.8
11	2.7	13	9.3	7.8	7.3	7.1	7.8	5.2	3.1	3.1	7.3	3.6
12	2.6	12	9.3	7.7	7.1	7.6	7.4	5.0	3.3	3.4	7.2	3.3
13	2.6	12	9.7	7.6	7.2	7.4	7.2	4.7	3.3	3.7	6.0	3.2
14	2.6	12	9.7	7.5	7.1	7.3	7.1	4.8	4.1	3.5	5.7	3.3
15	2.6	11	10	7.5	6.1	7.0	6.8	5.3	3.7	3.2	5.2	3.2
16	2.6	11	9.7	7.7	7.2	6.8	7.2	5.3	3.4	3.0	5.1	3.2
17	3.4	11	9.3	7.6	7.0	6.9	7.1	5.0	3.3	3.5	4.9	3.1
18	3.8	11	9.0	7.1	7.3	7.2	7.3	4.8	3.5	10	4.6	3.0
19	1170	10	8.5	7.1	7.0	6.6	7.3	4.9	4.2	14	4.4	3.0
20	9570	10	8.0	7.1	6.8	7.0	7.4	4.5	4.1	6.8	4.5	2.9
21	981	10	7.5	7.1	6.8	7.2	7.0	4.8	3.8	4.1	4.5	2.9
22	116	11	7.0	7.3	6.8	7.3	6.6	5.1	3.5	3.2	4.2	2.9
23	39	11	7.0	7.8	6.8	7.2	6.6	4.8	3.3	3.0	4.3	3.0
24	28	12	7.0	8.1	6.8	7.2	6.7	4.4	3.4	3.3	13	3.0
25	26	10	7.0	7.5	6.8	7.4	6.7	4.1	3.4	3.8	770	2.8
26	26	10	7.0	7.3	6.7	7.4	6.4	3.9	3.4	3.5	31	2.7
27	28	10	7.5	7.5	6.8	7.6	6.4	4.1	3.4	3.3	7.2	2.8
28	29	10	8.0	7.7	7.0	8.0	6.3	4.1	3.3	3.2	5.9	3.0
29	36	10	7.0	7.6	7.0	7.5	6.8	3.8	3.3	3.1	5.0	3.0
30	45	10	7.0	7.4	---	7.1	6.3	3.8	3.0	2.9	4.3	3.1
31	45	---	8.0	7.1	---	7.3	---	3.8	---	3.0	3.5	---
TOTAL	12189.2	418	271.3	247.8	204.5	223.0	219.2	156.6	105.8	120.2	954.1	95.0
MEAN	393	13.9	8.75	7.99	7.05	7.19	7.31	5.05	3.53	3.88	30.8	3.17
MAX	9570	42	11	11	8.0	8.0	9.9	6.8	4.3	14	770	6.0
MIN	2.0	10	7.0	7.1	6.1	6.6	6.3	3.8	3.0	2.6	3.0	2.1
CFSM	1.30	.05	.03	.03	.02	.02	.02	.02	.01	.01	.10	.01
IN.	1.50	.05	.03	.03	.03	.03	.03	.02	.01	.01	.12	.01
AC-FT	24180	829	538	492	406	442	435	311	210	238	1890	188

CAL YR 1983	TOTAL	14089.1	MEAN 38.6	MAX 9570	MIN 1.3	CFSM .13	IN 1.73	AC-FT	27950	
WTR YR 1984	TOTAL	15204.7	MEAN 41.5	MAX 9570	MIN 2.0	CFSM .14	IN 1.87	AC-FT	30160	

07299840 GREENBELT LAKE NEAR CLARENDON, TX

LOCATION.--Lat 35°00'02", long 100°53'40", Donley County, Hydrologic Unit 11120201, on upstream side near right end of dam on Salt Fork Red River and 4.3 mi north of Clarendon.

DRAINAGE AREA.--457 mi², of which 191 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1967 to current year. Prior to October 1973, published as Greenbelt Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Freese and Nichols, Inc., Consulting Engineers bench mark).

REMARKS.--The lake is formed by a rolled earthfill dam 5,800 ft long. Deliberate impoundment began Dec. 5, 1966, and the dam was completed in August 1967. The dam is the property of Greenbelt Municipal and Industrial water Authority and was built to impound water for municipal and industrial uses by the cities of Childress, Clarendon, Crowell, Hedley, and Quanah. The spillway is an uncontrolled open cut through natural ground, 1,450 ft wide and located at the left end of dam, designed to discharge 184,000 ft³/s at an elevation of 2,684.0 ft. A morning-glory-type drop inlet with a 26-foot 8.5-inch-diameter opening at crest discharges into a 7- by 7-foot concrete conduit. The outlet works consists of a 36-inch pipe that is controlled by two 20-inch valves that control the discharge into a stilling basin and to a water treatment plant. The capacity table, dated April 1964, is based on Geological Survey topographic maps dated 1962. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	2,686.0	-
Design flood	2,683.0	105,600
Crest of spillway	2,674.0	81,760
Crest of morning-glory-type drop inlet	2,663.65	59,110
Lowest gated outlet (invert)	2,597.0	900

COOPERATION.--Records of diversion and capacity table furnished by Greenbelt Municipal and Industrial water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,650 acre-ft June 26-28, 1975 (elevation, 2,655.71 ft); minimum, 2,950 acre-ft Aug. 29, 30, 1967 (elevation, 2,607.37 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,660 acre-ft Oct. 1 at 0100 hours (elevation, 2,644.62 ft); minimum, 23,160 acre-ft Sept. 30 (elevation, 2,639.76 ft).

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

2,639.0	22,370	2,643.0	26,720
2,640.0	23,410	2,644.0	27,900
2,641.0	24,480	2,645.0	29,120
2,642.0	25,580		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28620	28470	28030	27830	27940	27850	27920	27700	26740	26900	25720	24370
2	28580	28460	28050	27830	27890	27850	27960	27680	26710	26870	25680	24340
3	28530	28470	28070	27830	27900	27840	27910	27620	26690	26810	25660	24320
4	28500	28450	28080	27840	27890	27840	28000	27620	26620	26790	25630	24290
5	28470	28470	28000	27860	27900	27840	28000	27620	26640	26740	25630	24260
6	28450	28470	28060	27860	27920	27840	27970	27610	26580	26720	25600	24210
7	28450	28470	28050	27860	27920	27830	28030	27560	26530	26630	25600	24090
8	28390	28390	28030	27860	27910	27830	28120	27530	26470	26580	25580	24050
9	28440	28340	28020	27900	27910	27830	28100	27500	26450	26530	25510	24010
10	28400	28390	28010	27910	27910	27830	28100	27430	26400	26480	25450	23970
11	28350	28360	28050	27920	27910	27820	28100	27400	26660	26410	25390	23870
12	28340	28350	28020	27890	27900	27820	28100	27400	26720	26360	25340	23830
13	28310	28310	28000	27900	27900	27820	28100	27380	26920	26330	25280	23810
14	28250	28250	27950	27900	27900	27820	28030	27360	26990	26260	25220	23780
15	28270	28310	27990	27900	27900	27810	28010	27310	27010	26220	25160	23710
16	28230	28310	27990	27900	27890	27810	28010	27260	27000	26200	25110	23660
17	28240	28280	27900	27910	27890	27810	28000	27240	26980	26210	25050	23600
18	28340	28220	27960	27910	27890	27810	28010	27240	26990	26170	25000	23570
19	28380	28180	27960	27910	27890	27790	27970	27180	26990	26140	24940	23540
20	28460	28230	27890	27910	27880	27790	27940	27220	27130	26100	24880	23510
21	28520	28220	27790	27910	27880	27790	27840	27160	27130	26020	24820	23460
22	28560	28170	27910	27900	27880	27790	27850	27130	27120	26000	24760	23440
23	28560	28180	27890	27900	27880	27780	27910	27090	27100	25960	24700	23410
24	28500	28180	27860	27900	27860	27780	27880	27070	27110	25930	24650	23350
25	28530	28160	27860	27900	27860	27780	27810	27020	27060	25910	24590	23320
26	28520	28120	27850	27900	27860	27840	27680	26960	27060	25880	24560	23270
27	28510	28100	27850	27900	27860	27820	27750	26940	27010	25890	24520	23260
28	28510	28070	27840	27920	27850	27900	27730	26910	27020	25870	24500	23230
29	28460	28070	27820	27890	27850	27910	27710	26850	26960	25820	24460	23220
30	28490	28060	27820	27940	---	27940	27700	26810	26960	25810	24440	23240
31	28490	---	27820	27940	---	27950	---	26730	---	25750	24410	---
MAX	28620	28470	28080	27940	27940	27950	28120	27700	27130	26900	25720	24370
MIN	28230	28060	27790	27830	27850	27780	27680	26730	26400	25750	24410	23220
(†)	2644.48	2644.13	2643.93	2644.03	2643.96	2644.04	2643.83	2643.01	2643.20	2642.15	2640.93	2639.84
(‡)	-170	-430	-240	+120	-90	+100	-250	-970	+230	-1210	-1340	-1170
(††)	366	322	380	441	317	322	343	503	480	588	498	429

CAL YR 1983 MAX 33480 MIN 27790 ‡ -4650 †† 5035
WTR YR 1984 MAX 28620 MIN 23220 ‡ -5420 †† 4989

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.
†† Diversions, in acre-feet, for municipal and industrial uses by Greenbelt Water Authority.

07299840 GREENBELT LAKE NEAR CLARENDON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JAN 04...	1020	416	.0	130	32	29	13	32

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JAN 04...	1	4.7	94	60	33	.70	1.4	230

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX

LOCATION.--Lat 34°57'27", long 100°13'14", Collingsworth County, Hydrologic Unit 11120202, near center of stream at downstream side of bridge on U.S. Highway 83, 4 mi downstream from Fort Worth and Denver (Burlington) Railway Co. bridge, 4.5 mi south of Lutie, and 7.2 mi north of Wellington.

DRAINAGE AREA.--1,222 mi^2, of which 209 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,941.41 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Several small diversions upstream from gage for irrigation. Some regulation for municipal use by Greenbelt Lake (station 07299840), capacity 59,100 acre-ft, 42 mi upstream.

AVERAGE DISCHARGE.--14 years (water years 1953-66) prior to completion of Greenbelt Lake, 72.6 ft^3/s (52,600 acre-ft/yr); 18 years (water years 1967-84) regulated, 45.8 ft^3/s (31,730 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 146,000 ft^3/s May 16, 1957 (gage height, 19.00 ft), from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of 63,400 ft^3/s; minimum, 0.1 ft^3/s June 19, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,560 ft^3/s June 10 at 2400 hours (gage height, 7.13 ft); minimum daily, 1.2 ft^3/s July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	9.7	4.7	10.0	24	22	35.0	8.2	4.1	4.2	5.4	2.1
2	4.8	9.6	5.6	12.0	26	22	77.0	11.0	7.3	5.6	4.6	2.1
3	5.1	9.6	9.7	13.0	21	22	49.0	9.6	7.5	5.6	3.9	2.1
4	3.6	9.9	7.0	16.0	18	20	32.0	8.0	6.2	4.2	3.6	1.9
5	3.0	11.0	5.0	29.0	16	19	26.0	7.7	6.2	4.2	3.8	2.2
6	3.2	18.0	4.3	22.0	15	20	22.0	7.9	6.8	3.1	5.4	2.1
7	3.6	15.0	4.6	10.0	15	21	22.0	6.4	5.6	2.8	3.5	1.7
8	3.8	14.0	4.1	8.5	23	17	122.0	6.2	4.2	2.0	3.0	1.7
9	3.9	12.0	3.7	7.9	34	16	44.0	6.1	15.0	1.8	29.0	1.9
10	4.0	11.0	4.2	5.5	36	14	21.0	5.9	294.0	1.6	25.0	1.5
11	3.8	12.0	3.8	5.9	29	14	20.0	5.6	1380.0	1.6	10.0	1.3
12	3.6	14.0	3.5	6.4	19	19	12.0	6.7	91.0	1.6	116.0	1.4
13	3.8	12.0	3.5	5.5	17	21	10.0	6.5	12.0	1.6	44.0	1.6
14	3.8	14.0	3.2	5.0	18	23	8.0	6.6	27.0	1.4	15.0	1.9
15	3.8	11.0	2.8	4.0	16	18	7.5	6.9	31.0	1.4	6.0	2.4
16	5.4	11.0	2.5	4.5	13	14	7.4	6.7	23.0	1.2	3.9	2.2
17	8.5	12.0	2.5	4.0	15	16	8.5	7.2	20.0	22.0	3.3	2.2
18	17.0	11.0	2.5	3.5	32	16	10.0	8.2	20.0	15.0	2.7	2.5
19	470.0	9.5	2.5	3.0	25	13	11.0	8.2	25.0	2.8	2.7	2.5
20	491.0	8.9	2.0	3.0	19	12	10.0	6.7	35.0	2.4	2.5	2.4
21	172.0	9.3	1.5	4.0	19	11	7.5	6.5	27.0	2.2	2.3	2.5
22	90.0	8.5	1.5	6.0	19	10	8.2	6.0	12.0	2.2	2.4	2.8
23	44.0	14.0	1.5	10.0	18	14	7.5	6.3	3.5	2.4	3.3	2.1
24	38.0	9.2	1.5	19.0	17	13	8.2	6.8	4.1	3.4	4.9	2.3
25	18.0	7.7	1.5	37.0	19	13	7.5	6.2	2.7	8.3	6.1	2.1
26	13.0	6.6	1.5	60.0	23	13	6.2	6.2	57.0	5.1	3.6	2.5
27	10.0	4.5	3.0	53.0	24	20	6.2	9.2	4.6	4.1	3.0	3.0
28	7.4	5.7	6.0	38.0	21	35	6.2	24.0	94.0	4.7	3.1	3.2
29	7.2	6.2	4.0	33.0	22	38	7.5	7.4	4.6	6.5	2.7	3.1
30	8.2	5.0	2.5	26.0	---	25	9.0	5.6	3.4	6.0	2.7	3.3
31	8.5	---	5.0	23.0	---	26	---	4.9	---	5.8	2.3	---
TOTAL	1466.0	311.9	111.2	487.7	613	577	628.4	235.4	2233.8	136.8	329.7	66.6
MEAN	47.3	10.4	3.59	15.7	21.1	18.6	20.9	7.59	74.5	4.41	10.6	2.22
MAX	491	18	9.7	60	36	38	122	24	1380	22	116	3.3
MIN	3.0	4.5	1.5	3.0	13	10	6.2	4.9	2.7	1.2	2.3	1.3
AC-FT	2910	619	221	967	1220	1140	1250	467	4430	271	654	132

CAL YR 1983 TOTAL 9689.0 MEAN 26.5 MAX 1340 MIN 1.5 AC-FT 19220
WTR YR 1984 TOTAL 7197.5 MEAN 19.7 MAX 1380 MIN 1.2 AC-FT 14280

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Chemical and biochemical analyses: October 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,340 micromhos July 15, 1984; minimum daily, 330 micromhos July 30, 1982.
WATER TEMPERATURES: Maximum daily, 40.0°C July 20, 1981; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,340 micromhos July 15; minimum daily, 1,220 micromhos June 28.
WATER TEMPERATURES: Maximum daily, 30.0°C June 9, Sept. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 15...	0900	11	3490	8.0	6.0	5	1.3	13.8	120	.7	K67	130
JAN 23...	1310	10	3300	7.9	4.0	<1	4.5	15.2	126	.6	<10	K60
MAR 26...	1200	15	3390	7.9	17.0	<1	1.3	10.8	123	.5	K34	K34
MAY 07...	1145	7.5	3450	8.0	20.0	5	3.2	11.5	137	.4	200	120
JUL 17...	1500	1.8	3250	7.8	35.0	3	1.2	9.1	143	1.2	520	K190
AUG 21...	1315	3.1	3080	7.7	33.0	5	4.1	7.5	114	.9	K23	K12

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 AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 15...	1800	1700	570	96	220	2	3.9	160	1600	320	.60	19
JAN 23...	1700	1600	530	100	230	3	3.4	180	1500	350	.60	19
MAR 26...	1700	1500	530	84	210	2	4.0	150	1500	320	.60	17
MAY 07...	1700	1600	540	94	200	2	3.8	150	1600	300	.60	19
JUL 17...	1800	1700	560	91	160	2	4.0	110	1600	250	.60	20
AUG 21...	1700	1500	520	86	130	1	3.9	120	1500	180	.60	20

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 15...	2900	15	15	1.5	.010	1.5	.120	.88	1.0	<.010	1.3
JAN 23...	2800	19	6	1.5	.010	1.5	.190	.11	.30	<.010	1.3
MAR 26...	2800	<2	<2	1.4	.020	1.4	.130	.07	.20	.010	1.2
MAY 07...	2800	29	11	1.7	.020	1.7	.020	.48	.50	<.010	1.3
JUL 17...	2800	12	12	1.9	.020	1.9	.050	.55	.60	.010	3.0
AUG 21...	2500	11	3	2.0	.030	2.0	.080	.42	.50	<.010	1.3

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED SOLIDS (MG/L)	DISSOLVED SOLIDS (TONS)	DISSOLVED CHLORIDE (MG/L)	DISSOLVED CHLORIDE (TONS)	DISSOLVED SULFATE (MG/L)	DISSOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	1466.0	2820	2230	8840	250	998	1200	4810	1400
NOV.	1983	311.9	3500	2940	2470	300	253	1600	1330	1800
DEC.	1983	111.2	3050	2460	740	270	81	1300	400	1500
JAN.	1984	487.7	3050	2450	3230	270	354	1300	1750	1500
FEB.	1984	613	3350	2770	4580	290	479	1500	2460	1700
MAR.	1984	577	3350	2770	4310	290	451	1500	2320	1700
APR.	1984	628.4	3060	2460	4180	270	457	1300	2260	1500
MAY	1984	235.4	3180	2600	1650	280	176	1400	892	1600
JUNE	1984	2233.8	1900	1430	8620	180	1060	790	4750	880
JULY	1984	136.8	3230	2650	977	280	104	1400	527	1600
AUG.	1984	329.7	2420	1860	1650	220	197	1000	906	1100
SEPT	1984	66.6	3180	2580	465	280	50	1400	251	1600
TOTAL		7197.5	**	**	41700	**	4660	**	22600	**
WTD.AVG.		20	2700	2150	**	240	**	1200	**	1300

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3130	3560	3250	3280	3360	3420	3100	3280	3260	3400	3370	3190
2	3140	3570	3460	3290	3240	3430	3110	3340	3230	3370	3450	3130
3	3190	3580	3650	3470	3320	3350	3150	3280	3400	3330	3210	3170
4	3180	3560	3390	3260	3400	3360	3160	3350	3260	3240	3170	3200
5	3160	3540	3280	2740	3410	3370	3220	3320	3380	3290	3130	3120
6	3170	3580	3200	2950	3390	3330	3200	3280	3400	3220	3250	3140
7	3160	3590	2880	2980	3550	3300	3180	3340	3340	3250	3340	3180
8	3180	3580	2860	3120	3500	3320	2700	3090	3210	3220	3190	3210
9	3170	3540	2850	3260	3420	3350	2580	3170	3120	3030	2350	3190
10	3160	3500	2780	3290	3180	3370	2750	3280	2510	3100	2500	3180
11	3170	3480	2920	3340	3220	3340	2940	3310	1280	3250	2710	3220
12	3180	3450	2360	3460	3300	3320	3140	3360	3450	3480	1750	3200
13	3170	3520	2410	3550	3370	3370	3300	3340	3920	3700	2470	3190
14	3160	3500	2490	3360	3350	3300	3460	3330	3750	4020	2850	3160
15	3170	3480	2540	3400	3360	3370	3350	3340	3480	4340	3040	3190
16	3200	3460	2620	3420	3350	3610	3290	3360	3760	4300	3300	3120
17	3310	3490	2660	3460	3330	3580	3320	3400	4110	3070	3120	3090
18	3150	3500	2730	3510	3120	3610	3370	3350	4010	2870	3040	3140
19	2760	3530	2800	3550	3200	3620	3350	3450	4080	3150	3120	3060
20	2440	3450	2840	3590	3340	3600	3440	3400	3890	3480	3170	3170
21	2810	3510	2910	3560	3380	3420	3390	3390	3830	3390	3050	3140
22	3460	3470	2990	3420	3420	3300	3430	3360	3760	3370	3080	3190
23	3620	3320	3050	3280	3430	3260	3400	3300	3310	3300	3090	3220
24	3770	3450	3100	3230	3450	3340	3360	3380	3610	3170	3060	3240
25	3740	3560	3170	3100	3350	3330	3370	3340	3650	3220	3020	3190
26	3680	3530	3210	2670	3320	3320	3390	3320	2510	3340	3080	3600
27	3660	3440	3090	2630	3260	3300	3420	3150	2830	3310	3060	3020
28	3630	3170	2910	2870	3490	3250	3450	1940	1220	3210	3130	3170
29	3660	3400	3230	3110	3610	3190	3470	3370	2920	3200	3150	3180
30	3600	3490	3490	3250	---	3280	3490	3440	3240	3340	3160	3150
31	3590	---	3350	3360	---	3130	---	3290	---	3200	3180	---
MEAN	3280	3490	2980	3250	3360	3370	3240	3280	3290	3360	3020	3180

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	17.0	5.0	4.0	15.0	15.0	15.0	22.0	19.0	21.0	20.0	20.0
2	20.0	17.0	---	4.0	---	17.0	15.0	20.0	18.0	22.0	20.0	26.0
3	19.0	18.0	8.0	2.0	15.0	9.0	16.0	26.0	20.0	22.0	21.0	21.0
4	17.0	16.0	14.0	5.0	13.0	---	---	26.0	18.0	21.0	20.0	18.0
5	15.0	15.0	---	11.0	---	---	20.0	26.0	25.0	22.0	20.0	16.0
6	18.0	15.0	2.0	11.0	15.0	6.0	20.0	26.0	21.0	22.0	22.0	15.0
7	20.0	15.0	13.0	16.0	---	9.0	20.0	27.0	---	24.0	23.0	17.0
8	16.0	18.0	11.0	---	---	10.0	20.0	28.0	29.0	23.0	22.0	18.0
9	18.0	---	10.0	5.0	15.0	10.0	18.0	27.0	30.0	22.0	21.0	20.0
10	20.0	14.0	7.0	8.0	16.0	9.0	19.0	28.0	---	22.0	22.0	18.0
11	16.0	9.0	8.0	3.0	16.0	---	19.0	20.0	20.0	22.0	21.0	18.0
12	13.0	---	7.0	---	15.0	18.0	19.0	22.0	21.0	21.0	22.0	19.0
13	---	16.0	---	.0	16.0	23.0	13.0	25.0	20.0	22.0	20.0	17.0
14	15.0	9.0	---	.0	15.0	20.0	13.0	28.0	21.0	22.0	20.0	18.0
15	18.0	9.0	---	---	---	22.0	19.0	20.0	22.0	25.0	21.0	19.0
16	19.0	8.0	---	.0	15.0	24.0	15.0	18.0	21.0	22.0	22.0	20.0
17	19.0	9.0	3.0	---	16.0	24.0	14.0	18.0	25.0	22.0	21.0	28.0
18	18.0	15.0	---	---	---	6.0	15.0	17.0	20.0	23.0	21.0	30.0
19	11.0	9.0	---	---	---	6.0	22.0	20.0	20.0	22.0	21.0	13.0
20	---	8.0	---	---	15.0	10.0	20.0	18.0	26.0	22.0	27.0	15.0
21	12.0	18.0	---	---	14.0	19.0	20.0	20.0	24.0	22.0	28.0	17.0
22	12.0	14.0	---	---	18.0	17.0	20.0	18.0	24.0	22.0	---	17.0
23	---	---	---	5.0	17.0	---	24.0	16.0	25.0	23.0	23.0	18.0
24	14.0	---	---	5.0	---	18.0	14.0	19.0	28.0	---	23.0	18.0
25	14.0	9.0	---	11.0	18.0	---	15.0	20.0	25.0	---	22.0	16.0
26	13.0	9.0	---	10.0	---	18.0	---	25.0	23.0	20.0	22.0	15.0
27	12.0	---	---	10.0	---	20.0	---	---	24.0	22.0	24.0	15.0
28	15.0	5.0	---	9.0	---	15.0	---	18.0	20.0	21.0	27.0	13.0
29	15.0	11.0	---	15.0	9.0	15.0	---	15.0	22.0	22.0	24.0	8.0
30	12.0	6.0	3.0	16.0	---	15.0	26.0	14.0	20.0	20.0	21.0	20.0
31	17.0	---	4.0	15.0	---	15.0	---	14.0	---	20.0	20.0	---
MEAN	16.0	12.5	7.5	7.5	15.0	15.0	18.0	21.5	22.5	22.0	22.0	18.0

07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'32", long 99°30'28", in SW1/4SE1/4 sec.34. T.5 N, R.22 W., Greer County, Hydrologic Unit 11120202, near left bank on downstream side of pier of bridge on State Highway 34, 0.5 mi south of Mangum, 13.0 mi downstream from Fish Creek, and at mile 35.5.

DRAINAGE AREA.--1,566 mi^2, of which 209 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1905 to June 1906, October 1937 to current year. Monthly discharge only for some period, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Apr. 11, 1905, to June 30, 1906, nonrecording gage at site 0.2 mi upstream at different datum. Oct. 1, 1937, to Nov. 8, 1938, nonrecording gage at present site and datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--47 years (water years 1938-84), 84.4 ft^3/s (61,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft^3/s May 16, 1957 (gage height, 14.55 ft); maximum gage height, 14.7 ft June 16, 1938; no flow at times each year except 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft^3/s Oct. 20 (gage height, 11.17 ft), no other peak above base of 6,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	32	21	18	27	27	41	9.4	.24	18	.00	.00
2	.00	32	24	23	23	28	65	10	.12	6.6	.00	.00
3	.00	30	27	21	21	28	65	12	.44	5.0	.00	.00
4	.00	29	28	19	20	28	78	11	.76	3.5	.00	.00
5	.00	29	29	40	20	27	58	9.6	.22	2.2	.00	.00
6	.00	36	27	50	18	27	44	8.4	.10	1.5	.00	.00
7	.00	43	25	60	18	26	137	6.7	.01	.92	.00	.00
8	.00	39	25	72	22	24	132	5.3	.00	.10	.00	.00
9	.00	33	25	60	40	22	83	4.7	.00	.00	.00	.00
10	.00	28	25	45	44	20	105	3.9	.10	.00	.00	.00
11	.00	26	24	42	43	18	67	3.2	801	.00	.02	.00
12	.00	24	23	40	39	20	46	2.9	284	.00	.00	.00
13	.00	23	23	30	37	21	38	2.6	92	.00	.00	.00
14	.00	23	21	30	34	22	33	2.3	65	.00	.00	.00
15	.00	24	21	30	30	21	29	2.3	136	.00	.00	.00
16	.00	22	19	50	26	20	26	2.2	41	.00	.00	.00
17	.00	22	18	40	26	20	23	2.1	22	.00	.00	.00
18	606	22	17	30	34	21	22	2.2	20	.00	.00	.00
19	2380	22	16	23	35	19	22	2.6	44	.00	.00	.00
20	3530	22	16	23	37	17	21	2.3	27	.00	.00	.00
21	622	22	15	25	35	16	20	2.1	132	.00	.00	.00
22	199	21	15	20	33	171	17	1.9	32	.00	.00	.00
23	135	28	15	19	30	242	16	1.7	17	.00	.00	.00
24	89	32	15	18	27	34	14	1.5	11	.00	.00	.00
25	57	34	15	25	27	32	13	1.2	13	.00	26	.00
26	50	33	14	65	25	26	11	1.0	11	.00	.57	.00
27	44	29	14	65	31	29	8.7	1.8	10	.00	.00	.00
28	40	50	14	52	31	40	7.5	1.6	32	.00	.00	.00
29	36	22	13	49	29	37	7.9	1.6	29	.00	.00	.00
30	34	20	13	36	---	36	11	1.2	40	.00	.00	.00
31	34	---	15	29	---	39	---	.72	---	.00	.00	---
TOTAL	7856.00	852	612	1149	862	1158	1261.1	122.02	1860.99	37.82	26.59	.00
MEAN	253	28.4	19.7	37.1	29.7	37.4	42.0	3.94	62.0	1.22	.86	.000
MAX	3530	50	29	72	44	242	137	12	801	18	26	.00
MIN	.00	20	13	18	18	16	7.5	.72	.00	.00	.00	.00
AC-FT	15580	1690	1210	2280	1710	2300	2500	242	3690	75	53	.00

WTR YR 1984 TOTAL 15797.52 MEAN 43.2 MAX 3530 MIN .00 AC-FT 31330

07301300 NORTH FORK RED RIVER NEAR SHAMROCK, TX

LOCATION.--Lat 35°15'51", long 100°14'29", Wheeler County, Hydrologic Unit 11120302, on left bank at downstream side of bridge on U.S. Highway 83, 2.5 mi north of Shamrock, 16 mi upstream from Texas-Oklahoma State line, and 23 mi downstream from McClellan Creek.

DRAINAGE AREA.--1,082 mi^2, of which 379 mi^2 probably is noncontributing.

PERIOD OF RECORD.--1951-63 (occasional low-flow measurements), February 1964 to current year.
Water-quality records: Chemical analyses: October 1964 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 2,165.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Some regulation by Lake McClellan (capacity, 5,000 acre-ft) 41 mi upstream. Flow is affected at times by discharge from the flood-detention pools of eleven floodwater-retarding structures with a combined detention capacity of 18,290 acre-ft. These structures control runoff from 165 mi^2. Gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years, 31.0 ft^3/s (22,460 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft^3/s May 29, 1975 (gage height, 7.47 ft), from rating curve extended above 3,800 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1915, 16.1 ft in May 1957, from information by State Department of Highways and Public Transportation and by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 816 ft^3/s June 11 at 2015 hours (gage height, 3.10 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	4.2	3.0	85	.03	.00	.00	.00	.00
2	.00	.00	.00	3.6	3.6	3.1	73	5.4	.00	.00	.00	.00
3	.00	.00	.05	5.7	3.0	28	89	.25	.03	.00	.00	.00
4	.00	.00	.00	3.6	3.0	20	81	.02	.00	.00	.00	.00
5	.00	.00	.00	10	2.3	10	60	.00	.00	.00	.00	.00
6	.00	.00	.00	7.2	3.0	6.7	48	.00	.00	.00	.00	.00
7	.00	.00	.00	1.9	2.2	6.3	277	.00	.00	.00	.00	.00
8	.00	.00	.00	.59	56	5.7	152	.00	.00	.00	.00	.00
9	.84	.00	.01	.34	29	5.1	81	.00	.00	.00	.00	.00
10	.00	.00	.02	.06	47	4.5	81	.00	18	.00	.00	.00
11	.00	.00	.00	.02	30	11	81	.00	272	.00	.00	.00
12	.00	.00	.00	.00	16	26	28	.00	98	.00	.00	.00
13	.00	.00	.00	.00	11	30	4.3	.00	2.5	.00	.00	.00
14	.00	.00	.00	.00	7.7	21	.21	.00	.53	.00	.00	.00
15	.00	.00	.00	.00	4.4	9.0	.09	.00	1.0	.00	.00	.00
16	.00	.00	.00	.00	2.3	4.4	.09	.00	.07	.00	.00	.00
17	5.3	.00	.00	.00	21	6.9	.05	.00	.03	.00	.00	.00
18	80	.00	.00	.00	68	15	.05	.00	.04	.00	.00	.00
19	107	.00	.00	.00	18	5.8	.06	.00	.16	.00	.00	.00
20	25	.00	.00	.00	9.5	3.2	.05	.00	1.2	.00	.00	.00
21	.12	.00	.00	.00	6.9	1.5	.02	.00	.04	.00	.00	.00
22	.02	.67	.00	.00	8.2	1.3	.02	.00	.00	.00	.00	.00
23	.02	7.7	.00	.00	6.0	120	.00	.00	.13	.00	.00	.00
24	.01	.05	.00	.00	3.3	34	.00	.00	121	.00	.00	.00
25	.00	.00	.00	.30	2.9	27	.00	.00	68	.00	.00	.00
26	.00	.00	.00	70	8.8	13	.00	.00	21	.00	.00	.00
27	.00	.00	.00	98	13	81	.00	5.4	92	.00	.00	.00
28	.00	.00	.00	31	22	214	.00	.16	216	.00	.00	.00
29	.00	.00	.00	7.7	21	52	4.7	.00	13	.00	.00	.00
30	.00	.00	.00	3.0	---	23	.00	.00	.37	.00	.00	.00
31	.00	---	.00	3.0	---	71	---	.00	---	.00	.00	---
TOTAL	218.31	8.42	.08	246.01	433.3	862.5	1145.64	11.26	925.10	.00	.00	.00
MEAN	7.04	.28	.003	7.94	14.9	27.8	38.2	.36	30.8	.000	.000	.000
MAX	107	7.7	.05	98	68	214	277	5.4	272	.00	.00	.00
MIN	.00	.00	.00	.00	2.2	1.3	.00	.00	.00	.00	.00	.00
AC-FT	433	17	.2	488	859	1710	2270	22	1830	.00	.00	.00

CAL YR 1983 TOTAL 10772.11 MEAN 29.5 MAX 1420 MIN .00 AC-FT 21370
WTR YR 1984 TOTAL 3850.62 MEAN 10.5 MAX 277 MIN .00 AC-FT 7640

07301410 SWEETWATER CREEK NEAR KELTON, TX

LOCATION.--Lat 35°28'23", long 100°07'14", Wheeler County, Hydrologic Unit 11120302, near center of stream on downstream side of bridge on Farm Road 592, 5 mi north of Kelton, 8 mi upstream from Texas-Oklahoma State line, and 8.5 mi northeast of Wheeler.

DRAINAGE AREA.--287 mi^2, of which 20 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 2,230 ft, from topographic map.

REMARKS.--Water-discharge records fair. Diversion above station for ranch use.

AVERAGE DISCHARGE.--22 years (water years 1963-84), 13.0 ft^3/s (0.66 in/yr), 9,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,890 ft^3/s May 20, 1977 (gage height, 15.73 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, about 20 ft May 16, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75 ft^3/s June 11 at 1330 hours (gage height, 7.97 ft), no peak above base of 500 ft^3/s; minimum, no flow Sept. 7-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	1.9	2.8	4.0	8.9	9.4	14	10	3.2	3.5	.47	.12
2	.11	2.0	3.0	4.5	9.4	9.4	28	10	2.9	2.7	.37	.17
3	.15	2.0	4.1	5.0	9.2	9.3	25	11	3.3	2.0	.37	.17
4	.16	2.0	4.1	5.5	8.9	9.4	17	10	4.0	1.8	.37	.06
5	.16	2.0	3.8	6.0	8.7	8.9	15	9.6	3.7	1.7	.37	.06
6	.16	2.2	3.7	6.5	8.6	8.8	14	9.3	3.0	1.2	.42	.01
7	.30	2.4	3.7	7.0	8.7	8.7	27	8.6	2.7	.80	.32	.00
8	.54	2.2	3.8	7.5	9.1	8.5	29	8.3	2.4	.55	.32	.00
9	.63	2.0	4.0	7.5	10	8.7	18	8.0	2.2	.39	.42	.00
10	.67	1.8	4.2	6.9	9.7	8.7	17	7.5	2.5	.28	.66	.00
11	.57	1.7	4.3	7.1	9.6	8.9	16	7.1	35	.30	.95	.00
12	.46	1.8	4.2	6.8	9.1	9.8	15	6.6	9.0	.26	1.1	.00
13	.47	2.1	4.4	6.0	9.0	10	13	6.4	5.6	.23	.95	.00
14	.43	2.1	4.4	4.0	9.1	10	12	6.1	5.3	.15	.73	.00
15	.37	2.2	4.4	3.5	9.0	10	12	5.9	4.2	.20	.53	.00
16	.39	2.2	4.0	4.0	8.5	10	11	5.6	3.3	.20	.47	.00
17	.57	2.4	4.0	3.0	8.7	10	11	5.4	2.6	.32	.42	.00
18	.75	2.5	3.5	2.0	13	10	11	5.6	2.3	.53	.37	.00
19	1.6	2.4	3.0	1.5	11	10	11	5.8	2.8	.28	.32	.00
20	4.1	2.4	2.5	2.0	10	10	11	5.6	3.6	.12	.24	.00
21	7.3	2.4	2.0	3.0	9.9	9.6	11	5.4	3.4	.06	.17	.00
22	3.4	2.4	1.8	4.0	9.9	9.3	11	5.0	2.3	.04	.20	.00
23	2.5	2.8	1.6	5.0	9.5	12	10	4.6	1.9	.04	.42	.00
24	2.0	2.8	1.5	6.0	9.3	13	10	4.6	3.9	.08	.87	.00
25	1.7	2.9	1.5	8.0	9.3	12	10	4.2	3.0	.20	1.3	.00
26	1.5	2.9	1.8	9.0	9.6	11	10	4.0	2.6	.21	1.3	.00
27	1.6	2.9	1.8	10	9.7	11	9.4	4.0	2.3	.14	.80	.01
28	1.5	2.9	2.0	9.7	9.2	18	9.1	4.0	3.1	.15	.66	.02
29	1.5	2.9	1.5	9.4	9.3	14	11	3.8	5.5	.31	.37	.08
30	1.6	2.9	2.0	8.8	---	12	12	3.6	5.9	.29	.17	.10
31	1.7	---	3.0	8.9	---	13	---	3.6	---	.49	.17	---
TOTAL	39.04	70.1	96.4	182.1	273.9	323.4	430.5	199.2	137.5	19.52	16.60	.80
MEAN	1.26	2.34	3.11	5.87	9.44	10.4	14.4	6.43	4.58	.63	.54	.027
MAX	7.3	2.9	4.4	10	13	18	29	11	35	3.5	1.3	.17
MIN	.11	1.7	1.5	1.5	8.5	8.5	9.1	3.6	1.9	.04	.17	.00
CFSM	.005	.009	.01	.02	.04	.04	.05	.02	.02	.002	.002	.000
IN.	.01	.01	.01	.03	.04	.05	.06	.03	.02	.00	.00	.00
AC-FT	77	139	191	361	543	641	854	395	273	39	33	1.6

CAL YR 1983 TOTAL 2933.86 MEAN 8.04 MAX 72 MIN .02 CFSM .03 IN .41 AC-FT 5820
WTR YR 1984 TOTAL 1789.06 MEAN 4.89 MAX 35 MIN .00 CFSM .02 IN .25 AC-FT 3550

07301410 SWEETWATER CREEK NEAR KELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 03...	1535	.15	1240	26.5	420	290	110	35	100
DEC 28...	0945	2.6	1050	.0	400	110	120	25	75
FEB 02...	1530	10	838	9.5	330	83	100	20	56
MAR 20...	1620	10	830	15.5	310	63	92	20	59
MAY 02...	1315	11	818	19.5	300	79	85	21	55
JUN 12...	1705	7.4	621	28.5	200	46	57	13	59

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 03...	2	3.4	130	320	140	.60	29	820
DEC 28...	2	2.7	290	210	45	.70	27	680
FEB 02...	1	2.7	250	140	41	.70	22	530
MAR 20...	2	2.8	250	140	40	.70	23	530
MAY 02...	1	2.7	220	160	41	.70	8.3	510
JUN 12...	2	7.2	150	110	35	.50	8.1	380

07307800 PEASE RIVER NEAR CHILDRESS, TX

LOCATION.--Lat 34°13'39", long 100°04'24", Cottle County, Hydrologic Unit 11130105, near right bank on downstream side of bridge on Farm Road 104, 0.8 mi upstream from Catfish Creek, 4.4 mi downstream from confluence of North and Middle Forks, 17 mi southeast of Childress, and 71.0 mi upstream from mouth.

DRAINAGE AREA.--2,754 mi², of which 559 mi² probably is noncontributing.

PERIOD OF RECORD.--December 1959 to September 1962, October 1967 to current year.
Water-quality records: Chemical analyses: July 1968 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,492.98 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair. Three small diversions for irrigation above station. Flow is affected at times by discharge from the flood-detention pools of six floodwater-retarding structures with a combined detention capacity of 1,360 acre-ft. These structures control runoff from 6.97 mi² in the Kent Creek drainage basin.

AVERAGE DISCHARGE.--19 years (water years 1961-62, 1967-84), 57.3 ft³/s (0.36 in/yr), 41,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s June 9, 1960 (gage height, 13.59 ft), from rating curve extended above 4,000 ft³/s on basis of runoff comparisons with nearby stations; maximum gage height, 14.83 ft Oct. 20, 1983; no flow Aug. 10-22, 1969, May 25, 26, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1909, 22 ft June 1, 1957; flood in May 1935 reached a stage of 18 ft and was the second highest, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 20	0800	*17,800	14.83
May 19	0400	2,240	10.16
Aug. 11	1800	3,150	10.60

Minimum discharge, 0.33 ft³/s Aug. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	46	20	29	16	13	9.1	5.9	5.1	13	1.4	4.5
2	2.3	52	21	30	16	14	10	7.0	3.3	11	1.7	3.1
3	4.1	47	25	27	16	14	9.0	6.2	3.8	11	1.3	2.4
4	1.6	41	27	26	15	14	9.1	5.5	6.4	16	1.1	2.7
5	.87	41	27	28	15	13	9.7	5.9	4.0	11	.64	2.0
6	23	59	27	29	14	13	11	6.6	3.1	7.0	.61	1.7
7	176	55	28	29	14	11	9.7	5.6	2.1	4.3	.53	1.4
8	52	63	27	28	13	10	9.9	5.6	1.6	2.3	1.2	1.4
9	60	32	25	27	14	10	9.9	6.1	1.9	1.5	43	1.5
10	34	22	26	25	14	10	10	6.0	1.7	1.2	18	1.3
11	13	26	25	25	14	10	11	5.6	1.7	1.1	555	1.0
12	7.2	30	24	23	14	10	10	6.0	1.8	2.5	150	1.1
13	5.5	33	24	21	14	10	10	6.1	35	3.6	69	1.1
14	4.4	42	23	20	15	10	9.5	5.9	348	2.2	36	1.1
15	3.4	38	21	18	14	10	9.3	6.1	133	1.3	22	1.1
16	3.1	38	20	17	13	10	9.4	6.3	34	1.1	18	1.5
17	57	37	19	16	14	10	9.8	6.1	16	6.5	14	2.0
18	52	36	18	12	14	9.9	9.7	7.7	12	8.2	11	2.1
19	4780	34	16	10	13	9.7	10	224	102	3.5	9.1	1.6
20	14800	37	16	10	13	9.4	10	21	33	1.8	7.2	1.6
21	4250	36	15	10	14	11	8.7	11	46	1.4	6.2	1.8
22	1330	33	15	12	14	11	9.0	7.1	27	1.1	4.8	2.2
23	542	40	15	15	13	9.2	9.5	5.4	16	1.1	4.3	2.5
24	603	36	16	18	14	10	10	4.5	10	7.4	5.2	2.0
25	276	34	17	20	15	10	11	3.2	8.0	5.6	73	1.5
26	242	32	19	21	14	10	11	1.9	5.9	2.5	17	2.3
27	133	27	19	21	13	9.4	7.9	2.5	5.8	1.8	13	3.7
28	89	25	19	21	12	9.2	5.9	64	60	1.1	14	3.9
29	76	23	18	19	13	9.3	5.2	18	38	5.0	9.5	3.9
30	58	20	20	17	---	9.4	5.2	11	20	5.4	6.9	4.3
31	52	---	25	16	---	8.7	---	8.3	---	2.2	5.5	---
TOTAL	27731.41	1115	657	640	407	328.2	279.5	492.1	986.2	144.7	1120.18	64.3
MEAN	895	37.2	21.2	20.6	14.0	10.6	9.32	15.9	32.9	4.67	36.1	2.14
MAX	14800	63	28	30	16	14	11	224	348	16	555	4.5
MIN	.87	20	15	10	12	8.7	5.2	1.9	1.6	1.1	.53	1.0
CFSM	.41	.02	.01	.009	.006	.005	.004	.007	.02	.002	.02	.001
IN.	.47	.02	.01	.01	.01	.01	.00	.01	.02	.00	.02	.00
AC-FT	55010	2210	1300	1270	807	651	554	976	1960	287	2220	128

CAL YR 1983 TOTAL 34709.37 MEAN 95.1 MAX 14800 MIN .10 CFSM .04 IN .59 AC-FT 68850
WTR YR 1984 TOTAL 33965.59 MEAN 92.8 MAX 14800 MIN .53 CFSM .04 IN .58 AC-FT 67370

07308500 RED RIVER NEAR BURKBURNETT, TX

LOCATION.--Lat 34°06'36", long 98°31'53", Cotton County, Okla., Hydrologic Unit 11130102, on left bank at downstream side of bridge on U.S. Highways 277 and 281, 2.5 mi northeast of Burkburnett, and at mile 933.

DRAINAGE AREA.--20,570 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to August 1925 (monthly discharge only), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 952.57 ft National Geodetic Vertical Datum of 1929. July 11, 1924, to Aug. 31, 1925, nonrecording gage at site 1,000 ft downstream at same datum. Dec. 16, 1959, to Jan. 11, 1960, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--24 years (water years 1961-84), 864 ft³/s (626,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 166,000 ft³/s Oct. 21, 1983 (gage height, 16.90 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 3, 1957, reached a stage of 13.54 ft, from levels to floodmarks. According to local residents, higher stages occurred in 1891 and June 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 166,000 ft³/s Oct. 21 at 2100 hours (gage height, 16.90 ft), no other peak above base of 9,000 ft³/s; minimum, 0.45 ft³/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1920	718	350	377	215	372	148	72	207	43	300.00
2	1.8	2010	741	400	374	207	366	197	77	161	37	205.00
3	1.9	2010	747	450	345	232	347	182	87	199	33	138.00
4	1.8	1950	763	500	304	223	291	158	80	232	34	97.00
5	1.9	1850	690	600	263	199	302	147	79	177	36	81.00
6	6.8	2050	688	700	251	191	293	153	81	124	25	64.00
7	2130.0	2290	673	803	299	177	342	126	72	100	23	46.00
8	2070.0	2470	658	583	327	145	401	111	64	84	39	30.00
9	672.0	2110	610	618	397	145	394	99	70	73	38	21.00
10	309.0	1650	612	470	410	153	436	102	75	57	46	17.00
11	218.0	1590	593	444	437	207	793	103	74	49	106	13.00
12	130.0	1450	510	401	465	296	1070	111	57	52	215	11.00
13	82.0	1260	494	396	451	286	760	116	1630	60	214	8.70
14	61.0	1140	464	339	385	250	516	123	1980	78	163	7.20
15	51.0	1170	418	333	372	215	383	106	1570	70	603	5.30
16	42.0	1070	425	303	316	184	302	98	1320	47	404	5.20
17	59.0	1100	430	298	316	184	272	97	1720	70	276	4.10
18	84.0	1100	400	225	316	204	246	104	1420	60	207	3.30
19	4260.0	999	300	200	277	232	236	171	1170	68	138	2.40
20	41800.0	960	250	150	306	161	231	156	968	52	100	1.90
21	93900.0	924	250	150	296	123	215	131	1030	47	78	1.60
22	121000.0	642	225	200	296	105	186	123	2370	45	63	1.50
23	57600.0	919	200	250	286	253	184	147	1570	45	70	1.10
24	16900.0	976	180	350	259	476	185	174	1940	49	78	.81
25	8290.0	1190	150	400	259	909	175	125	1590	54	87	58.00
26	5800.0	1170	200	440	397	1260	165	92	919	52	100	69.00
27	4370.0	1100	250	396	465	1140	147	89	465	39	111	46.00
28	3320.0	786	225	401	286	835	132	83	277	79	1620	27.00
29	2840.0	694	200	359	215	849	161	73	215	67	1370	15.00
30	2320.0	700	225	353	---	598	138	78	241	54	873	8.90
31	2050.0	---	275	403	---	440	---	78	---	51	478	---
TOTAL	370373.8	41250	13564	12265	9747	11094	10041	3801	23283	2602	7708	1290.01
MEAN	11950	1375	438	396	336	358	335	123	776	83.9	249	43.0
MAX	121000	2470	763	803	465	1260	1070	197	2370	232	1620	300
MIN	1.6	642	150	150	215	105	132	73	57	39	23	.81
AC-FT	734600	81820	26900	24330	19330	22000	19920	7540	46180	5160	15290	2560

CAL YR 1983 TOTAL 531218.00 MEAN 1455 MAX 121000 MIN 1.6 AC-FT 1054000
WTR YR 1984 TOTAL 507018.81 MEAN 1385 MAX 121000 MIN .81 AC-FT 1006000

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1974. Chemical and biochemical: October 1974 to current year. Pesticide analyses: October 1974 to September 1982.

PERIOD OF DAILY RECORD.--
SECIFIC CONDUCTANCE: July 1968 to September 1981.
WATER TEMPERATURES: July 1968 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 17,400 micromhos July 30, 1972; minimum daily, 889 micromhos Sept. 24, 1970.
WATER TEMPERATURES: Maximum daily, 35.5°C June 29, 1980; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 17...	0915	1120	8870	8.0	11.0	78	12.9	126	1.8	K440	K480	1500
JAN 24...	0920	350	9980	8.1	1.0	12	15.4	116	.9	K20	130	1900
MAR 27...	0815	1220	3640	7.2	13.0	320	11.1	113	3.9	960	3300	640
MAY 09...	0830	99	10200	8.0	16.0	17	11.3	122	5.4	K12	K4	1500
JUL 18...	0830	60	9700	8.0	24.5	40	9.9	127	4.3	K28	80	1600
AUG 22...	1030	63	11800	7.8	25.5	200	8.2	108	3.2	240	540	1700

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 17...	1200	400	110	1500	18	11	210	1100	2500	.40	13
JAN 24...	1600	500	150	1700	18	8.3	230	1300	2800	.60	10
MAR 27...	550	170	53	520	9	6.6	100	480	860	.40	6.2
MAY 09...	1400	380	140	1700	20	12	140	1400	2700	.50	3.6
JUL 18...	1500	390	140	1600	18	12	96	1200	2700	.60	8.1
AUG 22...	1700	480	130	2000	22	14	75	1500	3200	.60	11

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 17...	5750	5800	.60	.060	1.4	.170	.010	.030	2100	6350	12
JAN 24...	5640	6600	1.0	.270	.70	.060	.030	.040	77	73	78
MAR 27...	2270	2200	.76	.100	2.4	.480	.050	.050	776	2560	95
MAY 09...	6640	6400	<.10	.070	.90	.100	.010	.020	111	30	50
JUL 18...	6380	6100	<.10	.100	1.2	.040	.020	<.010	57	9.2	84
AUG 22...	7620	7400	<.10	.180	1.5	.100	.110	.030	128	22	96

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 17...	0915	3	<100	<10	1	<1	1	3	100	1
MAR 27...	0815	1	<100	<10	<1	<1	<1	2	50	7
MAY 09...	0830	2	<100	<10	<1	<1	<1	<1	30	<1
AUG 22...	1030	2	100	<10	<1	<1	<1	21	40	5

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 17...	80	30	<.1	4	<1	2	<1	4400	37	10
MAR 27...	40	30	<.1	1	<1	<1	<1	1900	16	20
MAY 09...	110	50	<.1	5	3	1	<1	7700	40	20
AUG 22...	80	30	<.1	5	6	1	<1	7000	51	10

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX

LOCATION.--Lat 33°49'14", long 99°47'10", Foard-Knox County line, Hydrologic Unit 11130204, near right bank on downstream side of bridge on State Highway 6, 4.5 mi north of Truscott, about 47.6 mi upstream from confluence with South Wichita River, and 188.4 mi upstream from mouth.

DRAINAGE AREA.--937 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-57 (occasional low-flow measurements), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,351.78 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. One small diversion for irrigation above station.

AVERAGE DISCHARGE.--24 years (water years 1961-84), 59.6 ft³/s (0.86 in/yr), 43,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,900 ft³/s Sept. 19, 1965 (gage height, 21.96 ft); minimum, 0.01 ft³/s July 25, 1964, and Aug, 22, 23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900 occurred in September 1919; the next highest flood occurred in May 1954, from information by local resident.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 20	1430	*23,000	21.79
Oct. 26	0800	3,000	15.24

Minimum discharge, 6.0 ft³/s Sept. 11-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	105	48	36	27	27	24	14	12	13	12	7.5
2	10	98	48	39	27	26	25	15	12	13	12	7.3
3	21	89	49	40	26	25	24	16	14	12	11	8.1
4	31	84	49	39	26	25	22	16	13	11	10	9.0
5	25	83	48	37	26	25	22	14	14	10	10	8.1
6	14	102	47	35	26	24	22	14	13	10	9.8	7.3
7	16	100	45	33	25	24	34	12	11	10	9.0	6.9
8	25	82	45	32	26	23	37	12	9.4	10	13	6.6
9	18	75	44	32	27	22	33	11	8.1	10	88	7.0
10	27	71	42	32	28	30	26	11	8.4	10	79	7.1
11	31	68	42	31	27	28	22	11	8.5	8.9	22	6.5
12	19	66	40	30	26	31	20	11	8.0	62	18	6.3
13	12	64	39	29	26	29	20	11	8.1	14	21	6.4
14	9.7	62	39	29	25	27	18	11	12	13	29	6.6
15	8.8	61	39	29	24	26	18	11	30	13	18	6.4
16	8.1	60	41	29	23	24	17	11	37	13	13	7.3
17	218	59	41	29	23	24	18	12	25	12	12	8.6
18	93	57	38	28	26	24	18	13	65	12	10	9.3
19	2830	56	31	26	25	23	19	15	36	12	8.7	9.7
20	18500	55	30	25	24	22	19	50	79	12	8.2	8.9
21	9760	54	28	26	24	22	19	58	34	12	22	9.7
22	1040	54	26	28	24	22	17	33	21	12	9.0	11
23	366	63	26	29	23	22	17	24	17	12	8.2	12
24	236	63	28	30	23	22	17	20	10	13	9.8	12
25	235	57	30	30	23	22	16	17	10	27	25	108
26	1770	54	31	29	29	23	15	13	10	22	189	9.3
27	359	52	32	29	46	22	14	13	10	15	39	7.7
28	206	51	33	29	36	27	14	12	57	12	19	8.1
29	150	50	32	28	29	31	14	13	14	12	12	8.1
30	124	49	30	27	---	27	14	13	13	11	9.0	8.5
31	110	---	33	27	---	24	---	12	---	13	7.9	---
TOTAL	36282.3	2044	1174	952	770	773	615	519	619.5	441.9	763.6	345.3
MEAN	1170	68.1	37.9	30.7	26.6	24.9	20.5	16.7	20.7	14.3	24.6	11.5
MAX	18500	105	49	40	46	31	37	58	79	62	189	108
MIN	8.1	49	26	25	23	22	14	11	8.0	8.9	7.9	6.3
CFSM	1.25	.07	.04	.03	.03	.03	.02	.02	.02	.02	.03	.01
IN.	1.44	.08	.05	.04	.03	.03	.02	.02	.02	.02	.03	.01
AC-FT	71970	4050	2330	1890	1530	1530	1220	1030	1230	877	1510	685

CAL YR 1983 TOTAL 43983.7 MEAN 121 MAX 18500 MIN 2.6 CFSM .13 IN 1.75 AC-FT 87240
WTR YR 1984 TOTAL 45299.6 MEAN 124 MAX 18500 MIN 6.3 CFSM .13 IN 1.80 AC-FT 89850

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to current year.
WATER TEMPERATURES: July 1968 to current year.

INSTRUMENTATION.--Since August 1968, specific conductance is recorded continuously at this station. Since June 1982, water temperature is recorded continuously at this station.

REMARKS.--Where maximum and minimum specific conductance values are not shown, mean values are estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 35,800 micromhos Oct. 9, 1982; minimum daily, 500 micromhos Oct. 20, 21, 1983.
WATER TEMPERATURES: Maximum daily, 39.0°C Aug. 21, 23, 1969, Aug. 22, 1973; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 25,400 micromhos Oct. 1; minimum daily, 500 micromhos Oct. 20, 21.
WATER TEMPERATURES: Maximum daily, 32.5°C Aug. 20; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO
OCT										
11...	1340	32	18200	21.5	--	--	--	--	--	--
19...	1410	3830	1520	18.5	380	310	130	14	160	4
20...	1505	22600	523	15.5	230	160	80	6.4	18	.5
24...	1245	231	9600	19.0	--	--	--	--	--	--
NOV										
14...	1315	62	13900	16.0	2600	2400	710	200	2400	21
DEC										
28...	1525	34	--	.0	--	--	--	--	--	--
FEB										
06...	1430	26	16700	10.0	2600	2500	720	190	3000	27
MAR										
20...	1210	226	16900	13.0	--	--	--	--	--	--
APR										
30...	1555	15	19900	22.0	3000	2900	840	210	3600	30
JUN										
05...	1445	13	17300	30.0	--	--	--	--	--	--
JUL										
24...	1445	13	13700	26.0	2100	2000	600	140	2500	25
SEP										
04...	1430	9.0	12600	27.0	--	--	--	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
11...	--	--	--	--	--	--	--	22	1.9	81
19...	5.5	71	320	260	.30	7.6	940	3620	37400	100
20...	4.0	66	170	24	.20	7.3	350	--	--	--
24...	--	--	--	--	--	--	--	855	533	99
NOV										
14...	13	160	2200	4000	.40	7.4	9600	24	4.0	93
DEC										
28...	--	--	--	--	--	--	--	14	1.3	86
FEB										
06...	14	130	2400	4900	.50	2.4	11000	11	.77	77
MAR										
20...	--	--	--	--	--	--	--	5	3.1	91
APR										
30...	23	100	2700	5500	.50	1.6	13000	21	.85	87
JUN										
05...	--	--	--	--	--	--	--	15	.53	86
JUL										
24...	13	66	1900	4000	.40	1.3	9200	9	.32	84
SEP										
04...	--	--	--	--	--	--	--	10	.24	87

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	36282.3	1420	910	89100	360	34900	200	19900	250
NOV.	1983	2044	11900	7810	43100	3300	18000	1600	9000	*
DEC.	1983	1174	14100	9340	29600	4000	12600	1900	6040	*
JAN.	1984	952	13600	8990	23100	3800	9800	1800	4740	*
FEB.	1984	770	15400	10300	21400	4400	9210	2100	4300	*
MAR.	1984	773	16100	10800	22400	4700	9710	2200	4490	*
APR.	1984	615	19200	13000	21600	5800	9600	2500	4180	*
MAY	1984	519	19000	12900	18000	5700	8040	2500	3480	*
JUNE	1984	619.5	15900	10600	17700	4600	7690	2100	3540	*
JULY	1984	441.9	15600	10400	12400	4500	5400	2100	2470	*
AUG.	1984	763.6	12000	7980	16500	3400	7010	1600	3360	*
SEPT	1984	345.3	13000	8600	8020	3600	3400	1800	1640	*
TOTAL		45299.6	**	**	323000	**	135000	**	67100	**
WTD.AVG.		124	4010	2640	**	1100	**	550	**	650

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25400	24800	25100	10800	10300	10600	13300	13100	13200	15000	14300	14600
2	25200	17000	24200	11200	10800	11000	13200	13100	13100	14300	13600	14000
3	23700	20300	22900	11500	11200	11300	13100	13000	13100	13500	13000	13300
4	22600	18000	21500	11600	11400	11500	13200	13100	13200	12800	12200	12500
5	22400	20600	21600	11700	11300	11500	13400	13100	13200	12400	11900	12100
6	22400	21000	21600	11400	11300	11300	13400	13200	13300	12400	10300	12000
7	21000	19800	20700	11300	10100	10400	13400	13200	13300	12800	11600	12400
8	19600	9700	16600	10800	10200	10600	13500	---	13300	12900	11800	12600
9	19700	15600	18000	11300	10400	10800	13600	13300	13500	12900	11900	12700
10	19000	16500	18000	11900	11400	11700	13600	11900	13200	13300	10500	12100
11	---	16100	18200	12100	11800	12000	13700	12700	13500	13800	10100	12500
12	20700	18300	19900	12200	12000	12100	13800	11800	13300	13900	9800	12700
13	19200	16300	17200	12200	12100	12100	13800	12900	13700	14200	10500	12700
14	19300	16800	18100	12600	12100	12300	13900	13000	13700	14300	10300	12600
15	20700	19400	20200	12800	12600	12600	14000	13600	13800	13900	10900	12600
16	20900	20500	20600	12900	12700	12800	13800	12700	13600	14600	11600	13500
17	20400	1700	7430	12800	12700	12800	13700	13000	13600	14600	11900	13700
18	8200	5200	6400	12900	12800	12800	14100	13700	13800	15300	13000	14100
19	8100	900	2010	13000	12800	12900	14500	14100	14300	15800	14500	15300
20	1400	500	600	13000	12800	12900	14800	14600	14700	15800	13600	15100
21	1300	500	721	13000	12800	12900	15800	14600	15100	16300	12600	14900
22	5000	1400	3120	13100	12600	12900	16100	15400	15700	16300	14000	15200
23	7700	5100	6470	12600	12000	12300	15900	15400	15700	15500	13400	14600
24	9560	7700	8590	12300	11600	12000	16500	15800	16000	15200	13200	14500
25	10100	6900	9550	12300	12000	12200	16600	16100	16300	15100	10000	13800
26	4600	1400	2000	12400	12200	12300	16200	14800	15800	15200	11200	14100
27	5600	3000	4380	12700	12200	12400	16200	15400	15900	15300	11400	14400
28	7500	5700	6590	13000	12600	12800	15700	15300	15400	15400	11900	14500
29	8700	7600	8150	13100	12200	12900	16000	15400	15700	15500	12400	15000
30	9600	8600	9110	13300	13100	13200	16000	15200	15600	15800	11000	14500
31	10400	9600	9950	---	---	---	15400	14800	15100	15900	12200	15000
MONTH	25400	500	13200	13300	10100	12100	16600	11800	14300	16300	9800	13700

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	16000	12200	15100	15400	13400	14900	16600	16200	16400	19200	18800	19000
2	16200	13000	15700	15700	13300	15400	16500	16300	16400	19600	19000	19300
3	16300	13200	15600	16000	14600	15700	16800	16300	16500	20000	19200	19500
4	16500	15100	16200	16200	14900	15900	17100	16600	16800	20000	19400	19700
5	16500	14100	16200	16400	13500	15500	17200	16800	17000	20200	19600	19800
6	16700	13800	15900	16500	14600	16100	17300	17000	17200	20200	19600	19900
7	16200	13800	15600	16700	13600	16100	19900	16900	17500	20000	19600	19800
8	16200	14000	15600	16800	15300	16600	19200	18200	18800	20200	19700	19900
9	16100	12300	15200	16800	15400	16400	19600	19200	19400	20600	19900	20200
10	16100	13800	15500	16700	13200	15400	19900	19400	19600	21000	20100	20500
11	16100	13600	15400	15700	13300	14700	19400	19000	19200	21400	20600	20900
12	16200	13900	15700	15700	13200	15300	19800	19300	19500	21500	20800	21200
13	16200	13300	15700	15600	13900	15100	20000	19700	19900	21500	20900	21200
14	16200	13800	15700	16000	15600	15800	20000	19700	19900	21400	20800	21200
15	16400	14700	15800	16200	15800	16000	20100	20000	20000	21400	20900	21100
16	16500	14900	16100	15800	15600	15700	20400	20100	20200	21400	20900	21100
17	16500	14400	16000	15900	15700	15800	20700	20300	20500	21400	20500	21100
18	16500	13500	15700	15900	15700	15800	20600	20400	20500	21100	20500	20800
19	16300	15000	16000	16100	15900	16000	20400	20200	20300	21200	20800	21000
20	16500	14600	16000	16500	16100	16200	20500	20000	20200	21600	20300	21000
21	16500	15100	16200	16600	16500	16600	20900	20500	20700	23300	21100	22500
22	16600	14000	16100	---	---	16800	21100	20800	20900	23800	17900	22100
23	16600	14500	16000	17100	16800	17000	21400	21000	21200	17400	12500	14400
24	16700	13900	16000	17200	17000	17100	21800	21400	21600	12600	12100	12400
25	16800	13700	16300	17300	17100	17200	22000	21600	21800	12600	12000	12300
26	16800	15100	16100	17400	17200	17300	22000	21600	21900	13000	12400	12700
27	16000	10100	13500	17200	17000	17100	21600	20900	21200	13400	12700	13000
28	13500	11500	12200	17300	16900	17100	20900	20200	20500	14200	13100	13600
29	15200	12600	13900	17300	16600	17100	20200	19500	19800	15400	14200	14800
30	---	---	---	16500	15900	16200	19500	19000	19300	16400	15400	15900
31	---	---	---	16500	16300	16400	---	---	---	16800	16200	16500
MONTH	16800	10100	15600	17400	13200	16100	22000	16200	19500	23800	12000	18700

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17200	16600	16900	---	---	20400	15100	14300	14800	---	---	10300
2	17500	16900	17300	---	---	20600	15700	14900	15300	---	---	11100
3	17600	17000	17400	---	---	20900	16600	15500	16100	---	---	11900
4	18000	16900	17500	---	---	21300	17500	16400	17100	12700	12500	12600
5	18400	18000	18100	---	---	21600	18100	17300	17800	13500	12700	13100
6	---	---	18800	---	---	21700	18700	18000	18400	14400	13300	13800
7	---	---	19600	---	---	21900	19200	18600	19000	15300	14300	14800
8	---	---	20200	---	---	22000	19500	13300	18400	15900	15100	15500
9	---	---	20500	---	---	22200	19400	3300	13200	16300	15600	15900
10	---	---	21100	---	---	22100	11600	2100	7930	17500	16300	16800
11	---	---	21300	---	---	22300	11400	7300	8660	17900	15900	17000
12	---	---	21900	---	---	14400	11900	8000	9710	16700	16000	16400
13	---	---	22300	---	---	16000	16700	12200	15100	17200	16400	16900
14	---	---	20400	---	---	16200	19400	16500	17900	17800	17100	17400
15	---	---	16300	---	---	15600	20600	19400	20200	17500	17100	17300
16	---	---	15100	---	---	15100	20500	20100	20300	17800	17500	17600
17	---	---	17600	---	---	14800	20700	20200	20400	---	---	17000
18	---	---	13200	---	---	14400	20800	20500	20600	---	---	16800
19	---	---	14000	---	---	14300	21200	20600	21000	---	---	16500
20	---	---	11500	---	---	14500	21300	20700	21000	---	---	16900
21	---	---	12200	---	---	14600	21800	14700	18800	---	---	16600
22	---	---	14100	---	---	14400	18700	18200	18400	---	---	15200
23	---	---	15000	---	---	14200	---	---	18400	---	---	14700
24	---	---	15700	---	---	13700	---	---	18200	---	---	14900
25	---	---	17900	---	---	10100	---	---	16500	---	---	9800
26	---	---	18700	---	---	9660	---	---	7190	---	---	10100
27	---	---	20100	---	---	10000	---	---	5550	---	---	10700
28	---	---	16600	---	---	11200	---	---	6810	---	---	10500
29	---	---	18400	---	---	11900	---	---	7060	---	---	11400
30	---	---	19900	13000	11300	12400	---	---	7820	---	---	11100
31	---	---	---	14400	13000	13800	---	---	9600	---	---	---
MONTH	18400	16600	17700	14400	11300	16400	21800	2100	15100	17900	12500	14400

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.0	19.5	23.0	20.0	19.0	19.5	8.0	5.0	6.5	1.0	.0	.5
2	27.5	21.0	24.0	21.0	18.5	20.0	9.5	7.5	8.5	3.5	.0	1.5
3	27.5	22.0	25.0	22.0	19.0	20.5	9.0	7.0	8.5	4.5	.0	2.5
4	26.0	22.0	24.0	20.5	18.5	19.5	11.0	6.0	8.5	6.0	1.5	4.0
5	24.5	18.5	21.5	18.5	17.5	17.5	10.5	7.5	9.0	7.5	3.0	5.0
6	24.0	19.0	21.5	18.5	17.0	18.0	8.5	5.5	7.0	9.0	5.0	7.0
7	23.5	19.5	21.0	20.0	17.5	18.5	9.5	5.5	7.5	9.5	5.0	7.0
8	21.0	19.0	19.5	21.0	17.5	19.0	10.0	6.5	8.5	9.5	5.5	7.5
9	22.0	18.5	20.0	19.0	13.0	16.0	10.0	7.0	8.5	9.5	6.0	8.5
10	24.0	18.5	21.0	14.0	11.0	12.5	11.0	7.0	9.0	6.5	3.0	4.5
11	22.0	18.5	20.0	14.0	10.5	12.0	11.0	8.0	9.5	7.0	2.5	4.5
12	19.5	15.5	17.5	15.5	11.5	13.5	10.5	7.5	9.0	7.0	3.5	5.0
13	20.0	14.0	17.0	15.5	12.0	14.0	10.0	7.5	9.0	5.0	2.5	3.5
14	21.0	15.0	18.0	16.5	13.5	15.0	9.5	7.0	8.0	4.0	1.5	2.5
15	23.5	16.5	20.0	15.0	12.5	13.5	7.0	2.5	5.0	4.5	1.5	3.0
16	24.5	18.0	21.0	14.5	11.0	13.0	5.5	2.5	4.0	5.5	1.5	3.5
17	21.5	17.5	20.0	15.5	12.0	13.5	3.5	2.5	3.0	4.0	1.0	3.0
18	23.5	19.5	21.5	15.0	12.0	13.5	2.0	.0	.5	1.0	.0	.0
19	22.5	17.5	18.5	14.0	10.5	12.5	.0	.0	.0	1.0	.0	.0
20	18.0	15.0	15.5	13.0	9.0	11.0	.0	.0	.0	1.0	.0	.0
21	15.0	14.0	14.5	15.0	10.5	13.0	.0	.0	.0	2.0	.0	.5
22	17.0	14.5	15.5	16.0	13.5	14.5	.0	.0	.0	3.5	.0	1.5
23	18.5	15.5	17.0	13.5	10.5	12.0	.0	.0	.0	5.0	.0	2.5
24	20.0	17.0	18.5	11.5	8.5	10.0	.0	.0	.0	7.0	.5	4.0
25	19.0	17.0	18.5	12.5	9.0	10.5	.0	.0	.0	8.5	3.0	5.5
26	16.5	14.0	15.5	12.0	9.0	11.0	.0	.0	.0	10.0	4.0	7.0
27	18.5	15.5	17.0	8.5	4.0	6.0	.0	.0	.0	10.0	5.0	7.5
28	19.5	16.5	18.0	6.5	3.0	4.5	.0	.0	.0	11.0	5.0	8.0
29	21.0	18.0	19.5	9.0	4.5	6.5	.0	.0	.0	12.0	6.0	9.0
30	20.0	18.0	19.0	7.5	5.5	6.5	.0	.0	.0	10.5	6.0	8.5
31	21.0	18.5	19.5	---	---	---	.5	.0	.0	11.0	4.5	7.5
MONTH	27.5	14.0	19.5	22.0	3.0	13.5	11.0	.0	4.0	12.0	.0	4.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	5.5	9.0	13.0	6.0	9.5	13.0	9.5	11.0	20.5	15.0	17.5
2	11.5	8.0	9.5	15.0	9.0	12.0	18.5	12.5	15.0	27.5	17.5	21.5
3	11.5	5.5	8.5	14.5	11.0	12.5	17.0	11.0	14.0	28.0	18.0	22.5
4	11.5	6.0	9.0	13.0	10.0	11.5	17.0	9.0	13.0	28.0	17.5	22.5
5	11.5	6.0	8.5	10.5	8.0	9.5	19.5	9.5	14.5	29.5	18.5	23.5
6	10.5	4.5	8.0	13.5	7.0	10.5	20.5	12.0	16.5	31.0	20.5	24.5
7	12.0	6.5	9.5	16.0	9.0	13.0	17.5	14.0	16.5	24.5	18.5	22.0
8	9.5	7.5	8.5	15.5	10.5	13.0	21.0	14.0	17.5	23.5	15.5	19.5
9	11.0	6.0	8.5	15.0	9.0	12.5	22.5	15.0	18.5	24.5	17.0	20.5
10	12.5	7.5	10.0	14.5	11.0	13.0	21.5	15.5	18.5	25.0	17.0	21.0
11	13.5	9.5	11.5	---	---	---	24.0	14.5	19.0	27.5	19.0	23.5
12	13.0	8.5	11.0	---	---	---	22.5	14.5	18.5	28.5	22.0	25.5
13	13.0	8.0	10.5	---	---	---	22.5	14.5	18.5	29.5	22.0	26.0
14	14.0	8.0	11.0	---	---	---	20.0	13.5	17.0	29.0	22.5	26.0
15	13.5	10.0	11.5	---	---	---	17.5	12.5	15.5	27.5	22.5	25.0
16	13.0	8.5	11.0	---	---	---	20.0	11.0	15.5	26.5	21.5	24.0
17	14.0	8.5	11.5	---	---	---	22.5	12.0	17.0	25.0	21.0	23.0
18	13.0	9.5	11.5	---	---	---	20.0	14.0	17.5	24.0	21.5	22.5
19	11.5	8.0	10.0	---	---	---	23.0	14.5	18.5	27.5	21.5	24.0
20	10.0	8.0	9.0	---	---	---	23.0	17.5	19.5	25.5	21.0	23.5
21	11.5	5.5	8.5	---	---	---	20.0	13.5	17.0	28.0	21.0	24.5
22	13.0	6.5	10.0	---	---	---	19.5	11.5	15.5	30.0	23.0	26.0
23	13.0	8.5	11.0	14.0	10.0	12.5	22.5	12.0	17.5	28.5	23.5	26.0
24	13.5	8.0	11.0	17.0	8.0	12.5	24.5	15.0	20.0	30.0	24.0	27.0
25	15.0	9.0	12.0	18.0	10.5	14.5	25.5	17.5	21.5	30.0	23.0	26.5
26	13.5	8.0	11.0	18.0	12.0	15.5	25.5	18.5	21.5	30.0	22.0	26.0
27	9.0	6.0	7.5	17.0	12.5	15.0	23.5	14.5	19.5	30.5	23.0	26.5
28	9.0	5.0	7.0	16.0	10.0	12.5	19.5	15.5	17.5	26.5	21.5	23.5
29	10.5	4.5	7.5	17.0	9.0	13.0	19.0	16.0	17.0	25.5	18.0	22.0
30	---	---	---	16.0	11.0	13.5	21.0	12.5	15.5	26.0	18.5	22.0
31	---	---	---	12.0	10.5	11.5	---	---	---	26.5	18.5	22.5
MONTH	15.0	4.5	10.0	18.0	6.0	12.5	25.5	9.0	17.0	31.0	15.0	23.5

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	19.0	23.0	---	---	---	28.0	24.5	26.0	---	---	---
2	25.5	20.5	23.0	---	---	---	30.5	24.5	27.0	---	---	---
3	27.5	22.0	24.5	---	---	---	31.5	24.0	27.5	---	---	---
4	29.0	22.5	25.5	---	---	---	31.5	25.5	28.5	28.0	24.0	26.0
5	29.0	22.5	24.5	---	---	---	32.0	25.5	28.5	29.0	20.5	24.5
6	---	---	---	---	---	---	31.5	25.5	28.5	28.5	21.0	24.0
7	---	---	---	---	---	---	31.5	25.5	28.0	28.0	19.5	23.0
8	---	---	---	---	---	---	31.5	25.5	27.5	30.5	22.0	25.5
9	---	---	---	---	---	---	28.0	24.0	26.0	31.5	23.0	26.5
10	---	---	---	---	---	---	27.0	22.5	24.5	31.0	23.5	26.5
11	---	---	---	---	---	---	26.0	24.5	25.5	31.0	23.0	26.0
12	---	---	---	---	---	---	28.5	24.0	26.0	30.5	23.0	26.0
13	---	---	---	---	---	---	31.0	25.5	28.0	31.0	23.0	26.5
14	---	---	---	---	---	---	31.0	26.5	28.5	31.0	23.0	25.5
15	---	---	---	---	---	---	30.5	26.0	28.0	22.5	19.0	20.0
16	---	---	---	---	---	---	30.0	25.5	28.0	23.0	18.0	20.0
17	---	---	---	---	---	---	30.0	25.5	27.5	26.5	17.5	21.5
18	---	---	---	---	---	---	30.5	25.0	28.0	27.5	19.5	23.0
19	---	---	---	---	---	---	31.5	25.5	28.5	27.5	19.0	23.0
20	---	---	---	---	---	---	32.5	27.0	29.5	25.0	19.0	22.0
21	---	---	---	---	---	---	31.5	27.5	29.5	22.5	20.0	21.5
22	---	---	---	---	---	---	29.0	27.0	27.5	26.5	19.0	22.0
23	---	---	---	---	---	---	30.5	25.5	27.5	27.0	21.0	24.0
24	---	---	---	27.5	25.0	26.0	30.5	26.0	28.5	28.5	22.5	25.0
25	---	---	---	29.0	24.5	26.5	31.0	26.5	28.5	24.5	13.5	18.0
26	---	---	---	31.0	25.0	28.0	29.0	26.5	28.0	14.5	13.0	14.0
27	---	---	---	31.5	25.0	28.5	27.5	25.0	26.0	16.0	13.0	14.0
28	---	---	---	31.0	25.5	28.0	---	---	---	14.5	12.5	13.5
29	---	---	---	29.5	24.5	26.5	---	---	---	13.5	11.0	12.5
30	---	---	---	29.0	24.0	26.5	---	---	---	18.0	9.5	13.5
31	---	---	---	29.5	23.5	26.5	---	---	---	---	---	---
MONTH	29.0	19.0	24.0	31.5	23.5	27.0	32.5	22.5	27.5	31.5	9.5	22.0

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX

LOCATION.--Lat 33°38'39", long 99°48'02", Knox County, Hydrologic Unit 11130205, on right bank at upstream side of bridge on State Highway 6, 2 mi downstream from Panhandle and Santa Fe Railway Co. bridge, 4 mi north of Benjamin, and 41 mi upstream from confluence with North Wichita River.

DRAINAGE AREA.--584 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-57 (occasional low-flow measurements), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,334.23 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. No known regulation or diversion above station.

AVERAGE DISCHARGE.--24 years (water years 1961-84), 37.9 ft³/s (0.88 in/yr), 27,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Oct. 18, 1960 (gage height, 15.40 ft); maximum gage height, 16.70 ft Oct. 20, 1983; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1903 occurred in September 1919 (stage and discharge unknown), from information by local resident.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 17	1300	924	9.67
Oct. 20	1400	*11,000	16.70

Minimum discharge, no flow Oct. 1-5, 15, 16, and Sept. 5-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	74	25	19	17	14	12	9.0	4.0	4.3	.78	.27
2	.00	73	25	22	18	13	13	11	4.0	4.3	1.1	.19
3	.00	69	26	22	17	13	11	10	4.0	4.0	.88	.08
4	.00	66	26	21	18	13	11	9.3	4.3	3.1	.78	.02
5	.00	68	25	21	18	13	11	9.3	4.6	2.5	.50	.00
6	.18	73	24	19	17	13	11	9.6	4.3	2.2	.23	.00
7	3.8	68	23	18	16	13	13	8.3	4.0	2.2	.08	.00
8	2.7	60	23	18	16	13	18	9.0	3.8	1.8	.02	.00
9	13	54	23	19	17	13	12	8.0	3.8	1.2	.41	.00
10	12	49	23	18	17	13	11	7.6	3.3	1.1	74	.00
11	2.9	46	22	17	17	15	12	7.6	3.1	1.0	214	.00
12	2.7	44	21	16	16	26	10	7.6	2.9	32	27	.00
13	1.6	39	22	16	16	16	10	7.1	2.9	1.1	14	.00
14	.78	41	21	17	16	14	10	6.7	2.9	1.1	9.6	.00
15	.00	39	21	16	16	13	9.6	6.7	2.7	2.2	6.0	.00
16	.00	36	22	16	15	13	9.6	6.7	2.5	2.2	3.8	.00
17	430	36	22	16	14	13	9.6	6.4	2.5	2.2	2.7	.00
18	89	35	22	16	14	13	9.6	8.0	3.6	2.7	3.1	.00
19	2780	34	19	15	14	13	9.6	11	8.2	1.4	4.3	.00
20	8260	31	19	14	14	13	11	11	3.5	1.1	2.3	.00
21	5650	29	18	15	14	12	9.6	8.0	3.1	1.0	1.4	.00
22	1470	29	17	17	14	12	9.3	6.7	2.5	.78	1.0	.00
23	371	38	17	18	14	12	9.3	6.7	1.8	.78	.88	.00
24	224	35	18	17	14	12	9.0	6.0	1.8	2.1	.50	.00
25	198	32	19	17	14	12	8.6	5.3	1.7	.78	.34	44
26	282	29	20	17	17	12	7.6	4.9	1.8	.88	.19	18
27	157	28	21	17	27	12	6.7	4.6	1.8	.78	.04	13
28	125	26	22	17	14	13	8.6	4.6	59	.50	.03	8.9
29	103	25	21	17	14	12	10	4.0	8.0	.41	1.7	7.0
30	89	25	19	17	---	12	9.0	4.0	6.0	.50	1.0	5.2
31	79	---	18	17	---	11	---	4.0	---	.41	.50	---
TOTAL	20346.66	1331	664	542	465	412	311.7	228.7	162.4	82.62	373.16	96.66
MEAN	656	44.4	21.4	17.5	16.0	13.3	10.4	7.38	5.41	2.67	12.0	3.22
MAX	8260	74	26	22	27	26	18	11	59	32	214	44
MIN	.00	25	17	14	14	11	6.7	4.0	1.7	.41	.02	.00
CFSM	1.12	.08	.04	.03	.03	.02	.02	.01	.009	.005	.02	.006
IN.	1.30	.08	.04	.03	.03	.03	.02	.01	.01	.01	.02	.01
AC-FT	40360	2640	1320	1080	922	817	618	454	322	164	740	192

CAL YR 1983 TOTAL 25938.36 MEAN 71.1 MAX 8260 MIN .00 CFSM .12 IN 1.65 AC-FT 51450
WTR YR 1984 TOTAL 25015.90 MEAN 68.3 MAX 8260 MIN .00 CFSM .12 IN 1.59 AC-FT 49620

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--Chemical analyses: October 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

INSTRUMENTATION.--Since August 1968, specific conductance is recorded continuously at this station. Since April 1983, water temperature is recorded continuously at this station.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 48,900 micromhos May 13, 1971; minimum daily, 901 micromhos Sept. 6, 1973.
WATER TEMPERATURES: Maximum daily, 38.5°C July 30, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 43,600 micromhos Sept. 25; minimum daily, 2,400 micromhos Sept. 25.
WATER TEMPERATURES: Maximum daily, 35.5°C Aug. 19, 20; minimum daily, 0.0°C on many days during December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
11...	1515	2.9	6360	--	23.0	1700	1700	550	79
20...	1230	10200	713	--	15.0	310	270	110	8.8
NOV									
14...	1450	42	20700	--	17.0	3600	3400	960	290
FEB									
06...	1730	16	24500	--	10.0	3600	3500	950	310
APR									
30...	1630	9.0	31200	--	24.5	4300	4100	1100	370
JUL									
24...	1545	2.5	22300	--	27.0	3600	3500	960	290
SEP									
04...	1610	.03	34700	7.5	26.0	5400	5300	1500	390

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT									
11...	860	9	14	48	1500	1400	.40	6.9	4400
20...	23	.6	3.0	45	270	31	.20	5.7	480
NOV									
14...	3600	27	22	180	2600	6400	.30	9.0	14000
FEB									
06...	4700	35	23	140	3000	7400	.30	3.1	16000
APR									
30...	6800	47	29	140	3400	11000	.40	3.3	23000
JUL									
24...	4300	32	21	74	2600	7300	.30	5.7	16000
SEP									
04...	7200	44	31	82	3600	12000	.30	3.4	25000

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	20346.66	1960	1340	73700	580	31600	290	16200	360
NOV.	1983	1331	19500	13300	47900	6100	22000	2400	8750	*
DEC.	1983	664	21100	14400	25800	6700	11900	2600	4600	*
JAN.	1984	542	20800	14200	20800	6600	9590	2500	3720	*
FEB.	1984	465	22600	15400	19400	7200	9040	2700	3370	*
MAR.	1984	412	23200	15800	17600	7400	8260	2700	3030	*
APR.	1984	311.7	26700	18200	15300	8700	7310	2900	2480	*
MAY	1984	228.7	30400	20700	12800	10100	6210	3100	1940	*
JUNE	1984	162.4	21600	14800	6470	7000	3070	2400	1060	*
JULY	1984	82.62	20500	14000	3120	6600	1480	2300	510	*
AUG.	1984	373.16	8810	6010	6060	2700	2720	1200	1180	1500
SEPT	1984	96.66	19700	13500	3520	6300	1640	2300	611	*
TOTAL		25015.90	**	**	252000	**	115000	**	47400	**
WTD.AVG.		68	5470	3740	**	1700	**	700	**	910

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---			17500	19700	19400	19500	22400	20800	21700
2	---	---	---			18100	19800	19600	19700	21600	20000	20900
3	---	---	---			18600	19600	19400	19500	21100	19800	20500
4	---	---	---			19200	19800	19600	19700	20400	19500	19900
5	---	---	---			18900	20000	19800	19900	19700	18800	19200
6	---	---	24500			17500	20100	19800	20000	19400	18300	19100
7	---	---	11400			17100	20100	20000	20000	19500	19300	19400
8	---	---	20500			18300	20200	20000	20100	19500	19100	19300
9	---	---	2500			19000	20300	20100	20200	19700	19000	19200
10	---	---	3200			19500	20400	20200	20300	20100	19700	19900
11	---	---	6360			20000	20700	20400	20500	20200	17600	19800
12	13100	5500	8150			20400	20700	20500	20600	20100	17800	19000
13	27000	13700	21300			19600	20800	20600	20700	20300	18200	19900
14	31800	27300	29900			20600	20900	20700	20800	20400	20200	20300
15	---	---	---			21000	21000	20400	20800	20700	20400	20600
16	---	---	---			21300	20400	19800	20200	20900	20700	20800
17	---	---	4630			21500	20700	20100	20500	21300	20900	21100
18	---	---	12500			21700	21000	20400	20700	21900	21300	21600
19	---	---	835			21900	21400	20900	21200	22600	21300	22000
20	---	---	713			22000	21600	21000	21400	22100	21200	21600
21	---	---	1040			22200	22100	21200	21700	22700	21300	22000
22	---	---	2440			22500	23300	21900	22300	22300	21300	21800
23	---	---	8750			18800	23200	22400	22700	21800	21600	21700
24	---	---	11100			18300	23600	22500	23100	21900	18900	21200
25	---	---	13400			19700	24000	22800	23400	21900	21600	21700
26	---	---	11200			20200	23500	22300	22800	22000	20900	21700
27	---	---	9510			20300	23100	22400	22700	22000	21600	21800
28	---	---	13200			20800	22800	22200	22500	21900	21700	21800
29	---	---	14400			20700	23500	22400	23000	22000	21700	21900
30	---	---	15500			21200	24100	22700	23400	22200	22000	22100
31	---	---	16900				23300	21600	22500	22300	22000	22200
MONTH	31800	5500	11000			19900	24100	19400	21200	22700	17600	20800

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	22300	22100	22200	23500	21000	22300	25000	24700	24800	31100	30200	30700
2	22500	22200	22300	24200	23600	23900	25800	24500	25200	30500	29300	29900
3	22500	22100	22300	24200	24000	24100	26300	25700	25900	30900	30100	30500
4	22500	22200	22300	24300	24100	24200	26600	26100	26400	30700	30000	30400
5	22600	21600	22400	24400	24100	24200	26700	26200	26500	30700	30200	30500
6	23500	21700	22800	24400	24000	24200	26800	26500	26600	31000	29900	30400
7	23800	23400	23500	24300	24100	24100	26800	22500	25700	30600	30100	30400
8	23800	22400	23200	24300	24100	24200	25700	15700	22600	30600	29500	30200
9	23400	22700	23200	24400	24100	24300	19400	14400	16100	31300	30300	30600
10	23400	23200	23300	24300	23900	24100	25000	19100	22600	31600	30900	31200
11	23600	23300	23400	24300	19900	23100	26600	25100	26000	31400	30200	31100
12	23700	23400	23500	21300	4700	15400	27400	26300	27000	31600	30300	31000
13	23800	23600	23700	20100	15700	17700	27600	26900	27300	31200	30500	30900
14	23900	23600	23700	21700	17800	20000	27700	27000	27500	31300	30300	30900
15	24000	23100	23800	23400	21600	22500	27900	27000	27700	31600	30900	31300
16	24100	23100	24000	23500	23300	23400	28000	26600	27700	32400	31300	31700
17	24100	21000	23700	23200	22000	22700	28300	26600	28000	32200	31300	31900
18	24200	22200	23500	23800	22000	22900	28300	27900	28200	31700	31200	31500
19	24000	23500	23800	24200	23100	23700	28700	27400	28300	33600	30000	31600
20	24000	23200	23600	24500	24000	24300	28800	28200	28500	33400	22200	29500
21	23700	22100	23100	24500	24500	24500	28900	26400	28600	27800	22200	25100
22	24500	23500	24100	---	---	24700	29100	27900	28900	30800	27900	29100
23	24400	24000	24100	---	---	24800	29200	28800	29000	30700	27800	29300
24	24400	24200	24300	---	---	25000	29500	28100	29100	28300	27500	27800
25	24700	24100	24400	---	---	25200	29500	28900	29200	29600	28000	28700
26	24700	15200	21700	25500	25300	25400	29700	29200	29400	31200	29300	30200
27	22900	11600	17300	25500	24200	25000	29600	28900	29400	32100	30600	31200
28	20100	12600	16500	25900	24900	25400	29800	28800	29200	32100	31500	31800
29	20900	19500	20100	25900	25400	25600	30300	28800	29700	32200	31500	31800
30	---	---	---	25400	23600	24400	31100	30100	30700	32000	31200	31600
31	---	---	---	25800	24800	25300	---	---	---	32600	31400	31900
MONTH	24700	11600	22800	25900	4700	23600	31100	14400	27100	33600	22200	30500

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	33100	32100	32500	---	---	18100	36800	35000	35500	---	---	32300
2	33000	32300	32600	---	---	27400	39200	36200	37600	---	---	33500
3	32500	31500	32100	---	---	30000	40300	38700	39500	---	---	34000
4	32700	31900	32300	---	---	30200	40300	38200	39600	---	---	34700
5	33000	32200	32500	---	---	32400	40700	39400	40000	---	---	---
6	32400	30600	31700	---	---	32800	41100	40100	40500	---	---	---
7	33700	32300	32900	---	---	33600	41800	40700	41100	---	---	---
8	34300	33200	33800	---	---	34000	42200	41100	41700	---	---	---
9	34500	33300	33900	---	---	34600	42300	9800	35600	---	---	---
10	34300	33100	33700	---	---	35100	27500	3300	6950	---	---	---
11	34400	33200	33800	---	---	35600	5800	2600	4270	---	---	---
12	---	---	33600	---	---	9240	23000	6200	15000	---	---	---
13	---	---	34200	---	---	4940	24500	21900	23400	---	---	---
14	---	---	33000	---	---	7030	25300	22400	24300	---	---	---
15	---	---	33500	---	---	11400	24400	22000	23100	---	---	---
16	---	---	33800	---	---	14500	21800	20800	21300	---	---	---
17	---	---	33700	---	---	32000	22200	20900	21500	---	---	---
18	---	---	33800	---	---	30200	22900	20900	22200	---	---	---
19	---	---	25600	---	---	32700	24100	22000	23200	---	---	---
20	---	---	12900	---	---	33800	24900	23900	24400	---	---	---
21	---	---	13200	---	---	35000	25500	24000	24800	---	---	---
22	---	---	14600	---	---	35200	25700	24200	25200	---	---	---
23	---	---	16700	---	---	36300	27000	25400	26200	---	---	---
24	---	---	19000	---	---	25000	27800	26200	27000	---	---	---
25	---	---	21500	29900	25200	26700	---	---	27200	43600	2400	22000
26	---	---	25900	31800	30100	30800	28200	27800	28000	10700	2700	4000
27	---	---	28600	32300	31200	31700	---	---	28200	28700	18700	26600
28	---	---	12400	33600	32200	32900	---	---	28600	28100	22600	24600
29	---	---	6300	34100	32800	33500	---	---	30900	24400	23400	24000
30	---	---	17600	34600	33600	34100	---	---	26700	23600	21700	22600
31	---	---	---	35600	34200	34800	---	---	31000	---	---	---
MONTH	34500	30600	27100	35600	25200	28200	42300	2600	27900	43600	2400	25800

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	20.0	18.5	19.5	9.5	5.0	7.0	1.5	.0	.5
2	---	---	---	22.0	18.5	20.0	10.5	8.0	9.5	3.5	.0	1.0
3	---	---	---	22.0	18.5	20.0	10.0	7.5	9.0	7.5	2.0	5.0
4	---	---	---	20.5	18.5	19.5	12.5	5.0	9.0	9.5	4.0	7.0
5	---	---	---	18.5	17.5	17.5	11.0	8.0	9.5	10.0	4.0	7.5
6	---	---	---	19.0	17.0	18.0	9.0	4.5	7.0	10.5	5.5	8.0
7	---	---	19.0	20.5	17.5	19.0	10.5	4.5	8.0	9.5	5.0	8.0
8	---	---	19.0	21.5	17.5	19.5	10.5	5.5	8.5	11.0	4.5	8.0
9	---	---	23.0	19.0	13.5	16.0	10.0	6.0	8.5	10.5	6.0	9.0
10	---	---	22.0	15.0	11.0	13.0	11.5	6.0	9.0	7.0	2.5	5.0
11	22.5	15.5	18.5	14.5	10.0	12.5	12.0	7.5	10.0	7.5	2.0	5.0
12	22.5	13.0	16.5	16.5	11.5	13.5	11.0	6.5	9.0	7.5	3.5	5.5
13	25.0	11.0	16.5	16.5	11.5	14.0	10.0	7.0	9.0	5.5	2.0	3.5
14	21.5	11.5	16.0	17.5	13.0	15.0	9.5	6.0	8.5	4.5	1.5	3.0
15	---	---	---	16.0	12.0	14.0	7.5	2.5	4.5	5.0	2.0	3.5
16	---	---	---	15.0	10.5	13.0	6.5	2.0	4.0	6.0	1.5	4.0
17	20.5	17.5	19.0	16.0	11.0	13.5	4.5	2.0	3.0	6.0	1.5	3.5
18	25.0	19.5	22.0	16.0	11.5	14.0	3.0	.0	.5	1.5	.0	.5
19	22.5	17.5	18.5	14.5	10.5	12.5	.0	.0	.0	.5	.0	.0
20	18.0	16.0	16.5	14.0	8.5	11.0	.0	.0	.0	1.5	.0	.5
21	16.0	15.0	15.5	15.5	10.0	13.0	.0	.0	.0	3.0	.0	.5
22	17.0	14.5	15.5	17.0	13.5	15.0	.0	.0	.0	3.0	.0	1.5
23	18.5	16.0	17.0	13.5	11.0	12.5	.0	.0	.0	6.5	.5	3.5
24	20.0	17.0	18.0	12.5	8.0	10.5	.0	.0	.0	8.0	1.0	5.0
25	19.5	17.5	18.5	13.0	8.0	10.5	.0	.0	.0	9.5	3.5	7.0
26	18.5	16.0	17.5	12.0	9.5	11.0	.0	.0	.0	10.5	4.0	7.5
27	19.5	16.0	17.5	9.0	4.5	6.5	.0	.0	.0	11.0	5.5	8.5
28	20.0	16.5	18.0	8.0	2.5	5.0	.0	.0	.0	11.5	5.0	8.5
29	21.5	17.5	19.0	10.5	3.5	7.0	.0	.0	.0	12.0	6.0	9.5
30	21.0	17.5	19.0	8.5	5.5	6.5	.0	.0	.0	11.0	6.0	8.5
31	22.0	18.0	20.0	---	---	---	.0	.0	.0	10.5	4.0	7.5
MONTH	25.0	11.0	18.5	22.0	2.5	14.0	12.5	.0	4.5	12.0	.0	5.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	5.5	9.5	---	---	5.0	13.0	10.0	11.5	20.5	15.0	17.5
2	12.5	8.0	10.0	---	---	7.0	20.0	12.5	15.5	27.5	17.5	21.5
3	11.5	5.0	8.5	---	---	10.0	18.5	10.0	14.5	28.0	18.0	22.5
4	12.0	6.0	9.0	---	---	8.0	18.5	8.5	13.5	28.0	17.5	22.5
5	12.0	6.0	9.0	---	---	10.0	20.0	9.5	15.0	29.5	18.5	23.5
6	10.5	4.0	7.5	---	---	8.0	20.0	11.5	16.5	31.0	20.5	24.5
7	12.0	---	10.0	---	---	6.0	19.5	16.0	17.5	24.5	18.5	21.0
8	---	---	7.5	---	---	7.0	23.0	14.5	18.5	24.5	13.5	18.5
9	---	---	5.0	---	---	5.0	23.5	13.5	19.0	25.5	15.0	20.0
10	11.5	6.0	9.0	---	---	7.0	22.0	14.5	18.0	26.0	15.0	20.5
11	14.0	8.0	11.0	---	---	7.5	24.5	14.0	19.0	28.5	18.0	23.0
12	13.0	7.0	10.5	---	---	7.0	23.5	14.0	18.5	31.0	20.5	25.0
13	13.0	6.0	10.0	17.0	---	10.0	23.5	13.5	18.0	30.5	20.5	25.0
14	14.0	---	11.0	19.0	---	12.5	21.0	12.5	17.0	31.0	21.0	25.0
15	14.0	---	11.5	20.5	13.0	16.5	18.5	11.0	15.0	28.0	20.5	24.0
16	14.0	6.5	10.5	---	---	14.0	21.5	10.0	15.5	27.5	20.0	23.5
17	14.5	7.0	11.0	---	---	12.0	24.0	11.0	17.0	25.0	19.5	22.0
18	---	---	9.0	---	---	11.0	19.5	13.5	17.0	25.0	20.0	22.5
19	---	---	9.0	11.0	---	7.0	25.0	14.0	19.0	30.0	21.0	25.0
20	---	---	7.0	18.0	---	16.0	23.5	17.5	20.0	27.5	19.5	23.5
21	---	---	3.0	---	---	10.0	22.0	13.0	17.5	29.5	19.0	24.0
22	---	---	5.0	---	---	12.0	22.0	11.0	16.5	34.0	21.5	26.5
23	---	---	8.0	---	---	14.0	23.5	11.5	17.5	28.5	22.5	25.5
24	---	---	5.0	---	---	8.0	26.0	14.5	20.0	30.5	22.5	26.0
25	---	---	9.0	---	---	10.0	24.5	17.5	21.0	33.0	21.5	26.0
26	---	---	8.0	---	---	15.0	24.5	18.0	21.0	33.0	21.0	26.0
27	---	---	5.0	19.0	13.5	15.5	25.0	14.0	19.0	30.5	22.5	26.0
28	---	---	3.0	16.5	8.5	12.5	20.0	15.0	17.5	26.5	20.5	23.5
29	8.5	2.0	6.0	18.5	9.0	14.5	20.0	15.5	17.0	27.5	16.0	21.0
30	---	---	---	17.5	11.0	15.0	22.5	11.5	16.5	26.5	17.0	21.0
31	---	---	---	13.0	10.0	11.5	---	---	---	26.0	16.5	21.0
MONTH	14.5	2.0	8.0	20.5	8.5	10.5	26.0	8.5	17.5	34.0	13.5	23.0

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	18.0	22.5	---	---	25.0	28.5	24.5	26.5	---	---	24.0
2	26.5	20.0	23.0	---	---	24.0	29.5	23.5	26.5	---	---	24.0
3	27.0	21.0	24.0	---	---	25.0	32.0	24.0	27.5	---	---	23.0
4	28.0	21.0	24.5	---	---	26.0	32.5	25.0	28.5	26.0	24.5	25.5
5	28.0	21.0	24.5	---	---	26.0	31.5	25.0	28.0	---	---	---
6	28.5	21.0	24.5	---	---	26.0	30.0	25.5	28.0	---	---	---
7	28.5	22.5	25.5	---	---	25.0	29.5	25.5	27.5	---	---	---
8	31.0	23.5	27.0	---	---	25.0	30.0	25.5	27.5	---	---	---
9	31.0	23.5	27.0	---	---	25.0	28.0	24.0	26.0	---	---	---
10	30.0	24.0	26.5	---	---	28.0	28.0	22.0	24.5	---	---	---
11	30.0	23.5	26.5	---	---	27.0	25.0	23.5	24.0	---	---	---
12	26.5	24.5	25.5	---	---	24.0	30.5	23.5	26.5	---	---	---
13	---	---	25.0	---	---	25.0	33.5	24.0	28.5	---	---	---
14	---	---	25.0	---	---	26.0	33.5	24.5	29.0	---	---	---
15	---	---	25.0	---	---	25.0	34.0	24.0	28.0	---	---	---
16	---	---	25.0	---	---	26.0	33.5	23.5	28.0	---	---	---
17	---	---	25.0	---	---	27.0	32.0	24.0	27.5	---	---	---
18	---	---	25.0	---	---	25.0	33.5	23.0	28.0	---	---	---
19	---	---	25.0	---	---	25.0	35.5	24.0	29.0	---	---	---
20	---	---	26.0	---	---	25.0	35.5	26.0	30.0	---	---	---
21	---	---	25.0	---	---	26.0	35.0	25.0	29.0	---	---	---
22	---	---	24.0	---	---	26.0	28.5	24.5	27.0	---	---	---
23	---	---	25.0	---	---	26.0	34.0	24.5	28.5	---	---	---
24	---	---	25.0	26.5	25.5	26.0	35.0	25.0	29.0	---	---	---
25	---	---	27.0	30.0	24.5	27.0	34.0	25.0	29.0	24.5	13.5	19.5
26	---	---	27.0	33.0	25.5	29.0	28.5	25.0	26.5	13.5	12.5	13.0
27	---	---	26.0	31.0	26.5	28.5	---	---	25.0	15.5	12.0	13.5
28	---	---	25.0	31.5	26.5	28.5	---	---	26.0	14.5	12.0	13.0
29	---	---	25.0	30.5	26.0	28.0	---	---	25.0	14.0	10.0	12.0
30	---	---	25.0	29.0	25.5	27.0	---	---	23.0	20.5	8.0	13.5
31	---	---	---	30.5	24.5	26.5	---	---	25.0	---	---	---
MONTH	31.0	18.0	25.0	33.0	24.5	26.0	35.5	22.0	27.0	26.0	8.0	18.0

07312000 LAKE KEMP NEAR MABELLE, TX

LOCATION.--Lat 33°45'30", long 99°09'03", Baylor County, Hydrologic Unit 11130206, in outlet gate tower near center of dam on Wichita River, 6.2 mi north of Mabelle, 13 mi northeast of Seymour, and 126.7 mi upstream from mouth.

DRAINAGE AREA.--2,086 mi².

PERIOD OF RECORD.--October 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1972, nonrecording gage at different site and at datum 2.40 ft higher.

REMARKS.--The lake is formed by a rolled earthfill dam 8,890 ft long. The original dam was completed Aug. 25, 1923, but deliberate impoundment had begun Oct. 1, 1922. Enlargement of the dam was completed in November 1973. The 3,000-foot-wide uncontrolled spillway is located approximately 600 ft to right and slightly upstream from right end of dam. The controlled outlet works near center of dam consist of two hydraulically operated slide gates 5 ft 8 in by 13 ft with a 13-foot-diameter conduit and spillway basin. The dam and lake are owned by the city of Wichita Falls and the Wichita County Water Improvement District No. 2. Water is used for irrigation in the Wichita River Valley, oilfield operation, municipal, and industrial uses. The capacity table is based on a resurvey made in 1973. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,183.0	-
Crest of spillway	1,160.0	603,000
Top of flood-control pool	1,156.0	502,900
Top of conservation pool	1,144.0	268,000
Lowest gated outlet (invert)	1,090.0	1,400

COOPERATION.--Capacity table No. 4-C was furnished by the Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 420,900 acre-ft June 30, 1941 (elevation, 1,152.0 ft), present datum; minimum since first appreciable storage, 26,160 acre-ft June 30, 1953 (elevation, 1,108.0 ft), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 304,300 acre-ft Oct. 28 at 0600 hours (elevation, 1,146.22 ft); minimum, 160,600 acre-ft Oct. 17 (elevation, 1,135.38 ft).

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

1,134.0	148,900	1,142.0	238,200
1,136.0	166,200	1,144.0	268,000
1,148.0	186,700	1,146.0	300,500
1,140.0	210,900	1,148.0	335,600

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165500	300000	274300	277200	281400	282200	270700	262800	239800	220000	193300	180600
2	165200	298000	275100	277500	281400	282000	271600	262800	238900	219700	192500	179900
3	164300	296000	275100	278100	281000	282000	271500	262400	238500	218900	191300	179000
4	163700	293300	275500	278500	281400	281200	270500	262200	237500	218100	190300	178100
5	163200	291500	275600	278800	280900	280400	270500	262200	237500	217600	189300	177700
6	163000	290000	275300	278900	281200	279700	270700	262200	237800	216900	188100	177200
7	162800	287800	275300	278900	281200	279300	271500	261300	237700	216000	187100	176700
8	162700	286500	275500	279300	281200	278600	271500	260800	236900	214700	185500	176700
9	162600	284000	275600	279300	281500	277700	272000	259900	236800	213400	185300	176500
10	162600	281400	276200	279300	281800	277800	272100	259300	235700	212600	187300	176100
11	162400	279100	276100	279900	282000	278100	272100	258400	235200	211600	189500	175900
12	162200	277200	276100	279400	281800	279900	271600	257800	234800	210900	190600	175600
13	161800	275000	276100	279300	282000	280100	271500	257000	234900	210400	190900	175400
14	161300	273600	276400	279100	282300	280600	271000	256100	234700	209700	191100	174800
15	160900	272900	276400	279300	282300	279300	270500	255100	234200	208800	191100	174600
16	160600	271800	276600	279400	281800	279400	270400	254000	233200	207800	191300	174200
17	162800	271800	276400	279300	282300	278600	269900	253100	232400	207200	191300	173900
18	164800	272800	276100	279100	282300	278300	269300	251900	231200	206700	191100	173800
19	169900	272400	275900	279100	282200	277500	268800	251600	231800	205800	190900	173600
20	185300	272300	275800	278900	282000	276900	268800	250400	231200	205100	190300	173400
21	214500	272400	275900	279100	282000	276600	268200	249400	230100	204000	189300	173300
22	270500	273600	275600	279100	282200	276600	267400	248600	229000	203000	188900	173200
23	292100	274000	275600	279600	282000	276600	267100	248300	227700	202100	187900	173100
24	297800	274500	275500	279700	282000	274800	266500	247600	226700	201300	187000	173100
25	300000	274500	275600	280100	282300	274500	266500	246400	225600	200500	185800	174200
26	301500	275100	275600	280400	283100	273600	266500	245400	224600	199600	184800	176000
27	304100	275100	275900	280600	283600	274800	265600	244800	223700	198700	183700	176200
28	303600	274200	276400	280700	282800	273400	264500	243100	222900	197700	183200	176100
29	303100	275000	276400	280700	282300	272600	263900	242500	221500	196700	182500	176000
30	302000	274200	276700	281000	---	271800	262800	241400	220700	195700	181700	175900
31	301000	---	276900	281000	---	271500	---	240500	---	194500	181300	---
MAX	304100	300000	276900	281000	283600	282200	272100	262800	239800	220000	193300	180600
MIN	160600	271800	274300	277200	280900	271500	262800	240500	220700	194500	181300	173100
(†)	1146.03	1144.39	1144.56	1144.82	1144.90	1144.22	1143.66	1142.16	1140.74	1138.68	1137.50	1136.99
(‡)	+134500	-26800	+2700	+4100	+1300	-10800	-8700	-22300	-19800	-26200	-13200	-5400

CAL YR 1983 MAX 304100 MIN 160600 ‡ +52400
WTR YR 1984 MAX 304100 MIN 160600 ‡ +9400

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

07312100 WICHITA RIVER NEAR MABELLE, TX

LOCATION.--Lat 33°45'36", long 99°08'33", Baylor County, Hydrologic Unit 11130206, near left bank on downstream side of bridge on U.S. Highways 183 and 283, 0.3 mi downstream from Lake Kemp Dam, 6.2 mi north of Mabelle, and 13 mi northeast of Seymour.

DRAINAGE AREA.--2,086 mi^2, all of which is above Lake Kemp Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-58 (occasional discharge measurements), October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,062.72 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow is regulated by Lake Kemp (see station 07312000). Water is released from Lake Kemp to supply Lake Diversion. Water from Lake Diversion is released for mining, industrial use, recreation, and irrigation in the vicinity of Wichita Falls.

AVERAGE DISCHARGE.--25 years, 139 ft^3/s (100,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,290 ft^3/s Mar. 24, 1976 (gage height, 10.47 ft); minimum daily, 0.15 ft^3/s June 22, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft^3/s Nov. 16 at 1100 hours (gage height, 8.56 ft); minimum daily, 0.60 ft^3/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227.0	1010.0	2.9	1.20	.72	173	236.0	238.0	231.00	230	309.00	194.00
2	225.0	1410.0	2.6	1.20	.84	234	145.0	90.0	231.00	230	308.00	195.00
3	225.0	1730.0	2.6	1.20	.80	233	1.7	1.3	225.00	228	307.00	196.00
4	226.0	1690.0	2.4	1.10	.87	234	1.5	1.2	225.00	223	305.00	195.00
5	82.0	1530.0	2.6	1.10	.95	235	1.3	1.3	231.00	220	303.00	68.00
6	138.0	1260.0	2.5	1.10	.80	232	1.1	31.0	189.00	218	305.00	1.50
7	86.0	1400.0	2.3	1.00	.67	233	1.3	147.0	79.00	235	304.00	1.10
8	2.2	1400.0	2.4	1.00	.80	235	1.2	230.0	79.00	313	305.00	1.10
9	2.0	1390.0	2.5	1.20	.84	233	1.2	229.0	79.00	313	309.00	.99
10	1.8	1390.0	2.3	1.20	.84	233	1.1	230.0	78.00	313	127.00	1.10
11	1.9	1390.0	2.2	.98	.82	235	1.2	290.0	80.00	313	1.80	1.00
12	1.9	1380.0	2.1	1.00	.84	239	1.4	345.0	32.00	316	1.00	.92
13	72.0	1390.0	2.3	1.00	.84	233	1.3	346.0	1.10	316	.87	.91
14	112.0	1210.0	2.1	1.10	.81	233	1.3	343.0	.72	310	.74	1.20
15	113.0	684.0	2.2	1.00	.76	233	1.4	344.0	.63	310	.75	1.50
16	113.0	712.0	2.1	1.00	.84	235	1.3	434.0	202.00	310	.75	1.00
17	56.0	6.3	2.1	1.10	.82	233	144.0	485.0	421.00	310	.75	1.00
18	2.0	4.1	2.0	1.10	.91	232	241.0	488.0	175.00	308	.75	1.00
19	8.3	3.4	2.0	.94	.93	233	200.0	487.0	1.60	308	.78	1.00
20	79.0	3.2	1.7	.94	.96	233	107.0	492.0	247.00	308	195.00	.67
21	3.9	3.1	1.7	.88	.94	233	105.0	392.0	472.00	308	320.00	.67
22	2.8	3.2	1.7	.83	.86	235	104.0	337.0	472.00	310	319.00	.75
23	2.6	3.9	1.6	.84	.94	233	104.0	337.0	472.00	310	320.00	.67
24	274.0	3.0	1.6	.84	.94	233	183.0	333.0	475.00	311	320.00	.60
25	2.6	2.8	1.5	.84	.85	234	106.0	335.0	475.00	310	319.00	.75
26	2.1	2.9	1.5	.86	4.10	233	31.0	340.0	475.00	310	319.00	.94
27	527.0	2.8	1.4	.91	128.00	236	230.0	338.0	387.00	309	319.00	.84
28	1020.0	2.8	1.4	.88	254.00	236	235.0	342.0	327.00	307	239.00	.94
29	1020.0	2.7	1.4	.90	202.00	234	235.0	335.0	330.00	311	194.00	.84
30	1020.0	3.0	1.2	.99	---	236	235.0	332.0	282.00	309	195.00	.75
31	1010.0	---	1.2	.88	---	236	---	313.0	---	308	195.00	---
TOTAL	6659.1	21023.2	62.1	31.11	609.29	7193	2659.3	8986.8	6975.05	9035	6144.19	871.74
MEAN	215	701	2.00	1.00	21.0	232	88.6	290	233	291	198	29.1
MAX	1020	1730	2.9	1.2	254	239	241	492	475	316	320	196
MIN	1.8	2.7	1.2	.83	.67	173	1.1	1.2	.63	218	.74	.60
AC-FT	13210	41700	123	62	1210	14270	5270	17830	13840	17920	12190	1730

CAL YR 1983 TOTAL 55788.42 MEAN 153 MAX 1730 MIN .29 AC-FT 110700
WTR YR 1984 TOTAL 70249.88 MEAN 192 MAX 1730 MIN .60 AC-FT 139300

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
WATER TEMPERATURES: October 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,110 micromhos May 13, 14, 1980; minimum daily, 561 micromhos May 28, 1975.
WATER TEMPERATURES: Maximum daily, 32.0°C Sept. 4, 1972, June 26, July 5, 1975; minimum daily, 0.0°C Dec. 20, 1973, and Feb. 9, 17, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,610 micromhos Aug. 30; minimum daily, 1,250 micromhos Oct. 20.
WATER TEMPERATURES: Maximum daily, 29.0°C Aug. 30, 31; minimum daily, 3.0°C Dec. 22, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
28...	1115	1050	4000	--	18.0	720	650	210	48
NOV									
15...	1550	685	4650	--	16.5	800	730	230	55
JAN									
30...	0800	.90	5640	--	10.0	1000	830	270	79
MAY									
27...	0800	335	5870	--	22.0	1000	950	300	73
JUL									
25...	1645	331	6420	--	27.0	1100	1000	320	79
SEP									
05...	1810	2.3	6390	7.8	29.0	1200	1100	340	90

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT									
28...	570	10	7.4	71	570	940	.30	7.2	2400
NOV									
15...	650	10	8.2	75	650	1100	.30	7.2	2700
JAN									
30...	880	13	5.6	170	730	1500	.40	10	3600
MAY									
27...	950	13	8.1	100	800	1500	.40	7.2	3700
JUL									
25...	1000	13	8.3	91	830	1700	.30	6.4	4000
SEP									
05...	1000	13	8.1	110	820	1800	.40	9.3	4100

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED SOLIDS (MG/L)	DISSOLVED SOLIDS (TONS)	DISSOLVED CHLORIDE (MG/L)	DISSOLVED CHLORIDE (TONS)	DISSOLVED SULFATE (MG/L)	DISSOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	6659.1	5100	3140	56500	1300	22700	690	12500	920
NOV.	1983	21023.2	4510	2760	157000	1100	61600	620	35000	840
DEC.	1983	62.1	4780	2940	493	1200	197	650	109	870
JAN.	1984	31.11	5620	3480	292	1400	119	760	64	1000
FEB.	1984	609.29	5310	3270	5380	1300	2170	720	1190	950
MAR.	1984	7193	5430	3350	65000	1400	26300	740	14300	970
APR.	1984	2659.3	5600	3460	24800	1400	10100	760	5460	1000
MAY	1984	8986.8	5790	3580	86900	1500	35500	790	19100	1000
JUNE	1984	6975.05	6030	3740	70400	1500	28900	820	15400	1100
JULY	1984	9035	6350	3950	96300	1600	39900	860	20900	1100
AUG.	1984	6144.19	6550	4080	67700	1700	28200	880	14700	1100
SEPT	1984	871.74	6580	4100	9640	1700	4020	890	2090	1100
TOTAL		70249.88	**	**	640000	**	260000	**	141000	**
WTD.AVG.		192	5460	3370	**	1400	**	740	**	970

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6440	5150	4980	5640	5630	5350	5480	5590	5900	6200	6550	6600
2	6450	4220	5560	5640	5660	5360	5490	5610	5940	6180	6500	6600
3	6440	4100	3090	5630	5670	5380	5740	5630	5940	6200	6520	6590
4	6440	4320	2690	5710	5650	5380	5710	5670	5930	6240	6520	6600
5	6230	4430	3330	5480	5660	5380	5620	5710	5940	6230	6530	6480
6	6340	4430	4820	5100	5670	5380	5680	5700	5880	6250	6530	5810
7	5960	4290	5580	5470	5670	5400	5630	5700	5930	6280	6540	6120
8	5920	4690	2460	5460	5680	5390	5620	5700	5920	6280	6540	6280
9	5970	4500	3070	5470	5630	5410	5640	5680	5960	6280	6540	6220
10	5960	4590	5130	5670	5660	5380	5630	5700	5960	6290	6430	6260
11	6000	4630	3790	5640	5650	5380	5600	5730	5960	6300	6230	6230
12	5900	4650	5130	5700	5630	5380	5640	5760	5960	6310	6230	6190
13	5820	4660	5390	5670	5630	5380	5670	5770	5950	6310	6180	6340
14	6460	4650	5610	5700	5650	5400	5690	5760	5900	6350	6280	6340
15	6460	4620	5540	5690	5660	5410	5680	5770	5690	6340	6340	6430
16	6470	4630	4340	5700	5670	5440	5690	5780	5840	6340	6290	6410
17	6420	5300	4380	5680	5670	5450	5690	5780	5810	6330	6000	6410
18	6120	5270	5120	5700	5690	5450	5560	5800	5780	6350	6370	6430
19	2380	4910	5290	5700	5660	5460	5560	5790	5950	6350	6350	6440
20	1250	4920	5220	5700	5680	5460	5570	5790	5950	6350	6370	6540
21	4100	4900	5440	5710	5630	5460	5600	5810	6050	6410	6570	6060
22	5440	5200	5700	5690	5660	5460	5600	5810	6070	6410	6560	6010
23	5980	4630	5690	5700	5660	5460	5600	5840	6100	6400	6580	6060
24	6070	5620	5720	5620	5660	5470	5610	5840	6100	6410	6560	6060
25	5880	5670	5720	5520	5070	5470	5620	5830	6110	6410	6600	6000
26	6030	5630	5680	5650	5080	5480	5730	5870	6100	6430	6600	5910
27	6030	5620	5630	5680	5090	5470	5630	5870	6150	6450	6600	5710
28	4000	5690	5570	5680	5360	5470	5660	5870	6200	6470	6600	5730
29	4300	5240	5550	5700	5360	5470	5660	5860	6200	6460	6600	5810
30	4450	5100	5550	5680	---	5480	5660	5860	6200	6470	6610	5790
31	5100	---	5640	5690	---	5470	---	5870	---	6480	6600	---
MEAN	5570	4880	4920	5630	5580	5430	5630	5770	5980	6340	6460	6220

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	19.0	8.0	9.0	11.0	9.0	12.0	18.0	22.0	26.0	26.0	28.0
2	23.0	19.0	13.0	10.0	11.0	9.0	12.0	17.0	22.0	26.0	26.0	27.0
3	22.0	19.0	11.0	10.0	10.0	9.0	12.0	16.0	22.0	27.0	26.0	27.0
4	23.0	19.0	11.0	10.0	10.0	9.0	11.0	16.0	23.0	27.0	27.0	25.0
5	21.0	18.0	10.0	9.0	10.0	9.0	11.0	17.0	23.0	27.0	27.0	27.0
6	21.0	19.0	8.0	10.0	10.0	9.0	14.0	18.0	22.0	27.0	27.0	22.0
7	20.0	18.0	10.0	10.0	10.0	10.0	14.0	16.0	23.0	27.0	27.0	19.0
8	20.0	18.0	10.0	11.0	10.0	9.0	15.0	18.0	24.0	27.0	27.0	19.0
9	20.0	18.0	10.0	13.0	10.0	9.0	15.0	19.0	24.0	27.0	26.0	22.0
10	20.0	17.0	9.0	8.0	11.0	9.0	15.0	19.0	24.0	27.0	26.0	22.0
11	19.0	17.0	9.0	8.0	11.0	9.0	15.0	19.0	24.0	27.0	26.0	22.0
12	15.0	17.0	8.0	9.0	10.0	9.0	15.0	20.0	24.0	27.0	26.0	22.0
13	15.0	17.0	10.0	8.0	10.0	10.0	14.0	20.0	24.0	27.0	26.0	22.0
14	20.0	17.0	12.0	8.0	10.0	10.0	14.0	20.0	22.0	27.0	24.0	22.0
15	20.0	15.0	10.0	8.0	10.0	11.0	14.0	20.0	21.0	27.0	24.0	20.0
16	20.0	16.0	5.0	8.0	8.0	10.0	13.0	20.0	22.0	27.0	24.0	20.0
17	20.0	14.0	5.0	8.0	10.0	10.0	14.0	20.0	25.0	27.0	24.0	20.0
18	20.0	15.0	5.0	8.0	10.0	10.0	15.0	20.0	25.0	27.0	25.0	20.0
19	20.0	13.0	4.0	7.0	10.0	10.0	15.0	20.0	24.0	27.0	25.0	20.0
20	18.0	12.0	4.0	8.0	10.0	11.0	15.0	20.0	23.0	27.0	25.0	20.0
21	15.0	12.0	4.0	8.0	8.0	11.0	15.0	22.0	26.0	27.0	27.0	20.0
22	15.0	18.0	3.0	9.0	9.0	12.0	15.0	21.0	26.0	27.0	28.0	20.0
23	15.0	12.0	3.0	10.0	11.0	12.0	15.0	23.0	26.0	27.0	28.0	22.0
24	15.0	14.0	4.0	8.0	10.0	12.0	15.0	23.0	26.0	27.0	28.0	22.0
25	16.0	13.0	4.0	8.0	10.0	12.0	17.0	23.0	26.0	27.0	28.0	21.0
26	15.0	13.0	7.0	10.0	10.0	12.0	18.0	22.0	26.0	27.0	28.0	15.0
27	15.0	9.0	9.0	10.0	7.0	13.0	17.0	22.0	26.0	27.0	28.0	15.0
28	18.0	---	6.0	10.0	6.0	12.0	17.0	21.0	26.0	27.0	28.0	15.0
29	19.0	8.0	5.0	10.0	7.0	12.0	16.0	21.0	26.0	26.0	28.0	15.0
30	19.0	9.0	5.0	10.0	---	12.0	16.0	22.0	26.0	26.0	29.0	15.0
31	19.0	---	7.0	9.0	---	12.0	---	22.0	---	26.0	29.0	---
MEAN	18.5	15.5	7.5	9.0	9.5	10.5	14.5	20.0	24.0	27.0	26.5	21.0

07312110 SOUTH SIDE CANAL NEAR DUNDEE, TX

LOCATION.--Lat 33°48'50", long 98°55'57", Archer County, Hydrologic Unit 11130206, on left bank 125 ft downstream from Lake Diversion headgates and 5.3 mi northwest of Dundee.

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

GAGE.--Water-stage recorder. Datum of gage is 1,039.70 ft National Geodetic Vertical Datum of 1929 (Wichita County Water Improvement District bench mark).

REMARKS.--Records good. Water diverted from Lake Diversion is used for mining, industrial use, recreation, and irrigation. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 84.2 ft^3/s (61,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 374 ft^3/s July 22, 1974; maximum gage height, 8.66 ft July 23, 1978; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 321 ft^3/s July 26; maximum gage height, 8.33 ft Aug. 9; minimum daily discharge, 0.22 ft^3/s Jan. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190.0	8.0	2.20	.81	88.0	3.9	5.1	156	282	275	307	198
2	190.0	7.8	2.20	1.10	87.0	3.9	4.9	136	282	265	316	198
3	190.0	7.8	2.10	.64	86.0	4.3	3.6	121	282	258	316	198
4	190.0	7.8	2.00	.59	85.0	4.3	4.0	122	290	255	317	190
5	190.0	7.8	1.90	.52	84.0	4.3	53.0	120	298	271	317	198
6	190.0	7.9	1.70	.43	83.0	4.1	92.0	119	273	297	316	194
7	159.0	7.8	1.70	.41	64.0	3.9	93.0	129	249	304	316	194
8	130.0	7.8	1.60	.41	40.0	4.1	90.0	150	247	300	318	191
9	130.0	6.5	1.70	.44	18.0	4.1	93.0	152	245	299	319	190
10	113.0	6.3	1.60	.32	23.0	4.3	90.0	164	231	297	265	227
11	97.0	6.3	1.40	.45	44.0	4.5	103.0	169	185	303	247	238
12	97.0	6.1	1.40	.32	63.0	5.0	125.0	170	184	310	246	233
13	97.0	6.1	1.20	.22	51.0	5.0	135.0	171	181	308	128	229
14	83.0	5.4	1.10	.29	12.0	5.0	132.0	210	179	307	34	224
15	36.0	4.6	1.20	.25	11.0	5.2	132.0	250	177	305	44	220
16	35.0	4.4	1.20	.23	10.0	6.5	130.0	269	175	304	69	218
17	27.0	4.1	1.00	.23	12.0	6.6	130.0	277	173	304	79	217
18	18.0	3.9	.84	.25	9.6	6.1	132.0	280	208	304	75	213
19	18.0	3.4	.81	.25	9.7	3.0	133.0	283	235	303	75	216
20	18.0	3.3	.81	26.00	7.9	3.8	120.0	286	232	307	123	220
21	18.0	3.3	.81	77.00	3.7	4.6	106.0	289	234	312	164	244
22	18.0	3.2	.81	93.00	3.6	5.4	105.0	279	245	316	166	264
23	18.0	3.1	.81	91.00	3.3	4.2	113.0	265	245	319	172	253
24	13.0	3.0	.81	85.00	3.2	3.6	128.0	266	246	319	199	243
25	8.3	3.0	.81	75.00	3.9	4.9	130.0	268	260	319	202	233
26	8.0	3.0	.81	74.00	3.6	4.3	144.0	271	271	321	204	224
27	8.0	2.3	.81	82.00	2.0	4.4	153.0	273	275	311	204	215
28	7.9	2.2	.81	91.00	2.3	3.2	154.0	275	276	299	212	206
29	8.0	2.5	.81	90.00	3.1	4.1	150.0	277	277	299	248	196
30	7.9	2.2	.81	90.00	---	4.8	154.0	280	277	301	247	188
31	7.9	---	.81	88.00	---	4.7	---	281	---	301	230	---
TOTAL	2321.0	150.9	38.57	970.16	916.9	140.1	3137.6	6758	7214	9293	6475	6472
MEAN	74.9	5.03	1.24	31.3	31.6	4.52	105	218	240	300	209	216
MAX	190	8.0	2.2	93	88	6.6	154	289	298	321	319	264
MIN	7.9	2.2	.81	.22	2.0	3.0	3.6	119	173	255	34	188
AC-FT	4600	299	77	1920	1820	278	6220	13400	14310	18430	12840	12840

CAL YR 1983	TOTAL	32011.13	MEAN	87.7	MAX 278	MIN .03	AC-FT	63490
WTR YR 1984	TOTAL	43887.23	MEAN	120	MAX 321	MIN .22	AC-FT	87050

07312200 BEAVER CREEK NEAR ELECTRA, TX

LOCATION.--Lat 33°54'21", long 98°54'17", Wichita County, Hydrologic Unit 11130207, near right bank on downstream side of bridge on Farm Road 2326, 6.5 mi northwest of Kamay, 8 mi upstream from Wichita River, and 9 mi south of Electra.

DRAINAGE AREA.--652 mi².

PERIOD OF RECORD.--February 1960 to current year.
Water-quality records: Chemical analyses: October 1968 to June 1970. Water temperatures: October 1968 to June 1970. Sediment records: April 1966 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 991.3 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation reference point).

REMARKS.--Records fair. Some regulation by Santa Rosa Lake, capacity 11,570 acre-ft, about 30 mi upstream. Several small diversions above station.

AVERAGE DISCHARGE.--24 years, 56.2 ft³/s (1.17 in/yr), 40,700 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s Mar. 17, 1961 (gage height, 33.57 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1925, 36.0 ft, probably occurred Oct. 2, 1941 (partly caused by breaching of Santa Rosa Dam to avoid its failure), from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 7	1730	1,080	17.80
Oct. 21	1130	*9,280	33.80
Oct. 24	0100	4,540	28.86

Minimum discharge, 0.22 ft³/s Aug. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	114	7.9	5.8	4.8	6.5	4.0	14	5.8	3.7	1.5	2.1
2	1.4	91	7.9	7.0	4.7	3.5	3.5	29	4.9	4.1	1.3	2.1
3	2.0	75	7.6	7.9	4.5	2.8	3.2	8.4	4.9	4.3	1.1	2.1
4	2.2	63	7.3	9.6	4.2	2.4	3.0	6.4	5.2	4.2	.66	2.1
5	2.4	51	7.6	10	4.0	2.0	2.9	5.8	5.5	4.1	.58	2.1
6	2.7	47	6.4	10	3.7	2.0	2.7	5.6	9.3	3.5	.59	2.1
7	699	48	5.5	9.9	3.1	1.9	9.1	4.6	5.3	3.6	.29	1.9
8	389	47	3.5	8.8	3.2	1.9	16	4.1	3.9	3.7	.60	2.2
9	37	41	3.3	8.7	6.1	1.8	8.0	4.0	3.4	3.8	13	2.1
10	10	37	3.5	7.9	6.8	1.8	4.8	4.2	96	3.7	66	2.1
11	7.4	27	3.1	7.2	6.4	7.7	3.6	4.7	42	3.8	170	2.1
12	4.3	24	3.0	6.7	11	73	2.8	4.4	9.6	3.8	79	2.0
13	2.6	22	3.1	6.4	6.0	58	2.4	4.4	6.6	7.2	9.0	1.8
14	2.0	20	3.3	6.3	4.0	29	2.3	4.4	5.3	5.3	4.9	1.6
15	2.0	17	3.3	5.7	3.0	13	2.0	3.5	4.4	2.9	2.9	1.5
16	2.2	15	3.2	5.6	2.8	6.3	1.9	3.5	4.0	2.6	2.5	1.5
17	210	14	3.1	5.2	2.6	3.7	1.8	3.0	3.6	2.9	2.2	1.6
18	123	13	3.1	4.7	16	8.7	2.3	3.3	3.3	2.9	2.2	1.6
19	745	12	3.1	3.9	11	6.7	2.2	3.7	3.2	2.6	2.2	1.7
20	4740	9.2	3.0	3.9	17	3.2	2.3	4.4	4.7	2.4	2.2	1.6
21	8830	8.2	3.0	4.0	8.2	3.0	2.3	4.4	5.2	2.4	2.2	1.6
22	5060	6.1	3.0	3.7	4.7	2.8	2.2	4.4	3.9	2.4	2.2	1.6
23	3460	20	3.0	4.3	2.7	76	2.2	4.7	3.4	2.4	2.2	1.6
24	4190	50	3.0	5.0	2.1	74	3.2	4.4	3.3	4.2	2.3	1.5
25	2720	29	3.5	5.2	1.9	13	3.2	4.2	3.6	6.2	2.5	51
26	977	17	4.7	5.6	3.6	6.9	3.4	3.5	4.1	7.2	2.5	277
27	456	17	5.5	5.4	47	4.8	3.9	3.5	4.6	5.2	4.3	18
28	281	16	5.5	5.1	35	24	3.6	4.4	4.6	3.7	4.3	4.1
29	215	10	5.4	5.0	17	33	3.1	11	4.6	2.4	2.6	2.5
30	167	9.0	5.6	4.4	---	11	2.7	8.5	3.9	2.0	2.4	2.0
31	135	---	5.8	4.6	---	6.2	---	6.4	---	1.7	2.3	---
TOTAL	33476.8	969.5	139.8	193.5	247.1	490.6	110.6	184.8	272.1	114.9	392.52	398.8
MEAN	1080	32.3	4.51	6.24	8.52	15.8	3.69	5.96	9.07	3.71	12.7	13.3
MAX	8830	114	7.9	10	47	76	16	29	96	7.2	170	277
MIN	1.4	6.1	3.0	3.7	1.9	1.8	1.8	3.0	3.2	1.7	.29	1.5
CFSM	1.66	.05	.007	.01	.01	.02	.006	.009	.01	.006	.02	.02
IN.	1.91	.06	.01	.01	.01	.03	.01	.01	.02	.01	.02	.02
AC-FT	66400	1920	277	384	490	973	219	367	540	228	779	791

CAL YR 1983 TOTAL 38287.51 MEAN 105 MAX 8830 MIN .01 CFSM .16 IN 2.18 AC-FT 75940
WTR YR 1984 TOTAL 36991.02 MEAN 101 MAX 8830 MIN .29 CFSM .16 IN 2.11 AC-FT 73370

07312500 WICHITA RIVER AT WICHITA FALLS, TX

LOCATION.--Lat 33°54'34", long 98°32'00", Wichita County, Hydrologic Unit 11130206, near center of stream on downstream side of bridge on Beverly Drive in Wichita Falls, 4 mi upstream from Fort Worth and Denver Railway Co. bridge, 8.4 mi upstream from Holliday Creek, and 55.3 mi upstream from mouth.

DRAINAGE AREA.--3,140 mi^2, of which 2,086 mi^2 is above Lake Kemp Dam.

PERIOD OF RECORD.--February 1900 to January 1902 (monthly discharge only, published in WSP 1311), October 1910 to December 1911 (gage heights only), March 1938 to current year.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 924.26 ft National Geodetic Vertical Datum of 1929. February 1900 to February 1902 and Oct. 1, 1910, to Dec. 31, 1911, nonrecording gages at site 4 mi downstream at different datum. Mar. 30, 1938, to Dec. 1, 1959, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Flow from 2,086 mi^2 is regulated by Lake Kemp (capacity 603,000 acre-ft) 71 mi upstream. Since completion of dam in 1923, no flow has been permitted to pass over spillway. Water is diverted from Lake Diversion (capacity 40,000 acre-ft), 41 mi, upstream for the irrigation of 42,000 acres under permit in the vicinity of Wichita Falls. During the water year, Wichita County Water Improvement District No. 2 diverted 65,130 acre-ft from Lake Diversion for mining, industrial use, recreation, and irrigation.

AVERAGE DISCHARGE.--47 years (water years 1901, 1939-84), 261 ft^3/s (189,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft^3/s Oct. 3, 1941 (gage height, 24.0 ft); no flow Oct. 11, 1960 (construction of cofferdam upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,440 ft^3/s Oct 24 at 0530 hours (gage height, 18.07 ft); minimum, 32 ft^3/s Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	674	100	54	43	55	191	50	72	73	80	77
2	71	771	97	48	44	48	190	83	69	74	84	73
3	79	824	95	48	45	68	187	139	85	79	82	73
4	93	872	92	46	46	123	183	94	77	75	80	70
5	85	1050	86	48	48	141	122	76	77	79	87	76
6	90	1250	86	50	54	151	67	69	147	81	89	74
7	393	1330	82	44	97	155	82	61	153	84	91	69
8	1300	1300	81	48	95	162	115	58	120	75	88	61
9	747	1220	78	49	73	164	118	57	93	77	101	60
10	248	1180	77	48	59	168	63	65	218	83	452	59
11	162	1120	75	46	54	172	54	62	192	83	639	60
12	114	1110	74	46	46	186	49	48	140	89	529	55
13	106	1100	72	46	54	206	55	48	103	87	344	54
14	100	1110	72	45	49	206	57	50	88	83	177	55
15	104	1100	69	45	38	192	59	56	73	88	104	63
16	97	1100	60	44	35	183	58	59	68	94	74	59
17	142	950	60	44	34	180	57	69	67	87	64	63
18	276	645	55	42	52	183	55	70	67	85	58	68
19	397	588	50	42	53	190	61	77	68	84	54	66
20	1880	512	50	41	44	194	63	78	71	91	55	63
21	2990	379	50	40	41	189	60	80	72	88	53	62
22	3540	338	45	40	40	184	53	82	71	87	57	61
23	4900	328	45	58	38	194	47	77	67	84	60	66
24	5270	286	40	87	36	202	46	70	76	86	58	71
25	4480	178	40	45	34	235	44	65	75	93	65	71
26	3970	133	45	45	38	201	40	68	72	106	61	103
27	3410	120	50	45	43	192	45	63	75	109	61	205
28	1550	112	48	49	48	191	43	66	85	104	71	130
29	668	111	45	48	61	194	48	64	79	91	72	100
30	560	105	48	43	---	213	48	69	72	88	81	96
31	569	---	50	42	---	200	---	76	---	86	90	---
TOTAL	38468	21896	2017	1466	1442	5322	2360	2149	2792	2673	4061	2263
MEAN	1241	730	65.1	47.3	49.7	172	78.7	69.3	93.1	86.2	131	75.4
MAX	5270	1330	100	87	97	235	191	139	218	109	639	205
MIN	71	105	40	40	34	48	40	48	67	73	53	54
AC-FT	76300	43430	4000	2910	2860	10560	4680	4260	5540	5300	8050	4490

CAL YR 1983 TOTAL 81440 MEAN 223 MAX 5270 MIN 23 AC-FT 161500
WTR YR 1984 TOTAL 86909 MEAN 237 MAX 5270 MIN 34 AC-FT 172400

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to current year.
WATER TEMPERATURES: October 1981 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD
SPECIFIC CONDUCTANCE: Maximum daily, 9,490 micromhos Mar. 2, 1984; minimum daily, 245 micromhos Oct. 24, 1983.
WATER TEMPERATURES: Maximum daily, 35.0°C July 21, 1982, July 4, 1983, and June 15, 16, 1984; minimum daily, 0.0°C Dec. 21, 30, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,490 micromhos Mar. 2; minimum daily, 245 micromhos Oct. 24.
WATER TEMPERATURES: Maximum daily, 35.0°C June 15, 16; minimum daily, 0.0°C Dec. 21, 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 16...	0815	1110	4910	7.8	12.5	11.7	115	1.2	830
JAN 24...	1145	104	6250	7.8	3.0	14.3	112	2.5	1200
MAR 27...	1050	195	5610	7.6	15.0	10.6	114	1.6	980
MAY 08...	0900	60	6950	7.9	17.0	9.4	102	2.3	1300
JUL 18...	1030	85	6740	7.9	27.5	9.7	130	3.1	1200
AUG 22...	1230	61	7120	7.7	28.5	8.0	109	3.0	1400

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 16...	750	230	62	730	11	7.7	80	650	1200
JAN 24...	1100	310	110	930	12	7.4	160	500	1800
MAR 27...	880	260	81	830	12	7.4	100	640	1500
MAY 08...	1100	310	120	1000	13	8.4	160	680	1900
JUL 18...	1100	300	110	1100	14	8.9	120	880	1800
AUG 22...	1200	330	130	1100	13	8.6	140	810	1900

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV 16...	.30	7.7	2900	.010	<.10	.080	1.8	1.9	.060
JAN 24...	.30	6.6	3800	.040	<.10	.160	.54	.70	.070
MAR 27...	.30	5.1	3400	.020	<.10	.340	.26	.60	.080
MAY 08...	.40	4.7	4100	<.010	<.10	.020	.58	.60	.110
JUL 18...	.40	7.2	4300	<.010	<.10	.010	.89	.90	.120
AUG 22...	.40	6.6	4400	<.010	<.10	.110	.79	.90	.020

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	38468	991	542	56300	230	23900	100	10500	170
NOV.	1983	21896	5040	2980	176000	1300	77200	540	32200	920
DEC.	1983	2017	6660	4130	22500	1800	10000	740	4060	1300
JAN.	1984	1466	7490	4760	18900	2100	8460	850	3380	1500
FEB.	1984	1442	7370	4670	18200	2100	8140	840	3260	1400
MAR.	1984	5322	5450	3270	46900	1400	20700	590	8540	1000
APR.	1984	2360	6270	3850	24500	1700	10900	700	4430	1200
MAY	1984	2149	6950	4340	25200	1900	11200	780	4530	1300
JUNE	1984	2792	5980	3660	27600	1600	12200	660	4990	1100
JULY	1984	2673	6870	4280	30900	1900	13800	770	5560	1300
AUG.	1984	4061	5180	3120	34200	1400	15100	570	6220	960
SEPT	1984	2263	6620	4110	25100	1800	11200	740	4530	1300
TOTAL		86909	**	**	507000	**	223000	**	92200	**
WTD.AVG.		237	3610	2160	**	950	**	390	**	660

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6900	4670	6980	7700	7480	8210	5490	6580	7480	6830	7000	6710
2	6970	4880	6940	7790	7500	9490	5570	6220	7810	6920	7090	7030
3	6930	4980	6910	7840	7430	8500	5600	6440	7130	6960	7030	7160
4	6880	5100	6940	7920	7350	5820	5630	7520	6930	6770	7080	7050
5	6870	5110	6680	8000	7580	5330	5700	7200	6980	6870	6870	7020
6	6020	5100	6500	7910	7400	5320	5920	6890	5110	6820	7010	7070
7	2960	4590	6170	6650	6220	5310	6340	6630	5050	6870	7100	7180
8	1870	4850	5910	5230	5980	5290	6030	6780	5640	7020	6930	7160
9	2090	5090	5610	5450	6370	5280	5070	7320	6260	7110	6860	7140
10	3410	5060	5850	7970	7150	5290	6120	7070	3960	7090	3500	7200
11	4190	5020	6200	7940	6670	5230	6440	7290	3780	7070	3260	7240
12	4550	5000	6550	8010	6950	5040	6940	7420	4780	6880	3580	7250
13	4980	4980	6850	7470	7290	5380	7180	7330	6180	6890	4560	7280
14	5050	4990	7100	8070	7340	5760	6960	7400	6570	6700	5570	7270
15	4940	4930	6910	7910	6860	5190	6840	7430	6420	6900	5460	7360
16	5100	4960	6770	7930	7560	5450	6690	7010	6620	6930	5400	7480
17	4340	4970	6650	7960	7670	5300	6750	6970	6660	6760	5610	7380
18	2230	5000	6000	8010	7520	5180	6990	6920	6750	6790	6090	7350
19	1750	5030	6320	8180	7830	5240	7150	6900	6840	6940	6400	7300
20	1080	5070	6600	8210	7970	5170	6810	6690	6500	6900	6770	7260
21	494	5080	6290	8250	8000	5240	6780	6570	6440	6820	6910	7250
22	356	5070	6450	8240	7850	5210	6790	6580	6610	6860	7000	7210
23	263	5250	6710	7950	8080	5070	7040	6900	6760	6870	6980	7310
24	245	5700	6860	5760	8410	5160	7240	6950	6640	6850	6950	7290
25	328	6150	7110	6100	8800	5420	7280	7080	6700	6810	7010	7230
26	524	6470	6970	8010	8380	6300	7360	6790	6670	6660	7160	5950
27	1000	6640	6750	7720	8230	5430	7270	7160	6680	6780	7120	4420
28	1960	6850	7120	7380	8100	5220	7650	7120	6580	6810	7250	4510
29	2880	6910	7480	7550	8150	5280	7470	7080	6670	6770	6940	5450
30	3500	7000	7670	7580	---	5390	7270	6970	6780	6920	7090	6240
31	4170	---	7810	7570	---	5250	---	7210	---	7060	6370	---
MEAN	3380	5350	6700	7560	7520	5670	6610	6980	6330	6880	6320	6890

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.0	22.0	11.0	---	13.0	14.0	14.0	22.0	20.0	30.0	29.0	28.0
2	28.0	22.0	---	---	13.0	16.0	18.0	24.0	22.0	31.0	30.0	29.0
3	30.0	22.0	12.0	---	12.0	15.0	17.0	24.0	24.0	28.0	30.0	27.0
4	27.0	20.0	12.0	---	12.0	14.0	16.0	25.0	26.0	30.0	28.0	28.0
5	27.0	19.0	12.0	---	10.0	13.0	18.0	---	27.0	32.0	28.0	29.0
6	24.0	20.0	14.0	10.0	11.0	13.0	20.0	24.0	27.0	33.0	32.0	27.0
7	22.0	20.0	13.0	8.0	12.0	14.0	16.0	25.0	26.0	32.0	30.0	25.0
8	20.0	19.0	12.0	8.0	11.0	14.0	20.0	24.0	30.0	---	30.0	---
9	20.0	18.0	12.0	10.0	13.0	13.0	22.0	24.0	30.0	---	30.0	25.0
10	24.0	16.0	12.0	8.0	13.0	12.0	20.0	24.0	28.0	31.0	26.0	30.0
11	23.0	15.0	12.0	9.0	14.0	12.0	22.0	26.0	27.0	30.0	24.0	29.0
12	22.0	---	11.0	8.0	14.0	13.0	20.0	26.0	29.0	31.0	27.0	30.0
13	21.0	17.0	11.0	7.0	15.0	16.0	20.0	30.0	30.0	32.0	30.0	29.0
14	22.0	14.0	10.0	7.0	16.0	20.0	19.0	30.0	34.0	31.0	31.0	29.0
15	23.0	16.0	11.0	6.0	16.0	22.0	17.0	28.0	35.0	---	30.0	19.0
16	25.0	16.0	9.0	6.0	16.0	17.0	18.0	26.0	35.0	31.0	31.0	23.0
17	24.0	15.0	6.0	5.0	15.0	15.0	22.0	28.0	34.0	30.0	31.0	24.0
18	23.0	14.0	6.0	2.0	14.0	18.0	21.0	26.0	33.0	31.0	32.0	26.0
19	23.0	15.0	6.0	1.0	13.0	14.0	21.0	23.0	29.0	33.0	33.0	26.0
20	21.0	15.0	2.0	3.0	11.0	16.0	21.0	25.0	31.0	31.0	34.0	24.0
21	18.0	16.0	.0	4.0	14.0	13.0	20.0	29.0	30.0	32.0	33.0	24.0
22	16.0	17.0	---	3.0	15.0	18.0	18.0	30.0	32.0	32.0	33.0	27.0
23	16.0	15.0	---	5.0	16.0	16.0	14.0	29.0	31.0	31.0	32.0	27.0
24	19.0	10.0	---	7.0	16.0	15.0	17.0	30.0	32.0	28.0	33.0	27.0
25	18.0	14.0	---	8.0	15.0	16.0	20.0	30.0	32.0	32.0	32.0	19.0
26	19.0	14.0	---	11.0	15.0	18.0	26.0	24.0	30.0	32.0	33.0	14.0
27	18.0	10.0	---	11.0	11.0	18.0	27.0	30.0	30.0	29.0	32.0	15.0
28	19.0	9.0	---	11.0	11.0	17.0	21.0	24.0	32.0	31.0	31.0	15.0
29	18.0	13.0	---	12.0	12.0	16.0	19.0	24.0	31.0	28.0	30.0	13.0
30	20.0	---	.0	11.0	---	16.0	21.0	23.0	29.0	29.0	32.0	13.0
31	21.0	---	2.0	12.0	---	15.0	---	24.0	---	30.0	32.0	---
MEAN	22.0	16.0	9.0	7.5	13.5	15.5	19.5	26.0	29.5	31.0	30.5	24.0

07312700 WICHITA RIVER NEAR CHARLIE, TX

LOCATION.--Lat 34°03'11", long 98°17'47", Clay County, Hydrologic Unit 11130206, on right bank at upstream side of bridge on Farm Road 810, 3.0 mi southeast of Charlie, and 5.7 mi northwest of Petrolia.

DRAINAGE AREA.--3,439 mi², of which 2,086 mi² is above Lake Kemp Dam and 143 mi² is above Lake Wichita Dam.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 872.71 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. For statement regarding regulations and diversions, see station 07312500. Records furnished by the city of Wichita Falls show that 14,120 acre-ft was returned to river above station as sewage effluent and filter plant washwater. Several observations of water temperature were made during year.

AVERAGE DISCHARGE.--17 years, 268 ft³/s (194,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,090 ft³/s Nov. 4, 1972 (gage height, 21.21 ft); maximum gage height, 22.32 ft May 15, 1982; minimum discharge, 24 ft³/s Feb. 18, 1978, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,980 ft³/s Oct. 26 at 1200 hours (gage height, 19.07 ft); minimum, 35 ft³/s Jan. 19, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	694	166	102	120	89	232	123	147	146	134	154
2	93	791	163	112	125	92	222	182	130	152	118	130
3	94	865	155	112	128	84	220	166	109	153	115	119
4	82	959	154	104	134	99	214	154	137	163	122	113
5	109	971	146	99	128	170	208	135	136	136	115	117
6	119	1150	138	97	131	190	162	115	223	110	131	130
7	626	1310	134	94	134	203	109	107	334	114	137	128
8	1500	1380	131	89	151	208	147	106	254	136	134	113
9	1160	1360	128	89	160	209	167	94	191	136	128	117
10	593	1300	125	92	136	208	172	99	203	134	172	121
11	298	1270	123	89	104	215	145	111	350	122	535	115
12	199	1230	117	87	94	244	115	112	270	145	820	124
13	142	1210	115	82	82	258	103	106	201	177	569	122
14	145	1210	117	80	87	257	110	94	158	168	400	109
15	139	1210	112	78	115	250	119	87	131	142	246	111
16	136	1210	115	76	94	237	123	87	120	140	167	134
17	192	1190	123	76	85	233	127	97	109	200	102	118
18	366	1030	112	73	107	231	123	112	108	161	80	126
19	503	865	109	61	148	233	119	113	104	149	67	132
20	1180	686	92	76	102	239	125	126	123	141	61	124
21	3230	550	92	73	87	231	129	143	120	156	60	104
22	3500	529	71	71	80	221	125	157	126	140	58	99
23	3510	483	97	71	76	222	115	167	121	140	82	110
24	4080	474	102	85	74	263	107	161	117	149	96	130
25	4750	391	85	154	72	251	94	144	120	153	84	141
26	4940	275	97	145	69	266	89	136	116	151	97	164
27	4720	237	104	134	70	238	78	145	116	157	97	230
28	4210	209	107	107	77	250	82	127	129	163	85	341
29	1920	189	97	109	73	238	92	149	154	164	96	258
30	791	176	92	128	---	231	108	142	144	143	105	203
31	677	---	97	125	---	245	---	146	---	127	155	---
TOTAL	44070	25404	3616	2970	3043	6605	4081	3943	4801	4568	5368	4237
MEAN	1422	847	117	95.8	105	213	136	127	160	147	173	141
MAX	4940	1380	166	154	160	266	232	182	350	200	820	341
MIN	66	176	71	61	69	84	78	87	104	110	58	99
AC-FT	87410	50390	7170	5890	6040	13100	8090	7820	9520	9060	10650	8400

CAL YR 1983 TOTAL 108209 MEAN 296 MAX 4940 MIN 48 AC-FT 214600
WTR YR 1984 TOTAL 112706 MEAN 308 MAX 4940 MIN 58 AC-FT 223600

07314000 LAKE KICKAPOO NEAR ARCHER CITY, TX

LOCATION.--Lat 33°39'47", long 98°46'43", Archer County, Hydrologic Unit 11130209, on intake tower near left end of dam on North Fork Little Wichita River, 8.2 mi south of Mankins, and 9.2 mi northwest of Archer City.

DRAINAGE AREA.--275 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1946 to current year. Prior to October 1965, monthend contents only.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Nonrecording gage read twice daily prior to Feb. 17, 1974, once daily thereafter. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Wichita Falls). Prior to Oct. 8, 1946, water-stage recorder at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 8,200 ft long, including a 483-foot-wide reinforced concrete ogee-type uncontrolled spillway near right end of dam. The dam was completed Dec. 15, 1945, and storage began Feb. 1, 1946. The service outlet consists of two gate-controlled 4- by 5-foot conduits. The dam and lake are owned by the city of Wichita Falls, which uses the water for their municipal supply. The capacity table is based on Geological Survey topographic maps, dated 1929. The capacity curve, dated November 1946, was entitled "Lake Kickapoo Area & Capacity Curve". Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,062.0	-
Design flood (2-foot freeboard)	1,060.0	221,000
Crest of spillway	1,045.0	106,000
Lowest gated outlet (invert)	1,000.92	0

COOPERATION.--Capacity curve, record of lake elevations, and diversions for municipal use are furnished by the city of Wichita Falls.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 134,300 acre-ft Aug. 2, 1950 (elevation, 1,049.2 ft); minimum observed since first filling in July 1950, 35,660 acre-ft June 30, 1953 (elevation, 1,029.8 ft).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 83,710 acre-ft Oct. 23-31 (elevation, 1,041.3 ft); minimum, 51,650 acre-ft Sept. 27-30 (elevation, 1,034.5 ft).

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

1,034.0	49,700	1,037.0	62,000	1,040.0	76,500
1,035.0	53,600	1,038.0	66,500	1,041.0	82,000
1,036.0	57,700	1,039.0	71,300	1,042.0	87,700

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79250	83140	80900	78150	76500	73380	73900	70340	64250	61570	56880	55240
2	79250	83140	80900	78150	76500	73380	72860	70340	64250	61140	56470	55240
3	79250	83140	80350	78150	76500	73380	72860	70340	64250	61140	56880	55240
4	78700	83140	80350	78150	76500	73380	72860	70340	64250	61140	56470	55240
5	78700	83140	80350	78150	76500	73380	72860	70340	64250	60710	56470	54830
6	78700	83140	79800	77600	75460	73380	72860	69380	64250	60710	56060	54420
7	78150	83140	79800	77600	75460	73380	72860	69380	64250	60710	56060	54420
8	78150	82570	79800	77600	74940	73380	72860	68900	64250	60280	56060	54420
9	77600	82570	79800	77600	74940	73380	72340	68900	64250	60280	56060	54420
10	77600	82570	79800	77600	74940	73380	72340	67940	64250	60280	56060	54010
11	77600	82570	79800	77600	74940	73380	72340	67940	64250	60280	56060	54010
12	77050	82570	79800	77600	74420	73900	72340	67940	64250	59850	56470	54010
13	77050	82570	79800	77050	74420	73900	72340	67940	64250	59850	56880	54010
14	77050	82570	79800	77050	74420	73900	72340	67940	63800	59850	56880	54010
15	77050	82000	79250	77050	74420	73900	72340	67940	63800	59420	56880	54010
16	77050	82000	79250	77050	74420	73900	71300	67940	63800	59420	56880	53600
17	77050	82000	79250	77050	74420	73900	71300	67460	63800	58990	56880	53600
18	76500	82000	79250	77050	74420	73900	71300	67460	63800	58990	56880	53210
19	76500	82000	78700	77050	74420	73900	71300	66980	63350	58990	56880	53210
20	76500	81450	78700	77050	74420	73900	71300	66500	63350	58990	56060	52820
21	76500	81450	78700	77050	73900	73900	71300	66050	63350	58560	56060	52820
22	79250	81450	78700	77050	73900	73900	71300	66050	63350	58560	56060	52430
23	82000	81450	78700	77050	73900	73900	71300	66050	63350	58130	56060	52430
24	83710	81450	78700	76500	73900	73900	71300	66050	63350	58130	55650	52040
25	83710	81450	78700	76500	73900	73900	71300	66050	62450	57700	55650	52040
26	83710	81450	78700	76500	73380	73900	71300	66050	62450	57700	55240	52040
27	83710	81450	78700	76500	73380	73900	71300	66050	62450	57290	55240	51650
28	83710	81450	78150	76500	73380	73900	71300	64700	62450	57290	55240	51650
29	83710	80900	78150	76500	73380	73900	71300	64700	62450	57290	55240	51650
30	83710	80900	78150	76500	---	73900	70340	64700	62450	57290	55240	51650
31	83710	---	78150	76500	---	73900	---	64250	---	56880	55240	---
MAX	83710	83140	80900	78150	76500	73900	73900	70340	64250	61570	56880	55240
MIN	76500	80900	78150	76500	73380	73380	70340	64250	62450	56880	55240	51650
(†)	1041.3	1040.8	1040.3	1040.0	1039.4	1039.5	1038.8	1037.5	1037.1	1035.8	1035.4	1034.5
(‡)	+4460	-2810	-2750	-1650	-3120	+520	-3560	-6090	-1800	-5570	-1640	-3590
(††)	145	136	172	161	82.3	172	108	92.4	108	88.4	89.1	117

CAL YR 1983 MAX 94210 MIN 76500 ‡ -10730 †† 1234
WTR YR 1984 MAX 83710 MIN 51650 ‡ -27600 †† 1471

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.
†† Diversions, in acre-feet, for municipal use, by the city of Wichita Falls.

07314000 LAKE KICKAPOO NEAR ARCHER CITY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 17...	1240	464	21.5	130	0	36	10	41

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 17...	2	6.0	150	14	47	.40	4.5	250

07314500 LITTLE WICHITA RIVER NEAR ARCHER CITY, TX

LOCATION.--Lat 33°39'45", long 98°36'46", Archer County, Hydrologic Unit 11130209, on left bank at downstream side of bridge on State Highway 79, 1.5 mi downstream from confluence of North and Middle Forks, and 4.8 mi north of Archer City.

DRAINAGE AREA.--481 mi², of which 275 mi² is above Lake Kickapoo.

PERIOD OF RECORD.--May 1932 to January 1956, August 1966 to current year.
Water-quality records: Chemical analyses: January 1953 to January 1956. Water temperatures: January 1953 to January 1956. Sediment records: May 1968 to September 1975.

REVISED RECORDS.--WSP 827: 1932-35. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 934.72 ft National Geodetic Vertical Datum of 1929. Aug. 17, 1954, to Jan. 6, 1956, nonrecording gage at present site and datum.

REMARKS.--Records fair. Some regulation by Lake Kickapoo (station 07314000) on North Fork Little Wichita River. Records furnished by the city of Wichita Falls show that 1,471 acre-ft was diverted from Lake Kickapoo for municipal use during the current water year. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1933-45) prior to completion of Lake Kickapoo, 110 ft³/s (79,700 acre-ft/yr); 28 years (water years 1946-55, 1967-84) regulated, 40.5 ft³/s (29,340 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s Oct. 31, 1941 (gage height, 26.18 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1930 reached a stage of about 28 ft, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 372 ft³/s Oct. 21 at 1430 hours (gage height, 10.47 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	.04	.00	3.10	.28	0	.00	.00	.00	.00
2	.00	.00	.03	.61	.00	1.10	.11	0	.00	.00	.00	.00
3	.00	.00	.03	.61	.00	.49	.05	0	.00	.00	.00	.00
4	.00	.92	.03	.61	.00	.18	.03	0	.14	.00	.00	9.80
5	.00	.85	.03	.53	.00	.09	.01	0	1.50	.00	.00	5.40
6	.00	2.10	.02	.33	.00	.02	.00	0	21.00	.00	.00	1.70
7	3.10	2.30	.02	.33	.00	.01	.00	0	29.00	.00	.00	.64
8	8.90	1.90	.02	.25	.00	.00	.00	0	3.20	.00	.00	.21
9	3.80	1.10	.02	.25	.00	.00	.59	0	.83	.00	.00	.09
10	.98	.38	.02	.19	.00	.00	1.20	0	.23	.00	4.30	.03
11	.36	.18	.02	.00	.00	.00	.32	0	.05	.00	5.50	.00
12	.12	.11	.02	.00	.00	44.00	.07	0	.02	.00	13.00	.00
13	.09	.07	.03	.00	.00	33.00	.04	0	.00	.00	4.10	.00
14	.06	.05	.03	.00	.00	17.00	.02	0	.00	.00	.99	.00
15	.05	.03	.01	.00	.00	5.70	.01	0	.00	.00	.37	.00
16	.03	.02	.00	.00	.00	2.20	.00	0	.00	.00	.16	.00
17	.04	.02	.00	.00	.00	1.10	.00	0	.00	.00	.07	.00
18	2.80	.02	.00	.00	.03	.63	.00	0	.00	.00	.02	.00
19	.94	.02	.00	.00	.01	.29	.00	0	.00	.00	.00	.00
20	44.00	.02	.00	.00	.00	.16	.00	0	.00	.00	.00	.00
21	295.00	.01	.00	.00	.08	.58	.00	0	.00	.00	.00	.00
22	56.00	.01	.00	.00	.33	.33	.00	0	.00	.00	.00	.00
23	12.00	.02	.00	.00	.19	1.60	.00	0	.00	.00	.00	.00
24	3.60	.07	.00	.00	.13	8.40	.00	0	.00	.00	.00	.00
25	1.40	1.70	.00	.00	.07	5.30	.00	0	.00	.00	.00	.00
26	.70	1.10	.00	.00	.56	1.60	.00	0	.00	.00	.00	27.00
27	.36	.62	.00	.00	40.00	.63	.00	0	.00	.04	.00	106.00
28	.14	.26	.00	.00	17.00	1.10	.00	0	.00	.03	.00	15.00
29	.06	.19	.00	.00	7.00	1.80	.00	0	.00	.00	.00	5.20
30	.02	.09	.00	.00	---	1.90	.00	0	.00	.00	.00	1.50
31	.01	---	.02	.00	---	.79	---	0	---	.00	.00	---
TOTAL	434.56	14.16	.38	3.75	65.40	133.10	2.73	0	55.97	.07	28.51	172.57
MEAN	14.0	.47	.012	.12	2.26	4.29	.091	.000	1.87	.002	.92	5.75
MAX	295	2.3	.03	.61	40	44	1.2	.00	29	.04	13	106
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	862	28	.8	7.4	130	264	5.4	.00	111	.1	57	342

CAL YR 1983 TOTAL 4494.02 MEAN 12.3 MAX 729 MIN .00 AC-FT 8910
WTR YR 1984 TOTAL 911.20 MEAN 2.49 MAX 295 MIN .00 AC-FT 1810

07314800 LAKE ARROWHEAD NEAR HENRIETTA, TX

LOCATION.--Lat 33°45'51", long 98°22'17", Clay County, Hydrologic Unit 11130209, at intake tower near center of dam on Little Wichita River, 2.3 mi upstream from Lake Creek, 11 mi southwest of Henrietta, and 12.3 mi southeast of Wichita Falls.

DRAINAGE AREA.--822 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.40 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--The lake is formed by a rolled earthfill dam 15,900 ft long, including an uncontrolled reinforced concrete ogee spillway 1,581 ft wide located near the left end of dam. The dam was completed in December 1966 and storage began in June 1967. The service outlet works, located in a cylindrical service tower at upstream side of dam, consist of two gated 5-foot-diameter inlets that can be used for controlled releases. The dam was built by the city of Wichita Falls to impound water for municipal, industrial, and recreational uses. The area-capacity curves are based on Geological Survey topographic maps. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam	944.4	-
Design flood	939.95	551,400
Crest of spillway (top of conservation pool)	926.4	262,100
Lowest gated outlet (invert)	874.1	-

COOPERATION.--Capacity table furnished by Homer Hunter and Associates and Biggs and Mathews Consulting Engineers for the city of Wichita Falls. Area-capacity curves furnished by Homer Hunter and Associates. Record of diversions furnished by the city of Wichita Falls.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 279,000 acre-ft May 24, 1982 (gage height, 927.42 ft); minimum since first appreciable storage, 4,640 acre-ft Aug. 31 to Sept. 4, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 201,300 acre-ft Oct. 7 (gage height, 922.31 ft); minimum, 143,600 acre-ft Sept. 28 (gage height, 917.60 ft).

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

916.0	127,100	922.0	197,000
918.0	148,000	924.0	225,200
920.0	171,300		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194400	199100	194900	192600	192900	191100	190800	185100	176600	168300	156800	149900
2	193600	198900	195100	192600	192400	190900	190500	185100	176300	168700	156500	149700
3	194700	198800	194700	193000	192200	190900	189600	184700	176400	168300	156300	149000
4	194100	198000	195400	192900	191800	189800	189500	184200	176800	167600	155900	149200
5	194200	198800	194400	193200	191700	190100	190000	183800	177300	167300	155600	149200
6	194100	198900	194700	192900	192400	190400	190000	184000	178300	166900	155300	148800
7	200400	199300	194400	192900	192400	190500	190300	183000	178400	166500	155200	148700
8	200400	199500	194600	193300	192600	189800	189600	183600	178200	166500	154900	148800
9	200700	197400	194500	192400	192400	189500	190900	183500	177400	165900	154400	148800
10	200400	197100	194600	193200	193000	189800	189600	183300	176800	165400	154700	148700
11	199100	197700	194400	193700	192500	190700	188200	182200	176700	164500	154900	147900
12	199100	197100	194700	192800	192400	191700	189500	182100	176300	164300	155200	147900
13	199300	197400	194200	192600	192500	192200	188800	182000	175800	164300	155100	147500
14	199300	197000	194000	192200	193700	193300	188300	181800	175700	163900	154800	146200
15	198800	196900	193700	192500	192100	191800	187900	181600	175400	163500	154600	145900
16	198500	197400	193800	192600	192600	192000	187800	181200	174900	163000	154400	145700
17	198500	197100	193800	191600	193200	192100	187700	180900	174400	162800	153900	145500
18	198900	197300	192800	191600	192900	192400	187400	180800	173300	162100	153600	145400
19	198900	196500	192800	192200	192900	191600	187700	180200	173600	162000	153100	145300
20	199600	196700	193000	191800	192900	191300	187800	180400	173300	161700	152900	145000
21	199500	196700	192000	192200	192900	191400	186900	180700	172900	161000	152900	144800
22	199600	195700	192400	192400	171200	192000	186400	179800	172400	160600	152200	145000
23	200000	196200	191400	192500	191200	191200	187000	179900	171100	160200	151800	144800
24	199600	196300	192000	192400	191300	191200	186800	180400	171600	159700	151600	144400
25	199300	197000	192400	192600	191400	191800	187800	178800	171600	159500	151100	144100
26	199600	195700	192500	192600	191400	191800	186100	179300	171200	159500	151100	144200
27	199800	195000	192600	192500	191300	190800	185700	177900	170500	158800	150900	144000
28	199500	195000	192100	192800	191300	190300	185500	177400	170100	158300	150600	143800
29	199300	195500	192100	192000	191200	190500	184800	177600	169400	158000	150500	144000
30	199300	194100	192500	192500	---	190500	184800	177700	168800	157700	150200	144300
31	199100	---	192800	192500	---	190300	---	177400	---	157200	150400	---
MAX	200700	199500	195400	193700	193700	193300	190900	185100	178400	168700	156800	149900
MIN	193600	194100	191400	191600	171200	189500	184800	177400	168800	157200	150200	143800
(†)	922.15	921.78	921.68	921.66	921.56	921.49	921.07	920.49	919.79	918.81	918.21	917.66
(‡)	+4600	-5000	-1300	-300	-1300	-900	-5500	-7400	-8600	-11600	-6800	-6100
(††)	1185	1113	1119	1069	1082	1177	1395	1660	1275	1649	1135	2317

CAL YR 1983 MAX 230900 MIN 191400 ‡ -34300 †† 16986
WTR YR 1984 MAX 200700 MIN 143800 ‡ -50200 †† 16176

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.
†† Diversions, in acre-feet, for municipal use by the city of Wichita Falls.

07314800 LAKE ARROWHEAD NEAR HENRIETTA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1970 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 17...	0835	659	23.5	160	20	44	12	67

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 17...	2	9.0	140	12	120	.40	.4	350

07314900 LITTLE WICHITA RIVER ABOVE HENRIETTA, TX

LOCATION.--Lat 33°49'36", long 98°14'23", Clay County, Hydrologic Unit 11130209, on right bank at downstream side of bridge on U.S. Highways 822 and 287, 1.0 mi downstream from Duck Creek, 2.8 mi west of Henrietta, 6.6 mi upstream from Turkey Creek, and 7.6 mi upstream from Dry Fork Little Wichita River.

DRAINAGE AREA.--1,037 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1953 to current year. Prior to October 1974, published as "near Henrietta".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 831.57 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1953, nonrecording gage. Prior to July 11, 1975, at site 2.6 mi downstream at same datum.

REMARKS.--Water-discharge records fair. Flow largely regulated by Lake Arrowhead 39 mi upstream (capacity 262,100 acre-ft). The city of Wichita Falls diverted 1,471 acre-ft from Lake Kickapoo and 16,176 acre-ft from Lake Arrowhead for municipal uses, and returned 14,120 acre-ft as sewage effluent and filter plant washwater to the Wichita River below station 07312500 at Wichita Falls and above station 07312700 near Charlie. The city of Henrietta diverted 534 acre-ft from pool at gage for municipal use. Record of diversions were furnished by the cities of Wichita Falls and Henrietta, respectively.

AVERAGE DISCHARGE.--13 years (water years 1954-66) prior to completion of Lake Arrowhead, 124 ft^3/s (89,840 acre-ft/yr); 18 years (water years 1967-84) regulated, 36.2 ft^3/s (26,230 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,630 ft^3/s May 1, 1966 (gage height, 18.28 ft, at former site); maximum gage height, 23.95 ft May 24, 1982, at present site; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 21 ft at former site, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft^3/s Oct. 7 at 2000 hours (gage height, 19.85 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	0	0	0	0	.0	0	.0	13.00	0	16.0	0
2	.0	0	0	0	0	.0	0	.0	9.80	0	15.0	0
3	.0	0	0	0	0	.0	0	.0	1.60	0	10.0	0
4	.0	0	0	0	0	.0	0	.0	.00	0	.0	0
5	.0	0	0	0	0	.0	0	.0	.00	0	.0	0
6	.0	0	0	0	0	.0	0	.0	12.00	0	.0	0
7	610.0	0	0	0	0	.0	0	.0	45.00	0	.0	0
8	918.0	0	0	0	0	.0	0	.0	88.00	0	.0	0
9	328.0	0	0	0	0	.0	0	.0	18.00	0	.0	0
10	88.0	0	0	0	0	.0	0	.0	7.30	0	11.0	0
11	32.0	0	0	0	0	.0	0	.0	5.90	0	5.2	0
12	15.0	0	0	0	0	9.3	0	.0	5.00	0	1.8	0
13	8.5	0	0	0	0	1.9	0	.0	4.20	0	.0	0
14	5.4	0	0	0	0	.0	0	.0	1.60	0	.0	0
15	4.0	0	0	0	0	.0	0	.0	.16	0	.0	0
16	3.2	0	0	0	0	.0	0	.0	.00	0	.0	0
17	2.8	0	0	0	0	.0	0	.0	.00	0	.0	0
18	2.0	0	0	0	0	.0	0	.0	.00	0	.0	0
19	2.4	0	0	0	0	.0	0	.0	.00	0	.0	0
20	15.0	0	0	0	0	.0	0	.0	.00	0	.0	0
21	87.0	0	0	0	0	.0	0	.0	.00	0	.0	0
22	271.0	0	0	0	0	.0	0	.0	.00	0	.0	0
23	149.0	0	0	0	0	.0	0	.0	.00	0	.0	0
24	49.0	0	0	0	0	.0	0	.0	.00	0	.0	0
25	22.0	0	0	0	0	.0	0	.0	.00	0	.0	0
26	11.0	0	0	0	0	.0	0	.0	.00	0	.0	0
27	7.1	0	0	0	0	.0	0	.0	.00	0	.0	0
28	4.8	0	0	0	0	.0	0	2.5	.00	0	.0	0
29	3.4	0	0	0	0	.0	0	11.0	.00	0	.0	0
30	1.4	0	0	0	---	.0	0	13.0	.00	0	.0	0
31	.0	---	0	0	---	.0	---	13.0	---	4	.0	---
TOTAL	2640.0	0	0	0	0	11.2	0	39.5	211.56	4	59.0	0
MEAN	85.2	.000	.000	.000	.000	.36	.000	1.27	7.05	.13	1.90	.000
MAX	918	.00	.00	.00	.00	9.3	.00	13	88	4.0	16	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5240	.00	.00	.00	.00	22	.00	78	420	7.9	117	.00

CAL YR 1983 TOTAL 3359.18 MEAN 9.20 MAX 918 MIN .00 AC-FT 6660
WTR YR 1984 TOTAL 2965.26 MEAN 8.10 MAX 918 MIN .00 AC-FT 5880

07314900 LITTLE WICHITA RIVER ABOVE HENRIETTA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1952 to January 1956, March 1959 to September 1966, January 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 19...	1025	2.4	188	21.5	51	0	14	4.0	15
JUN 14...	1445	1.3	197	30.0	57	1	16	4.2	15

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 19...	.9	6.9	51	15	21	.20	6.3	110
JUN 14...	.9	7.3	56	13	21	.20	7.6	120

07315200 EAST FORK LITTLE WICHITA RIVER NEAR HENRIETTA, TX

LOCATION.--Lat 33°48'46", long 98°05'05", Clay County, Hydrologic Unit 11130209, on downstream side of bridge on U.S. Highway 82, 5.8 mi upstream from Little Wichita River, 6.4 mi east of Henrietta, and 8.9 mi west of Ringgold.

DRAINAGE AREA.--178 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-72-1: 1966(M).

GAGE.--Water-stage recorder. Datum of gage is 825.32 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No known diversions above station.

AVERAGE DISCHARGE.--20 years (water years 1965-84), 23.9 ft^3/s (1.82 in/yr), 17,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s Oct. 13, 1981 (gage height, 31.70 ft), from rating curve extended above 5,100 ft^3/s on basis of contracted-opening measurement of 15,500 ft^3/s; no flow for many days most years.
Maximum stage since at least 1920, that of Oct. 13, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1941 reached a stage of 28.8 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 610 ft^3/s Oct. 8 at 0030 hours (gage height, 15.97 ft), no other peak above base of 300 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.07	.02	.01	.01	.01	.05	.01	.01	.00	.00	.00
2	.00	.06	.02	.01	.01	.01	.05	.01	.01	.00	.00	.00
3	.00	.06	.02	.01	.01	.01	.04	.01	.01	.00	.00	.00
4	.00	.06	.02	.02	.01	.01	.04	.01	.01	.00	.00	.00
5	.00	.07	.02	.02	.01	.01	.04	.01	.02	.00	.00	.00
6	.00	.09	.02	.02	.01	.01	.04	.01	.08	.00	.00	.00
7	294	.10	.02	.04	.01	.01	.04	.01	.05	.00	.00	.00
8	499	.09	.02	.05	.01	.01	.03	.01	.03	.00	.00	.00
9	214	.08	.02	.07	.01	.01	.03	.01	.02	.00	.00	.00
10	17	.05	.02	.05	.01	.01	.03	.01	.02	.00	.00	.00
11	4.5	.05	.02	.04	.01	.04	.03	.01	.02	.00	.00	.00
12	2.1	.04	.02	.02	.01	26	.03	.01	.01	.00	.00	.00
13	1.2	.03	.02	.00	.01	11	.03	.01	.01	.00	.00	.00
14	.84	.03	.02	.00	.07	26	.03	.01	.00	.00	.00	.00
15	.67	.03	.02	.00	.01	5.6	.03	.01	.00	.00	.00	.00
16	.54	.02	.02	.00	.01	1.2	.02	.01	.00	.00	.00	.00
17	.45	.02	.02	.00	.01	.39	.02	.01	.00	.00	.00	.00
18	.32	.02	.01	.00	.01	.18	.02	.01	.00	.00	.00	.00
19	.35	.05	.01	.00	.01	.18	.02	.01	.00	.00	.00	.00
20	.45	.04	.00	.00	.01	.13	.02	.02	.00	.00	.00	.00
21	.50	.04	.00	.00	.01	.09	.02	.04	.00	.00	.00	.00
22	.34	.04	.00	.02	.01	.05	.02	.03	.00	.00	.00	.00
23	.26	.13	.00	.02	.01	.06	.01	.02	.00	.00	.00	.00
24	.23	.11	.00	.02	.01	.04	.01	.02	.00	.00	.00	.00
25	.18	.09	.00	.01	.01	.02	.01	.02	.00	.00	.00	.00
26	.14	.06	.00	.01	.01	.02	.01	.02	.00	.00	.00	.00
27	.12	.05	.00	.01	.01	.04	.01	.02	.00	.00	.00	.00
28	.10	.03	.00	.01	.01	.15	.01	.01	.00	.00	.00	.00
29	.08	.02	.00	.01	.01	.09	.01	.01	.00	.00	.00	.00
30	.08	.02	.00	.01	---	.05	.01	.01	.00	.00	.00	.00
31	.07	---	.00	.01	---	.05	---	.01	---	.00	.00	---
TOTAL	1037.52	1.65	.36	.49	.35	71.48	.76	.42	.30	.00	.00	.00
MEAN	33.5	.055	.012	.016	.012	2.31	.025	.014	.010	.000	.000	.000
MAX	499	.13	.02	.07	.07	26	.05	.04	.08	.00	.00	.00
MIN	.00	.02	.00	.00	.01	.01	.01	.01	.00	.00	.00	.00
CFSM	.19	.000	.000	.000	.000	.01	.000	.000	.000	.000	.000	.000
IN.	.22	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
AC-FT	2060	3.3	.7	1.0	.7	142	1.5	.8	.6	.00	.00	.00

CAL YR 1983 TOTAL 3198.93 MEAN 8.76 MAX 499 MIN .00 CFSM .05 IN .67 AC-FT 6350
WTR YR 1984 TOTAL 1113.33 MEAN 3.04 MAX 499 MIN .00 CFSM .02 IN .23 AC-FT 2210

07315200 EAST FORK LITTLE WICHITA RIVER NEAR HENRIETTA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1968, October 1969 to current year. Sediment records: October 1965 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 19...	1230	.39	297	21.5	80	0	21	6.7	24
JAN 11...	1305	.04	1010	5.0	230	0	57	22	130

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 19...	1	6.2	84	21	28	.20	8.9	170
JAN 11...	4	4.2	310	51	120	.40	14	580

07315500 RED RIVER NEAR TERRAL, OK

LOCATION.--Lat 33°52'43", long 97°56'03", Jefferson County, Hydrologic Unit 11130201, on left bank on downstream side of bridge abutment on U.S. Highway 81, 0.5 mi downstream from Chicago, Rock Island, and Railroad Co. bridge, 1.2 mi south of Terral, 3.6 mi downstream from Little Wichita River, and at mile 872.

DRAINAGE AREA.--28,723 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 770.31 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 12, 1939, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Many small diversions for irrigation, oilfield, and municipal uses upstream from station.

AVERAGE DISCHARGE.--46 years (water years 1939-84), 2,127 ft³/s (1,541,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s Oct. 22, 1983 (gage height, 33.60 ft); minimum, 43 ft³/s Mar. 15, 1939.
Maximum stage since at least 1891, that of Oct. 22, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1935, reached a stage of 27.2 ft, although floods in 1891 and on May 1, 1908, are reported to have reached about the same stage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 210,000 ft³/s Oct. 22 at 2000 hours (gage height, 33.60 ft), no other peak above base of 21,000 ft³/s; minimum, 90 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	5460	1060	550	633	937	2180	402	321	352	206	427
2	95	5100	981	600	627	693	1860	458	324	324	196	354
3	100	4870	949	650	595	602	1490	637	318	334	195	292
4	126	4720	947	750	587	544	1170	745	288	308	186	248
5	108	4940	929	837	572	503	1110	571	299	307	191	223
6	96	5260	871	1010	577	547	1090	509	406	334	203	207
7	288	4910	858	1320	585	608	1070	475	379	284	206	192
8	3750	4840	851	1270	572	616	1040	417	450	242	206	187
9	6270	4880	821	1040	602	603	1190	401	543	224	205	184
10	3560	4880	788	917	590	628	1280	387	483	221	213	171
11	1860	4960	777	892	644	666	1390	370	406	224	227	159
12	865	4810	572	852	607	810	1480	369	726	231	357	150
13	527	4760	713	791	611	884	1630	369	674	226	804	141
14	404	4600	697	747	603	962	1680	356	473	239	848	142
15	327	4610	730	715	595	954	1510	341	1660	257	665	132
16	296	4530	765	690	600	905	1030	327	1340	259	442	126
17	226	4350	749	665	586	820	803	314	1030	246	395	124
18	267	3640	727	599	605	781	736	305	884	232	351	136
19	469	3240	559	500	580	735	679	334	989	263	275	129
20	12700	3500	500	500	603	712	636	355	869	226	230	130
21	48600	3640	450	540	606	693	608	355	727	214	204	136
22	180000	3630	400	560	609	679	572	398	736	205	182	134
23	175000	3620	400	587	646	668	547	393	687	204	171	126
24	95100	3440	450	619	882	697	527	387	969	198	160	119
25	36600	3220	400	744	870	2890	497	379	767	201	157	146
26	20000	3070	350	797	883	3390	485	395	757	210	159	172
27	14900	2630	400	762	871	3020	451	357	627	214	151	177
28	12600	2390	450	708	1180	3140	411	356	488	218	148	207
29	10700	2010	500	661	1210	2960	400	339	399	213	170	265
30	7570	1470	450	628	---	3240	404	325	371	208	411	278
31	6050	---	500	615	---	2800	---	334	---	218	526	---
TOTAL	639554	121980	20594	23116	19731	38687	29956	12460	19390	7636	9040	5614
MEAN	20630	4066	664	746	680	1248	999	402	646	246	292	187
MAX	180000	5460	1060	1320	1210	3390	2180	745	1660	352	848	427
MIN	95	1470	350	500	572	503	400	305	288	198	148	119
AC-FT	1269000	241900	40850	45850	39140	76740	59420	24710	38460	15150	17930	11140

CAL YR 1983 TOTAL 1036773 MEAN 2840 MAX 180000 MIN 95 AC-FT 2056000
WTR YR 1984 TOTAL 947758 MEAN 2590 MAX 180000 MIN 95 AC-FT 1880000

07315500 RED RIVER NEAR TERRAL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,000 micromhos June 15, 1984; minimum daily, 330 micromhos Oct. 21, 1983.
WATER TEMPERATURES: Maximum daily, 35.0°C Aug. 13, 16, 17, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,000 micromhos June 15; minimum daily, 330 micromhos Oct. 21.
WATER TEMPERATURES: Maximum daily, 34.0°C June 28, Aug. 19, 20; minimum daily, 0.0°C Dec. 20, Jan. 18-21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 22...	1200	175000	449	15.0	130	31	39	7.0	43
DEC 31...	1130	515	8510	2.0	1700	1300	430	140	1300
FEB 29...	1350	1190	3480	8.0	630	470	160	55	520
APR 25...	1450	477	6070	24.0	1100	940	280	93	900
JUN 27...	1125	641	9300	27.5	1300	1200	390	90	1600
JUL 31...	1820	212	6850	31.0	1200	1100	310	100	1100

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 22...	2	3.9	95	42	59	.30	9.0	260
DEC 31...	14	9.1	310	1000	2300	.50	14	5400
FEB 29...	9	5.9	160	400	850	.40	5.5	2100
APR 25...	12	8.0	140	810	1500	.40	4.5	3700
JUN 27...	20	16	110	1100	2600	.70	11	5900
JUL 31...	14	11	110	870	1800	.50	5.1	4300

07315500 RED RIVER NEAR TERRAL, OK--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	639554	914	541	934000	190	327500	120	209700	190
NOV.	1983	121980	3770	2280	751000	860	282400	490	160300	730
DEC.	1983	20594	4880	2990	166000	1200	65200	620	34400	890
JAN.	1984	23116	5360	3300	206000	1300	82000	670	42100	960
FEB.	1984	19731	6600	4100	218000	1700	88600	820	43800	1100
MAR.	1984	38687	3880	2370	248000	920	95900	500	51800	730
APR.	1984	29956	4410	2690	217000	1000	83500	560	45600	830
MAY	1984	12460	6290	3890	131000	1600	52400	790	26600	1100
JUNE	1984	19390	8290	5240	274000	2200	116500	1000	52800	1300
JULY	1984	7636	7310	4560	93900	1900	38500	910	18700	1200
AUG.	1984	9040	5530	3400	83100	1300	32800	700	17100	1000
SEPT	1984	5614	5960	3670	55600	1500	22100	750	11400	1100
TOTAL		947758	**	**	3379000	**	1288000	**	714000	**
WTD.AVG.		2590	2170	1320	**	500	**	280	**	420

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5730	3210	5000	6250	8010	4170	2450	6400	6470	7440	6930	5320
2	5640	3400	4850	4590	7850	5910	2630	5890	6400	7780	6890	5380
3	5530	3570	4540	4320	7980	6040	3270	5530	6580	8070	6760	5200
4	4980	3650	4100	3500	7880	6300	4040	4860	6550	7840	6580	5180
5	5110	3820	3660	3060	7800	6990	4160	5480	6280	7490	6340	5980
6	5300	3410	3360	2120	7660	7060	4330	5530	6610	8430	6300	5920
7	4240	3660	3150	4320	7650	6850	4610	5800	6300	8280	6390	6100
8	1850	3970	3100	3860	7640	6780	4590	6260	7720	8500	6080	6260
9	911	4160	3060	3890	7250	7000	4450	6290	5230	9020	5890	6360
10	1570	4180	3450	3710	7450	6510	3980	6520	5020	8350	5620	6350
11	1360	4100	3560	4220	7270	6520	3740	6550	5470	7700	5570	6550
12	1290	4000	3670	4510	7250	5640	4030	6680	4270	7140	5080	6820
13	1420	3950	3260	4410	7150	5930	4500	6260	3620	6820	5130	6600
14	1700	3880	3730	4560	7090	5570	4570	6360	4210	7050	3370	6760
15	2130	3820	3930	4000	7120	5770	4310	6500	13000	6970	3910	6590
16	2610	3760	3820	4120	7590	5580	4950	6710	11600	6840	4120	6550
17	2960	3750	5010	4020	7440	5690	5490	6720	9990	6550	4910	6590
18	3190	4450	5540	4990	7480	6090	5500	6730	9800	6410	7160	6570
19	3480	4570	5890	5910	7640	6250	5480	6470	8920	7030	6590	6560
20	1800	3880	6170	8070	7710	6100	5450	6350	9920	6890	6000	6460
21	330	3480	6420	8540	7360	6090	5530	6550	9050	6680	5560	6480
22	359	3300	6690	9010	7330	6020	5690	6910	7660	6720	5700	6540
23	940	3110	6950	7760	7020	6040	5990	6310	7530	6880	5910	6520
24	1150	2990	6830	7530	5110	6550	5900	6500	8250	6710	6180	6560
25	1100	3380	7230	7310	4930	2270	6130	6570	8010	6800	6350	5530
26	1280	3450	7660	7680	4980	1720	6100	6580	8990	6760	6690	5970
27	1600	3820	7960	7640	5180	2070	6210	7110	9010	6880	6460	5610
28	2020	3950	7870	7870	3750	2190	6220	7590	8080	6660	6680	5880
29	2280	4500	7790	7740	3490	2840	6250	7140	7360	6610	6750	5340
30	2440	5120	8260	7610	---	1950	6220	6680	7380	6440	6560	5150
31	2800	---	8510	8000	---	2000	---	6640	---	6870	5850	---
MEAN	2550	3810	5320	5650	6900	5240	4890	6400	7510	7250	5950	6120

07315500 RED RIVER NEAR TERRAL, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	20.0	8.0	---	10.0	12.0	13.0	21.0	27.0	30.0	30.0	30.0
2	27.0	20.0	9.0	6.0	11.0	13.0	16.0	24.0	29.0	32.0	31.0	29.0
3	22.0	20.0	9.0	8.0	10.0	14.0	14.0	25.0	28.0	28.0	33.0	29.0
4	26.0	19.0	11.0	6.0	11.0	11.0	13.0	25.0	27.0	30.0	30.0	29.0
5	24.0	18.0	9.0	5.0	9.0	9.0	17.0	27.0	27.0	33.0	30.0	30.0
6	---	---	8.0	6.0	7.0	11.0	18.0	28.0	29.0	33.0	31.0	29.0
7	---	18.0	10.0	6.0	11.0	14.0	15.0	24.0	30.0	33.0	31.0	---
8	---	17.0	9.0	8.0	8.0	9.0	18.0	23.0	29.0	32.0	30.0	31.0
9	20.0	5.0	9.0	7.0	10.0	10.0	18.0	25.0	28.0	31.0	27.0	31.0
10	22.0	8.0	8.0	5.0	14.0	9.0	18.0	24.0	29.0	32.0	32.0	31.0
11	20.0	13.0	---	5.0	14.0	10.0	20.0	26.0	29.0	30.0	26.0	31.0
12	18.0	12.0	9.0	5.0	12.0	10.0	19.0	29.0	30.0	33.0	32.0	31.0
13	17.0	13.0	8.0	4.0	13.0	17.0	19.0	27.0	30.0	32.0	33.0	31.0
14	18.0	15.0	8.0	6.0	13.0	20.0	18.0	30.0	30.0	31.0	31.0	30.0
15	18.0	---	7.0	1.0	15.0	22.0	17.0	28.0	29.0	33.0	31.0	20.0
16	18.0	15.0	---	2.0	13.0	16.0	17.0	26.0	29.0	30.0	32.0	24.0
17	21.0	18.0	---	2.0	14.0	16.0	20.0	27.0	28.0	31.0	32.0	26.0
18	19.0	17.0	---	.0	12.0	18.0	20.0	25.0	29.0	33.0	32.0	28.0
19	22.0	15.0	---	.0	10.0	11.0	20.0	27.0	30.0	32.0	34.0	28.0
20	22.0	19.0	.0	.0	8.0	15.0	21.0	24.0	30.0	32.0	34.0	26.0
21	17.0	18.0	---	.0	12.0	18.0	20.0	29.0	30.0	31.0	32.0	25.0
22	16.0	18.0	---	1.0	9.0	18.0	19.0	29.0	30.0	31.0	32.0	30.0
23	15.0	12.0	---	2.0	13.0	14.0	21.0	29.0	30.0	33.0	31.0	28.0
24	13.0	12.0	---	3.0	13.0	13.0	24.0	29.0	30.0	29.0	32.0	30.0
25	16.0	12.0	---	4.0	10.0	14.0	23.0	30.0	32.0	31.0	31.0	17.0
26	16.0	14.0	---	6.0	12.0	15.0	26.0	25.0	28.0	33.0	31.0	15.0
27	17.0	10.0	---	7.0	7.0	15.0	24.0	25.0	31.0	30.0	33.0	16.0
28	17.0	8.0	---	8.0	7.0	13.0	21.0	26.0	34.0	32.0	33.0	15.0
29	17.0	9.0	---	12.0	8.0	13.0	---	25.0	32.0	31.0	33.0	16.0
30	18.0	7.0	---	8.0	---	14.0	22.0	25.0	30.0	30.0	32.0	19.0
31	18.0	---	2.0	7.0	---	13.0	---	26.0	---	31.0	32.0	---
MEAN	19.0	14.5	8.0	4.5	11.0	14.0	19.0	26.0	29.5	31.5	31.5	26.0

07315950 MOSS LAKE NEAR GAINESVILLE, TX

LOCATION.--Lat 33°46'26", long 97°12'50", Cooke County, Hydrologic Unit 11130201, on top of upstream side of dam adjacent to guardrail of roadway about 250 ft from right end of Fish Creek dam on Fish Creek, 1.6 mi upstream from Bearhead Creek, 3.7 mi upstream from mouth, and 10 mi northwest of Gainesville.

DRAINAGE AREA.--65 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 20, 1979, recording gage at site about 150 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 1,460 ft long. The dam was completed and storage began Dec. 2, 1966. An uncontrolled morning-glory-type spillway with a 7- by 7-foot opening is designed to discharge 2,500 ft³/s at a 10-foot head. The emergency spillway is a 400-foot-wide cut through natural ground located about 100 ft to the left of the left end of dam. The dam was built by the city of Gainesville to impound water for municipal use. Area and capacity tables are based on a 1961 survey. There was no diversion from the lake during the current water year. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	740.0	-
Top of design flood pool	736.0	55,230
Crest of spillway	725.0	36,440
Crest of spillway (top of conservation pool)	715.0	23,210
Lowest gated outlet (invert)	666.0	78

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 50,990 acre-ft Oct. 13, 1981 (elevation, 733.72 ft); minimum since lake first filled in May 1968, 17,740 acre-ft Sept. 26, 1980 (elevation, 709.67 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,910 acre-ft June 11 at 1700 hours (elevation, 713.81 ft); minimum, 19,850 acre-ft Sept. 30 (elevation, 711.184 ft).

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

711.0	19,010
713.0	21,040
714.0	22,110

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21180	21150	20910	20790	20880	21060	21540	21610	21460	21580	20940	20460
2	21180	21140	20930	20780	20880	21060	21610	21650	21440	21540	20900	20420
3	21170	21140	20920	20780	20860	21080	21590	21650	21410	21520	20880	20410
4	21160	21150	20920	20790	20880	21080	21560	21630	21410	21490	20880	20390
5	21140	21150	20900	20790	20830	21070	21560	21630	21400	21490	20830	20370
6	21100	21160	20900	20780	20840	21070	21560	21640	21410	21470	20830	20330
7	21230	21160	20900	20780	20840	21060	21610	21610	21400	21440	20820	20280
8	21350	21170	20900	20780	20880	21040	21630	21610	21390	21410	20810	20250
9	21350	21130	20890	20830	20900	21030	21620	21610	21360	21360	20820	20230
10	21340	21090	20890	20830	20900	21030	21650	21590	21870	21330	20820	20220
11	21320	21080	20880	20840	20910	21100	21660	21580	21910	21320	20860	20160
12	21300	21060	20880	20840	20940	21280	21660	21540	21910	21320	20880	20140
13	21280	21060	20850	20830	20930	21300	21650	21540	21910	21360	20880	20120
14	21250	21040	20860	20820	20930	21340	21630	21540	21900	21340	20860	20090
15	21230	21040	20830	20820	20920	21370	21610	21530	21890	21330	20830	20040
16	21220	21020	20850	20820	20920	21360	21610	21510	21860	21310	20830	20020
17	21220	21000	20860	20840	20900	21360	21600	21490	21840	21280	20800	20000
18	21220	21000	20840	20830	20940	21470	21590	21470	21820	21240	20770	19970
19	21280	21030	20840	20810	20940	21450	21590	21480	21800	21230	20750	19940
20	21300	21020	20840	20810	20940	21450	21610	21530	21770	21220	20740	19930
21	21290	21000	20810	20810	20930	21450	21610	21530	21750	21180	20700	19930
22	21250	21000	20790	20830	20930	21450	21580	21530	21710	21150	20680	19910
23	21240	21000	20780	20850	20930	21490	21560	21550	21700	21150	20650	19910
24	21230	21000	20770	20850	20910	21470	21560	21550	21680	21130	20650	19890
25	21210	20980	20770	20850	20910	21470	21540	21540	21680	21110	20620	19930
26	21200	20990	20780	20880	21000	21470	21610	21540	21670	21090	20600	19930
27	21190	20990	20770	20880	21040	21520	21560	21540	21670	21070	20580	19930
28	21180	20960	20780	20890	21020	21530	21550	21520	21660	21030	20550	19900
29	21160	20930	20770	20880	21020	21550	21540	21520	21630	21020	20530	19880
30	21150	20920	20780	20850	---	21540	21530	21500	21580	20990	20510	19850
31	21150	---	20790	20860	---	21540	---	21470	---	20950	20480	---
MAX	21350	21170	20930	20890	21040	21550	21660	21650	21910	21580	20940	20460
MIN	21100	20920	20770	20780	20830	21030	21530	21470	21360	20950	20480	19850
(†)	713.10	712.88	712.76	712.83	712.98	713.47	713.46	713.40	713.50	712.91	712.46	711.84
(±)	-50	-230	-130	+70	+160	+520	-10	-60	+110	-630	-470	-630

CAL YR 1983 MAX 23530 MIN 20770 ± -1410
WTR YR 1984 MAX 21910 MIN 19850 ± -1350

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

07315950 MOSS LAKE NEAR GAINESVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 08...	1310	321	21.5	140	12	50	4.0	11

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 08...	.4	2.8	130	20	13	.20	2.5	180

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43/40", long 97°09'35", in SW1/4 sec.36, T.9 S., R.1 E., Love County, Okla., Hydrologic Unit 11130201, near center of span at downstream side of bridge on U.S. Highway 77, 0.2 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 5.0 mi downstream from Fish Creek, 4.5 mi southwest of Thackerville, Okla., 7.0 mi north of Gainesville, and at mile 791.5.

DRAINAGE AREA.--30,782 mi^2, of which 5,936 mi^2 probably is noncontributing.

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1939, and Feb. 13, 1965, to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Records poor. Flow is slightly regulated by Lake Kemp (station) 07331500); since 1943, by Lake Altus in Oklahoma; since 1946 by Lake Kickapoo (station 07314000); and since 1967 by Lake Arrowhead and Moss Lake stations 07314800 and 07315950).

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

AVERAGE DISCHARGE.--48 years, 2,808 ft^3/s (1,974,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 168,000 ft^3/s June 9, 1941 (gage height, 24.15 ft); maximum gage height, 37.14 ft Oct. 24, 1983; minimum discharge, 48 ft^3/s Jan. 27, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151,000 ft^3/s Oct. 24 at 1915 hours (gage height, 37.14 ft), no other peak above base of 24,000 ft^3/s; minimum daily, 75 ft^3/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	9220	2610	1260	1010	1170	3400	751	450	733	254	130
2	117	8010	2220	1300	971	1430	3040	857	430	631	257	288
3	113	7440	1930	1330	966	1270	2520	1560	420	579	251	433
4	105	7120	1780	1340	964	1050	2170	1210	400	566	261	380
5	93	6790	1720	1210	944	919	1860	1080	595	562	253	320
6	75	6730	1670	1250	920	837	1580	1040	586	549	240	250
7	121	7140	1650	1280	921	803	1480	929	589	484	246	230
8	199	6850	1610	1340	921	788	1430	817	801	472	232	220
9	1450	6290	1570	1530	941	810	1350	781	722	473	267	200
10	3820	6090	1550	1720	950	816	1320	748	1670	458	270	190
11	3050	6080	1510	1590	960	829	1470	726	6510	435	354	180
12	2240	6070	1450	1470	950	1080	1580	660	4810	388	316	170
13	1560	5870	1450	1460	933	1510	1540	640	2500	379	330	160
14	1050	5600	1340	1410	931	1660	1580	600	1330	391	308	150
15	760	5380	1340	1360	889	1670	1680	560	1200	323	423	170
16	581	5200	1390	1320	866	1370	1790	540	979	326	722	160
17	458	5090	1410	1290	866	1230	1700	500	1210	335	727	150
18	395	4970	1400	1250	866	1160	1380	450	1630	361	673	160
19	401	4660	1380	1200	893	1180	1150	420	1330	345	523	150
20	411	3980	1330	1150	887	1090	1070	450	1200	363	425	160
21	4230	3800	1320	1110	869	997	986	500	1170	353	349	150
22	16600	3910	1300	1080	863	953	973	540	1170	349	294	140
23	53300	4000	1270	1020	863	930	927	600	995	318	242	150
24	135000	4040	1260	1080	858	932	891	560	1000	323	251	140
25	140000	3970	1250	1100	839	1140	877	540	952	309	288	170
26	98800	3790	1270	1110	1070	1000	891	520	1120	297	243	190
27	41300	3650	1300	1150	1150	2560	797	560	1130	339	209	210
28	22800	3480	1350	1230	1120	3820	796	520	942	278	180	240
29	18600	3160	1300	1250	1100	3540	786	500	889	249	152	300
30	15500	2960	1280	1200	---	3520	790	480	779	249	169	310
31	11500	---	1240	1100	---	3330	---	470	---	245	138	---
TOTAL	574754	161340	46450	39490	27281	45394	43804	21109	39509	12462	9847	6251
MEAN	18540	5378	1498	1274	941	1464	1460	681	1317	402	318	208
MAX	140000	9220	2610	1720	1150	3820	3400	1560	6510	733	727	433
MIN	75	2960	1240	1020	839	788	786	420	400	245	138	130
AC-FT	1140000	320000	92130	78330	54110	90040	86890	41870	78370	24720	19530	12400

CAL YR 1983 TOTAL 1213558 MEAN 3325 MAX 140000 MIN 75 AC-FT 2407000
WTR YR 1984 TOTAL 1027691 MEAN 2808 MAX 140000 MIN 75 AC-FT 2038000

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1944 to April 1946, October 1952 to September 1964, October 1966 to current year. Pesticide analyses: April 1978 to September 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to April 1946, October 1952 to September 1964, October 1966 to current year.
WATER TEMPERATURES: October 1952 to September 1963, October 1966 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,100 micromhos July 16, 1972, and June 19, 1984; minimum daily, 176 micromhos Nov. 4, 1958.
WATER TEMPERATURES: Maximum daily, 35.0°C July 13, 1954, and July 24, 30, Aug. 6, 12, 15, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,100 micromhos June 19; minimum daily, 410 micromhos Oct. 25.
WATER TEMPERATURES: Maximum daily, 34.0°C June 25, 28, July 6, Aug. 20; minimum daily, 0.0°C on several days during December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
29...	0919	3160	3460	8.3	5.0	110	12.4	101	1.4	77	770	650
JAN												
17...	0931	1290	6810	7.9	1.5	--	13.6	100	1.1	K2	87	1200
MAR												
26...	1700	1000	4890	8.3	17.0	31	10.5	115	5.2	130	130	880
MAY												
08...	0930	817	5090	8.0	20.0	50	8.8	99	2.4	48	130	840
JUN												
19...	1215	1330	11200	7.9	30.0	220	6.8	95	1.5	K96	2000	1700
SEP												
11...	1100	180	5900	8.2	27.0	15	7.9	103	4.9	K13	4300	1100

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
29...	480	170	54	500	9	7.2	170	390	870	.30	8.1
JAN											
17...	940	310	100	1100	14	7.2	250	780	1900	.50	10
MAR											
26...	710	230	75	790	12	6.5	170	590	1300	.40	3.2
MAY											
08...	670	210	75	770	12	7.1	170	560	1200	.40	4.7
JUN											
19...	1600	470	120	2000	22	15	120	1300	3300	.50	11
SEP											
11...	970	290	89	810	11	10	130	680	1400	.60	6.4

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
29...	2070	2100	.41	.060	1.7	.230	.100	.080	--	--	--
JAN											
17...	4320	4400	.86	.270	.70	.210	.140	.120	271	944	25
MAR											
26...	3080	3100	4.2	.050	.90	.190	.060	.040	1360	3670	6
MAY											
08...	2880	2900	<.10	.010	1.0	.100	.050	.020	131	289	76
JUN											
19...	7290	7300	1.1	.010	.60	.060	.060	.030	--	--	--
SEP											
11...	3480	3400	<.10	.090	.90	.110	.040	.010	37	18	96

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 29...	0919	2	300	<10	<1	<1	1	3	50	1
JAN 17...	0931	3	200	<10	<1	<1	1	1	50	<1
MAY 08...	0930	1	200	<10	<1	<1	<1	2	20	1
SEP 11...	1100	2	200	<10	4	1	<1	1	60	6

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 29...	30	20	<.1	2	1	1	<1	2100	17	10
JAN 17...	70	70	.3	2	<1	<1	<1	3900	26	30
MAY 08...	50	10	.1	3	<1	<1	<1	3100	20	10
SEP 11...	60	10	<.1	<1	4	<1	<1	3700	24	10

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	574754	864	498	773000	200	308600	100	160400	180
NOV.	1983	161340	3650	2170	945000	890	385900	440	192400	700
DEC.	1983	46450	5010	3030	380000	1200	156700	610	76500	920
JAN.	1984	39490	5600	3420	365000	1400	151400	680	73000	1000
FEB.	1984	27281	6520	4010	295000	1700	123300	800	58900	1100
MAR.	1984	45394	3780	2260	277000	930	113500	460	56100	710
APR.	1984	43804	3950	2360	280000	970	114600	480	56600	740
MAY	1984	21109	4850	2930	167000	1200	68900	590	33700	890
JUNE	1984	39509	4980	3100	330000	1300	138600	610	65400	840
JULY	1984	12462	7140	4420	149000	1900	62400	880	29500	1200
AUG.	1984	9847	5640	3440	91500	1400	38000	690	18300	1000
SEPT	1984	6251	6140	3760	63500	1600	26400	750	12700	1100
TOTAL		1027691	**	**	4115000	**	1689000	**	834000	**
WTD.AVG.		2808	2480	1480	**	610	**	300	**	470

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5050	2480	3930	5560	6760	4730	2370	5330	6200	8530	6620	6080
2	5170	2800	3960	5940	6800	4850	2150	5110	6400	7980	6730	6250
3	5320	3090	4250	4870	6880	4900	2320	2610	6620	7410	6670	6510
4	5430	3310	4500	5050	6840	3770	2610	3180	6710	7180	6630	7570
5	5470	3430	4850	5280	7090	3820	2750	4130	6440	6930	6530	6060
6	5480	3500	5110	5480	7110	4300	2880	4200	6250	6940	6520	5560
7	4490	3440	4850	6320	7140	5110	3620	4970	6160	7000	6510	5500
8	4600	3450	4670	5460	7330	5400	3990	4800	5030	7250	6630	5360
9	4060	3480	4600	4160	6900	5690	4110	4520	4510	7590	5900	5420
10	1560	3930	4520	4870	6800	5980	4330	4910	3500	7270	6480	5460
11	862	4040	4750	3680	6630	6340	4660	5180	1300	7000	6310	5690
12	986	4170	5000	3470	6600	5200	4350	5230	1070	7770	5150	6040
13	1490	4200	5250	3820	6540	4310	4150	5390	1430	7420	6040	6100
14	1330	4050	5550	4720	6550	4190	4580	5710	1680	7390	6000	6160
15	1230	4080	5270	5240	6540	3530	3890	5830	3730	7520	5410	6320
16	1250	4000	5140	3780	6530	3450	4610	6030	3990	7920	6170	6350
17	1520	4030	4740	4250	6600	4250	4790	6080	4650	7190	5410	6410
18	1540	4940	4620	4760	6460	4900	4580	6100	9850	6860	3890	6420
19	1860	3820	4850	6870	6350	4840	4400	5870	11100	6770	3840	6440
20	1630	3940	5230	7030	6310	4130	4650	5700	10300	6710	4230	6570
21	526	4630	4800	6960	6670	4690	5370	5690	9330	6700	4200	6600
22	867	4380	6790	6960	6570	5030	5450	4680	9000	6650	4440	6480
23	1010	3930	6660	6860	6710	5340	5240	4100	8620	6440	5570	6500
24	420	3570	5520	6820	6820	5440	5340	4060	9370	6420	6520	6550
25	410	3430	5560	7000	6910	4390	5440	5060	8530	6560	6590	5600
26	1130	3230	5540	7210	5990	4960	5500	5370	7290	6620	6420	5920
27	1220	3180	5500	7300	6090	3500	5630	5630	7800	6370	6160	6080
28	1450	3490	5460	7010	4690	2070	5760	5890	7830	6150	5960	5830
29	1650	3660	5500	6940	4650	1910	5740	5640	7690	6240	5870	5770
30	2040	3910	5540	6880	---	2020	5940	5720	8050	6390	5780	6030
31	2200	---	5550	6910	---	2250	---	5780	---	6520	6010	---
MEAN	2360	3720	5100	5720	6550	4360	4370	5110	6350	7020	5850	6120

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	20.0	8.0	2.0	11.0	12.0	14.0	22.0	28.0	30.0	30.0	26.0
2	24.0	22.0	9.0	.0	11.0	12.0	17.0	24.0	23.0	32.0	31.0	---
3	28.0	21.0	10.0	.0	11.0	12.0	16.0	24.0	23.0	30.0	32.0	28.0
4	28.0	21.0	10.0	3.0	8.0	13.0	14.0	25.0	27.0	26.0	28.0	29.0
5	28.0	20.0	9.0	6.0	8.0	10.0	16.0	21.0	28.0	33.0	26.0	29.0
6	22.0	18.0	8.0	7.0	8.0	12.0	18.0	26.0	29.0	34.0	30.0	28.0
7	19.0	12.0	8.0	7.0	10.0	14.0	17.0	24.0	30.0	33.0	30.0	27.0
8	---	18.0	10.0	8.0	11.0	13.0	17.0	24.0	29.0	---	31.0	27.0
9	---	16.0	10.0	7.0	12.0	10.0	20.0	26.0	27.0	32.0	27.0	24.0
10	---	14.0	10.0	5.0	14.0	10.0	19.0	24.0	26.0	33.0	30.0	30.0
11	---	12.0	10.0	4.0	15.0	11.0	21.0	25.0	26.0	32.0	27.0	29.0
12	---	12.0	10.0	4.0	12.0	13.0	21.0	25.0	28.0	32.0	25.0	30.0
13	---	13.0	8.0	4.0	15.0	15.0	22.0	---	30.0	33.0	33.0	24.0
14	19.0	15.0	8.0	3.0	16.0	19.0	18.0	25.0	31.0	30.0	33.0	22.0
15	23.0	14.0	7.0	2.0	16.0	21.0	16.0	29.0	32.0	33.0	32.0	22.0
16	24.0	14.0	6.0	4.0	14.0	18.0	18.0	27.0	31.0	29.0	33.0	20.0
17	24.0	14.0	6.0	2.0	14.0	16.0	20.0	27.0	29.0	32.0	32.0	26.0
18	25.0	16.0	2.0	.0	13.0	17.0	20.0	26.0	32.0	32.0	32.0	27.0
19	24.0	16.0	.0	.0	11.0	12.0	18.0	23.0	32.0	32.0	28.0	27.0
20	24.0	14.0	.0	1.0	10.0	19.0	23.0	24.0	32.0	27.0	34.0	25.0
21	20.0	15.0	.0	.0	12.0	13.0	23.0	28.0	32.0	27.0	32.0	25.0
22	18.0	17.0	.0	.0	13.0	---	18.0	28.0	32.0	32.0	33.0	23.0
23	18.0	15.0	.0	2.0	13.0	---	22.0	28.0	28.0	28.0	32.0	23.0
24	18.0	13.0	.0	4.0	14.0	---	23.0	28.0	31.0	27.0	33.0	27.0
25	17.0	12.0	.0	6.0	10.0	---	23.0	29.0	34.0	32.0	29.0	19.0
26	17.0	13.0	---	7.0	12.0	---	20.0	26.0	29.0	27.0	26.0	18.0
27	17.0	11.0	---	8.0	8.5	---	22.0	30.0	32.0	27.0	32.0	19.0
28	18.0	15.0	---	5.0	8.0	14.0	22.0	25.0	34.0	28.0	33.0	17.0
29	18.0	8.0	---	7.0	9.0	15.0	22.0	26.0	32.0	27.0	---	13.0
30	18.0	15.0	---	9.0	---	15.0	23.0	26.0	30.0	---	32.0	13.0
31	19.0	---	---	10.0	---	14.0	---	27.0	---	30.0	32.0	---
MEAN	21.5	15.0	6.0	4.0	11.5	14.0	19.5	25.5	29.5	30.5	30.5	24.0

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE1/4 sec.33, T.8 S., R.7 E., Bryan County, Oklahoma, Hydrologic Unit 11130210, in control tower of Denison Dam on Red River, 1.2 mi upstream from Shawnee Creek, 1.8 mi upstream from Sand Creek, 4.0 mi northwest of Denison, 6.0 mi southwest of Colbert, and at mile 725.9.

DRAINAGE AREA.--39,719 mi², of which 5,936 mi² probably is noncontributing.

PERIOD OF RECORD.--July 1942 to current year. Month-end contents only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1944, nonrecording gage at same site and datum. Prior to Oct. 1, 1948, supplementary nonrecording gage in Cumberland pool at the same datum.

REMARKS.--Reservoir is formed by a rolled-fill earth dam. The controlled outlet consists of eight 20-feet diameter conduits and the uncontrolled outlet is a concrete, ogee-type weir spillway. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power-pool was first filled March 15, 1945. Capacity, based on 1969 survey, 5,312,000 acre-ft at elevation 640.0 ft, crest of spillway, 2,643,000 acre-ft at elevation 617.0 ft maximum power pool; 1,031,000 acre-ft at elevation 590.0 ft, minimum power pool, in Denison pool. Dead storage, 11,000 acre-ft at elevation 610.0 ft in Cumberland pool. When contents are below 2,105,000 acre-ft, the reservoir is divided into two pools by protective levees around the Cumberland oilfield on the Washita River arm with bottom outlet channel for the upper pool (known as Cumberland pool) at elevation 610 ft. At higher elevations the two pools are considered as being at a common level, contents being computed from gage in Denison pool. Figures given herein represent total contents of both pools. Reservoir is used principally for flood control and power development. Revised capacity table, based on survey in 1969, used since Oct. 1, 1977. Data regarding the dam and Lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	670.0	-
Crest of spillway	640.0	5,312,000
Top of maximum power pool	617.0	2,643,000
Bottom of minimum power pool (in Denison pool)	590.0	1,031,000

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,991,300 acre-ft June 5, 1957 (elevation, 643.18 ft); minimum contents since power pool first filled, 1,565,100 acre-ft Sept. 16, 1964; minimum elevation, 599.96 ft Mar. 1, 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,009,000 acre-ft Oct. 27 (elevation, 620.91 ft); minimum, 2,150,000 acre-ft Sept. 21 (elevation, 610.64 ft).

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

610.0	2,105,000	617.0	2,643,000	627.0	3,649,000
614.0	2,399,000	622.0	3,117,000	632.0	4,240,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2263000	2945000	2659000	2590000	2611000	2625000	2588000	2541000	2484000	2462000	2302000	2185000
2	2257000	2909000	2656000	2588000	2616000	2622000	2595000	2550000	2485000	2456000	2299000	2186000
3	2245000	2878000	2661000	2591000	2617000	2628000	2606000	2546000	2485000	2449000	2295000	2183000
4	2238000	2858000	2662000	2591000	2617000	2637000	2599000	2538000	2480000	2447000	2294000	2179000
5	2235000	2843000	2669000	2592000	2620000	2626000	2593000	2537000	2477000	2442000	2293000	2175000
6	2238000	2833000	2665000	2595000	2617000	2614000	2584000	2536000	2477000	2435000	2290000	2170000
7	2243000	2814000	2664000	2600000	2617000	2608000	2581000	2531000	2476000	2432000	2288000	2167000
8	2245000	2798000	2662000	2603000	2618000	2596000	2578000	2521000	2473000	2428000	2285000	2167000
9	2245000	2785000	2663000	2618000	2620000	2586000	2568000	2515000	2477000	2421000	2287000	2166000
10	2251000	2774000	2664000	2605000	2620000	2588000	2570000	2513000	2486000	2414000	2285000	2165000
11	2267000	2758000	2664000	2600000	2626000	2600000	2565000	2512000	2504000	2407000	2287000	2164000
12	2270000	2752000	2656000	2608000	2629000	2610000	2559000	2512000	2517000	2403000	2286000	2164000
13	2273000	2746000	2662000	2609000	2629000	2605000	2558000	2515000	2517000	2396000	2283000	2164000
14	2271000	2745000	2660000	2612000	2622000	2599000	2556000	2510000	2513000	2392000	2278000	2165000
15	2275000	2733000	2659000	2615000	2629000	2593000	2554000	2509000	2507000	2389000	2273000	2160000
16	2275000	2721000	2658000	2617000	2628000	2590000	2550000	2506000	2505000	2381000	2267000	2157000
17	2269000	2714000	2657000	2606000	2609000	2582000	2547000	2505000	2502000	2376000	2263000	2156000
18	2267000	2708000	2656000	2604000	2622000	2587000	2546000	2507000	2499000	2367000	2259000	2154000
19	2272000	2720000	2650000	2599000	2621000	2580000	2539000	2511000	2495000	2359000	2255000	2154000
20	2284000	2711000	2645000	2594000	2620000	2572000	2544000	2517000	2493000	2351000	2248000	2152000
21	2305000	2706000	2640000	2593000	2617000	2565000	2548000	2517000	2488000	2349000	2243000	2150000
22	2350000	2705000	2619000	2599000	2614000	2557000	2548000	2517000	2483000	2348000	2240000	2152000
23	2405000	2698000	2615000	2596000	2619000	2561000	2542000	2515000	2482000	2341000	2237000	2151000
24	2533000	2687000	2602000	2598000	2614000	2555000	2537000	2509000	2481000	2335000	2228000	2150000
25	2790000	2675000	2593000	2597000	2609000	2563000	2535000	2507000	2477000	2330000	2221000	2156000
26	2976000	2681000	2588000	2601000	2642000	2566000	2533000	2502000	2482000	2326000	2219000	2156000
27	3008000	2680000	2594000	2603000	2641000	2584000	2533000	2504000	2478000	2320000	2213000	2155000
28	3001000	2669000	2592000	2608000	2634000	2590000	2531000	2505000	2474000	2318000	2204000	2155000
29	3002000	2662000	2589000	2612000	2631000	2586000	2529000	2497000	2469000	2318000	2197000	2152000
30	2994000	2662000	2587000	2614000	---	2588000	2528000	2493000	2466000	2312000	2194000	2150000
31	2974000	---	2585000	2612000	---	2589000	---	2489000	---	2308000	2190000	---
MAX	3008000	2945000	2669000	2618000	2642000	2637000	2606000	2550000	2517000	2462000	2302000	2186000
MIN	2235000	2662000	2585000	2588000	2609000	2555000	2528000	2489000	2466000	2308000	2190000	2150000

WTR YR 1984 MAX 3008000 MIN 2150000

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, Hydrologic Unit 11140101, on right bank 1,800 ft downstream from Denison Dam powerhouse, 0.4 mi upstream from Shawnee Creek (spillway flow return), 4.5 mi north of Denison, and at mile 725.5.

DRAINAGE AREA.--39,720 mi², of which 5,936 mi² probably is noncontributing. At site used prior to October 1961, drainage area 39,777 mi², of which 5,936 mi² probably was noncontriubting.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, Tex.", and October 1934 to September 1961, published as "near Colbert, Oklahoma". Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft National Geodetic Vertical Datum of 1929. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder at county road bridge 2.5 mi downstream. Prior to Oct. 1, 1931, at datum 6.85 ft higher; Oct. 1, 1931, to Sept. 24, 1934, at datum 7.07 ft higher; and July 29, 1942, to Sept. 30, 1961, at datum 2.64 ft lower. Sept. 25, 1934, to July 28, 1942, water-stage recorder at railway bridge 1.9 mi downstream at datum 7.36 ft higher.

REMARKS.--Records good. Flow regulated since October 1943 by Lake Texoma (station 07331500).

COOPERATION.--Gage-height record and 9 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--20 years, (1924-43 water years) prior to completion of Denison Dam, 5,684 ft³/s (4,118,000 acre-ft/yr); 40 years (water years 1945-84), 4,330 ft³/s (3,137,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft³/s May 21, 1935 (gage height, 31.8 ft at site and datum then in use); maximum gage height, 32.0 ft Apr. 25, 1942 (at site and datum used in 1943); minimum daily discharge, 12 ft³/s Jan. 10, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 26, 1908, reached a stage of 45.5 ft at site and datum used July 29, 1942, to Sept. 30, 1961, from record of the National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,900 ft³/s Oct. 26 (gage height, 17.04 ft); minimum daily, 59 ft³/s Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2370	31000	4250	151	1370	5510	3960	3020	2820	2010	1690	902
2	2630	31000	4220	2670	101	3130	5090	4090	116	3230	1720	918
3	5080	29200	4450	1910	1570	101	3790	5400	77	3160	1690	910
4	4660	22200	1890	1280	821	97	2600	6110	2420	3180	114	1240
5	1350	18100	810	1430	96	5590	6310	4120	2920	3160	59	1720
6	127	18100	2050	138	1700	6110	6570	3020	2470	3190	1420	1420
7	90	18100	2610	84	1310	4570	6560	4550	2410	1660	1480	134
8	348	18200	4060	85	2850	6150	4830	4590	126	1650	1600	82
9	81	18000	2330	1360	1650	6110	7100	3670	1250	3210	1480	80
10	72	14300	2670	5900	736	184	5220	1760	1280	3220	1410	82
11	75	10900	2780	2550	147	108	6650	1620	2370	3210	132	87
12	80	11000	2790	1230	96	6120	6630	1190	4680	3230	70	88
13	81	11000	2190	763	1590	6780	5120	101	5430	3190	1580	87
14	503	10800	2820	637	2090	6870	4350	3200	4780	1660	2150	238
15	119	10900	3030	107	2650	7110	3810	120	5010	1330	2200	101
16	1250	11000	2700	1140	2400	5860	4470	2900	2430	3220	2220	87
17	4130	10300	2970	6590	4440	5780	3740	1200	2440	3190	2200	88
18	1320	6670	2440	3760	1280	5840	3740	105	3230	3180	1840	90
19	1600	7750	4560	2880	758	5730	4130	78	3250	3210	2220	88
20	1200	7340	3720	3540	2190	5770	3140	72	2450	2920	2160	97
21	78	7410	5590	1180	2300	5790	1770	94	2980	800	2670	97
22	4890	9770	7480	936	2400	5840	1830	2180	3050	777	1520	95
23	16600	9690	4330	2950	852	5860	3090	2940	1580	3480	1530	89
24	32000	9730	5680	1160	1900	4840	3070	3180	1590	3480	3770	84
25	42500	9690	3010	1250	1470	1290	2600	2930	3060	3050	2730	447
26	43200	7100	3590	986	1110	4180	3770	1790	3190	2510	1240	88
27	43500	7280	595	104	2000	4220	2120	646	3200	2530	1960	78
28	38300	7240	2010	99	2340	4730	2560	1470	3760	114	4000	79
29	30900	6250	1790	93	1640	6400	2580	2510	4250	72	2820	78
30	30900	5240	1490	95	---	6400	2550	4000	2380	2460	2510	77
31	30900	---	2160	3280	---	4730	---	4030	---	1380	1050	---
TOTAL	340934	395260	97065	50338	45857	147800	123750	76686	80999	76663	55235	9751
MEAN	11000	13180	3131	1624	1581	4768	4125	2474	2700	2473	1782	325
MAX	43500	31000	7480	6590	4440	7110	7100	6110	5430	3480	4000	1720
MIN	72	5240	595	84	96	97	1770	72	77	72	59	77
AC-FT	676200	784000	192500	99850	90960	293200	245500	152100	160700	152100	109600	19340

CAL YR 1983 TOTAL 1875830 MEAN 5139 MAX 43500 MIN 51 AC-FT 3721000
WTR YR 1984 TOTAL 1500338 MEAN 4099 MAX 43500 MIN 59 AC-FT 2976000

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1944 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to current year.
WATER TEMPERATURES: October 1945 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,520 micromhos Aug. 14, 1944; minimum daily, 656 micromhos Oct. 16, 1945.
WATER TEMPERATURES (1945-69): Maximum daily, 31.0°C July 17, 1969; minimum daily, 3.0°C Feb. 2-4, 7, 1966.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,250 micromhos Feb. 10; minimum daily, 1,240 micromhos Nov. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 28...	1400	7240	1260	8.1	13.0	4.9	10.0	97	.1	25	85	280
JAN 16...	1420	1140	2160	7.9	3.0	--	14.4	109	1.0	<1	21	450
MAR 26...	1320	4180	1720	8.3	11.0	6.0	11.1	104	1.2	K5	150	370
MAY 07...	1638	4550	1750	8.1	18.0	2.3	8.8	95	.7	K4	93	380
JUN 19...	0800	3250	1750	7.5	20.0	1.1	6.1	68	1.1	K20	230	380
SEP 10...	1900	82	1920	7.7	25.0	2.6	5.8	72	1.2	K10	850	420

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 28...	180	74	24	140	4	5.4	100	170	230	.30	4.7
JAN 16...	310	120	35	280	6	5.8	140	240	490	.40	6.7
MAR 26...	240	100	29	200	5	5.2	130	220	340	.30	5.1
MAY 07...	250	100	32	200	5	4.7	130	230	340	.30	5.2
JUN 19...	240	100	32	210	5	5.2	140	230	340	.30	6.7
SEP 10...	280	110	34	230	5	5.0	140	240	390	.40	8.5

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 29...	1400	1	150	<.5	<1	<1	<3	2	13	<1
JAN 16...	1420	2	200	<10	1	<1	<1	1	20	<1
MAY 07...	1638	<1	170	3	2	<1	<3	1	5	<1
SEP 10...	1900	4	170	<1	3	<1	<3	1	<3	3

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 28...	18	31	<.1	<10	<1	<1	<1	860	<6	5
JAN 16...	20	50	.2	2	<1	<1	<1	1300	6	20
MAY 07...	33	3	.1	<10	<1	<1	<1	1200	<6	14
SEP 10...	27	940	<.1	<10	2	<1	<1	1200	<6	7

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	340934	1380	787	724000	270	244200	180	167900	320
NOV.	1983	395260	1270	721	770000	240	258900	170	178100	300
DEC.	1983	97065	1350	768	201000	260	67800	180	46600	320
JAN.	1984	50338	1620	931	127000	320	42900	220	29500	360
FEB.	1984	45857	1800	1050	130000	360	44200	240	30300	390
MAR.	1984	147800	1720	993	396000	340	134600	230	92400	370
APR.	1984	123750	1740	1010	337000	340	114700	240	78700	380
MAY	1984	76686	1730	1000	207000	340	70500	230	48400	380
JUNE	1984	80999	1740	1010	221000	340	75000	240	51500	380
JULY	1984	76663	1780	1030	214000	350	72700	240	49800	380
AUG.	1984	55235	1820	1060	158000	360	53700	250	36800	390
SEPT	1984	9751	1910	1120	29400	380	10000	260	6870	400
TOTAL		1500338	**	**	3514000	**	1189000	**	817000	**
WTD.AVG.		4099	1510	867	**	290	**	200	**	340

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	1330	1290	1440	1740	1680	1810	1710	1740	1750	1780	2000
2	1360	1290	1290	1430	2180	1700	1840	1720	1740	1750	1790	1960
3	1360	1300	1290	1430	1790	1700	1730	1720	1740	1750	1780	1920
4	1350	1300	1290	1430	1740	1690	1740	1710	1750	1760	1780	1860
5	1350	1290	1290	1420	1690	1690	1750	1720	1760	1760	1780	1870
6	1350	1270	1290	1440	1640	1710	1740	1720	1760	1750	1790	1860
7	1350	1260	1270	1550	2190	1670	1740	1730	1760	1750	1790	1860
8	1350	1240	1280	1700	1760	1700	1730	1730	1750	1750	1790	1870
9	1350	1250	1300	2200	1790	1710	1730	1730	1750	1760	1790	1870
10	1350	1260	1300	1500	2250	1710	1730	1730	1760	1760	1810	1880
11	1350	1260	1310	1510	2000	1700	1740	1740	1760	1760	1810	1880
12	1350	1270	1320	1580	1910	1700	1730	1740	1710	1830	1810	1890
13	1350	1280	1320	1630	1840	1700	1740	1740	1720	1760	1810	1890
14	1350	1280	1320	1710	1890	1700	1740	1730	1740	1760	1800	1890
15	1350	1270	1330	1800	1980	1700	1740	1730	1700	1760	1820	1890
16	1360	1260	1340	1970	1810	1760	1740	1730	1720	1770	1810	1890
17	1360	1260	1340	1680	1790	1750	1740	1730	1740	1810	1810	1910
18	1360	1260	1350	1570	1770	1730	1740	1730	1760	1780	1810	1900
19	1370	1260	1360	1600	1750	1720	1730	1730	1760	1810	1820	1920
20	1380	1250	1370	1620	1740	1720	1730	1730	1760	1770	1820	1920
21	1380	1250	1380	1640	1720	1720	1730	1730	1760	1780	1820	1930
22	1380	1250	1390	1660	1790	1720	1730	1720	1750	1790	1830	1950
23	1370	1250	1400	1680	2190	1730	1730	1730	1750	1840	1840	1970
24	1370	1250	1410	1660	1770	1730	1760	1730	1740	1850	1830	1980
25	1370	1250	1420	1660	1750	1730	1740	1740	1740	1780	1830	2010
26	1370	1250	1430	1680	1730	1730	1740	1740	1750	1780	1840	2020
27	1410	1260	1440	1970	1710	1730	1730	1740	1750	1790	1850	2020
28	1410	1260	1450	2000	1710	1730	1730	1750	1750	1790	1840	2010
29	1400	1270	1440	2040	1700	1720	1730	1750	1750	1790	1850	2000
30	1380	1270	1440	2070	---	1730	1730	1760	1750	1790	1840	2000
31	1370	---	1440	1720	---	1760	---	1760	---	1790	1850	---
MEAN	1370	1270	1350	1680	1840	1720	1740	1730	1750	1780	1810	1930

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	20.0	14.0	---	4.0	9.0	---	16.0	18.0	---	21.0	22.0
2	---	20.0	14.0	---	3.0	9.0	11.0	---	---	20.0	21.0	---
3	24.0	20.0	---	5.0	3.5	---	11.0	16.0	---	21.0	22.0	---
4	24.0	20.0	---	5.0	---	---	---	---	18.0	---	---	22.0
5	24.0	---	13.0	6.0	---	7.0	12.0	---	19.0	21.0	---	22.0
6	24.0	---	12.0	6.0	4.0	8.0	12.0	---	18.0	21.0	22.0	22.0
7	24.0	19.0	12.0	---	4.0	7.0	---	16.0	18.0	---	22.0	22.0
8	---	19.0	12.0	---	5.0	8.0	---	16.0	19.0	---	21.0	---
9	---	18.0	12.0	6.0	6.0	9.0	12.0	17.0	---	21.0	22.0	---
10	---	18.0	---	6.0	5.0	---	13.0	17.0	---	21.0	22.0	22.0
11	23.0	---	---	6.0	---	---	13.0	18.0	19.0	20.0	---	22.0
12	23.0	---	13.0	6.0	---	9.0	13.0	---	20.0	24.0	---	22.0
13	23.0	---	13.0	5.0	6.0	9.0	13.0	---	21.0	21.0	22.0	---
14	23.0	17.0	12.0	---	6.0	9.0	---	18.0	22.0	---	22.0	---
15	---	17.0	12.0	---	6.0	11.0	---	18.0	22.0	---	22.0	22.0
16	---	17.0	12.0	5.0	6.0	10.0	14.0	17.0	---	21.0	22.0	22.0
17	22.0	17.0	---	5.0	7.0	---	14.0	17.0	---	21.0	---	23.0
18	22.0	17.0	---	5.0	---	---	14.0	17.0	20.0	21.0	---	23.0
19	22.0	---	11.0	4.0	---	11.0	14.0	---	20.0	21.0	---	23.0
20	22.0	---	10.0	4.0	---	9.0	15.0	---	19.0	21.0	22.0	23.0
21	21.0	17.0	---	---	9.0	9.0	---	17.0	19.0	21.0	22.0	23.0
22	---	16.0	9.0	---	10.0	10.0	---	18.0	19.0	---	22.0	---
23	---	16.0	8.0	5.0	7.0	10.0	16.0	18.0	---	---	23.0	---
24	21.0	---	---	5.0	8.0	---	15.0	18.0	---	22.0	22.0	22.0
25	21.0	16.0	---	5.0	---	---	15.0	18.0	24.0	22.0	---	21.0
26	---	---	---	4.0	---	11.0	15.0	---	20.0	22.0	---	21.0
27	20.0	---	6.0	5.0	8.0	11.0	16.0	---	20.0	22.0	22.0	23.0
28	20.0	14.0	6.0	---	8.0	11.0	---	---	24.0	---	22.0	23.0
29	---	14.0	6.0	---	8.0	11.0	---	21.0	20.0	---	22.0	23.0
30	---	14.0	6.0	4.0	---	11.0	16.0	18.0	---	---	22.0	---
31	20.0	---	---	5.0	---	---	---	18.0	---	21.0	22.0	---
MEAN	22.5	17.5	10.5	5.0	6.0	9.5	13.5	17.5	20.0	21.5	22.0	22.5

07332600 BOIS D'ARC CREEK NEAR RANDOLPH, TX

LOCATION.--Lat 33°28'32", long 96°12'52", Fannin County, Hydrologic Unit 11140101, on right bank at downstream side of bridge on State Highway 11, 2.3 mi upstream from Henson Creek, and 2.4 mi east of Randolph.

DRAINAGE AREA.--72.0 mi^2.

PERIOD OF RECORD.--November 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 564.38 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No known diversion or regulation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1964-84), 55.5 ft^3/s (10.48 in/yr), 40,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft^3/s May 13, 1982 (gage height observed, 26.55 ft); no flow each year except 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1922, 24.6 ft about 1935, from information by State Department of Highways and Public Transportation and local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,030 ft^3/s May 1 at about 1000 hours (gage height, 15.88 ft, from peak stage indicator), no other peak above base of 4,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	2.7	2.8	2.5	14	7.6	1780	3.1	.17	.00	.00
2	.00	.01	3.6	2.8	2.6	13	150	156	2.9	.09	.00	.00
3	.00	.01	6.5	2.9	2.5	12	40	60	2.8	.07	.00	.00
4	.00	.01	7.2	4.1	2.4	12	28	40	2.5	.05	.00	.00
5	.00	.02	5.0	4.5	2.1	9.9	20	20	2.4	.04	.00	.00
6	.00	.15	3.6	3.7	1.6	9.2	17	10	8.2	.03	.00	.00
7	.00	.10	3.0	2.8	1.7	8.8	15	8.0	3.6	.02	.00	.00
8	.00	.06	2.8	2.1	2.1	8.4	13	13	2.1	.00	.00	.00
9	.00	.24	2.8	3.2	5.0	8.0	11	11	1.7	.00	.00	.00
10	.00	.05	2.8	4.7	5.2	8.1	10	10	1.3	.00	.00	.00
11	.00	.02	2.7	5.4	9.6	9.9	9.0	9.6	.93	.00	.00	.00
12	.00	.01	2.4	4.1	81	956	8.6	9.0	.73	6.3	.00	.00
13	.00	.01	2.4	3.6	14	67	8.0	8.5	.54	1.5	.00	.00
14	.00	.01	2.2	3.1	8.6	40	7.6	8.0	.37	.06	.00	.00
15	.00	.02	2.1	2.9	7.3	15	7.3	7.6	.29	.02	.00	.00
16	.00	.01	2.9	2.7	6.7	9.0	7.0	7.0	.24	.00	.00	.00
17	.00	.00	2.6	2.6	6.1	8.0	6.8	6.6	.17	.00	.00	.00
18	.00	.00	2.7	2.4	7.3	20	6.5	6.2	.13	.00	.00	.00
19	23	.79	2.8	2.4	7.1	11	6.3	5.9	.10	.00	.00	.00
20	2.4	.93	2.8	2.5	6.0	8.6	6.1	21	.06	.00	.00	.00
21	2.8	.97	2.8	2.5	5.7	7.5	6.0	13	.05	.00	.00	.00
22	.68	.55	2.8	2.6	5.5	22	5.8	7.0	.03	.00	.00	.00
23	.29	2.2	2.8	4.2	5.3	96	5.6	6.5	.02	.00	.00	.00
24	.15	.99	2.6	4.8	4.9	25	5.4	5.5	.01	.00	.00	.00
25	.07	.81	2.6	4.6	4.6	14	5.3	4.9	.00	.00	.00	.00
26	.06	5.9	2.6	4.1	89	110	5.2	4.6	.11	.00	.00	.00
27	.05	190	2.6	3.8	70	90	5.1	4.2	.29	.00	.00	.00
28	.05	22	2.6	3.5	23	66	5.0	7.7	.12	.00	.00	.00
29	.03	5.5	2.6	3.3	16	18	4.9	4.2	.68	.00	.00	.00
30	.03	3.7	2.8	3.0	---	11	10	3.6	.47	.00	.00	.00
31	.03	---	2.8	2.6	---	9.1	---	3.4	---	.00	.00	---
TOTAL	29.64	235.08	95.2	104.3	405.4	1716.5	443.1	2262.0	35.94	8.35	.00	.00
MEAN	.96	7.84	3.07	3.36	14.0	55.4	14.8	73.0	1.20	.27	.000	.000
MAX	23	190	7.2	5.4	89	956	150	1780	8.2	6.3	.00	.00
MIN	.00	.00	2.1	2.1	1.6	7.5	4.9	3.4	.00	.00	.00	.00
CFSM	.01	.11	.04	.05	.19	.77	.21	1.01	.02	.004	.000	.000
IN.	.02	.12	.05	.05	.21	.89	.23	1.17	.02	.00	.00	.00
AC-FT	59	466	189	207	804	3400	879	4490	71	17	.00	.00

CAL YR 1983 TOTAL 11595.33 MEAN 31.8 MAX 3210 MIN .00 CFSM .44 IN 5.99 AC-FT 23000
WTR YR 1984 TOTAL 5335.51 MEAN 14.6 MAX 1780 MIN .00 CFSM .20 IN 2.76 AC-FT 10580

NOTE.--No gage-height record Mar. 15 to Apr. 17 and Apr. 19 to May 19.

07335390 PAT MAYSE LAKE NEAR CHICOTA, TX

LOCATION.--Lat 33°51'10", long 95°32'38", Lamar County, Hydrologic Unit 11140101, on upstream side of dam on Sanders Creek, 2,800 ft to right of outlet channel, 2.0 mi southeast of Chicota, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--175 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year. Prior to October 1970, published as Pat Mayse Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 10, 1968, non-recording gage at present site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam about 7,080 ft long, including an emergency spillway 100 ft wide located near the right abutment of dam. The dam was completed and deliberate impoundment began Sept. 28, 1967. The flood-control outlet works consist of an uncontrolled morning-glory-type drop-inlet spillway that is connected to a 7.25-foot-diameter concrete conduit through the dam. A 24- and 12-inch-diameter low-flow pipe is provided for additional outlets. The lake was built for flood control, municipal, and industrial water supply, recreation, fish and wildlife conservation, and for channel improvement on Sanders Creek. Water is diverted from the lake for municipal and industrial uses by the city of Paris. Any resultant effluent is discharged into Pine Creek below Lake Crook, which is located in another drainage basin. The capacity table is based on Geological Survey topographic maps dated 1949. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity acre-feet)
Top of dam	488.5	-
Crest of spillway	477.0	352,700
Top of flood-control pool	460.5	189,100
Crest of morning-glory drop-inlet spillway (top of conservation pool)	450.6	122,100
Streambed	393.0	0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 208,000 acre-ft Dec. 11, 12, 1971 (elevation, 462.87 ft); minimum since conservation pool was first reached on Apr. 20, 1968, 100,900 acre-ft Nov. 10, 1978 (elevation, 446.80 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 155,500 acre-ft May 3 (elevation, 455.85 ft); minimum, 112,600 acre-ft Feb. 5, 7, 8 (elevation, 448.97 ft).

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

448.0	107,300	451.0	124,500	455.0	149,800
449.0	112,800	453.0	136,800	457.0	163,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117900	116700	115700	114200	113000	138800	140600	135800	129400	124000	120200	117800
2	117800	116600	115800	114200	113000	137900	140400	151600	129200	123800	120100	117700
3	117600	116500	116000	114200	113000	137300	140800	155500	128900	123700	120000	117500
4	117500	116400	115900	114300	112900	136400	140200	154300	128700	123400	119900	117300
5	117300	116400	115900	114200	112700	135600	139300	152800	128300	123700	119800	117200
6	117200	116500	115700	114200	112700	135000	138400	151500	128300	123700	119800	117100
7	117600	116500	115700	114100	112600	134400	137800	149700	128000	123700	119700	116700
8	117800	116400	115700	114200	112700	133700	137100	148000	127800	123100	119500	116600
9	117800	116300	115600	114600	113000	133100	136500	146300	127600	123100	120300	116900
10	117700	116200	115700	114500	113100	132800	136300	144700	127300	122900	120800	116800
11	118000	116000	115600	114500	118700	132500	135900	143200	127200	122900	120900	116600
12	117900	115800	115400	114500	128400	135500	135200	141900	127000	122800	120800	116500
13	117700	115800	115400	114400	132500	138400	134600	140700	126800	122700	120600	116300
14	117500	115800	115300	114400	132400	138300	134000	139500	126600	122600	120600	116100
15	117400	115700	115200	114300	132100	137600	133400	138300	126400	122500	120400	115900
16	117300	115600	115200	114300	131500	137000	132900	137300	126200	122400	120300	115700
17	117300	115600	115200	114400	131300	136400	132400	136500	125900	122300	120200	115600
18	117200	115500	115000	114100	131000	135900	132000	135700	125800	122200	120100	115400
19	117400	116100	115000	114100	130600	135100	131400	135100	125600	122000	119900	115200
20	117700	116100	115000	114100	130200	134500	133400	134700	125400	121700	119600	115100
21	117600	116000	114900	114100	129900	134000	135200	134100	125200	121500	119600	114900
22	117500	116500	114800	114200	129700	133400	135300	133500	125000	121300	119400	115200
23	117400	116000	114700	114200	129400	135300	134800	133200	124700	121200	119300	115100
24	117200	116000	114600	114200	129100	138900	134300	132700	124600	121200	119100	115100
25	117200	115800	114500	114200	128800	139500	133700	132200	124400	121100	118900	115200
26	117100	116000	114400	114300	131500	138600	133200	131500	124500	120900	118800	115200
27	117000	115800	114500	114200	137900	141400	132700	131500	124400	120800	118700	115000
28	116900	115800	114400	114200	140400	143700	132200	131100	124400	120800	118600	115000
29	116800	115700	114300	114200	139700	144200	131900	130700	124300	120600	118500	114800
30	116800	115600	114200	114200	---	143000	131500	130300	124100	120500	118200	114800
31	116700	---	114200	113000	---	141700	---	129900	---	120300	118000	---
MAX	118000	116700	116000	114600	140400	144200	140800	155500	129400	124000	120900	117800
MIN	116700	115500	114200	113000	112600	132500	131400	129900	124100	120300	118000	114800
(†)	449.68	449.49	449.25	449.04	453.45	453.77	452.15	451.88	450.93	450.30	449.90	449.34
(‡)	-1200	-1100	-1400	-1200	+26700	+2000	-10000	-1600	-5800	-3800	-2300	-3200

CAL YR 1983 MAX 163400 MIN 114200 ‡ -20900
WTR YR 1984 MAX 155500 MIN 112600 ‡ -3100

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

07335390 PAT MAYSE LAKE NEAR CHICOTA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JUN 06...	0946	136	23.0	52	7	18	1.7	5.0

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JUN 06...	.3	2.8	45	14	4.8	.20	.6	74

07335400 SANDERS CREEK NEAR CHICOTA, TX
(Outflow from Pat Mayse Lake)

LOCATION.--Lat 33°51'09", long 95°32'40", Lamar County, Hydrologic Unit 11140101, on upstream side of Pat Mayse Dam, 2,800 ft to right of morning-glory drop inlet, 2.0 mi southeast of Chicota, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--175 mi^2 at Pat Mayse Dam; 184 mi^2 at former site 2.6 mi downstream.

PERIOD OF RECORD.--March 1964 to September 1967 (gage heights and discharge measurements only), October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 440.00 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 2.6 mi downstream at datum 52.77 ft lower. Oct. 1, 1967, to Sept. 30, 1970, at datum 10.00 ft higher.

REMARKS.--Records good. Flow represents uncontrolled outflow from Pat Mayse Lake (station 07335390). Flow downstream from dam is affected by local runoff and backwater from the Red River.

AVERAGE DISCHARGE.--17 years, 131 ft^3/s (94,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum outflow, 1,110 ft^3/s May 27, 1982 (gage height, 22.41 ft); maximum gage height, 22.87 ft Dec. 11, 12, 1971; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum outflow, 890 ft^3/s May 3 at 2300 hours (gage height, 15.85 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	571	691	186	113.0	4.30	0	0
2	0	0	0	0	0	516	641	716	100.0	3.50	0	0
3	0	0	0	0	0	469	651	885	93.0	2.90	0	0
4	0	0	0	0	0	432	657	888	83.0	2.70	0	0
5	0	0	0	0	0	383	601	883	76.0	1.70	0	0
6	0	0	0	0	0	350	546	877	75.0	1.00	0	0
7	0	0	0	0	0	322	491	870	72.0	.81	0	0
8	0	0	0	0	0	288	466	862	66.0	.51	0	0
9	0	0	0	0	0	257	430	854	61.0	.40	0	0
10	0	0	0	0	0	237	399	846	56.0	.24	0	0
11	0	0	0	0	0	218	389	831	52.0	.19	0	0
12	0	0	0	0	13	304	361	773	49.0	.14	0	0
13	0	0	0	0	172	441	330	694	44.0	.08	0	0
14	0	0	0	0	221	522	300	620	41.0	.03	0	0
15	0	0	0	0	207	495	270	547	38.0	.02	0	0
16	0	0	0	0	192	455	245	480	34.0	.01	0	0
17	0	0	0	0	176	421	226	431	31.0	.00	0	0
18	0	0	0	0	169	391	205	386	27.0	.00	0	0
19	0	0	0	0	154	358	186	349	25.0	.00	0	0
20	0	0	0	0	140	321	186	324	22.0	.00	0	0
21	0	0	0	0	131	296	314	302	19.0	.00	0	0
22	0	0	0	0	123	271	352	274	17.0	.00	0	0
23	0	0	0	0	116	290	336	259	14.0	.00	0	0
24	0	0	0	0	105	435	310	237	11.0	.00	0	0
25	0	0	0	0	97	590	283	218	9.4	.00	0	0
26	0	0	0	0	115	567	259	194	8.7	.00	0	0
27	0	0	0	0	298	574	240	179	8.2	.00	0	0
28	0	0	0	0	601	778	214	172	7.6	.00	0	0
29	0	0	0	0	625	837	206	151	6.5	.00	0	0
30	0	0	0	0	---	825	187	139	5.2	.00	0	0
31	0	---	0	0	---	764	---	124	---	.00	0	---
TOTAL	0	0	0	0	3655	13978	10972	15551	1264.6	18.53	0	0
MEAN	.000	.000	.000	.000	126	451	366	502	42.2	.60	.000	.000
MAX	.00	.00	.00	.00	625	837	691	888	113	4.3	.00	.00
MIN	.00	.00	.00	.00	.00	218	186	124	5.2	.00	.00	.00
AC-FT	.00	.00	.00	.00	7250	27730	21760	30850	2510	37	.00	.00

CAL YR 1983	TOTAL	55750.83	MEAN 153	MAX 917	MIN .00	AC-FT	110600
WTR YR 1984	TOTAL	45439.13	MEAN 124	MAX 888	MIN .00	AC-FT	90130

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW1/4 sec.11, T.8 S., R.17 E., Choctaw County, Oklahoma, Hydrologic Unit 11140101, on right downstream bank of bridge on U.S. Highway 271 at Arthur City, 10.6 mi downstream from Muddy Boggy River, 26.0 mi upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,531 mi², of which 5,936 mi² probably is noncontributing.

PERIOD OF RECORD.--January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft National Geodetic Vertical Datum of 1929. 1905-11, nonrecording gage at St. Louis-San Franciso Railway Co. bridge 200 ft upstream at same datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 mi above station.

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

AVERAGE DISCHARGE.--13 years (water years 1906-11, 1937-43) prior to regulation by Denison Dam, 9,266 ft³/s 6,713,000 acre-ft/yr; 40 years (water years 1945-84) after completion of Denison Dam, 7,794 ft³/s, 5,647,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft³/s May 28, 1908 (gage height, 43.2 ft) from rating curve extended above 41,000 ft³/s on basis of records for later years; minimum, 130 ft³/s Dec. 11, 12, 1956 (gage height, 4.49 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,100 ft³/s Oct. 27 (gage height, 16.28 ft); minimum daily, 140 ft³/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2570	30300	7970	3620	581	7440	8900	4340	2610	4660	802	2910
2	2740	29800	7200	3250	1770	5610	7390	13400	2290	3590	1820	2280
3	2270	29200	6440	2040	2520	6190	7660	24800	2650	2870	1870	1540
4	2330	28300	5960	2970	1310	5650	9520	21400	2020	3130	1880	1250
5	3650	23000	4230	3230	1320	3200	7810	15300	984	4670	1890	1210
6	4010	19400	2810	2360	1380	2320	6000	11200	1360	3970	1690	1210
7	2680	18600	3590	1990	1000	4940	7720	7840	2500	3510	831	1470
8	1530	18600	3880	1670	1310	6610	8060	5850	2530	3430	654	1800
9	735	18500	5040	1080	1840	5940	8150	6230	2510	2750	1720	1710
10	510	18300	5220	955	2430	6360	9310	6030	2640	2090	2390	859
11	518	15100	3770	1260	2910	6590	11900	5250	2030	2600	3260	536
12	384	12200	3710	5520	2830	7880	11300	3880	926	3450	2690	442
13	271	12000	3700	4560	2890	16400	9810	3170	1030	3540	1950	482
14	189	12000	3660	2970	1830	18300	8390	2760	3880	3520	970	554
15	156	11700	3120	2350	1730	16100	7110	2130	4930	3440	815	470
16	140	11700	3710	1710	2920	14200	6150	2780	5050	2760	1900	400
17	252	11400	3920	1440	2950	11600	5520	2350	5080	2020	2300	365
18	284	9390	3740	1230	3260	8700	5790	2410	3360	2530	2380	434
19	1590	9080	3440	5130	4040	8150	5290	2480	2810	3220	2400	329
20	1920	8960	3510	4630	3290	9840	5280	1920	3200	3280	2300	284
21	1610	8920	4680	3950	1830	11100	7770	1680	3380	3310	2210	260
22	2340	10200	4680	3780	2420	10800	10400	2080	2960	3360	2430	285
23	2090	11000	6030	2630	2970	9830	10900	1620	2870	2480	2460	356
24	5090	11100	8270	1960	2890	15300	8160	1990	3250	1280	2620	334
25	24200	12200	6830	2890	2040	15800	6080	3210	2590	1770	1960	286
26	37400	10100	8230	2390	2650	11400	5340	3440	2040	2980	2430	351
27	41200	10100	5290	2010	8560	7500	4710	3360	2670	2960	3230	606
28	40200	9700	4180	1740	11200	11300	5200	2760	3320	2760	2510	1290
29	35300	9700	2720	1290	10600	13600	4330	2040	3570	2620	1710	1840
30	29700	8670	2560	840	---	13900	4060	2120	4080	2100	2980	1010
31	30300	---	3690	667	---	11200	---	3080	---	868	3440	---
TOTAL	278159	449220	145780	78112	89271	303750	224010	172900	85120	91518	64492	27153
MEAN	8973	14970	4703	2520	3078	9798	7467	5577	2837	2952	2080	905
MAX	41200	30300	8270	5520	11200	18300	11900	24800	5080	4670	3440	2910
MIN	140	8670	2560	667	581	2320	4060	1620	926	868	654	260
AC-FT	551700	891000	289200	154900	177100	602500	444300	342900	168800	181500	127900	53860

WTR YR 1984 TOTAL 2009485 MEAN 5490 MAX 41200 MIN 140 AC-FT 3986000

07336820 RED RIVER NEAR DE KALB, TX

LOCATION.--lat 33°41'15", long 94°41'39", Bowie County, Tex.-McCurtain County, Okla. State line, Hydrologic Unit 11140106, near left bank at downstream side of bridge on U.S. Highway 259, 4.8 mi upstream from North Mill Creek, 13 mi north of De Kalb, and at mile 556.9.

DRAINAGE AREA.--47,348 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. At times, flood peaks may be affected by storage in Lake Texoma (station 07331500) located approximately 169 mi upstream, and low flows may be affected by releases for generation of electric power. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years (water years 1969-84), 11,300 ft³/s (8,187,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft³/s Dec. 11, 1971 (gage height, 31.55 ft), from graph based on gage readings; minimum, 213 ft³/s Nov. 30, 1979, from graph based on gage readings.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1957, 205,000 ft³/s June 1957 (gage height, 32.2 ft), from rating curve extended above 186,500 ft³/s. The greatest flood since 1936 occurred in February 1938, stage unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,800 ft³/s Mar. 30 at 0900 hours (gage height, 19.34 ft); minimum daily, 721 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3690	28000	9340	3470	2140	18500	37900	4520	8820	3610	2330	3160
2	3360	29200	9100	3820	2080	15500	34100	14300	6660	4210	1630	3690
3	3120	30000	8520	4440	1990	12200	26600	33000	3860	4620	1600	3320
4	3250	30000	7510	4200	2920	9970	16900	43900	3340	3610	2190	2460
5	2980	28200	6780	3920	2810	10200	17100	37800	3370	3440	2200	1830
6	2980	23200	6310	3870	1970	8530	17300	28600	2480	5650	2180	1550
7	4200	19800	5470	3640	1930	7000	12800	23600	1770	6630	2140	1450
8	4670	18100	4850	2930	1880	7580	14400	20000	2010	5020	1910	1420
9	3430	17900	4420	2720	1720	9280	14900	17400	2720	4250	1550	1720
10	2300	17600	4590	2660	2000	8210	15500	16000	2760	3920	1390	2110
11	1700	17700	5470	2500	2420	7270	15800	14600	2660	3200	2020	1950
12	1510	17400	5570	2280	6910	10900	21300	10700	2740	2880	2740	1330
13	1370	14000	4980	2540	11000	18500	22600	7080	2080	3860	3480	1010
14	1290	12200	5060	2680	9840	34600	19500	5530	1440	4440	2950	882
15	1160	11900	5110	4960	10900	36900	14500	4720	1690	4420	2150	861
16	1090	11700	4860	4550	9540	33100	11900	3970	4210	4160	1480	870
17	1070	11500	4740	3560	8540	30200	10400	3250	5290	3890	1360	836
18	1120	11400	4770	3140	6580	26800	8460	3760	5530	3150	2030	761
19	1110	11700	4880	2980	4790	23500	7430	3130	5270	2590	2430	721
20	1160	10900	4680	2910	4550	23200	7180	3660	3560	3110	2550	736
21	2420	9100	4340	5650	4850	26800	8900	3370	2980	3570	2570	743
22	2870	8930	3900	5310	3870	29100	11100	2690	3250	3660	2490	757
23	2280	8960	3450	4410	3230	27400	12600	3520	3370	3700	2470	815
24	2610	9100	3160	3920	4260	31300	15400	5790	2910	3800	2630	791
25	2680	10400	3010	3180	4490	35800	13010	4040	2880	2930	2760	770
26	16900	10800	2970	2960	4020	36700	10860	4080	3140	2020	2730	896
27	32100	11600	3000	3400	5790	37000	8270	3990	2560	2530	2250	962
28	36100	11500	2910	3500	10900	45100	6200	4180	2180	3290	2750	897
29	36300	10100	3000	2980	17500	45200	5470	4040	2720	3380	3370	936
30	30900	9670	3100	2600	---	45600	5470	4660	3300	3290	2620	1310
31	26600	---	3260	2320	---	42000	---	8390	---	3000	2060	---
TOTAL	238320	472560	153110	108000	155420	753940	443850	348270	101550	115830	71010	41544
MEAN	7688	15750	4939	3484	5359	24320	14800	11230	3385	3736	2291	1385
MAX	36300	30000	9340	5650	17500	45600	37900	43900	8820	6630	3480	3690
MIN	1070	8930	2910	2280	1720	7000	5470	2690	1440	2020	1360	721
AC-FT	472700	937300	303700	214200	308300	1495000	880400	690800	201400	229700	140800	82400

CAL YR 1983 TOTAL 3761518 MEAN 10310 MAX 45400 MIN 348 AC-FT 7461000
WTR YR 1984 TOTAL 3003404 MEAN 8206 MAX 45600 MIN 721 AC-FT 5957000

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: October 1970 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1968 to current year.
WATER TEMPERATURES: January 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationship between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,140 micromhos July 13, 1980; minimum daily, 132 micromhos Mar. 25, 1968.
WATER TEMPERATURES: Maximum daily, 34.0°C on several days during July and August 1969-70; minimum daily, 0.0°C Jan. 11, 1977, Dec. 22, 1983, Jan. 19-21, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,780 micromhos Aug. 30, Sept. 4; minimum daily, 271 micromhos Feb. 16.
WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 19; minimum daily, 0.0°C Dec. 22, Jan. 19-21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT 04...	1310	3250	1320	--	24.0	--	--	--	--	--	--	--
NOV 15...	1245	11900	1270	8.2	14.0	20	66	9.6	94	1.3	280	170
DEC 20...	1140	4250	1050	7.8	3.0	10	11	12.8	96	.8	240	130
JAN 31...	1730	2250	987	--	9.0	--	--	--	--	--	--	--
MAR 14...	1600	36500	297	7.8	13.0	560	350	10.4	99	3.4	81	24
APR 25...	1400	14000	405	7.9	21.0	350	240	8.2	94	2.4	110	36
JUL 17...	1510	3980	1560	8.2	31.0	37	19	7.6	104	1.9	330	210
AUG 28...	1650	2890	1680	8.2	30.0	60	4.6	7.4	99	3.3	330	190

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	76	22	140	4	5.6	110	170	220	.30	5.0	700	165
DEC 20...	63	19	110	3	4.2	110	130	180	.20	5.4	580	30
JAN 31...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	24	5.1	21	1	2.6	57	31	28	.20	5.4	150	876
APR 25...	32	7.9	33	1	3.1	77	47	44	.20	5.6	220	486
JUL 17...	85	29	190	5	4.8	120	200	290	.30	3.5	870	47
AUG 28...	86	29	190	5	5.8	140	200	300	.30	6.1	900	60

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	--	--	--	--	--	--	--	--	--	98	860	--
NOV 15...	71	.35	.050	.40	.060	.94	1.0	.170	5.3	735	23600	--
DEC 20...	8	.29	.010	.30	.040	.46	.50	.020	5.9	94	1080	--
JAN 31...	--	--	--	--	--	--	--	--	--	83	504	22
MAR 14...	78	.23	.170	.40	.180	1.3	1.5	.300	14	1340	132000	79
APR 25...	48	.35	.050	.40	.020	.78	.80	.320	15	672	25400	67
JUL 17...	18	--	.010	<.10	.070	.83	.90	.080	5.9	170	1830	31
AUG 28...	<1	--	.020	<.10	.040	.76	.80	.110	8.0	83	648	64

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC 20...	1140	1	130	<1	<10	2	58
AUG 28...	1650	2	180	2	<10	<1	7

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
DEC 20...	4	23	.1	<1	<1	8
AUG 28...	3	11	<.1	<1	<1	4

07336820 RED RIVER NEAR DE KALB, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	238320	730	425	273000	120	74500	83	53400	190
NOV.	1983	472560	813	474	605000	130	165700	93	118600	210
DEC.	1983	153110	748	434	179000	120	48700	84	34900	200
JAN.	1984	108000	948	559	163000	160	45400	110	32400	240
FEB.	1984	155420	745	435	182000	120	49900	85	35700	190
MAR.	1984	753940	473	266	542000	68	138500	49	100500	130
APR.	1984	443850	779	453	542000	120	147200	88	105600	200
MAY	1984	348270	539	307	289000	81	75800	58	54700	150
JUNE	1984	101550	1180	712	195000	210	56800	150	40200	280
JULY	1984	115830	1510	933	292000	280	88100	200	61900	340
AUG.	1984	71010	1520	946	181000	290	55000	200	38600	340
SEPT	1984	41544	1350	829	93000	250	27700	170	19500	310
TOTAL		3003404	**	**	3538000	**	973000	**	696000	**
WTD.AVG.		8206	746	436	**	120	**	86	**	190

07336820 RED RIVER NEAR DE KALB, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	750	700	1070	942	531	415	1340	417	1580	1530	1590
2	1300	680	670	995	776	588	551	615	733	1600	1490	1480
3	1270	600	563	890	680	668	567	363	1050	1380	1310	1390
4	1300	550	975	1220	637	738	741	294	1160	1280	1460	1780
5	1290	575	870	1170	1050	730	778	329	1230	1350	1420	1620
6	1290	615	805	1060	1190	791	705	402	1330	1280	1320	1580
7	1280	630	748	957	1190	857	654	457	1300	1260	1590	1580
8	1350	660	654	1070	1200	830	845	507	1170	1300	1420	1510
9	1290	675	754	1170	1250	761	1050	549	1010	1480	1270	1500
10	1180	730	402	1070	1300	803	988	500	1160	1580	1330	1570
11	1110	720	370	792	1300	844	975	652	1410	1590	1310	1540
12	1050	800	350	882	860	706	887	785	1200	1600	1510	1500
13	1010	920	335	749	602	531	733	923	1250	1450	1610	1430
14	987	1000	572	1110	433	297	711	1150	1370	1460	1140	1340
15	996	1060	361	628	427	335	910	1010	1200	1510	1360	1250
16	970	1110	543	700	271	362	1050	1000	1020	1590	1290	1280
17	926	1180	838	781	279	386	1080	1040	948	1670	1280	1170
18	850	1200	754	695	620	419	1070	980	1200	1600	1170	1160
19	824	1230	693	487	870	457	1050	1120	1620	1650	1610	1050
20	814	1250	603	593	1020	461	1260	1090	1540	1470	1590	1020
21	882	1290	763	880	1420	664	1200	1140	1550	1710	1700	970
22	1140	1320	974	723	1440	598	911	1150	1400	1550	1680	916
23	1150	1380	995	928	1210	542	946	925	1460	1600	1660	825
24	1200	1290	1100	1390	1010	539	762	653	1320	1690	1720	860
25	1210	1120	1130	1260	999	545	570	374	1320	1650	1740	907
26	560	915	1180	1140	1030	555	393	336	1260	1290	1770	819
27	460	730	1200	1050	919	318	568	550	1400	1630	1540	926
28	415	568	1280	930	706	321	911	700	1430	1640	1550	833
29	490	590	1290	1170	549	288	1110	750	1500	1650	1740	886
30	690	653	1220	1070	---	380	1210	650	1520	1650	1780	846
31	950	---	1100	995	---	390	---	406	---	1450	1610	---
MEAN	1020	893	800	956	903	556	853	734	1250	1520	1500	1240

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

07337000 RED RIVER AT INDEX, AR

LOCATION.--Lat 33°33'07", long 94°02'28", in NW 1/4 SW 1/4 sec.7, T.14 S., R.28 W., Miller County, Hydrologic Unit 11140106, near right bank on downstream side of bridge on U.S. Highway 71 at Index, 2.2 mi south of Ogden, 20.6 mi upstream from Little River, and at mile 485.3.

DRAINAGE AREA.--48,030 mi , of which 5,936 mi probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1936 to current year. Gage-height records collected at same site since 1917 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.87 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1939, nonrecording gage at present site and datum, and Dec. 12, 1939, to July 19, 1979, water-stage recorder at site 500 ft downstream at present datum.

REMARKS.--Water-discharge records good. Some regulation by Lake Texoma (station 07331500, 241 mi upstream) since Oct. 31, 1943 (capacity, 5,392,900 acre-ft), by Pat Mayse Lake (station 07335390) since Sept. 28, 1967 (capacity, 352,700 acre-ft), and by Hugo Lake in Oklahoma since Jan. 18, 1974 (capacity, 966,700 acre-ft).

AVERAGE DISCHARGE.--48 years, 11,620 ft³/s (8,419,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 297,000 ft³/s Feb. 23, 1938 (gage height, 34.25 ft); minimum, 378 ft³/s Nov. 28, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,000 ft³/s May 5 (gage height, 14.34 ft); minimum daily, 1,163 ft³/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	25800	8960	4800	2590	17400	29600	5650	7090	3500	3030	2570
2	2340	27000	8690	4090	2330	18100	25800	5560	8880	3800	2850	2360
3	2950	27300	9030	3470	2260	15500	22800	15300	7890	4050	2300	3070
4	2810	27500	8670	3480	2170	12300	19100	33500	5650	4440	1920	3270
5	2740	27200	7570	3840	2240	10700	16000	38700	4470	5310	2010	3030
6	2670	25800	6490	3900	2850	9930	16000	31900	4250	5000	2290	2470
7	2520	22100	5910	3440	2620	8860	16200	25600	4060	4760	2300	2050
8	2660	19100	5310	3630	2090	7250	13500	21600	3290	5670	2590	1870
9	3430	17800	4730	3280	2070	6770	12100	18600	2870	5320	2370	1900
10	3530	17600	4270	3100	2110	7760	12600	16500	3310	4410	2160	1950
11	2750	17500	4360	3110	1980	7810	14600	15400	3660	3980	1930	2120
12	2110	17500	4750	2930	3330	8410	15700	14400	3650	3720	1880	2290
13	1700	16800	5310	2570	7700	12200	19200	11600	3600	3220	2260	2100
14	1520	14000	4770	2440	12000	18900	19900	8860	3520	3240	2780	1730
15	1420	12100	4540	3910	10600	26200	17400	7020	2860	3900	3110	1560
16	1320	11500	4610	4930	10500	25900	13600	5990	2420	4120	2770	1450
17	1220	11300	4570	4460	9570	23900	11300	5390	3090	4000	2230	1410
18	1160	11100	4270	3780	8360	22400	9880	4840	4670	3820	1810	1390
19	1130	11400	4240	3250	7130	20300	8750	4740	5210	3510	1810	1350
20	1160	11500	4270	2900	5400	18100	7550	5130	5310	2910	2250	1310
21	1150	10800	4300	2700	4520	18000	7220	4670	4730	2740	2500	1280
22	1250	9090	3920	3890	4480	20100	7650	4900	3890	3180	2560	1330
23	2070	8590	3540	4830	4270	21400	10100	4610	3670	3390	2560	1360
24	2300	8330	3610	4590	3400	21200	11600	4320	3850	3440	2500	1320
25	2100	8330	2380	4270	3430	24400	13300	5930	3750	3460	2500	1330
26	2300	9280	2080	3820	4190	27000	13600	6490	3500	3440	2590	1320
27	14100	10000	2820	3120	4530	26700	11200	5660	3640	2640	2730	1290
28	27900	10500	4200	3020	5000	31600	8900	5190	3640	2300	2630	1370
29	30900	10800	4440	3160	9570	36200	6840	5090	3160	2750	2400	1420
30	31200	9690	5050	2910	---	34500	5770	5100	3070	3120	2820	1360
31	27100	---	5370	2780	---	32600	---	4940	---	3160	3040	---
TOTAL	185190	467310	157030	110400	143290	592390	417760	353180	126650	116300	75480	54630
MEAN	5974	15580	5065	3561	4941	19110	13930	11390	4222	3752	2435	1821
MAX	31200	27500	9030	4930	12000	36200	29600	38700	8880	5670	3110	3270
MIN	1130	8330	2080	2440	1980	6770	5770	4320	2420	2300	1810	1280
AC-FT	367300	926900	311500	219000	284200	1175000	828600	700500	251200	230700	149700	108400

CAL YR 1983	TOTAL	3595720	MEAN	9851	MAX	43900	MIN	1130	AC-FT	7132000
WTR YR 1984	TOTAL	2799610	MEAN	7649	MAX	38700	MIN	1130	AC-FT	5553000

07337000 RED RIVER AT INDEX, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Water years 1947-56, April 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT											
12...	1045	2160	1290	8.1	21.0	8.0	8.0	91	150	140	310
DEC											
12...	1300	4760	830	7.8	11.0	39	9.4	86	650	270	190
FEB											
08...	0800	2000	994	8.0	6.5	12	13.6	110	390	68	260
APR											
11...	1015	13600	930	7.7	15.0	80	9.8	98	600	K2500	200
JUN											
20...	0915	4900	1610	8.3	30.0	17	6.4	86	86	182	340
AUG											
30...	1100	2990	825	8.3	25.0	15	5.8	70	49	610	330

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT											
12...	170	80	26	140	4	5.7	170	220	.30	4.1	768
DEC											
12...	88	53	15	96	3	4.2	100	130	.20	5.8	483
FEB											
08...	61	69	20	100	3	3.9	100	140	.20	5.5	597
APR											
11...	110	55	15	96	3	3.3	120	160	.20	5.3	507
JUN											
20...	210	89	29	130	4	5.0	220	310	.30	2.3	1060
AUG											
30...	180	87	28	210	5	4.9	210	270	.30	4.8	629

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
12...	730	<.10	.050	.60	.080	.010	<.010	22	128	80
DEC										
12...	470	.37	.160	.50	.120	.050	.050	97	1250	78
FEB										
08...	560	<.10	<.010	1.1	.100	.020	<.010	16	86	91
APR										
11...	510	.28	.240	2.1	.170	.040	.020	374	13700	65
JUN										
20...	910	<.10	.110	1.1	.090	<.010	.010	63	833	65
AUG										
30...	910	<.10	.090	.80	.080	.020	<.010	46	371	86

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC										
12...	1300	2	130	.5	1	26	<3	3	120	2
FEB										
08...	0800	1	170	<.5	<1	2	<3	2	59	1
JUN										
20...	0915	1	250	<.0	<1	<1	<3	1	13	9
AUG										
30...	1100	2	220	<.0	<1	1	<3	3	28	3

07337000 RED RIVER AT INDEX, ARK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 12...	8	29	<.1	<10	1	<1	<1	520	<6	16
FEB 08...	14	46	.4	<10	2	<1	<1	670	<6	8
JUN 20...	15	7	.1	<10	1	<1	<1	1100	<6	13
AUG 30...	21	33	.3	<10	1	<1	1	1100	<6	16

07342470 SOUTH SULPHUR RIVER NEAR COMMERCE, TX

LOCATION.--Lat 33°13'11", long 95°51'45", Hunt County, Hydrologic Unit 11140301, on left bank at downstream side of bridge on State Highway 11, 0.7 mi upstream from St. Louis Southwestern Railroad bridge, 1.8 mi downstream from Dunbar Creek, and 3.0 mi southeast of Commerce.

DRAINAGE AREA.--189 mi^2.

PERIOD OF RECORD.--October 1979 to current year. Stage records collected at this site November 1956 to September 1979 are published in reports by the Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those periods with no gage-height record, Jan. 20 to Feb. 1 and Feb. 5 to Mar. 12, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1980-84), 125 ft^3/s (8.98 in/yr), 90,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft^3/s May 13, 1982 (gage height, 28.66 ft); minimum, 0.41 ft^3/s Sept. 11-13, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 20, 1971, reached a stage of 27.80 ft, from records published by the Corps of Engineers.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 12	about 1030	3,710	a19.00
Mar. 23	2300	*9,620	25.29

a From graph.

Minimum discharge, 0.37 ft^3/s May 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.1	25	1.7	3.8	20	53	3.2	1.3	3.2	1.4	1.4
2	1.1	2.8	20	1.7	3.0	10	42	915	3.4	2.9	1.6	1.6
3	1.2	2.8	22	2.0	2.5	30	420	944	.79	3.5	1.7	1.6
4	1.3	2.7	37	2.0	2.2	8.0	473	62	.66	3.5	3.1	1.6
5	1.2	2.4	50	2.0	2.0	4.5	63	28	.61	4.5	5.7	1.6
6	1.1	11	31	1.8	1.6	3.5	44	17	8.2	3.8	2.5	1.7
7	1.3	8.3	22	2.1	1.2	2.5	33	7.5	93	2.5	1.7	2.3
8	9.6	3.7	12	1.7	2.0	2.2	332	3.2	37	2.3	1.4	1.7
9	7.3	3.8	8.6	5.6	2.5	2.0	274	2.0	23	2.1	2.0	1.4
10	2.4	2.8	6.2	29	10	5.0	81	1.3	15	1.8	1.4	1.5
11	3.9	2.4	4.5	18	500	50	489	.94	9.1	1.4	1.3	1.6
12	22	3.4	3.8	38	1300	2870	138	.86	6.7	1.7	1.2	1.7
13	2.8	2.3	3.4	23	700	1620	55	.74	5.3	1.8	1.3	1.7
14	1.8	2.0	3.0	12	140	198	35	.57	4.7	1.6	1.4	1.8
15	1.4	2.0	2.5	7.4	30	108	25	.53	3.8	1.5	1.9	1.5
16	1.3	2.0	3.4	5.0	15	78	19	.51	3.3	1.6	2.0	1.5
17	1.5	2.7	4.7	4.0	9.0	63	12	.47	2.8	1.5	1.2	1.6
18	2.7	6.2	3.0	3.2	4.0	55	9.7	.45	2.6	1.6	1.2	1.7
19	3.7	20	2.1	2.3	3.0	1800	7.9	.51	2.6	1.7	1.2	1.7
20	47	14	2.2	2.0	2.5	551	6.4	.68	2.5	1.6	1.3	2.2
21	71	48	2.0	1.4	2.0	119	5.0	8.5	3.1	1.6	1.3	1.6
22	109	30	1.5	2.5	1.6	71	9.4	42	2.4	1.5	1.3	1.9
23	44	36	1.0	4.0	1.4	1200	9.1	20	2.3	1.7	1.4	1.6
24	30	21	2.8	8.0	1.2	5120	4.9	19	2.4	1.8	1.2	2.0
25	21	6.8	2.0	24	2.5	1160	3.1	3.7	2.5	1.7	1.1	1.8
26	10	4.2	2.0	7.0	10	130	2.6	1.4	2.9	1.6	1.2	2.6
27	6.2	16	2.0	4.0	150	295	2.1	.88	3.0	1.6	1.3	2.9
28	5.4	257	1.8	3.0	600	1280	1.6	5.7	3.4	1.4	1.4	2.2
29	4.0	70	2.0	2.7	100	945	1.7	14	5.6	1.3	1.5	1.9
30	3.3	35	1.7	7.0	---	124	1.7	8.2	9.0	1.4	1.5	1.8
31	2.7	---	1.8	4.5	---	71	---	2.7	---	1.4	1.6	---
TOTAL	422.4	624.4	287.0	232.6	3603.0	17995.7	2653.2	2115.54	262.96	63.1	51.3	53.7
MEAN	13.6	20.8	9.26	7.50	124	581	88.4	68.2	8.77	2.04	1.65	1.79
MAX	109	257	50	38	1300	5120	489	944	93	4.5	5.7	2.9
MIN	1.1	2.0	1.0	1.4	1.2	2.0	1.6	.45	.61	1.3	1.1	1.4
AC-FT	838	1240	569	461	7150	35690	5260	4200	522	125	102	107

CAL YR 1983 TOTAL 33965.63 MEAN 93.1 MAX 9360 MIN .82 AC-FT 67370
WTR YR 1984 TOTAL 28364.90 MEAN 77.5 MAX 5120 MIN .45 AC-FT 56260

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX

LOCATION.--Lat 33°21'20", long 95°35'39", Hopkins-Delta County line, Hydrologic Unit 11140301, on left bank of cut channel at downstream side of bridge on State Highways 19 and 154, 1.0 mi downstream from Big Creek, 1.0 mi upstream from Brushy Creek, 4.5 mi downstream from Doctors Creek, and 5.6 mi southeast of Cooper.

DRAINAGE AREA.--527 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 371.91 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1970, at datum 3.00 ft higher. May 9, 1942, to Nov. 8, 1949, nonrecording gage, and Nov. 9, 1949, to May 13, 1955, water-stage recorder at site 700 ft to right of present gage. Gage-height telemeter at station.

REMARKS.--Water-discharge records good. Small diversions upstream from station. Low flow may be sustained by sewage effluent.

AVERAGE DISCHARGE.--42 years (water years 1943-84), 402 ft^3/s (10.36 in/yr), 291,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft^3/s May 13, 1982 (gage height, 27.21 ft, from floodmark), in gage well; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,050 ft^3/s Mar. 24 at 2300 hours (gage height, 21.27 ft), no other peak above base of 8,000 ft^3/s; minimum, 0.06 ft^3/s Sept. 2, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.8	28	2.2	5.8	223	171	7.2	7.8	1.0	.62	.09
2	.73	1.4	16	2.3	5.5	107	108	278	5.7	1.4	.62	.06
3	.61	1.8	19	2.4	4.9	112	243	894	4.9	2.6	.59	.09
4	.61	1.8	14	2.6	3.9	203	853	1040	4.5	2.7	1.1	.06
5	.55	3.1	11	2.6	3.3	132	325	323	4.3	2.1	1.1	.20
6	.49	4.3	15	2.4	2.7	68	123	102	3.9	1.6	1.1	.36
7	.63	5.0	26	2.6	2.3	38	76	46	3.6	1.1	2.0	.32
8	1.5	6.7	16	2.9	1.9	26	483	24	53	.94	2.0	.32
9	2.4	11	11	3.4	2.8	20	880	14	37	.96	1.7	.32
10	4.4	19	9.2	7.6	3.0	17	388	9.5	13	1.5	1.2	.32
11	5.6	4.5	7.1	17	12	16	591	7.2	8.5	1.5	.92	.36
12	8.8	1.9	6.1	16	1450	2080	1330	5.8	6.4	1.3	1.2	.29
13	4.9	1.7	5.8	16	1720	3850	1220	5.2	5.2	1.5	1.7	.26
14	6.8	1.6	5.2	18	2380	4410	184	5.0	4.0	1.5	.86	.26
15	6.2	1.5	4.4	14	1200	2630	83	4.9	3.1	1.5	.60	.29
16	4.7	1.6	4.0	9.5	235	625	47	4.8	2.6	1.3	.47	.29
17	3.3	2.1	3.4	7.4	100	281	30	4.8	2.3	.94	.41	.29
18	2.5	2.4	3.1	6.1	54	169	23	4.8	1.9	.73	.37	.23
19	2.1	4.8	2.9	5.2	34	1350	20	4.4	1.5	.61	.36	.23
20	1.6	6.6	2.8	4.8	25	2220	17	4.3	1.3	.57	.32	.23
21	1.4	11	2.7	4.4	19	2700	46	95	1.1	.52	.29	.20
22	37	15	2.6	3.7	16	645	39	38	.95	.48	.31	.26
23	105	22	2.6	4.0	14	1550	22	102	.90	.45	.32	.23
24	38	16	2.5	5.4	13	6510	15	47	.83	.46	.30	.31
25	14	12	2.5	9.5	12	7010	14	17	.87	.46	.27	.85
26	8.9	10	2.5	12	68	4060	12	11	1.1	.48	.23	1.1
27	7.0	6.7	2.4	9.5	793	2440	11	6.4	1.2	.59	.20	.59
28	5.7	4.7	2.4	6.8	1250	2340	9.2	5.3	1.1	.61	.20	.44
29	4.7	189	2.4	6.1	793	2200	8.2	5.2	.96	.52	.17	.23
30	3.6	108	2.3	6.3	---	1850	7.5	5.0	.93	.55	.17	.19
31	2.6	---	2.3	6.4	---	470	---	7.1	---	.52	.11	---
TOTAL	287.32	479.0	237.2	219.1	10224.1	50352	7378.9	3127.9	184.44	32.99	21.81	9.27
MEAN	9.27	16.0	7.65	7.07	353	1624	246	101	6.15	1.06	.70	.31
MAX	105	189	28	18	2380	7010	1330	1040	53	2.7	2.0	1.1
MIN	.49	1.4	2.3	2.2	1.9	16	7.5	4.3	.83	.45	.11	.06
CFSM	.02	.03	.02	.01	.67	3.08	.47	.19	.01	.002	.001	.001
IN.	.02	.03	.02	.02	.72	3.55	.52	.22	.01	.00	.00	.00
AC-FT	570	950	470	435	20280	99870	14640	6200	366	65	43	18

CAL YR 1983 TOTAL 96462.61 MEAN 264 MAX 14300 MIN .13 CFSM .50 IN 6.81 AC-FT 191300
WTR YR 1984 TOTAL 72554.03 MEAN 198 MAX 7010 MIN .06 CFSM .38 IN 5.12 AC-FT 143900

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966, October 1967 to current year. Chemical and biochemical analyses: December 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1958 to September 1966, October 1967 to current year.
WATER TEMPERATURES: October 1958 to September 1966, October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,710 micromhos Aug. 14, 1973; minimum daily, 82 micromhos July 2, 1976.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 6, 1960, Aug. 10, 1962; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,200 micromhos Jan. 25; minimum daily, 107 micromhos Mar. 24.
WATER TEMPERATURES: Maximum daily, 30.0°C July 2; minimum daily, 0.0°C Dec. 22, 24-26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 14...	1400	1.5	480	8.2	15.0	30	9.5	11.2	115	1.8	140
DEC 19...	1620	2.8	561	7.8	1.0	30	24	12.4	88	3.2	150
MAR 13...	1145	3120	154	7.0	10.0	560	200	9.1	81	3.8	53
APR 24...	1100	15	433	7.6	18.0	350	120	7.2	77	2.7	140
JUL 19...	1040	.57	490	7.9	26.0	56	19	5.5	68	2.0	180
AUG 27...	1545	.20	700	8.4	32.0	50	36	9.2	128	1.2	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 14...	0	47	4.7	43	2	5.6	150	59	24	.40	7.8
DEC 19...	28	51	4.9	46	2	4.3	120	37	57	.30	8.9
MAR 13...	9	18	1.9	7.6	.5	3.6	44	21	4.5	.20	8.1
APR 24...	0	50	4.7	30	1	3.5	150	40	18	.30	9.7
JUL 19...	0	62	6.2	35	1	4.5	190	31	24	.40	9.7
AUG 27...	0	50	5.3	93	3	5.2	210	54	58	.50	6.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 14...	280	15	15	2.5	.040	2.5	.060	1.7	1.8	.220	8.6
DEC 19...	280	28	10	3.0	.040	3.0	.190	1.0	1.2	.360	8.8
MAR 13...	91	457	62	1.2	.210	1.4	.170	1.3	1.5	.440	15
APR 24...	250	160	20	.94	.060	1.0	.170	1.3	1.5	.280	9.5
JUL 19...	290	28	12	--	.010	<.10	.120	.78	.90	.160	9.3
AUG 27...	400	27	14	--	.020	<.10	.040	.46	.50	.090	6.3

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC 19...	1620	3	68	<1	<10	2	17
APR 24...	1100	4	82	<1	<10	3	28
AUG 27...	1545	5	83	<1	<10	2	8

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 19...	4	29	.2	<1	<1	9
APR 24...	<1	16	.2	<1	<1	20
AUG 27...	3	17	.3	<1	<1	<3

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	287.32	618	357	277	35	27	46	36	170
NOV.	1983	479.0	452	259	335	22	29	36	47	150
DEC.	1983	237.2	357	204	131	16	11	29	19	120
JAN.	1984	219.1	715	415	246	44	26	50	30	180
FEB.	1984	10224.1	190	108	2980	7.4	205	17	460	75
MAR.	1984	50352	164	93	12600	6.2	845	15	1970	66
APR.	1984	7378.9	237	135	2690	9.8	194	20	407	91
MAY	1984	3127.9	358	204	1730	17	140	29	248	120
JUNE	1984	184.44	497	286	142	26	13	39	19	160
JULY	1984	32.99	491	282	25	25	2.2	39	3.4	160
AUG.	1984	21.81	593	342	20	33	2.0	44	2.6	170
SEPT	1984	9.27	648	375	9.4	37	0.9	48	1.2	180
TOTAL		72554.03	**	**	21200	**	1500	**	3250	**
WTD.AVG.		198	191	108	**	7.6	**	17	**	74

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	730	502	253	529	632	267	256	559	582	453	533	690
2	740	504	370	539	641	276	270	525	568	459	531	691
3	745	507	364	551	656	285	291	444	543	460	528	684
4	747	510	308	591	672	209	260	261	517	461	525	689
5	755	516	265	600	675	199	275	306	528	468	433	693
6	760	483	309	671	679	246	292	304	540	478	414	711
7	740	506	376	654	682	286	307	314	553	485	468	717
8	703	502	382	607	683	312	285	329	516	490	501	716
9	737	501	322	588	665	330	249	344	507	497	555	706
10	728	498	317	587	718	354	260	358	500	501	586	695
11	719	500	327	1090	688	361	239	370	492	502	620	686
12	705	502	347	674	184	193	168	381	420	503	658	680
13	725	503	388	537	172	150	180	392	399	502	698	675
14	737	501	308	663	166	168	235	401	395	500	723	671
15	681	502	321	673	196	175	256	412	396	497	734	666
16	687	503	348	664	223	190	285	423	395	500	735	664
17	686	505	392	752	236	265	310	434	397	498	733	663
18	678	502	483	770	245	288	337	443	401	500	731	660
19	672	508	462	663	258	218	359	438	407	505	728	658
20	666	492	447	572	270	189	378	452	413	508	725	654
21	665	490	434	540	281	165	500	353	420	511	727	651
22	677	492	450	528	291	203	414	351	426	514	723	634
23	687	473	482	509	303	185	418	290	432	516	722	632
24	407	525	530	563	316	107	434	345	438	517	720	637
25	445	607	566	1200	331	117	486	375	439	518	719	636
26	471	620	558	760	300	152	465	396	447	519	719	589
27	473	602	559	794	196	158	492	418	442	520	715	560
28	474	636	553	737	175	216	518	494	445	530	714	582
29	480	421	545	760	247	217	535	583	446	532	713	622
30	487	394	532	799	---	218	547	624	447	534	709	621
31	494	---	526	645	---	226	---	583	---	536	704	---
MEAN	648	510	414	671	406	223	343	410	462	500	647	661

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	17.0	10.0	2.0	5.0	7.0	13.0	18.0	20.0	25.0	24.0	26.0
2	20.0	18.0	10.0	2.0	8.0	9.0	15.0	16.0	20.0	30.0	24.0	25.0
3	21.0	18.0	11.0	2.0	6.0	11.0	14.0	18.0	22.0	26.0	23.0	26.0
4	22.0	20.0	9.0	2.0	7.0	12.0	16.0	20.0	22.0	27.0	24.0	24.0
5	20.0	18.0	12.0	3.0	6.0	12.0	14.0	20.0	24.0	28.0	25.0	22.0
6	18.0	16.0	8.0	4.0	4.0	10.0	14.0	21.0	24.0	28.0	26.0	22.0
7	19.0	16.0	7.0	4.0	4.0	10.0	16.0	22.0	24.0	28.0	25.0	22.0
8	20.0	16.0	6.0	5.0	4.0	10.0	15.0	20.0	26.0	28.0	26.0	24.0
9	20.0	16.0	10.0	5.0	8.0	10.0	15.0	19.0	25.0	28.0	26.0	24.0
10	18.0	12.0	11.0	6.0	10.0	10.0	16.0	20.0	24.0	28.0	26.0	25.0
11	18.0	10.0	11.0	4.0	14.0	10.0	16.0	20.0	24.0	28.0	25.0	26.0
12	18.0	9.0	8.0	3.0	12.0	10.0	18.0	22.0	25.0	28.0	25.0	25.0
13	15.0	11.0	9.0	3.0	12.0	10.0	18.0	22.0	25.0	27.0	26.0	25.0
14	16.0	13.0	7.0	3.0	12.0	13.0	19.0	22.0	26.0	26.0	25.0	25.0
15	16.0	12.0	5.0	3.0	14.0	16.0	18.0	24.0	26.0	28.0	25.0	25.0
16	18.0	10.0	4.0	3.0	12.0	16.0	16.0	22.0	26.0	28.0	25.0	20.0
17	20.0	10.0	4.0	2.0	11.0	17.0	15.0	22.0	26.0	28.0	26.0	19.0
18	20.0	15.0	4.0	2.0	12.0	18.0	16.0	22.0	26.0	28.0	26.0	20.0
19	21.0	16.0	2.0	1.0	11.0	16.0	18.0	22.0	26.0	26.0	26.0	20.0
20	21.0	12.0	2.0	1.0	10.0	11.0	18.0	22.0	26.0	25.0	27.0	20.0
21	20.0	13.0	2.0	1.0	8.0	12.0	20.0	21.0	27.0	25.0	27.0	21.0
22	18.0	17.0	.0	1.0	9.0	14.0	18.0	21.0	26.0	25.0	28.0	22.0
23	18.0	16.0	1.0	2.0	9.0	16.0	18.0	22.0	27.0	25.0	27.0	23.0
24	17.0	12.0	.0	3.0	10.0	14.0	17.0	22.0	28.0	26.0	26.0	24.0
25	16.0	10.0	.0	2.0	9.0	14.0	19.0	24.0	26.0	---	25.0	24.0
26	14.0	12.0	.0	2.0	12.0	16.0	21.0	25.0	27.0	26.0	24.0	20.0
27	14.0	11.0	1.0	3.0	11.0	18.0	21.0	25.0	26.0	26.0	26.0	18.0
28	14.0	7.0	1.0	3.0	9.0	16.0	20.0	24.0	27.0	26.0	27.0	18.0
29	14.0	7.0	1.0	4.0	8.0	13.0	22.0	20.0	26.0	24.0	27.0	16.0
30	15.0	9.0	1.0	---	---	13.0	18.0	19.0	25.0	24.0	27.0	14.0
31	16.0	---	1.0	4.0	---	14.0	---	19.0	---	23.0	26.0	---
MEAN	18.0	13.5	5.0	3.0	9.0	13.0	17.0	21.0	25.0	26.5	25.5	22.0

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX

LOCATION.--Lat 33°28'29", long 95°35'15", Lamar County, Hydrologic Unit 11140301, on left bank at downstream side of highway embankment near left end of downstream bridge on State Highways 19 and 24, 2.3 mi upstream from Auds Creek, 5.5 mi upstream from Hickory Creek, 8.7 mi northeast of Cooper, and 15.6 mi upstream from mouth.

DRAINAGE AREA.--276 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 372.42 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Nov. 8, 1949, nonrecording gage, Nov. 8, 1949, to May 21, 1960, water-stage recorder at site 50 ft upstream at datum 9.00 ft higher, and May 22, 1960, to Sept. 30, 1970, at datum 5.00 ft higher.

REMARKS.--Water-discharge records good. In 1928-29, the channel was rectified for a distance of 28 mi upstream and 18 mi downstream from this station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--35 years, 236 ft³/s (11.61 in/yr), 171,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,600 ft³/s Oct. 19, 1971 (gage height, 36.16 ft, from floodmarks); no flow at times most years.
Maximum stage since at least 1915, that of Oct. 19, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 2, 1944, reached a stage of 35.6 ft, present datum, and flood in 1932 reached about same stage, from information by Corps of Engineers and local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 12	0215	38,500	27.39
Mar. 23	1445	28,400	23.00
May 2	0245	*39,000	27.60

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.48	8.90	.40	2.90	121.0	90.0	290.0	2.60	.16	0	0
2	.09	.47	10.00	.83	2.50	130.0	1440.0	10800.0	1.70	.12	0	0
3	.03	.41	41.00	1.50	2.00	44.0	496.0	357.0	1.30	.08	0	0
4	.02	.41	45.00	2.80	1.60	274.0	151.0	139.0	.93	.05	0	0
5	.02	.41	30.00	3.10	1.30	141.0	86.0	75.0	.90	.04	0	0
6	.01	1.90	15.00	3.70	.58	65.0	62.0	50.0	3.50	.03	0	0
7	.02	3.20	9.20	5.80	.56	23.0	92.0	38.0	23.00	.02	0	0
8	.73	4.00	4.70	5.60	.55	13.0	475.0	29.0	18.00	.01	0	0
9	8.00	3.60	3.50	9.60	3.90	9.2	155.0	22.0	7.20	.00	0	0
10	4.80	1.60	3.20	81.00	38.00	5.8	365.0	16.0	3.70	.00	0	0
11	1.90	1.20	5.60	58.00	439.00	4.7	572.0	13.0	2.20	.00	0	0
12	1.20	.92	3.40	24.00	9440.00	387.0	131.0	11.0	1.50	.00	0	0
13	1.30	.85	2.10	14.00	320.00	444.0	64.0	9.9	1.00	.47	0	0
14	1.60	.74	1.80	9.10	168.00	205.0	38.0	7.9	.72	.32	0	0
15	.87	.62	1.70	6.80	115.00	149.0	28.0	6.3	.60	.14	0	0
16	.53	.48	3.00	5.00	84.00	214.0	24.0	5.4	.34	.08	0	0
17	.51	.50	5.50	3.50	64.00	179.0	22.0	4.4	.29	.22	0	0
18	.50	.57	5.60	2.80	59.00	157.0	20.0	3.9	.22	.14	0	0
19	.49	23.00	3.20	.95	65.00	682.0	28.0	4.4	.15	.06	0	0
20	.68	60.00	3.40	1.50	51.00	201.0	28.0	13.0	.12	.03	0	0
21	2.40	31.00	3.00	.99	38.00	111.0	193.0	148.0	.07	.01	0	0
22	39.00	14.00	.61	1.30	32.00	78.0	45.0	28.0	.05	.00	0	0
23	21.00	22.00	.72	4.90	28.00	7310.0	19.0	95.0	.02	.00	0	0
24	9.80	19.00	.12	9.00	24.00	791.0	13.0	57.0	.07	.00	0	0
25	4.80	15.00	.13	16.00	17.00	272.0	10.0	17.0	.34	.00	0	0
26	2.70	7.20	.20	18.00	2270.00	172.0	7.9	8.7	.36	.00	0	0
27	1.60	61.00	.21	16.00	2480.00	3190.0	8.6	5.0	.52	.00	0	0
28	1.20	142.00	.28	12.00	502.00	980.0	6.8	8.7	.34	.00	0	0
29	.86	38.00	.31	9.10	102.00	259.0	6.9	13.0	.25	.00	0	0
30	.66	18.00	.24	6.20	---	149.0	5.8	8.4	.24	.00	0	0
31	.55	---	.31	3.60	---	107.0	---	4.5	---	.00	0	---
TOTAL	108.01	472.56	211.93	337.07	16351.89	16867.7	4683.0	12288.5	72.23	1.98	0	0
MEAN	3.48	15.8	6.84	10.9	564	544	156	396	2.41	.064	.000	.000
MAX	39	142	45	81	9440	7310	1440	10800	23	.47	.00	.00
MIN	.01	.41	.12	.40	.55	4.7	5.8	3.9	.02	.00	.00	.00
AC-FT	214	937	420	669	32430	33460	9290	24370	143	3.9	.00	.00

CAL YR 1983 TOTAL 56584.57 MEAN 155 MAX 13400 MIN .00 AC-FT 112200
WTR YR 1984 TOTAL 51394.87 MEAN 140 MAX 10800 MIN .00 AC-FT 101900

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
WATER TEMPERATURES: October 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,320 micromhos Oct. 24, 1983; minimum daily, 191 micromhos Oct. 12, Dec. 10, 1971.
WATER TEMPERATURES: Maximum daily, 39.0°C June 1, 1977; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,320 micromhos Oct. 24; minimum daily, 223 micromhos Mar. 23.
WATER TEMPERATURES: Maximum daily, 34.0°C July 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
03...	1635	.02	2070	28.0	570	520	180	30	230
JAN									
31...	1600	3.3	1180	11.0	340	230	110	16	110
FEB									
29...	0730	100	441	4.0	160	62	57	4.6	22
APR									
30...	2100	5.6	807	21.0	240	97	80	9.0	79
JUN									
30...	0800	.25	1470	26.0	370	300	120	18	170
JUL									
25...	0900	.01	1730	27.0	410	350	130	20	210

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
03...	4	5.9	54	700	230	.50	2.0	1400
JAN								
31...	3	3.5	110	390	72	.40	.6	770
FEB								
29...	.8	2.3	100	81	12	.40	6.3	250
APR								
30...	2	2.7	140	200	55	.40	2.6	510
JUN								
30...	4	4.1	79	440	150	.40	2.5	950
JUL								
25...	5	4.3	62	520	200	.50	5.4	1100

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	108.01	1910	1280	372	230	66	570	166	510
NOV.	1983	472.56	1160	742	947	100	132	310	392	340
DEC.	1983	211.93	711	437	250	43	24	170	95	230
JAN.	1984	337.07	1080	682	621	84	76	270	249	330
FEB.	1984	16351.89	416	250	11100	20	866	91	4020	140
MAR.	1984	16867.7	314	188	8550	13	590	67	3040	110
APR.	1984	4683.0	385	231	2920	17	215	83	1050	130
MAY	1984	12288.5	310	185	6140	13	418	66	2180	100
JUNE	1984	72.23	952	594	116	68	13	230	46	290
JULY	1984	1.98	1560	1020	5.4	160	0.8	430	2.3	440
AUG.	1984	0.00	*	*	0.00	*	0.00	*	0.00	*
SEPT	1984	0.00	*	*	0.00	*	0.00	*	0.00	*
TOTAL		51394.87	**	**	31000	**	2400	**	11200	**
WTD.AVG.		140	371	223	**	17	**	81	**	120

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2040	2110	546	1080	1170	530	598	650	849	1540		
2	2060	2130	599	1070	1200	568	330	279	888	1510		
3	2070	2120	622	1090	1220	597	275	385	932	1520		
4	2080	2130	611	1150	1240	505	447	483	941	1580		
5	2090	2140	668	1400	1260	530	500	526	963	1540		
6	2110	2080	746	974	1270	602	563	566	945	1560		
7	2090	2110	796	1150	1280	641	617	608	850	1580		
8	2010	2020	688	1010	1290	668	350	632	983	1590		
9	1900	1920	834	1060	1250	682	460	657	990	---		
10	1700	1940	875	918	1190	706	400	690	995	---		
11	1710	1930	898	1100	750	718	308	719	1010	---		
12	1730	1940	914	1140	327	425	428	751	1050	---		
13	1720	1940	923	1150	455	385	536	794	1060	1520		
14	1750	1950	932	1160	541	455	604	823	1110	1540		
15	1800	1960	945	1020	621	536	647	841	1120	1580		
16	1840	1970	963	1160	680	529	671	870	1130	1600		
17	1830	1960	952	900	706	574	683	910	1160	1630		
18	1870	1950	771	1170	745	596	700	931	1180	1640		
19	1820	1850	1110	1210	780	350	685	941	1210	1660		
20	1860	1690	1090	1200	787	435	695	890	1200	1670		
21	1970	1370	1010	1240	803	521	450	418	1200	1690		
22	1760	1630	1050	1230	817	593	500	582	1210	---		
23	1920	1530	1040	1220	833	223	581	551	1230	---		
24	2320	1330	1090	1260	841	306	618	531	1240	---		
25	2260	1210	1080	1170	855	420	619	644	1250	---		
26	2200	1350	1060	1150	691	536	635	710	1310	---		
27	2190	1160	1050	1140	338	292	668	746	1380	---		
28	2170	730	1030	1160	404	355	698	773	1450	---		
29	2160	530	1020	1150	441	413	762	715	1460	---		
30	2150	603	1060	1170	---	502	807	766	1410	---		
31	2130	---	1050	1180	---	575	---	820	---	---		
MEAN	1980	1710	904	1130	855	509	561	684	1120	1590		

07343000 NORTH SULPHUR RIVER NR COOPER, TEX.--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	18.0	9.0	---	11.0	12.0	10.0	17.0	20.0	31.0		
2	22.0	19.0	10.0	---	8.0	14.0	15.0	15.0	20.0	25.0		
3	22.0	19.0	11.0	---	11.0	12.0	14.0	20.0	23.0	28.0		
4	22.0	23.0	9.0	9.0	5.0	14.0	14.0	---	23.0	26.0		
5	20.0	18.0	11.0	10.0	10.0	8.0	---	20.0	23.0	25.0		
6	20.0	15.0	5.0	6.0	10.0	12.0	14.0	28.0	22.0	---		
7	19.0	14.0	5.0	6.0	14.0	12.0	16.0	24.0	25.0	28.0		
8	19.0	15.0	5.0	14.0	12.0	9.0	14.0	23.0	25.0	34.0		
9	21.0	15.0	9.0	9.0	---	8.0	14.0	18.0	---	---		
10	18.0	9.0	---	7.0	---	10.0	16.0	---	---	---		
11	18.0	8.0	13.0	6.0	---	10.0	14.0	20.0	25.0	---		
12	20.0	8.0	14.0	4.0	12.0	---	17.0	22.0	25.0	---		
13	14.0	---	8.0	2.0	14.0	16.0	16.0	30.0	26.0	26.0		
14	15.0	13.0	7.0	4.0	15.0	16.0	17.0	30.0	31.0	31.0		
15	15.0	13.0	4.0	3.0	15.0	20.0	15.0	24.0	33.0	28.0		
16	19.0	12.0	6.0	2.0	15.0	17.0	15.0	20.0	28.0	28.0		
17	24.0	15.0	3.0	4.0	10.0	17.0	14.0	26.0	28.0	28.0		
18	24.0	15.0	4.0	4.0	---	17.0	---	20.0	27.0	28.0		
19	22.0	16.0	2.0	---	11.0	---	---	25.0	31.0	26.0		
20	23.0	11.0	2.0	---	8.0	---	---	22.0	27.0	31.0		
21	18.0	11.0	1.0	---	11.0	10.0	---	20.0	27.0	---		
22	16.0	17.0	---	---	8.0	14.0	---	22.0	28.0	---		
23	15.0	15.0	---	---	10.0	16.0	21.0	24.0	30.0	---		
24	16.0	11.0	---	4.0	10.0	12.0	18.0	28.0	28.0	---		
25	16.0	8.0	---	6.0	10.0	---	18.0	25.0	27.0	---		
26	20.0	---	---	8.0	13.0	21.0	21.0	26.0	27.0	---		
27	---	10.0	---	5.0	6.0	16.0	20.0	25.0	25.0	---		
28	14.0	4.0	---	5.0	8.0	11.0	20.0	25.0	29.0	---		
29	20.0	4.0	---	---	4.0	8.0	22.0	18.0	25.0	---		
30	15.0	7.0	---	10.0	---	9.0	21.0	21.0	26.0	---		
31	17.0	---	---	11.0	---	12.0	---	25.0	---	---		
MEAN	19.0	13.0	7.0	6.5	10.5	13.0	16.5	23.0	26.0	28.0		

07343200 SULPHUR RIVER NEAR TALCO, TX

LOCATION.--Lat 33°23'10", long 95°07'56", Franklin County, Hydrologic Unit 11140302, on downstream side of highway embankment near right end of bridge on U.S. Highway 271, 2.2 mi northwest of Talco, 3.2 mi downstream from Mustang Creek, and 162 mi upstream from mouth.

DRAINAGE AREA.--1,365 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-1(P).

GAGE.--Water-stage recorder. Datum of gage is 290.82 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. River Crest Steam Electric Generating Plant diverts water for cooling purposes upstream from this station. Flow is affected at times by discharge from flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 8,210 acre-ft. These structures control runoff from 23.4 mi^2 in the Auds and Deport Creek drainage basins. Gage height telemeter located at station.

AVERAGE DISCHARGE.--28 years, 1,420 ft^3/s (14.13 in/yr), 1,029,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,000 ft^3/s Dec. 11, 1971 (gage height, 29.40 ft, from floodmark); no flow at times in 1957, 1964-65, 1970, and 1979-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in 1908 and 1914 each reached a stage of 27.5 ft, and flood in 1945 reached a stage of 26.5 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 13	0300	19,900	23.64	Mar. 28	1400	19,600	23.62
Mar. 13	1100	20,000	23.66	May 3	0400	22,200	23.80
Mar. 24	1800	*25,500	24.18				

Minimum discharge, 0.63 ft^3/s Oct. 1, 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	6.0	194	4.6	21	1100	1110	27	41	2.2	5.0	4.0
2	.66	5.0	128	4.8	17	431	495	6330	31	2.3	7.6	4.1
3	.70	4.0	102	5.4	14	277	1810	19300	28	2.6	23	6.4
4	.69	3.0	224	6.1	12	453	1130	8750	23	3.0	28	7.8
5	.76	2.2	150	6.9	11	565	988	3080	18	4.4	23	6.2
6	.73	1.4	97	8.5	11	430	588	876	15	4.5	14	5.3
7	.63	1.1	65	10	8.9	257	362	373	14	4.7	10	4.8
8	.81	1.1	50	10	7.3	159	674	249	26	5.2	10	4.6
9	.78	1.1	52	11	5.9	107	1430	178	44	5.4	10	4.9
10	.71	2.1	50	20	6.8	76	1190	130	83	5.5	9.3	5.2
11	.71	6.1	55	198	16	59	1350	91	65	5.7	8.2	5.1
12	.95	6.2	36	212	4350	2870	1600	65	45	7.8	24	4.6
13	1.0	4.5	45	132	16800	18200	1510	53	34	5.1	29	4.6
14	1.2	3.7	44	80	6820	11200	1330	46	27	4.5	23	4.4
15	2.2	5.8	33	58	4310	8140	456	39	21	19	17	4.2
16	3.0	5.0	27	50	2140	4880	269	33	17	26	12	4.4
17	4.6	4.3	23	40	524	1670	170	28	13	19	9.6	4.1
18	6.6	5.4	21	32	290	650	111	24	9.9	12	8.4	4.0
19	7.7	9.3	19	27	200	1200	146	24	7.4	8.8	7.0	3.7
20	11	17	19	21	147	3190	192	27	5.5	7.0	5.8	3.6
21	14	24	17	15	112	2670	201	30	4.4	6.0	4.9	3.8
22	10	45	15	13	82	2550	646	148	3.4	5.6	4.5	4.4
23	8.5	42	13	14	62	1530	420	173	2.7	5.3	4.4	4.6
24	41	34	11	16	50	18600	196	468	2.2	5.3	4.3	3.8
25	101	40	8.9	23	41	21100	108	317	1.8	5.1	4.6	3.4
26	70	49	7.6	40	57	16200	66	136	1.9	5.1	4.6	3.9
27	42	46	6.8	52	2380	16100	51	76	1.9	5.4	4.5	3.9
28	27	53	6.3	53	3150	18800	41	62	1.8	5.5	4.6	3.6
29	18	141	5.6	48	1910	13900	35	197	1.7	5.5	4.5	4.1
30	12	110	4.9	36	---	6550	31	113	1.9	5.7	4.1	5.8
31	8.5	---	4.6	27	---	3370	---	62	---	5.5	4.1	---
TOTAL	398.06	678.3	1534.7	1274.3	43555.9	177284	18706	41505	591.5	214.7	333.0	137.3
MEAN	12.8	22.6	49.5	41.1	1502	5719	624	1339	19.7	6.93	10.7	4.58
MAX	101	141	224	212	16800	21100	1810	19300	83	26	29	7.8
MIN	.63	1.1	4.6	4.6	5.9	59	31	24	1.7	2.2	4.1	3.4
CFSM	.009	.02	.04	.03	1.10	4.19	.46	.98	.01	.005	.008	.003
IN.	.01	.02	.04	.03	1.19	4.83	.51	1.13	.02	.01	.01	.00
AC-FT	790	1350	3040	2530	86390	351600	37100	82330	1170	426	661	272

CAL YR 1983 TOTAL 314276.39 MEAN 861 MAX 27700 MIN .63 CFSM .63 IN 8.56 AC-FT 623400
WTR YR 1984 TOTAL 286212.76 MEAN 782 MAX 21100 MIN .63 CFSM .57 IN 7.80 AC-FT 567700

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1966 to current year. Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: January 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to current year.
WATER TEMPERATURES: October 1966 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,800 micromhos Feb. 17, 1976; minimum daily, 100 micromhos Sept. 11, 1974.
WATER TEMPERATURES: Maximum daily, 38.0°C Aug. 15, 1975; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,240 micromhos Nov. 28; minimum daily, 165 micromhos Mar. 25.
WATER TEMPERATURES: Maximum daily, 31.0°C on several days during June and July; minimum daily, 0.0°C Dec. 24, Jan. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 15...	1630	6.5	787	8.0	13.0	10	15	8.1	78	1.4	230
DEC 20...	1620	18	470	7.8	3.0	40	48	11.8	89	1.5	150
MAR 15...	1640	7880	197	7.7	15.0	560	160	9.2	92	3.0	74
APR 26...	1500	62	379	7.5	22.0	140	90	6.8	80	2.7	140
JUL 18...	1530	12	590	8.0	30.0	32	17	7.0	93	1.5	190
AUG 29...	1745	4.6	800	8.0	28.0	40	4.5	7.4	96	1.8	220

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 15...	6	78	7.6	100	3	4.8	220	110	70	.40	6.4
DEC 20...	32	52	5.3	31	1	4.0	120	65	21	.30	7.2
MAR 15...	7	26	2.2	7.8	.4	3.6	67	19	4.2	.20	8.6
APR 26...	13	51	3.8	21	.8	3.3	130	43	11	.30	7.7
JUL 18...	26	64	6.2	54	2	4.5	160	94	38	.40	4.4
AUG 29...	52	76	7.8	76	2	5.3	170	140	64	.40	5.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 15...	510	30	27	--	<.010	<.10	.090	1.3	1.4	.060	13
DEC 20...	260	36	8	2.5	.080	2.6	.090	.81	.90	.130	10
MAR 15...	110	374	50	.71	.290	1.0	.190	1.2	1.4	.370	14
APR 26...	220	109	13	.36	.040	.40	.080	.92	1.0	.060	9.9
JUL 18...	360	29	13	--	.010	<.10	.050	.95	1.0	.080	8.8
AUG 29...	480	19	8	--	.010	<.10	.040	1.2	1.2	.060	9.2

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC 20...	1620	2	61	<1	<10	1	16
AUG 29...	1745	1	140	<1	<10	3	7

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
DEC 20...	<1	27	.1	<1	1	9
AUG 29...	4	41	<.1	<1	<1	<3

DATE	TIME	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)
AUG 29...	1745	<1	<1.0	<.1	<1.0	.2	.7	<.1

DATE	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
AUG 29...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<10

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED SOLIDS (MG/L)	DISSOLVED SOLIDS (TONS)	DISSOLVED CHLORIDE (MG/L)	DISSOLVED CHLORIDE (TONS)	DISSOLVED SULFATE (MG/L)	DISSOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	398.06	926	561	603	68	73	150	165	300
NOV.	1983	678.3	944	572	1050	70	127	160	288	300
DEC.	1983	1534.7	565	336	1390	30	126	79	326	190
JAN.	1984	1274.3	632	376	1290	34	118	89	305	220
FEB.	1984	43555.9	299	174	20500	11	1260	34	4020	110
MAR.	1984	177284	213	123	59000	6.2	2970	22	10700	79
APR.	1984	18706	285	166	8360	9.6	484	32	1600	100
MAY	1984	41505	295	172	19200	10	1130	33	3710	110
JUNE	1984	591.5	588	349	558	31	50	82	130	200
JULY	1984	214.7	718	429	249	43	25	110	61	240
AUG.	1984	333.0	550	326	293	28	25	75	67	190
SEPT	1984	137.3	557	330	122	28	10	75	28	190
TOTAL		286212.76	**	**	113000	**	6400	**	21400	**
WTD.AVG.		782	251	146	**	8.3	**	28	**	92

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	650	990	950	633	746	296	263	577	358	796	731	790
2	643	959	868	625	757	311	289	291	365	802	669	775
3	662	933	617	637	758	325	225	258	380	804	613	735
4	791	919	368	638	758	319	296	311	412	795	551	686
5	785	904	434	645	757	245	261	312	455	769	472	649
6	601	903	469	647	764	297	292	356	487	757	455	652
7	642	901	517	642	770	318	319	368	502	760	438	640
8	687	902	542	640	773	320	358	374	515	763	423	630
9	756	904	498	638	756	336	332	398	516	765	403	611
10	777	900	485	590	740	351	287	429	573	768	396	600
11	653	889	445	594	746	375	307	453	677	776	387	583
12	791	858	486	628	550	338	277	474	741	695	363	579
13	653	853	488	535	261	225	208	491	769	752	414	561
14	706	858	489	551	237	198	213	510	757	764	477	539
15	734	787	490	611	242	209	276	533	742	739	542	524
16	786	842	480	638	264	229	323	552	723	664	565	510
17	697	852	468	624	284	287	340	559	714	643	575	503
18	701	853	474	631	319	320	378	568	713	611	632	487
19	706	812	465	661	341	300	380	581	714	624	722	480
20	738	807	459	665	357	275	347	577	722	650	782	474
21	700	800	463	660	386	226	418	598	730	674	811	451
22	725	790	467	650	408	230	391	740	743	701	828	454
23	723	782	470	648	438	293	299	622	748	727	836	450
24	717	781	482	649	469	223	305	492	758	751	838	443
25	930	811	510	656	473	165	331	369	775	766	835	445
26	1080	844	535	573	466	166	371	372	771	786	828	439
27	1110	1010	560	700	373	204	403	385	782	788	817	437
28	1050	1240	595	793	308	214	422	412	794	790	811	431
29	1000	1000	630	803	275	211	477	365	798	792	801	421
30	1010	1070	665	760	---	231	525	353	803	780	791	410
31	997	---	697	766	---	237	---	328	---	762	785	---
MEAN	781	892	534	650	510	267	330	452	651	742	632	546

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

07343460 LAKE SULPHUR SPRINGS NEAR SULPHUR SPRINGS, TX

LOCATION.--Lat 33°10'44", long 97°37'22", Hopkins County, Hydrologic Unit 1140303, below dam at outflow on Farm Road 2285 bridge over stilling basin, 0.5 mi from Sulphur Springs city limits, and 1.75 mi northwest of county courthouse.

PERIOD OF RECORD.--Chemical analyses: October 1975 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 15...	1100	121	13.5	39	6	9.9	3.5	6.0

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 15...	.4	5.0	33	16	6.8	.20	4.3	71

07343500 WHITE OAK CREEK NEAR TALCO, TX

LOCATION.--Lat 33°19'20", long 95°05'33", Titus County, Hydrologic Unit 11140303, near center of main channel on downstream side of bridge on U.S. Highway 271, 0.8 mi downstream from Lewis Creek, 2.4 mi upstream from Ripley Creek, 2.7 mi south of Talco, and 38.4 mi upstream from mouth.

DRAINAGE AREA.--494 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1711: Elevation of historical maximum.

GAGE.--Water-stage recorder. Datum of gage is 286.45 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several small diversions above station for municipal supply. The cities of Sulphur Springs and Mount Vernon discharged sewage effluent into tributaries above this station. Gage height telemeter at station.

AVERAGE DISCHARGE.--34 years (water years 1951-84), 437 ft^3/s (12.01 in/yr), 316,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft^3/s Dec. 11, 1971 (gage height, 21.20 ft), from rating curve extended above 23,000 ft^3/s; no flow at times in 1954, 1956, 1964-65, 1969-73, 1976, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, 22.9 ft Mar. 31, 1945, from floodmarks and from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,050 ft^3/s Mar. 27 at 0230 hours (gage height, 17.14 ft), no peak above base of 9,000 ft^3/s; no flow Sept. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	2.10	11.0	16.0	23.0	552	1550	21.0	7.1	2.50	.41	.04
2	.77	1.90	9.8	16.0	19.0	367	994	20.0	6.4	2.40	.42	.07
3	.75	1.60	58.0	15.0	16.0	251	505	24.0	7.2	2.20	.49	.19
4	.66	1.50	250.0	14.0	14.0	418	304	21.0	6.1	2.00	1.30	.15
5	.51	1.40	397.0	9.7	11.0	382	244	21.0	5.3	2.90	2.00	.10
6	.15	1.20	341.0	7.6	9.6	320	211	23.0	4.9	3.00	1.80	.07
7	.05	.98	211.0	8.4	9.3	219	172	21.0	4.6	2.60	2.80	.05
8	.04	.85	97.0	8.8	10.0	130	166	18.0	4.0	2.10	3.90	.03
9	.03	.77	48.0	9.3	11.0	87	168	15.0	3.9	1.80	3.60	.04
10	.01	.71	42.0	48.0	14.0	65	173	13.0	3.9	1.70	2.90	.05
11	.00	.61	391.0	259.0	16.0	55	175	11.0	3.5	1.60	2.60	.04
12	.02	.54	438.0	293.0	457.0	489	167	10.0	3.2	2.00	2.60	.03
13	.01	.51	262.0	230.0	1060.0	1220	146	9.9	3.6	2.70	2.50	.03
14	.00	.71	145.0	152.0	1380.0	1760	115	8.7	4.1	2.30	2.00	.02
15	4.50	1.10	74.0	84.0	1670.0	2040	94	7.6	3.7	3.00	1.70	.02
16	3.80	1.30	44.0	51.0	2140.0	2180	79	7.4	3.3	7.20	1.30	.01
17	3.00	1.20	31.0	36.0	1730.0	1660	69	8.5	2.9	9.80	.85	.00
18	4.20	1.30	25.0	28.0	759.0	782	59	8.2	2.6	6.00	.65	.00
19	5.10	2.70	21.0	23.0	254.0	442	54	9.2	2.4	3.80	.51	.00
20	4.20	3.70	18.0	21.0	152.0	565	49	9.5	2.1	2.60	.38	.00
21	4.70	57.00	17.0	20.0	117.0	685	45	9.9	1.9	2.00	.28	.00
22	4.00	144.00	16.0	20.0	94.0	661	41	12.0	1.8	1.40	.21	.26
23	4.00	140.00	16.0	19.0	73.0	731	38	21.0	1.7	1.00	.24	.65
24	4.60	100.00	16.0	18.0	60.0	826	36	33.0	1.6	.85	.23	1.00
25	3.60	86.00	16.0	23.0	51.0	1460	35	29.0	1.6	.83	.19	1.30
26	2.60	73.00	16.0	42.0	63.0	3520	32	34.0	1.7	.77	.17	2.00
27	2.00	54.00	16.0	73.0	298.0	4520	28	43.0	1.9	.65	.16	2.40
28	1.90	35.00	16.0	81.0	568.0	3380	25	48.0	2.0	.56	.14	2.20
29	2.70	22.00	16.0	57.0	599.0	2570	24	27.0	2.5	.57	.14	2.30
30	2.90	15.00	17.0	40.0	---	2040	23	15.0	2.6	.55	.08	3.00
31	2.40	---	17.0	30.0	---	1740	---	9.7	---	.49	.06	---
TOTAL	63.99	752.68	3092.8	1752.8	11677.9	36117	5821	568.6	104.1	73.87	36.61	16.05
MEAN	2.06	25.1	99.8	56.5	403	1165	194	18.3	3.47	2.38	1.18	.54
MAX	5.1	144	438	293	2140	4520	1550	48	7.2	9.8	3.9	3.0
MIN	.00	.51	9.8	7.6	9.3	55	23	7.4	1.6	.49	.06	.00
AC-FT	127	1490	6130	3480	23160	71640	11550	1130	206	147	73	32

CAL YR 1983 TOTAL 85099.74 MEAN 233 MAX 6530 MIN .00 AC-FT 168800
WTR YR 1984 TOTAL 60077.40 MEAN 164 MAX 4520 MIN .00 AC-FT 119200

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Chemical and biochemical analyses: October 1982 to September 1983.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,220 micromhos June 15, 1972; minimum daily, 33 micromhos May 16, 1969.
WATER TEMPERATURES: Maximum daily, 37.0°C July 18, Aug. 3, 15, 1975; minimum daily, 0.0°C on several days during January 1968, 1970, 1978, and 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 730 micromhos Aug. 9; minimum daily, 70 micromhos Mar. 27.
WATER TEMPERATURES: Maximum daily, 33.0°C June 21; minimum daily, 0.0°C Jan. 21, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 15...	1805	1.1	595	7.7	14.0	15	5.1	6.8	67	1.8	120
DEC 20...	1800	17	203	7.0	2.5	100	39	11.3	84	1.5	49
MAR 15...	1445	1940	108	6.6	17.0	70	44	7.6	79	2.5	29
APR 26...	1100	32	359	7.1	21.0	140	90	6.6	75	1.6	86
JUL 18...	1020	6.5	580	7.5	28.0	67	15	3.4	44	1.7	130
AUG 29...	1105	.12	570	7.6	28.0	60	6.0	4.6	59	1.3	120

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 15...	0	27	12	80	3	9.7	140	63	67	.50	2.1
DEC 20...	16	12	4.5	17	1	6.8	33	34	18	.10	11
MAR 15...	13	7.2	2.7	6.9	.6	4.7	16	23	8.4	.10	6.4
APR 26...	36	20	8.8	32	2	5.8	50	66	32	.20	8.8
JUL 18...	0	32	13	69	3	8.4	135	63	60	.50	4.1
AUG 29...	0	29	12	67	3	9.6	130	61	53	.50	2.6

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 15...	350	12	12	--	<.010	<.10	.050	1.4	1.4	.060	10
DEC 20...	120	32	12	.25	.050	.30	.110	.99	1.1	.470	16
MAR 15...	69	46	<2	.13	.070	.20	.120	1.2	1.3	.230	14
APR 26...	200	81	12	.47	.030	.50	.110	.89	1.0	.330	12
JUL 18...	330	25	13	--	.010	<.10	.050	1.1	1.1	.140	11
AUG 29...	310	20	11	--	.010	<.10	.050	.55	.60	.090	13

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC 20...	1800	<1	37	<1	<10	3	390
APR 26...	1100	<1	75	<1	<10	2	290
AUG 29...	1105	1	84	2	<10	<1	36

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 20...	5	76	.2	<1	<1	22
APR 26...	<1	210	.2	<1	<1	34
AUG 29...	3	280	<.1	<1	<1	<3

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	63.99	577	328	57	80	14	77	13	110
NOV.	1983	752.68	247	143	291	23	46	38	77	61
DEC.	1983	3092.8	151	88	735	11	91	25	205	41
JAN.	1984	1752.8	264	153	725	24	115	41	193	66
FEB.	1984	11677.9	139	81	2560	10	315	23	716	38
MAR.	1984	36117	110	64	6280	7.2	707	18	1780	30
APR.	1984	5821	178	104	1630	14	223	28	447	47
MAY	1984	568.6	524	298	458	69	105	72	110	110
JUNE	1984	104.1	380	219	61	41	11	56	16	88
JULY	1984	73.87	554	315	63	75	15	75	15	110
AUG.	1984	36.61	657	371	37	98	9.7	84	8.3	120
SEPT	1984	16.05	601	341	15	85	3.7	80	3.4	120
TOTAL		60077.40	**	**	12900	**	1660	**	3580	**
WTD.AVG.		164	136	80	**	10	**	22	**	36

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	640	256	353	289	167	106	417	331	473	703	563
2	487	639	260	286	286	175	123	424	355	471	699	560
3	476	635	243	300	295	182	144	447	370	477	692	551
4	482	630	151	311	299	119	159	443	361	480	696	555
5	482	632	142	287	312	132	183	445	351	471	698	552
6	481	636	152	225	321	149	213	444	349	468	702	555
7	483	633	165	333	330	138	221	475	352	476	657	553
8	481	631	174	364	341	172	231	499	350	478	608	552
9	479	628	181	414	348	203	219	562	351	476	730	553
10	481	625	186	450	430	240	236	631	350	477	716	551
11	---	626	110	230	601	281	256	612	353	477	706	555
12	478	625	115	171	154	115	273	600	357	478	668	554
13	479	624	126	215	128	113	250	590	366	487	627	556
14	---	620	150	265	119	110	265	587	379	496	614	559
15	480	595	155	248	105	106	280	586	390	510	606	554
16	496	626	164	245	106	109	282	575	395	576	602	559
17	529	628	173	243	119	121	281	567	400	590	598	---
18	547	633	186	247	138	149	279	566	412	618	580	---
19	586	599	192	251	171	173	280	549	418	620	573	---
20	598	610	201	256	193	201	313	558	420	638	547	---
21	590	450	208	265	223	172	300	554	426	652	557	---
22	582	187	217	274	254	143	318	570	432	667	570	552
23	596	200	228	280	270	146	331	511	437	677	557	547
24	610	219	240	318	286	144	333	585	443	680	573	546
25	601	204	252	450	305	92	348	632	446	689	567	572
26	606	270	274	325	327	79	358	616	445	695	558	567
27	614	226	286	378	238	70	365	642	450	697	563	570
28	647	243	297	391	207	92	373	505	456	701	558	602
29	650	232	306	396	174	110	387	433	463	695	562	645
30	657	252	315	307	---	112	401	340	465	698	560	675
31	644	---	326	303	---	105	---	302	---	700	559	---
MEAN	545	500	207	303	254	143	270	525	396	574	620	566

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX

LOCATION.--lat 33°18'16", long 94°09'38", Bowie-Cass County line, Hydrologic Unit 11140302, in intake structure of Wright Patman Dam on the Sulphur River, 0.5 mi upstream from U.S. Highway 59, 10 mi southwest of Texarkana, and 44.5 mi upstream from mouth.

DRAINAGE AREA.--3,443 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1953 to current year. Published as Texarkana Reservoir prior to October 1970 and as Lake Texarkana from October 1970 to September 1972.

REVISED RECORDS.--WSP 1561: 1957(M). WSP 1711: 1959(M).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). July 19 to Dec. 31, 1953, nonrecording gage at site about 125 ft upstream at datum 200 ft higher.

REMARKS.--The lake is formed by a rolled earthfill dam 18,500 ft long, including a 200-foot uncontrolled spillway and a 1-mile long dike. Temporary impoundment of water began July 2, 1953, and deliberate impoundment began June 27, 1956. The dam was completed in December 1957. The flood-control outlet works consist of two 20.0-foot-diameter conduits controlled by four 10.0- by 20.0-foot electrically driven broome-type gates. Flow is affected at times by discharge from the flood-detention pools of 25 floodwater-retarding structures with a combined detention capacity of 13,450 acre-ft. These structures control runoff from 40.0 mi² in the Sulphur River and Langford Creek drainage basins. Outflow discharging over the spillway passes into an outlet channel and then to the Sulphur River. The lake was built for flood control and for conservation. An unknown amount of water is diverted for industrial and municipal uses. The capacity table is based on a 1948 survey. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	286.0	-
Crest of spillway	259.5	2,654,300
Top of conservation pool	220.0	145,300
Lowest gated outlet (invert)	200.0	2,600

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,912,100 acre-ft May 9, 1966 (elevation, 252.64 ft); minimum since first appreciable storage and after deliberate impoundment began, 137,500 acre-ft Sept. 5, 1958.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,912,100 acre-ft May 9, 1966 (elevation, 252.64 ft); minimum since first appreciable storage and after deliberate impoundment began, 137,500 acre-ft Sept. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 476,400 acre-ft Apr. 8 at 1600 hours (elevation, 230.99 ft); minimum daily, 159,500 acre-ft Feb. 9 at 0800 hours (elevation, 220.68 ft).

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

220.0	145,300	226.0	298,500	230.0	437,200
222.0	189,300	228.0	364,100	232.0	518,400
224.0	240,200				

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249900	220800	166200	161600	162700	221800	396800	297600	347000	311300	286900	254600
2	249300	218200	169500	161400	162700	223400	429200	297300	346300	310700	286000	253800
3	248200	215900	173600	161200	162700	230000	455600	297600	345000	309100	286300	252400
4	247600	211300	172000	161200	163200	234500	465600	297900	343600	310100	285400	252100
5	246500	209600	173300	161000	161900	237700	472000	301600	341600	314500	284500	251800
6	245700	208000	172200	160800	161000	239100	474000	306600	341900	314200	283300	250400
7	244900	205600	172000	160100	160400	240200	474000	314800	341300	312600	283300	249000
8	244000	203300	171800	159900	159900	236700	473200	322220	340300	312000	283000	247400
9	242900	202100	171600	159900	160600	234800	464400	330000	338900	311300	282100	247900
10	242700	198200	176300	161400	160800	233200	461200	339300	337600	310100	280600	247400
11	242100	193300	177900	160800	161900	230500	456000	348000	335900	309100	280300	246200
12	241800	191000	175400	161400	169800	231800	448100	353800	335000	308200	278800	244900
13	241300	188600	176100	160600	172200	231600	438400	354500	333600	307500	277600	244300
14	239900	186500	176300	160400	175600	233400	431100	352400	333000	306600	277000	243500
15	239100	183900	174000	162300	180900	236400	423100	351000	331700	306300	275500	243500
16	238300	182000	175200	163200	185100	241000	414500	350000	329700	305300	274900	242400
17	238000	180600	174700	162500	189100	245700	403700	349700	328700	304100	273100	241800
18	237500	178300	173800	163800	197700	247900	394200	348700	327100	301600	272000	241300
19	236700	183700	172700	163400	203300	257500	383100	348700	326100	300400	269600	240700
20	236700	180200	171600	163800	206800	265500	374600	348700	324800	299100	268700	240200
21	236900	177900	171600	163400	213800	275200	366500	348300	323200	297300	268400	239400
22	235900	178300	170900	163200	220000	286600	354100	347000	321900	296000	266700	240200
23	234800	177700	170200	164000	225700	297900	341900	347300	319900	294200	266100	239600
24	234000	175800	169300	164000	227000	309100	332000	347000	318700	293600	264700	238800
25	234000	174000	168200	163800	225500	309700	327100	347300	317400	293000	262900	237500
26	233200	174500	167300	163800	226000	309100	321200	348700	316400	292300	262400	236100
27	232100	173100	166400	163600	228400	309700	316100	351400	315500	292300	260900	235600
28	230500	171600	165300	163600	223900	311600	308800	351000	315500	291700	259800	235000
29	228600	169100	163200	163200	222100	314800	306900	350000	312900	290800	258900	234200
30	226000	167100	162500	162900	---	333300	299400	348300	312300	289900	257500	233700
31	223400	---	161900	162900	---	362400	---	348300	---	288100	255800	--
MAX	249900	220800	177900	164000	228400	362400	474000	354500	347000	314500	286900	254600
MIN	223400	167100	161900	159900	159900	221800	299400	297300	312300	288100	255800	233700
(†)	223.37	221.03	220.79	220.84	223.32	227.95	226.03	227.54	226.44	225.66	224.56	223.76
(‡)	-27900	-56300	-5200	+1000	+59200	+140300	-63000	+48900	-36000	-24200	-32300	-22100

CAL YR 1983 MAX 541300 MIN 161900 ‡ -389500
WTR YR 1984 MAX 474000 MIN 159900 ‡ -17600

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

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1967 to September 1984 (discontinued).

331838094095901 WRIGHT PATMAN LAKE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
FEB										
14...	0850	1.00	259	7.5	10.0	.80	9.8	88	<1	21
14...	0851	1.20	--	--	--	--	--	--	--	--
14...	0852	10.0	259	7.5	10.0	--	9.9	89	--	--
14...	0853	20.0	259	7.5	10.0	--	9.9	89	--	--
14...	0854	23.0	259	7.4	9.5	--	9.6	85	--	--
MAY										
30...	0900	1.00	219	7.9	24.5	.60	6.4	76	K2	K6
30...	0901	1.00	--	--	--	--	--	--	--	--
30...	0902	10.0	219	7.9	24.5	--	6.3	75	--	--
30...	0904	20.0	219	7.9	24.0	--	6.3	74	--	--
30...	0906	30.0	219	7.8	24.0	--	6.2	73	--	--
AUG										
07...	0850	1.00	210	8.8	28.5	.50	7.5	96	<1	<1
07...	0852	10.0	212	8.5	28.0	--	6.3	80	--	--
07...	0853	20.0	215	8.0	28.0	--	3.8	48	--	--
07...	0854	26.0	220	7.5	27.5	--	2.1	27	--	--

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
FEB									
14...	84	15	28	3.3	18	.9	3.1	69	30
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	84	15	28	3.3	18	.9	3.1	69	30
MAY									
30...	91	12	31	3.2	12	.6	3.6	79	22
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	88	9	30	3.1	12	.6	3.5	79	21
AUG									
07...	75	5	25	3.1	13	.7	3.7	70	17
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	76	0	25	3.2	13	.7	3.7	75	17

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
14...	19	.20	3.2	150	<.10	.70	.080	17	8
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	<.10	.80	.070	60	30
14...	--	--	--	--	--	--	--	--	--
14...	20	--	3.2	150	<.10	.80	.080	7	53
MAY									
30...	11	.20	.8	130	<.10	1.0	.050	63	7
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	<.10	.90	.060	80	10
30...	--	--	--	--	<.10	.80	.060	150	20
30...	11	--	.5	130	<.10	.90	.090	13	270
AUG									
07...	11	.20	.5	120	<.10	1.4	.160	7	2
07...	--	--	--	--	<.10	1.4	.140	30	40
07...	--	--	--	--	<.10	1.5	.200	10	170
07...	11	--	1.4	120	<.10	1.8	.220	14	470

WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331903094100201 WRIGHT PATMAN LAKE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
14...	0928	1.00	259	7.7	10.0	10.5	94
14...	0929	10.0	259	7.5	9.5	9.6	85
MAY							
30...	0940	1.00	217	8.0	24.5	6.4	76
30...	0942	10.0	217	7.9	24.5	6.3	75
30...	0944	20.0	217	7.9	24.0	6.1	72
AUG							
07...	0920	1.00	202	8.9	28.0	7.8	99
07...	0921	10.0	204	8.8	28.0	6.8	87
07...	0922	15.0	209	8.3	28.0	5.1	65

332142094115001 WRIGHT PATMAN LAKE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
14...	0945	1.00	235	7.9	11.0	.70	10.3
14...	0946	9.00	235	7.7	10.5	--	9.8
MAY							
30...	1005	1.00	207	7.8	24.5	.60	5.4
30...	1007	10.0	207	7.7	24.5	--	5.4
30...	1009	15.0	207	7.7	24.5	--	5.2
AUG							
07...	0945	1.00	209	8.7	29.0	.50	8.2
07...	0946	10.0	209	8.4	29.0	--	7.4

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB						
14...	94	<.10	1.1	.070	50	<10
14...	89	<.10	.90	.070	60	20
MAY						
30...	64	<.10	.80	.060	80	10
30...	64	<.10	.90	.060	50	20
30...	62	<.10	.90	.060	60	20
AUG						
07...	106	<.10	1.6	.130	30	<10
07...	96	<.10	1.4	.130	30	30

WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331935094112901 WRIGHT PATMAN LAKE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
14...	1000	1.00	238	8.0	11.0	.90	10.6
14...	1001	5.00	238	7.9	11.0	--	10.6
14...	1002	10.0	238	7.3	10.0	--	9.2
14...	1003	14.0	238	7.1	9.5	--	7.7
MAY							
30...	1030	1.00	205	7.8	25.0	--	5.9
30...	1032	10.0	205	7.8	25.0	--	5.8
30...	1034	20.0	205	7.8	25.0	--	5.8
30...	1036	23.0	205	7.7	24.5	--	5.8
AUG							
07...	1005	1.00	208	8.6	28.0	.60	7.5
07...	1006	10.0	208	8.5	27.5	--	7.3
07...	1007	19.0	208	8.5	27.5	--	7.0

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB						
14...	97	<.10	.90	.060	30	10
14...	97	--	--	--	--	--
14...	82	--	--	--	--	--
14...	68	<.10	1.0	.070	70	10
MAY						
30...	71	--	--	--	--	--
30...	70	--	--	--	--	--
30...	70	--	--	--	--	--
30...	69	--	--	--	--	--
AUG						
07...	96	<.10	1.4	.120	20	20
07...	92	--	--	--	--	--
07...	88	<.10	1.8	.180	30	40

331628094121901 WRIGHT PATMAN LAKE DR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
14...	1040	1.00	225	7.6	13.0	9.1	87
14...	1041	6.00	225	7.6	12.5	9.1	86
MAY							
30...	1135	1.00	227	8.1	24.0	6.8	80
30...	1137	10.0	227	8.1	24.0	6.8	80
30...	1139	13.0	227	8.1	24.0	6.7	79
AUG							
07...	1123	1.00	208	9.1	28.0	9.0	115
07...	1124	10.0	208	9.0	28.0	8.6	110

WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331706094130501 WRIGHT PATMAN LAKE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
14...	1030	1.00	257	7.7	12.5	9.7	92
14...	1031	10.0	257	7.4	11.5	8.9	82
14...	1032	20.0	257	7.4	11.0	8.7	80
14...	1033	27.0	257	7.3	11.0	8.4	77
MAY							
30...	1100	1.00	229	8.0	24.0	6.1	72
30...	1102	10.0	229	8.0	24.0	6.2	73
30...	1104	20.0	229	8.0	24.0	6.2	73
30...	1106	30.0	232	7.9	24.0	6.2	73
30...	1110	36.0	232	7.9	24.0	6.2	73
AUG							
07...	1030	1.00	208	8.9	27.5	7.8	99
07...	1031	10.0	208	8.8	27.5	7.7	97
07...	1032	20.0	208	8.7	27.5	7.5	95
07...	1033	30.0	208	8.6	27.5	7.2	91

331519094141101 WRIGHT PATMAN LAKE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
FEB									
14...	1105	1.00	277	7.6	13.5	.70	8.8	85	K4
14...	1106	5.00	277	7.6	13.0	--	8.7	83	--
14...	1107	10.0	264	7.4	12.0	--	8.6	81	--
14...	1108	20.0	264	7.3	11.5	--	7.9	73	--
14...	1109	24.0	264	7.3	11.5	--	7.9	73	--
MAY									
30...	1300	1.00	244	8.1	24.0	.50	7.2	85	--
30...	1302	5.00	247	8.1	24.0	--	6.9	81	--
30...	1304	10.0	249	8.0	24.0	--	6.3	74	--
30...	1306	15.0	251	8.0	24.0	--	6.4	75	--
30...	1308	21.0	251	7.9	23.5	--	6.6	77	--
AUG									
07...	1056	1.00	217	9.5	28.0	.40	8.2	104	K4
07...	1057	10.0	217	9.4	28.0	--	7.7	98	--
07...	1058	20.0	217	9.0	27.5	--	7.0	88	--
07...	1059	25.0	217	8.8	27.5	--	6.6	83	--

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)
FEB									
14...	K26	84	22	28	3.5	20	1	3.2	62
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	84	17	28	3.3	18	.9	3.2	67
MAY									
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
AUG									
07...	K13	76	2	25	3.2	14	.7	3.8	74
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	76	2	25	3.2	13	.7	3.8	74

WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331519094141101 WRIGHT PATMAN LAKE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB									
14...	40	23	.8	160	<.10	.60	.080	9	3
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	<.10	.70	.070	30	<10
14...	--	--	--	--	--	--	--	--	--
14...	31	20	2.8	150	<.10	.90	.090	13	40
MAY									
30...	--	--	--	--	<.10	.80	.060	110	240
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	<.10	.90	.080	110	360
AUG									
07...	17	11	1.3	120	<.10	2.3	.160	22	5
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	<.10	1.8	.160	20	20
07...	17	11	1.3	120	<.10	2.0	.190	18	54

331533094210901 WRIGHT PATMAN LAKE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	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)
FEB										
14...	1430	1.00	290	7.0	12.5	.10	8.0	76	K1000	K2500
14...	1431	.10	--	--	--	--	--	--	--	--
14...	1432	10.0	292	7.0	12.5	--	8.0	76	--	--
14...	1433	15.0	292	6.9	12.5	--	8.0	76	--	--
MAY										
30...	1500	1.00	307	7.9	25.0	.30	7.0	84	K37	K24
30...	1501	.50	--	--	--	--	--	--	--	--
30...	1502	5.00	307	7.7	24.0	--	4.9	58	--	--
30...	1504	10.0	307	7.7	24.0	--	4.7	55	--	--
30...	1506	15.0	302	7.7	24.0	--	4.3	51	--	--
30...	1508	21.0	302	7.8	24.0	--	4.0	47	--	--
AUG										
07...	1300	1.00	357	7.4	28.5	.60	6.7	86	K520	K880
07...	1302	10.0	321	7.3	27.5	--	6.4	81	--	--
07...	1303	18.0	316	7.3	27.5	--	6.4	81	--	--

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 AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB									
14...	80	36	24	4.9	26	1	4.4	44	49
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	83	39	25	5.0	26	1	4.3	44	52
MAY									
30...	130	19	45	3.9	17	.7	3.9	110	28
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	130	18	45	3.8	17	.7	3.8	110	28
AUG									
07...	130	5	43	4.3	23	.9	4.0	120	26
07...	--	--	--	--	--	--	--	--	--
07...	120	7	40	4.0	20	.8	3.9	110	22

WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331533094210901 WRIGHT PATMAN LAKE GC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (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)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB									
14...	31	9.3	180	.40	1.5	1.9	.280	300	87
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	30	9.4	180	.40	1.6	2.0	.310	340	94
MAY									
30...	14	5.2	180	.10	.90	1.0	.090	54	49
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	.30	.90	1.2	.070	80	80
30...	--	--	--	--	--	--	--	--	--
30...	14	6.0	180	.40	.80	1.2	.080	70	98
AUG									
07...	20	2.5	190	<.10	1.2	--	.080	10	67
07...	--	--	--	<.10	.90	--	.110	20	60
07...	17	1.3	170	<.10	1.3	--	.120	19	98

WRIGHT PATMAN LAKE NEAR TEXARKANA--Continued

Wright Patman Lake AC (331838094095901)

Phytoplankton Analyses October 1983 to September 1984

Date	2-14-84
Time	0851
TOTAL CELLS/ml	49,800
NUMBER OF SPECIES	35
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	200
Ankistrodesmus falcatus	500
Ankistrodesmus falcatus var. mirabilis	100
Ankistrodesmus nannoselene	400
Dictyosphaerium sp.	P
Franceia sp.	100
Golenkinia sp.	500
Micratinium pusillum var. longisetum	100
Tetraedron sp.	100
Tetrastrum staurogeniaeforme	1600
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon pediforme	300
Dinobryon sp.	200
CYANOPHYTA (Blue-green algae)	
Chroococcus sp.	12000
Dactylococcopsis raphidioides	9500
Gloeothece linearis	400
Synechococcus aeruginosa	600
Synechococcus elongatus	2000
Synechocystis sp.	200
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	180
Melosira distans	11320
Melosira granulata	200
Melosira granulata var. angustissima f. spiralis	1000
Melosira italica var. tenuissima	P
Stephanodiscus astrea	1280
Stephanodiscus tenuis	1830
Order Pennales	
Fragilaria crotonensis	760
Navicula perpusilla	190
Navicula sp.	P
Nitzschia acicularis	950
Nitzschia frustulum	190
Nitzschia microcephala	380
Nitzschia palea	570
Nitzschia subacicularis	1520
Synedra delicatissima	300
Synedra rumpens var. scotia	380
Synedra sp.	950

P = Species observed after counts completed.

WRIGHT PATMAN LAKE NEAR TEXARKANA--Continued

Wright Patman Lake AC (331838094095901)

Phytoplankton Analyses October 1983 to September 1984

Date	5-30-84
Time	0901
TOTAL CELLS/ml	7630
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Coccomyxa dispar	188
Kirchneriella lunaris	63
Lauterborniella elegantissima	63
Quadrigula chodati	313
Scenedesmus brasiliensis	250
Scenedesmus quadricauda	500
Schroederia setigera	188
CYANOPHYTA (Blue-green algae)	
Chroococcus pallidus	188
Rhabdoderma sp.	125
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	188
Melosira distans	4563
Melosira granulata var. angustissima	500
Stephanodiscus astrea	188
Stephanodiscus tenuis	313

Wright Patman Lake AC (331838094095901)

Phytoplankton Analyses October 1983 to September 1984

Date	8-7-84
Time	0851
TOTAL CELLS/ml	461,790
NUMBER OF SPECIES	49
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Actinastrum sp.	6364
Asterococcus sp.	9091
Chlamydomonas sp.	227
Closterium sp.	227
Dictyosphaerium pulchellum	5909
Gloeocystis sp.	909
Micratinium sp.	227
Oocystis sp.	909
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	3182
Anabaenopsis cicularis	42955
Anabaenopsis raciborskii	42273
Aphanizomenon	5000
Aphanocapsa delicatissima	39500
Aphanocapsa elachista	38000
Chroococcus giganteus	1000
Chroococcus multicoloratus	10000
Chroococcus turicensis	4000
Chroococcus varius	17000
Coelosphaerium collinsi	27727
Gloeocapsa sp.	2727
Lyngbya contorta	2273
Lyngbya limnetica	14773
Merismopedia punctata	22273
Microcoleus lacustris	30682
Oscillatoria limnetica	40682
Oscillatoria subtilissima	11818
Oscillatoria sp. 1	2273
Oscillatoria sp. 2	11364
Oscillatoria sp. 3	3636
Pseudoanabaena catenata	11364
Raphidiopsis curvata	7727
Spirulina okensis	11591
Spirulina tenerrima	14773
Synechococcus aeruginosa	2500
Synechococcus lineare	1500
EUGLENOPHYTA (Euglenoids)	
Lepocinclis ovum	1500
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	227
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	1364
Melosira granulata	4318
Melosira granulata var. angustissima	2273
Stephanodiscus sp.	1591
Order Pennales	
Navicula cryptocephala	28
Nitzschia acicularis	57
Nitzschia latens	1704
Nitzschia palea	1761
Nitzschia parvula	284
Nitzschia sp.	57
Synedra rumpens	114
Synedra socia	57

WRIGHT PATMAN LAKE NEAR TEXARKANA--Continued

Wright Patman Lake GC (331533094210901)

Phytoplankton Analyses October 1983 to September 1984

Date	2-14-84
Time	1431
TOTAL CELLS/ml	12,620
NUMBER OF SPECIES	22
DEPTH COLLECTED (ft.)	0.1

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	130
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	3500
Dactylococcopsis raphidioides	130
Synechococcus elongatus	130
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	30
Melosira distans	200
Stephanodiscus tenuis	4660
Order Pennales	
Diploneis sp.	150
Navicula capitata	150
Navicula circumtexta	150
Navicula cryptocepnala	150
Navicula pupula var. capitata	150
Navicula rhyncocephala	440
Navicula schroeteri var. escambia	150
Nitzschia acicularis	300
Nitzschia obtusa var. scalpelliformis	P
Nitzschia palea	300
Nitzschia paleacea	300
Nitzschia parvula	300
Nitzschia tryblionella	150
Synedra ulna	150

P = Species observed after counts completed.

WRIGHT PATMAN LAKE NEAR TEXARKANA--Continued

Wright Patman Lake GC (331533094210901)

Phytoplankton Analyses October 1983 to September 1984

Date	5-30-84
Time	1501
TOTAL CELLS/ml	87,375
NUMBER OF SPECIES	38
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	125
Botryococcus sp.	1500
Chlamydomonas fenestrata	125
Chlamydomonas sp.	250
Chodatella sp.	125
Coelastrum microporum	2250
Cosmarium sp.	125
Dictyosphaerium ehrenbergianum	2000
Elakotothrix gelatinosa	250
Gloeocystis botryoides	2500
Pteromonas angulosa	125
Scenedesmus quadricauda	1000
Scenedesmus sp.	250
Schroederia setigera	375
Sphaerocystis schroeteri	750
Tetraedron minima	125
Tetrastrum heteracanthum	500
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	16000
Aphanizomenon flos-aquae	1500
Aphanocapsa delicatissima	125
Chroococcus giganteus	1250
Chroococcus multicoloratus	500
Chroococcus pallidus	250
Dactylococcopsis raphidioides	125
Microcystis marina	23000
Oscillatoria sp.	1000
Pseudoanabaena sp.	1750
Synechococcus aeruginosa	125
Synechococcus elongatus	125
EUGLENOPHYTA (Euglenoids)	
Euglena acus	125
Trachelomonas hispida	1500
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	125
Melosira distans	250
Melosira granulata	23500
Melosira islandica	1250
Melosira lirata	1625
Stephanodiscus tenuis	750
Order Pennales	
Navicula minuscula	125

WRIGHT PATMAN LAKE NEAR TEXARKANA--Continued

Wright Patman Lake GC (331533094210901)

Phytoplankton Analyses October 1983 to September 1984

Date	8-7-84
Time	1301
TOTAL CELLS/ml	320,861
NUMBER OF SPECIES	60
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. mirabilis	250
Ankistrodesmus nannoselene	625
Ankistrodesmus quaternatus	1000
Chlamydomonas sp. 1	125
Chlamydomonas sp. 2	250
Closterium gracile	125
Closterium sp.	125
Scenedesmus armatus var. bicaudatus	500
Scenedesmus brasiliensis	500
Scenedesmus sp.	250
Staurastrum sp.	125
Tetraedron trigonum var. gracile	250
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	27760
Anabaena sp.	3750
Aphanizomenon flos-aquae	8250
Aphanocapsa delicatissima	75250
Aphanocapsa elachista	38250
Aphanothece sp.	750
Chroococcus dispersus	79750
Chroococcus giganteus	1500
Chroococcus multicoloratus	1000
Chroococcus pallidus	2500
Dactylococcopsis fasciculata	125
Dactylococcopsis raphidioides	250
Gloeothece rupestris	2500
Merismopedia convoluta	2500
Merismopedia minima	24375
Merismopedia punctata	1500
Merismopedia tenuissima	1750
Microcoleus acutissimus	2500
Microcoleus lacustris	3000
Microcystis aeruginosa	3750
Microcystis flos-aquae	3250
Oscillatoria limnetica	7250
Pseudoanabaena sp.	2750
Raphidiopsis curvata	250
Rhabdoderma sigmoidea f. minor	1250
Spirulina okensis	2000
Synechococcus aeruginosa	1875
Synechococcus lineare	125
EUGLENOPHYTA (Euglenoids)	
Euglena acus	125
Euglena intermedia	125
Phacus longicauda	125
Trachelomonas sp.	250
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	500
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	2000
Melosira granulata	2500
Melosira granulata var. angustissima f. spiralis	500
Melosira islandica	2500
Melosira lirata	6875
Stephanodiscus sp.	1000
Order Pennales	
Achnanthes affinis	11
Nitzschia acicularis	11
Nitzschia fonticola	22
Nitzschia latens	100
Nitzschia palea	111
Nitzschia subconfinis	33
Nitzschia thermalis	122
Nitzschia sp. 1	33
Nitzschia sp. 2	33

RED RIVER BASIN

07344210 SULPHUR RIVER NEAR TEXARKANA, TX

LOCATION.--Lat 33°18'20", long 94°09'03", Bowie County, Hydrologic Unit 11140302, on downstream side of highway embankment near left end of downstream (northbound) bridge on U.S. Highway 59, 0.4 mi downstream from Texarkana Dam, 1.4 mi upstream from Elliott Creek, 11.7 mi southwest of Texarkana, and at mile 44.1.

DRAINAGE AREA.--3,443 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year. August 1937 to July 1953 and October 1953 to September 1979 (daily gage heights); January to December 1933, January 1937 to December 1942, and January 1945 to September 1979 (discharge measurements); January to December 1939 and January 1945 to September 1979 (daily discharges) published by Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 180.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair above 50 ft^3/s and poor below. Daily discharge determined from flow through gates, computed from relation between discharge, head, and gate openings, and adjusted to discharge measurements. Flow regulated by Wright Patman Lake (station 07344200).

AVERAGE DISCHARGE.--5 years, 2,141 ft^3/s (1,552,000 acre-ft/yr).

EXTEMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s June 16 to July 5, 1981; maximum gage height, 32.57 ft June 15, 1981 at 1000 hours; no flow June 25, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 94,000 ft^3/s Apr. 4, 1945; maximum stage, 47.23 ft Apr. 14, 1945; no flow on various occasions.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,000 ft^3/s Mar. 27 to Apr. 24; maximum gage height, 30.51 ft Apr. 11 at 1600 hours; minimum daily discharge, 37 ft^3/s Oct. 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	1040	362	201	191	1560	6000	1310	406	333	274	113
2	150	1040	202	201	191	1560	6000	734	406	330	273	113
3	150	1040	202	195	191	1560	6000	517	406	328	272	113
4	150	1040	202	191	191	1560	6000	347	406	325	271	113
5	150	1040	202	191	191	2100	6000	151	406	322	270	113
6	150	1040	202	191	191	2730	6000	113	402	319	269	113
7	150	1040	202	191	191	2730	6000	113	400	316	267	113
8	150	1040	202	191	191	2730	6000	113	397	314	266	113
9	150	1040	202	191	191	2730	6000	308	394	311	265	113
10	150	1040	202	191	191	2730	6000	406	391	308	264	113
11	150	1040	352	191	191	2730	6000	406	389	305	263	113
12	150	1040	468	191	191	2730	6000	406	386	302	262	113
13	150	1040	468	191	196	2730	6000	406	383	300	261	113
14	150	1040	468	191	378	2730	6000	406	380	297	260	113
15	150	1040	468	191	466	2730	6000	406	378	295	259	113
16	150	802	468	191	466	2730	6000	406	375	292	258	113
17	150	683	468	191	712	2730	6000	406	372	290	256	113
18	150	683	468	191	1000	2730	6000	406	369	289	255	113
19	150	683	468	191	1000	2730	6000	406	366	288	255	113
20	150	683	468	191	1000	2730	6000	406	364	287	254	113
21	150	683	468	191	1000	2730	6000	406	361	286	253	113
22	75	683	468	191	1280	2730	6000	406	358	285	252	113
23	37	683	468	191	1560	2730	6000	406	356	284	251	113
24	37	683	468	191	1560	3440	6000	406	353	283	250	113
25	37	683	468	191	1560	3910	4680	406	350	281	249	113
26	84	683	468	191	1560	5040	3960	406	348	280	248	113
27	179	683	468	191	1560	6000	3510	406	345	280	247	113
28	399	683	468	191	1560	6000	2820	406	342	279	246	113
29	856	683	334	191	1560	6000	2820	406	339	277	245	113
30	1040	683	201	191	---	6000	2100	406	336	276	244	113
31	1040	---	201	191	---	6000	---	406	---	275	159	---
TOTAL	6934	25964	11224	5945	20710	99870	163890	12638	11264	9237	7918	3390
MEAN	224	865	362	192	714	3222	5463	408	375	298	255	113
MAX	1040	1040	468	201	1560	6000	6000	1310	406	333	274	113
MIN	37	683	201	191	191	1560	2100	113	336	275	159	113
CFSM	.07	.25	.11	.06	.21	.94	1.59	.12	.11	.09	.07	.03
IN.	.07	.28	.12	.06	.22	1.08	1.77	.14	.12	.10	.09	.04
AC-FT	13750	51500	22260	11790	41080	198100	325100	25070	22340	18320	15710	6720

CAL YR 1983	TOTAL	685891.0	MEAN	1879	MAX	11000	MIN	6.1	CFSM .55	IN 7.41	AC-FT	1360000
WTR YR 1984	TOTAL	378984.0	MEAN	1035	MAX	6000	MIN	37	CFSM .30	IN 4.09	AC-FT	751700

07344210 SULPHUR RIVER NEAR TEXARKANA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
FEB 14...	1300	375	256	7.5	11.0	<1	5.5	10.3	94	2.6	81
MAY 30...	1400	405	222	8.0	25.5	50	20	6.9	83	1.4	88
AUG 06...	1500	265	213	8.8	28.0	35	4.9	9.9	126	3.9	76

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB 14...	13	27	3.3	18	.9	3.1	68	29	19	.20	3.2
MAY 30...	8	30	3.1	12	.6	3.8	80	21	11	.20	7.0
AUG 06...	4	25	3.3	14	.7	3.8	72	20	17	.20	18

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 14...	140	15	15	<.010	<.10	.040	.66	.70	.080	7.0
MAY 30...	140	23	15	.010	<.10	.100	.60	.70	.080	14
AUG 06...	140	18	11	<.010	<.10	.040	1.5	1.5	.160	10

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
FEB 14...	1300	1	52	<1	<10	2	8
MAY 30...	1400	<1	z1	2	<10	2	49
AUG 06...	1500	4	34	<1	20	4	15

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
FEB 14...	<1	14	<.1	<1	<1	17
MAY 30...	2	9	<.1	<1	<1	10
AUG 06...	<1	10	<.1	<1	<1	<3

07344482 BIG CYPRESS CREEK NEAR WINNSBORO, TX

LOCATION.--Lat 33°01'24", long 95°16'12", Franklin County, Hydrologic Unit 11140305, on left bank at downstream side of bridge on State Highway 37, 0.3 mi downstream from Glade Branch, 1.8 mi upstream from Little Cypress Creek, 4.7 mi north of Winnsboro, and 146.5 mi upstream from mouth.

DRAINAGE AREA.--27.2 mi^2.

PERIOD OF RECORD.--March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 375.83 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected slightly by Lake Franklin located upstream on Glade Branch. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years (water years 1975-84), 19.2 ft^3/s (9.59 in/yr), 13,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft^3/s Nov. 24, 1974 (gage height, 12.39 ft); no flow at times in water years 1974, 1978-80, 1982, and 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 12	0915	*1,130	10.72
Mar. 12	1215	993	10.60

Minimum observed discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	1.2	1.8	3.1	2.6	7.6	7.2	2.0	.91	.00	.00	.00
2	.80	1.3	36	4.0	3.0	6.6	7.8	12	.74	.00	.00	.00
3	.89	1.3	99	3.7	2.3	6.5	9.0	21	.58	.00	.00	.00
4	.84	1.5	13	3.7	2.3	6.7	6.8	5.9	.62	.00	.00	.00
5	.61	1.6	6.1	3.4	2.4	8.8	5.7	3.5	.84	1.1	.00	.00
6	.38	2.7	4.0	3.1	2.4	7.5	5.6	3.0	1.5	1.0	.00	.00
7	.49	2.3	3.3	2.9	2.6	6.1	5.4	2.4	1.7	.53	.00	.00
8	1.8	1.9	2.8	2.7	2.7	4.8	7.5	1.8	1.3	.28	.00	.00
9	1.9	2.0	2.9	5.7	6.1	4.3	6.5	1.7	.89	.17	.00	.00
10	1.3	1.6	3.8	17	5.9	4.1	5.8	1.8	.64	.06	.00	.00
11	1.3	1.3	5.0	8.0	47	4.5	8.9	1.5	.51	.01	.00	.00
12	2.8	1.5	3.4	5.6	787	424	6.3	1.1	.52	.00	.00	.00
13	1.3	1.6	2.9	4.0	57	71	4.9	1.0	.38	.00	.00	.00
14	.98	2.1	2.7	3.6	16	21	4.0	.84	.25	.00	.00	.00
15	.74	1.6	2.3	4.1	10	15	3.4	.78	.15	.00	.00	.00
16	.75	1.3	4.3	3.8	7.8	12	3.2	.70	.06	.00	.00	.00
17	.90	2.0	4.6	3.6	6.2	11	3.3	.65	.13	.00	.00	.00
18	1.0	2.7	3.8	4.6	6.9	10	3.2	.66	.04	.00	.00	.00
19	1.1	7.9	3.3	3.6	6.5	94	3.3	4.0	.00	.00	.00	.00
20	1.3	5.7	3.0	3.1	5.2	22	4.0	8.9	.00	.00	.00	.00
21	6.1	3.1	3.3	3.1	4.8	12	3.7	3.6	.00	.00	.00	.00
22	2.0	2.6	2.7	3.3	4.5	9.6	3.0	2.2	.00	.00	.00	.00
23	1.2	10	2.4	6.9	4.6	23	2.6	1.6	.00	.00	.00	.00
24	1.0	3.7	2.0	6.8	3.6	53	2.6	1.4	.00	.00	.00	.00
25	.95	2.4	1.8	4.8	3.6	16	2.7	1.5	.00	.00	.00	.00
26	.96	1.8	1.9	3.9	38	12	2.2	1.1	.00	.00	.00	.00
27	.89	3.6	2.5	3.3	53	13	2.0	1.0	.00	.00	.00	.00
28	.97	2.6	2.8	3.1	15	25	1.7	2.7	.00	.00	.00	.00
29	.94	1.8	2.3	3.0	9.0	13	2.5	1.6	.00	.00	.00	.00
30	.96	1.8	2.0	2.7	---	9.2	1.7	1.0	.00	.00	.00	.00
31	1.1	---	2.2	2.7	---	7.8	---	.96	---	.00	.00	---
TOTAL	38.93	78.5	233.9	136.9	1118.0	941.1	136.5	93.89	11.76	3.15	.00	.00
MEAN	1.26	2.62	7.55	4.42	38.6	30.4	4.55	3.03	.39	.10	.000	.000
MAX	6.1	10	99	17	787	424	9.0	21	1.7	1.1	.00	.00
MIN	.38	1.2	1.8	2.7	2.3	4.1	1.7	.65	.00	.00	.00	.00
CFSM	.05	.10	.28	.16	1.42	1.12	.17	.11	.01	.004	.000	.000
IN.	.05	.11	.32	.19	1.53	1.29	.19	.13	.02	.00	.00	.00
AC-FT	77	156	464	272	2220	1870	271	186	23	6.2	.00	.00

CAL YR 1983 TOTAL 4853.71 MEAN 13.3 MAX 734 MIN .01 CFSM .49 IN 6.64 AC-FT 9630
WTR YR 1984 TOTAL 2792.63 MEAN 7.63 MAX 787 MIN .00 CFSM .28 IN 3.82 AC-FT 5540

07344484 LAKE CYPRESS SPRINGS NEAR MOUNT VERNON, TX

LOCATION.--Lat 33°03'22", long 95°08'21", Franklin County, Hydrologic Unit 11140305, in brick meter house located on upstream side and near center of dam on Big Cypress Creek, 1.5 mi upstream from Andy's Creek, 2.6 mi downstream from Panther Creek, and 10.3 mi southeast of Mount Vernon.

DRAINAGE AREA.--75.0 mi^2.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--The lake is formed by a rolled earthfill dam 5,230 ft long. Deliberate impoundment began July 7, 1970, and the dam was completed Feb. 15, 1971. The emergency spillway is an excavated channel through natural ground 1,000 ft wide located to the left of left end of dam. The service spillway is a rectangular 23- by 23-foot drop inlet located near the right end of dam. The low-flow outlet works consist of an 18-inch-diameter concrete pipe that has duplicate valve controls and discharges into the service spillway conduit. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	397.0	-
Crest of spillway	385.0	100,400
Crest of spillway	378.0	72,850
Lowest gated outlet (invert)	317.75	0

COOPERATION.--The capacity table, furnished by the Franklin County Water District, was based on data prepared by Wisenbaker, Fix, and Associates, Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 83,770 acre-ft Feb. 2, 1975 (elevation, 381.00 ft); minimum, 59,440 acre-ft Nov. 12-14, 1978 (elevation, 373.79 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,930 acre-ft Feb. 13 at 1400 hours (elevation, 378.60 ft); minimum, 67,560 acre-ft Sept. 20, 21 (elevation, 376.41 ft).

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

376.0	66,240	378.0	72,850
377.0	69,490	379.0	76,340

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69650	69360	69790	71150	72200	73780	74020	72920	72540	71120	69560	68700
2	69590	69320	70650	71150	72270	73740	74020	73430	72510	71090	69560	68700
3	69560	69320	71090	71190	72270	73710	73950	73540	72440	71050	69520	68630
4	69490	69320	71120	71220	72240	73810	73850	73470	72410	70920	69520	68500
5	69420	69260	71120	71220	72240	73740	73780	73430	72370	71050	69490	68540
6	69320	69260	71120	71320	72240	73710	73710	73400	72410	71020	69520	68440
7	69290	69260	71120	71320	72200	73640	73740	73360	72410	70920	69720	68310
8	69460	69260	71120	71320	72240	73610	73740	73300	72370	70890	69620	68270
9	69460	69190	71150	71630	72370	73470	73710	73260	72300	70790	69690	68240
10	69460	69160	71260	71660	72440	73400	73740	73160	72270	70650	69590	68210
11	69720	69160	71220	71690	73780	73640	73710	73050	72200	70590	69560	68180
12	69560	69090	71190	71800	74860	74540	73710	72990	72170	70850	69620	68110
13	69460	69090	71150	71800	74930	74680	73640	72990	72170	70790	69590	68010
14	69390	69090	71150	71800	74790	74610	73540	72990	72130	70720	69560	68010
15	69390	69030	71150	71800	74680	74580	73430	72920	72070	70720	69520	67950
16	69390	69030	71260	71800	74510	74440	73400	72810	72000	70650	69490	67880
17	69390	68990	71290	71860	74330	74400	73360	72750	71900	70620	69420	67750
18	69390	68990	71290	71860	74330	74300	73300	72750	71900	70490	69360	67690
19	69390	69490	71290	71860	74160	74470	73300	72990	71830	70390	69320	67590
20	69320	69560	71260	71860	74060	74440	73360	73050	71730	70290	69220	67560
21	69650	69520	71290	71860	74020	74370	73360	72990	71660	70190	69190	67790
22	69590	69590	71220	71930	73950	74230	73300	72950	71630	70120	69160	67880
23	69560	69820	71190	72070	73850	74400	73190	72920	71560	70090	69190	67850
24	69490	69820	71090	72100	73780	74400	73120	72880	71490	70050	69090	67820
25	69460	69820	71090	72130	73670	74370	73090	72920	71420	70050	69030	67980
26	69420	69790	71090	72130	73990	74330	73090	72810	71420	70020	68930	67950
27	69390	69820	71150	72200	73990	74440	73090	72750	71390	69920	68930	67920
28	69390	69750	71120	72200	73880	74330	73020	72880	71360	69850	68900	67880
29	69360	69750	71120	72240	73880	74260	73020	72710	71260	69750	68830	67790
30	69360	69750	71120	72200	---	74190	72990	72640	71190	69720	68800	67690
31	69360	---	71120	72200	---	74060	---	72610	---	69690	68700	---
MAX	69720	69820	71290	72240	74930	74680	74020	73540	72540	71120	69720	68700
MIN	69290	68990	69790	71150	72200	73400	72990	72610	71190	69690	68700	67560
(†)	376.96	377.08	377.49	377.81	378.30	378.35	378.04	377.93	377.51	377.06	376.76	376.45
(‡)	-330	+390	+1370	+1080	+1680	+180	-1070	-380	-1420	-1500	-990	-1010

CAL YR 1983 MAX 76660 MIN 68990 ‡ -4090
WTR YR 1984 MAX 74930 MIN 67560 ‡ -2000

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

07344484 LAKE CYPRESS SPRINGS NEAR MOUNT VERNON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1974 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
APR 12...	1230	161	15.5	41	23	8.3	5.0	12

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR 12...	.8	3.7	18	23	18	.10	3.8	85

07344486 BRUSHY CREEK AT SCROGGINS, TX

LOCATION.--Lat 32°58'32", long 95°11'03", Franklin County, Hydrologic Unit 11140305, on downstream side of highway embankment near left end of bridge on Farm Road 115, 0.1 mi north of Scroggins, 0.3 mi downstream from Briary Creek, 2.5 mi upstream from South Brushy Creek, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--23.4 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 343.90 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1979-84), 15.4 ft^3/s (8.94 in/yr), 11,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,140 ft^3/s Sept. 20, 1979 (gage height, 13.46 ft); no flow for many days during period December 1977 to September 1978 and part of day on July 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 200 ft^3/s Feb. 12 at 1200 hours (gage height, 11.77 ft), no peak above base of 800 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	4.0	5.0	6.2	4.6	10	8.5	1.8	.43	.53	.12	.00
2	.55	4.4	11	8.5	4.6	8.9	8.8	3.9	.37	.47	.10	.00
3	.52	4.8	96	8.2	4.6	8.9	11	20	.32	.46	.08	.00
4	.52	5.5	26	7.5	4.4	8.5	8.2	6.4	.31	.45	.13	.00
5	.49	7.7	15	7.1	4.1	15	7.3	3.8	.30	1.1	.19	.00
6	.44	10	12	6.7	3.7	12	6.9	2.9	.42	.85	.19	.00
7	.47	11	10	6.2	3.8	8.7	6.9	2.4	.77	.29	.24	.00
8	.73	9.4	9.1	5.9	4.0	7.4	9.2	2.1	.52	.19	1.2	.00
9	1.5	8.7	8.8	7.6	8.2	6.6	8.3	1.7	.41	.13	1.1	.00
10	1.0	8.2	9.4	18	8.9	6.3	8.9	1.5	.36	.11	1.3	.00
11	.90	8.4	11	11	11	6.9	16	1.3	.30	.10	.79	.00
12	1.9	8.9	9.1	8.4	148	75	9.6	1.3	.25	.10	.57	.00
13	1.3	9.4	8.0	7.2	46	33	6.9	1.3	.27	.09	.48	.00
14	1.0	10	7.7	6.4	18	18	5.8	1.3	.25	.14	.46	.00
15	.88	10	6.8	6.6	14	16	5.2	1.3	.22	.16	.33	.00
16	.78	10	7.1	6.8	12	14	5.0	1.2	.20	.11	.23	.00
17	.80	11	9.7	6.6	10	13	5.0	1.1	.17	.08	.14	.00
18	.96	11	10	7.0	10	13	4.7	1.0	.15	.06	.08	.00
19	.96	18	9.1	6.4	11	15	4.6	1.5	.14	.03	.05	.00
20	1.2	20	7.8	5.6	8.4	13	4.8	2.6	.12	.00	.02	.00
21	2.6	6.8	7.5	5.5	7.7	11	5.9	2.8	.10	.00	.00	.00
22	2.2	5.8	6.2	4.9	7.0	9.6	4.8	2.3	.07	.00	.00	.03
23	1.3	8.2	5.5	9.2	6.6	9.7	3.9	1.0	.07	.00	.00	1.1
24	1.7	8.2	5.0	10	6.4	13	3.5	.62	.06	.00	.00	.58
25	2.2	5.8	4.2	7.5	6.0	10	3.0	.54	.06	.00	.00	.27
26	2.4	4.8	4.2	6.6	14	9.4	2.5	.45	.05	.00	.00	.32
27	2.8	5.6	5.4	6.0	24	12	2.4	.42	.14	.25	.00	.64
28	3.2	7.7	6.2	5.6	14	18	2.1	.84	.29	.28	.00	.47
29	3.4	5.8	5.6	5.5	11	12	2.3	1.1	.33	.28	.00	.44
30	3.4	5.1	4.8	5.1	---	9.8	2.2	.60	.50	.22	.00	.44
31	3.7	---	4.8	4.8	---	8.9	---	.50	---	.15	.00	---
TOTAL	46.35	254.2	348.0	224.6	436.0	432.6	184.2	71.57	7.95	6.63	7.80	4.29
MEAN	1.50	8.47	11.2	7.25	15.0	14.0	6.14	2.31	.27	.21	.25	.14
MAX	3.7	20	96	18	148	75	16	20	.77	1.1	1.3	1.1
MIN	.44	4.0	4.2	4.8	3.7	6.3	2.1	.42	.05	.00	.00	.00
CFSM	.06	.36	.48	.31	.64	.60	.26	.10	.01	.009	.01	.006
IN.	.07	.40	.55	.36	.69	.69	.29	.11	.01	.01	.01	.01
AC-FT	92	504	690	445	865	858	365	142	16	13	15	8.5

CAL YR 1983 TOTAL 4399.03 MEAN 12.1 MAX 620 MIN .22 CFSM .52 IN 6.99 AC-FT 8730
WTR YR 1984 TOTAL 2024.19 MEAN 5.53 MAX 148 MIN .00 CFSM .24 IN 3.22 AC-FT 4010

07344489 LAKE BOB SANDLIN NEAR MOUNT PLEASANT, TX

LOCATION.--Lat 33°04'48", long 95°00'07", Titus County, Hydrologic Unit 11140305, in control room in left abutment of service spillway at left end of Fort Sherman Dam on Big Cypress Creek, 1.7 mi upstream from Tankersley Creek, 3.5 mi upstream from bridge on U.S. Highway 271, 5.7 mi southwest of the county courthouse in Mount Pleasant, and 129.2 mi upstream from mouth.

DRAINAGE AREA.--239 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. A nonrecording gage was located at same site and datum prior to Apr. 12, 1978.

REMARKS.--The lake is formed by a rolled earthfill dam 10,800 ft long, including spillways. Deliberate impoundment began Aug. 8, 1977, and the dam was completed by April 1978. The emergency spillway is an excavated channel cut through natural ground. The spillway is 4,500 ft wide, located to the left of the left end of the dam. The service spillway is 289.5 ft wide with 160 ft of net flow width controlled by four 40- by 22.5-foot tainter gates. The dam was built, owned, maintained, and operated by the Titus County Fresh Water Supply District No. 1 to provide water for municipal use. Flow from 75.0 mi above this station is controlled by Lake Cypress Springs on Big Cypress Creek and from 36.0 mi above this station is controlled by Montecello Reservoir on Blundell Creek, a tributary to Big Cypress Creek. Stage telemeter located at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	349.0	-
Crest of uncontrolled spillway	341.3	251,000
Crest of gated spillway	316.5	64,790
Lowest gated outlet (invert)	294.5	3,300

COOPERATION.--Area and capacity tables were compiled by Forest and Cotton, Inc., Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 215,400 acre-ft Mar. 4, 1983 (elevation, 337.72 ft); minimum, 516 acre-ft Aug. 8-17, 1977 (elevation, 290.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 205,800 acre-ft May 3 at 1000 hours (elevation, 336.69 ft); minimum observed, 176,400 acre-ft Sept. 30 (elevation, 333.39 ft).

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

333.0	173,000
335.0	190,400
337.0	208,600

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193500	191300	187900	188800	189500	196200	203900	204700	201900	194300	186500	181400
2	193300	191300	189300	188800	189500	196200	204200	205500	201800	194100	186400	181200
3	193200	191300	190300	188800	189500	196300	204600	205600	201400	193700	186300	181000
4	193100	191100	190300	188900	189600	196900	204400	205500	201000	193300	186300	180600
5	192800	190900	190600	188800	189300	197000	204400	205600	200700	193900	186300	180400
6	192600	190800	190200	188800	189200	197000	204300	205600	200800	193700	186300	180000
7	192400	190700	190100	188800	189200	197100	204500	205500	200700	193500	186800	179600
8	192600	190400	190000	188800	189300	197000	204700	205300	200700	193300	186800	179400
9	192600	190200	190000	189600	189600	196900	204700	205200	200500	193000	186700	179100
10	192500	189800	190300	189500	189700	196900	205000	204900	200400	192600	186600	178800
11	193200	189300	190200	189400	191800	197500	205100	204800	200300	192400	186400	178500
12	192700	189100	190000	189500	192900	198900	205200	204700	200200	192500	186600	178200
13	192700	188900	190100	189200	193500	199400	205200	204700	200100	192300	186200	178100
14	192200	188700	190000	189300	193700	199800	205200	204500	199900	192100	185900	177800
15	192200	188400	189700	189300	194200	200100	205100	204100	199600	191900	185700	177600
16	192000	188100	190200	189300	194400	200400	205100	203600	199300	191700	185600	177200
17	192000	187900	190100	189400	194400	200600	204900	203300	199000	191500	185500	177000
18	191900	187700	190100	189500	194900	201000	204700	202800	198800	190900	185300	176800
19	191900	189000	189900	189300	194900	201400	204800	203600	198400	190600	184900	176600
20	192400	188600	189700	189200	195000	201400	205100	203600	198000	190200	184600	176500
21	192900	188500	190000	189200	195000	201400	205100	203600	197600	189900	184400	177100
22	192500	188700	189700	189300	195100	201500	205000	203500	197100	189500	184100	177200
23	192300	188800	189100	189500	195300	202400	204800	203400	196800	189200	184000	177100
24	192200	188800	189300	189600	195100	202400	204700	203300	196200	189000	183700	177100
25	192000	188500	189200	189600	195100	202400	204700	203100	195900	188700	183300	177100
26	191900	188700	189200	189600	196200	202600	204700	202900	195800	188500	183000	177000
27	191700	188900	189200	189600	196200	203000	204800	202700	195500	188300	182700	176900
28	191700	188500	189100	189600	196200	203700	204700	202800	195300	187900	182500	176700
29	191800	188200	189000	189600	196100	203700	204800	202500	194900	187500	182200	176600
30	191500	188100	189000	189500	---	203700	204500	202400	194600	187100	181900	176400
31	191400	---	188900	189500	---	203800	---	202300	---	186800	181500	---
MAX	193500	191300	190600	189600	196200	203800	205200	205600	201900	194300	186800	181400
MIN	191400	187700	187900	188800	189200	196200	203900	202300	194600	186800	181500	176400
(†)	335.11	334.74	334.83	334.90	335.63	336.48	336.55	336.31	335.47	334.59	333.99	333.39
(‡)	-2100	-3300	+800	+600	+6600	+7700	+700	-2200	-7700	-7800	-5300	-5100

CAL YR 1983 MAX 214600 MIN 187700 ‡ -12900
WTR YR 1984 MAX 205600 MIN 176400 ‡ -17100

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

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX

LOCATION.--Lat 33°01'15", long 94°52'55", Camp-Titus County line, Hydrologic Unit 11140305, near center of stream at downstream side of bridge on State Highway 11, 0.5 mi upstream from Louisiana & Arkansas Railway Co. bridge, 1.4 mi upstream from Williamson Creek, 5.2 mi east of Pittsburg, 19.2 mi downstream from Lake Bob Sandlin, and 110.0 mi upstream from mouth.

DRAINAGE AREA.--366 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1943 to January 1963 (published as Cypress Creek near Pittsburg), October 1967 to current year. Gage-height records collected at this site September 1963 to December 1967 are published in reports by the Corps of Engineers.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 247.49 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1954, water-stage recorder at site 1,900 ft downstream at present datum.

REMARKS.--Water-discharge records good. Flow partly regulated by Lake Cypress Springs (station 07344484) since July 1970 and by Monticello Reservoir (on Blundell Creek) since August 1972. Flow largely regulated by Lake Bob Sandlin (station 07344489) since August 1977. Sewage effluent was returned to a tributary above the station by the city of Mount Pleasant, and sewage effluent was returned to a tributary below the gage by the city of Pittsburg. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--24 years (water years 1944-62, 1968-72), prior to combined regulation by Lake Cypress Springs and Monticello Reservoir, 327 ft^3/s (12.13 in/yr), 236,900 acre-ft/yr; 12 years (water years 1973-84) regulated, 238 ft^3/s (172,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft^3/s Mar. 30, 1945 (gage height, 28.3 ft, from floodmark, and adjusted to present site on basis of record for flood of Apr. 27, 1958), from rating curve extended above 20,000 ft^3/s; no flow Aug. 20 to Oct 3, 1954, July 19 to Nov. 4, 1956.
Maximum stage since at least 1895, that of Mar. 30, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1938 reached a stage of about 25 ft, present site, adjusted as explained above, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 317 ft^3/s Mar. 14 at 0600 hours (gage height, 9.57 ft); minimum daily, 1.8 ft^3/s Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	20	18	15	22	26	10	4.6	3.9	2.6	2.0
2	13	13	21	18	16	17	23	11	4.5	3.6	2.3	2.0
3	14	14	54	18	15	16	22	14	4.3	3.5	2.2	2.1
4	13	14	88	18	15	16	24	17	4.2	3.2	2.7	2.1
5	13	13	53	18	15	21	23	12	4.0	4.2	4.0	2.3
6	13	14	34	16	15	43	20	11	3.9	7.3	3.3	2.7
7	13	14	27	16	15	29	17	9.5	3.9	9.7	3.0	2.2
8	13	15	23	15	14	20	17	7.4	5.0	5.5	2.8	2.1
9	14	15	21	15	16	17	18	6.7	5.1	3.8	3.2	2.4
10	15	15	20	18	19	15	18	6.6	4.6	3.4	3.9	2.2
11	14	15	19	31	22	14	19	5.9	4.3	3.3	3.5	2.2
12	15	16	18	26	84	47	26	5.4	4.0	4.7	3.8	2.4
13	18	16	17	20	192	220	23	5.6	3.6	5.1	3.3	2.3
14	17	16	16	17	115	268	18	5.6	3.4	7.5	3.0	2.1
15	15	16	18	17	50	88	16	5.6	3.0	5.3	3.1	2.3
16	14	15	21	16	35	41	15	5.0	3.4	5.0	2.5	2.8
17	15	15	22	16	28	33	14	4.5	3.5	4.3	2.3	2.4
18	14	15	24	16	27	27	14	4.6	4.0	3.5	2.8	2.3
19	14	16	20	16	24	23	14	5.7	5.2	3.1	2.7	2.4
20	14	25	18	17	23	30	19	10	4.2	3.1	2.3	2.2
21	15	31	17	17	18	37	21	14	3.2	3.7	2.6	2.5
22	19	20	18	18	18	27	17	8.3	2.9	3.3	2.4	3.4
23	18	17	18	18	18	21	15	6.6	2.8	2.9	2.0	6.6
24	16	21	18	18	16	27	13	7.8	2.8	2.7	2.0	7.0
25	14	28	18	21	15	51	13	7.0	2.9	2.7	2.3	4.5
26	14	22	18	19	16	33	13	5.7	3.0	2.6	2.9	3.6
27	14	18	18	17	29	21	12	5.2	3.2	2.7	3.1	3.5
28	14	17	18	17	37	36	12	5.9	3.0	2.9	2.6	5.1
29	14	18	18	17	29	147	12	7.3	3.9	3.4	2.1	4.7
30	14	18	18	16	---	63	11	8.0	4.2	3.3	1.8	3.7
31	14	---	18	15	---	33	---	6.0	---	2.9	1.9	---
TOTAL	450	515	751	555	951	1503	525	244.9	114.6	126.1	85.0	90.1
MEAN	14.5	17.2	24.2	17.9	32.8	48.5	17.5	7.90	3.82	4.07	2.74	3.00
MAX	19	31	88	31	192	268	26	17	5.2	9.7	4.0	7.0
MIN	13	13	16	15	14	14	11	4.5	2.8	2.6	1.8	2.0
AC-FT	893	1020	1490	1100	1890	2980	1040	486	227	250	169	179

CAL YR 1983	TOTAL	43840.5	MEAN	120	MAX	7450	MIN 3.3	AC-FT	86960
WTR YR 1984	TOTAL	5910.7	MEAN	16.1	MAX	268	MIN 1.8	AC-FT	11720

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Chemical and biochemical analyses: January 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
WATER TEMPERATURES: October 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 941 micromhos Sept. 1, 1971; minimum daily, 69 micromhos July 30, 1969, Sept. 22, 1979.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 20, 1969; minimum daily, 0.0°C on several days during winter months of 1982-84.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 771 micromhos Sept. 6; minimum daily, 235 micromhos Dec. 4.
WATER TEMPERATURES: Maximum daily, 31.0°C July 11; minimum daily, 0.0°C Dec. 22, 23, Jan. 3, 19, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 16...	0815	15	350	7.4	11.0	20	8.3	6.7	61	3.3	63
DEC 21...	0930	17	304	6.9	2.0	5	6.7	12.5	91	1.5	66
MAR 15...	0855	81	286	6.5	16.0	70	36	8.3	84	3.0	68
APR 27...	0900	12	481	6.9	21.0	50	18	5.2	59	2.7	110
JUL 18...	1810	3.5	630	7.1	28.0	110	33	3.2	41	>23	80
AUG 30...	0905	1.4	725	7.3	25.5	50	11	2.8	34	15	78

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 16...	1	15	6.3	38	2	8.3	62	31	45	.30	5.7
DEC 21...	26	16	6.4	25	1	5.7	40	32	34	.20	7.2
MAR 15...	43	16	6.8	23	1	5.2	25	55	33	.20	9.4
APR 27...	62	24	11	46	2	9.8	43	78	61	.30	8.1
JUL 18...	0	20	7.2	84	4	14	99	49	97	.50	12
AUG 30...	0	20	6.9	96	5	24	94	52	120	.40	8.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 16...	190	30	27	1.9	.080	2.0	3.80	3.2	7.0	.900	9.2
DEC 21...	150	10	2	2.6	.020	2.6	.420	.68	1.1	.570	8.3
MAR 15...	160	70	9	.95	.050	1.0	.230	1.2	1.4	.310	11
APR 27...	260	39	8	2.7	.120	2.8	.240	.96	1.2	.460	15
JUL 18...	340	52	16	3.0	.400	3.4	7.80	2.2	10	2.30	14
AUG 30...	390	24	14	.63	.170	.80	.560	4.2	4.8	1.90	9.8

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC 21...	0930	<1	31	<1	<10	1	61
APR 27...	0900	<1	52	<1	<10	2	110
AUG 30...	0905	5	37	<1	<10	1	35

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 21...	5	32	1.7	<1	<1	6
APR 27...	2	820	2.2	<1	<1	8
AUG 30...	<1	1200	<.1	<1	<1	23

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	450	344	188	229	45	54	46	56	72
NOV.	1983	515	333	183	254	43	60	45	62	71
DEC.	1983	751	305	168	341	38	78	42	85	67
JAN.	1984	555	376	204	306	50	75	49	73	76
FEB.	1984	951	336	184	473	43	111	45	115	71
MAR.	1984	1503	328	180	729	42	171	44	178	70
APR.	1984	525	471	251	355	66	94	56	79	83
MAY	1984	244.9	526	277	183	77	51	59	39	85
JUNE	1984	114.6	609	315	97	94	29	62	19	85
JULY	1984	126.1	645	331	113	100	35	63	21	84
AUG.	1984	85.0	676	344	79	110	25	64	15	83
SEPT	1984	90.1	693	351	85	110	27	64	16	82
TOTAL		5910.7	**	**	3200	**	810	**	757	**
WTD.AVG.		16	376	203	**	51	**	47	**	73

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	327	274	360	396	457	403	495	532	666	662	751
2	317	339	314	365	363	381	429	492	511	710	680	731
3	313	325	257	344	348	347	434	485	502	722	676	711
4	329	306	235	370	383	338	457	480	501	724	665	716
5	400	312	272	346	388	365	462	470	522	692	594	761
6	350	327	295	343	382	376	507	433	541	739	569	771
7	340	343	308	340	351	405	455	478	575	560	599	759
8	329	346	306	366	348	394	444	506	610	570	614	739
9	318	330	305	388	360	401	443	574	604	551	650	693
10	308	344	316	375	334	392	453	590	576	582	678	665
11	325	340	311	357	364	383	467	572	566	611	689	654
12	366	310	305	388	337	340	468	560	565	630	676	674
13	345	326	323	467	328	275	464	539	583	650	675	698
14	342	330	322	406	279	240	509	516	598	720	695	712
15	338	340	389	353	300	284	482	510	607	652	703	720
16	398	352	334	344	315	331	490	520	612	605	702	730
17	351	332	409	352	329	347	487	526	625	608	695	701
18	334	313	339	361	342	368	488	537	608	625	684	690
19	350	294	350	342	344	377	489	543	637	615	658	713
20	335	283	324	340	339	410	496	544	646	599	647	748
21	301	338	301	370	352	469	484	548	655	593	689	720
22	324	385	278	417	355	410	462	546	664	605	712	654
23	352	476	295	373	309	364	539	540	674	663	695	670
24	393	352	310	351	383	352	533	523	677	703	698	701
25	421	292	318	380	352	396	496	611	690	706	718	713
26	373	358	320	410	362	407	476	647	710	695	737	684
27	298	407	333	425	369	378	468	612	727	681	723	668
28	363	330	345	419	359	358	480	525	737	669	730	649
29	378	283	350	376	413	326	482	578	719	649	702	627
30	360	276	354	392	---	348	489	550	700	621	721	584
31	312	---	357	430	---	369	---	541	---	660	748	---
MEAN	344	334	318	376	351	367	475	535	616	648	680	700

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	16.0	9.0	---	6.0	7.0	12.0	---	23.0	25.0	26.0	25.0
2	19.0	17.0	10.0	1.0	8.0	8.0	14.0	---	20.0	27.0	25.0	24.0
3	20.0	17.0	11.0	.0	9.0	10.0	17.0	21.0	21.0	28.0	26.0	25.0
4	21.0	18.0	12.0	2.0	7.0	13.0	14.0	21.0	24.0	26.0	24.0	27.0
5	20.0	17.0	12.0	5.0	6.0	11.0	12.0	20.0	24.0	29.0	24.0	25.0
6	19.0	16.0	10.0	5.0	5.0	11.0	12.0	22.0	24.0	29.0	27.0	25.0
7	19.0	15.0	7.0	5.0	4.0	10.0	15.0	24.0	25.0	26.0	27.0	25.0
8	19.0	15.0	7.0	5.0	4.0	10.0	15.0	23.0	25.0	29.0	24.0	23.0
9	18.0	15.0	9.0	6.0	7.0	9.0	15.0	22.0	25.0	30.0	27.0	24.0
10	18.0	12.0	12.0	6.0	10.0	10.0	16.0	22.0	25.0	30.0	27.0	28.0
11	18.0	10.0	12.0	5.0	12.0	9.0	15.0	23.0	27.0	31.0	25.0	29.0
12	14.0	10.0	10.0	3.0	13.0	10.0	17.0	21.0	27.0	29.0	25.0	28.0
13	15.0	11.0	10.0	3.0	12.0	10.0	16.0	22.0	27.0	27.0	28.0	27.0
14	15.0	12.0	9.0	3.0	11.0	12.0	17.0	25.0	28.0	26.0	28.0	28.0
15	15.0	13.0	7.0	3.0	12.0	15.0	16.0	25.0	28.0	27.0	28.0	24.0
16	17.0	11.0	3.0	3.0	12.0	15.0	15.0	25.0	25.0	29.0	28.0	20.0
17	18.0	10.0	5.0	2.0	10.0	17.0	14.0	24.0	26.0	30.0	29.0	23.0
18	20.0	13.0	5.0	3.0	12.0	19.0	15.0	24.0	29.0	29.0	25.0	22.0
19	20.0	17.0	3.0	.0	11.0	17.0	17.0	22.0	29.0	28.0	26.0	22.0
20	21.0	14.0	2.0	1.0	10.0	---	20.0	22.0	29.0	28.0	30.0	22.0
21	20.0	13.0	1.0	1.0	9.0	12.0	20.0	24.0	30.0	25.0	30.0	21.0
22	19.0	15.0	.0	.0	7.0	12.0	18.0	24.0	30.0	25.0	30.0	24.0
23	18.0	16.0	.0	2.0	8.0	15.0	19.0	24.0	26.0	27.0	29.0	24.0
24	15.0	12.0	---	3.0	9.0	13.0	15.0	25.0	27.0	28.0	28.0	26.0
25	15.0	10.0	---	2.0	9.0	13.0	18.0	25.0	29.0	27.0	25.0	26.0
26	13.0	12.0	---	5.0	11.0	15.0	20.0	24.0	26.0	27.0	25.0	21.0
27	12.0	12.0	---	5.0	10.0	17.0	21.0	25.0	28.0	27.0	28.0	20.0
28	13.0	8.0	---	5.0	7.0	16.0	20.0	25.0	28.0	25.0	28.0	18.0
29	16.0	6.0	---	5.0	7.0	12.0	21.0	23.0	27.0	24.0	29.0	17.0
30	14.0	8.0	---	6.0	---	13.0	18.0	22.0	25.0	26.0	28.0	15.0
31	17.0	---	---	5.0	---	12.0	---	22.0	---	26.0	29.0	---
MEAN	17.5	13.0	7.0	3.5	9.0	12.5	16.5	23.0	26.0	27.5	27.0	23.5

07345500 ELLISON CREEK RESERVOIR NEAR LONE STAR, TX

LOCATION.--Lat 32°55'16", long 94°43'17", Morris County, Hydrologic Unit 11140305, at pumphouse of Lone Star Steel Co., on left bank 1,700 ft upstream from Ellison Creek Dam on Ellison Creek, 0.6 mi upstream from Big Cypress Creek, and 1.4 mi southwest of Lone Star.

DRAINAGE AREA.--37.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1943 to September 1962 (published as "near Daingerfield"), January 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1943, staff gage at site just upstream from dam at datum 200 ft lower.

REMARKS.--The reservoir is formed by a rolled earthfill dam 4,000 ft long, with an uncontrolled concrete spillway 300 ft long at the left end of dam. Deliberate impoundment began Jan. 14, 1943, and the dam was completed in April 1943. Another spillway is cut through natural ground near the right end of dam. In addition, there is a relief dam, approximately 125 ft long, located near the reservoir pumphouse that can be breached if the other spillways are unable to release sufficient floodwater. There is a 36-inch-diameter conduit through the dam that is used for pumping water from Big Cypress Creek into the reservoir and can also be used to discharge water from the reservoir into Big Cypress Creek. The dam is owned by Lone Star Steel Co. The company diverts water from the lake for cooling purposes and returns most of the water to the lake. Area capacity curves are based on a survey made in 1942. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	280.1	-
Design flood	275.1	36,600
Crest of spillway	273.1	33,000
Crest of concrete spillway	268.1	24,700
Lowest gated outlet (invert)	235.1	196

COOPERATION.--Capacity table and area-capacity curves were furnished by Lone Star Steel Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,240 acre-ft Apr. 26, 1958 (elevation, 272.11 ft); minimum since lake first filled in May 1944, 15,760 acre-ft Dec. 24, 1975 (elevation, 261.28 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,520 acre-ft Feb. 12 (elevation, 268.68 ft); minimum, 20,540 acre-ft Sept. 30 (elevation, 265.24 ft).

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

265.0	20,230	268.0	24,470
266.0	21,540	269.0	26,020
267.0	22,970		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23200	23510	23060	23920	24700	24660	24920	24920	23980	22960	22540	21150
2	23210	23510	23170	23900	24730	24640	24950	24890	23960	22940	22480	21100
3	23200	23530	23450	23900	24750	24640	24920	24830	23960	22930	22420	21090
4	23200	23570	23510	23860	24780	24750	24860	24780	23890	22840	22460	21040
5	23180	23450	23570	23810	24780	24810	24840	24720	23870	23020	22370	21010
6	23140	23290	23560	23770	24780	24750	24810	24660	23960	22990	22250	21060
7	23120	23230	23530	23720	24750	24720	24870	24610	23930	22990	22140	20980
8	23170	23270	23480	23680	24800	24700	24900	24530	23900	22990	22000	20870
9	23180	23320	23440	23680	24870	24610	24870	24470	23840	22960	21890	20830
10	23170	23320	24080	23740	24870	24560	24920	24410	23830	22940	21820	20830
11	23210	23380	24230	23680	25230	24630	24900	24380	23750	22910	21790	20800
12	23200	23360	24250	23620	25510	24870	24870	24370	23710	22910	21780	20790
13	23170	23350	24250	23650	25290	24870	24840	24350	23660	22930	21720	20760
14	23150	23320	24230	23710	25110	24840	24810	24340	23620	22910	21680	20750
15	23170	23300	24220	23750	25030	24860	24800	24310	23540	22910	21670	20790
16	23200	23290	24340	23810	24950	24890	24760	24290	23500	22900	21640	20820
17	23230	23290	24370	23890	24890	24900	24730	24250	23470	22900	21600	20740
18	23270	23320	24400	23950	24900	24870	24730	24200	23440	22880	21580	20670
19	23290	23530	24400	23980	24870	24830	24730	24190	23380	22820	21600	20660
20	23300	23390	24380	24040	24840	24760	24810	24230	23320	22750	21600	20660
21	23350	23240	24400	24080	24810	24730	24860	24260	23240	22720	21580	20670
22	23390	23260	24380	24160	24780	24760	24870	24250	23170	22700	21510	20700
23	23410	23450	24350	24280	24720	24800	24860	24250	23110	22660	21440	20720
24	23420	23560	24310	24340	24720	24810	24830	24220	23060	22580	21370	20740
25	23420	23510	24260	24400	24660	24840	24810	24190	23020	22720	21350	20710
26	23420	23420	24260	24430	24560	24830	24830	24170	23050	22670	21340	20690
27	23410	23360	24190	24470	24590	25010	24840	24170	23030	22690	21310	20630
28	23420	23240	24110	24530	24670	24920	24860	24220	23020	22720	21300	20580
29	23450	23150	24070	24610	24700	24900	24870	24170	23000	22640	21270	20560
30	23480	23110	24020	24670	---	24890	24870	24130	22970	22600	21240	20540
31	23510	---	23980	24690	---	24920	---	24070	---	22600	21190	---
MAX	23510	23570	24400	24690	25510	25010	24950	24920	23980	23020	22540	21150
MIN	23120	23110	23060	23620	24560	24560	24730	24070	22970	22580	21190	20540
(†)	267.36	267.09	267.67	268.14	268.15	268.29	268.26	267.73	267.00	266.75	265.74	265.24
(‡)	+300	-400	+870	+710	+10	+220	-50	-800	-1100	-370	-1410	-650

CAL YR 1983 MAX 25650 MIN 21690 ‡ -1000
WTR YR 1984 MAX 25510 MIN 20540 ‡ -2670

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

07345500 ELLISON CREEK RESERVOIR NEAR LONE STAR, TX--Continued

.WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
APR 26...	1730	371	20.5	110	70	33	6.8	23

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR 26...	1	8.2	41	79	30	1.3	1.0	210

07345900 LAKE O' THE PINES NEAR JEFFERSON, TX

LOCATION.--Lat 32°45'04", long 94°29'59", Marion County, Hydrologic Unit 11140305, on left bank 1,500 ft upstream from left end of Ferrell's Bridge Dam on Big Cypress Creek, on Farm Road 726, 9.0 mi west of Jefferson, and 80.1 mi upstream from mouth.

DRAINAGE AREA.--850 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1957, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 10,600 ft long, including a 200-foot-wide concrete spillway. Impoundment of water began Aug. 21, 1957, and the dam was completed June 25, 1958. Official operation began Dec. 11, 1959. The flood-control outlet works consist of two 10.0-foot-diameter conduits that are controlled by two 8.0- by 12.5-foot electrically driven broome-type gates. The low-flow outlet works consist of a controlled 14-inch pipe. Flow over the spillway is discharged into a 2,000-foot-long rectified channel and then into Cypress Creek. The capacity table is based on a survey made in 1950. The lake was built for flood control, conservation, and water supply. During the current year, an unknown amount of water was diverted from the lake for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	277.0	-
Crest of spillway	249.5	842,100
Top of conservation pool	228.5	254,900
Crest of intake to wet well (14 in)	202.5	5,760
Lowest gated outlet (invert)	200.0	2,860

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 694,360 acre-ft May 5, 1966 (elevation, 245.41 ft); minimum since December 1959, 212,100 acre-ft Sept. 30, 1984 (elevation, 226.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 276,000 acre-ft Feb. 27 at 1600 hours (elevation, 229.61 ft); minimum daily, 212,100 acre-ft Sept. 30 (elevation, 226.10 ft).

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

226.0	107,000	230.0	283,700
228.0	245,600	232.0	324,800

CONTENTS, IIN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254800	248200	246700	255600	257300	273100	267900	260500	252400	243000	231000	222200
2	254300	248000	249600	255800	258600	273100	267700	260300	251900	242500	230600	221700
3	254100	248000	250900	255800	258400	272900	267900	260900	251500	241900	230100	221000
4	254100	248000	250400	256000	258400	275600	267900	260100	250900	241600	230300	220700
5	253900	247400	250400	256000	257800	276000	266800	259700	250800	242300	229900	220500
6	253200	248000	250800	256000	257300	275800	263700	259900	251100	242100	229900	220000
7	253000	247800	250200	256000	257500	274500	263500	260900	251100	241400	229600	219100
8	253200	247400	250200	256000	257500	273900	263500	260500	251100	241200	229400	218600
9	253200	247200	250200	256000	258000	272300	262600	259700	251100	240300	229200	218100
10	253000	247400	252400	257800	258800	271900	264300	258800	250900	240000	230800	217600
11	253500	247200	254100	257700	262200	275100	264500	258600	250400	239600	230600	217200
12	253500	247100	252200	257800	266600	272300	264800	258400	250400	239400	230100	216700
13	252200	245600	253400	257700	268100	272100	264700	258400	250200	239000	229800	216400
14	251300	246500	253400	257700	269400	271800	264500	258000	250000	238500	230100	215700
15	251300	246000	253000	257700	270800	271900	263500	257300	249500	238500	228900	215300
16	251300	245200	253200	257700	271600	272500	263300	256700	248900	238100	228700	215300
17	251300	244500	253500	258000	271200	272900	261800	256200	248500	237800	228000	215200
18	251300	244100	254100	258200	272300	273700	261100	255800	248400	237100	227800	214700
19	251100	247400	253500	257700	272300	273700	260700	256200	247800	236200	227500	214300
20	250600	246500	254300	258400	271800	271900	260300	256500	247400	235800	226600	213800
21	251900	246100	253900	258000	271600	271600	262000	256500	247200	235100	226600	214200
22	251500	246900	256200	257500	271200	268700	261200	256000	246900	234600	226100	214500
23	250600	248500	254100	258600	271000	269100	260500	255800	246100	234200	225700	214000
24	250400	247800	254100	258400	270800	268500	259500	255000	245800	233800	225000	213800
25	250200	246700	253200	258400	269400	267300	259000	255000	245200	233700	224700	214000
26	250000	248500	252600	258400	271900	268500	259200	254800	244900	234400	224000	214200
27	249500	248500	253200	258600	275600	270800	261400	254800	244700	234400	223800	213500
28	249100	248000	253200	258600	274500	272900	260900	255200	244500	233300	223600	212800
29	248900	247200	253500	258800	273700	270600	261600	254500	244000	232600	223400	212300
30	248900	247100	252800	258200	---	269800	260500	253400	243200	232200	223300	212500
31	248500	---	252800	257500	---	269100	---	253000	---	231500	222800	--
MAX	254800	248500	256200	258800	275600	276000	267900	260900	252400	243000	231000	222200
MIN	248500	244100	246700	255600	257300	267300	259000	253000	243200	231500	222800	212300
(†)	228.16	228.03	228.39	228.64	229.49	229.25	228.80	228.40	227.87	227.22	226.72	226.12
(‡)	-6700	-1400	+5700	+4700	+16200	-4600	-8600	-7500	-9800	-11700	-8700	-10300

CAL YR 1983 MAX 337300 MIN 244100 ‡ -79500
WTR YR 1984 MAX 276000 MIN 212300 ‡ -42700

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

07345900 LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to September 1984 (discontinued).

324509094303901 LAKE O'THE PINES SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
15...	0810	1.00	149	6.8	9.0	10.4	91
15...	0811	10.0	149	6.7	8.5	10.4	90
15...	0812	20.0	149	6.7	8.0	10.4	89
15...	0813	30.0	149	6.6	8.0	10.2	87
15...	0814	40.0	149	6.6	8.0	10.2	87
MAY							
31...	1030	1.00	143	6.9	24.5	7.1	85
31...	1032	10.0	143	6.9	24.0	7.0	83
31...	1034	20.0	143	6.8	24.0	6.7	79
31...	1036	27.0	143	6.8	24.1	6.4	76
AUG							
08...	1030	1.00	162	6.9	28.0	6.7	85
08...	1031	10.0	162	6.9	28.0	6.5	83
08...	1032	20.0	163	6.6	27.5	4.6	58
08...	1033	25.0	165	6.6	26.5	1.4	17
08...	1034	31.0	180	6.9	25.5	.2	2

324518094300801 LAKE O'THE PINES SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
FEB										
15...	0745	1.00	149	6.8	9.0	2.10	10.4	91	K16	K17
15...	0746	3.40	--	--	--	--	--	--	--	--
15...	0747	10.0	149	6.7	8.5	--	10.4	90	--	--
15...	0748	20.0	149	6.7	8.0	--	10.4	89	--	--
15...	0749	30.0	149	6.6	8.0	--	10.2	87	--	--
15...	0750	40.0	149	6.6	8.0	--	10.2	87	--	--
15...	0751	48.0	149	6.6	8.0	--	10.2	87	--	--
MAY										
31...	1010	1.00	143	6.8	24.0	2.10	7.0	83	K9	K6
31...	1011	3.50	--	--	--	--	--	--	--	--
31...	1012	10.0	143	6.8	24.0	--	7.1	84	--	--
31...	1014	20.0	143	6.6	24.0	--	7.1	84	--	--
31...	1015	25.0	143	6.5	23.5	--	6.3	74	--	--
31...	1016	30.0	148	6.5	22.0	--	2.0	23	--	--
31...	1018	36.0	148	6.6	21.5	--	1.4	16	--	--
AUG										
08...	0954	1.00	162	7.0	28.0	1.80	6.8	87	22	190
08...	0956	10.0	162	7.0	28.0	--	6.6	84	--	--
08...	0957	20.0	164	6.6	27.0	--	3.8	48	--	--
08...	0958	25.0	166	6.6	26.5	--	1.8	22	--	--
08...	0959	30.0	190	7.0	24.5	--	.2	2	--	--
08...	1000	37.0	197	7.1	23.5	--	.2	2	--	--

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

324518094300801 LAKE O'THE PINES SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
FEB									
15...	29	18	5.4	3.8	14	1	4.0	11	27
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	29	18	5.7	3.6	14	1	4.1	11	27
MAY									
31...	31	20	6.0	4.0	15	1	4.1	11	25
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	31	14	6.2	3.8	15	1	3.9	17	22
AUG									
08...	32	21	6.1	4.0	15	1	4.2	11	26
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	35	0	7.4	4.1	15	1	4.3	48	18

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
15...	17	.20	8.9	87	<.10	.30	.010	29	2
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	<.10	.50	.020	70	<10
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	18	--	8.9	88	<.10	.30	.010	26	11
MAY									
31...	18	.20	6.5	85	<.10	.90	.010	10	26
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	<.10	.70	.010	30	110
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	<.10	1.2	.060	140	680
31...	18	--	8.1	89	<.10	1.1	.010	18	1400
AUG									
08...	19	.20	7.4	89	<.10	.60	<.010	39	130
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	<.10	.40	.020	60	580
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	<.10	1.4	.020	200	7300
08...	18	--	11	110	<.10	1.4	.050	760	--

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

324613094323001 LAKE O'THE PINES SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
15...	0835	1.00	149	6.8	9.5	1.80	10.4
15...	0836	10.0	149	6.8	9.0	--	10.3
15...	0837	20.0	149	6.7	9.0	--	10.3
15...	0838	30.0	149	6.6	8.0	--	10.1
15...	0839	40.0	149	6.6	8.0	--	10.1
15...	0840	45.0	149	6.6	8.0	--	10.1
MAY							
31...	1050	1.00	145	6.9	24.5	2.10	7.3
31...	1052	10.0	145	6.8	24.5	--	7.1
31...	1054	20.0	145	6.6	24.0	--	7.1
31...	1055	25.0	145	6.5	24.0	--	4.2
31...	1056	30.0	145	6.4	23.0	--	2.7
31...	1058	38.0	150	6.4	22.5	--	1.3
AUG							
08...	1053	1.00	163	6.9	28.0	1.90	6.7
08...	1054	10.0	163	6.9	27.5	--	6.6
08...	1055	20.0	163	6.9	27.5	--	6.2
08...	1056	25.0	168	6.7	27.0	--	3.2
08...	1057	30.0	188	6.9	25.0	--	.2
08...	1058	45.0	201	7.1	23.5	--	.2

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB						
15...	92	<.10	.40	.020	120	<10
15...	90	--	--	--	--	--
15...	90	<.10	.40	.020	160	10
15...	86	--	--	--	--	--
15...	86	--	--	--	--	--
15...	86	<.10	.40	.010	120	10
MAY						
31...	87	<.10	1.0	.010	30	20
31...	85	<.10	.60	.010	10	40
31...	84	--	--	--	--	--
31...	50	--	--	--	--	--
31...	31	<.10	.70	.010	40	490
31...	15	<.10	1.0	.010	160	1100
AUG						
08...	85	<.10	.30	.020	80	110
08...	83	--	--	--	--	--
08...	78	<.10	.50	<.010	80	240
08...	40	--	--	--	--	--
08...	2	<.10	1.1	.030	660	5600
08...	2	<.10	2.0	.050	3800	7400

324738094325101 LAKE O'THE PINES SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
15...	0945	1.00	145	6.6	10.5	9.3	84
15...	0946	10.0	146	6.6	10.0	9.7	87
15...	0947	22.0	149	6.6	9.0	9.9	86
MAY							
31...	1110	1.00	144	6.8	24.5	6.9	82
31...	1111	5.00	144	6.8	24.5	6.7	80
31...	1114	20.0	144	6.6	24.0	5.7	68
31...	1116	23.0	144	6.5	24.0	3.6	43
AUG							
08...	1222	1.00	163	6.9	29.0	6.8	88
08...	1223	10.0	163	6.9	28.5	6.5	84
08...	1224	18.0	163	6.9	28.5	6.3	81

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

324806094350001 LAKE O'THE PINES SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
15...	0925	1.00	142	6.8	10.5	9.9	90
15...	0926	10.0	147	6.7	10.0	10.0	89
15...	0927	20.0	147	6.7	10.0	10.0	89
15...	0928	25.0	147	6.7	10.0	10.0	89
MAY							
31...	1130	1.00	137	6.8	24.5	6.9	82
31...	1132	10.0	140	6.8	24.0	6.6	78
AUG							
08...	1158	1.00	164	6.8	29.0	6.8	88
08...	1159	10.0	164	6.8	28.5	6.3	81
08...	1200	19.0	164	6.6	28.5	5.8	75

324726094363801 LAKE O'THE PINES SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
FEB									
15...	0900	1.00	150	6.8	10.0	2.40	9.9	89	K1
15...	0901	10.0	150	6.8	10.0	--	9.9	89	--
15...	0902	20.0	150	6.8	10.0	--	9.9	89	--
15...	0903	32.0	150	6.7	10.0	--	9.9	89	--
MAY									
31...	1150	1.00	151	7.0	24.5	2.10	7.1	85	K3
31...	1152	10.0	151	7.0	24.5	--	7.1	85	--
31...	1154	20.0	152	6.9	24.5	--	6.9	82	--
31...	1156	26.0	152	6.8	24.5	--	6.9	82	--
AUG									
08...	1126	1.00	168	6.8	28.5	1.50	6.6	85	<2
08...	1127	10.0	168	6.7	28.0	--	6.4	82	--
08...	1128	20.0	168	6.7	28.0	--	6.3	80	--
08...	1129	27.0	168	6.6	28.0	--	5.6	71	--

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)
FEB									
15...	K12	29	18	5.3	3.8	14	1	4.2	11
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	29	18	5.3	3.8	14	1	4.1	11
MAY									
31...	K8	33	21	6.6	4.1	15	1	4.3	12
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	34	21	6.8	4.1	16	1	4.2	13
AUG									
08...	28	31	21	5.8	4.1	16	1	4.4	10
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	32	21	5.9	4.1	16	1	4.4	11

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

324726094363801 LAKE O'THE PINES SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB									
15...	28	18	7.1	87	<.10	.40	.010	18	2
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	26	18	7.1	85	<.10	.40	.020	41	2
MAY									
31...	28	19	6.2	90	<.10	.70	.010	13	9
31...	--	--	--	--	<.10	.50	.010	30	20
31...	--	--	--	--	<.10	.70	.020	30	20
31...	28	19	6.2	92	<.10	.60	.020	19	11
AUG									
08...	27	20	3.1	86	<.10	.60	<.010	40	26
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	<.10	.50	<.010	40	40
08...	27	20	3.7	88	<.10	.50	.020	58	200

325100094420301 LAKE O'THE PINES SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB									
15...	1230	1.00	218	6.9	13.5	1.80	8.0	78	30
15...	1231	2.90	--	--	--	--	--	--	--
15...	1232	10.0	218	6.9	13.5	--	8.0	78	--
15...	1233	21.0	218	6.8	13.5	--	8.0	78	--
MAY									
31...	0850	1.00	213	8.1	23.5	2.00	7.3	86	K11
31...	0851	3.20	--	--	--	--	--	--	--
31...	0852	10.0	213	8.1	23.5	--	7.3	86	--
31...	0853	15.0	213	7.9	23.5	--	7.1	83	--
31...	0854	21.0	213	7.6	23.0	--	7.1	83	--
AUG									
08...	1420	1.00	212	8.2	28.0	.50	6.7	85	21
08...	1422	5.00	227	7.5	27.5	--	5.2	66	--
08...	1423	10.0	229	6.9	27.0	--	2.7	34	--
08...	1424	19.0	231	6.9	27.0	--	2.7	34	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)
FEB									
15...	K14	48	26	12	4.5	19	1	5.6	23
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	48	26	12	4.5	19	1	5.3	23
MAY									
31...	K5	48	26	11	5.1	22	1	4.2	23
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	51	28	12	5.0	22	1	4.1	23
AUG									
08...	K2500	41	11	9.0	4.6	20	1	4.9	30
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	51	12	12	5.1	23	1	5.2	39

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

325100094420301 · LAKE O'THE PINES SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB									
15...	38	24	.6	120	<.10	1.4	.040	49	31
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	40	24	.7	120	<.10	.70	.030	51	31
MAY									
31...	36	27	6.5	130	<.10	.90	.030	77	18
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	<.10	.70	.030	90	40
31...	--	--	--	--	--	--	--	--	--
31...	36	27	6.3	130	<.10	1.3	.040	80	29
AUG									
08...	24	27	12	120	<.10	1.8	.130	170	84
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	<.10	2.1	.120	80	80
08...	22	30	13	130	<.10	1.9	.100	54	120

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O'the Pines AC (324518094300801)

Phytoplankton Analyses October 1983 to September 1984

Date	2-15-84
Time	0746
TOTAL CELLS/ml	4630
NUMBER OF SPECIES	44
DEPTH COLLECTED (ft.)	3.4

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	300
Ankistrodesmus falcatus	10
Ankistrodesmus falcatus var. mirabilis	20
Chlamydomonas sp.	10
Closteriopsis longissima	10
Closterium gracile	10
Dictyosphaerium sp.	P
Scenedesmus	60
Sphaerocystis schroeteri	10
Unicellular coccoid	10
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon cylindricum	20
Mallomonas sp.	10
Unicellular flagellate	10
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	2070
Chroococcus sp.	290
Dactylococcopsis raphidioides	20
Gloeothece linearis	990
Gomphosphaeria sp.	200
Pseudoanabaena sp.	30
Synechocystis sp.	140
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	50
Melosira distans	10
Melosira tirata	130
Melosira varians	10
Melosira sp.	10
Order Pennales	
Achnanthes lanceolata var. dubia	10
Achnanthes minutissima	10
Capartogramma crucicula	10
Cocconeis placentula	10
Cymbella minuta	10
Diploneis sp.	10
Eunotia glacialis	10
Fragilaria capucina	20
Fragilaria vaucheriae	10
Gomphonema sp.	10
Navicula flopangensis	10
Nitzschia acicularis	10
Nitzschia microcephala	10
Nitzschia paleacea	10
Nitzschia sp.	10
Surirella ovata	10
Synedra acus	10
Synedra minuscula	10
Synedra rumpens var. scotia	10

P = Species observed after counts completed.

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O'The Pines AC (324518094300801)

Phytoplankton Analyses October 1983 to September 1984

Date	5-31-84
Time	1011
TOTAL CELLS/ml	120,523
NUMBER OF SPECIES	46
DEPTH COLLECTED (ft.)	3.5

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	63
Ankistrodesmus falcatus	63
Chlamydomonas sp.1	63
Chlamydomonas sp.2	63
Dictyosphaerium ehrenbergianum	2875
Gloeocystis gigas	1813
Scenedesmus minimum	125
Sphaerocystis schroeteri	625
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	31563
Aphanocapsa elachista	7563
Aphanothece saxicola	56875
Aphanothece sp.	1438
Chroococcus multicoloratus	313
Chroococcus pallidus	438
Microcystis aeruginosa	6813
Microcystis marginata	9688
Microcystis pulverea	1000
Synechococcus aeruginosa	250
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	375
Dinobryon sp.	63
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella glomerata	63
Cyclotella meneghiniana	63
Cyclotella stelligera	438
Melosira granulata	63
Melosira islandica	315
Melosira lirata	188
Stephanodiscus dubius	188
Order Pennales	
Achnantnes linearis	10
Achnanthes microcephala	24
Achnanthes minutissima	28
Achnanthes peragalli	4
Capartogramma crucicula	4
Cocconeis placentula	6
Cymbella angustata	4
Cymbella minuta	2
Fragilaria sp.	2
Navicula canalis	4
Navicula cryptocephala	4
Navicula elginensis	10
Navicula minuscula	2
Nitzschia acicularis	2
Nitzschia amphibia	18
Nitzschia latens	2
Nitzschia paleacea	6
Synedra fasciculata	2
Synedra ulna	2

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O' the Pines AC (324518094300801)

Phytoplankton Analyses October 1983 to September 1984

Date	8-8-84
Time	0955
TOTAL CELLS/ml	35,215
NUMBER OF SPECIES	21
DEPTH COLLECTED (ft.)	3.0

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlamydomonas sp.	114
Gloeocystis sp.	114
Nephrocytium sp.	227
Schroederia setigera	455
Sphaerocystis schroeteri	227
CYANOPHYTA (Blue-green algae)	
Anabaenopsis raciborskii	1932
Aphanocapsa delicatissima	13068
Chroococcus pallidus	114
Dactylococcopsis acicularis	227
Lygnbya nana	13068
Synechococcus aeruginosa	682
Synechococcus lineare	568
EUGLENOPHYTA (Euglenoids)	
Gonyostomum semen	227
PYRROPHYTA (Dinoflagellates)	
Peridinium sp.	114
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	1250
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	114
Melosira distans	1236
Rhizosolenia eriensis	114
Order Pennales	
Navicula pupula	1136
Synedra delicatissima	114
Synedra rumpens var. scotia	114

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O'the Pines FC (325100094420301)

Phytoplankton Analyses October 1983 to September 1984

Date	2-15-84
Time	1231
TOTAL CELLS/ml	7360
NUMBER OF SPECIES	36
DEPTH COLLECTED (ft.)	2.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. mirabilis	30
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	300
Aphanocapsa delicatissima	700
Chroococcus sp.	1180
Dactylococcopsis raphidioides	480
Gomphosphaeria sp.	250
Oscillatoria limnetica	600
Oscillatoria sp.	P
Pseudoanabaena sp.	530
Synechococcus elongatus	1600
Synechocystis sp.	100
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	80
Melosira granulata	30
Stephanodiscus astrea	110
Stephanodiscus hantzschii	110
Stephanodiscus tenuis	160
Order Pennales	
Achnanthes lanceolata var. dubia	50
Cocconeis fluviatilis	20
Cocconeis pediculus	20
Cocconeis placentula	50
Cymbella minuta	60
Fragilaria vaucheriae	120
Gomphonema olivaceum	20
Gyrosigma spencerii	30
Navicula capitata	50
Navicula confervacea	80
Navicula cryptocephala var. veneta	20
Navicula grimmei	30
Nitzschia acicularis	20
Nitzschia frustulum	60
Nitzschia latens	20
Nitzschia microcephala	20
Nitzschia palea	230
Nitzschia paleacea	20
Synedra rumpens	120
Synedra tenera	60

P = Species observed after counts completed.

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O'The Pines FC (325100094420301)

Phytoplankton Analyses October 1983 to September 1984

Date	5-31-84
Time	0851
TOTAL CELLS/ml	78,176
NUMBER OF SPECIES	41
DEPTH COLLECTED (ft.)	3.2

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Scenedesmus minimum	125
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	58813
Aphanocapsa elachista	125
Aphanothece sp.	1688
Chroococcus multicoloratus	500
Chroococcus pallidus	563
Dactylococcopsis raphidioides	125
Microcystis pulverea	15000
Synechococcus aeruginosa	563
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella glomerata	45
Cyclotella meneghiniana	18
Cyclotella pseudostelligera	63
Cyclotella stelligera	135
Cyclotella sp.	14
Melosira granulata var. angustissima	90
Melosira sp.	14
Stephanodiscus dubius	121
Order Pennales	
Achnanthes lanceolata	1
Achnanthes lanceolata var. dubia	6
Bacillaria paradoxa	1
Cocconeis placentula	125
Cocconeis sp.	4
Denticula sp.	2
Diploneis sp.	1
Eunotia sp.	1
Fragilaria leptostauron	1
Fragilaria virescens	1
Gomphonema brasiliense	2
Gyrosigma spencerii	3
Navicula capitata	2
Navicula cryptocephala	2
Navicula minuscula	1
Navicula radiosa var. parva	1
Nitzschia amphibia	5
Nitzschia denticula	4
Nitzschia fonticola	1
Nitzschia ignorata	1
Nitzschia latens	3
Nitzschia paleacea	3
Nitzschia sigma	2
Nitzschia sp.	1

LAKE O' THE PINES NEAR JEFFERSON, TX--Continued

Lake O' the Pines FC (325100094420301)

Phytoplankton Analyses October 1983 to September 1984

Date	8-8-84
Time	1421
TOTAL CELLS/ml	680,379
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	0.8

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Closterium sp.	114
Coelastrum sp.	57
Kirchneriella contorata	114
Oocystis parva	1591
Scenedesmus arcuatus var. platodisca	1364
Schroederia setigera	114
Tetraedron sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaena catenata	7500
Anabaena circinalis	13750
Anabaena spiroides	8295
Anabaena torulosa	7500
Anabaenopsis raciborskii	1364
Aphanocapsa delicatissima	455
Aphanocapsa elachista	114
Chroococcus pallidus	568
Chroococcus varius	7727
Dactylococcopsis acicularis	114
Dactylococcopsis irregularis	114
Microcystis sp.	P
Oscillatoria princeps	624750
Oscillatoria tenuis	3977
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	114
Phacus sp.	114
Trachelomonas volvocina	227
BACILLARIOPHYTA (Diatoms)	
Order Pennales	
Cocconeis placentula	114
Navicula circumtexta	38
Navicula symmetrica	38
Navicula sp.	38

P = Species observed after counts completed.

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX

LOCATION.--Lat 32°44'58", long 94°29'55", Marion County, Hydrologic Unit 11140306, on left bank 950 ft downstream from Ferrell's Bridge Dam, 7.6 mi upstream from French Creek, and 8.5 mi west of Jefferson.

DRAINAGE AREA.--850 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to September 1959 (published as Cypress Creek), October 1979 to current year. Records of stage and discharge for the period October 1959 to September 1979 published by the Corps of Engineers, New Orleans District.

GAGE.--Water-stage recorder. Datum of gage is 180.00 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Nov. 2, 1933, staff gage, and Nov. 2, 1933, to Dec. 8, 1955, water-stage recorder, at site about 950 ft upstream at datum 3.70 ft higher. After Dec. 9, 1955, at site about 550 ft downstream or at present site at datum 180.00 ft lower. Gage-height telemeter located at station.

REMARKS.--Water-discharge records good. Flow regulated by Lake O' the Pines (station 07345900) since August 1957.

AVERAGE DISCHARGE.--33 years (water years 1925-57), prior to completion of Ferrells Bridge Dam, 660 ft^3/s (478,200 acre-ft/yr); 7 years (water years 1958-59, 1980-84) regulated, 630 ft^3/s (456,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft^3/s Apr. 1, 1945 (gage height, 28.78 ft, site and datum then in use), from rating curve extended above 29,000 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 626 ft^3/s Mar. 17 at 1515 hours (gage height, 12.18 ft); minimum daily, 33 ft^3/s June 3-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	42	37	42	44	192	586	48	34	38	41	38
2	44	42	39	42	41	194	587	48	34	38	41	38
3	44	42	44	42	43	194	587	48	33	38	41	39
4	44	42	39	42	47	194	584	45	33	40	41	39
5	44	42	38	42	47	328	583	46	33	41	41	40
6	42	41	37	43	45	581	583	47	33	41	41	40
7	43	41	48	43	42	595	446	47	33	41	41	40
8	43	41	52	44	42	593	280	54	36	41	42	40
9	43	42	46	44	44	591	271	55	36	40	41	40
10	42	41	58	44	44	589	270	51	36	40	41	40
11	43	41	54	44	45	589	276	51	36	41	41	39
12	43	41	49	44	159	600	274	50	37	41	41	39
13	42	41	47	44	109	604	273	49	37	41	41	39
14	42	41	46	44	116	600	280	49	38	41	41	39
15	42	40	46	44	198	598	280	49	38	41	41	39
16	42	41	46	44	199	601	279	48	39	41	41	38
17	42	40	45	44	197	622	275	48	39	41	41	39
18	42	40	45	44	203	623	212	48	40	41	41	39
19	42	41	45	44	210	609	52	47	40	36	40	39
20	42	40	45	44	206	593	51	48	40	41	40	39
21	43	39	46	44	193	589	50	50	41	44	40	40
22	43	42	44	45	193	589	49	50	41	44	40	41
23	42	47	44	43	194	588	51	52	40	44	39	40
24	42	40	43	40	193	596	52	45	40	44	39	39
25	42	39	43	40	192	595	53	34	40	43	39	39
26	42	39	43	40	206	594	50	34	40	43	39	39
27	42	39	43	40	227	602	50	34	38	43	38	38
28	42	38	43	41	212	616	49	34	39	43	38	38
29	42	38	43	42	194	596	49	34	39	42	38	39
30	42	38	42	41	---	589	51	34	38	41	38	39
31	42	---	42	44	---	585	---	34	---	41	38	---
TOTAL	1319	1221	1382	1328	3885	16629	7533	1411	1121	1275	1245	1175
MEAN	42.5	40.7	44.6	42.8	134	536	251	45.5	37.4	41.1	40.2	39.2
MAX	44	47	58	45	227	623	587	55	41	44	42	41
MIN	42	38	37	40	41	192	49	34	33	36	38	38
AC-FT	2620	2420	2740	2630	7710	32980	14940	2800	2220	2530	2470	2330

CAL YR 1983 TOTAL 157948 MEAN 433 MAX 2690 MIN 34 AC-FT 313300
WTR YR 1984 TOTAL 39524 MEAN 108 MAX 623 MIN 33 AC-FT 78400

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemial and biochemical analyses: January 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
FEB 15...	1030	195	149	6.9	8.5	<1	2.7	10.1	87	1.1	31
MAY 31...	1310	34	144	7.1	25.5	14	1.2	7.7	94	1.2	30
AUG 08...	0830	42	166	7.0	26.0	12	.80	7.2	89	1.1	32

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB 15...	20	6.0	3.8	14	1	4.0	11	26	18	.20	8.9
MAY 31...	19	5.7	3.8	14	1	4.2	11	25	18	.20	7.0
AUG 08...	16	6.3	3.9	15	1	4.1	16	26	17	.20	7.5

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 15...	88	<2	<2	<.010	<.10	.040	.36	.40	.020	5.0
MAY 31...	85	<2	<2	<.010	<.10	.020	.68	.70	.020	5.0
AUG 08...	90	8	3	<.010	<.10	.090	.51	.60	.020	5.1

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
FEB 15...	1030	<1	52	1	<10	2	21
MAY 31...	1310	<1	61	<1	<10	<1	5
AUG 08...	0830	<1	53	1	<10	2	19

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
FEB 15...	<1	3	<.1	<1	<1	41
MAY 31...	2	29	<.1	<1	<1	9
AUG 08...	<1	320	<.1	<1	<1	94

07346045 BLACK CYPRESS BAYOU AT JEFFERSON, TX

LOCATION.--Lat 32°46'40", long 94°21'26", Marion County, Hydrologic Unit 11140306, near center of channel at downstream side of bridge on U.S. Highway 59, 1.1 mi north of Jefferson, 2.0 mi upstream from Texas and Pacific Railway Co. bridge, and 5.2 mi upstream from mouth.

DRAINAGE AREA.--365 mi^2.

PERIOD OF RECORD.--September 1968 to current year. May 1938 to September 1955 (daily gage heights) and November 1956 to August 1968 (daily gage heights and discharge measurements) published by Corps of Engineers as "Black Cypress Creek at Jefferson". September 1964 to August 1968 operated as low-flow partial-record station only.
Water-quality records.--Chemical analyses: October 1967 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 171.47 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. No known regulation or diversion in vicinity of gage. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--16 years (water years 1969-84), 319 ft^3/s (11.87 in/yr), 231,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft^3/s Apr. 25, 1974 (gage height, 17.69 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1938, 22.42 ft Apr. 29, 1958, from records of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 836 ft^3/s Feb. 17 at 1500 hours (gage height, 12.22 ft), no peak above base of 4,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	50	115	155	376	655	124	12	2.3	.00	.07
2	.01	.02	123	115	146	407	592	114	8.8	2.3	.00	.04
3	.01	.02	183	116	138	411	521	107	6.8	2.2	.00	.09
4	.02	.02	156	119	131	394	455	97	5.5	1.8	.00	.09
5	.04	.03	137	123	124	396	392	88	4.5	1.8	.00	.05
6	.03	.04	145	125	117	417	344	86	5.3	2.9	1.6	.04
7	.03	.08	166	124	113	415	310	90	9.8	3.0	26	.03
8	.03	.10	168	121	109	430	293	96	13	2.5	5.0	.03
9	.03	.12	148	122	115	470	280	92	14	2.5	2.5	.03
10	.03	.30	206	147	134	507	267	86	6.8	2.1	2.4	.02
11	.02	1.0	242	160	142	498	291	77	4.1	1.8	2.4	.01
12	.08	2.2	213	155	417	493	321	67	3.4	1.3	1.8	.00
13	.05	2.9	188	159	565	489	330	58	2.6	.91	1.4	.00
14	.04	3.5	201	174	532	460	336	49	3.4	.67	1.1	.00
15	.04	4.4	233	184	547	433	350	41	3.6	.57	.89	.00
16	.05	4.9	246	190	704	453	335	34	3.6	.43	.70	.00
17	.05	5.3	243	191	825	538	295	27	3.5	.38	.58	.00
18	.07	7.1	233	187	815	586	256	22	3.3	.37	.48	.00
19	.07	12	220	178	765	618	227	22	2.9	.32	.38	.00
20	.07	14	200	167	711	637	208	22	2.6	.28	.30	.00
21	.07	16	197	156	637	633	194	24	2.5	.20	.22	.00
22	.06	50	207	146	535	582	180	24	2.2	.14	.16	.05
23	.05	34	201	151	430	508	171	21	1.9	.11	.22	.07
24	.05	27	190	162	344	479	180	17	1.6	.07	.26	.03
25	.04	18	180	160	285	433	203	13	1.3	.04	.13	.02
26	.05	18	165	159	287	385	221	11	1.1	.03	.11	.01
27	.06	41	150	166	388	407	211	11	2.4	.01	.11	.01
28	.05	49	140	173	404	652	185	12	3.1	.01	.13	.01
29	.04	50	130	173	374	758	161	13	2.7	.00	.11	.01
30	.03	48	125	170	---	703	140	15	2.2	.00	.09	.00
31	.03	---	120	164	---	674	---	14	---	.00	.09	---
TOTAL	1.31	409.06	5506	4752	10989	15642	8904	1574	140.5	31.04	49.16	.71
MEAN	.042	13.6	178	153	379	505	297	50.8	4.68	1.00	1.59	.024
MAX	.08	50	246	191	825	758	655	124	14	3.0	26	.09
MIN	.01	.02	50	115	109	376	140	11	1.1	.00	.00	.00
CFSM	.000	.04	.49	.42	1.04	1.38	.81	.14	.01	.003	.004	.000
IN.	.00	.04	.56	.48	1.12	1.59	.91	.16	.01	.00	.01	.00
AC-FT	2.6	811	10920	9430	21800	31030	17660	3120	279	62	98	1.4

CAL YR 1983 TOTAL 93648.21 MEAN 257 MAX 1690 MIN .01 CFSM .70 IN 9.54 AC-FT 185800
WTR YR 1984 TOTAL 47998.78 MEAN 131 MAX 825 MIN .00 CFSM .36 IN 4.89 AC-FT 95210

07346050 LITTLE CYPRESS CREEK NEAR ORE CITY, TX

LOCATION.--Lat 32°40'21", long 94°45'03", Upshur County, Hydrologic Unit 11140307, on right bank at downstream side of bridge on U.S. Highway 259, 4 mi downstream from Clear Creek, 9 mi south of Ore City, and 12 mi north of Longview.

DRAINAGE AREA.--383 mi².

PERIOD OF RECORD.--December 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 232.67 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No known diversion above station. During the year, the city of Gilmer discharged a small amount of sewage effluent into a tributary above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1964-84), 262 ft³/s (9.29 in/yr), 189,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft³/s Apr. 24, 1966 (gage height, 20.20 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902 occurred in March 1945; maximum stage since 1945, that of Apr. 24, 1966. The flood in April 1958 reached a stage of 19.4 ft, or 1.3 ft lower than the flood of March 1945 at a point 6 mi upstream, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 721 ft³/s Feb. 13 at 2400 hours (gage height, 8.74 ft), no peak above base of 2,000 ft³/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.25	23	56	56	201	676	22	12	.06	.00	.00
2	.08	.15	21	56	52	191	610	23	9.7	.04	.00	.00
3	.04	.13	38	56	51	165	451	25	7.6	.02	.00	.00
4	.02	.09	106	57	50	142	288	26	6.4	.00	.00	.00
5	.02	.06	109	59	48	238	195	31	5.5	.00	.00	.00
6	.00	.06	93	60	45	400	162	30	5.8	.00	.00	.00
7	.00	.08	82	57	43	415	143	25	6.5	.00	.00	.00
8	.00	.28	61	54	41	350	136	20	11	.00	.00	.00
9	.00	1.5	46	54	52	285	136	16	12	.01	.00	.00
10	.00	2.0	45	81	103	237	132	14	13	.02	.00	.00
11	.00	1.7	98	110	120	190	341	12	11	.00	.00	.00
12	.00	1.5	121	102	355	230	439	10	8.6	.00	.00	.00
13	.00	1.7	119	96	660	362	279	8.6	6.5	.00	.00	.00
14	.00	2.1	108	86	687	409	180	8.2	5.0	.00	.00	.00
15	2.5	2.4	91	76	547	384	149	7.2	3.8	.00	.00	.00
16	3.0	1.8	69	71	460	383	123	6.1	2.9	.00	.00	.00
17	2.6	1.8	67	69	445	429	102	5.7	2.2	.00	.00	.00
18	2.4	1.8	81	69	463	447	89	5.1	1.7	.00	.00	.00
19	1.7	2.6	95	68	438	386	79	4.8	1.4	.00	.00	.00
20	1.3	17	93	68	350	296	74	6.3	1.2	.00	.00	.00
21	1.0	50	89	68	239	218	71	38	1.0	.00	.00	.00
22	.70	31	84	67	166	166	65	96	.79	.00	.00	.00
23	.45	26	79	64	132	142	57	82	.62	.00	.00	.00
24	.35	31	75	77	113	188	49	78	.40	.00	.00	.00
25	1.8	33	71	81	101	237	41	48	.27	.00	.00	.00
26	2.6	26	68	78	128	218	35	26	.18	.00	.00	.00
27	2.6	21	65	77	296	239	32	17	.38	.00	.00	.00
28	1.9	24	62	71	289	537	29	14	1.2	.00	.00	.00
29	1.2	28	60	66	221	650	27	13	.22	.00	.00	.00
30	.80	25	58	64	---	668	25	12	.11	.00	.00	.00
31	.47	---	57	60	---	646	---	12	---	.00	.00	---
TOTAL	27.67	334.00	2334	2178	6751	10049	5215	742.0	138.97	.15	.00	.00
MEAN	.89	11.1	75.3	70.3	233	324	174	23.9	4.63	.005	.000	.000
MAX	3.0	50	121	110	687	668	676	96	13	.06	.00	.00
MIN	.00	.06	21	54	41	142	25	4.8	.11	.00	.00	.00
CFSM	.002	.03	.20	.18	.61	.85	.45	.06	.01	.000	.000	.000
IN.	.00	.03	.23	.21	.66	.98	.51	.07	.01	.00	.00	.00
AC-FT	55	662	4630	4320	13390	19930	10340	1470	276	.3	.00	.00

CAL YR 1983 TOTAL 79202.70 MEAN 217 MAX 2540 MIN .00 CFSM .57 IN 7.69 AC-FT 157100
WTR YR 1984 TOTAL 27769.79 MEAN 75.9 MAX 687 MIN .00 CFSM .20 IN 2.70 AC-FT 55080

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX

LOCATION.--Lat 32°42'50", long 94°20'44", Marion County, Hydrologic Unit 11140307, on downstream side of highway embankment near left end of bridge on U.S. Highway 59, 0.3 mi downstream from Texas and Pacific Railway Co. bridge, 3.3 mi downstream from Grays Creek, 3.5 mi south of Jefferson, and 6.8 mi upstream from mouth.

DRAINAGE AREA.--675 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 174.60 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1947, nonrecording gage at upstream side of bridge at same datum.

REMARKS.--Water-discharge records good. No known diversion above station, but some sewage effluents are discharge to tributaries above station. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--38 years (water years 1947-84), 511 ft^3/s (10.28 in/yr), 370,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,500 ft^3/s Apr. 26, 1966 (gage height, 22.28 ft); no flow at times. Maximum stage since May 1944, that of Apr. 26, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1944 reached a stage of 21.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft^3/s Dec. 11 at 2100 hours (gage height, 11.08 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.00	35	112	119	772	457	77	28	40	.08	.00
2	.05	.00	35	110	112	755	516	92	24	28	.08	.00
3	.05	.00	139	110	108	698	580	100	21	18	.08	.00
4	.07	.00	211	110	104	606	624	94	19	12	.08	.00
5	.09	.00	244	111	98	605	639	83	17	9.4	.08	.00
6	.08	.00	225	111	93	720	642	75	19	9.0	.62	.00
7	.07	.04	193	109	87	710	620	72	41	7.6	2.5	.00
8	.06	.04	157	105	85	647	564	157	45	5.6	3.7	.00
9	.05	.04	125	106	93	613	475	139	47	4.0	4.6	.00
10	.03	.04	312	135	111	606	377	108	46	2.8	2.7	.00
11	.02	.03	1610	150	123	599	378	89	32	1.9	1.6	.00
12	.04	.02	1610	167	519	647	374	72	27	1.3	1.1	.00
13	.04	.02	1280	175	1080	765	376	57	25	5.8	.85	.00
14	.02	.02	992	177	1230	756	418	47	23	8.4	.72	.00
15	.01	.02	705	175	1250	700	467	40	18	7.0	.55	.00
16	.00	.03	444	167	1330	674	499	34	14	4.0	.41	.00
17	.00	.04	292	159	1210	673	482	29	12	2.1	.32	.00
18	.01	.04	256	157	1040	677	397	25	10	1.1	.25	.00
19	.02	.38	250	150	913	677	293	23	9.1	.76	.17	.00
20	.02	1.5	247	143	827	661	229	25	7.5	.53	.14	.00
21	.03	2.5	246	135	757	634	196	36	6.2	.38	.10	.00
22	.03	7.7	254	128	680	600	170	59	5.1	.28	.08	.00
23	.02	8.1	254	135	611	572	151	76	4.1	.22	.08	.00
24	.00	7.7	235	154	550	572	139	109	3.4	.16	.06	.09
25	.00	17	213	157	491	532	128	120	2.5	.11	.04	.54
26	.00	48	186	158	467	479	118	114	2.1	.10	.03	.19
27	.00	50	160	158	825	439	109	101	6.7	.14	.02	.36
28	.00	44	145	155	956	442	98	86	95	.15	.02	.36
29	.00	39	131	147	834	441	90	65	45	.14	.00	.35
30	.00	37	122	137	---	427	81	46	26	.11	.00	.19
31	.00	---	116	127	---	423	---	35	---	.09	.00	---
TOTAL	.84	263.26	11424	4330	16703	19122	10687	2285	680.7	171.17	21.06	2.08
MEAN	.027	8.78	369	140	576	617	356	73.7	22.7	5.52	.68	.069
MAX	.09	50	1610	177	1330	772	642	157	95	40	4.6	.54
MIN	.00	.00	35	105	85	423	81	23	2.1	.09	.00	.00
CFSM	.000	.01	.55	.21	.85	.91	.53	.11	.03	.008	.001	.000
IN.	.00	.01	.63	.24	.92	1.05	.59	.13	.04	.01	.00	.00
AC-FT	1.7	522	22660	8590	33130	37930	21200	4530	1350	340	42	4.1

CAL YR 1983	TOTAL	142375.21	MEAN	390	MAX	2790	MIN	.00	CFSM	.58	IN	7.85	AC-FT	282400
WTR YR 1984	TOTAL	65690.11	MEAN	179	MAX	1610	MIN	.00	CFSM	.27	IN	3.62	AC-FT	130300

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

INSTRUMENTATION.--Beginning June 1981, specific conductance and water temperature are recorded continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,350 micromhos Nov. 9, 1969; minimum daily, 39 micromhos Apr. 20, 1973.
WATER TEMPERATURES: Maximum daily, 32.0°C on several days during summer months of 1977-78 and 1980; minimum daily, 0.0°C Dec. 24-26, 30, 31, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 516 micromhos May 12; minimum daily, 41 micromhos Dec. 11.
WATER TEMPERATURES: Maximum daily, 31.5°C Aug. 21; minimum daily, 0.0°C Dec. 24-26, 30, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 15...	1600	.04	172	6.8	12.5	35	4.5	3.2	30	1.4	31
DEC 22...	0805	257	147	5.8	2.5	50	22	12.0	87	1.0	24
MAR 13...	1610	780	134	6.3	13.0	70	15	8.6	82	.7	24
APR 24...	1125	140	200	6.8	18.0	120	11	7.6	81	1.0	39
JUL 17...	1345	2.1	133	7.3	31.0	100	23	--	--	2.9	27

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 15...	3	7.0	3.2	19	2	4.9	28	21	20	.10	10
DEC 22...	17	5.6	2.4	15	1	3.2	7	20	24	<.10	20
MAR 13...	17	5.8	2.4	13	1	2.7	7	22	20	<.10	16
APR 24...	21	9.2	3.9	23	2	3.1	18	25	36	.10	20
JUL 17...	2	6.7	2.6	15	1	3.6	25	14	19	.20	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 15...	100	16	10	--	<.010	<.10	.090	1.1	1.2	.040	7.2
DEC 22...	95	8	4	--	.010	<.10	.040	.26	.30	.040	6.6
MAR 13...	86	24	<2	.08	.020	.10	.060	.44	.50	.060	8.1
APR 24...	130	8	2	.19	.010	.20	.110	.69	.80	.090	9.2
JUL 17...	86	17	13	--	.020	<.10	.070	.73	.80	.070	8.1

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC 22...	0805	<1	63	<1	<10	1	560

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 22...	5	96	.1	<1	<1	27

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	0.84	164	100	0.2	27	0.06	18	0.04	27
NOV.	1983	263.26	167	102	73	29	20	18	12	27
DEC.	1983	11424	97	61	1880	15	466	12	356	17
JAN.	1984	4330	203	122	1430	36	418	20	236	31
FEB.	1984	16703	115	72	3240	18	815	13	608	20
MAR.	1984	19122	142	88	4560	23	1190	16	831	25
APR.	1984	10687	154	95	2740	26	737	17	490	26
MAY	1984	2285	236	140	861	44	269	22	133	34
JUNE	1984	680.7	186	113	207	32	59	19	35	29
JULY	1984	171.17	195	118	54	34	16	20	9.1	30
AUG.	1984	21.06	156	96	5.5	26	1.5	17	1.0	26
SEPT	1984	2.08	127	79	0.4	20	0.1	15	0.08	22
TOTAL		65690.11	**	**	15100	**	3990	**	2710	**
WTD.AVG.		179	137	85	**	23	**	15	**	23

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	165	---	---	---	148	136	143	198	192	196
2	---	---	166	---	---	---	136	124	130	207	198	201
3	---	---	168	---	---	---	125	79	106	234	208	220
4	---	---	167	---	---	---	111	92	102	236	216	230
5	---	---	166	---	---	---	110	87	95	214	204	207
6	182	161	165	---	---	---	99	87	92	206	203	205
7	191	160	164	188	157	160	103	99	101	205	198	201
8	181	161	154	182	156	160	164	104	121	216	198	204
9	193	160	163	174	156	158	208	170	199	251	219	239
10	164	159	161	173	157	159	201	46	153	438	250	321
11	194	158	164	176	156	158	52	41	46	307	225	269
12	177	157	161	157	155	157	59	53	56	221	183	196
13	159	157	158	157	154	156	70	59	65	235	183	211
14	178	156	159	157	155	156	78	69	73	197	169	176
15	182	154	158	157	155	156	111	79	94	200	171	189
16	---	---	---	157	154	156	128	113	122	199	188	194
17	---	---	---	157	155	156	139	129	132	188	180	184
18	169	155	157	156	155	156	141	136	138	182	177	178
19	164	156	157	158	142	151	143	137	139	186	181	184
20	178	157	161	149	145	147	139	136	137	180	177	178
21	177	158	161	156	147	151	139	134	137	190	177	182
22	178	159	161	160	157	159	142	136	139	202	190	198
23	181	159	161	159	155	157	144	142	143	197	181	187
24	---	---	---	158	156	157	169	144	154	184	180	182
25	---	---	---	202	158	168	169	154	160	185	181	184
26	---	---	---	385	164	270	161	154	156	183	178	179
27	---	---	---	160	129	138	173	161	167	204	185	197
28	---	---	---	141	136	139	174	172	173	198	190	192
29	---	---	---	158	140	148	174	172	173	222	199	211
30	---	---	---	139	136	137	191	174	182	224	215	220
31	---	---	---	---	---	---	199	191	195	215	211	214
MONTH	194	154	162	385	129	159	208	41	130	438	169	204

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	212	209	210	125	106	114	144	133	138	290	216	224
2	209	207	208	136	126	133	133	127	130	258	205	217
3	206	201	204	139	136	137	127	123	125	235	210	221
4	201	195	198	143	139	141	124	123	124	233	216	223
5	197	194	195	143	128	136	128	123	125	225	215	218
6	202	196	199	126	123	123	137	128	132	249	225	233
7	204	200	202	131	123	128	150	137	144	267	250	259
8	200	197	198	140	131	135	161	150	155	292	179	226
9	197	187	192	145	141	143	164	160	162	216	166	185
10	187	179	183	144	141	143	167	164	165	209	195	205
11	188	176	183	141	140	140	170	160	165	206	195	199
12	174	88	117	141	130	137	171	161	167	516	201	335
13	95	81	87	131	129	130	178	164	173	511	315	412
14	82	80	81	135	130	132	170	157	163	309	234	267
15	82	80	80	135	132	133	170	151	161	231	213	218
16	100	82	90	149	135	143	151	146	148	215	212	213
17	114	100	108	149	144	147	154	146	150	221	215	217
18	117	114	115	144	139	141	163	155	159	232	221	226
19	118	116	117	140	139	140	172	163	167	245	232	239
20	122	117	120	142	139	140	178	171	175	254	245	251
21	127	122	125	146	141	144	188	178	183	256	236	249
22	132	127	130	154	147	150	203	188	195	239	222	230
23	141	132	136	162	154	159	215	204	210	223	198	213
24	151	141	146	161	158	159	217	199	213	258	189	205
25	158	151	155	163	159	161	205	197	200	340	225	286
26	162	117	152	167	159	164	207	205	206	359	228	316
27	114	96	103	171	165	167	207	205	206	316	226	260
28	105	96	100	175	171	174	208	206	207	224	209	215
29	109	106	107	172	165	168	210	205	207	208	192	198
30	---	---	---	169	166	167	215	207	211	193	187	190
31	---	---	---	164	144	156	---	---	---	189	186	188
MONTH	212	80	146	175	106	145	217	123	169	516	166	237

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	190	188	189	202	112	141	169	163	167	---	---	---
2	193	190	191	235	171	203	187	164	169	---	---	---
3	195	191	193	231	181	205	174	163	166	---	---	---
4	197	193	195	248	198	226	166	160	163	---	---	---
5	200	196	198	241	212	227	179	160	166	---	---	---
6	201	196	199	246	218	231	188	132	161	---	---	---
7	209	165	197	245	217	235	150	134	141	---	---	---
8	179	157	168	242	227	234	159	135	142	---	---	---
9	181	171	174	235	217	227	182	153	158	---	---	---
10	185	170	179	241	207	219	183	154	161	---	---	---
11	168	155	160	238	198	221	180	154	162	---	---	---
12	160	156	158	273	197	227	184	157	164	---	---	---
13	170	157	163	253	198	213	179	157	162	---	---	---
14	227	170	196	224	203	212	175	159	161	---	---	---
15	253	229	245	218	188	203	184	158	164	---	---	---
16	249	229	239	196	143	169	182	162	166	---	---	---
17	227	220	223	167	141	148	179	163	167	---	---	---
18	233	220	227	165	148	151	178	163	168	---	---	---
19	259	233	246	155	151	154	175	165	169	---	---	---
20	291	254	271	158	155	156	191	168	174	---	---	---
21	306	283	295	161	157	159	192	170	173	---	---	---
22	319	300	308	165	157	160	192	169	173	---	---	---
23	332	313	320	176	160	164	191	171	174	---	---	---
24	336	318	324	178	161	165	199	170	176	135	106	130
25	339	319	325	183	161	167	205	170	177	109	86	98
26	333	308	318	181	160	166	199	169	175	113	103	106
27	326	298	310	176	161	165	189	169	172	137	113	123
28	302	69	144	178	163	166	198	168	174	148	138	142
29	220	137	179	168	164	167	---	---	---	156	148	153
30	178	112	144	192	164	170	---	---	---	158	154	156
31	---	---	---	179	161	168	---	---	---	---	---	---
MONTH	339	69	223	273	112	188	205	132	166	158	86	130

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.0	19.5	21.5	---	---	---	10.0	9.0	9.5	.5	.5	.5
2	23.5	19.5	21.0	---	---	---	11.0	10.0	10.5	1.5	.5	1.0
3	24.5	20.5	22.0	---	---	---	13.0	11.0	12.0	2.0	1.5	1.5
4	24.5	22.0	23.0	---	---	---	13.0	12.5	12.5	3.5	2.0	3.0
5	23.5	21.5	22.5	---	---	---	13.0	12.0	12.5	5.0	4.0	4.5
6	22.0	20.5	21.0	---	---	---	13.0	11.0	12.0	5.5	5.0	5.0
7	21.5	20.5	21.0	16.0	15.5	15.5	11.0	9.5	10.0	6.0	5.5	5.5
8	21.0	20.5	20.5	16.5	15.5	16.0	9.5	8.5	9.0	6.5	6.0	6.0
9	21.0	19.5	20.0	16.0	14.5	15.0	10.0	9.0	9.5	7.0	6.5	7.0
10	21.0	19.5	20.0	14.5	13.0	14.0	16.0	10.0	12.0	8.0	7.0	7.5
11	21.0	19.5	20.0	13.0	12.0	12.5	16.0	15.0	15.5	7.5	5.5	6.5
12	21.0	19.5	20.0	12.0	11.0	11.5	14.5	13.0	13.5	5.5	4.5	5.0
13	19.5	17.5	18.5	12.5	11.5	12.0	13.0	11.5	12.0	5.0	4.5	4.5
14	19.0	17.0	17.5	16.0	12.5	14.0	11.5	10.0	10.5	5.0	4.0	4.5
15	18.0	16.5	17.0	15.0	13.5	14.0	10.0	9.0	9.0	4.0	4.0	4.0
16	---	---	---	13.0	12.0	12.5	9.0	6.5	7.5	4.0	3.5	4.0
17	---	---	---	13.0	11.5	12.5	6.5	6.0	6.0	4.0	3.0	3.5
18	20.5	19.5	20.0	16.0	13.0	14.5	6.0	6.0	6.0	3.5	3.0	3.5
19	21.0	20.0	20.5	17.0	15.5	16.0	6.0	5.0	5.5	3.0	2.0	2.5
20	22.5	20.5	21.5	15.0	14.0	14.0	5.0	4.0	4.0	2.0	1.5	1.5
21	23.0	21.5	22.0	14.5	13.0	14.0	4.0	3.5	3.5	1.5	1.0	1.0
22	21.0	19.0	20.0	15.0	14.5	14.5	3.5	2.0	2.5	1.0	.5	1.0
23	19.0	18.5	18.5	16.0	15.0	15.5	2.0	1.0	1.5	2.5	1.5	2.0
24	---	---	---	14.5	12.5	13.5	1.0	.0	.5	4.0	2.5	3.5
25	---	---	---	12.5	11.5	12.0	.5	.0	.5	5.0	4.0	4.5
26	---	---	---	12.0	11.0	11.5	.5	.0	.5	5.5	4.5	5.0
27	---	---	---	12.5	11.5	12.0	.5	.5	.5	6.0	4.5	5.5
28	---	---	---	11.5	9.5	10.5	.5	.5	.5	6.0	5.0	5.5
29	---	---	---	9.5	8.5	9.0	.5	.5	.5	7.0	5.5	6.0
30	---	---	---	9.5	8.5	9.0	.5	.0	.5	7.5	6.5	7.0
31	---	---	---	---	---	---	.5	.0	.5	7.5	6.5	7.0
MONTH	24.5	16.5	20.5	17.0	8.5	13.0	16.0	.0	7.0	8.0	.5	4.0

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	6.0	6.5	9.0	7.5	8.0	15.5	14.0	14.5	21.0	19.0	20.0
2	8.0	7.0	7.5	10.5	8.5	9.5	15.5	15.0	15.5	19.0	18.5	18.5
3	8.5	8.0	8.0	12.0	10.5	11.0	17.0	15.5	16.0	20.5	19.0	19.5
4	8.5	8.0	8.0	13.0	12.0	12.5	16.5	15.0	15.5	21.0	19.5	20.5
5	8.0	7.0	7.5	13.0	11.5	12.5	15.5	14.0	14.5	21.5	20.0	21.0
6	7.0	6.0	6.5	11.5	10.5	11.0	16.0	14.0	15.0	23.5	21.5	22.5
7	6.0	5.5	5.5	11.5	10.0	11.0	16.0	15.5	16.0	24.0	23.5	23.5
8	6.5	5.5	6.0	12.5	10.5	11.5	17.5	16.0	17.0	23.0	21.5	22.5
9	8.0	6.5	7.5	12.0	11.5	11.5	18.0	16.5	17.5	21.5	20.0	20.5
10	10.5	8.0	9.5	11.5	11.0	11.5	17.5	17.0	17.5	21.0	19.5	20.5
11	13.0	11.0	12.0	11.5	11.0	11.0	18.0	16.5	17.0	22.0	20.0	21.0
12	14.0	13.5	13.5	12.5	11.5	12.0	19.0	17.5	18.5	22.5	21.5	22.0
13	13.5	12.5	13.0	14.0	12.5	13.0	19.0	17.5	18.5	24.0	22.0	23.0
14	13.0	12.0	12.5	15.0	13.5	14.0	19.0	18.0	18.5	24.5	22.5	23.5
15	13.5	12.5	13.0	17.0	15.0	16.0	18.5	17.0	17.5	24.5	23.0	24.0
16	13.5	12.5	13.0	17.5	17.0	17.5	17.0	16.0	16.5	24.5	23.0	23.5
17	13.0	12.0	12.5	19.0	17.5	18.5	16.5	15.0	16.0	24.0	22.5	23.0
18	13.5	13.0	13.5	20.0	19.0	19.5	17.0	15.5	16.0	23.5	22.0	23.0
19	13.0	12.0	12.5	19.5	18.0	19.0	17.5	16.5	17.0	23.5	22.5	23.0
20	12.0	11.0	11.5	18.0	16.0	17.0	19.5	17.0	18.0	23.0	22.5	22.5
21	11.0	10.0	10.5	16.5	15.0	16.0	21.0	19.5	20.0	22.5	22.0	22.0
22	11.0	10.0	10.5	17.0	15.5	16.0	20.5	19.5	20.0	22.5	21.0	22.0
23	11.5	10.0	11.0	17.5	17.0	17.0	19.0	18.0	18.5	23.0	22.0	22.5
24	12.5	11.0	11.5	17.0	16.5	16.5	18.5	17.5	18.0	23.5	22.5	23.0
25	12.0	11.0	11.5	16.5	15.5	16.0	20.0	18.5	19.0	24.0	23.0	23.5
26	12.0	11.5	12.0	17.5	16.0	16.5	21.0	20.0	20.5	25.0	23.5	24.0
27	11.5	9.5	10.5	18.5	17.5	18.0	22.5	20.5	21.5	25.5	24.5	25.0
28	9.5	8.5	9.0	18.5	16.0	17.5	22.0	22.0	22.0	26.0	25.0	25.5
29	9.0	7.5	8.0	16.0	15.0	15.5	23.0	22.0	22.5	25.0	23.0	24.0
30	---	---	---	15.5	14.5	15.0	22.5	21.0	22.0	23.0	21.5	22.5
31	---	---	---	15.0	14.0	14.5	---	---	---	22.5	20.0	21.0
MONTH	14.0	5.5	10.0	20.0	7.5	14.5	23.0	14.0	18.0	26.0	18.5	22.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	20.5	21.0	26.5	25.5	26.0	27.5	25.0	26.0	---	---	---
2	23.0	21.0	22.0	27.0	25.5	26.0	27.5	25.5	26.5	---	---	---
3	23.5	21.5	22.5	28.0	26.0	27.0	28.0	25.0	26.0	---	---	---
4	24.0	22.0	23.0	29.5	27.0	28.0	27.5	25.0	26.5	---	---	---
5	24.0	23.5	23.5	29.0	27.5	28.0	28.5	25.0	27.0	---	---	---
6	23.5	23.0	23.5	30.0	27.0	28.5	30.5	26.5	27.5	---	---	---
7	23.5	22.5	23.0	30.5	28.0	29.0	27.0	26.0	26.5	---	---	---
8	24.5	23.0	23.5	31.0	28.5	29.5	27.0	25.5	26.0	---	---	---
9	25.5	24.0	24.5	30.5	28.5	29.5	28.5	26.5	27.5	---	---	---
10	26.0	24.5	25.0	30.5	28.5	29.5	29.0	27.0	28.0	---	---	---
11	26.5	24.5	25.5	31.0	29.0	30.0	29.0	27.0	28.0	---	---	---
12	27.0	25.0	26.0	30.5	29.0	30.0	28.5	27.0	27.5	---	---	---
13	27.0	25.5	26.5	30.0	28.5	29.0	28.0	26.5	27.5	---	---	---
14	27.5	26.0	26.5	30.0	27.5	28.5	28.0	26.0	27.0	---	---	---
15	28.5	26.5	27.0	30.5	28.0	29.0	28.0	26.0	27.0	---	---	---
16	28.5	27.0	27.5	30.5	28.0	29.0	28.0	26.5	27.5	---	---	---
17	29.0	27.0	27.5	30.0	28.5	29.5	29.0	26.5	27.5	---	---	---
18	29.5	27.0	28.0	30.0	28.5	29.0	29.0	27.0	28.0	---	---	---
19	29.5	27.5	28.5	29.5	27.5	28.5	29.5	27.5	28.5	---	---	---
20	30.0	27.0	28.5	29.0	27.0	28.0	31.0	27.5	29.0	---	---	---
21	30.5	27.5	29.0	28.5	26.5	27.5	31.5	28.0	29.5	---	---	---
22	30.5	27.5	29.0	28.0	26.0	27.0	30.5	28.5	29.5	---	---	---
23	31.0	28.0	29.5	28.0	26.0	27.0	30.0	28.5	29.0	---	---	---
24	30.5	29.0	29.5	28.0	26.0	27.0	30.5	27.5	28.5	26.5	24.5	25.5
25	30.5	28.5	29.5	28.5	26.0	27.0	29.5	27.0	28.0	26.0	24.5	25.0
26	30.0	28.0	28.5	29.5	26.0	27.5	29.5	26.0	27.5	25.5	23.0	24.0
27	28.0	27.0	27.5	28.5	27.0	27.5	31.0	26.5	28.5	23.0	22.0	22.0
28	27.0	24.0	25.0	28.5	26.0	27.0	30.0	27.5	29.0	21.5	20.5	21.0
29	26.0	25.0	25.5	28.0	25.5	27.0	---	---	---	20.0	19.5	20.0
30	26.5	25.0	25.5	28.0	25.0	26.5	---	---	---	19.5	18.5	19.0
31	---	---	---	27.5	25.0	26.0	---	---	---	---	---	---
MONTH	31.0	20.5	26.0	31.0	25.0	28.0	31.5	25.0	27.5	26.5	18.5	22.5

07346085 BIG CYPRESS CREEK NEAR KARNACK, TX

LOCATION.--Lat 32°41'48", long 94°11'15", Harrison County, Hydrologic Unit 11140304, near right bank at downstream side of bridge on State Highway 43, 0.6 mi upstream from Mill Pond, 1.1 mi downstream from Gum Slough (Haggerty Creek flows into Gum Slough), and 2.2 mi north of Karnack.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1979 to current year. Records for the period Nov. 1, 1975, to Sept. 30, 1979, published by the Corps of Engineers, New Orleans District, as "Cypress Creek (Cypress Bayou) near Karnack, Tex."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Elevation records fair. This is a stage-only station used to aid in the operation of Lake O' the Pines and Caddo Lake and located in the upper end of Caddo Lake 15 mi above the dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 172.65 ft June 6, 1981; minimum, 167.07 ft Oct. 16, 17, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation, 174.20 ft May 9, 1979; minimum, 166.72 ft Oct. 23, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 170.22 ft Feb. 17 at 2400 hours; minimum, 167.49 ft Nov. 2-3.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167.72	167.50	167.94	168.84	168.81	169.74	169.79	168.90	168.40	168.17	167.75	167.61
2	167.71	167.49	168.21	168.83	168.79	169.69	169.81	168.89	168.38	168.15	167.80	167.65
3	167.69	167.49	168.55	168.81	168.79	169.66	169.77	168.83	168.37	168.12	167.82	167.72
4	167.69	167.53	168.66	168.81	168.75	169.69	169.74	168.83	168.35	168.09	167.82	167.70
5	167.67	167.51	168.65	168.80	168.72	169.82	169.71	168.79	168.37	168.12	167.80	167.67
6	167.67	167.60	168.68	168.79	168.71	169.91	169.69	168.75	168.43	168.11	167.88	167.65
7	167.64	167.58	168.70	168.78	168.71	169.91	169.70	168.80	168.42	168.09	167.91	167.63
8	167.63	167.58	168.74	168.77	168.70	169.88	169.60	168.83	168.41	168.08	167.97	167.60
9	167.63	167.54	168.74	168.85	168.74	169.87	169.53	168.81	168.40	168.06	167.96	167.58
10	167.61	167.53	169.73	168.87	168.74	169.84	169.67	168.77	168.39	168.03	167.95	167.57
11	167.62	167.57	169.82	168.90	168.81	169.81	169.76	168.74	168.38	168.01	167.93	167.56
12	167.62	167.56	169.85	168.89	169.93	169.91	169.68	168.70	168.36	167.99	167.93	167.55
13	167.62	167.55	169.84	168.88	170.19	169.96	169.60	168.66	168.34	168.05	167.94	167.53
14	167.61	167.51	169.73	168.93	170.12	169.94	169.50	168.64	168.33	168.03	167.91	167.51
15	167.60	167.51	169.61	168.91	170.13	169.90	169.44	168.64	168.32	168.01	167.89	167.65
16	167.60	167.52	169.60	168.91	170.18	169.86	169.40	168.60	168.30	168.03	167.87	167.62
17	167.60	167.52	169.51	168.92	170.22	169.84	169.36	168.57	168.27	167.99	167.86	167.58
18	167.61	167.51	169.41	168.89	170.21	169.85	169.35	168.53	168.26	167.98	167.84	167.56
19	167.59	167.62	169.40	168.91	170.16	169.81	169.31	168.56	168.23	167.96	167.82	167.55
20	167.58	167.63	169.32	168.89	170.08	169.77	169.23	168.57	168.21	167.94	167.81	167.53
21	167.55	167.63	169.29	168.88	169.99	169.76	169.12	168.57	168.19	167.90	167.76	167.66
22	167.54	167.72	169.29	168.88	169.90	169.76	169.02	168.56	168.17	167.88	167.76	167.65
23	167.55	167.78	169.29	168.91	169.79	169.77	168.95	168.56	168.14	167.87	167.75	167.64
24	167.55	167.81	169.28	168.92	169.67	169.75	168.91	168.55	168.13	167.85	167.74	167.66
25	167.53	167.82	169.28	168.92	169.61	169.74	168.90	168.53	168.12	167.82	167.73	167.63
26	167.52	167.86	169.29	168.91	169.90	169.69	168.89	168.54	168.15	167.80	167.72	167.66
27	167.53	167.85	169.10	168.88	169.93	169.75	168.85	168.51	168.19	167.82	167.70	167.62
28	167.52	167.87	169.03	168.87	169.86	169.72	168.86	168.48	168.19	167.83	167.70	167.60
29	167.51	167.90	169.03	168.86	169.82	169.76	168.79	168.48	168.19	167.82	167.68	167.58
30	167.51	167.91	169.04	168.83	---	169.78	168.80	168.45	168.19	167.78	167.67	167.56
31	167.50	---	168.91	168.82	---	169.79	---	168.43	---	167.77	167.64	---
MAX	167.72	167.91	169.85	168.93	170.22	169.96	169.81	168.90	168.43	168.17	167.97	167.72
MIN	167.50	167.49	167.94	168.77	168.70	169.66	168.79	168.43	168.12	167.77	167.64	167.51

CAL YR 1983 MAX 171.79 MIN 167.49
WTR YR 1984 MAX 170.22 MIN 167.49

07346140 FRAZIER CREEK NEAR LINDEN, TX

LOCATION.--Lat 33°03'14", long 94°17'24", Cass County, Hydrologic Unit 11140306, on right bank at downstream side of bridge on U.S. Highway 59, 1.6 mi upstream from Colley Creek, 3.7 mi upstream from Johns Creek, and 5.3 mi northeast of Linden.

DRAINAGE AREA.--48.0 mi^2.

PERIOD OF RECORD.--August 1958 to June 1961 (low-flow partial record only), November 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 228.7 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bridge plans).

REMARKS.--Records good except those for September, which are fair. No known diversion. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1966-84), 40.7 ft^3/s (11.51 in/yr), 29,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft^3/s Apr. 22, 1974 (gage height, 12.51); no flow at times for most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1945, 15.6 ft Apr. 26, 27, 1958, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 356 ft^3/s Feb. 12 at 2300 hours (gage height, 7.93 ft), no peak above base of 700 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.50	8.9	14	15	47	40	13	3.4	1.6	.00	.00
2	.03	.42	16	19	16	43	41	21	2.6	.25	.00	.00
3	.02	.57	74	21	16	44	53	25	1.9	.00	.00	.00
4	.02	.65	64	18	16	85	40	17	1.4	.00	.00	.00
5	.01	.85	25	17	15	143	32	13	.74	1.8	.00	.00
6	.01	.96	17	15	13	164	29	12	1.2	5.7	.00	.00
7	.00	1.5	14	14	13	93	29	9.8	3.9	1.7	.00	.00
8	.00	1.5	11	13	13	63	48	9.3	3.6	.80	.00	.00
9	.00	1.2	9.9	16	21	51	43	8.8	1.5	.20	.78	.00
10	.00	1.2	36	57	38	46	36	8.4	.62	.01	.56	.00
11	.00	1.1	103	51	38	44	118	8.7	.32	.00	.02	.00
12	.01	1.5	73	31	220	105	119	8.5	.18	.06	.00	.00
13	.59	1.4	32	25	294	135	57	8.2	.11	2.2	.00	.00
14	.65	1.4	23	21	149	83	39	8.0	.20	6.9	.00	.00
15	.35	1.4	17	20	82	61	31	8.0	.01	1.5	.00	.00
16	.42	1.2	17	21	93	73	29	6.9	.00	.10	.00	.00
17	.42	1.1	22	20	67	162	28	6.3	.00	.05	.00	.00
18	.50	1.1	25	22	55	119	25	6.0	.00	.00	.00	.00
19	.56	6.5	27	21	49	74	79	5.7	.00	.00	.00	.00
20	.64	17	23	17	42	54	92	6.4	.00	.00	.00	.00
21	.72	9.6	28	17	37	45	49	7.5	.00	.00	.00	.00
22	.79	7.8	34	19	34	40	32	9.3	.00	.00	.00	.00
23	1.5	14	24	28	31	42	25	8.5	.00	.00	.00	.00
24	1.0	17	21	43	29	104	22	7.6	.00	.00	.00	.00
25	.85	11	16	32	27	87	19	7.2	.00	.00	.00	.00
26	.57	8.6	14	25	62	54	17	6.4	.00	.00	.00	.00
27	.53	9.9	16	20	149	65	16	5.4	.00	.00	.00	.00
28	.46	15	17	18	100	111	15	5.1	.00	.00	.00	.00
29	.49	11	16	17	57	79	15	4.4	1.0	.00	.00	.00
30	.42	10	13	16	---	51	14	4.1	.38	.00	.00	.00
31	.57	---	13	15	---	43	---	4.2	---	.00	.00	---
TOTAL	12.16	156.95	849.8	703	1791	2410	1232	279.7	23.06	22.87	1.36	.00
MEAN	.39	5.23	27.4	22.7	61.8	77.7	41.1	9.02	.77	.74	.044	.000
MAX	1.5	17	103	57	294	164	119	25	3.9	6.9	.78	.00
MIN	.00	.42	8.9	13	13	40	14	4.1	.00	.00	.00	.00
CFSM	.008	.11	.57	.47	1.29	1.62	.86	.19	.02	.02	.001	.000
IN.	.01	.12	.66	.54	1.39	1.87	.95	.22	.02	.02	.00	.00
AC-FT	24	311	1690	1390	3550	4780	2440	555	46	45	2.7	.00

CAL YR 1983 TOTAL 13980.32 MEAN 38.3 MAX 613 MIN .00 CFSM .80 IN 10.83 AC-FT 27730
WTR YR 1984 TOTAL 7481.90 MEAN 20.4 MAX 294 MIN .00 CFSM .43 IN 5.80 AC-FT 14840

SABINE RIVER BASIN

08017200 COWLEECH FORK SABINE RIVER AT GREENVILLE, TX

LOCATION.--Lat 33°07'58", long 96°04'36", Hunt County, Hydrologic Unit 12010001, on left bank 103 ft downstream from centerline of downstream bridge on Interstate Highway 30 (U.S. Highway 67), 0.3 mi downstream from Horse Creek, 0.9 mi downstream from Louisiana and Arkansas Railroad Co. bridge, 1.8 mi east of Greenville, and at mile 558.3.

DRAINAGE AREA.--77.7 mi².

PERIOD OF RECORD.--February 1959 to current year. Prior to October 1963, published as Sabine River at Greenville.

REVISED RECORDS.--WSP 1732: Drainage area. WSP 2122: 1960, 1963-65.

GAGE.--Water-stage recorder. Datum of gage is 485.07 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. The city of Greenville diverted water from city lakes upstream from the gage and from Lake Tawakoni for municipal use. Sewage effluent is returned to a tributary downstream from the gage. Extreme low flow is largely sustained by return water from a treatment plant upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1960-84), 61.2 ft³/s (10.70 in/yr), 44,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s May 13, 1982 (gage height, 18.47 ft); no flow in 1964, 1969-70, 1972-73, and 1977-84.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1895, 22 ft in May 1935, from information by local resident and city engineer of Greenville. A flood of July 3, 1913, reached a stage of 20 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,270 ft³/s Mar. 12 at 1800 hours (gage height, 17.02 ft), but may have been greater on Mar. 19 or Mar. 24, during period of no gage-height record; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.04	2.5	.26	.24	3.9	4.0	2.1	.17	.37	.00	.00
2	.00	.14	2.8	.29	.25	2.2	7.0	223	.10	.08	.00	.04
3	.00	.21	3.6	.29	.25	1.3	20	41	.08	.04	.00	.24
4	.00	.23	3.8	.32	.25	1.0	7.0	13	.07	.02	.32	.00
5	.00	.12	4.9	.30	.24	.92	4.0	7.0	.08	1.9	.17	.00
6	.00	1.2	3.9	.32	.20	.68	3.0	4.6	3.8	.35	.01	.00
7	1.5	.52	2.8	.24	.20	.36	2.0	3.0	27	.09	.00	.00
8	.34	.17	1.8	.19	.20	.25	25	1.9	4.9	.06	.00	.00
9	.07	.08	1.5	2.1	1.8	.18	9.1	1.2	1.5	.02	.00	.00
10	.05	.04	.97	3.8	1.2	.16	6.0	.79	.80	.00	.00	.00
11	2.1	.03	.40	1.3	13	4.0	4.0	.60	.74	.00	.00	.00
12	1.8	.03	.25	2.7	686	1650	3.0	.47	.43	.00	.00	.00
13	.18	.02	.24	2.0	81	2600	2.5	.40	.22	.00	.00	.00
14	.16	.01	.20	1.2	13	140	1.8	.32	.31	.00	.00	.00
15	.17	.00	.16	1.0	4.2	20	1.4	.26	.16	.00	.00	.00
16	.23	.00	.51	.84	1.9	5.0	1.2	.22	.09	.20	.00	.00
17	.36	.01	.94	.70	1.1	3.0	.80	.18	.06	.00	.00	.00
18	.48	.01	.49	.57	1.5	2.0	.60	.16	.05	.00	.00	.00
19	3.1	2.7	1.0	.43	.88	3000	.60	.39	.04	.00	.00	.00
20	.84	1.5	1.9	.35	.50	170	.40	.81	.04	.00	.00	.00
21	.28	.44	1.8	.31	.34	40	.40	5.0	.03	.00	.00	.00
22	5.8	.23	.88	.31	.30	10	.40	11	.03	.00	.00	.11
23	3.2	4.6	.48	3.8	.25	4.0	.80	5.5	.02	.00	.00	.02
24	1.8	1.8	.28	1.8	.20	4000	1.4	4.4	.02	.00	.00	.00
25	.58	.72	.16	1.0	.19	200	1.1	.79	.03	.00	.00	.40
26	.18	1.2	.11	.74	121	40	.93	.35	6.4	.00	.00	.27
27	.14	12	.14	.54	382	14	.85	.20	2.3	.00	.00	.00
28	.41	66	.31	.45	52	150	.73	11	.46	.00	.00	.00
29	.07	9.9	.24	.42	11	25	.64	3.9	1.1	.00	.00	.00
30	.00	4.1	.31	.33	---	10	.57	.70	.91	.00	.00	.00
31	.00	---	.24	.26	---	6.0	---	.29	---	.00	.00	---
TOTAL	23.84	108.05	39.61	29.16	1375.19	12103.95	111.22	344.53	51.94	3.13	.50	1.08
MEAN	.77	3.60	1.28	.94	47.4	390	3.71	11.1	1.73	.10	.016	.036
MAX	5.8	66	4.9	3.8	686	4000	25	223	27	1.9	.32	.40
MIN	.00	.00	.11	.19	.19	.16	.40	.16	.02	.00	.00	.00
CFSM	.01	.05	.02	.01	.61	5.02	.05	.14	.02	.001	.000	.000
IN.	.01	.05	.02	.01	.66	5.79	.05	.16	.02	.00	.00	.00
AC-FT	47	214	79	58	2730	24010	221	683	103	6.2	1.0	2.1

CAL YR 1983 TOTAL 14929.46 MEAN 40.9 MAX 3290 MIN .00 CFSM .53 IN 7.15 AC-FT 29610
WTR YR 1984 TOTAL 14192.20 MEAN 38.8 MAX 4000 MIN .00 CFSM .50 IN 6.79 AC-FT 28150

NOTE.--No gage-height record Mar. 13 to Apr. 24.

08017300 SOUTH FORK SABINE RIVER NEAR QUINLAN, TX

LOCATION.--Lat 32°53'52", long 96°15'11", Hunt County, Hydrologic Unit 12010001, on right bank at downstream side of bridge on Farm Road 1565, 2.4 mi upstream from Dry Creek, 6.2 mi upstream from Bearpen Creek, 7 mi southwest of Quinlan, and 25 mi upstream from mouth.

DRAINAGE AREA.--78.7 mi^2.

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 461.40 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. The city of Royse City discharges sewage effluent into the river above this station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1960-84), 76.6 ft^3/s (13.23 in/yr), 55,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,000 ft^3/s June 16, 1981, (gage height, 18.24 ft); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 21 ft July 29, 1902, from information by local resident. Flood of Apr. 27, 1957, reached a stage of 17.76 ft, from floodmarks.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 12	1400	6,920	16.09
Mar. 19	1900	3,130	15.47
Mar. 23	1800	*17,400	17.55

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.17	8.5	2.9	4.5	15	2.0	.00	.00	.00	.00	.00
2	.00	.16	6.7	2.7	4.8	11	17	30	.00	.00	.00	.00
3	.00	.14	14	4.3	5.2	9.5	54	4.3	.00	.00	.00	.00
4	.00	.13	22	5.0	6.7	7.9	16	.01	.00	.00	.00	.00
5	.00	.13	12	5.2	6.9	6.6	4.0	.00	.00	.00	.00	.00
6	.00	1.3	7.3	4.7	6.6	5.0	1.4	.00	.00	.00	.00	.00
7	.00	2.4	4.9	4.2	6.2	4.8	6.8	.00	.41	.00	.00	.00
8	.00	1.1	3.7	3.8	6.0	3.9	264	.00	.69	.00	.00	.00
9	5.4	1.0	3.0	9.0	12	3.3	37	.00	.02	.00	.00	.00
10	1.1	.77	2.6	88	17	3.0	14	.00	.00	.00	.00	.00
11	.43	1.2	2.4	41	13	3.5	4.4	.00	.00	.00	.00	.00
12	54	.95	2.3	20	144	4080	1.3	.00	.00	.00	.00	.00
13	14	.93	2.2	13	60	1150	.25	.00	.00	.00	.00	.00
14	1.9	.84	3.0	9.7	24	47	.06	.00	.00	.00	.00	.00
15	.53	.79	2.7	8.5	15	24	.01	.00	.00	.00	.00	.00
16	.27	.74	2.5	7.7	11	17	.00	.00	.00	.00	.00	.00
17	.20	.79	2.8	7.1	7.6	13	.00	.00	.00	.00	.00	.00
18	.16	.81	3.9	6.1	8.7	10	.00	.00	.00	.00	.00	.00
19	523	1.5	3.5	5.8	12	1270	.00	.00	.00	.00	.00	.00
20	521	8.1	4.0	5.7	8.9	192	.00	.00	.00	.00	.00	.00
21	80	6.0	3.6	5.7	6.1	23	.00	.00	.00	.00	.00	.00
22	25	4.2	3.2	5.4	4.4	11	.00	.00	.00	.00	.00	.00
23	7.6	12	2.8	38	3.5	6190	.00	.00	.00	.00	.00	.00
24	2.6	14	2.5	54	2.9	3840	.00	.00	.00	.00	.00	.00
25	1.2	7.4	2.2	30	3.2	67	.00	.00	.00	.00	.00	.00
26	.66	5.3	3.5	19	406	23	.00	.00	.00	.00	.00	.00
27	.39	260	5.0	13	217	166	.00	.00	.00	.00	.00	.00
28	.32	180	4.5	9.8	37	66	.00	.00	.00	.00	.00	.00
29	.29	26	4.0	7.7	21	20	.00	.00	.00	.00	.00	.00
30	.28	14	3.6	6.4	---	6.8	.00	.00	.00	.00	.00	.00
31	.22	---	3.2	5.0	---	3.0	---	.00	---	.00	.00	---
TOTAL	1240.55	552.85	152.1	448.4	1081.2	17292.3	422.22	34.31	1.12	.00	.00	.00
MEAN	40.0	18.4	4.91	14.5	37.3	558	14.1	1.11	.037	.000	.000	.000
MAX	523	260	22	88	406	6190	264	30	.69	.00	.00	.00
MIN	.00	.13	2.2	2.7	2.9	3.0	.00	.00	.00	.00	.00	.00
CFSM	.51	.23	.06	.18	.47	7.09	.18	.01	.000	.000	.000	.000
IN.	.59	.26	.07	.21	.51	8.17	.20	.02	.00	.00	.00	.00
AC-FT	2460	1100	302	889	2140	34300	837	68	2.2	.00	.00	.00

CAL YR 1983	TOTAL	31848.16	MEAN 87.3	MAX 7500	MIN .00	CFSM 1.11	IN 15.05	AC-FT 63170		
WTR YR 1984	TOTAL	21225.05	MEAN 58.0	MAX 6190	MIN .00	CFSM .74	IN 10.03	AC-FT 42100		

08017400 LAKE TAWAKONI NEAR WILLS POINT, TX

LOCATION.--Lat 32°48'40", long 95°54'56", Rains-Van Zandt County line, Hydrologic Unit 12010001, in stairwell at left end of spillway of Iron Bridge Dam on Sabine River, 750 ft upstream from bridge on Farm Road 47, 3 mi upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.5.

DRAINAGE AREA.--756 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Lake is formed by a rolled earthfill dam 29,560 ft long, including a 480-foot uncontrolled concrete ogee spillway. Outlet works consist of two 4- by 6-foot sluice gates and two 20-inch steel pipes controlled by service valves. Closure of earthen dam began July 1, 1960, and deliberate impoundment of water began Oct. 7, 1960. Capacity table is based on a 1956 survey. Diversions are made for municipal use by the city of Dallas and various other users in the Sabine River basin. The lake was built for water conservation. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	454.0	-
Design flood	446.2	1,290,000
Crest of spillway	437.5	936,200
Lowest intake to wet well (invert)	416.5	342,700
Lowest gated outlet (invert)	378.0	0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,130,000 acre-ft May 1, 1966 (elevation, 442.58 ft); minimum since lake first filled in May 1965, 802,700 acre-ft Oct. 21, 1972 (elevation, 433.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 990,100 acre-ft Mar. 28 at 1700 hours (elevation, 438.97 ft); minimum, 811,000 acre-ft Sept. 30 (elevation, 433.90 ft).

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

433.0	781,200	437.0	918,200
435.0	848,200	438.0	954,300
436.0	882,800	439.0	991,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	899300	891900	887400	879300	876500	896800	966900	934400	912900	896100	869200	840100
2	897900	892300	890200	879000	877200	897200	965400	932300	912900	895100	868100	840700
3	897500	891900	892300	878600	876900	896100	964300	933000	912600	894000	867800	840400
4	897500	892600	890200	879000	876500	898900	960200	932300	912200	892600	868800	838400
5	896800	891200	894000	878600	875800	897200	958000	932600	910500	893300	868100	837700
6	895400	893300	889100	878600	874800	895400	955400	931900	912200	892300	867400	836300
7	896500	892300	888800	878300	874400	895100	955800	933700	910800	891600	868100	833300
8	896800	891200	888400	877900	873700	895100	956900	929000	910800	890200	867800	832300
9	896500	893000	888800	886300	876200	893000	955800	927600	910800	888400	867400	831900
10	895800	891600	889500	881400	875800	893300	956900	925400	911200	887700	866400	830900
11	902800	888400	890200	880000	880700	894700	954000	925400	909800	887400	865300	829600
12	900300	888100	888100	881400	889100	905200	952500	925000	909400	888800	865000	828900
13	897500	887400	889500	880400	892600	917100	951400	924700	909100	888100	863600	827900
14	897200	888400	888400	880000	891900	920000	949300	924000	908000	887000	863600	826900
15	896500	886700	888400	880000	893700	921800	948500	923200	907300	886300	862500	825500
16	896800	884900	888400	879700	892600	921800	945300	922500	906300	884900	861800	827500
17	896800	883500	888100	880400	891600	921800	943800	921800	904900	883900	860400	822800
18	896500	883200	889500	880000	893700	924300	943100	921800	904500	881800	859000	821400
19	896800	891200	887400	878300	892300	927900	942000	922100	903500	881100	857600	820100
20	900300	888400	886700	878300	892300	934100	942800	922500	902400	879700	856200	819400
21	900000	887700	889500	876500	891200	934800	942800	920300	901400	878300	854100	818100
22	898600	888400	885600	878300	890500	934100	940900	921100	900300	877600	853400	818400
23	897200	891200	887400	879000	890900	952200	938400	920300	899600	876500	852000	817700
24	896800	888800	884900	879000	889800	985000	935500	920000	898600	876200	850600	815300
25	896100	887000	881800	879000	888400	986800	934800	918900	897500	877200	849200	818700
26	895100	889500	880700	879000	898600	982800	935200	918200	898900	876500	848500	816700
27	894400	890200	881400	878600	899600	989400	935900	922500	898600	875500	847200	815000
28	893700	888800	883200	878600	899300	985000	935500	920700	898200	874400	845800	815000
29	893700	888100	881100	879700	897500	978000	936200	917100	897500	873000	844800	813300
30	893000	889100	879000	877900	---	972800	933000	916100	896800	871600	843800	811000
31	892300	---	879000	877600	---	970600	---	914300	---	870600	842400	---
MAX	902800	893300	894000	886300	899600	989400	966900	934400	912900	896100	869200	840700
MIN	892300	883200	879000	876500	873700	893000	933000	914300	896800	870600	842400	811000
(†)	436.26	436.17	435.88	435.84	436.41	438.44	437.41	436.89	436.39	435.64	434.83	433.90
(±)	-7500	-3200	-10100	-1400	+19900	+73100	-37600	-18700	-17500	-26200	-28200	-31400

CAL YR 1983 MAX 1020000 MIN 879000 ± -66600
WTR YR 1984 MAX 989400 MIN 811000 ± -88800

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

08017400 LAKE TAWAKONI NEAR WILLS POINT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
APR 10...	1145	208	16.0	76	0	26	2.8	11

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR 10...	.6	3.4	77	15	7.3	.30	.5	110

08017410 SABINE RIVER NEAR WILLS POINT, TX

LOCATION.--Lat 32°48'34", long 95°54'46", Van Zandt County, Hydrologic Unit 12010001, on right bank at downstream side of bridge on Farm Road 47, 750 ft downstream from Iron Bridge Dam that forms Lake Tawakoni, 3.0 upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.3.

DRAINAGE AREA.--756 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 370.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Lake Tawakoni (see station 08017400). Several observations of water temperatures were obtained during the year.

AVERAGE DISCHARGE.--14 years, 390 ft^3/s (296,300 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s Dec. 11, 1971 (gage height, 18.5 ft, from graph based on gage readings); no flow most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since construction of Iron Bridge Dam in 1960, about 21,000 ft^3/s May 1, 1966, from theoretical rating curve of flow over dam 750 ft upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,420 ft^3/s Mar. 25 at 1045 hours (gage height, 15.96 ft); no flow Feb. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	15.0	6.3	8.40	2.7	1760	5.1	5.8	13	24.0	36.0
2	19	18	15.0	6.4	13.00	2.9	1450	15.0	6.2	12	25.0	36.0
3	19	18	21.0	6.5	9.10	3.4	1250	146.0	6.5	13	25.0	35.0
4	20	17	15.0	6.6	8.80	24.0	1340	6.6	7.0	13	25.0	35.0
5	25	17	88.0	10.0	49.00	64.0	868	5.1	7.5	13	25.0	18.0
6	22	17	76.0	7.5	10.00	7.5	761	3.6	8.3	13	25.0	8.0
7	22	16	17.0	7.2	14.00	3.4	758	152.0	7.8	13	24.0	8.6
8	23	16	14.0	7.2	8.10	6.8	838	348.0	8.5	13	24.0	8.8
9	23	116	14.0	33.0	8.10	5.7	846	2.3	9.0	13	24.0	8.8
10	23	67	14.0	103.0	7.80	4.6	783	1.6	9.0	12	18.0	8.9
11	36	23	40.0	9.1	8.10	4.6	747	1.6	9.7	12	14.0	9.1
12	138	14	15.0	9.8	8.10	121.0	717	1.6	11.0	13	11.0	8.8
13	23	13	52.0	9.8	7.80	31.0	626	1.8	11.0	17	8.9	8.8
14	20	24	16.0	9.4	7.50	4.9	675	1.7	11.0	27	9.1	8.8
15	20	33	14.0	9.1	11.00	5.1	701	1.8	12.0	27	9.1	8.8
16	20	13	17.0	9.1	8.40	5.4	659	1.8	12.0	26	9.2	8.8
17	20	13	15.0	9.8	3.00	9.1	389	1.9	9.6	21	9.1	9.0
18	19	13	53.0	23.0	.84	6.2	289	1.9	7.6	20	8.4	9.1
19	19	27	20.0	9.8	6.80	315.0	266	2.0	6.9	20	8.4	9.1
20	22	13	14.0	9.4	1.20	372.0	214	20.0	6.6	20	8.4	9.1
21	21	13	46.0	9.4	.40	52.0	303	2.2	6.5	20	8.5	9.1
22	35	16	57.0	9.4	.00	17.0	464	2.0	6.4	20	12.0	9.8
23	23	96	23.0	9.4	.09	285.0	324	3.0	5.8	22	19.0	9.8
24	19	12	129.0	13.0	.99	2260.0	72	1.9	6.7	26	21.0	9.8
25	28	11	12.0	8.4	.99	3540.0	30	2.1	5.1	26	19.0	10.0
26	20	22	8.1	8.4	17.00	4630.0	31	2.4	10.0	26	17.0	10.0
27	19	13	8.1	8.8	388.00	4570.0	74	15.0	4.5	26	18.0	10.0
28	19	25	64.0	8.8	243.00	3280.0	36	136.0	4.7	25	30.0	10.0
29	18	17	16.0	8.8	11.00	11.0	110	133.0	10.0	24	36.0	10.0
30	18	24	11.0	15.0	---	1820.0	159	6.3	13.0	24	36.0	10.0
31	18	---	6.7	9.1	---	1770.0	---	5.8	---	24	36.0	---
TOTAL	790	758	925.9	410.5	860.51	23234.3	17540	1031.1	245.7	594	587.1	391.0
MEAN	25.5	25.3	29.9	13.2	29.7	749	585	33.3	8.19	19.2	18.9	13.0
MAX	138	116	129	103	388	4630	1760	348	13	27	36	36
MIN	18	11	6.7	6.3	.00	2.7	30	1.6	4.5	12	8.4	8.0
AC-FT	1570	1500	1840	814	1710	46090	34790	2050	487	1180	1160	776

CAL YR 1983 TOTAL 127150.90 MEAN 348 MAX 6430 MIN 1.7 AC-FT 252200
WTR YR 1984 TOTAL 47368.11 MEAN 129 MAX 4630 MIN .00 AC-FT 93950

08018500 SABINE RIVER NEAR MINEOLA, TX

LOCATION.--Lat 32°36'49", long 95°29'08", Wood County, Hydrologic Unit 12010001, on left bank 5 ft downstream from bridge on U.S. Highway 69, 3.5 mi south of Mineola, 4.5 mi upstream from Missouri Pacific Railway Lines bridge, 16.2 mi upstream from Lake Fork Creek, and at mile 461.1.

DRAINAGE AREA.--1,357 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1959, October 1967 to current year. Gage-height records collected at this site since July 1946 are contained in reports published by the National Weather Service.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 304.16 ft National Geodetic Vertical Datum of 1929. May 12, 1939, to Dec. 11, 1955, at site 55 ft upstream from downstream side of bridge; Dec. 12, 1955, to Dec. 12, 1959, at downstream side of bridge; Oct. 1, 1967, to Sept. 12, 1968, nonrecording gage at downstream side of bridge; Sept. 13, 1968, to Oct. 23, 1974, water-stage recorder at downstream side of bridge; Oct. 24, 1974, to Oct. 16, 1975, at site on right bank 75 ft downstream from bridge. All gages at present datum.

REMARKS.--Water-discharge records good. Flow partly regulated since October 1960 by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, located 53 mi upstream, and since September 1962 by Lake Holbrook, capacity 7,990 acre-ft, located on Keys Creek, a tributary to the Sabine River 8.0 mi upstream. Flow may be slightly affected at times from a floodwater-retarding structure with a detention capacity of 3,570 acre-ft. This structure controls runoff from 9.70 mi² in the Mill Creek drainage basin.

AVERAGE DISCHARGE.--20 years (water years 1940-59) prior to regulation by Lake Tawakoni, 1,054 ft³/s (763,600 acre-ft/yr); 17 years (water years 1968-84) regulated, 858 ft³/s (621,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,000 ft³/s Apr. 1, 1945 (gage height, 24.00 ft); maximum gage height, 24.37 ft June 8, 1943; no flow at times.
Maximum stage since at least 1890, that of June 8, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,150 ft³/s Apr. 1 at 0930 hours (gage height, 17.10 ft); minimum, 5.0 ft³/s June 26-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	23	46	44	667	4080	72	90.0	6.1	31	30
2	19	17	28	47	41	423	3680	150	49.0	6.5	30	38
3	18	16	63	40	43	187	3230	130	29.0	9.3	30	40
4	18	16	364	36	43	119	2690	100	20.0	8.8	30	41
5	17	16	439	34	40	145	2380	71	16.0	13.0	30	42
6	17	19	241	33	37	155	2130	100	16.0	16.0	30	42
7	17	21	115	32	35	159	1900	63	17.0	15.0	36	42
8	18	19	87	31	34	163	1740	40	15.0	14.0	40	42
9	20	19	87	35	54	121	1560	37	13.0	14.0	35	34
10	21	19	53	70	70	87	1380	203	12.0	14.0	34	24
11	21	17	36	105	94	71	1280	144	11.0	13.0	33	18
12	27	30	28	157	657	421	1200	66	11.0	13.0	32	15
13	28	62	26	162	1420	1190	1130	37	11.0	43.0	31	14
14	32	45	25	110	2070	1660	1030	26	10.0	87.0	29	13
15	73	29	31	76	2260	1950	905	20	9.7	58.0	25	13
16	54	20	33	62	1870	1810	795	17	9.1	34.0	22	13
17	33	17	42	55	1100	1220	760	15	8.4	26.0	19	13
18	24	18	42	52	473	604	757	14	7.7	26.0	16	13
19	20	30	36	48	189	285	641	15	7.4	29.0	14	13
20	19	36	32	45	137	272	385	21	7.0	30.0	13	13
21	23	29	32	42	109	587	254	37	6.5	28.0	12	13
22	22	27	42	46	87	680	229	31	6.0	25.0	12	14
23	20	32	37	51	77	477	300	26	5.6	23.0	12	15
24	20	53	27	55	66	281	391	46	5.3	23.0	12	14
25	21	43	40	64	58	591	366	52	5.3	23.0	12	14
26	25	58	45	76	84	1050	205	34	5.1	24.0	12	15
27	24	55	64	73	271	1500	113	24	5.0	25.0	13	15
28	20	38	67	65	546	2130	76	26	5.3	33.0	19	16
29	19	28	44	57	703	2700	73	25	5.6	44.0	22	17
30	20	23	32	51	---	3370	80	20	6.0	40.0	23	17
31	18	---	28	47	---	3880	---	79	---	34.0	24	---
TOTAL	746	869	2289	1903	12712	28955	35740	1741	425.0	797.7	733	663
MEAN	24.1	29.0	73.8	61.4	438	934	1191	56.2	14.2	25.7	23.6	22.1
MAX	73	62	439	162	2260	3880	4080	203	90	87	40	42
MIN	17	16	23	31	34	71	73	14	5.0	6.1	12	13
AC-FT	1480	1720	4540	3770	25210	57430	70890	3450	843	1580	1450	1320

CAL YR 1983 TOTAL 229036.0 MEAN 627 MAX 6170 MIN 16 AC-FT 454300
WTR YR 1984 TOTAL 87573.7 MEAN 239 MAX 4080 MIN 5.0 AC-FT 173700

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Biochemical analysis: July 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,400 micromhos June 3, 1971; minimum daily, 70 micromhos Dec. 12, 1971.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 21, 1984; minimum daily, 0.0°C Jan. 15, Feb. 1, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,070 micromhos July 8; minimum daily, 114 micromhos Mar. 26.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 21; minimum daily, 2.0°C on several days during December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV										
14...	1155	45	300	7.5	12.5	9.0	85	1.1	82	8
DEC										
19...	1630	36	493	7.3	3.5	12.0	90	1.0	93	42
MAR										
12...	1100	380	350	7.0	10.0	9.1	82	2.0	80	55
APR										
23...	1050	240	280	7.8	18.5	8.0	87	1.0	89	14
JUL										
16...	1245	33	1180	8.9	30.5	--	--	2.1	81	40
SEP										
04...	1245	42	320	7.8	26.0	6.0	74	2.0	92	2

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV									
14...	26	4.2	26	1	4.3	74	25	29	.20
DEC									
19...	27	6.2	53	2	4.4	51	47	79	.20
MAR									
12...	20	7.3	31	2	4.1	25	64	48	.10
APR									
23...	28	4.6	20	1	3.8	75	27	19	.30
JUL									
16...	24	5.1	190	10	5.6	41	39	300	.20
SEP									
04...	29	4.8	27	1	4.2	90	22	28	.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV									
14...	6.6	170	--	.010	<.10	.060	1.0	1.1	.070
DEC									
19...	8.5	260	.19	.010	.20	.380	.62	1.0	.020
MAR									
12...	11	200	--	<.010	<.10	.020	--	<.20	.120
APR									
23...	2.3	150	.18	.020	.20	.080	.62	.70	.030
JUL									
16...	5.1	590	.32	.080	.40	.230	1.3	1.5	.200
SEP									
04...	3.6	170	--	.030	<.10	.040	.86	.90	.100

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	746	297	162	327	56	112	28	56	50
NOV.	1983	869	433	236	554	85	199	38	90	70
DEC.	1983	2289	339	185	1150	64	398	31	194	57
JAN.	1984	1903	595	324	1670	120	607	52	266	94
FEB.	1984	12712	321	175	6010	61	2090	30	1010	53
MAR.	1984	28955	273	150	11700	51	4020	26	2000	46
APR.	1984	35740	241	132	12700	45	4320	23	2210	41
MAY	1984	1741	435	238	1120	84	397	39	184	71
JUNE	1984	425.0	728	395	454	150	171	61	69	110
JULY	1984	797.7	779	422	909	160	355	61	132	110
AUG.	1984	733	603	327	648	130	249	49	96	89
SEPT	1984	663	432	236	422	84	150	39	69	70
TOTAL		87573.7	**	**	37700	**	13100	**	6390	**
WTD.AVG.		239	292	159	**	55	**	27	**	49

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	392	263	475	805	336	198	400	927	747	468	460
2	294	368	293	644	775	354	208	325	558	758	401	422
3	298	361	274	645	742	380	219	303	528	819	334	344
4	307	366	400	644	688	408	228	293	527	845	306	322
5	310	370	254	592	672	398	232	445	538	885	311	308
6	312	373	290	540	660	463	238	590	512	1070	323	295
7	310	341	360	634	700	804	236	554	450	1920	321	300
8	306	346	239	762	714	700	245	470	577	2070	320	296
9	302	351	288	664	498	573	265	469	578	1540	409	306
10	293	396	231	504	471	600	275	389	552	1170	365	313
11	294	555	237	523	479	570	289	269	599	878	364	323
12	254	721	273	500	420	350	265	294	630	850	649	339
13	283	450	278	473	254	422	292	314	677	794	530	358
14	291	310	295	613	219	290	277	331	727	980	453	376
15	300	282	307	550	237	255	268	343	778	1280	413	396
16	252	276	263	499	250	269	255	363	800	1120	407	424
17	244	282	340	458	279	292	235	390	835	1020	433	458
18	263	293	342	510	301	340	232	408	886	928	503	525
19	242	302	415	608	352	421	259	415	959	656	808	624
20	235	283	473	618	420	451	304	365	1030	467	956	826
21	213	290	592	650	480	365	295	500	1050	422	1140	859
22	237	301	686	680	545	234	293	606	1060	396	952	828
23	248	325	557	675	575	370	281	630	1040	419	1760	826
24	259	298	388	525	617	365	277	720	1020	399	1950	708
25	275	586	224	600	633	417	249	640	1030	387	2010	610
26	326	1100	571	686	641	114	307	585	996	383	1840	494
27	467	620	465	710	671	166	317	538	955	419	1520	463
28	432	338	322	745	539	228	336	486	924	503	1150	475
29	388	319	444	750	461	255	374	495	862	505	834	687
30	395	325	436	756	---	220	382	535	792	396	712	640
31	400	---	429	821	---	203	---	830	---	327	526	---
MEAN	301	397	362	615	521	375	271	461	780	818	757	487

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	18.0	---	2.0	6.0	10.0	14.0	---	20.0	16.0	26.0	26.0
2	20.0	19.0	12.0	3.0	9.0	11.0	15.0	---	21.0	20.0	25.0	27.0
3	21.0	18.0	12.0	4.0	7.0	---	15.0	---	24.0	30.0	27.0	27.0
4	22.0	18.0	12.0	5.0	9.0	9.0	15.0	20.0	24.0	28.0	26.0	25.0
5	22.0	---	11.0	8.0	7.0	12.0	14.0	21.0	24.0	---	25.0	24.0
6	22.0	17.0	11.0	6.0	6.0	11.0	13.0	22.0	24.0	26.0	28.0	25.0
7	21.0	16.0	9.0	5.0	5.0	10.0	15.0	25.0	24.0	29.0	29.0	24.0
8	20.0	---	11.0	7.0	5.0	13.0	11.0	24.0	24.0	29.0	28.0	25.0
9	19.0	15.0	10.0	8.0	9.0	11.0	16.0	24.0	25.0	30.0	22.0	25.0
10	19.0	14.0	11.0	7.0	11.0	12.0	15.0	23.0	25.0	29.0	28.0	27.0
11	20.0	12.0	12.0	6.0	13.0	11.0	16.0	24.0	27.0	30.0	27.0	27.0
12	18.0	14.0	11.0	7.0	14.0	11.0	18.0	23.0	25.0	30.0	27.0	28.0
13	18.0	---	10.0	10.0	12.0	13.0	17.0	22.0	26.0	30.0	29.0	27.0
14	16.0	15.0	8.0	7.0	14.0	14.0	16.0	23.0	27.0	29.0	29.0	27.0
15	15.0	15.0	11.0	5.0	13.0	16.0	17.0	24.0	29.0	29.0	28.0	26.0
16	18.0	12.0	9.0	4.0	12.0	17.0	17.0	25.0	27.0	30.0	28.0	22.0
17	19.0	13.0	10.0	3.0	14.0	18.0	15.0	25.0	27.0	30.0	28.0	22.0
18	21.0	13.0	6.0	4.0	14.0	18.0	15.0	24.0	27.0	29.0	29.0	22.0
19	22.0	16.0	6.0	7.0	12.0	17.0	15.0	24.0	27.0	30.0	29.0	23.0
20	20.0	14.0	3.0	7.0	---	14.0	19.0	22.0	28.0	30.0	31.0	23.0
21	20.0	---	5.0	6.0	---	15.0	20.0	24.0	27.0	29.0	36.0	23.0
22	19.0	19.0	6.0	7.0	---	13.0	19.0	25.0	28.0	27.0	35.0	23.0
23	18.0	17.0	2.0	7.0	12.0	15.0	18.0	26.0	32.0	28.0	35.0	23.0
24	17.0	14.0	2.0	4.0	13.0	14.0	17.0	24.0	29.0	29.0	34.0	25.0
25	16.0	13.0	6.0	4.0	10.0	15.0	18.0	25.0	30.0	28.0	27.0	25.0
26	15.0	13.0	11.0	5.0	13.0	16.0	21.0	29.0	29.0	29.0	26.0	22.0
27	16.0	12.0	2.0	7.0	10.0	16.0	20.0	26.0	29.0	27.0	29.0	20.0
28	14.0	10.0	2.0	6.0	10.0	16.0	20.0	26.0	28.0	26.0	28.0	20.0
29	15.0	10.0	2.0	6.0	9.0	16.0	22.0	24.0	27.0	26.0	29.0	19.0
30	14.0	10.0	---	8.0	---	14.0	23.0	21.0	25.0	27.0	29.0	16.0
31	18.0	---	3.0	6.0	---	15.0	---	24.0	---	24.0	22.0	---
MEAN	18.5	14.5	8.0	6.0	10.5	14.0	17.0	24.0	26.5	28.0	28.5	24.0

08018730 BURKE CREEK NEAR YANTIS, TX

LOCATION.--Lat 32°59'26", long 95°37'18", Hopkins County, Hydrologic Unit 12010003, on the downstream side of highway embankment, 7 ft to left of left end of main bridge on Farm Road 1567, 100 ft upstream from Cane Branch, 1.2 mi upstream from Brushy Branch, and 5.0 mi northwest of Yantis.

DRAINAGE AREA.--33.1 mi^2.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. There are no known diversions or return effluents in the basin above gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 19.2 ft^3/s (7.88 in/yr), 13,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft^3/s June 16, 1981 (gage height, 11.59 ft), from graph based on gage reading on June 16; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1943, 17.5 ft June 6, 1943, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft^3/s Mar. 24 at 0015 hours (gage height, 10.47 ft), no other peak above base of 1,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.5	3.1	4.4	1.8	7.7	2.2	1.0	.19	.00	.00
2	.00	.00	2.3	3.2	3.9	1.6	9.6	4.3	.94	.15	.00	.00
3	.00	.00	12	3.2	4.0	1.6	15	3.2	.83	.11	.00	.00
4	.00	.00	3.5	3.2	4.1	1.6	8.2	2.4	.79	.07	.00	.00
5	.00	.00	2.6	3.4	4.1	3.8	5.8	1.9	.76	.06	.00	.00
6	.00	.00	2.5	3.4	4.1	3.0	5.0	1.7	.98	.06	.00	.00
7	.00	.00	2.5	3.5	4.1	2.1	5.1	1.4	1.4	.01	.00	.00
8	.00	.00	2.5	3.8	4.1	1.2	14	1.2	1.0	.00	.00	.00
9	.00	.00	2.6	4.1	5.5	1.2	9.7	1.0	.87	.00	.00	.00
10	.00	.00	2.8	7.8	5.8	1.2	7.1	.79	.78	.00	.00	.00
11	.00	.00	3.9	4.8	12	1.2	7.5	.67	.73	.00	.00	.00
12	.00	.00	3.8	4.0	331	166	6.1	.82	.67	.00	.00	.00
13	.00	.00	3.6	3.9	25	68	4.8	.58	.69	.00	.00	.00
14	.00	.00	3.5	3.6	4.8	12	3.9	.35	.77	.00	.00	.00
15	.00	.00	3.4	3.6	3.2	5.6	3.5	.21	.69	.00	.00	.00
16	.00	.00	3.4	3.7	2.5	3.8	4.1	.06	.57	.00	.00	.00
17	.00	.00	3.5	3.7	2.1	3.2	4.2	.00	.59	.00	.00	.00
18	.00	.00	3.6	3.7	2.2	2.6	4.3	.00	.47	.00	.00	.00
19	.00	9.1	3.7	3.6	2.0	79	4.0	7.8	.40	.00	.00	.00
20	.00	2.2	3.7	3.6	1.4	17	4.6	26	.37	.00	.00	.00
21	.00	.45	3.7	3.6	1.2	5.7	5.5	20	.43	.00	.00	.00
22	.00	.97	3.6	3.7	1.2	3.8	4.0	3.7	.32	.00	.00	.00
23	.00	1.3	3.4	4.7	1.1	325	2.8	1.9	.28	.00	.00	.00
24	.00	1.4	3.1	5.8	1.2	524	2.8	1.5	.23	.00	.00	.00
25	.00	1.2	2.8	4.5	1.2	29	2.7	1.4	.20	.00	.00	.00
26	.00	1.2	2.8	4.2	24	15	3.3	1.2	.20	.00	.00	.00
27	.00	1.2	2.8	4.4	31	60	3.1	1.3	.22	.00	.00	.00
28	.00	1.2	3.1	4.4	4.5	131	2.5	2.7	.21	.00	.00	.00
29	.00	1.2	3.1	4.4	2.4	17	2.4	2.2	.22	.00	.00	.00
30	.00	1.4	3.1	4.5	---	9.3	2.2	1.5	.23	.00	.00	.00
31	.00	---	3.1	4.6	---	8.1	---	1.2	---	.00	.00	---
TOTAL	.00	22.82	105.5	125.7	498.1	1505.4	165.5	95.18	17.84	.65	.00	.00
MEAN	.000	.76	3.40	4.05	17.2	48.6	5.52	3.07	.59	.021	.000	.000
MAX	.00	9.1	12	7.8	331	524	15	26	1.4	.19	.00	.00
MIN	.00	.00	1.5	3.1	1.1	1.2	2.2	.00	.20	.00	.00	.00
CFSM	.000	.02	.10	.12	.52	1.47	.17	.09	.02	.001	.000	.000
IN.	.00	.03	.12	.14	.56	1.69	.19	.11	.02	.00	.00	.00
AC-FT	.00	45	209	249	988	2990	328	189	35	1.3	.00	.00

CAL YR 1983 TOTAL 6343.92 MEAN 17.4 MAX 526 MIN .00 CFSM .53 IN 7.13 AC-FT 12580
WTR YR 1984 TOTAL 2536.69 MEAN 6.93 MAX 524 MIN .00 CFSM .21 IN 2.85 AC-FT 5030

08018800 LAKE FORK RESERVOIR NEAR QUITMAN, TX

LOCATION.--Lat 32°48'48", long 95°31'40", Wood County, Hydrologic Unit 12010003, in room at left end of gated concrete spillway structure of Lake Fork Dam on Lake Fork Creek, 2,000 ft upstream from bridge on State Highway 182, 2.3 mi upstream from Alum Branch, and 4.4 mi west-northwest of the county courthouse in Quitman.

DRAINAGE AREA.--490 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

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

REMARKS.--The lake is formed by a rolled earthfill dam 12,660 ft long, including a 260-foot gated concrete spillway. The outlet works consist of two 5- by 8-foot low-flow sluice gates, five 40- by 20-foot taintor gates, and two 5- by 6-foot sluice gates that open into a wet-well where there are two 36-inch and one 10-inch valve-controlled and metered-outlet pipes. Deliberate impoundment began June 29, 1979, and closure of the dam was completed in January 1980. The lake was built for water conservation and is owned by the Sabine River Authority. No known diversions were made from the lake this year. Flow is affected at times by discharge from the flood-detention pools of 21 floodwater-retarding structures with a combined detention capacity of 20,270 acre-ft. These structures control runoff from 60.0 mi above the lake. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	419.5	1,270,000
Top of tainter gates	405.0	732,900
Crest of gated spillway	385.0	291,900
Invert of upper sluice gate	383.0	260,400
Invert of lower sluice gate	360.5	43,120
Invert of sluice gate in two center pieces	360.0	40,620

COOPERATION.--Area and capacity tables were prepared and furnished by URS/Forrest and Cotton, Inc., Consulting Engineers, for the Sabine River Authority. Observed elevations for the period Oct. 31, 1979, to Jan. 31, 1980, were furnished by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 357,200 acre-ft Apr. 3, 1984 (elevation, 388.85 ft); minimum observed, 46,140 acre-ft Dec. 11-14, 1979 (elevation, 361.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 357,200 acre-ft Apr. 3 at 1500 hours (elevation, 388.85 ft); minimum, 275,200 acre-ft Nov. 17, 18 (elevation, 383.95 ft).

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

383.0	260,400	387.0	325,000
385.0	291,900	389.0	359,900

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279000	276900	279000	284400	287100	315700	355400	353700	351900	345900	336000	329300
2	278500	276800	283800	284400	287100	315400	356300	354600	351700	345500	335800	329100
3	278400	276800	286000	284200	287100	314600	356900	354200	351700	345200	335300	328900
4	278400	276900	286200	284400	287100	315600	356300	354000	351400	344800	336000	328200
5	278200	276900	286800	284400	287100	314600	356100	354000	351200	345200	335500	328100
6	277900	277600	285800	284600	286800	313400	355600	353800	351000	344800	335300	327500
7	278000	277400	285700	284400	286800	312600	356500	354600	351500	344700	335300	327000
8	278800	277200	285500	284400	286800	312100	356700	353300	351000	344100	335100	326700
9	278700	277600	285700	287900	287600	311100	356500	352800	351000	343800	334900	326500
10	278500	277100	286200	286300	287600	311400	356700	352400	350800	343200	334600	326200
11	280100	276400	286300	286300	293200	312700	356100	352100	350300	343100	334400	325800
12	279600	276300	285800	286600	306400	317900	356300	351900	350100	342900	334400	325700
13	279000	276800	286300	286300	312200	322500	356700	351900	350000	342500	334400	325300
14	278500	276000	286000	286500	313900	323800	356000	351500	349800	342200	334600	325000
15	278400	276000	285800	286500	314900	325100	356000	351400	349600	341800	334400	324300
16	278400	275500	286300	286500	314900	325800	355600	350800	349200	341100	334100	323800
17	278400	275200	286300	286900	314900	326300	355300	350700	349100	341000	333700	323500
18	278200	275200	286600	286900	315900	327400	355300	350700	348700	340600	333400	323100
19	278200	278200	286000	286300	315700	330000	355100	352100	348400	340100	333100	322800
20	279100	277900	285700	286500	315700	330800	356000	353800	348000	339600	332700	322600
21	279100	277700	286800	286200	315600	331000	356000	353800	347500	339200	332500	322600
22	278500	278800	285500	286500	315600	331200	355400	353700	347300	339100	332500	322600
23	278400	280100	285800	286900	315600	334400	354900	353700	346900	338600	332400	322600
24	278200	279800	285500	286900	315100	342700	354200	353300	346600	338700	331800	322300
25	278000	279300	284700	287100	314100	346200	354200	353000	346200	338400	331700	324100
26	277700	279900	284700	287100	316600	347700	354200	352800	346400	338000	331200	323600
27	277600	280300	284900	287100	317400	351500	354200	354200	346100	337900	330800	323100
28	277400	279600	285000	287100	317100	353800	354200	354000	346400	337500	330500	323300
29	277200	279100	284700	287900	316300	354900	354700	353300	346600	337000	330300	322800
30	277100	279300	284200	287100	---	355300	353700	352800	346200	336700	329800	321900
31	276900	---	284100	287100	---	355800	---	352400	---	336300	329600	---
MAX	280100	280300	286800	287900	317400	355800	356900	354600	351900	345900	336000	329300
MIN	276900	275200	279000	284200	286800	311100	353700	350700	346100	336300	329600	321900
(†)	384.06	384.21	384.51	384.70	386.48	388.77	388.65	388.58	388.23	387.66	387.27	386.82
(±)	-2200	+2400	+4800	+3000	+29200	+39500	-2100	-1300	-6200	-9900	-6700	-7700

CAL YR 1983 MAX 319900 MIN 244100 ± +40300
WTR YR 1984 MAX 356900 MIN 275200 ± +82200

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

SABINE RIVER BASIN

08018800 LAKE FORK RESERVOIR NEAR QUITMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
APR 10...	1245	216	16.0	61	13	15	5.8	15

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR 10...	.9	5.8	48	21	20	.10	1.2	110

08019000 LAKE FORK CREEK NEAR QUITMAN, TX

LOCATION.--Lat 32°45'47", long 95°27'46", Wood County, Hydrologic Unit 12010003, at downstream side of highway embankment near left end of bridge on State Highway 37, 0.3 mi downstream from Dry Creek, 2.4 mi south of Quitman, and 23.4 mi upstream upstream from mouth.

DRAINAGE AREA.--585 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1924 to April 1926, February 1939 to current year. Discharge for some high-water periods in 1925-26 published in WSP 1342. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1961, published as Lake Fork Sabine River near Quitman.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 317.42 ft National Geodetic Vertical Datum of 1929. June 27, 1924, to Apr. 30, 1926, nonrecording gage at site 1,000 ft downstream at same datum. Prior to Sept. 5, 1978, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Since May 1962, flow from 31.0 mi² is controlled by Lake Quitman (capacity 7,440 acre-ft) on Dry Creek, a tributary above this station and below Lake Fork Reservoir. Construction of Lake Fork Dam and Reservoir (capacity 675,800 acre-ft), located about 5 mi upstream from station, began in 1975. Deliberate impoundment began June 29, 1979, and the dam was completed in January 1980. Lake Fork Reservoir controls runoff from 490 mi². The city of Quitman discharged a small amount of sewage effluent into a tributary above this station.

AVERAGE DISCHARGE.--41 years (water years 1925, 1940-79), prior to regulation by Lake Fork Reservoir, 432 ft³/s (313,000 acre-ft/yr); 5 years (water years 1980-84) regulated, 196 ft³/s (142,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,600 ft³/s Mar. 30, 1945 (gage height, 29.85 ft, from floodmark), from rating curve extended above 49,000 ft³/s; no flow at times most years.
Maximum stage since at least 1890, that of Mar. 30, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1895 reached a stage of about 25.9 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 636 ft³/s Feb. 13 at 1500 hours (gage height, 9.46 ft); no flow Sept. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.9	3.8	2.4	4.0	353	67	14	9.8	4.7	3.2	3.80
2	4.7	4.9	10.0	2.9	3.5	392	60	17	8.9	4.0	3.4	3.80
3	4.9	4.6	191.0	3.3	3.1	461	59	111	8.6	3.5	3.4	3.50
4	5.1	4.3	120.0	3.5	3.3	469	52	52	8.6	3.4	3.1	3.80
5	5.8	4.5	29.0	3.0	2.7	484	45	26	8.9	4.0	3.0	4.00
6	5.4	7.8	14.0	2.9	3.5	494	38	19	9.4	3.7	3.3	3.30
7	5.3	7.9	8.3	2.5	4.6	479	35	16	9.8	3.8	3.8	2.30
8	7.6	5.5	6.0	2.3	3.0	465	40	15	9.3	3.6	4.9	1.70
9	8.1	4.5	4.8	4.3	6.7	457	43	15	9.0	3.4	4.7	1.10
10	6.5	3.5	4.8	31.0	16.0	232	40	13	8.9	3.7	4.0	.86
11	5.8	3.6	7.5	30.0	16.0	52	41	12	8.5	3.7	3.8	.54
12	8.1	4.2	10.0	14.0	387.0	265	40	11	8.7	3.5	3.6	.37
13	6.1	4.8	7.1	8.4	600.0	440	35	11	8.7	3.6	3.5	.26
14	5.0	4.8	5.2	6.0	490.0	335	30	11	8.5	3.7	3.8	.17
15	4.3	4.6	4.3	5.7	297.0	181	28	11	8.4	3.7	3.8	.10
16	4.5	5.4	4.7	5.4	156.0	114	27	11	8.7	3.4	3.8	.06
17	4.5	5.5	6.1	5.4	90.0	90	25	11	8.4	3.5	3.7	.02
18	4.4	5.2	8.1	5.2	72.0	78	21	10	8.0	3.6	3.7	.00
19	4.3	8.1	9.1	4.5	74.0	72	20	12	8.1	3.6	3.7	.00
20	4.2	14.0	7.5	4.2	63.0	77	20	25	8.2	3.5	3.7	.00
21	5.2	11.0	6.0	4.8	54.0	67	20	110	8.3	3.4	3.4	.00
22	4.8	5.7	4.8	3.6	49.0	57	24	61	8.1	3.3	3.4	.00
23	5.9	15.0	4.0	5.9	44.0	53	22	26	8.1	3.3	3.5	.00
24	5.5	18.0	3.3	13.0	47.0	75	21	19	8.1	3.4	3.6	.04
25	4.6	11.0	2.8	12.0	325.0	72	18	15	7.9	3.6	3.6	.13
26	4.5	6.0	2.8	8.6	458.0	61	16	13	8.0	4.0	3.5	1.00
27	4.3	4.0	2.9	6.6	572.0	216	15	12	8.1	3.7	3.6	.59
28	4.2	4.6	3.1	5.5	565.0	478	14	14	8.1	3.7	3.6	.39
29	4.2	5.1	2.9	5.2	512.0	321	14	19	8.1	3.6	3.5	.29
30	4.3	4.5	2.3	4.2	---	132	14	14	7.1	3.5	3.5	.26
31	4.3	---	2.3	3.6	---	82	---	10	---	3.4	3.7	---
TOTAL	160.9	197.5	498.5	219.9	4921.4	7604	944	736	255.3	112.5	112.8	32.38
MEAN	5.19	6.58	16.1	7.09	170	245	31.5	23.7	8.51	3.63	3.64	1.08
MAX	8.1	18	191	31	600	494	67	111	9.8	4.7	4.9	4.0
MIN	4.2	3.5	2.3	2.3	2.7	52	14	10	7.1	3.3	3.0	.00
AC-FT	319	392	989	436	9760	15080	1870	1460	506	223	224	64

CAL YR 1983 TOTAL 65756.60 MEAN 180 MAX 1690 MIN 2.3 AC-FT 130400
WTR YR 1984 TOTAL 15795.18 MEAN 43.2 MAX 600 MIN .00 AC-FT 31330

08019000 LAKE FORK CREEK NEAR QUITMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1961 to June 1965, November 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1967 to current year.
WATER TEMPERATURES: December 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,800 micromhos Oct. 5, 1972; minimum daily, 37 micromhos Dec. 11, 1971.
WATER TEMPERATURES (1976-1979, 1981-84); Maximum daily, 34.0°C Aug. 15, 1983; minimum daily, 0.0°C Dec. 23-27, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 micromhos Feb. 3; minimum daily, 250 micromhos Feb. 27.
WATER TEMPERATURES: Maximum daily, 31.0°C July 11, 13, 16, 27; minimum daily, 0.0°C Dec. 23-27.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV									
28...	1530	5.2	727	9.0	130	88	31	12	81
JAN									
11...	1100	30	1080	4.0	170	160	42	17	130
APR									
30...	1600	14	415	21.0	92	44	22	9.1	43
JUN									
30...	1615	3.3	267	28.0	72	5	18	6.6	23
JUL									
09...	1630	3.3	328	29.0	85	5	21	7.8	27
AUG									
31...	1700	3.6	336	30.0	95	19	24	8.4	30

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV								
28...	3	6.8	39	45	150	.10	7.9	360
JAN								
11...	4	4.8	15	93	260	.20	19	570
APR								
30...	2	6.1	49	45	62	.20	7.4	220
JUN								
30...	1	6.7	67	20	32	.20	2.3	150
JUL								
09...	1	6.5	80	22	41	.20	2.2	180
AUG								
31...	1	6.3	76	18	44	.20	4.3	180

08019000 LAKE FORK CREEK NEAR QUITMAN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	160.9	288	160	70	43	19	36	16	63
NOV.	1983	197.5	417	231	123	69	37	50	27	88
DEC.	1983	498.5	523	289	388	91	123	62	83	110
JAN.	1984	219.9	813	443	263	170	98	89	53	150
FEB.	1984	4921.4	362	201	2670	59	778	44	585	77
MAR.	1984	7604	374	207	4260	60	1240	45	933	80
APR.	1984	944	544	300	765	96	244	64	163	110
MAY	1984	736	564	310	617	100	204	65	130	110
JUNE	1984	255.3	294	164	113	44	31	37	25	65
JULY	1984	112.5	325	181	55	50	15	40	12	71
AUG.	1984	112.8	336	187	57	52	16	42	13	73
SEPT	1984	32.38	335	187	16	52	4.5	41	3.6	73
TOTAL		15795.18	**	**	9400	**	2810	**	2040	**
WTD.AVG.		43	398	220	**	66	**	48	**	84

08019000 LAKE FORK CREEK NEAR QUITMAN, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	300	325	671	1000	302	469	441	341	289	341	332
2	297	303	445	679	1020	265	506	413	342	296	343	333
3	295	300	506	684	1050	260	517	725	332	299	344	335
4	300	304	510	680	1010	261	558	914	308	301	345	331
5	303	306	528	644	1020	285	560	696	301	305	338	334
6	294	314	537	673	950	307	562	562	309	316	339	337
7	298	316	504	697	880	284	566	482	332	311	307	336
8	292	314	523	873	901	264	577	456	334	319	328	335
9	259	310	543	864	875	258	642	455	320	329	327	337
10	276	307	516	710	820	319	640	409	308	335	317	339
11	285	305	546	682	800	458	621	370	289	331	316	341
12	265	308	435	848	350	509	614	350	294	339	325	344
13	270	310	472	874	260	513	598	339	290	342	333	347
14	276	311	467	827	400	437	571	331	284	343	338	348
15	283	313	454	874	465	440	561	324	291	339	355	358
16	288	312	572	851	530	460	519	321	294	340	354	356
17	292	314	756	900	570	500	467	320	281	338	346	362
18	294	318	869	917	579	536	466	314	289	339	346	---
19	296	355	893	926	575	558	471	311	279	333	337	---
20	298	404	583	920	610	551	476	370	273	332	335	---
21	281	399	532	945	640	566	481	610	272	333	338	---
22	290	398	581	960	660	572	564	697	275	334	334	---
23	275	545	454	930	673	549	604	609	272	331	335	---
24	280	591	390	795	668	604	693	527	270	331	336	360
25	290	593	392	805	405	659	529	459	273	328	337	357
26	295	632	408	852	310	653	455	414	271	325	350	338
27	302	628	397	900	250	435	446	377	268	326	345	336
28	298	600	504	956	265	505	410	443	266	328	339	335
29	300	563	565	995	287	473	402	446	265	326	341	336
30	303	431	680	1040	---	443	415	386	267	332	338	343
31	299	---	676	1030	---	467	---	381	---	338	336	---
MEAN	289	390	534	839	649	442	532	460	293	326	337	342

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	16.0	10.0	3.0	---	10.0	16.0	18.0	22.0	26.0	27.0	28.0
2	26.0	17.0	9.0	2.0	---	15.0	17.0	20.0	23.0	28.0	26.0	28.0
3	25.0	18.0	13.0	4.0	---	13.0	14.0	22.0	25.0	29.0	26.0	27.0
4	25.0	17.0	9.0	5.0	---	13.0	14.0	24.0	28.0	30.0	26.0	27.0
5	26.0	17.0	9.0	5.0	5.0	10.0	11.0	22.0	25.0	28.0	26.0	27.0
6	25.0	16.0	10.0	6.0	9.0	12.0	12.0	24.0	24.0	28.0	26.0	28.0
7	24.0	16.0	10.0	7.0	9.0	12.0	15.0	25.0	27.0	29.0	26.0	28.5
8	24.0	16.0	10.0	5.0	12.0	13.0	17.0	22.0	25.0	28.0	27.0	28.0
9	22.0	14.0	9.0	5.0	13.0	12.0	17.0	19.0	24.0	30.0	28.0	28.0
10	21.0	13.0	8.0	5.0	15.0	10.0	18.0	19.0	26.0	30.0	27.0	27.0
11	21.0	13.0	10.0	6.0	15.0	10.0	20.0	20.0	28.0	31.0	28.0	28.0
12	19.0	14.0	11.0	6.0	14.0	13.0	22.0	23.0	26.0	30.0	27.0	28.0
13	20.0	14.0	9.0	6.0	14.0	13.0	21.0	25.0	25.0	31.0	26.0	28.0
14	21.0	14.0	9.0	3.0	13.0	14.0	20.0	26.0	28.0	30.0	26.0	29.0
15	21.0	14.0	9.0	3.0	14.0	12.0	17.0	26.0	27.0	30.0	27.0	---
16	22.0	14.0	4.0	5.0	14.0	16.0	16.0	25.0	---	31.0	27.0	24.0
17	21.0	13.0	5.0	3.0	15.0	17.0	17.0	26.0	27.0	30.0	28.0	26.0
18	21.0	13.0	4.0	2.0	15.0	20.0	18.0	24.0	28.0	29.0	28.0	---
19	20.0	13.0	3.0	2.0	---	15.0	18.0	24.0	28.0	30.0	28.0	---
20	20.0	15.0	3.0	2.0	13.0	---	19.0	22.0	28.0	30.0	29.0	---
21	20.0	17.0	2.0	2.0	13.0	16.0	22.0	24.0	29.0	30.0	30.0	---
22	20.0	17.0	1.0	2.0	14.0	17.0	22.0	24.0	30.0	27.0	30.0	---
23	20.0	15.0	.0	2.0	14.0	17.0	18.0	23.0	28.0	28.0	28.0	---
24	20.0	13.0	.0	4.0	12.0	15.0	22.0	26.0	27.0	28.0	30.0	24.0
25	17.0	10.0	.0	4.0	12.0	17.0	24.0	24.0	29.0	30.0	29.0	26.0
26	16.0	14.0	.0	5.0	9.0	19.0	25.0	27.0	27.0	30.0	30.0	20.0
27	15.0	13.0	.0	6.0	8.0	20.0	22.0	27.0	27.0	31.0	28.0	19.0
28	15.0	10.0	1.0	6.0	7.0	16.0	22.0	25.0	26.0	---	30.0	17.0
29	15.0	9.0	1.0	6.0	10.0	15.0	23.0	23.0	28.0	30.0	29.0	16.0
30	16.0	9.0	2.0	6.0	---	16.0	21.0	22.0	28.0	30.0	28.0	17.0
31	16.0	---	2.0	6.0	---	15.0	---	20.0	---	28.0	30.0	---
MEAN	20.5	14.0	5.5	4.5	12.0	14.5	18.5	23.5	26.5	29.5	28.0	25.0

08019300 LAKE WINNSBORO NEAR WINNSBORO, TX

LOCATION.--Lat 32°53'13", long 95°20'41", Wood County, Hydrologic Unit 12010002, near left end of dam on Big Sandy Creek, 0.8 mi upstream from bridge on State Highway 37, 2.5 mi upstream from Indian Creek, and 5.8 mi southwest of Winnsboro.

DRAINAGE AREA.--27.1 mi².

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1963, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 2,500 ft long. Storage began June 11, 1962, and the dam was completed in August 1962. The dam was built by Wood County for flood control and recreation. The spillway is an uncontrolled 20-foot square drop inlet at crest elevation of 419.0 ft. The crest was raised in April 1966 from elevation 417 to 419 ft. The other spillway is a 300-foot-wide cut channel through natural ground near right end of dam. The capacity curve is based on 1960 Geological Survey topographic maps. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	437.0	-
Design flood	433.0	22,500
Crest of spillway	427.0	16,270
Crest of drop inlet (top of conservation pool)	419.0	8,110
Lowest gated outlet (invert)	392.2	0

COOPERATION.--Capacity curve was furnished by Wisenbaker, Fix, and Associates, Consulting Engineers for Wood County.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,640 acre-ft Feb. 5, 1975 (elevation, 422.92 ft); minimum since first appreciable storage, 2,430 acre-ft Jan. 19, 20, 1965 (elevation, 409.79 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,350 acre-ft Mar. 13 at 1600 hours (elevation, 419.30 ft); minimum, 6,210 acre-ft Sept. 21, 22 (elevation, 416.46 ft).

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

416.0	5,890	419.0	8,110
417.0	6,590	420.0	8,940
418.0	7,330		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7000	6840	6810	7000	7060	8050	8210	7950	7780	7390	6960	6480
2	6970	6830	7030	7000	7060	8060	8210	8050	7780	7390	6920	6480
3	6970	6830	7080	7000	7040	8050	8180	8110	7750	7370	6900	6470
4	6960	6850	7080	7000	7040	8080	8160	8110	7750	7340	6910	6440
5	6940	6830	7090	7010	7030	8080	8150	8100	7740	7370	6910	6420
6	6920	6850	7060	7000	7050	8070	8150	8090	7760	7360	6890	6410
7	6910	6850	7060	7000	7060	8070	8150	8080	7750	7340	6920	6390
8	6940	6850	7060	7000	7060	8060	8130	8050	7750	7320	6910	6350
9	6930	6830	7080	7070	7080	8060	8150	8030	7730	7300	6910	6350
10	6910	6820	7080	7080	7100	8060	8150	8010	7720	7330	6890	6350
11	6960	6790	7060	7080	7280	8060	8150	8000	7710	7290	6880	6330
12	6940	6790	7060	7060	7760	8100	8130	7990	7680	7310	6870	6320
13	6910	6790	7060	7060	7860	8300	8130	7980	7680	7290	6860	6300
14	6900	6780	7040	7050	7910	8340	8090	7980	7660	7280	6830	6290
15	6900	6770	7040	7040	7940	8310	8080	7960	7650	7240	6830	6280
16	6900	6760	7080	7030	7930	8300	8070	7920	7620	7240	6820	6270
17	6890	6750	7080	7040	7950	8270	8060	7910	7600	7220	6790	6260
18	6890	6750	7060	7040	7970	8250	8060	7900	7600	7190	6780	6230
19	6880	6850	7060	7030	7960	8230	8050	7980	7570	7180	6760	6230
20	6950	6840	7050	7030	7960	8220	8050	8010	7560	7140	6750	6210
21	6930	6840	7040	7030	7990	8210	8060	8020	7530	7120	6730	6210
22	6910	6840	7030	7030	8000	8200	8050	8020	7530	7120	6670	6240
23	6890	6880	7030	7040	8000	8190	8010	7920	7500	7090	6640	6240
24	6890	6860	7000	7050	7990	8210	8010	7910	7460	7090	6630	6230
25	6860	6850	7000	7060	7990	8250	8000	7870	7450	7060	6600	6230
26	6860	6860	7000	7060	8070	8250	8000	7890	7440	7060	6590	6270
27	6860	6860	7000	7060	8070	8230	7980	7870	7440	7050	6570	6270
28	6860	6830	7000	7060	8090	8300	7980	7870	7430	7030	6560	6270
29	6850	6840	7000	7060	8110	8280	7970	7830	7430	7000	6530	6250
30	6840	6830	7000	7060	---	8250	7940	7820	7410	6970	6520	6220
31	6830	---	7000	7060	---	8230	---	7800	---	6970	6510	---
MAX	7000	6880	7090	7080	8110	8340	8210	8110	7780	7390	6960	6480
MIN	6830	6750	6810	7000	7030	8050	7940	7800	7410	6970	6510	6210
(†)	417.34	417.33	417.56	417.64	419.00	419.15	418.79	418.61	418.11	417.53	416.89	416.48
(‡)	-170	0	+170	+60	+1050	+120	-290	-140	-390	-440	-460	-290

CAL YR 1983 MAX 8680 MIN 6750 ‡ -1320
WTR YR 1984 MAX 8340 MIN 6210 ‡ -780

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

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX

LOCATION.--Lat 32°36'14", long 95°05'29", Upshur County, Hydrologic Unit 12010002, on downstream side of highway embankment near left end of bridge on State Highway 155, 0.5 mi upstream from St. Louis Southwestern Railway Lines bridge, 1.6 mi northeast of Big Sandy, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--231 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: 1941(M), 1945-46, 1956, drainage area. WSP 1922: 1944(M), 1945-46.

GAGE.--Water-stage recorder. Datum of gage is 278.38 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 5, 1940, nonrecording gage, and Oct. 5, 1940, to Nov. 26, 1951, water-stage recorder at site 1.3 mi upstream at datum 3.00 ft higher.

REMARKS.--Water-discharge records good. Since June 1962, flow is affected somewhat by the flood-detention pool of Lake Winnsboro (station 08019300).

AVERAGE DISCHARGE.--45 years, 178 ft^3/s (129,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s Mar. 31, 1945 (gage height, 24.1 ft, from floodmark, present site and datum), from rating curve extended above 13,000 ft^3/s; minimum, 3.5 ft^3/s July 24, Aug. 7, 8, 1984. Maximum stage since at least 1875, that of Mar. 31, 1945, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 427 ft^3/s Feb. 15 at 0030 hours (gage height, 9.61 ft), no peak above base of 1,500 ft^3/s; minimum daily, 3.5 ft^3/s July 24, Aug. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	34	39	74	140	322	33	13.0	7.9	5.2	4.3
2	12	16	37	39	68	149	269	31	11.0	7.4	4.6	4.5
3	11	16	76	42	64	146	211	24	10.0	7.2	4.5	4.4
4	11	17	99	46	60	138	170	32	9.7	7.2	4.6	4.6
5	13	17	106	50	56	143	149	31	9.5	7.2	4.2	4.6
6	13	19	106	53	49	145	133	43	13.0	8.8	3.8	4.7
7	15	22	107	59	48	138	125	63	20.0	9.2	3.5	4.4
8	15	24	110	65	46	133	135	53	21.0	8.7	3.5	4.5
9	18	24	95	74	68	133	125	38	19.0	8.2	4.9	5.0
10	20	22	79	97	90	131	122	29	18.0	7.3	5.1	5.0
11	19	20	86	94	97	121	148	21	16.0	6.9	4.7	5.2
12	29	21	63	97	253	162	135	18	13.0	6.7	7.7	5.6
13	34	20	61	104	340	201	144	15	11.0	7.6	9.6	6.6
14	34	19	66	112	367	185	172	14	8.6	8.0	6.6	6.5
15	28	19	61	109	400	214	180	20	7.2	7.6	4.8	6.6
16	23	18	51	91	319	268	146	26	6.7	6.8	4.3	7.5
17	19	17	51	73	317	357	111	23	5.8	6.0	4.3	9.4
18	20	17	54	64	314	340	87	23	5.4	5.7	3.8	9.4
19	21	21	61	68	240	249	74	34	5.5	6.0	3.6	9.1
20	24	44	56	72	167	194	69	55	5.4	5.4	3.6	9.3
21	38	56	55	73	136	175	63	90	4.9	5.2	3.8	10.0
22	49	60	54	75	122	162	55	74	5.2	4.4	4.4	16.0
23	43	54	53	78	115	155	48	71	5.4	3.9	4.5	22.0
24	34	57	46	79	108	210	44	51	5.3	3.5	4.7	23.0
25	29	62	39	76	98	177	41	42	4.9	4.6	4.8	23.0
26	22	60	35	74	107	157	39	32	4.9	8.3	4.8	20.0
27	19	53	34	76	142	160	38	25	6.0	7.9	4.2	19.0
28	18	46	35	75	134	259	36	24	7.0	10.0	4.1	20.0
29	18	37	35	76	133	271	36	20	7.9	9.6	4.3	21.0
30	16	35	34	77	---	320	33	18	7.9	7.3	3.8	21.0
31	16	---	33	77	---	318	---	16	---	6.2	4.0	---
TOTAL	692	929	1912	2284	4532	6051	3460	1089	288.2	216.7	144.3	316.2
MEAN	22.3	31.0	61.7	73.7	156	195	115	35.1	9.61	6.99	4.65	10.5
MAX	49	62	110	112	400	357	322	90	21	10	9.6	23
MIN	11	16	33	39	46	121	33	14	4.9	3.5	3.5	4.3
AC-FT	1370	1840	3790	4530	8990	12000	6860	2160	572	430	286	627

CAL YR 1983 TOTAL 49069.7 MEAN 134 MAX 1340 MIN 6.0 AC-FT 97330
WTR YR 1984 TOTAL 21914.4 MEAN 59.9 MAX 400 MIN 3.5 AC-FT 43470

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 03...	1400	11	80	21.0	17	6	4.1	1.6	8.0
NOV 14...	1545	20	138	14.0	20	9	4.7	1.9	17
DEC 20...	1020	58	161	4.0	27	20	6.2	2.8	17
JAN 30...	1500	76	222	9.0	35	28	8.1	3.6	25
MAR 12...	1525	183	183	13.0	35	28	7.9	3.7	18
APR 23...	1500	47	205	19.0	41	26	9.2	4.3	23
JUN 11...	1345	15	138	25.0	25	9	6.1	2.4	14

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 03...	.9	2.0	11	5.0	15	<.10	12	54
NOV 14...	2	2.3	11	8.2	31	<.10	13	85
DEC 20...	1	3.0	7	18	30	<.10	15	96
JAN 30...	2	2.9	7	25	42	<.10	16	130
MAR 12...	1	2.8	7	29	28	<.10	14	110
APR 23...	2	3.2	15	24	37	.10	13	120
JUN 11...	1	2.5	16	13	25	<.10	12	85

08020000 SABINE RIVER NEAR GLADEWATER, TX

LOCATION.--Lat 32°31'37", long 94°57'36", Gregg County, Hydrologic Unit 12010002, on right bank 46 ft downstream from bridge on U.S. Highway 271, 0.4 mi downstream from Glade Creek, 1.2 mi southwest of Gladewater, and at mile 397.5.

DRAINAGE AREA.--2,791 mi^2.

PERIOD OF RECORD.--October 1932 to current year.

REVISED RECORDS.--WSP 1732: Drainage area. WRD TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 243.85 ft National Geodetic Vertical Datum of 1929 (Texas Reclamation Department bench mark based on Geological Survey datum). Prior to Oct. 13, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow is partially regulated by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, by Lake Fork Creek Reservoir (station 08018800), capacity 675,800 acre-ft, and five tributary reservoirs with a combined capacity of 42,370 acre-ft. There are many diversions above station for oilfield operations and municipal supply. Rain gage and gage-height telemeter are operated at this station.

AVERAGE DISCHARGE.--28 years (water years 1933-60) prior to regulation by Lake Tawakoni, 2,012 ft^3/s (1,458,000 acre-ft/yr); 24 years (water years 1961-84) regulated, 1,633 ft^3/s (1,183,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 138,000 ft^3/s Apr. 2, 1945 (gage height, 44.16 ft, from floodmark), from rating curve extended above 91,000 ft^3/s; minimum, 5.6 ft^3/s Aug. 16, 1939.
Maximum stage since at least 1892, that of Apr. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 41.7 ft (discharge, 85,900 ft^3/s), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,850 ft^3/s Apr. 6 at 1900 hours (gage height, 20.46 ft); minimum, 14 ft^3/s Aug. 31 and Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	81	222	251	285	1270	2800	233	146	33	46	15
2	50	78	208	236	272	1370	3050	223	132	37	53	19
3	47	77	273	232	261	1360	3300	227	156	32	52	25
4	45	77	334	249	252	1170	3530	258	162	30	51	27
5	46	75	438	260	241	958	3720	305	132	41	52	28
6	43	76	615	260	231	768	3830	322	129	39	44	38
7	43	79	720	254	222	637	3800	298	144	35	42	41
8	45	86	621	246	217	577	3660	281	180	35	46	42
9	45	96	479	274	228	518	3370	254	181	35	43	45
10	47	107	410	333	264	473	3010	202	145	34	46	48
11	54	107	471	392	324	448	2940	164	123	32	59	47
12	85	101	500	434	1070	817	2710	205	109	32	65	45
13	87	97	414	469	2200	1640	2420	284	97	37	78	41
14	107	96	346	492	2700	2080	2100	225	86	29	89	35
15	112	94	306	500	2850	2240	1770	162	79	27	69	28
16	106	118	298	465	2930	2340	1610	134	70	26	62	23
17	95	133	302	410	2800	2460	1430	120	66	62	55	20
18	107	123	324	371	2760	2550	1270	107	59	74	48	18
19	118	139	366	341	2590	2470	1170	117	54	56	44	18
20	108	155	379	319	1990	2040	1110	198	50	49	38	16
21	97	233	387	304	1180	1290	1020	413	47	40	32	17
22	103	299	366	287	743	933	950	297	43	32	29	23
23	141	289	346	289	569	999	658	238	39	30	25	23
24	150	242	321	306	489	1300	495	263	36	30	23	32
25	131	222	279	332	438	1380	505	253	33	31	21	38
26	113	220	296	351	490	1350	566	207	30	41	19	37
27	98	232	272	352	766	1290	570	180	30	53	18	32
28	90	238	260	348	1050	1520	469	176	30	44	17	27
29	87	236	261	340	1190	1910	352	158	30	47	16	25
30	86	237	269	323	---	2180	276	133	30	47	15	25
31	86	---	289	300	---	2510	---	131	---	44	14	---
TOTAL	2626	4443	11372	10320	31602	44848	58461	6768	2648	1214	1311	898
MEAN	84.7	148	367	333	1090	1447	1949	218	88.3	39.2	42.3	29.9
MAX	150	299	720	500	2930	2550	3830	413	181	74	89	48
MIN	43	75	208	232	217	448	276	107	30	26	14	15
AC-FT	5210	8810	22560	20470	62680	88960	116000	13420	5250	2410	2600	1780

CAL YR 1983	TOTAL	462431	MEAN	1267	MAX	7290	MIN 43	AC-FT 917200
WTR YR 1984	TOTAL	176511	MEAN	482	MAX	3830	MIN 14	AC-FT 350100

08020450 SABINE RIVER ABOVE LONGVIEW, TX

LOCATION.--Lat 32°28'47", long 94°48'15", Gregg County, Hydrologic Unit 12010002, on left bank at city of Longview pumping station at the end of Swinging Bridge Road, 1.4 mi southwest of the intersection of Swinging Bridge Road and Farm Road 2206 in Longview, 2.5 mi downstream from Hawkins Creek, 2.6 mi upstream from U.S. Highway 259, and at mile 375.4.

DRAINAGE AREA.--2,943 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1983 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 230.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Daily discharges above 500 ft³/s are not published. Flow is partially regulated by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, and by Lake Fork Reservoir (station 08018800), capacity 675,800 acre-ft, and by five tributary reservoirs with a combined capacity of 42,370 acre-ft. There are many diversions above station for oilfield operations and for municipal and industrial supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 18.10 ft Apr. 7, 1984; minimum daily discharge, 10 ft³/s Sept. 20, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 18.10 ft Apr. 7 at about 1200 hours; minimum daily discharge, 10 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	76	240	300	300	-	-	298	141	45	40.0	7.10
2	36	72	220	250	290	-	-	253	149	28	45.0	3.20
3	40	70	200	240	280	-	-	248	141	32	58.0	13.00
4	36	68	300	230	270	-	-	243	156	28	62.0	70.00
5	36	68	400	250	260	-	-	280	156	36	66.0	53.00
6	37	66	500	270	250	-	-	314	149	58	62.0	32.00
7	34	66	600	260	240	-	-	330	178	53	62.0	20.00
8	34	70	-	250	230	-	-	302	178	36	70.0	13.00
9	36	80	600	240	220	600	-	276	187	24	75.0	28.00
10	36	100	500	300	230	550	-	236	184	28	70.0	36.00
11	38	110	400	350	300	500	-	197	156	24	75.0	32.00
12	45	100	450	400	500	-	-	175	134	24	91.0	32.00
13	72	90	500	450	-	-	-	220	124	32	95.0	32.00
14	78	85	400	480	-	-	-	250	107	49	103.0	24.00
15	100	82	350	490	-	-	-	203	103	32	112.0	24.00
16	110	82	320	500	-	-	-	165	95	20	95.0	24.00
17	105	100	290	450	-	-	-	141	87	16	83.0	7.10
18	100	120	300	420	-	-	-	131	83	49	79.0	1.80
19	110	110	330	360	-	-	-	127	83	75	70.0	.00
20	120	140	360	340	-	-	-	149	83	62	58.0	.47
21	110	180	380	320	-	-	-	365	62	49	45.0	7.10
22	100	250	400	300	-	-	-	467	45	32	32.0	20.00
23	110	320	380	290	-	-	-	300	32	20	20.0	24.00
24	140	300	350	280	600	-	576	233	40	13	20.0	16.00
25	150	250	320	300	500	-	535	240	24	13	16.0	10.00
26	130	230	300	330	450	-	553	220	24	75	13.0	24.00
27	110	220	280	340	500	-	591	194	36	66	13.0	28.00
28	100	230	260	350	-	-	561	184	36	70	16.0	32.00
29	90	240	250	350	-	-	462	181	36	58	13.0	36.00
30	84	240	250	340	---	-	360	169	49	53	3.2	32.00
31	80	---	280	320	---	-	---	145	---	45	4.8	---
TOTAL	2443	4215	-	10350	-	-	-	7236	3058	1245	1667.0	681.77
MEAN	78.8	141	-	334	-	-	-	233	102	40.2	53.8	22.7
MAX	150	320	-	500	-	-	-	467	187	75	112	70
MIN	34	66	-	230	-	-	-	127	24	13	3.2	.00
AC-FT	4850	8360	-	20530	-	-	-	14350	6070	2470	3310	1350

WTR YR 1984	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--		
CAL YR 1983	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--		

08022040 SABINE RIVER NEAR BECKVILLE, TX

LOCATION.--Lat 32°19'38", long 94°21'12", Panola County, Hydrologic Unit 12010002, on downstream side of highway embankment near right end of downstream bridge on U.S. Highway 59, 0.9 mi upstream from Eightmile Creek, 6.0 mi upstream from Farm Road 1794, 8.4 mi northeast of Beckville, 12.4 mi downstream from State Highway 43, and at mile 327.0.

DRAINAGE AREA.--3,589 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1978, published as "near Tatum".

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 190.00 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at site 12.4 mi upstream at datum 14.18 ft higher. Prior to Sept. 21, 1945, non-recording gage.

REMARKS.--Water-discharge records good. Eight major reservoirs, with a combined capacity of 1,701,000 acre-ft, largely regulate flow. Several diversions above station and below Lake Tawakoni for oilfield operation, municipal, and industrial uses. Low flows are sustained by sewage effluents returned to the river above the station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08018500.

AVERAGE DISCHARGE.--22 years (water years 1939-60) prior to regulation by Lake Tawakoni, 2,663 ft^3/s (1,929,000 acre-ft/yr); 24 years (water years 1961-84) regulated, 2,204 ft^3/s (1,597,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft^3/s Apr. 4, 1945 (gage height, 33.80 ft), site and datum then in use, from graph based on gage readings, from rating curve extended above 66,000 ft^3/s on basis of partly estimated measurement of 88,900 ft^3/s; minimum observed, 2.4 ft^3/s Aug. 11, 12, 1964.
Maximum stage since at least 1884, that of Apr. 4, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of about 2 ft lower than flood of Apr. 4, 1945. These dates and gage heights are based on information for stations near Tatum (08022000) and at Logansport, La. (08022500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,380 ft^3/s Feb. 14 at 0130 hours (gage height, 20.66 ft); minimum, 13 ft^3/s Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	106	316	557	681	3270	2650	595	174	58	95	28
2	91	107	308	565	651	2680	2960	570	156	56	78	26
3	84	110	851	577	636	2420	3220	798	156	54	68	26
4	61	112	1730	574	629	2270	3490	1000	149	51	57	28
5	57	109	1440	570	610	3270	3690	829	147	54	61	39
6	54	122	858	580	602	4830	3860	718	160	60	76	112
7	69	144	666	579	579	5080	4020	752	420	95	78	64
8	58	184	766	572	534	3980	4170	1150	580	117	117	33
9	54	175	841	574	531	3200	4240	1640	343	99	155	18
10	65	145	1170	769	621	2580	4230	1050	248	81	140	13
11	80	127	3400	1120	722	2110	4840	567	206	67	95	22
12	80	127	4400	1080	2150	2120	5570	435	179	61	79	28
13	114	135	2610	980	6670	3370	5150	355	163	64	84	34
14	176	138	1610	951	7970	3850	4090	328	127	68	100	38
15	147	125	1320	941	6420	3590	3330	384	116	79	91	37
16	135	124	1160	974	5740	3410	2760	364	103	84	88	34
17	134	130	1160	979	5390	3390	2330	295	100	78	102	30
18	140	131	1370	939	4690	3380	2030	248	98	70	93	38
19	137	153	1440	913	3900	3330	1810	211	86	60	78	29
20	124	279	1330	853	3550	3240	1630	488	82	53	57	32
21	128	410	1190	767	3110	2980	1510	1260	75	62	50	35
22	135	325	1240	707	2390	2350	1420	1190	60	71	41	41
23	134	352	1270	692	1720	1760	1280	802	68	71	29	99
24	126	625	1060	804	1360	1580	1080	542	67	67	29	137
25	129	565	860	909	1160	1810	915	398	57	68	24	100
26	149	434	743	848	1300	2030	815	346	53	74	20	91
27	149	359	653	813	4200	1980	799	322	53	73	18	68
28	142	392	645	799	6440	1880	842	295	50	108	21	58
29	131	407	632	779	4750	1970	814	256	57	108	24	51
30	123	347	614	752	---	2130	708	229	67	115	26	45
31	112	---	566	721	---	2340	---	206	---	104	27	---
TOTAL	3423	6999	38219	24238	79706	88180	80253	18623	4400	2330	2101	1434
MEAN	110	233	1233	782	2748	2845	2675	601	147	75.2	67.8	47.8
MAX	176	625	4400	1120	7970	5080	5570	1640	580	117	155	137
MIN	54	106	308	557	531	1580	708	206	50	51	18	13
AC-FT	6790	13880	75810	48080	158100	174900	159200	36940	8730	4620	4170	2840

CAL YR 1983	TOTAL	813025	MEAN	2227	MAX	11100	MIN 54	AC-FT	1613000
WTR YR 1984	TOTAL	349906	MEAN	956	MAX	7970	MIN 13	AC-FT	694000

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1952 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: March 1968 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1952 to current year.
WATER TEMPERATURES: February 1952 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request. Formerly published as 08022000 Sabine River near Tatum.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,040 micromhos Jan. 13, 1966; minimum, 53 micromhos Mar. 31, 1979.
WATER TEMPERATURES (water years 1952-62, 1964-84): Maximum, 38.0°C July 8, 1969; minimum, 0.0°C on several days during December 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,980 micromhos Sept. 28; minimum daily, 175 micromhos Dec. 12.
WATER TEMPERATURES: Maximum daily, 30.0°C on several days during summer months; minimum daily, 0.0°C on several days during December.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 16...	0840	122	830	7.8	13.0	15	4.8	8.8	83	1.7	89
DEC 21...	1420	1170	318	6.9	4.5	40	18	11.9	92	1.0	48
MAR 14...	0805	3870	260	6.9	13.0	70	58	9.0	86	1.8	47
APR 24...	1450	1060	380	7.7	21.0	50	18	9.6	110	1.6	78
JUL 18...	1530	69	860	8.3	30.0	47	6.8	--	--	4.8	130
SEP 05...	1300	29	1170	8.1	25.5	55	3.3	7.2	89	3.3	85

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 16...	0	27	5.3	120	6	6.1	110	50	140	.50	11
DEC 21...	35	13	3.8	36	2	3.3	13	27	61	.20	14
MAR 14...	31	12	4.2	27	2	3.3	16	30	46	.20	11
APR 24...	27	23	5.1	41	2	3.6	52	29	61	.30	7.7
JUL 18...	48	39	8.7	120	5	6.0	85	84	170	.90	.4
SEP 05...	0	22	7.4	200	10	6.2	150	52	250	.60	1.7

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 16...	430	15	15	1.3	.050	1.3	.310	1.3	1.6	.500	9.1
DEC 21...	170	8	<1	.37	.030	.40	.180	.22	.40	.120	6.9
MAR 14...	140	97	14	.26	.040	.30	.120	.68	.80	.170	9.2
APR 24...	200	29	2	.28	.020	.30	<.010	--	.70	.060	6.6
JUL 18...	480	14	13	--	.010	<.10	.020	1.3	1.3	.150	15
SEP 05...	630	31	16	.19	.010	.20	.040	1.3	1.3	.130	11

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC 21...	1420	<1	78	<1	<10	3	360
SEP 05...	1300	<1	77	<1	<10	1	39

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 21...	4	81	.2	<1	<1	15
SEP 05...	2	59	.2	<1	<1	17

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	3423	828	454	4190	170	1540	67	615	110
NOV.	1983	6999	683	377	7120	130	2470	58	1090	97
DEC.	1983	38219	271	152	15700	45	4640	26	2700	49
JAN.	1984	24238	393	220	14400	68	4440	37	2400	67
FEB.	1984	79706	258	145	31100	43	9170	25	5360	47
MAR.	1984	88180	267	150	35700	44	10400	26	6170	49
APR.	1984	80253	266	149	32400	44	9490	26	5590	49
MAY	1984	18623	418	233	11700	73	3680	39	1940	70
JUNE	1984	4400	704	388	4600	140	1620	59	700	98
JULY	1984	2330	956	520	3270	200	1270	73	456	110
AUG.	1984	2101	867	474	2690	180	1000	69	389	110
SEPT	1984	1434	1290	692	2680	300	1170	85	328	100
TOTAL		349906	**	**	166000	**	50900	**	27700	**
WTD.AVG.		956	313	175	**	54	**	29	**	54

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	941	626	448	337	431	255	270	498	564	1170	669	1120
2	980	633	386	375	457	292	254	500	598	1200	676	1140
3	833	648	356	371	476	317	260	471	612	1220	756	1150
4	691	677	372	352	495	321	244	361	638	1230	861	1140
5	692	758	255	349	474	310	224	318	669	1250	955	1150
6	852	775	352	363	485	261	220	366	733	1240	984	1160
7	1020	727	446	396	472	245	219	455	658	1250	861	1250
8	1090	761	498	469	471	231	225	326	564	1360	794	1340
9	1080	853	376	426	519	218	241	278	555	1390	656	1380
10	1020	830	317	414	620	227	246	327	533	1220	716	1400
11	956	816	197	365	552	243	247	400	535	1020	873	1420
12	920	807	175	388	401	258	236	444	948	934	1080	1470
13	960	777	204	309	215	246	251	462	953	880	1220	1500
14	1080	699	244	385	195	256	247	492	885	853	1070	1530
15	1030	708	246	344	200	246	281	530	828	832	862	1540
16	974	313	248	329	205	220	277	549	786	875	759	1490
17	931	782	245	333	207	232	288	558	775	896	827	1450
18	707	801	255	320	262	319	289	585	806	890	750	1400
19	624	790	248	375	258	290	308	580	773	865	757	1330
20	595	737	252	415	266	263	311	573	784	852	888	1280
21	765	890	307	390	282	266	305	510	790	843	966	1230
22	789	759	285	406	293	284	329	303	805	778	988	1080
23	795	638	282	695	305	292	341	363	857	705	983	1000
24	759	550	274	468	333	299	369	461	900	690	1000	744
25	767	578	296	388	345	307	388	513	938	710	1040	1060
26	737	727	308	391	355	322	337	488	935	738	1070	1320
27	722	504	310	416	208	280	358	450	949	730	1090	1750
28	670	549	307	435	182	253	437	481	990	704	1180	1980
29	730	620	309	415	230	277	494	490	1040	845	1120	1870
30	723	590	317	440	---	274	493	521	1080	805	1130	1750
31	637	---	320	428	---	287	---	541	---	770	1120	---
MEAN	841	714	304	396	352	271	300	458	783	960	926	1350

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	19.0	11.0	1.0	6.0	8.0	---	21.0	22.0	28.0	26.0	28.0
2	22.0	18.0	12.0	2.0	8.0	10.0	16.0	21.0	23.0	28.0	27.0	27.0
3	22.0	20.0	13.0	2.0	---	11.0	16.0	22.0	24.0	28.0	26.0	27.0
4	25.0	19.0	13.0	4.0	8.0	12.0	14.0	20.0	29.0	28.0	26.0	25.0
5	24.0	19.0	14.0	4.0	8.0	12.0	14.0	21.0	26.0	29.0	27.0	24.0
6	22.0	17.0	12.0	4.0	8.0	12.0	16.0	24.0	25.0	28.0	28.0	24.0
7	23.0	17.0	10.0	5.0	8.0	10.0	15.0	26.0	24.0	29.0	28.0	25.0
8	22.0	18.0	10.0	6.0	7.0	11.0	16.0	24.0	25.0	30.0	28.0	25.0
9	21.0	16.0	10.0	7.0	9.0	11.0	17.0	22.0	24.0	30.0	28.0	26.0
10	21.0	14.0	14.0	7.0	10.0	12.0	17.0	22.0	26.0	30.0	28.0	27.0
11	23.0	12.0	13.0	6.0	12.0	12.0	16.0	---	28.0	30.0	28.0	27.0
12	22.0	13.0	13.0	6.0	13.0	13.0	17.0	26.0	30.0	29.0	28.0	26.0
13	21.0	12.0	12.0	5.0	13.0	13.0	16.0	24.0	27.0	30.0	27.0	26.0
14	21.0	17.0	10.0	5.0	13.0	14.0	17.0	24.0	28.0	28.0	27.0	27.0
15	18.0	16.0	10.0	5.0	14.0	15.0	17.0	28.0	28.0	29.0	27.0	27.0
16	20.0	12.0	---	5.0	13.0	16.0	18.0	25.0	28.0	30.0	27.0	23.0
17	20.0	12.0	7.0	4.0	12.0	16.0	18.0	24.0	28.0	30.0	28.0	23.0
18	22.0	14.0	6.0	4.0	14.0	17.0	17.0	24.0	28.0	30.0	29.0	23.0
19	22.0	17.0	6.0	---	12.0	17.0	18.0	24.0	28.0	29.0	29.0	23.0
20	22.0	14.0	3.0	3.0	12.0	17.0	18.0	24.0	28.0	28.0	29.0	---
21	22.0	16.0	5.0	1.0	13.0	16.0	20.0	24.0	29.0	28.0	29.0	24.0
22	20.0	16.0	.0	2.0	11.0	18.0	19.0	24.0	29.0	28.0	29.0	23.0
23	20.0	16.0	.0	4.0	11.0	17.0	20.0	24.0	30.0	28.0	29.0	25.0
24	19.0	---	.0	4.0	12.0	18.0	21.0	23.0	30.0	28.0	29.0	26.0
25	17.0	14.0	.0	5.0	11.0	18.0	19.0	24.0	30.0	28.0	28.0	25.0
26	17.0	14.0	.0	5.0	12.0	16.0	22.0	26.0	30.0	28.0	27.0	25.0
27	16.0	14.0	---	5.0	10.0	18.0	22.0	26.0	28.0	28.0	28.0	23.0
28	16.0	12.0	.0	6.0	10.0	16.0	23.0	28.0	28.0	27.0	29.0	22.0
29	16.0	12.0	.0	8.0	8.0	14.0	23.0	26.0	28.0	26.0	28.0	---
30	16.0	11.0	.5	7.0	---	14.0	24.0	23.0	27.0	26.0	28.0	19.0
31	19.0	---	.5	7.0	---	15.0	---	24.0	---	26.0	28.0	---
MEAN	20.5	15.0	7.0	4.5	10.5	14.0	18.0	24.0	27.5	28.5	28.0	25.0

08022060 MARTIN LAKE NEAR TATUM, TX

LOCATION.--Lat 32°15'42", long 94°34'23", Rusk County, Hydrologic Unit 12010002, on retaining wall, 30 ft to right of intake to generating plant No. 1, 1.9 mi upstream from Martin Dam on Martin Creek, 5.8 mi southwest of Tatum, and 21.9 mi upstream from mouth.

DRAINAGE AREA.--130 mi².

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 15, 1976, non-recording gage near left end of dam 1.9 mi downstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 8,675 ft long, including a 1,000-foot uncontrolled emergency spillway. Deliberate impoundment began in April 1974. The uncontrolled emergency spillway is an excavated channel cut through natural ground and located at the left end of the dam. The controlled spillway is a concrete ogee design with four 14.0- by 40.0-foot-wide tainter gates located near the left end of the dam. The low-flow outlet works consist of a 3.0- by 5.0-foot conduit with a sluice gate located in one of the gate piers. There is an 8-inch pipe with sluice gate. The area and capacity tables are based on an aerial survey made in October 1971. There are no known diversions. Figures given herein repesent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	321.5	-
Crest of uncontrolled spillway	312.0	111,500
Top of gates	308.0	87,960
Top of conservation pool	306.0	77,500
Crest of gated spillway	294.0	31,040
Lowest gated outlet (invert)	284.0	10,320

COOPERATION.--Area and capacity tables furnished by Forrest and Cotton, Consulting Engineers, for Texas Utilities Services, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,250 acre-ft Mar. 31, 1979 (elevation, 308.95 ft); minimum since first appreciable storage, 58,320 acre-ft Feb. 4, 1981 (elevation, 301.83 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,360 acre-ft Feb. 13 at 1400 hours (elevation, 307.33 ft); minimum, 60,570 acre-ft Sept. 30 (elevation, 302.36 ft).

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

302.0	59,040	306.0	77,470
304.0	67,880	308.0	87,970

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67230	64920	65410	74620	77750	80810	78960	77950	76400	73070	68380	64110
2	67140	64870	65910	74670	77750	79930	79020	78810	76200	72970	68290	63940
3	66960	64870	67600	74770	77750	79370	79020	79020	76050	72780	68110	63850
4	67140	64740	67970	74770	77700	81070	78910	79020	75900	72590	67970	63670
5	66870	64700	68110	74820	77500	83360	78910	79020	76000	72540	67830	63580
6	66680	64960	68060	74820	77550	82730	78860	78960	76250	72390	67830	63360
7	66550	64960	68060	74820	77500	80760	78860	79170	76350	72300	67780	63140
8	66500	64960	68110	74820	77500	79980	78860	79070	76250	72110	67740	63010
9	66360	64870	68110	75510	77900	80140	78860	78960	76150	72010	67550	62830
10	66270	64700	70820	75950	78050	80290	79220	78810	76000	71820	67370	62700
11	66270	64650	72680	76100	78860	80340	79320	78660	75850	71630	67280	62520
12	66320	64520	73120	76150	83990	81530	79320	78510	75850	71530	67140	62440
13	66270	64520	73120	76150	84100	81120	79320	78460	75760	71340	67000	62310
14	66090	64470	73260	76300	82990	80040	79170	78360	75660	71150	66870	62130
15	66000	64380	73160	76450	82260	79220	79070	78200	75510	71010	66770	61830
16	65910	64250	73790	76550	81480	78760	79020	78000	75410	70910	66680	61610
17	66090	64250	74040	76600	80340	78610	78960	77850	75260	70720	66590	61480
18	66090	64250	74330	76700	79170	78760	78910	77750	75070	70540	66410	61300
19	66050	64920	74380	76650	77850	78660	78860	77800	74920	70350	66180	61130
20	66000	65050	74530	76650	76750	78610	78960	77900	74720	70110	66000	61000
21	65910	65100	74530	76700	76800	78710	78810	77800	74530	69970	65870	61690
22	65770	65230	74570	76750	76850	78760	78660	77700	74380	69740	65680	61610
23	65730	65370	74570	77000	76850	78860	78510	77600	74230	69550	65460	61780
24	65590	65410	74530	77250	76850	78860	78460	77500	74040	69450	65230	61650
25	65410	65370	74530	77400	76850	78960	78360	77450	73840	69640	65100	61390
26	65370	65590	74530	77500	80550	79020	78310	77300	73750	69500	65010	61300
27	65280	65640	74570	77500	82680	79120	78260	77200	73550	69410	64830	61090
28	65190	65550	74570	77550	82520	79020	78260	77200	73450	69170	64700	60870
29	65100	65460	74570	77650	81690	79020	78000	76850	73310	68940	64520	60700
30	65010	65410	74620	77550	---	79020	78000	76750	73160	68750	64340	60570
31	64960	---	74620	77750	---	78960	---	76600	---	68570	64110	---
MAX	67230	65640	74620	77750	84100	83360	79320	79170	76400	73070	68380	64110
MIN	64960	64250	65410	74620	76750	78610	78000	76600	73160	68570	64110	60570
(†)	303.36	303.46	305.42	306.05	306.82	306.29	306.10	305.82	305.12	304.15	303.17	302.36
(±)	-2410	+450	+9210	+3130	+3940	-2730	-960	-1400	-3440	-4590	-4460	-3540

CAL YR 1983 MAX 86610 MIN 64250 ± -2530
WTR YR 1984 MAX 84100 MIN 60570 ± -6800

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

08022060 MARTIN LAKE NEAR TATUM, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1974 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 16...	1600	197	18.5	51	26	10	6.2	15

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 16...	.9	3.1	25	32	22	.20	4.4	110

08022070 MARTIN CREEK NEAR TATUM, TX

LOCATION.--Lat 32°17'44", long 94°29'29", Panola County, Hydrologic Unit 12010002, on right bank, 35 ft downstream from right abutment, 360 ft to right of bridge on State Highway 149, 50 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.7 mi upstream from Hogan Creek, 2.0 mi southeast of Tatum, 5.0 mi downstream from Martin Lake, and 15.0 mi upstream from mouth.

DRAINAGE AREA.--148 mi^2.

PERIOD OF RECORD.--April 1974 to current year.

REVISED RECORDS.--WDR TX-76-1: 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.26 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 31, 1978, at site 50 ft upstream at same datum.

REMARKS.--Records good. Flow is largely regulated by Martin Lake located 5 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years (water years 1975-84), 85.8 ft^3/s (62,160 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft^3/s Apr. 30, 1976 (gage height, 13.76 ft); minimum, 0.25 ft^3/s Oct. 17, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1948, 18.15 ft April 1969. The flood in April 1957 reached a stage of 13.95 ft, from information by State Department of Highways and Public Transporation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft^3/s Mar. 7 at 1330 hours (gage height, 12.35 ft); minimum, 3.5 ft^3/s Sept. 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	7.0	9.4	19	15	692	14.0	7.1	6.2	5.5	5.1	4.7
2	7.1	7.4	12.0	19	15	687	13.0	13.0	5.7	5.9	5.2	4.7
3	6.7	7.3	131.0	15	14	679	14.0	50.0	5.5	5.5	5.1	5.4
4	4.8	6.7	67.0	13	13	444	13.0	16.0	5.0	5.4	5.3	5.7
5	7.8	6.6	19.0	12	12	296	13.0	11.0	5.2	6.0	5.3	4.3
6	5.8	7.9	13.0	11	11	896	12.0	9.3	10.0	5.8	5.9	4.2
7	6.3	10.0	11.0	11	12	1290	12.0	12.0	19.0	5.1	11.0	4.1
8	6.3	7.2	9.6	11	12	1210	12.0	28.0	9.7	4.9	11.0	4.2
9	6.5	6.8	9.1	19	17	256	12.0	12.0	7.9	5.0	6.3	4.2
10	6.6	6.3	51.0	39	19	40	15.0	9.4	7.0	4.8	5.5	4.2
11	6.9	6.6	182.0	21	16	24	48.0	7.9	6.3	4.7	5.2	4.1
12	8.4	6.9	51.0	16	359	98	20.0	7.4	6.1	4.5	5.3	3.7
13	8.0	7.1	20.0	14	401	278	15.0	7.2	6.1	4.6	5.3	3.6
14	7.6	7.2	15.0	12	1020	930	13.0	7.1	6.0	4.8	5.3	3.8
15	7.5	7.1	13.0	15	1040	924	12.0	6.6	5.9	4.8	5.3	3.6
16	7.6	6.9	15.0	15	1040	547	11.0	6.7	6.0	4.8	5.4	3.9
17	8.9	7.1	33.0	20	986	431	11.0	6.3	5.9	5.6	5.3	3.9
18	12.0	7.3	36.0	21	965	200	10.0	6.5	5.4	5.3	5.1	3.9
19	8.0	17.0	25.0	16	949	34	10.0	7.3	5.3	5.1	5.1	3.8
20	7.4	25.0	19.0	14	935	20	9.8	9.0	5.3	5.0	5.1	3.9
21	7.3	12.0	16.0	12	666	19	9.3	20.0	4.9	5.1	5.1	4.7
22	7.3	9.7	18.0	12	103	18	8.3	12.0	5.3	5.0	4.9	8.7
23	7.2	15.0	15.0	15	25	20	7.9	9.4	5.7	5.0	4.9	5.6
24	7.1	13.0	13.0	20	19	20	8.1	8.4	5.9	5.0	4.9	6.0
25	6.8	9.7	15.0	16	16	18	8.0	7.8	5.7	5.1	4.7	5.7
26	6.6	9.0	14.0	14	164	16	7.6	7.5	5.5	11.0	4.8	4.3
27	6.6	13.0	14.0	13	317	16	7.7	7.1	5.7	6.6	4.9	4.0
28	6.8	13.0	15.0	13	70	16	7.8	7.7	5.7	5.7	4.7	4.0
29	6.7	11.0	14.0	13	362	15	7.9	7.9	5.6	5.4	4.8	4.0
30	6.7	9.9	14.0	12	---	14	7.1	6.8	5.5	5.4	4.6	4.1
31	6.6	---	13.0	12	---	13	---	6.5	---	5.1	4.7	---
TOTAL	222.6	286.7	902.1	485	9593	10161	369.5	340.9	195.0	167.5	171.1	135.0
MEAN	7.18	9.56	29.1	15.6	331	328	12.3	11.0	6.50	5.40	5.52	4.50
MAX	12	25	182	39	1040	1290	48	50	19	11	11	8.7
MIN	4.8	6.3	9.1	11	11	13	7.1	6.3	4.9	4.5	4.6	3.6
AC-FT	442	569	1790	962	19030	20150	733	676	387	332	339	268

CAL YR 1983 TOTAL 41177.8 MEAN 113 MAX 2300 MIN 4.8 AC-FT 81680
WTR YR 1984 TOTAL 23029.4 MEAN 62.9 MAX 1290 MIN 3.6 AC-FT 45680

08022500 SABINE RIVER AT LOGANSPORT, LA

LOCATION.--Lat 31°58'20", long 94°00'22", De Soto Parish, Louisiana-Shelby County, Texas State line at Logansport, Hydrologic Unit 12010004, just upstream from bridge on U.S. Highway 84, 3 mi upstream from Bayou Castor, 111 mi upstream from Toledo Bend Dam, and at mile 267.1.

DRAINAGE AREA.--4,842 mi².

PERIOD OF RECORD.--Gage-height record March 1968 to current year. Discharge record July 1903 to February 1968.

REVISED RECORDS.--WSP 1312: 1903-6 (monthly and annual means). WSP 1732: 1929(M), 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 147.72 ft National Geodetic Vertical Datum of 1929. July 1, 1903, to Sept. 30, 1956, nonrecording gage. Oct. 1, 1956, to Jan. 16, 1964, water-stage recorder 4,600 ft upstream. Jan. 16, 1964, to Dec. 10, 1968, water-stage recorder 4,700 ft upstream. All gages to present datum except prior to Dec. 31, 1906, when datum was 2.00 ft lower.

REMARKS.--Station discontinued as daily streamflow station Mar. 1, 1968, due to backwater from storage in Toledo Bend Reservoir (station 08025350). Ten major reservoirs, with a combined capacity of 1,824,000 acre-ft, largely regulated the flow. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08018500. Numerous diversions above station for oilfield operations, municipal, and industrial uses.

AVERAGE DISCHARGE.--64 years (water years 1904-67), 3,208 ft³/s (2,324,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (1968-81), 32.50 ft Apr. 20, 1969; minimum since initial filling of Toledo Bend Reservoir in June 1968, 17.97 ft Nov. 29, 1977. Maximum discharge (1903-67), 92,000 ft³/s Apr. 8, 1945 (gage height, 44.07 ft, from floodmark); minimum, 16 ft³/s Sept. 26-28, Oct. 3, 4, 1939.
Maximum stage since at least 1884, that of Apr. 8, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 39.4 ft, present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 26.64 ft Mar. 8 at 0600 hours; minimum, 19.65 ft Sept. 29.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	21.52	21.25	24.23	22.29	22.74	23.75	22.61	20.88	20.53
2			---	21.42	21.24	24.07	22.53	22.70	23.60	22.61	21.36	20.45
3			---	21.38	21.25	23.75	22.53	23.06	23.65	22.61	21.23	20.37
4			---	21.29	21.22	23.55	22.40	22.84	23.62	22.64	21.25	20.35
5			---	21.24	20.57	24.90	22.66	22.61	23.64	22.40	21.10	20.40
6			---	21.21	21.35	26.20	22.89	22.60	23.72	22.31	20.88	20.40
7			21.60	21.25	21.27	26.60	22.98	22.87	23.83	22.26	20.90	20.45
8			21.49	21.27	21.30	26.46	23.14	23.36	23.75	22.48	20.95	20.60
9			21.40	21.39	21.40	26.13	22.96	23.55	23.68	22.30	21.06	20.56
10			22.52	21.28	21.53	25.57	22.73	23.85	23.62	22.24	20.85	20.48
11			22.82	21.64	21.65	25.07	22.70	23.76	23.57	22.23	20.95	20.33
12			23.45	21.56	23.00	24.64	22.80	23.48	23.50	21.94	21.04	20.29
13			23.38	21.50	24.14	24.39	22.70	23.45	23.36	21.98	20.89	20.26
14			23.33	21.52	24.56	24.41	22.93	23.42	23.30	22.11	20.90	20.23
15			22.88	21.63	24.89	24.43	22.88	23.39	23.26	21.94	20.86	20.04
16			22.60	21.69	25.07	24.31	23.00	23.36	23.44	21.85	20.83	20.05
17			22.52	21.64	25.13	24.20	22.92	23.37	23.33	21.83	20.80	20.06
18			22.35	21.40	24.88	24.30	22.69	23.40	23.30	21.73	20.76	20.00
19			22.45	21.55	24.56	23.66	22.85	23.52	23.15	21.58	20.80	20.00
20			22.47	21.42	24.23	23.65	22.38	23.62	23.18	21.52	20.80	19.99
21			22.20	21.48	23.96	23.55	22.97	23.85	23.05	21.49	20.75	20.23
22			22.36	21.50	23.73	23.45	22.97	23.95	22.98	21.43	20.73	20.33
23			22.12	21.42	23.54	23.23	22.89	23.64	22.94	21.37	20.60	20.37
24			21.72	21.49	23.15	22.87	22.69	23.66	22.91	21.31	20.62	20.23
25			22.13	21.55	23.28	22.81	22.70	23.80	22.84	21.23	20.60	20.10
26			22.04	21.50	23.33	22.85	22.66	23.87	22.81	21.23	20.70	20.02
27			21.91	21.38	23.31	22.57	22.90	23.90	22.75	21.11	20.58	19.94
28			21.40	21.36	23.80	21.87	22.64	23.41	22.68	21.03	20.57	19.76
29			21.55	21.35	24.00	22.08	22.80	23.59	22.58	20.99	20.55	19.73
30			21.68	21.24	---	22.15	22.85	23.67	22.64	20.93	20.60	19.85
31			21.63	21.16	---	22.15	---	23.72	---	20.89	20.52	---
MAX			---	21.69	25.13	26.60	23.14	23.95	23.83	22.64	21.36	20.60
MIN			---	21.16	20.57	21.87	22.29	22.60	22.58	20.89	20.52	19.73

NOTE.--No gage-height record Oct. 1 to Dec. 6.

08025350 TOLEDO BEND RESERVOIR NEAR BURKEVILLE, TX

LOCATION.--Lat 31°10'25", long 93°33'57", Newton County, Hydrologic Unit 12010004, in powerhouse at right end of Toledo Bend Dam on Sabine River, 15 mi northeast of Burkeville, and at mile 156.5.

DRAINAGE AREA.--7,178 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sabine River Authority). Prior to July 20, 1967, nonrecording gage at same site and datum. July 20, 1967, to June 30, 1973, recording gage at right end of spillway 1.6 mi north of present site and at same datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam. Closure of embankment completed and deliberate impoundment was begun Oct. 3, 1966. The reservoir is operated for hydro-electric power generation and water conservation. Releases during high inflow periods are controlled by eleven 40- by 28-foot tainter gates. An 8.33- by 12-foot gated conduit through the dam is used for low-flow releases. Two additional 20-inch-diameter conduits, which bypass the larger conduit, may also be used for low-flow releases. Water for turbines is admitted through four 16.75- by 29-foot penstocks and controlled by vertically operated caterpillar-type gates. The capacity table is based on Geological Survey topographic maps. For statement regarding regulation by upstream reservoirs, see station 08020000. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	185.0	-
Design flood	175.3	5,102,000
Top of gates	173.0	4,660,000
Top of power drawdown storage	172.0	4,476,000
Top of power head storage	162.2	2,922,000
Crest of spillway (controlled)	145.0	1,162,000
Lowest gated outlet (invert)	100.0	4,090

COOPERATION.--Capacity table furnished by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,739,000 acre-ft Mar. 21, 1969 (elevation, 173.42 ft); minimum since initial filling of reservoir in June 1968, 3,433,000 acre-ft Nov. 27, 1977 (elevation, 165.74 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,449,000 acre-ft Mar. 11 at 0800 hours and May 28 at 2400 hours (elevation, 171.85 ft); minimum, 3,740,000 acre-ft Nov. 19, Sept. 20, 21 (elevation, 167.70 ft).

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

167.0	3,628,000	169.0	3,953,000	171.0	4,297,000
168.0	3,788,000	170.0	4,123,000	172.0	4,476,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3893000	3804000	3903000	3995000	3940000	4227000	4106000	4262000	4365000	4173000	3887000	3813000
2	3883000	3804000	3920000	3990000	3961000	4223000	4140000	4244000	4368000	4169000	3870000	3813000
3	3880000	3804000	3977000	3983000	3958000	4209000	4161000	4279000	4365000	4159000	3878000	3821000
4	3873000	3804000	3983000	3970000	3970000	4253000	4192000	4262000	4350000	4128000	3878000	3821000
5	3890000	3801000	4040000	3953000	4007000	4350000	4171000	4235000	4350000	4123000	3870000	3804000
6	3883000	3813000	4000000	3956000	3953000	4377000	4168000	4235000	4368000	4118000	3878000	3796000
7	3883000	3804000	3970000	3956000	3953000	4402000	4183000	4315000	4350000	4111000	3870000	3780000
8	3880000	3801000	3965000	3956000	3956000	4440000	4225000	4324000	4350000	4109000	3887000	3772000
9	3877000	3834000	3953000	3980000	3960000	4424000	4225000	4315000	4350000	4101000	3878000	3772000
10	3870000	3808000	4037000	4005000	3956000	4442000	4218000	4302000	4359000	4092000	3883000	3772000
11	3860000	3788000	4140000	3988000	3966000	4418000	4227000	4315000	4350000	4080000	3878000	3775000
12	3887000	3785000	4132000	4003000	4092000	4436000	4248000	4333000	4342000	4071000	3873000	3775000
13	3854000	3788000	4218000	4020000	4161000	4426000	4248000	4336000	4333000	4054000	3872000	3775000
14	3854000	3813000	4192000	4024000	4221000	4415000	4295000	4340000	4324000	4046000	3875000	3772000
15	3854000	3788000	4195000	4020000	4262000	4397000	4262000	4343000	4311000	4046000	3878000	3772000
16	3854000	3772000	4209000	4029000	4293000	4386000	4264000	4342000	4288000	4040000	3873000	3767000
17	3850000	3754000	4206000	4037000	4288000	4374000	4258000	4338000	4297000	4024000	3870000	3759000
18	3845000	3753000	4209000	4054000	4315000	4359000	4235000	4331000	4279000	4017000	3863000	3753000
19	3837000	3811000	4178000	4020000	4311000	4368000	4246000	4336000	4271000	4005000	3850000	3743000
20	3834000	3791000	4140000	4013000	4324000	4342000	4230000	4336000	4262000	3995000	3849000	3740000
21	3857000	3769000	4178000	3987000	4309000	4297000	4283000	4350000	4253000	3990000	3849000	3748000
22	3854000	3803000	4157000	3970000	4297000	4285000	4278000	4356000	4244000	3987000	3850000	3756000
23	3845000	3887000	4166000	3995000	4272000	4265000	4265000	4386000	4244000	3977000	3854000	3759000
24	3840000	3852000	4175000	4003000	4262000	4248000	4249000	4384000	4253000	3965000	3847000	3764000
25	3844000	3821000	4109000	4003000	4209000	4204000	4257000	4366000	4230000	3953000	3837000	3759000
26	3834000	3852000	4071000	3998000	4244000	4175000	4248000	4397000	4209000	3936000	3826000	3769000
27	3824000	3895000	4080000	3992000	4274000	4175000	4274000	4391000	4202000	3936000	3829000	3756000
28	3821000	3895000	4123000	3983000	4258000	4183000	4251000	4449000	4192000	3928000	3821000	3756000
29	3818000	3878000	4075000	3970000	4241000	4123000	4283000	4408000	4180000	3928000	3821000	3756000
30	3818000	3907000	4020000	3961000	---	4102000	4279000	4395000	4175000	3916000	3821000	3743000
31	3813000	---	4007000	3950000	---	4109000	---	4384000	---	3903000	3821000	---
MAX	3893000	3907000	4218000	4054000	4324000	4442000	4295000	4449000	4368000	4173000	3887000	3821000
MIN	3813000	3753000	3903000	3950000	3940000	4102000	4106000	4235000	4175000	3903000	3821000	3740000
(†)	168.15	168.72	169.32	168.98	170.68	169.92	170.90	171.49	170.30	168.70	168.20	167.72
(‡)	-87000	+94000	+100000	-57000	+291000	-132000	+170000	+105000	-209000	-272000	-82000	-78000

CAL YR 1983 MAX 4699000 MIN 3753000 ‡ -469000
WTR YR 1984 MAX 4449000 MIN 3740000 ‡ -157000

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

08025360 SABINE RIVER AT TOLEDO BEND RESERVOIR NEAR BURKEVILLE, TX

LOCATION.--Lat 31°10'25", long 93°33'57", Newton County, Hydrologic Unit 12010005, in powerhouse at right end of Toledo Bend Dam, 10 mi upstream from Sabine River near Burkeville gage, and at mile 156.5.

DRAINAGE AREA.--7,178 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorders. Datum of gages is National Geodetic Vertical Datum of 1929 (levels by Sabine River Authority).

REMARKS.--Water-discharge records fair. Daily discharges are combinations of releases from various outlets at the dam. Discharges made by releases through the turbines are computed using scroll case differential pressure relationships. Taintor gate releases, low-flow sluiceway releases, bypass gate releases, and turbine leakages are based on discharge measurements and operations logs.

AVERAGE DISCHARGE.--13 years, 5,331 ft^3/s (3,862,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 67,000 ft^3/s Jan. 28, 1974; minimum daily (estimated), 30 ft^3/s Oct. 1-4, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 15,400 ft^3/s Dec. 26, Mar. 29; minimum daily, 100 ft^3/s Apr. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	962	204	7590	204	15100	204	1320	4920	210	204	204
2	204	841	204	7620	204	15000	204	3220	210	188	204	204
3	820	835	204	7530	204	15000	204	187	210	184	2770	204
4	974	1590	204	7490	204	14900	204	313	4790	5180	204	788
5	839	204	4830	7550	204	14900	162	183	5060	5030	204	833
6	839	204	7750	204	204	14800	132	180	5030	5220	854	838
7	1100	861	7240	204	1080	14600	132	180	5050	204	794	1530
8	204	838	7720	204	847	14600	132	180	5070	204	783	204
9	204	833	7770	204	204	14600	132	180	210	5170	810	204
10	810	823	204	204	204	14600	132	180	210	4960	1480	792
11	843	1450	5270	204	204	14700	2050	212	5200	5050	204	839
12	846	204	7610	204	204	14700	2000	152	5280	5150	204	796
13	790	204	7470	2680	204	14600	1910	150	4970	5150	824	801
14	1750	807	7600	2680	204	14700	2100	150	5160	204	795	1490
15	204	809	7500	2670	3150	14800	1850	150	4960	204	781	204
16	204	793	7480	2660	6810	15000	1900	160	210	5120	709	204
17	854	1010	8600	2650	8820	15000	1900	160	210	5150	1570	804
18	883	1580	7570	4010	11000	14800	1870	160	5230	5220	204	847
19	920	204	9040	7750	11000	15000	1800	150	4960	5190	204	815
20	943	204	10500	7780	10900	15200	104	150	4970	5240	807	817
21	1370	901	9600	7730	11100	14400	100	150	5010	204	810	1530
22	204	941	7490	7790	11000	14200	100	150	5020	204	808	204
23	204	204	7610	7650	12300	14200	100	176	210	5050	813	204
24	870	204	8820	7650	14700	14100	139	210	210	5020	1510	804
25	817	204	11400	7590	14900	14100	150	210	4980	5060	204	810
26	922	204	15400	7650	14900	14200	150	210	5100	5100	204	805
27	839	204	5840	7540	15100	15200	150	210	5050	5210	818	829
28	1460	204	7690	7630	15200	15200	150	150	5050	204	777	1510
29	204	204	7460	7710	15200	15400	150	150	5140	204	806	204
30	204	204	7530	7550	---	10200	150	150	210	5090	821	204
31	799	---	7580	7740	---	204	---	150	---	5260	1500	---
TOTAL	22328	18730	211390	156318	180455	438004	20461	9633	107890	104834	23680	20522
MEAN	720	624	6819	5043	6223	14130	682	311	3596	3382	764	684
MAX	1750	1590	15400	7790	15200	15400	2100	3220	5280	5260	2770	1530
MIN	204	204	204	204	204	204	100	150	210	184	204	204
AC-FT	44290	37150	419300	310100	357900	868800	40580	19110	214000	207900	46970	40710

CAL YR 1983 TOTAL 2436174 MEAN 6674 MAX 39000 MIN 144 AC-FT 4832000
WTR YR 1984 TOTAL 1314245 MEAN 3591 MAX 15400 MIN 100 AC-FT 2607000

08025360 SABINE RIVER AT TOLEDO BEND RESERVOIR NEAR BURKEVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT 18...	1610	162	6.7	17.0	10.3	106	2.1	29	0
FEB 23...	1515	126	7.1	11.0	12.5	114	.3	27	9
APR 04...	1525	130	6.7	13.0	12.2	116	1.0	27	12
MAY 15...	1510	139	6.4	20.5	9.4	104	.5	27	9
JUN 26...	1603	140	7.6	27.0	9.0	113	.2	29	13
AUG 08...	1435	143	6.5	23.0	6.1	71	1.2	29	13

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 18...	6.4	3.1	17	1	3.1	28	16	21	.10
FEB 23...	6.2	2.8	13	1	2.7	18	17	19	<.10
APR 04...	6.3	2.8	14	1	2.9	15	17	21	<.10
MAY 15...	6.3	2.8	14	1	2.8	18	18	19	<.10
JUN 26...	6.5	3.0	15	1	2.6	16	16	19	.10
AUG 08...	6.5	3.0	15	1	2.8	16	19	19	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
OCT 18...	8.5	92	--	<.020	<.10	.310	.99	1.3	.080
FEB 23...	6.2	78	--	<.010	.10	.080	.22	.30	<.010
APR 04...	6.3	79	.18	.020	.20	.050	.45	.50	.020
MAY 15...	6.0	80	.09	.010	.10	.030	.57	.60	.010
JUN 26...	4.9	77	--	<.010	<.10	.030	.57	.60	.010
AUG 08...	5.1	80	--	<.010	<.10	.040	.86	.90	.020

08026000 SABINE RIVER NEAR BURKEVILLE, TX

LOCATION.--Lat 31°03'50", long 93°31'10", Newton County, Texas-Vernon Parish, Lousiana State line, Hydrologic Unit 12010005, near left edge of low-water channel at downstream side of bridge on State Highway 63, about 200 ft downstream from Pearl Creek, 10 mi northeast of Burkeville, 16 mi downstream from Bayou Toro, and at mile 139.7.

DRAINAGE AREA.--7,482 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1955 to current year. Published as "below Toledo Bend near Burkeville" for period 1955-75.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 70.59 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1958, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records fair. Flow regulated by Toledo Bend Reservoir (station 08025350) 16.8 mi upstream, capacity 4,660,000 acre-ft.

AVERAGE DISCHARGE.--11 years (water years 1956-66) prior to completion of Toledo Bend Reservoir, 4,653 ft³/s (3,371,000 acre-ft/yr); 18 years (water years 1967-84) regulated, 5,016 ft³/s (3,634,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft³/s Jan. 29, 1974 (gage height, 34.20 ft); minimum daily, 38 ft³/s Sept. 14, 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1860, 35.9 ft in May 1884, from information by local resident. Flood of Apr. 15, 1945, reached a stage of 35.8 ft, and flood of May 23, 1953, reached a stage of 35.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,400 ft³/s Mar. 5 at 2100 hours (gage height, 20.63 ft); minimum daily, 225 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	985	621	7710	3190	15400	751	550	2570	380	2530	832
2	332	1090	814	7720	751	15300	929	1870	2740	290	293	243
3	810	1020	5320	7670	723	15200	1830	2480	418	1550	1820	225
4	1020	1480	7100	7640	710	15200	1680	410	2910	4070	1340	620
5	1120	721	6220	7780	682	18800	1170	356	5100	5160	231	910
6	1010	319	10100	3320	611	19800	676	315	5370	5190	565	927
7	1400	879	9010	691	1220	18900	553	306	5850	2610	1050	1300
8	929	1060	8400	577	1520	16800	1700	575	5930	352	965	825
9	340	1020	8290	752	706	15300	1930	971	2770	3150	988	240
10	776	1030	4680	1800	658	14900	1410	615	552	5250	1350	633
11	1020	1440	5820	1560	714	14800	1450	418	3230	5200	771	949
12	1040	699	9040	1090	9640	14800	2480	366	5470	5260	433	971
13	1040	305	8650	1400	9240	15000	2490	315	5310	5260	1370	977
14	1410	811	8170	4420	5080	15100	2320	293	5310	2550	1220	1340
15	861	955	8050	3430	4510	14900	2440	273	5190	349	979	841
16	339	936	8530	3630	8180	15000	2780	283	2530	3000	915	243
17	886	947	7690	3440	8870	14900	2290	273	437	5190	1190	666
18	1110	1370	8030	4150	11100	14700	2260	266	3290	5260	973	994
19	1070	742	8050	6280	11300	14800	2240	280	5130	5260	253	1040
20	1080	624	10700	7930	11200	15100	1070	422	5100	5290	659	1050
21	1470	1090	11000	7900	11400	14600	474	571	5100	2550	935	1460
22	721	1190	8690	7920	11300	14200	414	1980	5100	332	927	1670
23	327	1360	8380	8180	11200	14100	371	1090	2510	2950	927	933
24	835	2010	8300	10100	14400	14200	331	624	302	5060	1300	1080
25	1010	1450	9290	9700	14800	14100	369	441	2850	5170	861	1130
26	1040	678	14400	8850	15200	14100	357	402	4670	5280	240	1040
27	823	1620	11100	8220	16500	14900	359	894	4730	5320	684	1020
28	1620	2260	5980	8020	16200	15100	356	670	4760	2710	916	1410
29	706	1670	7730	7980	15600	15300	342	410	4880	504	921	879
30	305	895	7970	7890	---	14000	338	332	2720	3020	943	278
31	768	---	7740	7920	---	3000	---	299	---	5300	1340	---
TOTAL	27554	32656	243865	175670	217205	462300	38160	19350	112829	108817	29889	26726
MEAN	889	1089	7867	5667	7490	14910	1272	624	3761	3510	964	891
MAX	1620	2260	14400	10100	16500	19800	2780	2480	5930	5320	2530	1670
MIN	305	305	621	577	611	3000	331	266	302	290	231	225
AC-FT	54650	64770	483700	348400	430800	917000	75690	38380	223800	215800	59280	53010

CAL YR 1983 TOTAL 2684818 MEAN 7356 MAX 41500 MIN 275 AC-FT 5325000
WTR YR 1984 TOTAL 1495021 MEAN 4085 MAX 19800 MIN 225 AC-FT 2965000

08026000 SABINE RIVER NEAR BURKEVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: May 1968 to current year. Pesticide analyses: October 1972 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1968 to current year.
WATER TEMPERATURES: May 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 352 micromhos Mar. 15, 16, 1973; minimum daily, 30 micromhos Dec. 4, 1983.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 20, 1975, and May 28, 1981; minimum daily , 4.5°C Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 151 micromhos Mar. 12; minimum daily, 30 micromhos Dec. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 18...	1208	670	136	6.5	23.0	10	3.5	7.9	92	.9	26
FEB 23...	1700	12000	126	7.0	11.0	<1	5.5	11.6	105	.5	27
APR 04...	1105	1710	86	6.6	16.5	70	40	9.5	97	2.1	19
MAY 15...	1725	273	117	6.4	28.0	50	6.8	7.8	99	.7	22
JUN 26...	1855	8450	139	7.3	29.5	25	5.0	9.2	120	.7	29
AUG 08...	1036	478	134	6.9	25.0	12	1.7	7.8	94	.7	26

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 18...	11	5.7	2.8	14	1	2.8	15	17	18	<.10	7.6
FEB 23...	9	6.2	2.8	13	1	2.7	18	17	18	<.10	6.3
APR 04...	12	4.8	1.6	8.6	.9	1.7	7	18	10	<.10	14
MAY 15...	4	5.2	2.3	12	1	2.4	18	15	13	.10	13
JUN 26...	11	6.5	3.0	15	1	2.7	18	16	19	.10	5.1
AUG 08...	12	6.5	2.4	15	1	2.5	14	16	18	.10	11

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	77	11	1	--	<.020	<.10	.050	1.1	1.1	.020	6.0
FEB 23...	77	17	<2	--	<.010	1.7	.080	.32	.40	<.010	5.8
APR 04...	63	59	20	--	.050	<.10	.110	.39	.50	.040	9.7
MAY 15...	74	13	<2	.18	.020	.20	.080	.72	.80	.040	5.7
JUN 26...	78	12	4	--	<.010	<.10	.040	.56	.60	.020	6.2
AUG 08...	80	6	8	--	<.010	<.10	.030	.57	.60	.020	5.7

08026000 SABINE RIVER NEAR BURKEVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 18...	1208	1	41	<1	<10	2	66
AUG 08...	1036	<1	51	<1	<10	<1	180

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 18...	3	92	<.1	<1	<1	--	6
AUG 08...	<1	22	<.1	<1	<1	<6	11

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	27554	134	79	5880	19	1410	15	1120	27
NOV.	1983	32656	111	67	5940	16	1380	13	1150	23
DEC.	1983	243865	76	48	31900	11	6930	9.7	6400	16
JAN.	1984	175670	121	73	34600	17	8110	14	6710	25
FEB.	1984	217205	114	69	40600	16	9480	13	7870	24
MAR.	1984	462300	129	77	96000	18	22800	15	18400	26
APR.	1984	38160	107	66	6770	15	1550	13	1330	22
MAY	1984	19350	101	62	3260	14	739	12	642	21
JUNE	1984	112829	134	79	24200	19	5830	15	4620	27
JULY	1984	108817	139	82	24000	20	5840	15	4550	28
AUG.	1984	29889	111	68	5490	16	1260	13	1070	23
SEPT	1984	26726	118	72	5170	17	1210	14	1000	24
TOTAL		1495021	**	**	284000	**	66600	**	54900	**
WTD.AVG.		4085	116	70	**	16	**	14	**	24

08026000 SABINE RIVER NEAR BURKEVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	141	103	126	119	127	115	133	125	120	134	95
2	134	140	87	135	116	128	100	132	134	117	136	120
3	132	139	55	137	121	129	68	131	122	132	134	125
4	130	135	30	138	114	128	91	128	134	132	132	110
5	132	136	37	134	112	115	76	111	136	136	137	100
6	125	134	51	128	114	107	109	115	132	141	135	95
7	131	138	107	121	116	112	120	118	136	135	120	75
8	132	134	133	119	120	123	79	103	138	139	131	100
9	133	136	140	86	122	127	68	128	110	140	130	125
10	136	137	111	81	108	128	61	90	97	138	100	115
11	132	140	53	92	110	135	68	91	139	140	115	105
12	130	137	40	90	50	151	124	107	142	141	130	120
13	131	135	47	95	31	128	126	110	139	139	85	125
14	130	131	65	125	39	129	127	117	137	141	90	100
15	129	134	110	113	49	130	127	112	132	140	115	125
16	133	144	100	110	116	129	123	113	125	141	120	135
17	138	142	90	108	120	130	128	113	117	141	95	120
18	133	125	85	106	122	131	126	112	127	142	110	135
19	136	123	83	131	123	130	128	115	132	136	130	145
20	138	121	60	120	128	132	100	102	139	137	120	141
21	133	109	50	125	129	133	96	85	135	136	105	135
22	134	112	58	115	128	134	94	49	129	120	110	125
23	134	119	65	110	130	132	109	63	130	143	115	140
24	140	59	70	90	128	134	110	75	110	141	85	130
25	136	69	55	115	127	137	105	85	139	143	95	115
26	135	76	35	132	129	134	104	94	140	144	120	120
27	134	81	50	131	124	132	109	99	141	142	110	125
28	139	64	77	131	125	133	110	63	141	143	100	110
29	132	61	126	108	126	134	115	73	140	120	95	130
30	137	71	133	120	---	135	124	92	117	140	90	145
31	140	---	137	133	---	107	---	99	---	135	75	---
MEAN	134	117	79	116	110	129	105	102	131	137	113	120

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	15.0	6.0	10.0	10.0	---	23.0	24.0	---	29.0	
2	---	22.0	14.0	8.5	10.5	12.0	---	22.5	23.0	---	29.0	
3	---	22.0	17.0	---	12.0	14.0	15.0	23.0	27.0	---	28.0	
4	25.0	---	16.0	9.0	10.0	12.0	15.0	23.0	24.0	---	29.0	
5	27.0	21.0	17.0	9.5	10.0	---	14.0	24.0	23.0	---	29.0	
6	25.0	20.0	15.0	10.5	---	11.5	15.0	27.0	23.0	---	---	
7	25.0	19.0	15.0	10.0	9.0	13.0	---	27.0	23.0	---	---	
8	25.0	19.0	15.0	10.0	10.0	11.0	17.0	23.0	23.0	---	---	
9	25.0	20.0	15.0	13.0	10.5	11.0	19.0	23.0	25.0	28.0	---	
10	25.0	17.0	11.0	12.0	14.0	8.0	19.0	23.0	26.0	28.0	---	
11	25.0	16.0	15.0	10.5	---	5.0	21.0	24.0	24.0	28.0	---	
12	23.0	22.0	---	9.5	---	5.0	19.5	27.0	25.0	28.0	---	
13	23.0	11.0	---	9.5	15.0	10.5	19.5	28.0	25.0	28.0	---	
14	---	15.5	---	10.5	15.5	13.0	15.0	28.0	---	29.0	---	
15	22.5	18.0	---	8.0	14.5	13.0	20.0	27.0	25.0	29.0	---	
16	24.0	21.0	---	---	14.0	15.0	15.0	27.0	26.0	29.0	---	
17	22.0	18.0	---	---	12.0	15.0	17.0	27.0	27.0	28.0	---	
18	24.0	18.0	---	6.0	11.0	---	---	26.0	26.0	28.0	---	
19	23.0	---	---	7.0	10.0	---	17.0	25.0	27.0	28.0	---	
20	23.0	17.0	---	---	10.5	---	---	23.0	27.0	28.0	---	
21	24.0	18.0	---	---	---	---	18.0	23.0	27.0	29.0	---	
22	24.0	---	---	---	11.0	14.0	19.0	23.0	27.0	---	---	
23	21.0	18.0	---	---	---	14.0	25.0	25.0	28.0	28.0	---	
24	20.0	17.0	---	---	13.0	---	---	27.0	28.0	28.0	---	
25	20.0	17.0	---	---	13.0	10.0	---	27.0	27.0	28.0	---	
26	20.0	15.0	---	9.0	11.0	9.0	22.0	27.0	---	28.0	---	
27	20.0	18.0	---	9.0	11.0	14.0	---	26.0	---	28.0	---	
28	20.0	14.0	---	9.0	11.0	15.0	---	26.0	---	---	---	
29	20.5	14.0	9.0	11.0	11.5	13.0	---	24.0	---	---	---	
30	21.0	14.0	9.0	10.0	---	13.0	---	24.0	---	28.0	---	
31	20.5	---	8.0	9.0	---	15.0	---	25.0	---	---	---	
MEAN	23.0	18.0	13.5	9.5	11.5	12.0	18.0	25.0	25.5	28.0	29.0	

08028500 SABINE RIVER NEAR BON WIER, TX

LOCATION.--Lat 30°44'49", long 93°36'30", Beauregard Parish, Louisiana-Newton County, Texas State line, Hydrologic Unit 12010005, near left bank at downstream side of bridge on U.S. Highway 190, 0.7 mi upstream from Quicksand Creek, 0.8 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.0 mi east of Bon Wier, 2.4 mi upstream from Caney Creek, and at mile 97.7.

DRAINAGE AREA.--8,229 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1312. Gage-height records collected in this vicinity since 1913 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1342: 1953. WSP 1442: 1924, 1926-27(M), 1929(M), 1939. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.42 ft National Geodetic Vertical Datum of 1929. Prior to July 8, 1931, nonrecording gage at site 0.8 mi downstream at datum 3.00 ft higher. July 8, 1931, to Oct. 15, 1958, nonrecording gage at present site at datum 3.00 ft higher. Oct. 16, 1958, to Sept. 30, 1975, water-stage recorder at present site at datum 3.00 ft higher.

REMARKS.--Water-discharge records fair. Flow regulated by Toledo Bend Reservoir (station 08025350) located 58.8 mi upstream. Gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years (water years 1924-66) prior to completion of Toledo Bend Reservoir, 6,846 ft³/s (4,960,000 acre-ft/yr); 18 years (water years 1967-84) regulated, 6,054 ft³/s (4,386,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 115,000 ft³/s May 19, 1953 (gage height, 28.70 ft); minimum daily, 134 ft³/s Nov. 9, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1833, 33.5 ft Apr. 23 or 24, 1913, from information by Gulf, Colorado, and Santa Fe Railway Co. and local residents. Flood in May 1884 reached a stage of 29 ft. Floods occurring about 1844 and 1860 were higher than flood in May 1884, from information by local residents. All flood data referenced to current datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,600 ft³/s Feb. 13 at 1100 hours (gage height, 23.47 ft); minimum daily, 553 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	878	943	2170	8600	8730	16600	3590	777	894	2710	5550	1520
2	844	1210	1790	8500	4090	16200	1860	1070	3120	1060	2950	1270
3	820	1310	3770	8500	2420	15900	4610	2480	2660	817	1150	738
4	1020	1270	14800	8500	2450	15700	5780	2130	1030	1860	2200	662
5	1110	1580	12200	8550	2280	17000	4350	968	3270	4420	1670	782
6	1370	1310	13200	8400	2110	22200	3030	825	5250	5320	947	1080
7	1330	894	16600	3860	1960	23000	2220	766	5980	5380	1170	1110
8	1610	1140	15200	2020	2390	21800	2540	945	6810	2450	1490	1410
9	1350	1380	12700	1950	2670	19700	4550	1620	6820	983	1370	1130
10	855	1360	10800	4420	2840	17600	4170	1650	3450	3700	1460	639
11	980	1350	11300	5830	2910	16500	3350	1250	1480	5240	1860	707
12	1250	1650	13800	4600	13100	16000	3410	999	3950	5320	1510	1020
13	1280	1240	14600	3390	33500	16000	3760	888	5740	5370	1200	1040
14	1280	822	14400	3760	26600	16100	3440	799	5600	5370	1880	1030
15	1560	1030	13400	5440	21100	16000	3170	745	5600	2410	1670	1290
16	1290	1260	10700	5460	18500	15800	2980	702	5470	907	1410	1050
17	834	1250	10000	5490	17700	15700	3070	679	2820	3350	1280	553
18	1110	1270	9600	5170	15500	15500	2720	650	1290	5170	1470	650
19	1370	1610	9370	5780	15400	15300	2630	661	4020	5320	1310	980
20	1350	1960	10300	7960	13700	15400	2540	884	5550	5350	746	1010
21	1330	2630	12000	8810	13000	15600	1550	1820	5450	5340	858	1090
22	1640	2330	12200	8740	12900	15100	1110	3490	5430	2480	1130	2040
23	1240	2090	11000	8890	12500	14600	1010	4860	5380	912	1130	3480
24	816	2880	10000	12000	12900	14500	942	2990	2470	3360	1130	2850
25	1010	3280	10000	14200	14800	14800	883	1860	962	5060	1370	2930
26	1240	2370	11000	13100	15300	14700	874	1430	3360	5250	1160	2280
27	1270	2100	13000	11700	16400	14700	855	1470	5090	5320	647	1730
28	1160	4500	10000	10200	17500	15000	842	1810	5230	5400	760	1530
29	1660	4400	9500	9580	17200	15200	823	1440	5300	2690	1040	1710
30	1190	3210	9000	9220	---	15500	800	1140	5480	1390	1080	1330
31	780	---	8800	8980	---	11400	---	993	---	3940	1170	---
TOTAL	36827	55629	337200	231600	342450	505100	77459	44791	124956	113649	45768	40641
MEAN	1188	1854	10880	7471	11810	16290	2582	1445	4165	3666	1476	1355
MAX	1660	4500	16600	14200	33500	23000	5780	4860	6820	5400	5550	3480
MIN	780	822	1790	1950	1960	11400	800	650	894	817	647	553
AC-FT	73050	110300	668800	459400	679200	1002000	153600	88840	247900	225400	90780	80610

CAL YR 1983 TOTAL 3378053 MEAN 9255 MAX 52900 MIN 637 AC-FT 6700000
WTR YR 1984 TOTAL 1956070 MEAN 5344 MAX 33500 MIN 553 AC-FT 3880000

08028500 SABINE RIVER NEAR BON WEIR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1969 to current year.
WATER TEMPERATURES: November 1969 to current year.
COLOR: November 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 407 micromhos Aug. 31, 1978; minimum daily, 34 micromhos Feb. 3, 1983.
WATER TEMPERATURES: Maximum daily, 33.0°C July 17, 1978, and July 14, 26, 1980; minimum daily, 4.0°C Feb. 2, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT							
05...	1815	1390	190	27.0	70	29	19
13...	1215	1200	174	22.0	60	24	19
19...	1400	1450	146	25.0	40	18	16
27...	1245	1290	195	20.0	--	29	20
NOV							
03...	1220	1280	190	25.0	60	26	21
10...	1210	1360	192	17.0	70	26	20
17...	1155	1240	218	18.0	60	29	22
25...	1245	3330	123	18.0	120	22	14
DEC							
01...	1245	2100	81	14.5	100	16	8.6
08...	0900	16400	75	14.0	140	14	8.3
14...	1245	15100	99	17.0	70	16	12
20...	1415	11000	148	13.0	30	18	17
28...	1100	9370	129	9.0	30	16	16
JAN							
04...	1555	8440	138	12.0	40	16	16
11...	1310	5900	92	11.5	140	14	9.9
17...	1440	5540	115	8.0	70	21	13
25...	1645	13600	108	8.0	70	16	14
FEB							
02...	1130	3920	129	9.5	60	18	18
08...	1550	2820	131	10.0	70	20	14
15...	1208	21200	30	13.0	200	3.5	3.6
22...	1220	13200	125	1.0	50	20	18
MAR							
01...	1600	16600	125	9.5	40	17	16
06...	1340	22800	94	11.0	200	15	12
14...	1320	16100	122	13.0	30	17	15
21...	0628	15600	132	13.0	40	17	16
29...	1720	15300	136	13.0	40	18	17
APR							
06...	0945	3120	105	15.0	140	20	12
12...	1005	2990	135	22.0	140	23	11
19...	1100	2820	153	18.0	70	22	16
26...	1505	878	203	16.0	100	28	19
MAY							
02...	1655	1290	154	24.0	60	19	20
09...	1610	1760	149	26.0	140	23	16
18...	1340	647	209	28.0	120	29	22

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
MAY							
24...	1930	2480	84	27.0	140	14	9.0
30...	1810	1090	150	26.0	80	24	15
JUN							
07...	1915	6470	149	26.0	40	18	17
15...	0815	5580	140	27.0	20	18	17
22...	1315	6180	151	29.5	40	19	17
28...	1600	5850	144	28.5	30	18	17
JUL							
05...	1420	5580	137	29.0	25	17	16
12...	1140	6010	138	29.0	30	17	17
19...	1320	6110	139	30.0	30	17	17
26...	1720	5880	142	28.0	30	17	17
AUG							
02...	1415	2480	197	29.5	100	27	23
09...	1230	1240	203	29.0	70	27	22
18...	1330	1390	210	31.0	100	31	23
23...	1805	1200	208	30.0	60	27	23
30...	1615	1070	168	30.5	50	22	19
SEP							
06...	1225	968	167	28.0	60	22	20
13...	1510	1000	177	30.0	60	22	20
20...	1700	1030	167	26.0	50	22	21
27...	1455	1690	243	25.0	120	42	25

08029500 BIG COW CREEK NEAR NEWTON, TX

LOCATION.--Lat 30°49'08", long 93°47'07", Newton County, Hydrologic Unit 12010005, near center of span at downstream side bridge on State Highway 87, 2.6 mi southwest of Newton, 5.0 mi downstream from Melhomes Creek, and 8.0 mi upstream from White Oak Creek.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--April 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 134.69 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good. No known diversion above station. Several observations of water temperature were made during the yea.

AVERAGE DISCHARGE.--32 years, 115 ft³/s (12.20 in/yr), 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s Apr. 29, 1953 (gage height, 19.45 ft); minimum daily, 10 ft³/s July 7, 8, 21-23, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 27.5 ft in April 1922, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 4	0600	3,870	16.08	Feb. 12	1600	*17,800	19.12
Dec. 11	1400	1,740	15.16	Mar. 6	0800	1,120	14.28
Jan. 24	2200	1,270	14.59	May 22	2000	1,920	15.30

Minimum discharge, 33 ft³/s Sept. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	39	149	90	107	171	110	85	82	87	43	58
2	43	40	152	92	102	161	156	86	79	66	42	49
3	43	41	975	91	128	156	403	84	77	54	47	51
4	47	45	2730	88	150	153	269	80	75	52	59	71
5	45	49	780	86	114	578	153	75	73	50	53	61
6	43	55	604	88	100	1090	122	73	83	48	73	48
7	42	62	271	83	94	551	115	72	130	48	98	42
8	39	74	175	81	92	251	504	155	120	46	72	42
9	38	55	143	221	129	206	529	191	85	44	71	51
10	38	50	284	926	334	184	237	119	72	45	79	51
11	38	48	1440	576	308	174	306	83	69	48	66	45
12	40	46	730	207	9720	181	222	77	72	50	54	41
13	44	45	253	146	4690	195	146	75	79	80	52	38
14	47	46	175	125	1150	198	123	72	68	53	50	37
15	42	48	143	189	439	166	111	70	64	50	83	36
16	40	50	135	224	509	159	105	68	65	53	75	37
17	48	49	207	151	359	154	103	67	64	45	53	37
18	63	45	178	141	265	149	101	67	61	44	48	35
19	54	67	129	133	229	158	99	117	62	55	45	33
20	48	231	112	112	217	174	98	448	138	48	43	33
21	47	262	184	103	311	143	96	373	85	42	41	43
22	46	119	473	99	277	135	95	1310	64	39	42	96
23	44	298	259	218	203	130	95	1260	59	38	41	134
24	43	470	152	1050	179	125	88	300	55	40	41	70
25	42	155	116	772	165	120	85	161	53	40	44	55
26	41	91	104	242	170	115	85	126	51	57	40	50
27	40	390	107	166	406	125	89	113	50	66	39	45
28	39	617	124	139	378	135	93	110	52	58	38	45
29	38	235	116	124	215	123	89	98	58	80	38	44
30	38	119	98	116	---	114	86	91	90	57	37	42
31	38	---	91	114	---	111	---	85	---	48	42	---
TOTAL	1343	3941	11589	6993	21540	6585	4913	6191	2235	1631	1649	1520
MEAN	43.3	131	374	226	743	212	164	200	74.5	52.6	53.2	50.7
MAX	63	617	2730	1050	9720	1090	529	1310	138	87	98	134
MIN	38	39	91	81	92	111	85	67	50	38	37	33
CFSM	.34	1.02	2.92	1.77	5.81	1.66	1.28	1.56	.58	.41	.42	.40
IN.	.39	1.15	3.37	2.03	6.26	1.91	1.43	1.80	.65	.47	.48	.44
AC-FT	2660	7820	22990	13870	42720	13060	9740	12280	4430	3240	3270	3010

CAL YR 1983 TOTAL 68357 MEAN 187 MAX 4000 MIN 31 CFSM 1.46 IN 19.87 AC-FT 135600
WTR YR 1984 TOTAL 70130 MEAN 192 MAX 9720 MIN 33 CFSM 1.50 IN 20.38 AC-FT 139100

08052700 LITTLE ELM CREEK NEAR AUBREY, TX

LOCATION.--Lat 33°17'00", long 96°53'33", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of bridge on Farm Road 1385, 1.5 mi upstream from Mustang Creek, 5.5 mi east of Aubrey, and 18 mi upstream from Lewisville Dam on the Elm Fork Trinity River.

DRAINAGE AREA.--75.5 mi^2.

PERIOD OF RECORD.--June 1956 to September 1976, October 1979 to current year.
Water-quality records.--Chemical analyses: January 1968. Specific conductance: December 1966 to September 1975. Water temperatures: February 1966 to September 1975. Sediment records: February 1966 to September 1975.

REVISED RECORDS.--WRD TX-70-1: 1969.

GAGE.--Water-stage recorder. Datum of gage is 534.76 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Records good. Some small diversions for irrigation above station. Flow is affected at times by discharge from the flood-detention pools of 17 floodwater-retarding structures with a combined detention capacity of 10,460 acre-ft. These structures control runoff from 36.4 mi^2 above station. Several observations of water temperature were obtained during the year.

AVERAGE DISCHARGE.--25 years (water year 1957-76, 1980-1984), 46.8 ft^3/s (33,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft^3/s May 13, 1982 (gage height, 17.80 ft); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 18.2 ft in May 1941, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 819 ft^3/s Mar. 12 at 1700 hours (gage height, 13.52 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.45	.18	.08	3.20	6.30	.49	.00	0	0	0
2	.00	.00	.29	.19	.12	1.60	5.80	16.00	.00	0	0	0
3	.00	.00	.38	.21	.23	.96	8.30	5.00	.00	0	0	0
4	.00	.00	.95	.21	.23	.73	5.90	3.00	.00	0	0	0
5	.00	.00	1.10	.21	.12	.57	3.60	1.30	.00	0	0	0
6	.00	.14	.72	.16	.05	.40	2.40	2.90	.00	0	0	0
7	.00	.65	.44	.13	.08	.29	2.60	2.00	.00	0	0	0
8	.00	.57	.23	.13	.10	.14	15.00	.75	.00	0	0	0
9	.00	.32	.19	.13	.76	.06	9.80	.39	.00	0	0	0
10	.00	.16	.10	.13	1.10	.06	4.80	.04	.05	0	0	0
11	.00	.06	.10	.13	.63	.11	3.40	.00	.04	0	0	0
12	.00	.06	.07	.13	5.80	502.00	2.70	.00	.00	0	0	0
13	.00	.08	.06	.11	3.80	184.00	1.70	.00	.00	0	0	0
14	.00	.06	.06	.11	1.60	62.00	1.10	.00	.00	0	0	0
15	.00	.02	.06	.11	.70	31.00	.74	.00	.00	0	0	0
16	.00	.00	.12	.11	.38	20.00	.59	.00	.00	0	0	0
17	.00	.00	.15	.11	.14	13.00	.47	.00	.00	0	0	0
18	.00	.00	.17	.11	.26	9.50	.37	.00	.00	0	0	0
19	.00	1.20	.09	.01	.57	29.00	.38	.00	.00	0	0	0
20	.00	1.60	.09	.00	.34	21.00	.29	.00	.00	0	0	0
21	4.10	.53	.10	.08	.14	14.00	.25	.00	.00	0	0	0
22	1.60	.23	.02	.41	.08	9.30	.15	.00	.00	0	0	0
23	.70	.15	.00	.82	.05	52.00	.16	.00	.00	0	0	0
24	.40	.55	.00	1.10	.02	80.00	.11	.00	.00	0	0	0
25	.27	.39	.00	.65	.00	31.00	.09	.00	.00	0	0	0
26	.20	.25	.02	.47	87.00	19.00	.08	.00	.00	0	0	0
27	.11	5.90	.12	.31	131.00	15.00	.09	.00	.00	0	0	0
28	.06	7.80	.21	.18	17.00	38.00	.03	.00	.00	0	0	0
29	.02	2.00	.08	.15	6.70	26.00	.06	.00	.00	0	0	0
30	.01	.91	.08	.12	---	13.00	.11	.00	.00	0	0	0
31	.00	---	.10	.09	---	8.70	---	.00	---	0	0	---
TOTAL	7.47	23.63	6.55	6.99	259.08	1185.62	77.37	31.87	.09	0	0	0
MEAN	.24	.79	.21	.23	8.93	38.2	2.58	1.03	.003	.000	.000	.000
MAX	4.1	7.8	1.1	1.1	131	502	15	16	.05	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.06	.03	.00	.00	.00	.00	.00
AC-FT	15	47	13	14	514	2350	153	63	.2	.00	.00	.00

CAL YR 1983 TOTAL 2462.81 MEAN 6.75 MAX 555 MIN .00 AC-FT 4880
WTR YR 1984 TOTAL 1598.67 MEAN 4.37 MAX 502 MIN .00 AC-FT 3170

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX

LOCATION.--lat 33°04'09", long 96°57'51", Denton County, Hydrologic Unit 12030103, in intake structure of Lewisville Dam on Elm Fork Trinity River, 2 mi upstream from bridge on State Highway 121, 2.4 mi northeast of Lewisville, 12 mi upstream from Denton Creek, and 30.0 mi upstream from mouth.

DRAINAGE AREA.--1,660 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1954 to current year. Prior to October 1970, published as Garza-Little Elm Reservoir near Lewisville.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 17, 1955, non-recording gage at site 4,000 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 32,888 ft long, including a 560-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov. 1, 1954, and the dam was completed in August 1955. The controlled low-flow outlet works consist of a 16.0-foot-diameter conduit that is controlled by three 6.5- by 13.0-foot broome-type gates and two 60-inch steel pipes with service valves. The lake was built for flood control and water conservation. The city of Dallas obtains most of its municipal water supply from this lake. The capacity table is based on a survey made in 1965. Inflow is affected at times by discharge from the flood-detention pools of 118 floodwater-retarding structures with a combined detention capacity of 81,670 acre-ft. These structures control runoff from 298 mi² in the Elm Fork Trinity River, Clear, Little Elm, and Hickory Creeks watersheds. Gage-height telemeter at station. An unknown amount of water was diverted for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	560.0	-
Crest of spillway	532.0	981,800
Top of conservation pool	515.0	457,600
Lowest intakes to wet wells (invert)	481.0	42,560
Invert of three broome-type gates	448.0	0

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,168,000 acre-ft Nov. 1, 1981 (elevation, 536.46 ft); minimum since initial filling in 1957, 184,700 acre-ft Sept. 28, 1980 (elevation, 498.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 441,100 acre-ft Apr. 8 at 0800 hours (elevation, 514.28 ft); minimum daily, 309,100 acre-ft Sept. 30 at 2400 (elevation, 507.50 ft).

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

507.0	300,900	510.0	351,900	514.0	434,700
508.0	317,300	512.0	391,000	515.0	457,600
509.0	334,300				

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370800	403500	401400	388700	380200	388000	438300	438100	418800	398000	356800	327900
2	369900	403500	401800	388200	380400	389300	439900	439700	418200	396200	355300	327900
3	369100	403500	401800	387600	380200	389300	440600	439700	417100	394800	354000	327800
4	368900	403500	401200	387400	380000	389900	439500	439200	416400	393700	352800	326900
5	368100	404600	401200	387000	379800	389500	439200	438800	414900	392000	351500	326200
6	368100	405300	400300	386800	379000	388700	438300	438600	419000	390800	350400	325000
7	377600	404800	399900	386400	378800	388700	440400	438300	418200	389500	351100	322300
8	390500	404400	399400	385700	379400	388400	441100	437000	417500	387800	350400	321200
9	399400	404400	399400	386600	379600	388000	440600	435800	417100	385700	349700	320200
10	402500	404400	399200	386800	379200	387800	441300	433300	416600	384300	349000	319200
11	406600	403500	398800	386000	380400	388200	440600	433300	417100	383300	349900	318500
12	406600	403500	397700	386000	380400	396500	440800	433100	417500	382200	349700	317800
13	406100	403100	398200	386000	380400	405900	440800	432400	417500	381000	348800	317200
14	405500	403500	397700	385500	379200	409600	440400	432000	417100	379000	348300	316500
15	405700	402900	397500	384900	380000	412900	439900	430900	416400	377800	347600	315200
16	405700	402000	397700	384500	379600	413500	439200	429700	415100	376600	346800	314000
17	405700	400900	397500	384500	379400	414200	438800	428800	414000	375600	346100	312800
18	405000	399900	397300	384100	380200	417500	438600	428600	412900	373800	345400	312000
19	405900	402200	396500	383300	379800	422600	438100	428400	411800	372800	344500	311200
20	407900	400500	395800	383100	379600	426600	437600	427900	410300	371200	341900	310400
21	407600	400500	395600	382500	378800	428400	437900	427300	408900	369700	340300	309700
22	407000	402000	395400	382900	378200	428400	437900	427100	407600	368500	339400	308900
23	406300	402200	394600	382900	378200	432700	437400	427300	406800	367200	338800	308400
24	406300	401800	393500	382700	377800	434000	435800	426400	405700	366200	338200	307200
25	406100	400900	392900	382500	376200	435200	435600	425700	404600	365000	337000	307200
26	405500	402200	392200	382200	382200	436100	435200	424600	403300	363900	335800	305900
27	405000	403100	391800	382000	383300	437400	435400	424400	402000	362800	334300	305600
28	404400	402500	394100	381800	384700	437600	434700	424400	401200	361600	332400	305100
29	404200	401600	390300	381800	386200	438800	434200	422800	399700	360100	330100	304300
30	404000	402000	389300	381200	---	439000	433300	421500	399000	359000	329300	303300
31	403700	---	388900	380800	---	439500	---	420400	---	357900	328300	---
MAX	407900	405300	401800	388700	386200	439500	441300	439700	419000	398000	356800	327900
MIN	368100	399900	388900	380800	376200	387800	433300	420400	399000	357900	328300	303300
(†)	512.60	512.52	511.90	511.51	511.77	514.21	513.94	513.36	512.38	510.33	508.65	507.15
(‡)	+32100	-1700	-13100	-8100	+5400	+53300	-6200	-12900	-21400	-41100	-29600	-25000

CAL YR 1983 MAX 485100 MIN 368100 ‡ -63200
WTR YR 1984 MAX 441300 MIN 303300 ‡ -68300

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

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

330419096575401 LEWISVILLE LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV												
16...	1145	1.00	358	7.8	16.0	.70	7.5	77	27	K15	110	18
16...	1146	1.20	--	--	--	--	--	--	--	--	--	--
16...	1147	10.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1148	20.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1149	30.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1150	40.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1151	50.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1152	58.0	358	7.7	16.0	--	7.3	75	--	--	120	18
APR												
17...	1240	1.00	394	8.1	17.5	.50	9.2	98	K2	K4	130	23
17...	1241	.90	--	--	--	--	--	--	--	--	--	--
17...	1242	10.0	394	8.1	16.0	--	9.4	97	--	--	--	--
17...	1243	20.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1244	30.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1245	40.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1246	50.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1247	60.0	394	8.1	15.5	--	9.0	92	--	--	130	34
AUG												
14...	0845	1.00	378	7.9	27.0	1.60	6.7	85	K4	K13	120	21
14...	0847	10.0	379	7.9	27.0	--	6.4	81	--	--	--	--
14...	0848	20.0	379	7.8	27.0	--	5.6	71	--	--	--	--
14...	0849	30.0	383	7.5	26.5	--	4.0	50	--	--	--	--
14...	0850	35.0	388	7.3	26.0	--	1.3	16	--	--	--	--
14...	0851	40.0	399	7.3	25.5	--	.1	1	--	--	--	--
14...	0852	51.0	434	7.2	22.5	--	.1	1	--	--	140	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
NOV												
16...	38	4.1	23	1	4.4	94	34	25	.30	3.6	190	6
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	39	4.3	23	1	4.4	97	34	25	--	4.0	190	11
APR												
17...	46	4.4	26	1	4.4	110	37	29	.30	1.9	210	10
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	46	4.5	26	1	4.3	100	38	28	--	2.0	210	37
AUG												
14...	40	4.7	27	1	4.5	98	41	30	.30	2.7	210	2
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	50	4.8	26	1	4.4	150	28	27	--	7.5	240	8

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330419096575401 LEWISVILLE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
16...	.29	.010	.30	.060	.94	1.0	1.3	<.010	.030	3	3
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	<.010	.30	.030	.77	.80	1.1	<.010	.020	40	30
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	.28	.020	.30	.070	1.1	1.2	1.5	<.010	.030	10	10
APR											
17...	.26	.040	.30	.070	.53	.60	.90	<.010	.040	11	<1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.17	.030	.20	.040	.66	.70	.90	<.010	.050	30	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.42	.080	.50	.180	.52	.70	1.2	.020	.040	10	14
AUG											
14...	--	<.010	<.10	<.010	--	.50	--	<.010	.010	<3	3
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.010	<.10	.120	--	--	--	<.010	.010	30	50
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	<.010	<.10	.340	1.3	1.6	--	<.010	.040	40	990
14...	--	.020	<.10	1.10	.60	1.7	--	.240	.260	1700	1600

330410096584501 LEWISVILLE LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV							
16...	1215	1.00	358	7.8	16.0	7.5	77
16...	1216	10.0	358	7.7	16.0	7.3	75
16...	1217	20.0	358	7.7	16.0	7.3	75
16...	1218	30.0	358	7.7	16.0	7.3	75
16...	1219	40.0	358	7.7	16.0	7.3	75
16...	1220	50.0	358	7.7	16.0	7.3	75
APR							
17...	1302	1.00	394	8.1	17.5	9.2	98
17...	1303	10.0	394	8.1	16.0	9.4	97
17...	1304	20.0	394	8.1	15.5	9.0	92
17...	1305	30.0	394	8.1	15.5	9.0	92
17...	1306	40.0	394	8.1	15.5	9.0	92
17...	1307	48.0	394	8.1	15.5	9.0	92
AUG							
14...	0910	1.00	375	8.0	27.0	7.3	93
14...	0911	10.0	376	8.0	27.0	7.0	89
14...	0912	20.0	377	7.8	27.0	6.0	76
14...	0913	30.0	380	7.6	26.5	4.4	55
14...	0914	35.0	385	7.4	26.0	2.0	25
14...	0915	42.0	409	7.3	24.5	.2	2

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330450096560501 LEWISVILLE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV							
16...	1230	1.00	357	7.8	16.0	7.6	78
16...	1231	10.0	357	7.7	16.0	7.4	76
16...	1232	20.0	371	7.7	15.5	7.2	73
16...	1233	30.0	380	7.7	15.0	7.0	70
APR							
17...	1315	1.00	400	8.1	17.5	9.6	102
17...	1316	5.00	441	8.3	17.0	9.3	98
17...	1317	10.0	444	8.2	16.5	9.2	96
17...	1318	20.0	443	8.1	16.0	8.9	92
17...	1319	25.0	420	8.1	15.5	8.7	89
17...	1320	32.0	400	8.1	15.5	8.7	89
AUG							
14...	0930	1.00	382	8.3	27.5	8.7	111
14...	0931	10.0	378	7.8	27.0	6.8	86
14...	0932	20.0	383	7.6	27.0	4.3	55
14...	0933	26.0	397	7.4	26.5	2.5	31

330606097025601 LEWISVILLE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	1615	1.00	394	8.2	18.0	9.2	99
17...	1616	10.0	394	8.0	16.0	8.6	89
17...	1617	20.0	394	8.0	16.0	8.3	86
17...	1618	25.0	394	7.9	16.0	7.3	75
AUG							
14...	1210	1.00	364	8.6	30.1	9.3	125
14...	1211	5.00	365	8.5	28.5	8.8	115
14...	1212	10.0	369	7.8	28.0	5.1	66
14...	1213	18.0	374	7.5	27.0	1.2	15

330755096572001 LEWISVILLE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
NOV										
16...	1255	1.00	356	7.8	15.5	.40	7.4	75	.27	.030
16...	1256	10.0	356	7.7	15.0	--	7.3	73	--	--
16...	1257	20.0	356	7.7	15.0	--	7.2	72	--	--
16...	1258	30.0	356	7.7	15.0	--	7.0	70	--	--
16...	1259	35.0	356	7.7	15.0	--	6.9	69	.24	.060
APR										
17...	1345	1.00	398	8.1	18.0	.40	9.3	100	.36	.040
17...	1346	5.00	398	8.1	16.5	--	9.3	97	--	--
17...	1347	10.0	398	8.1	15.5	--	9.0	92	--	--
17...	1348	20.0	398	8.0	15.5	--	8.8	90	.36	.040
17...	1349	30.0	398	8.0	15.5	--	8.6	88	--	--
17...	1350	37.0	398	8.0	15.5	--	8.6	88	.44	.060
AUG										
14...	1000	1.00	367	8.3	28.0	.80	8.3	107	--	<.010
14...	1001	10.0	370	8.1	27.5	--	6.8	87	--	--
14...	1002	20.0	377	7.7	27.0	--	4.0	51	--	.030
14...	1003	30.0	378	7.6	27.0	--	3.4	43	--	.050

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330755096572001 LEWISVILLE LAKE SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV									
16...	.30	.050	.95	1.0	1.3	<.010	.040	50	10
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	.30	.090	1.1	1.2	1.5	.020	.100	70	30
APR									
17...	.40	.060	.64	.70	1.1	<.010	.030	40	<10
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	.40	.040	.66	.70	1.1	.010	.010	50	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.140	.86	1.0	1.5	.010	.050	80	20
AUG									
14...	<.10	.020	.68	.70	--	<.010	.030	60	<10
14...	--	--	--	--	--	--	--	--	--
14...	<.10	.160	.44	.60	--	<.010	.020	40	20
14...	<.10	.170	.63	.80	--	<.010	.040	20	30

330959096565301 LEWISVILLE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
16...	1315	1.00	354	8.0	14.5	.40	7.8	77	<1	K16	110	18
16...	1316	10.0	354	8.0	14.5	--	7.7	76	--	--	--	--
16...	1317	20.0	354	8.0	14.0	--	7.5	74	--	--	--	--
16...	1318	24.0	354	8.0	14.0	--	7.3	72	--	--	110	20
APR												
17...	1415	1.00	412	8.2	18.5	.30	9.5	103	<1	<1	140	32
17...	1416	5.00	422	8.1	16.5	--	8.8	92	--	--	--	--
17...	1417	10.0	427	8.1	16.0	--	8.5	88	--	--	--	--
17...	1418	20.0	427	8.1	16.0	--	8.1	84	--	--	--	--
17...	1419	25.0	427	8.0	16.0	--	7.3	75	--	--	--	--
AUG												
14...	1035	1.00	358	8.6	29.0	.60	10.4	137	K2	K16	110	23
14...	1036	5.00	366	8.3	28.5	--	8.0	104	--	--	--	--
14...	1037	10.0	374	7.7	27.0	--	3.9	50	--	--	--	--
14...	1038	19.0	387	7.5	26.5	--	1.6	20	--	--	120	21

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
NOV											
16...	38	4.1	23	1	4.4	94	36	24	3.0	190	18
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	39	4.1	23	1	4.3	94	35	24	2.6	190	55
APR											
17...	49	4.6	25	1	4.5	110	49	25	2.1	230	31
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	110	--	--	--	--	--
AUG											
14...	35	4.6	29	1	4.6	84	42	31	2.8	200	2
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	39	4.4	28	1	4.7	95	39	31	3.8	210	39

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330959096565301 LEWISVILLE LAKE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV											
16...	.07	.030	.10	.040	1.2	1.2	1.3	<.010	.050	20	3
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	.08	.020	.10	.050	1.2	1.2	1.3	<.010	.090	6	6
APR											
17...	.75	.050	.80	.060	.84	.90	1.7	.010	.030	<3	<1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.95	.050	1.0	.060	1.2	1.3	2.3	.010	.050	54	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.95	.050	1.0	.200	1.2	1.4	2.4	.030	.150	20	10
AUG											
14...	--	<.010	<.10	.020	.78	.80	--	.010	.050	<3	1
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.020	<.10	.070	--	--	--	<.010	.040	30	<10
14...	--	.060	<.10	.280	.72	1.0	--	.080	.090	4	78

330722096592201 LEWISVILLE LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
NOV										
16...	1430	1.00	352	7.8	15.5	.40	7.4	75	.29	.010
16...	1431	10.0	352	7.7	15.0	--	7.3	73	--	--
16...	1432	20.0	352	7.7	14.5	--	7.4	73	--	--
16...	1433	28.0	352	7.7	14.0	--	7.4	73	.69	.010
APR										
17...	1450	1.00	405	8.0	18.5	.30	9.0	98	.77	.030
17...	1451	5.00	399	8.0	16.0	--	8.9	92	--	--
17...	1452	10.0	396	8.1	15.5	--	8.9	91	.43	.070
17...	1453	20.0	396	8.0	15.5	--	8.6	88	--	--
17...	1454	26.0	396	8.0	15.5	--	8.4	86	.44	.060
AUG										
14...	1115	1.00	380	8.5	28.0	.90	8.4	109	--	<.010
14...	1116	5.00	387	8.3	28.0	--	7.4	96	--	--
14...	1117	10.0	405	7.6	27.0	--	3.1	39	.16	.040
14...	1118	18.0	405	7.6	27.0	--	3.0	38	.06	.040

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV									
16...	.30	.040	.86	.90	1.2	<.010	.040	50	10
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	.70	.040	1.1	1.1	1.8	.020	.110	70	<10
APR									
17...	.80	.040	.86	.90	1.7	.040	.080	20	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.150	.65	.80	1.3	.020	.020	10	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.120	.68	.80	1.3	.020	.040	20	<10
AUG									
14...	<.10	.040	.76	.80	--	<.010	.030	30	10
14...	--	--	--	--	--	--	--	--	--
14...	.20	.160	.94	1.1	1.3	.070	.120	20	20
14...	.10	.160	.64	.80	.90	.070	.110	30	60

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330944097003601 LEWISVILLE LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV												
16...	1410	1.00	353	7.8	14.5	.40	7.7	76	K4	67	110	13
16...	1411	.60	--	--	--	--	--	--	--	--	--	--
16...	1412	9.00	353	7.7	13.5	--	7.2	70	--	--	--	--
APR												
17...	1530	1.00	437	8.1	17.5	.20	8.8	94	K20	K14	150	16
17...	1531	.40	--	--	--	--	--	--	--	--	--	--
17...	1532	5.00	410	8.0	16.0	--	8.3	86	--	--	--	--
17...	1533	11.0	408	7.9	16.0	--	8.0	82	--	--	140	27
AUG												
14...	1135	1.00	389	8.7	29.0	.30	10.4	137	K2	K20	110	16
14...	1137	3.00	387	8.5	28.0	--	8.5	110	--	--	--	--
14...	1138	5.00	397	8.0	27.5	--	6.4	82	--	--	110	17

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
NOV											
16...	38	3.9	24	1	4.3	98	31	24	4.5	190	16
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
17...	50	5.0	29	1	4.5	130	35	32	4.8	240	39
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	47	4.6	27	1	4.5	110	35	29	4.2	220	63
AUG											
14...	36	4.8	35	2	5.5	94	36	37	1.7	210	19
14...	--	--	--	--	--	--	--	--	--	--	--
14...	37	4.7	35	2	5.4	95	36	37	2.5	210	51

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV											
16...	.67	.030	.70	.060	1.1	1.2	1.9	.050	.110	8	<1
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
17...	.56	.040	.60	.120	.98	1.1	1.7	.060	.160	4	1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.74	.060	.80	.150	.95	1.1	1.9	.120	.120	12	10
AUG											
14...	--	.020	<.10	.040	1.4	1.4	--	.050	.150	3	<1
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.030	<.10	.030	1.2	1.2	--	.060	.170	4	10

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	11-16-83
Time	1146
TOTAL CELLS/ml	13,200
NUMBER OF SPECIES	19
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	100
Ankistrodesmus falcatus var. mirabilis	100
Ankistrodesmus nannoselene	200
Chlamydomonas sp.	200
Scenedesmus accuminatus	400
Scenedesmus quadricauda	400
Tetraedron trigonum var. gracile	100
Tetrastrum heteracanthum	800
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	500
Chroococcus dispersus	200
Dactylococcopsis raphidioides	700
Merismopedia minima	6800
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvulina	100
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	300
Melosira Tirata	1400
Stephanodiscus astrea	100
Stephanodiscus niagarae	100
Order Pennales	
Navicula sp.	100
Nitzschia palea	600

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1241
TOTAL CELLS/ml	10,527
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	329
Chlamydomonas sp.	197
Nephrocytium sp.	329
Schroederia setigera	66
Tetraedron minimum	66
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1315
Aphanothece sp.	1645
Chroococcus pallidus	1645
Dactylococcopsis raphidioides	197
Synechococcus aeruginosa	263
Synechococcus elongatus	329
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus astrea	219
Stephanodiscus niagarae	110
Stephanodiscus tenuis	2895
Order Pennales	
Achnanthes minutissima	66
Navicula sp.	395
Nitzschia latens	329
Nitzschia subacicularis	132

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	8-14-84
Time	0846
TOTAL CELLS/ml	345,326
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	2.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Cosmarium sp.	125
Oocystis sp.	1000
Selenastrum minutum	125
Tetraedron minimum	125
Tetrastrum heteracanthum	1000
CYANOPHYTA (Blue-green algae)	
Anabaena catenata	28646
Anabaena circinalis	37760
Anabaena sp.	1000
Anabaenopsis circularis	1250
Anabaenopsis raciborskii	36250
Aphanocapsa delicatissima	85625
Aphanocapsa elachista	1250
Chroococcus dispersus	1500
Chroococcus limneticus	3500
Dactylococcopsis smithii	125
Lyngbya contorta	4375
Lyngbya limnetica	8500
Merismopedia minima	12500
Merismopedia punctata	15625
Merismopedia tenuissima	4250
Microcystis sp.	24875
Oscillatoria geminata	1750
Oscillatoria limnetica	11375
Oscillatoria subtilissima	36458
Oscillatoria sp.	2750
Pseudoanabaena sp.	3000
Raphidiopsis curvata	7625
Rhabdoderma lineare	2250
Rhabdoderma sigmoidea	1250
Spirulina laxa	2000
Spirulina laxissima	2875
Synechococcus aeruginosa	375
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	125
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	500
Melosira granulata	1750
Stephanodiscus dubius	125
Order Pennales	
Navicula halophila	125
Nitzschia palea	553
Nitzschia subconfinis	34
Synedra sp.	1000

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	11-16-83
Time	1411
TOTAL CELLS/ml	51,760
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	P
Ankistrodesmus falcatus var. mirabilis	300
Chlamydomonas sp.	100
Cosmarium tinctum var. tumidum	100
Scenedesmus quadricauda	200
Selenastrum capricornutum	700
CHRYSOPHYTA (Golden-brown algae)	
Unicellular flagellate	300
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	600
Dactylococcopsis raphidioides	500
Merismopedia minima	45100
Pseudoanabaena sp.	600
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	100
Phacus sp.	100
Trachelomonas volvulina	100
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	380
Stephanodiscus hantzschii	1180
Order Pennales	
Nitzschia sp.	1400

P = Species observed after counts completed.

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1531
TOTAL CELLS/ml	32,136
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	395
Ankistrodesmus falcatus var. mirabilis	132
Chlamydomonas sp.	921
Closterium sp.	263
Scenedesmus quadricauda	263
Scenedesmus serratus	263
Schroederia setigera	789
CYANOPHYTA (Blue-green algae)	
Chroococcus multicoloratus	3289
Chroococcus pallidus	1974
Dactylococcopsis raphidioides	1974
Gloeothece sp.	526
Merismopedia minima	3684
Merismopedia tenuissima	2105
Synechococcus aeruginosa	P
Synechococcus elongatus	3947
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	132
CRYPTOPHYTA (Cryptomonads)	
Chilomonas sp.	132
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	601
Cyclotella ocellata	75
Melosira lirata	2632
Melosira sp.	5865
Stephanodiscus astrea	1353
Stephanodiscus niagarae	225
Stephanodiscus tenuis	301
Order Pennales	
Navicula sp.	32
Nitzschia amphibia	66
Nitzschia frustulum	32
Nitzschia palea	99
Nitzschia sp.	66

P = Species observed after counts completed.

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	8-14-84
Time	1136
TOTAL CELLS/ml	1,922,197
NUMBER OF SPECIES	66
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Actinastrum sp.	1364
Ankistrodesmus falcatus var. mirabilis	114
Botryococcus sp.	2500
Carteria polychloris	114
Carteria sp.	114
Chlamydomonas sp. 1	455
Chlamydomonas sp. 2	341
Chlamydomonas sp. 3	568
Chlamydomonas sp. 4	114
Chlorogonium sp.	227
Closterium sp.	114
Dictyosphaerium pulchellum	909
Gloeocystis botryoides	455
Gloeocystis sp.	455
Lagerheimia sp. 1	114
Lagerheimia sp. 2	227
Micratinium sp.	1136
Nephrocytium sp.	909
Pteromonas angulosa	1023
Pteromonas sp.	227
Scenedesmus acuminatus	455
Scenedesmus quadricauda	227
Schroederia setigera	227
Tetrastrum heteracanthum	455
Tetrastrum staurogeniaeforme	455
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	50000
Anabaenopsis raciborskii	90909
Aphanocapsa delicatissima	561364
Aphanocapsa elachista	181818
Dactylococcopsis acicularis	2273
Dactylococcopsis fasciculata	4545
Lyngbya contorta	22727
Lyngbya limnetica	47727
Merismopedia minima	227273
Merismopedia punctata	81818
Merismopedia tenuissima	27273
Microcystis aeruginosa	72727
Oscillatoria limnetica	100000
Oscillatoria minnesotensis	22727
Pseudoanabaena sp.	170455
Raphidiopsis curvata	29545
Rhabdoderma sigmoidea	20455
Spirulina laxa	50000
Spirulina laxissima	122727
Synechococcus aeruginosa	2273
Synechococcus lineare	2273
EUGLENOPHYTA (Euglenoids)	
Euglena acus	114
Euglena viridis	114
Euglena sp.	114
Lepocinclis ovum	455
Phacus orbicularis	114
Trachelomonas hispida	455
Trachelomonas volvocina	114
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	568
Cryptomonas sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	9545
Melosira granulata	1326
Melosira italica	152
Melosira lirata	152
Melosira varians	409
Stephanodiscus dubius	568
Order Pennales	
Navicula halophila	38
Navicula viridula var. rostellata	227
Navicula sp.	568
Nitzschia palea	1421
Nitzschia subconfinis	1421

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX

LOCATION.--Lat 33°02'43", long 96°57'41", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of pier of bridge on State Highway 121, 1.8 mi east of Lewisville, 1.9 mi downstream from Lewisville Lake, 8.3 mi upstream from Denton Creek, and 28.2 mi upstream from mouth.

DRAINAGE AREA.--1,673 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 432.39 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Jan. 6, 1950, nonrecording gage 0.6 mi upstream at datum 3.26 ft lower.

REMARKS.--Water-discharge records good. Flow regulated by Lewisville Lake (see station 08052800) since November 1954. Most of low flow is used by city of Dallas for municipal supply (see station 08055500). Gage-height telemeter located at station.

AVERAGE DISCHARGE.--5 years (water years 1950-54), prior to regulation, 402 ft³/s (291,200 acre-ft/yr); 30 years (water years 1955-84), regulated, 642 ft³/s (465,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft³/s Sept. 15, 1950 (gage height, 30.75 ft); minimum daily, 0.28 ft³/s Nov. 1, 3, 4, 9, 10, 1984. Maximum discharge since construction of Lewisville Dam in 1954, 15,000 ft³/s Nov. 2, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 33.8 ft in 1908, present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 814 ft³/s May 2 at 0100 hours (gage height, 9.19 ft); minimum daily, 0.28 ft³/s Nov. 1, 3, 4, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151.00	.28	112	300	143	116	113	258	244	321	357	314
2	167.00	12.00	181	300	119	133	162	386	262	321	362	357
3	183.00	.28	140	270	101	160	84	140	281	359	376	306
4	167.00	.28	136	230	102	159	55	167	281	458	378	254
5	141.00	.30	136	200	102	138	64	258	270	389	359	219
6	37.00	.30	142	215	106	120	77	232	335	308	334	194
7	123.00	.30	154	220	111	120	70	208	183	390	287	285
8	149.00	.30	141	231	112	127	70	208	173	435	242	313
9	43.00	.28	104	191	128	136	55	208	200	440	250	256
10	39.00	.28	104	160	113	137	54	222	257	403	293	255
11	47.00	.38	104	166	114	130	53	257	238	400	272	288
12	53.00	.38	104	193	127	240	53	253	283	390	257	303
13	41.00	.38	104	175	113	97	71	269	216	372	217	256
14	36.00	.38	106	173	112	89	92	269	248	416	201	268
15	30.00	.94	111	173	108	89	92	280	137	416	199	280
16	34.00	133.00	140	174	102	87	92	290	197	416	209	254
17	60.00	262.00	169	174	95	86	92	248	282	417	239	250
18	84.00	186.00	140	163	90	135	106	224	362	405	285	254
19	88.00	96.00	111	148	85	184	122	205	356	379	313	227
20	79.00	96.00	109	146	97	92	123	177	343	380	348	210
21	69.00	96.00	119	144	260	67	136	185	343	379	393	210
22	64.00	103.00	205	146	183	56	146	191	366	378	332	207
23	63.00	112.00	201	149	145	120	142	169	415	377	263	170
24	33.00	100.00	103	149	160	70	170	199	415	374	285	199
25	.47	90.00	102	150	219	59	198	239	416	330	341	230
26	57.00	75.00	127	151	269	56	181	255	391	307	341	199
27	127.00	86.00	311	149	186	55	198	260	334	352	341	165
28	45.00	76.00	290	148	146	53	306	235	339	352	341	144
29	59.00	75.00	282	148	115	53	249	215	331	354	339	131
30	68.00	74.00	285	148	---	53	207	247	276	357	330	131
31	35.00	---	300	149	---	53	---	245	---	357	298	---
TOTAL	2372.47	1677.06	4873	5633	3863	3270	3633	7199	8774	11732	9382	7129
MEAN	76.5	55.9	157	182	133	105	121	232	292	378	303	238
MAX	183	262	311	300	269	240	306	386	416	458	393	357
MIN	.47	.28	102	144	85	53	53	140	137	307	199	131
AC-FT	4710	3330	9670	11170	7660	6490	7210	14280	17400	23270	18610	14140

CAL YR 1983 TOTAL 83844.53 MEAN 230 MAX 1060 MIN .28 AC-FT 166300
WTR YR 1984 TOTAL 69537.53 MEAN 190 MAX 458 MIN .28 AC-FT 137900

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to current year.
WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Water temperature was recorded continuously at this station (November 1976 to September 1980).

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos Nov. 14, 1983; minimum daily, 200 micromhos May 13, 1982.
WATER TEMPERATURES: Maximum daily, 33.0°C July 27, 1977; minimum daily, 0.0°C Jan. 31 and Feb. 9, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos Nov. 14; minimum daily, 250 micromhos Dec. 27.
WATER TEMPERATURES: Maximum daily, 29.0°C on several days during July and August; minimum daily, 3.0°C Dec. 22, 28, 31, Jan. 20, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 28...	1022	92	406	7.8	10.5	10	13	8.3	76	5.0	130
JAN 16...	1115	167	396	7.5	3.0	5	4.0	13.0	97	1.8	120
MAR 26...	1035	52	477	8.0	14.0	50	15	9.7	96	3.0	150
MAY 07...	1325	208	412	7.9	20.5	18	3.5	8.2	93	.7	140
JUN 18...	1710	370	411	8.0	26.0	10	3.8	7.8	98	1.2	130
SEP 10...	1520	254	420	8.2	28.0	25	7.1	7.4	96	1.1	120

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 28...	27	43	4.6	29	1	4.6	100	39	32	.30	4.0
JAN 16...	10	41	4.2	26	1	4.2	110	28	21	.30	2.9
MAR 26...	29	51	5.3	35	1	4.8	120	61	34	.40	2.2
MAY 07...	29	48	4.6	28	1	3.9	110	44	29	.30	2.4
JUN 18...	32	46	4.2	25	1	4.5	100	40	29	.40	2.3
SEP 10...	28	40	4.3	28	1	5.0	90	39	34	.40	3.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 28...	220	76	16	.35	.050	.40	1.00	1.2	2.2	.550	6.6
JAN 16...	190	7	4	.48	.020	.50	.460	.54	1.0	.230	6.0
MAR 26...	270	15	<2	.82	.180	1.0	.500	.70	1.2	.310	5.1
MAY 07...	230	33	11	.77	.030	.80	.080	.42	.50	.160	7.9
JUN 18...	210	12	11	--	<.010	.60	--	--	.90	.100	4.8
SEP 10...	210	12	5	--	<.010	.10	.130	.57	.70	.170	4.5

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 16...	1115	2	50	<1	<10	2	<3
JUN 18...	1710	<1	51	<1	<10	4	3
SEP 10...	1520	2	49	95	<10	5	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 16...	<1	9	.3	<1	<1	11
JUN 18...	<1	5	.6	<1	<1	52
SEP 10...	8	24	.1	<1	<1	95

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	2372.47	382	210	1350	24	154	38	242	130
NOV.	1983	1677.06	390	214	971	25	112	39	178	130
DEC.	1983	4873	364	201	2640	23	298	35	457	130
JAN.	1984	5633	393	216	3290	25	379	40	605	130
FEB.	1984	3863	410	225	2350	26	275	43	449	140
MAR.	1984	3270	427	234	2070	28	246	47	412	140
APR.	1984	3633	419	230	2260	27	266	45	441	140
MAY	1984	7199	404	222	4320	26	502	42	813	140
JUNE	1984	8774	408	224	5310	26	619	43	1010	140
JULY	1984	11732	398	219	6930	25	802	41	1290	140
AUG.	1984	9382	387	213	5400	24	619	39	978	130
SEPT	1984	7129	387	213	4100	24	470	39	744	130
TOTAL		69537.53	**	**	41000	**	4740	**	7620	**
WTD.AVG.		190	397	218	**	25	**	41	**	130

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	729	401	384	401	411	403	400	416	401	386	383
2	369	700	372	383	415	414	450	368	412	406	388	365
3	367	727	251	386	414	404	479	422	414	408	384	376
4	366	726	325	385	410	415	457	426	412	405	389	386
5	371	742	384	387	413	414	455	402	415	412	388	388
6	395	725	388	385	412	412	440	405	385	415	389	394
7	385	705	387	380	410	407	451	407	425	407	390	389
8	377	733	395	387	407	408	489	412	421	400	390	370
9	399	747	376	424	414	412	455	407	411	405	389	378
10	402	757	398	409	405	409	464	409	400	407	387	389
11	404	776	395	389	401	415	457	400	416	409	395	391
12	394	777	398	386	425	435	459	403	375	403	391	389
13	400	784	402	389	409	456	450	402	413	402	390	389
14	404	790	392	394	411	437	425	401	400	404	393	390
15	406	788	385	393	413	431	421	400	413	402	391	389
16	410	376	380	396	415	430	420	400	410	403	392	382
17	396	350	376	394	416	428	417	403	410	400	389	388
18	386	391	352	398	421	431	408	407	411	391	388	390
19	380	392	399	396	427	467	412	413	413	390	385	392
20	387	393	396	395	420	435	410	411	412	390	387	393
21	396	394	392	396	395	473	408	410	412	394	385	393
22	388	391	381	398	398	462	400	410	408	388	391	394
23	390	390	382	404	407	366	407	409	407	387	395	383
24	439	393	385	401	400	381	412	414	406	386	386	393
25	639	395	390	400	412	470	404	406	405	385	385	396
26	380	397	375	400	410	461	408	400	408	390	375	397
27	365	406	250	397	420	471	397	403	409	389	382	398
28	402	403	323	399	416	473	400	409	405	393	387	401
29	393	400	345	398	412	461	402	403	406	387	386	403
30	385	401	366	399	---	469	404	406	412	391	385	401
31	406	---	385	400	---	467	---	408	---	387	384	---
MEAN	398	569	372	395	411	433	429	406	409	398	388	389

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

08053500 DENTON CREEK NEAR JUSTIN, TX

LOCATION.--Lat 33°07'08", long 97°17'25", Denton County, Hydrologic Unit 12030104, on right bank at downstream side of bridge on Farm Road 156, 100 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.2 mi north of Justin, 3.0 mi upstream from Olivers Creek, 12.9 mi upstream from Harriet Creek, and 32.9 mi upstream from Grapevine Dam.

DRAINAGE AREA.--400 mi^2.

PERIOD OF RECORD.--October 1949 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1732: 1950(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.66 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several small diversions above station. Flow is affected at times by discharge from the flood-detention pools of 84 floodwater-retarding structures with a combined detention capacity of 52,750 acre-ft. These structures control runoff from 197 mi^2 in the Denton Creek watershed. Gage-height telemeter located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years (water years 1950-80) prior to completion of floodwater-retarding structures, 77.4 ft^3/s (56,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,700 ft^3/s Oct. 13, 1981 (gage height, 18.68 ft), from high-water mark; no flow at times in 1949-65, 1967-74, 1976-83.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1935 was the highest since 1908 and reached a stage of 20.6 ft at site about 1,500 ft upstream, from information by local resident. Flood in May 1908 reached a stage about 1.0 ft higher than flood in May 1935, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s Oct. 8 at 1200 hours (gage height, 12.05 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	9.8	15.0	8.4	14	36	29	22.0	1.30	0	0	0
2	0	9.8	15.0	11.0	14	28	29	27.0	.78	0	0	0
3	0	9.5	15.0	14.0	14	24	31	25.0	.35	0	0	0
4	0	9.5	15.0	18.0	13	22	30	15.0	.11	0	0	0
5	0	11.0	15.0	24.0	13	20	27	11.0	.06	0	0	0
6	0	16.0	15.0	25.0	12	18	26	9.5	3.70	0	0	0
7	0	21.0	14.0	24.0	12	17	26	8.2	4.30	0	0	0
8	1760	20.0	13.0	20.0	12	16	30	7.4	4.60	0	0	0
9	1240	16.0	13.0	18.0	13	15	35	7.2	3.20	0	0	0
10	639	13.0	13.0	18.0	17	15	31	6.8	1.40	0	0	0
11	409	11.0	13.0	26.0	18	15	29	6.8	209.00	0	0	0
12	220	9.8	13.0	26.0	18	265	28	6.7	121.00	0	0	0
13	123	9.1	13.0	22.0	17	261	27	6.4	64.00	0	0	0
14	66	9.1	13.0	18.0	15	125	26	6.0	35.00	0	0	0
15	46	8.8	13.0	17.0	14	73	24	5.7	20.00	0	0	0
16	37	8.8	13.0	16.0	14	49	24	5.3	13.00	0	0	0
17	30	7.8	13.0	16.0	13	36	24	4.7	8.80	0	0	0
18	25	7.1	15.0	13.0	13	43	24	4.6	5.50	0	0	0
19	29	9.4	16.0	10.0	14	211	24	4.6	3.20	0	0	0
20	30	12.0	11.0	9.8	18	60	24	6.4	2.00	0	0	0
21	27	19.0	11.0	9.8	17	48	26	9.0	.77	0	0	0
22	23	16.0	10.0	12.0	16	42	35	9.8	.20	0	0	0
23	20	14.0	10.0	14.0	15	48	28	7.1	.04	0	0	0
24	17	13.0	7.8	18.0	15	55	26	6.8	.00	0	0	0
25	16	12.0	6.2	19.0	14	44	25	6.5	.00	0	0	0
26	14	12.0	4.9	19.0	32	39	25	4.7	.00	0	0	0
27	13	11.0	5.5	18.0	53	35	24	3.2	.00	0	0	0
28	12	14.0	6.5	17.0	125	37	23	2.4	.00	0	0	0
29	11	24.0	6.5	16.0	60	38	21	2.5	.00	0	0	0
30	11	20.0	6.8	15.0	---	34	21	4.8	.00	0	0	0
31	11	---	7.8	14.0	---	30	---	2.4	---	0	0	---
TOTAL	4829	383.5	359.0	526.0	635	1799	802	255.5	502.31	0	0	0
MEAN	156	12.8	11.6	17.0	21.9	58.0	26.7	8.24	16.7	.000	.000	.000
MAX	1760	24	16	26	125	265	35	27	209	.00	.00	.00
MIN	.00	7.1	4.9	8.4	12	15	21	2.4	.00	.00	.00	.00
AC-FT	9580	761	712	1040	1260	3570	1590	507	996	.00	.00	.00

CAL YR 1983 TOTAL 11838.90 MEAN 32.4 MAX 1760 MIN .00 AC-FT 23480
WTR YR 1984 TOTAL 10091.31 MEAN 27.6 MAX 1760 MIN .00 AC-FT 20020

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX

LOCATION.--Lat 32°58'21", long 97°03'22", Tarrant County, Hydrologic Unit 12030104, in intake structure of Grapevine Dam on Denton Creek, 2.7 mi northeast of Grapevine, 4.3 mi upstream from bridge on State Highway 121, and 11.7 mi upstream from mouth.

DRAINAGE AREA.--695 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970, published as Grapevine Reservoir.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 16, 1953, non-recording gage at site 1,000 ft upstream at present datum.

REMARKS.--The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-foot (150 m) uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in June 1952 and deliberate impoundment began July 3, 1952. The controlled outlet works consist of a 13.0-foot-diameter concrete conduit that is controlled by two 6.5- by 13.0-foot broome-type gates and two 30-inch steel pipes with service valves. The capacity table used since April 1972 is based on a survey made in October 1966. The lake was built for flood control, navigation, and water conservation. The city of Dallas uses part of this water for their municipal supply. An unknown amount of water is diverted for industrial and municipal uses. Inflow is affected at times by discharge from the flood-detention pools of 87 floodwater-retarding structures with a combined detention capacity of 57,850 acre-ft. These structures control runoff from 217 mi² in the Denton Creek watershed. Gage-height telemeter at station. Figures give herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	588.0	-
Crest of spillway	560.0	425,500
Top of conservation pool	535.0	181,100
Lowest intake to wet wells (invert)	500.5	22,140
Invert of two broome-type gates	475.0	100

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 471,200 acre-ft Nov. 1, 1981 (elevation, 563.29 ft); minimum since lake first filled in 1957, 94,480 acre-ft Feb. 26, 1979 (elevation, 520.67 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 162,700 acre-ft Oct. 11 at 2400 hours (elevation, 532.40 ft); minimum daily, 110,200 acre-ft Sept. 30 at 2400 hours (elevation, 523.70 ft).

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

523.0	106,500	529.0	140,400	534.0	173,900
525.0	117,200	531.0	153,300	535.0	181,200
527.0	128,400	532.0	160,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154900	155700	141100	128800	130500	131300	137500	134200	129600	128900	122000	116700
2	154500	155200	140900	128800	130500	131400	137600	134300	129400	128700	121800	116300
3	154100	154700	140700	128700	130500	131400	137300	134300	129200	128400	121500	116200
4	153700	154100	140300	128600	130500	131500	137100	134200	129200	128300	121400	116100
5	153100	154000	140100	128600	130400	130300	136500	134100	129100	128100	121200	115900
6	152600	153600	139900	128600	130200	130200	136100	134100	131500	127900	120900	115800
7	152100	153000	139600	128500	130200	130100	136500	134100	131400	127700	120800	115600
8	157200	152400	139400	128500	130400	129900	136400	133900	131200	127400	120700	115400
9	160400	152000	139200	128900	130500	129900	136100	133600	131100	127100	120500	115300
10	161600	151100	138900	128900	130500	130000	136100	133300	131100	127000	120300	114900
11	162700	150300	137700	128900	130800	130700	135800	133200	131100	126900	120200	114000
12	162600	149800	137200	128900	130800	132700	135600	133100	131400	126700	120200	113800
13	162400	149200	137000	128800	130800	133600	135400	133000	131500	126600	120100	113600
14	162000	148700	136500	128800	130700	134100	135100	132900	131500	126300	119800	113500
15	161700	148000	136200	128800	130700	134500	134900	132700	131400	126100	119700	113300
16	161500	147500	136000	128800	130700	134700	134600	132500	131200	125900	119500	112900
17	161300	146100	135600	128800	130400	134800	134200	132300	131200	125800	119300	112500
18	160900	145700	135300	128700	130800	136400	134100	132300	131000	125300	119100	112300
19	161100	145600	134800	128600	130700	137000	133800	132200	130900	125200	119000	112100
20	161300	145100	134400	128500	130700	137100	133800	132000	130700	124800	118700	112000
21	160900	144700	134200	128400	130500	137200	133600	131800	130500	124600	118400	111700
22	160400	144600	133500	128500	130500	137200	133300	131700	130300	124400	118200	111700
23	160000	144400	133200	128400	130500	138300	133100	131700	130200	124100	118000	111500
24	159500	144000	132700	128400	130400	138400	132900	131500	130100	123900	117900	111200
25	159000	143600	132300	128400	130100	138300	132600	131200	130000	123700	117700	111200
26	158400	143400	131700	128400	130100	138400	132500	131100	129700	123500	117500	111000
27	157900	143200	131500	128400	130500	138900	132600	130900	129600	123200	117300	110900
28	157500	142400	131100	128400	131200	138400	132400	130900	129500	123100	117200	110700
29	157100	141900	130900	128300	131200	138100	132400	130500	129200	122900	116900	110500
30	156700	141500	130400	128300	---	137900	132300	130200	129100	122700	116900	110200
31	156300	---	130100	130600	---	137800	---	129900	---	122300	116800	---
MAX	162700	155700	141100	130600	131200	138900	137600	134300	131500	128900	122000	116700
MIN	152100	141500	130100	128300	130100	129900	132300	129900	129100	122300	116800	110200
(†)	531.45	529.17	527.29	527.38	527.49	528.57	527.66	527.27	527.12	525.93	524.92	523.70
(‡)	-1000	-14800	-11400	+500	+600	-6600	-5500	-2400	-800	-6800	-5500	-6600

CAL YR 1983 MAX 183200 MIN 130100 ‡ -42400
WTR YR 1984 MAX 162700 MIN 110200 ‡ -45100

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

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

325751097033001 GRAPEVINE LAKE SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	0920	1.00	412	8.2	16.5	9.1	95
17...	0921	10.0	412	8.1	16.0	8.9	92
17...	0922	20.0	412	8.1	16.0	8.9	92
17...	0923	30.0	412	8.1	16.0	8.9	92
17...	0924	42.0	412	8.1	16.0	8.9	92
AUG							
13...	1240	1.00	388	8.4	29.5	7.8	104
13...	1241	10.0	388	8.3	27.5	6.9	88
13...	1242	20.0	391	8.0	27.5	5.4	69
13...	1243	30.0	396	7.7	27.5	2.6	33
13...	1244	36.0	401	7.5	27.0	.8	10

325822097030401 GRAPEVINE LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	0845	1.00	412	8.2	16.5	.50	9.1	95	<1	<1	150	29
17...	0846	.90	--	--	--	--	--	--	--	--	--	--
17...	0847	10.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0848	20.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0849	30.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0850	40.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0851	50.0	412	8.1	16.0	--	8.8	91	--	--	150	29
AUG												
13...	1150	1.00	388	8.5	29.0	1.20	8.5	112	K6	K3	140	30
13...	1152	10.0	390	8.1	28.0	--	6.3	81	--	--	--	--
13...	1153	20.0	394	7.8	27.5	--	4.4	56	--	--	--	--
13...	1154	30.0	400	7.5	27.0	--	2.4	30	--	--	--	--
13...	1155	35.0	403	7.4	27.0	--	1.0	13	--	--	--	--
13...	1156	40.0	416	7.4	26.0	--	.0	0	--	--	--	--
13...	1157	45.0	435	7.4	24.0	--	.0	0	--	--	160	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR												
17...	48	7.1	21	.8	4.0	120	35	27	.30	2.6	220	7
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	48	7.1	21	.8	4.1	120	35	28	--	2.6	220	19
AUG												
13...	44	7.3	23	.9	4.7	110	34	31	.30	3.0	210	2
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	50	7.6	22	.8	4.5	160	23	29	--	6.0	240	9

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325822097030401 GRAPEVINE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.130	.47	.60	.80	.030	.030	9	2
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.15	.050	.20	.120	.48	.60	.80	.040	.040	30	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.140	.46	.60	.80	.040	.050	8	11
AUG											
13...	--	<.010	<.10	.020	.68	.70	--	<.010	.010	4	6
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.030	<.10	.160	.74	.90	--	<.010	.030	20	70
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	<.010	<.10	.460	.54	1.0	--	<.010	.040	70	1700
13...	--	.010	<.10	1.00	.70	1.7	--	.130	.150	300	3500

325930097053801 GRAPEVINE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	0940	1.00	414	8.1	16.0	.40	9.0	93	K1	K2	150	29
17...	0941	10.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0942	20.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0943	30.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0944	40.0	414	8.1	15.5	--	8.9	91	--	--	150	29
AUG												
13...	1300	1.00	388	8.5	30.0	1.20	8.2	110	<1	K6	140	31
13...	1301	10.0	388	8.4	28.0	--	8.0	103	--	--	--	--
13...	1302	20.0	389	8.1	27.5	--	5.8	74	--	--	--	--
13...	1303	30.0	392	7.9	27.5	--	4.2	54	--	--	--	--
13...	1304	35.0	406	7.5	26.5	--	.1	1	--	--	--	--
13...	1305	42.0	437	7.5	25.0	--	.1	1	--	--	160	6

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR											
17...	48	7.1	21	.8	4.0	120	36	27	2.5	220	13
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	48	7.1	21	.8	4.1	120	35	27	2.6	220	22
AUG											
13...	44	7.5	23	.9	4.4	110	34	31	3.1	210	3
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	50	7.5	22	.8	4.6	150	23	29	6.2	240	14

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325930097053801 GRAPEVINE LAKE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.120	.48	.60	.80	.040	.030	8	3
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.15	.050	.20	.130	.47	.60	.80	.030	.040	50	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.130	.37	.50	.70	.040	.040	11	15
AUG											
13...	--	<.010	<.10	.010	.69	.70	--	<.010	<.010	3	7
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.020	<.10	.120	.68	.80	--	<.010	.020	30	130
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.030	<.10	1.30	1.0	2.3	--	.190	.220	630	3200

325933097081401 GRAPEVINE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
APR							
17...	1006	1.00	429	8.2	15.5	9.5	97
17...	1007	9.00	429	8.1	15.0	8.7	88
AUG							
13...	1335	1.00	385	8.4	31.0	7.8	106
13...	1336	7.00	382	8.5	27.5	7.1	91

330106097094601 GRAPEVINE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
APR							
17...	1015	1.00	461	8.2	16.0	8.1	84
17...	1016	5.00	454	8.1	15.0	8.1	82
17...	1017	9.00	460	8.1	15.0	7.9	80
AUG							
13...	1400	1.00	369	8.9	31.0	11.2	153
13...	1401	3.00	378	8.9	28.5	9.7	126
13...	1402	6.00	385	8.1	28.0	5.2	67

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

330207097103701 GRAPEVINE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	1035	1.00	417	8.2	15.5	.30	9.1	93	K2	K2	150	32
17...	1036	.50	--	--	--	--	--	--	--	--	--	--
17...	1037	6.00	420	8.1	15.0	--	8.3	84	--	--	150	22
AUG												
13...	1430	1.00	377	8.8	32.0	.50	9.7	134	K4	K24	130	35
13...	1432	4.00	389	8.7	29.0	--	8.3	109	--	--	140	41

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR											
17...	49	7.2	21	.8	4.0	120	37	28	2.6	220	15
17...	--	--	--	--	--	--	--	--	--	--	--
17...	49	7.2	21	.8	4.0	130	36	28	2.6	230	35
AUG											
13...	42	7.2	23	.9	5.1	100	35	31	3.9	210	4
13...	44	7.4	23	.9	4.4	100	35	31	4.0	210	35

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.130	.47	.60	.80	.030	.040	12	4
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.140	1.1	1.2	1.4	.040	.040	12	13
AUG											
13...	--	.010	<.10	.040	.76	.80	--	.010	.030	4	3
13...	--	.030	<.10	<.010	--	1.0	--	.040	.060	5	3

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	0846
TOTAL CELLS/ml	6,055
NUMBER OF SPECIES	20
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	197
Closterium sp. 1	33
Closterium sp. 2	99
Pediastrum duplex	1382
CYANOPHYTA (Blue-green algae)	
Chroococcus pallidus	132
Dactylococcopsis raphidioides	132
Synechococcus aeruginosa	296
Synechococcus sp.	560
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	66
Cyclotella ocellata	66
Melosira granulata	394
Melosira lirata	P
Stephanodiscus astrea	362
Stephanodiscus hantzschii	33
Stephanodiscus niagarea	362
Stephanodiscus tenuis	1743
Order Pennales	
Achnanthes sp.	33
Navicula sp.	P
Nitzschia amphibia	99
Nitzschia palea	66

P = Species observed after counts completed.

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1983 to September 1984

Date	8-13-84
Time	1151
TOTAL CELLS/ml	360,226
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	2.0

Organisms	Cells/ml
CYANOPHYTA (Blue-green algae)	
Anabaena wisconsinense	3409
Anabaenopsis raciborskii	63636
Aphanocapsa delicatissima	6818
Chroococcus limneticus	12500
Gloeothece linearis	3409
Gomphosphaeria lacustris	14773
Lyngbya nana	75000
Microcoleus lacustris	38636
Pseudoanabaena sp.	62500
Raphidiopsis curvata	64773
Spirulina okensis	4545
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	3409
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus sp.	3409
Order Pennales	
Achnanthes deflexa	614
Achnanthes linearis	1659
Synedra delicatissima	490
Synedra rumpens	646

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake EC (330207097103701)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1036
TOTAL CELLS/ml	9,650
NUMBER OF SPECIES	26
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus sp.	66
Chlamydomonas sp. 1	132
Chlamydomonas sp. 2	263
Coelastrum microporum	789
CYANOPHYTA (Blue-green algae)	
Chroococcus turgidus	197
Dactylococcopsis raphidioides	526
Synechococcus aeruginosa	658
Synechococcus sp.	526
EUGLENOPHYTA (Euglenoids)	
Euglena caudata	1711
Euglena sp.	66
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	66
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	407
Melosira granulata	120
Stephanodiscus artrea	312
Stephanodiscus hantzschii	480
Stephanodiscus niagarea	264
Stephanodiscus tenuis	2759
Order Pennales	
Achnanthes linearis	15
Caloneis bacillum	29
Cymbella cistula	15
Navicula cryptocephala	15
Navicula halophila	29
Navicula symmetrica	15
Nitzschia dissipata	117
Nitzschia microcephala	44
Nitzschia paleacea	29

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake EC (330207097103701)

Phytoplankton Analyses October 1983 to September 1984

Date	8-13-84
Time	1431
TOTAL CELLS/ml	348,142
NUMBER OF SPECIES	48
DEPTH COLLECTED (ft.)	0.8

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlamydomonas sp.	1705
Golenkinia radiata	112
Lagerheimia sp.	568
Lobomonas sp.	568
Scenedesmus sp.	5682
CYANOPHYTA (Blue-green algae)	
Anabaena wisconsinense	10795
Anabaenopsis circularis	9659
Anabaenopsis raciborskii	9659
Aphanocapsa delicatissima	60795
Aphanocapsa elachista	15909
Aphanothece sp.	2273
Chroococcus dispersus	2273
Chroococcus giganteus	2273
Chroococcus multicoloratus	568
Chroococcus pallidus	1136
Gloeothece linearis	568
Lyngbya nana	17045
Merismopedia punctata	13068
Microcoleus lacustris	9659
Microcystis aeruginosa	14773
Oscillatoria geminata	12500
Oscillatoria limnetica	17614
Pseudoanabaena sp.	81818
Raphidiopsis curvata	20455
Rhabdoderma sigmoidea f. minor	1136
Spirulina contorta	11932
Spirulina okensis	568
Spirulina sp.	15909
Synechococcus aeruginosa	568
EUGLENOPHYTA (Euglenoids)	
Euglena acus	568
Euglena viridis	568
Trachelomonas hispida	568
Trachelomonas volvocina	568
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	1136
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	504
Stephanodiscus sp.	63
Order Pennales	
Achnanthes deflexa	108
Achnanthes linearis	433
Achnanthes minutissima	108
Navicula sp.	108
Nitzschia acicularis	108
Nitzschia palea	108
Nitzschia paleacea	108
Nitzschia subconfinis	541
Nitzschia thermalis	200
Synedra delicatissima	108
Synedra rumpens	433
Synedra ulna	216

08055000 DENTON CREEK NEAR GRAPEVINE, TX

LOCATION.--Lat 32°59'13", long 97°00'45", Denton County, Hydrologic Unit 12030104, on left bank at downstream side of left pier of bridge on State Highway 121, 1.3 mi downstream from Bakers Branch, 4.1 mi downstream from Grapevine Dam, 5.0 mi northeast of Grapevine, and 6.1 mi upstream from mouth.

DRAINAGE AREA.--705 mi^2.

PERIOD OF RECORD.--October 1947 to current year.
Water-quality words.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 439.11 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Grapevine Lake since July 1952 (see preceding page). Much of flow is used by the city of Dallas for municipal supply (see station 08055500). The Corps of Engineers diverts water from Denton Creek just downstream from Grapevine Dam. Several observations of water temperature were made during the year. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--5 years (water years 1948-52), prior to regulation, 140 ft^3/s (101,400 acre-ft/yr); 32 years (water years 1953-84), regulated, unadjusted, 156 ft^3/s (113,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s Feb. 26, 1948 (gage height, 30.38 ft), from rating curve extended above 6,000 ft^3/s on basis of conveyance-slope study; no flow at times. Maximum discharge since construction of Grapevine Dam in 1952, 9,700 ft^3/s Nov. 1, 1981 (gage height, 27.93 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 was slightly higher than the flood in April 1942, which reached a stage of 35.9 ft, from floodmarks, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 620 ft^3/s May 1 at 1930 hours (gage height, 10.39 ft, from floodmark); minimum daily, 18 ft^3/s July 3, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	299	230	68	31	32	111	165	65	22	50	49
2	154	300	180	66	31	32	158	90	65	21	50	49
3	156	299	181	67	31	32	180	44	65	18	49	50
4	156	302	180	53	31	31	158	37	61	20	52	48
5	240	302	179	33	30	31	144	35	25	22	52	47
6	389	305	189	32	30	31	180	33	84	21	50	46
7	326	300	201	33	31	31	168	31	32	21	50	47
8	262	304	202	32	32	31	132	31	29	21	50	47
9	237	308	202	35	36	31	114	27	28	20	50	46
10	234	306	202	32	34	31	113	23	27	19	51	47
11	238	301	203	24	35	39	113	24	25	20	52	46
12	240	302	204	26	34	87	112	24	26	20	59	47
13	239	301	203	27	33	34	109	22	25	20	55	47
14	204	300	203	26	32	32	109	22	24	19	54	46
15	174	299	204	27	32	31	109	36	23	18	54	49
16	172	231	206	28	32	31	109	67	23	24	53	50
17	175	174	204	28	32	31	107	68	23	50	50	43
18	175	178	203	27	34	68	106	69	22	50	49	41
19	176	183	203	27	32	63	94	70	27	51	49	43
20	180	183	204	27	32	33	71	70	20	50	48	44
21	179	185	203	28	32	34	70	70	23	51	49	44
22	177	187	201	29	32	61	71	70	21	51	49	45
23	179	194	202	29	31	157	71	68	22	51	49	45
24	225	189	202	30	31	118	68	68	23	52	49	44
25	280	188	202	29	32	113	70	66	23	54	48	44
26	255	189	208	29	50	80	60	66	22	54	48	45
27	177	215	225	29	34	36	27	66	23	53	48	38
28	180	249	225	29	32	65	28	70	22	52	47	38
29	180	246	219	29	32	117	30	67	22	52	49	40
30	180	246	191	30	---	108	29	65	21	51	48	38
31	234	---	103	29	---	94	---	65	---	51	49	---
TOTAL	6526	7565	6164	1038	951	1745	3021	1729	941	1099	1560	1353
MEAN	211	252	199	33.5	32.8	56.3	101	55.8	31.4	35.5	50.3	45.1
MAX	389	308	230	68	50	157	180	165	84	54	59	50
MIN	153	174	103	24	30	31	27	22	20	18	47	38
AC-FT	12940	15010	12230	2060	1890	3460	5990	3430	1870	2180	3090	2680

CAL YR 1983 TOTAL 37225 MEAN 102 MAX 389 MIN 27 AC-FT 73840
WTR YR 1984 TOTAL 33692 MEAN 92.1 MAX 389 MIN 18 AC-FT 66830

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX

LOCATION.--Lat 32°57'57", long 96°56'39", Dallas County, Hydrologic Unit 12030103, near left bank at downstream side of bridge on Sandy Lake Road, 40 ft upstream from Carrollton Dam, 0.3 mi downstream from Denton Creek, 1.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 2.3 mi northwest of Carrollton, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--2,459 mi^2.

PERIOD OF RECORD.--January 1907 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to November 1923, published as "near Dallas".

REVISED RECORDS.--WSP 788: 1924. WSP 1148: Drainage area at former site. WSP 1632: 1908(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 433.40 ft National Geodetic Vertical Datum of 1929. Prior to November 1923, nonrecording gage at site 15.5 mi downstream at different datum. Nov. 1, 1923, to Nov. 13, 1934, nonrecording gage, and Nov. 14, 1934, to July 6, 1938, water-stage recorder at present site and datum. July 7, 1938, to Apr. 14, 1939, nonrecording gage at site 9.3 mi downstream at datum 22.94 ft lower. Apr. 15, 1939, to Sept. 30, 1955, water-stage recorder at site 8.5 mi downstream at datum 22.94 ft lower.

REMARKS.--Records good. Flow is largely regulated by Lewisville Lake (station 08052800) since November 1954 and by Grapevine Lake (station 08054500) since July 1952. The city of Dallas diverts water from pool at gage and from river 14 mi downstream for municipal use. A water treament plant returns water to river below this station. In addition, the Dallas Power and Light Co. diverts water from pool at gage into North Lake for cooling water at their electric generating plant. Several observations of water temperature were made during the year. Gage-height telemeters located at station.

AVERAGE DISCHARGE.--47 years (water years 1908-54), prior to regulation by Lewisville and Grapevine Lakes, 818 ft^3/s (592,600 acre-ft/yr); 30 years (water years 1955-84), regulated, unadjusted, 728 ft^3/s (527,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, about 17 ft May 25, 1908, present site and datum, from information by local resident; estimated discharge, 145,000 ft^3/s, at site 8.5 mi downstream (from information by Corps of Engineers); maximum gage height subsequent to 1908, 14.5 ft Apr. 26, 1942, present site and datum, from observation by National Weather Service; discharge at site 8.5 mi downstream, 90,700 ft^3/s; no flow at times.
Flood in 1866 reached about the same stage as flood of May 25, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s May 1 at 2400 hours (gage height, 3.70 ft); minimum daily, 1.5 ft^3/s Apr. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	103	156	94.0	168	96	148.0	453.0	83	133	144	129
2	122	126	209	91.0	161	108	288.0	822.0	106	93	146	180
3	148	119	100	82.0	146	146	191.0	65.0	119	94	161	128
4	140	112	109	95.0	134	144	119.0	22.0	123	162	168	92
5	140	129	136	50.0	133	138	84.0	87.0	146	168	141	102
6	238	190	144	53.0	134	111	122.0	74.0	799	49	116	40
7	232	140	176	54.0	139	103	180.0	35.0	110	145	112	134
8	288	136	160	62.0	146	115	234.0	35.0	58	156	74	163
9	72	133	136	55.0	205	129	63.0	25.0	73	183	44	98
10	82	140	133	34.0	109	141	14.0	8.2	132	144	105	93
11	106	140	136	4.4	107	179	17.0	29.0	106	153	91	107
12	119	140	143	40.0	282	788	13.0	32.0	121	163	72	148
13	115	140	138	20.0	79	161	1.5	26.0	155	136	62	85
14	103	112	116	38.0	88	98	19.0	40.0	149	174	43	76
15	47	126	114	69.0	56	76	19.0	37.0	94	158	52	142
16	45	194	151	81.0	43	83	24.0	109.0	126	157	69	114
17	67	329	192	96.0	35	77	25.0	121.0	182	186	89	91
18	106	261	177	99.0	64	281	12.0	102.0	158	182	99	89
19	133	122	137	89.0	36	701	54.0	182.0	140	154	106	46
20	133	126	118	92.0	28	132	27.0	103.0	120	156	122	25
21	96	100	97	91.0	113	64	20.0	87.0	119	164	200	41
22	72	100	157	88.0	118	44	40.0	102.0	112	153	144	77
23	80	122	194	150.0	75	682	20.0	43.0	152	154	100	20
24	82	82	93	176.0	93	312	23.0	22.0	159	165	85	17
25	94	67	93	169.0	179	173	52.0	65.0	162	112	152	53
26	126	136	97	168.0	359	143	55.0	81.0	167	109	159	100
27	202	140	195	166.0	119	63	33.0	111.0	114	143	158	52
28	112	126	244	165.0	102	41	59.0	166.0	85	142	163	63
29	112	185	219	168.0	105	127	102.0	88.0	126	142	151	54
30	119	136	215	167.0	---	124	33.0	132.0	75	129	165	34
31	115	---	133	169.0	---	111	---	99.0	---	159	129	---
TOTAL	3752	4212	4618	2975.4	3556	5691	2091.5	3403.2	4371	4518	3622	2593
MEAN	121	140	149	96.0	123	184	69.7	110	146	146	117	86.4
MAX	288	329	244	176	359	788	288	822	799	186	200	180
MIN	45	67	93	4.4	28	41	1.5	8.2	58	49	43	17
AC-FT	7440	8350	9160	5900	7050	11290	4150	6750	8670	8960	7180	5140

CAL YR 1983	TOTAL	69792.9	MEAN 191	MAX 1260	MIN 1.9	AC-FT	138400
WTR YR 1984	TOTAL	45403.1	MEAN 124	MAX 822	MIN 1.5	AC-FT	90060

08056500 TURTLE CREEK AT DALLAS, TX

LOCATIONS.--Lat 32 48'26", long 96 48'08", Dallas County, Hydrologic Unit 12030105, on left bank 68 ft upstream from Hall Street Dam, 210 ft upstream from Hall Street in Dallas, and 2.0 mi north of Dallas County Courthouse.

DRAINAGE AREA.--7.98 mi^2.

PERIOD OF RECORD.--Water years 1948-51 (annual maximums only), October 1951 to September 1980, April to September 1984. Daily discharge records for April 1948 to September 1951, published in WSP 1392, are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 428.13 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1951, at site 52 ft upstream at same datum.

REMARKS.--Records good. Flow is slightly affected by eight small channel dams above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years 8.17 ft^3/s, 5,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12,200 ft^3 Apr. 28, 1966 (gage height, 10.54 ft, from rating curve extended above 2,460 ft^3/s on basis of contracted-opening measurement of 12,200 ft^3/s); no flow at times during most years.
Maximum stage since at least 1903, that of Apr. 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during the period April to September, 2,140 ft^3/s Sept. 2 at 1845 hours *gage height, 5.58 ft); minimum, 0.62 ft^3/s June 24-26, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							4.5	76.0	2.30	1.90	1.1	1.40
2							65.0	6.5	2.20	1.70	1.1	103.00
3							10.0	3.0	2.20	1.20	1.2	7.50
4							5.0	2.4	2.50	1.30	1.3	3.50
5							4.3	2.4	3.40	6.10	2.4	3.70
6							3.9	3.7	115.00	1.70	1.7	5.50
7							60.0	2.6	2.50	1.50	2.7	5.20
8							8.2	2.0	1.90	1.50	1.6	4.80
9							5.1	1.7	1.70	1.30	1.4	4.40
10							4.5	2.0	1.50	1.10	1.1	2.80
11							4.0	1.7	1.60	1.10	28.0	.87
12							3.7	1.5	1.50	1.20	9.4	.83
13							3.5	2.0	1.40	1.40	4.1	.87
14							3.0	1.7	1.30	1.10	3.8	1.50
15							2.9	1.7	1.10	1.00	1.9	1.00
16							3.0	1.9	1.10	1.10	1.7	.92
17							2.2	2.1	1.00	1.00	1.3	.92
18							2.9	86.0	1.10	1.10	1.1	1.90
19							2.4	111.0	1.10	1.20	1.0	1.80
20							13.0	6.3	.98	1.50	1.2	2.50
21							5.8	4.2	.85	.95	1.4	1.00
22							2.3	3.3	1.10	.95	1.4	1.40
23							2.1	3.1	.80	1.10	4.3	1.10
24							2.0	3.1	.83	2.10	5.0	1.00
25							2.1	3.2	6.60	6.00	4.6	1.60
26							2.2	2.7	.80	2.40	1.2	2.20
27							1.9	12.0	.75	2.20	2.9	3.90
28							1.6	56.0	6.30	18.00	2.8	7.20
29							2.4	3.3	4.10	3.70	5.3	2.50
30							2.2	2.8	19.00	2.20	3.3	2.10
31							---	2.6	---	1.40	1.9	---
TOTAL							235.7	414.5	188.51	72.00	103.2	178.91
MEAN							7.86	13.4	6.28	2.32	3.33	5.96
MAX							65	111	115	18	28	103
MIN							1.6	1.5	.75	.95	1.0	.83
AC-FT							468	822	374	143	205	355

WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

08057000 TRINITY RIVER AT DALLAS, TX

LOCATION.--Lat 32°46'29", long 96°49'18", Dallas County, Hydrologic Unit 12030105, on right bank (levee) 90 ft downstream from Commerce Street viaduct in Dallas, 5.2 mi downstream from confluence of West and Elm Forks, and at mile 500.3.

DRAINAGE AREA.--6,106 mi^2.

PERIOD OF RECORD.--October 1898 to December 1899 (gage heights only published in WSP 28 and 37), July 1903 to current year.

REVISED RECORDS.--WSP 850: 1903-6 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WRD TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 368.02 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1898, to Dec. 31, 1899, nonrecording gage at site 2 mi upstream at different datum. July 1, 1903, to July 20, 1930, nonrecording gage at present site and datum. July 21, 1930, to Sept. 30, 1932, nonrecording gage at site 6 mi downstream at datum 3.08 ft lower.

REMARKS.--Records good. At times flow is affected by storage in seven upstream reservoirs, combined capacity 1,703,000 acre-ft, of which 846,200 acre-ft is for flood control. The city of Dallas diverts water for municipal use from Elm Fork, Lake Ray Hubbard (on the East Fork), and Lake Tawakoni (on the Sabine River), and purchases water from North Texas Municipal Water District (from the East Fork). Sewage effluent is returned to the river downstream from this station. Thr Trininty River Authority discharges sewage effluent into the river upstream from the station. For additional information on diversions and effluent returns upstream from this station, see stations 08048000, 08049200, and 08049500. Gage-height telemeters located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--81 years, 1,520 ft^3/s (1,101,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184,000 ft^3/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft^3/s; minimum observed for periods 1903-6, 1920-75, 1.2 ft^3/s July 4, 1953, result of storage behind temporary dam 4 mi upstream. Maximum stage since at least 1840, that of May 25, 1908.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1866 reached about the same stage as that of May 25, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft^3/s Mar. 24 at 0730 hours (gage height, 34.24 ft); minimum daily, 215 ft^3/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	319	403	826	363	351	424	585	297	333	320	273
2	277	321	716	737	354	336	994	4600	292	318	317	537
3	279	322	1710	725	323	324	1050	2840	280	316	320	1130
4	291	322	993	688	312	320	535	688	282	306	350	304
5	277	365	636	650	318	534	393	456	384	377	375	277
6	286	1160	538	663	302	327	372	433	2780	334	353	243
7	823	901	451	579	310	303	558	382	3840	315	358	232
8	2290	429	511	537	323	301	2710	354	828	310	343	226
9	5320	370	515	1140	1700	297	1210	330	458	299	332	233
10	1840	344	455	2610	1860	294	554	315	394	305	329	233
11	930	322	437	1420	825	577	445	300	371	299	454	229
12	1130	332	453	610	2600	6950	402	311	363	336	1240	227
13	546	306	435	638	1230	8210	369	300	346	637	994	224
14	431	331	438	398	515	3210	344	292	327	374	404	225
15	391	308	421	344	930	1370	341	299	323	350	336	218
16	347	314	559	342	452	960	327	279	316	332	302	217
17	349	416	650	332	328	594	335	283	308	332	289	215
18	349	558	725	360	812	743	326	604	307	329	278	218
19	697	608	591	346	786	5200	320	2010	312	324	278	226
20	1340	478	495	336	394	3060	371	878	307	320	277	226
21	1040	439	475	333	335	807	667	395	310	319	276	229
22	536	399	481	346	337	479	372	346	309	316	291	225
23	367	1080	478	698	322	6330	315	346	299	310	289	226
24	350	966	678	656	302	11800	310	335	294	314	290	233
25	347	448	674	504	298	5530	304	316	290	424	282	237
26	340	829	712	432	1470	2340	331	306	306	399	274	235
27	381	2560	861	515	2150	1520	313	283	311	355	275	225
28	369	1460	946	623	1060	1340	299	1180	344	367	281	270
29	319	684	1110	364	415	982	339	669	548	356	279	235
30	316	471	1090	344	---	817	370	349	410	337	276	228
31	321	---	1030	359	---	440	---	324	---	321	275	---
TOTAL	23169	18162	20667	19455	21726	66646	16000	21388	16536	10664	11337	8256
MEAN	747	605	667	628	749	2150	533	690	551	344	366	275
MAX	5320	2560	1710	2610	2600	11800	2710	4600	3840	637	1240	1130
MIN	277	306	403	332	298	294	299	279	280	299	274	215
AC-FT	45960	36020	40990	38590	43090	132200	31740	42420	32800	21150	22490	16380

CAL YR 1983 TOTAL 293292 MEAN 804 MAX 7730 MIN 211 AC-FT 581700
WTR YR 1984 TOTAL 254006 MEAN 694 MAX 11800 MIN 215 AC-FT 503800

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX

LOCATION.--Lat 32°45'04", long 96°47'07", Dallas County, Hydrologic Unit 12030105, on right bank at abandoned bridge abutment, 0.2 mi upstream from Cedar Crest Blvd. bridge, 1.8 mi southeast of Dallas City Hall, 2.1 mi downstream from Coombs Creek, and 2.7 mi downstream from Commerce Street Bridge (station 08057000).

PERIOD OF RECORD.--Chemical and biochemical analyses: February to September 1984.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February to September 1984.
pH: February to September 1984.
WATER TEMPERATURES: February to September 1984.
DISSOLVED OXYGEN: February to September 1984.

INSTRUMENTATION.--Beginning February 1984, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 946 micromhos Aug. 21; minimum, 128 micromhos Mar. 23.
pH: Maximum, 8.1 units Feb. 9, June 6, 17, 29, Sept. 2; minimum, 7.0 units Mar. 20, 29, Apr. 22, July 18.
WATER TEMPERATURES: Maximum, 32.5°C July 7, Aug. 19, 20; minimum, 10.0°C Feb. 28.
DISSOLVED OXYGEN: Maximum, 9.7 mg/L Mar. 12, 29, 30; minimum, 1.1 mg/L June 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB										
13...	1225	866	516	7.8	13.0	7.3	70	12	170	44
MAY										
08...	1510	262	783	7.8	23.0	5.9	69	16	180	12
JUN										
21...	1010	241	864	8.0	26.5	5.0	63	11	160	4
AUG										
22...	0845	220	890	7.7	29.0	4.0	53	12	180	29

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB									
13...	61	5.2	41	1	7.5	130	83	38	.50
MAY									
08...	62	6.6	81	3	8.4	170	100	72	.80
JUN									
21...	54	7.0	110	4	11	160	100	95	1.1
AUG									
22...	60	6.9	100	3	12	150	100	96	1.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
FEB									
13...	9.7	320	1.1	.600	1.7	1.60	1.3	2.9	.970
MAY									
08...	8.7	440	1.8	.540	2.3	4.70	.30	5.0	2.50
JUN									
21...	7.6	480	4.0	.900	4.9	1.70	1.2	2.9	3.10
AUG									
22...	8.6	470	6.0	.820	6.8	3.20	.40	3.6	4.80

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	23169	*	*	*	*	*	*	*	*
NOV.	1983	18162	*	*	*	*	*	*	*	*
DEC.	1983	20667	*	*	*	*	*	*	*	*
JAN.	1984	19455	*	*	*	*	*	*	*	*
FEB.	1984	21726	567	337	19800	47	2770	82	4830	160
MAR.	1984	66646	503	308	55500	36	6550	80	14400	160
APR.	1984	16000	721	414	17900	68	2920	95	4110	170
MAY	1984	21388	592	351	20300	49	2850	86	4950	170
JUNE	1984	16536	623	363	16200	55	2470	86	3840	160
JULY	1984	10664	804	453	13000	81	2320	100	2870	170
AUG.	1984	11337	763	432	13200	75	2300	96	2940	170
SEPT	1984	8256	762	431	9600	75	1680	96	2130	170
TOTAL		254006	**	**	166000	**	23900	**	40000	**
WTD.AVG.		694	409	241	**	35	**	58	**	110

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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14												
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16												
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18												
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20												
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22												
23												
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25												
26												
27												
28												
29												
30												
31												
MONTH												

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	789	722	758	866	842	860	844	497	777
2	---	---	---	841	793	818	874	480	676	515	320	389
3	---	---	---	878	841	855	746	649	697	486	362	417
4	---	---	---	895	865	889	755	688	718	619	494	572
5	---	---	---	883	687	818	815	740	767	709	613	679
6	---	---	---	869	710	814	859	819	840	732	681	707
7	---	---	897	866	849	859	870	474	789	799	714	761
8	---	---	820	872	847	856	672	462	541	784	746	771
9	774	470	606	893	871	879	577	451	505	---	---	786
10	665	584	626	900	886	895	660	586	621	---	---	793
11	672	457	596	---	360	829	810	712	756	---	---	815
12	648	441	518	518	242	465	860	812	831	---	---	821
13	568	514	534	501	458	476	890	847	864	---	---	828
14	679	562	609	626	490	538	897	879	886	---	---	843
15	736	623	684	699	587	635	891	861	880	---	---	856
16	798	643	721	771	597	693	887	855	870	---	---	868
17	832	767	794	809	629	751	874	838	861	---	---	874
18	843	553	688	822	499	782	866	835	845	---	---	800
19	708	539	655	615	301	403	886	868	874	---	---	540
20	778	706	742	475	335	401	866	457	789	---	---	610
21	782	749	766	646	482	567	858	631	737	---	---	708
22	855	772	806	779	654	714	798	699	746	781	743	761
23	870	790	818	787	128	469	783	742	760	804	785	794
24	854	821	838	416	349	382	828	786	813	851	800	824
25	896	839	866	489	385	440	850	807	835	861	835	849
26	891	350	625	642	492	572	844	804	830	874	841	855
27	629	438	511	693	518	600	863	808	839	897	842	870
28	589	521	555	754	524	622	893	838	867	705	241	516
29	715	593	657	800	476	693	881	790	849	603	490	556
30	---	---	---	822	499	702	828	779	803	685	609	652
31	---	---	---	858	825	840	---	---	---	699	670	683
MONTH	896	350	693	900	128	678	897	451	785	897	241	728

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	760	834	755	799	874	839	852	887	869	878
2	---	---	840	803	748	783	898	860	879	879	136	729
3	---	---	860	824	793	806	928	891	908	621	285	405
4	890	836	873	822	805	811	918	340	820	691	477	606
5	870	776	846	804	646	753	868	680	770	761	674	737
6	783	188	451	783	614	701	826	675	777	798	755	780
7	395	299	339	837	789	814	807	767	789	834	795	812
8	576	400	490	839	814	825	799	784	790	857	833	840
9	693	571	649	829	800	811	816	784	800	868	847	857
10	760	696	733	830	791	806	845	815	830	864	845	855
11	808	742	767	---	---	870	846	623	753	864	850	857
12	801	747	777	---	---	815	738	328	584	861	840	853
13	837	779	805	---	---	780	494	344	436	843	822	832
14	846	752	804	---	---	795	606	491	541	927	832	892
15	848	785	832	---	---	806	726	609	659	911	871	885
16	865	823	841	---	---	813	790	733	769	881	863	875
17	887	802	858	---	---	818	888	791	843	860	841	847
18	868	829	848	---	---	820	913	877	894	861	854	858
19	861	803	827	840	806	822	911	876	895	870	826	851
20	881	813	839	856	837	844	891	858	874	831	810	818
21	858	815	847	893	845	861	946	861	886	856	837	850
22	888	847	863	887	854	866	913	870	891	874	836	849
23	890	846	869	886	847	871	879	845	862	883	854	869
24	888	871	879	880	859	870	907	868	884	868	848	857
25	878	842	856	871	743	828	906	870	884	869	764	850
26	859	838	848	832	596	790	913	886	900	846	807	825
27	870	840	860	774	458	732	901	870	882	828	788	802
28	878	529	805	790	654	739	875	855	866	841	669	764
29	839	596	714	783	688	741	882	867	873	825	793	809
30	784	656	717	828	754	791	869	843	856	851	796	819
31	---	---	---	849	804	822	873	857	866	---	---	---
MONTH	890	188	777	893	458	807	946	328	810	927	136	812

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.4	7.3	7.4	7.5	7.5	7.5	7.7	7.5	7.5
2	---	---	---	7.4	7.3	7.3	7.8	7.5	7.6	7.8	7.7	7.8
3	---	---	---	7.3	7.2	7.3	7.6	7.6	7.6	7.7	7.4	7.6
4	---	---	---	7.3	7.2	7.3	7.7	7.6	7.6	7.6	7.5	7.6
5	---	---	---	7.5	7.3	7.4	7.6	7.4	7.5	7.6	7.4	7.5
6	---	---	---	7.5	7.2	7.3	7.6	7.5	7.6	7.5	7.3	7.3
7	7.8	7.7	7.8	7.2	7.2	7.2	7.7	7.6	7.7	7.5	7.4	7.5
8	7.8	7.6	7.7	7.2	7.1	7.1	7.8	7.7	7.7	7.5	7.5	7.5
9	8.1	7.6	7.7	7.2	7.1	7.1	7.7	7.5	7.6	---	---	---
10	7.7	7.5	7.6	7.2	7.1	7.1	7.5	7.4	7.5	---	---	---
11	7.9	7.5	7.6	7.4	7.1	7.2	7.5	7.4	7.4	---	---	---
12	---	---	---	7.7	7.4	7.6	7.5	7.4	7.5	---	---	---
13	---	---	---	7.7	7.5	7.6	7.5	7.5	7.5	---	---	---
14	---	---	---	7.5	7.4	7.5	7.5	7.5	7.5	---	---	---
15	---	---	---	7.6	7.3	7.4	7.5	7.4	7.4	---	---	---
16	---	---	7.5	7.5	7.4	7.4	7.4	7.4	7.4	---	---	---
17	7.5	7.5	7.5	7.5	7.4	7.5	7.4	7.4	7.4	---	---	---
18	7.7	7.5	7.5	7.5	7.4	7.4	7.4	7.4	7.4	---	---	---
19	7.5	7.5	7.5	7.5	7.3	7.3	7.5	7.4	7.5	---	---	---
20	7.5	7.5	7.5	7.3	7.0	7.1	7.7	7.5	7.6	---	---	---
21	7.5	7.5	7.5	---	---	---	7.9	7.3	7.6	---	---	---
22	7.5	7.4	7.4	---	---	---	7.3	7.0	7.2	7.9	7.9	7.9
23	7.5	7.4	7.4	---	---	---	7.2	7.2	7.2	8.0	7.9	7.9
24	7.4	7.3	7.3	7.5	7.3	7.5	7.2	7.2	7.2	7.9	7.8	7.9
25	7.4	7.3	7.3	7.4	7.3	7.4	7.3	7.2	7.2	---	---	7.9
26	7.8	7.3	7.5	7.4	7.3	7.4	7.8	7.2	7.6	---	---	---
27	7.7	7.4	7.5	7.5	7.3	7.4	7.8	7.8	7.8	---	---	---
28	7.5	7.3	7.4	7.4	7.2	7.3	7.7	7.7	7.7	---	---	---
29	7.5	7.4	7.4	7.6	7.0	7.2	7.7	7.4	7.6	---	---	---
30	---	---	---	7.6	7.4	7.5	7.6	7.5	7.6	---	---	---
31	---	---	---	7.5	7.4	7.5	---	---	---	---	---	---
MONTH	8.1	7.3	7.5	7.7	7.0	7.4	7.9	7.0	7.5	8.0	7.3	7.7

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	7.9	7.8	7.9	7.6	7.5	7.6	7.7	7.5	7.5
2	---	---	---	7.9	---	7.9	7.8	7.5	7.7	8.1	7.4	7.5
3	---	---	---	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
4	---	---	7.9	---	---	---	7.8	7.7	7.8	7.4	7.3	7.3
5	8.0	7.9	8.0	---	---	---	7.8	7.7	7.7	7.8	7.3	7.5
6	8.1	7.7	7.8	---	---	---	7.9	7.7	7.8	7.5	7.4	7.5
7	7.7	7.4	7.6	---	---	---	7.8	7.7	7.8	7.5	7.4	7.5
8	7.5	7.4	7.5	---	---	---	7.8	7.7	7.8	7.6	7.3	7.5
9	---	---	7.9	---	---	---	7.9	7.8	7.8	7.6	7.5	7.5
10	---	---	---	---	---	---	7.9	7.8	7.8	7.5	7.4	7.5
11	---	---	---	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
12	7.8	7.7	7.7	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
13	7.9	7.6	7.8	---	---	---	7.9	7.7	7.8	7.4	7.3	7.3
14	7.9	7.8	7.9	---	---	---	7.9	7.8	7.8	7.4	7.1	7.3
15	8.0	---	7.9	---	---	---	8.0	7.8	7.9	7.3	7.2	7.2
16	7.9	---	7.9	---	---	---	8.0	7.9	8.0	7.3	7.2	7.2
17	8.1	7.8	8.0	---	---	---	8.0	7.7	7.9	7.3	7.2	7.2
18	---	---	8.1	7.4	7.0	7.2	7.8	7.8	7.8	7.3	7.2	7.2
19	---	---	8.0	7.4	7.3	7.4	7.8	7.8	7.8	7.4	7.2	7.3
20	---	---	8.0	7.5	7.4	7.4	7.8	7.7	7.8	7.2	7.2	7.2
21	---	---	8.0	7.5	7.4	7.4	7.9	7.7	7.8	7.3	7.2	7.2
22	---	---	8.0	7.5	7.4	7.5	7.9	7.7	7.8	7.3	7.2	7.2
23	---	---	8.0	7.5	7.4	7.5	7.8	7.7	7.8	7.3	7.2	7.2
24	8.0	7.8	7.9	7.5	7.4	7.5	7.9	7.8	7.8	7.2	7.2	7.2
25	7.9	7.8	7.8	7.5	7.4	7.5	7.9	7.7	7.8	7.2	7.2	7.2
26	---	---	---	7.5	7.4	7.4	7.9	7.7	7.8	7.2	7.1	7.1
27	7.9	7.8	7.9	7.5	7.4	7.4	7.9	7.8	7.8	7.2	7.1	7.1
28	---	---	---	7.9	7.4	7.5	8.0	7.8	7.9	7.5	7.1	7.2
29	8.1	7.8	7.9	7.5	7.4	7.5	8.0	7.8	7.9	7.2	7.2	7.2
30	7.8	7.8	7.8	7.6	7.4	7.5	7.8	7.4	7.6	7.2	7.2	7.2
31	---	---	---	7.6	7.5	7.5	7.6	7.4	7.5	---	---	---
MONTH	8.1	7.4	7.9	7.9	7.0	7.5	8.0	7.4	7.8	8.1	7.1	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.5	12.0	13.0	17.5	16.0	16.5	21.5	19.0	20.5
2	---	---	---	16.0	14.0	15.0	17.5	16.0	17.0	19.5	18.5	19.0
3	---	---	---	18.0	16.0	17.0	17.5	16.0	17.0	22.0	19.5	20.5
4	---	---	---	18.0	16.5	17.5	17.0	15.5	16.5	23.5	21.0	22.0
5	---	---	---	16.5	12.5	14.5	18.5	16.0	17.0	25.0	22.5	23.5
6	---	---	---	15.5	12.0	13.5	19.5	17.0	18.5	26.0	23.5	25.0
7	13.5	12.5	13.0	16.0	13.5	15.0	19.0	17.0	18.0	25.5	24.0	25.0
8	13.0	12.0	12.5	16.5	14.5	15.5	18.0	16.5	17.0	---	---	---
9	13.0	10.5	11.5	15.5	14.0	15.0	19.5	17.0	18.0	---	---	---
10	13.5	12.0	12.5	16.0	15.0	15.5	19.5	18.5	19.0	---	---	---
11	16.0	12.5	14.5	15.5	12.5	15.0	21.0	18.5	20.0	---	---	---
12	15.5	12.0	13.5	13.0	11.5	12.5	21.5	19.5	20.5	---	---	---
13	14.0	12.0	13.0	14.0	12.0	13.0	22.0	19.5	20.5	---	---	---
14	15.0	13.0	14.0	18.0	14.0	15.5	21.0	19.5	20.5	---	---	---
15	16.0	14.5	15.0	20.0	16.5	18.0	20.0	19.0	19.5	---	---	---
16	15.5	14.0	14.5	19.5	17.0	19.0	19.5	18.0	18.5	---	---	---
17	16.0	14.5	15.0	19.0	18.0	19.0	21.0	17.5	19.0	---	---	---
18	16.0	15.0	15.5	19.5	18.0	19.0	20.5	19.0	20.0	---	---	---
19	15.0	14.0	14.5	17.5	15.0	16.0	20.5	19.5	20.0	---	---	---
20	14.5	12.0	13.5	15.5	14.0	14.5	22.5	19.5	21.0	---	---	---
21	14.5	12.5	13.5	17.0	15.0	16.0	22.5	21.5	22.0	---	---	---
22	15.5	13.0	14.0	18.5	16.5	17.5	21.5	20.0	20.5	---	---	---
23	16.0	14.0	15.0	18.5	15.5	17.0	21.5	19.5	20.5	27.5	26.0	26.5
24	16.5	14.0	15.0	16.5	15.5	16.0	22.5	19.5	21.0	28.0	25.5	26.5
25	16.0	14.5	15.5	17.0	15.5	16.0	22.0	20.5	21.0	28.5	26.0	27.5
26	16.0	13.5	15.0	19.0	16.0	17.0	23.5	21.0	22.0	29.0	26.5	27.5
27	13.5	12.5	13.0	19.0	18.5	19.0	24.5	22.0	23.0	29.0	26.5	28.0
28	12.0	10.0	11.0	18.5	16.5	17.5	24.0	22.5	23.0	26.0	24.0	25.0
29	13.0	11.0	12.0	18.0	15.5	16.5	23.5	21.5	23.0	25.0	23.0	24.0
30	---	---	---	18.0	15.5	16.5	22.5	20.0	21.5	25.5	23.0	24.0
31	---	---	---	17.5	16.5	17.0	---	---	---	24.5	23.0	23.5
MONTH	16.5	10.0	14.0	20.0	11.5	16.0	24.5	15.5	19.5	29.0	18.5	24.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	31.0	28.5	29.5	29.5	27.0	28.0	31.0	29.0	30.0
2	---	---	---	31.0	29.0	30.0	30.5	27.0	29.0	30.5	25.0	28.5
3	---	---	---	31.0	29.0	30.0	30.5	27.5	29.0	28.5	26.5	27.5
4	27.5	25.5	26.5	31.5	28.5	30.0	29.5	27.5	29.0	28.5	26.5	27.5
5	27.0	25.0	26.0	30.5	27.0	29.5	30.5	28.0	29.5	29.0	26.5	27.5
6	26.0	22.0	24.0	31.5	29.0	30.0	30.5	28.5	29.5	29.0	26.5	28.0
7	25.0	23.5	24.0	32.5	29.5	30.5	30.0	28.5	29.0	28.5	26.0	27.5
8	27.5	25.0	26.0	32.0	29.5	30.5	31.0	28.5	29.5	28.5	26.5	27.5
9	28.0	26.0	27.0	31.5	29.5	30.5	31.0	29.0	30.0	29.5	27.0	28.0
10	27.5	26.0	27.0	31.5	29.0	30.0	31.0	28.5	30.0	30.0	27.5	28.5
11	28.5	26.0	27.0	31.5	29.0	30.5	30.0	27.0	28.5	30.0	27.5	28.5
12	29.0	26.5	27.5	30.5	29.5	30.0	28.0	26.0	27.0	30.5	28.0	29.0
13	29.5	27.0	28.0	30.5	27.5	29.5	28.5	26.0	27.0	30.5	28.0	29.5
14	30.0	27.5	28.5	30.5	28.5	29.5	30.0	27.5	28.5	30.5	28.0	29.5
15	30.5	28.0	29.0	31.0	28.5	29.5	30.0	27.5	28.5	29.5	26.0	27.5
16	30.5	28.0	29.5	31.5	29.5	30.5	30.5	28.5	29.5	26.5	24.5	25.5
17	30.0	28.0	29.0	31.0	29.5	30.5	31.5	29.0	30.0	26.5	23.5	25.0
18	30.5	28.0	29.0	31.5	29.0	30.0	31.5	29.0	30.5	27.0	24.5	25.5
19	31.0	28.5	29.5	31.0	28.0	29.5	32.5	29.5	30.5	27.0	24.5	26.0
20	31.0	28.5	29.5	31.5	28.5	30.0	32.5	30.0	31.0	26.5	25.0	26.0
21	31.0	27.5	29.5	31.5	29.0	30.0	31.5	29.5	30.5	26.0	25.0	25.5
22	31.5	28.5	30.0	31.5	28.5	30.0	31.0	29.0	30.0	27.5	25.0	26.0
23	32.0	29.0	30.5	31.0	28.5	30.0	30.5	29.5	30.0	28.0	26.5	27.0
24	31.0	29.5	30.5	29.5	28.0	28.5	31.0	28.5	29.5	28.5	27.0	27.5
25	31.5	29.0	30.5	29.5	27.5	28.5	31.0	28.5	29.5	28.5	25.5	27.5
26	30.5	29.0	29.5	30.0	27.0	29.0	30.5	28.0	29.5	25.5	23.0	24.0
27	30.5	28.5	29.5	30.5	28.0	29.0	31.5	28.5	30.0	23.5	22.5	23.0
28	31.5	28.0	29.5	30.5	28.0	29.0	31.5	29.0	30.0	23.0	21.0	21.5
29	29.5	27.0	29.0	30.0	27.5	28.5	31.5	29.0	30.5	21.5	20.0	20.5
30	30.5	28.5	29.0	29.5	27.0	28.5	31.0	29.5	30.0	22.0	19.5	20.5
31	---	---	---	29.5	27.0	28.0	31.0	29.0	30.0	---	---	---
MONTH	32.0	22.0	28.5	32.5	27.0	29.5	32.5	26.0	29.5	31.0	19.5	26.5

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.3	7.8	8.0	7.3	6.6	6.9	7.4	5.5	6.0
2	---	---	---	7.9	6.9	7.3	9.4	6.9	8.0	7.4	5.2	6.2
3	---	---	---	6.8	5.9	6.5	8.2	7.6	8.1	6.3	5.5	5.8
4	---	---	---	6.1	5.7	5.9	8.0	7.4	7.8	6.3	5.8	6.0
5	---	---	---	9.2	5.7	6.9	7.2	6.5	6.9	6.2	5.8	6.0
6	---	---	---	8.6	6.7	7.2	6.5	5.7	6.1	5.9	5.5	5.7
7	---	---	---	6.8	6.2	6.6	7.9	5.1	5.9	5.7	5.4	5.5
8	6.8	5.5	6.2	6.4	5.8	6.1	8.5	5.8	7.8	5.9	5.8	5.8
9	8.5	6.6	7.7	6.2	5.8	6.0	7.3	5.4	6.5	---	---	---
10	7.3	4.9	6.7	5.8	5.2	5.6	7.1	6.9	7.0	---	---	---
11	7.0	3.5	5.4	8.9	5.4	6.0	7.0	6.6	6.9	---	---	---
12	7.9	6.3	7.3	9.7	8.1	8.8	6.8	6.4	6.6	---	---	---
13	7.5	6.0	7.0	8.8	7.9	8.3	6.8	6.4	6.5	---	---	---
14	7.7	7.2	7.5	8.4	7.4	7.9	6.8	6.1	6.5	---	---	---
15	9.3	6.7	7.8	8.5	6.7	7.5	7.0	6.3	6.7	---	---	---
16	8.8	5.6	6.9	8.4	6.3	7.1	7.3	6.6	7.0	---	---	---
17	6.8	6.5	6.6	7.6	6.4	6.8	7.2	6.7	6.9	---	---	---
18	7.6	6.2	7.1	8.5	6.3	6.6	6.8	6.3	6.6	---	---	---
19	7.5	6.3	6.9	8.0	6.8	7.4	6.5	5.5	6.1	---	---	---
20	7.2	6.4	6.9	7.9	7.0	7.4	6.4	5.6	6.1	---	---	---
21	7.2	6.6	6.9	7.1	6.4	6.9	5.5	3.5	4.7	---	---	---
22	6.8	6.1	6.5	6.3	5.7	6.1	5.7	4.7	5.1	---	---	---
23	6.6	5.7	6.1	9.4	5.5	7.7	5.8	5.3	5.7	5.3	4.6	5.0
24	6.2	5.6	6.0	8.0	6.9	7.6	6.1	5.3	5.8	4.9	4.5	4.7
25	6.0	4.8	5.5	8.0	6.4	7.3	5.0	1.8	2.7	4.9	4.4	4.6
26	8.2	5.4	7.0	7.8	6.8	7.2	4.9	2.4	3.9	4.6	4.1	4.3
27	8.4	6.6	7.3	8.1	6.4	7.2	5.6	4.8	5.2	4.4	3.8	4.1
28	9.0	7.7	8.6	8.7	6.9	7.7	5.7	5.1	5.3	6.2	3.6	4.5
29	8.6	8.4	8.5	9.7	7.0	7.7	5.7	5.1	5.4	4.6	3.5	4.1
30	---	---	---	9.7	7.4	8.1	6.1	5.6	5.9	4.4	4.0	4.2
31	---	---	---	7.3	7.0	7.2	---	---	---	4.2	3.7	3.9
MONTH	9.3	3.5	6.9	9.7	5.2	7.1	9.4	1.8	6.2	7.4	3.5	5.1

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	4.2	3.2	3.8	5.5	4.0	4.6	6.6	4.2	5.1
2	---	---	---	5.4	3.7	4.5	5.6	4.2	4.8	8.1	4.5	5.6
3	---	---	---	5.4	4.3	4.8	5.6	4.0	4.6	5.5	2.7	3.7
4	5.6	4.9	5.4	5.6	4.4	5.0	5.2	3.1	4.2	5.7	4.5	5.2
5	5.5	4.4	4.9	5.0	3.8	4.3	4.4	3.9	4.2	6.8	5.6	6.3
6	7.3	4.9	5.9	4.4	3.4	3.9	4.8	3.8	4.3	7.0	6.3	6.6
7	4.9	4.3	4.6	4.6	3.7	4.1	5.0	4.0	4.3	7.2	6.5	6.8
8	5.2	4.5	4.9	4.8	3.6	4.0	4.7	3.9	4.3	7.5	6.5	7.0
9	5.1	1.2	4.4	4.8	2.8	3.9	4.8	4.0	4.3	7.7	6.7	7.1
10	4.9	4.4	4.7	5.2	3.3	4.2	4.7	3.8	4.2	7.7	6.7	7.1
11	5.0	3.7	4.6	5.1	3.6	4.3	4.3	3.0	3.8	---	---	---
12	5.5	4.5	4.9	---	---	---	4.7	3.6	4.2	---	---	---
13	5.4	4.4	5.0	---	---	---	5.1	4.0	4.5	---	---	---
14	6.1	4.8	5.3	---	---	---	5.4	5.1	5.2	---	---	---
15	6.6	4.6	5.5	---	---	---	5.3	5.1	5.2	4.5	4.0	4.2
16	6.8	4.7	5.7	---	---	---	5.1	4.9	5.0	6.0	4.3	5.0
17	6.7	4.8	5.7	---	---	---	4.9	4.4	4.7	---	---	---
18	6.9	4.7	5.6	---	---	---	4.8	4.1	4.4	---	---	---
19	7.2	4.9	5.8	4.6	4.0	4.3	4.9	3.9	4.3	---	---	---
20	6.8	4.6	5.5	4.6	3.9	4.2	5.3	3.9	4.5	---	---	---
21	6.3	4.7	5.4	4.6	3.8	4.1	5.0	2.6	3.9	---	---	---
22	6.0	4.4	5.2	4.4	3.2	4.0	4.9	3.6	4.0	---	---	---
23	6.5	4.2	5.3	4.4	3.1	3.8	4.3	3.5	3.9	---	---	---
24	6.1	4.1	4.9	3.7	2.8	3.3	4.2	3.2	3.6	---	---	---
25	6.4	3.7	4.9	3.1	1.8	2.7	4.1	2.6	3.3	---	---	---
26	5.3	3.7	4.4	3.1	1.9	2.7	4.0	2.5	3.1	---	---	---
27	4.7	3.0	3.9	3.4	1.9	2.5	4.3	2.1	3.0	---	---	---
28	4.8	3.1	4.0	3.0	2.1	2.4	5.5	2.8	3.9	---	---	---
29	4.0	1.1	3.0	2.9	2.0	2.5	7.0	3.7	5.1	---	---	---
30	3.7	2.9	3.5	4.2	2.5	3.3	5.8	3.9	4.9	---	---	---
31	---	---	---	4.4	3.0	3.7	6.4	4.0	4.9	---	---	---
MONTH	7.3	1.1	4.9	5.6	1.8	3.8	7.0	2.1	4.3	8.1	2.7	5.8

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX

LOCATION--Lat 32 53'21", long 96 45'23", Dallas County, Hydrologic Unit 12030105, on left bank 20 ft upstream from bridge on Greenville Avenue in Dallas, 1.1 mi downstream from Texas and New Orleans Railroad Co. bridge, 1.2 mi downstream from Cottonwood Creek, 2.9 mi upstream from White Rock Lake, and 8.2 mi northeast of Dallas County Courthouse.

DRAINAGE AREA.--66.4 mi^2.

PERIOD OF RECORD.--August 1961 to September 1980, April to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1961, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for period of no elevation records which are poor. Some regulation at low flow on- and off-channel dams from which many small diversions are made. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1962-80), 53.9 ft^3/s, (11.02 in/yr), 39,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s Sept. 21, 1964 (elevation, 490.43 ft); minimum daily, 0.01 ft^3/s July 8, 1970, June 27, July 14, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1886, that of Sept. 21, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 5,610 ft^3/s June 6 at 0730 hours (elevation, 486.22 ft); minimum daily, 2.4 ft^3/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							30	565	16	5.5	3.5	2.4
2							180	330	15	4.5	3.5	59
3							78	97	15	4.0	3.5	28
4							50	70	15	5.1	5.5	8.2
5							39	53	19	33	4.0	5.7
6							37	43	800	7.0	3.5	4.6
7							218	46	110	4.8	3.4	4.6
8							93	32	70	4.7	3.2	5.3
9							52	31	40	4.1	3.1	4.8
10							45	33	25	4.0	3.0	5.0
11							37	32	19	16	15	3.7
12							33	22	15	7.9	40	3.6
13							31	19	12	5.8	11	3.6
14							28	18	10	4.7	8.5	3.6
15							26	14	9.0	4.3	7.0	4.1
16							25	14	8.0	4.3	6.5	4.6
17							26	16	7.5	4.2	6.1	4.3
18							25	113	7.0	4.0	5.7	4.8
19							25	73	6.6	4.0	5.4	4.3
20							28	32	6.2	3.9	5.2	4.3
21							29	24	5.8	3.8	4.6	4.8
22							22	20	5.5	3.8	4.8	5.9
23							19	17	5.2	3.9	5.5	5.5
24							16	16	4.9	4.1	6.6	6.6
25							16	15	4.7	10	4.5	5.5
26							16	15	4.5	5.8	5.3	5.9
27							16	16	4.3	4.5	4.3	6.4
28							13	128	45	4.1	3.9	6.6
29							27	26	11	3.9	3.9	5.5
30							21	20	8.0	3.7	3.9	5.3
31							---	18	---	3.6	3.6	---
TOTAL							1301	1968	1324.2	187.0	197.5	226.5
MEAN							43.4	63.5	44.1	6.03	6.37	7.55
MAX							218	565	800	33	40	59
MIN							13	14	4.3	3.6	3.0	2.4
CFSM							.65	.96	.66	.09	.10	.11
IN.							.73	1.10	.74	.10	.11	.13
AC-FT							2580	3900	2630	371	392	449

WTR YR 1984 TOTAL - MEAN - MAX - MIN - CFSM - IN. - AC-FT

NOTE.--No gage-height record June 7 to July 3 and July 13 to August 20.

08057410 TRINITY RIVER BELOW DALLAS, TX

LOCATION.--Lat 32°42'26", long 96°44'08", Dallas County, Hydrologic Unit 12030105, on right bank at downstream side of bridge on South Loop Highway 12, 1.0 mi downstream from White Rock Creek, 1.5 mi upstream from Fivemile Creek, 6.4 mi southeast of Dallas County Courthouse in Dallas, and at mile 491.8.

DRAINAGE AREA.--6,278 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1956 to September 1961 (monthly records only), October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 365.89 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow is affected at times by eight upstream reservoirs with a combined capacity of 1,714,400 acre-ft, of which 846,200 acre-ft is for flood control. Several cities within the Fort Worth-Dallas metroplex divert water for municipal use and return it to the river as sewage effluents above this station. Low flows are sustained by sewage effluents.

AVERAGE DISCHARGE.--27 years (water years 1958-84), 1,781 ft^3/s (1,290,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,700 ft^3/s May 27, 1957 (gage height, 32.02 ft); minimum daily, 131 ft^3/s Dec. 9, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 25, 1908, reached a stage of 41.1 ft, from information by Corps of Engineers, and is the highest since that date. Floods in 1866 and 1908 reached about the same stage at Dallas.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft^3/s Mar. 24 at 1900 hours (gage height, 25.53 ft); minimum daily, 504 ft^3/s Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	549	539	653	746	614	699	850	865	632	604	562	516
2	531	527	689	695	591	646	1370	4260	604	593	553	703
3	544	530	1310	695	575	599	1650	4020	576	582	550	1750
4	568	543	1080	669	547	581	1180	1380	584	555	597	802
5	556	553	784	642	546	763	916	936	696	650	645	664
6	541	1110	693	639	525	712	839	877	2540	617	579	604
7	1020	1110	609	588	566	566	896	825	4600	567	594	568
8	2040	742	596	575	547	552	2930	763	1740	556	580	542
9	4630	624	595	844	1310	549	2070	717	902	547	554	538
10	2460	607	551	2120	1750	529	1170	665	721	548	551	545
11	1180	555	539	1680	1130	709	969	632	697	551	678	553
12	1480	544	569	971	2210	5390	855	645	657	570	1270	556
13	1070	512	551	885	1850	8720	847	619	626	954	1560	530
14	748	543	554	739	1010	5210	785	616	618	644	832	532
15	643	534	538	628	1050	1980	764	642	598	557	690	517
16	555	543	595	625	965	1260	739	613	574	544	625	504
17	558	599	635	597	629	1080	730	614	549	549	601	525
18	565	735	646	604	1000	878	727	917	552	537	562	513
19	781	827	656	631	1230	4280	683	2280	572	534	536	520
20	1480	719	603	614	863	4340	788	1630	563	537	550	524
21	1320	683	576	579	677	1580	1200	911	564	520	534	534
22	957	647	580	573	627	1020	846	769	564	517	551	524
23	649	1060	590	848	608	4550	728	731	543	515	552	519
24	595	1100	650	866	579	12900	695	694	528	518	551	532
25	581	730	663	793	557	9990	676	670	536	654	542	553
26	571	754	670	730	1380	4590	679	631	556	688	523	550
27	589	2150	775	633	2520	2040	716	582	563	633	535	528
28	601	1690	822	883	1680	1870	669	1550	581	667	545	629
29	527	1060	905	637	899	1420	704	1300	910	608	543	555
30	511	752	884	606	---	1340	779	783	752	604	538	523
31	529	---	860	611	---	876	---	695	---	571	531	---
TOTAL	29929	23622	21421	23946	29035	82219	29450	33832	25698	18291	19614	17953
MEAN	965	787	691	772	1001	2652	982	1091	857	590	633	598
MAX	4630	2150	1310	2120	2520	12900	2930	4260	4600	954	1560	1750
MIN	511	512	538	573	525	529	669	582	528	515	523	504
AC-FT	59360	46850	42490	47500	57590	163100	58410	67110	50970	36280	38900	35610

CAL YR 1983 TOTAL 392482 MEAN 1075 MAX 7710 MIN 482 AC-FT 778500
WTR YR 1984 TOTAL 355010 MEAN 970 MAX 12900 MIN 504 AC-FT 704200

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: October 1971 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
pH: January 1977 to current year.
WATER TEMPERATURES: October 1967 to current year.
DISSOLVED OXYGEN: January 1977 to current year.

INSTRUMENTATION.--Beginning October 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1967-68, 1973-84): Maximum, 1,130 micromhos Dec. 17, 1977; minimum, 148 micromhos May 16, 1982.
pH (1976-82): Maximum, 8.8 units Jan. 23, 1980; minimum, 6.8 units Sept. 17, 18, 1981.
WATER TEMPERATURES (1967-68, 1973-83): Maximum, 34.0°C June 30, Aug. 31, 1977; minimum, 4.0°C Jan. 10, 1968.
DISSOLVED OXYGEN: Maximum, 12.5 mg/L Feb. 8, 1982; minimum, 0.0 mg/L on many days during spring and summer of 1977-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 954 micromhos Aug. 22; minimum, 218 micromhos Mar. 23.
pH: Maximum, 7.8 units Mar. 23, Aug. 22; minimum, 7.0 units several days during year.
WATER TEMPERATURES: Maximum, 31.0°C on several days during July and August; minimum, 5.0°C Dec. 25.
DISSOLVED OXYGEN: Maximum, 10.0 mg/L Dec. 30; minimum, 0.4 mg/L July 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT										
26...	1300	555	758	7.4	21.0	5.2	58	15	150	10
JAN										
17...	1250	415	736	7.7	8.5	7.0	60	22	160	0
FEB										
13...	1010	1910	518	7.4	13.0	7.3	70	18	170	40
MAY										
08...	1330	777	756	7.4	22.0	5.3	61	21	170	11
JUN										
19...	1325	560	822	7.2	28.5	4.3	56	14	150	4
AUG										
21...	1506	549	768	7.3	30.5	3.1	42	12	130	0

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
26...	50	6.1	88	3	11	140	91	76	1.1
JAN									
17...	54	6.2	93	3	13	190	100	73	1.1
FEB									
13...	60	4.8	42	1	6.6	130	85	38	.50
MAY									
08...	59	5.7	78	3	9.5	160	98	71	.90
JUN									
19...	51	6.4	100	4	12	150	84	87	1.1
AUG									
21...	42	5.7	97	4	13	140	89	79	1.4

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 26...	12	420	3.7	.770	4.5	2.90	5.1	8.0	3.10
JAN 17...	9.8	460	1.3	.440	1.7	8.00	4.0	12	3.80
FEB 13...	11	330	1.2	.470	1.7	.070	3.3	3.4	1.20
MAY 08...	9.8	430	2.1	.840	2.9	4.80	.70	5.5	2.60
JUN 19...	9.0	440	2.2	1.00	3.2	1.60	2.6	4.2	4.40
AUG 21...	9.9	420	2.2	.830	3.0	4.00	1.0	5.0	5.60

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	29929	580	331	26700	44	3520	76	6140	150
NOV.	1983	23622	656	374	23900	51	3260	86	5480	160
DEC.	1983	21421	714	408	23600	57	3320	93	5400	170
JAN.	1984	23946	704	402	26000	56	3630	92	5960	170
FEB.	1984	29035	629	359	28200	48	3780	82	6460	160
MAR.	1984	82219	515	294	65300	36	8070	68	15000	150
APR.	1984	29450	730	416	33100	59	4730	95	7590	170
MAY	1984	33832	630	360	32900	49	4450	83	7540	160
JUNE	1984	25698	660	376	26100	52	3630	86	5990	160
JULY	1984	18291	774	441	21800	64	3180	100	4990	170
AUG.	1984	19614	770	439	23200	64	3410	100	5320	160
SEPT	1984	17953	728	415	20100	59	2870	95	4610	170
TOTAL		355010	**	**	351000	**	47800	**	80500	**
WTD.AVG.		970	641	366	**	50	**	84	**	160

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	788	748	770	824	778	804	722	674	689	686	650	667
2	820	766	794	844	792	820	752	666	738	704	662	687
3	814	732	774	858	802	823	752	538	611	728	688	701
4	790	750	766	850	816	831	590	534	562	750	702	724
5	794	762	781	872	812	847	686	596	633	738	712	723
6	816	768	789	830	606	716	716	688	697	768	726	741
7	798	552	692	636	578	608	752	708	731	776	742	763
8	622	342	518	636	620	627	796	744	767	784	756	772
9	386	258	303	726	674	699	800	762	779	784	618	721
10	470	330	411	744	690	709	846	786	813	662	516	584
11	578	474	523	786	752	763	842	768	803	568	538	551
12	536	432	493	816	774	798	826	760	787	652	552	600
13	628	494	560	784	730	762	836	784	811	698	654	669
14	732	630	675	792	718	754	848	822	836	716	648	684
15	734	690	703	764	732	748	836	816	827	740	718	727
16	748	716	731	820	752	775	836	794	817	802	740	760
17	768	720	750	810	744	771	812	784	799	818	794	807
18	774	742	759	734	664	684	810	730	775	814	768	793
19	796	720	756	680	576	641	758	712	735	792	736	755
20	714	504	593	740	668	686	784	728	764	798	764	782
21	522	492	502	758	716	738	800	762	780	812	778	799
22	632	528	590	770	736	754	794	736	764	812	742	779
23	652	612	624	746	524	630	778	734	755	812	698	739
24	722	660	674	680	546	614	768	690	743	708	664	684
25	746	722	731	676	624	645	690	672	679	720	696	702
26	774	734	741	672	260	619	688	652	673	740	708	721
27	770	746	758	448	268	398	684	658	674	792	746	761
28	766	700	726	534	440	472	690	652	671	806	672	733
29	790	730	770	606	526	553	672	614	644	774	744	767
30	810	748	781	672	614	646	626	618	622	786	772	782
31	812	750	782	---	---	---	646	616	631	---	---	790
MONTH	820	258	672	872	260	698	848	534	729	818	516	725

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	798	706	652	683	816	796	806	---	---	794
2	---	---	804	760	710	732	838	542	690	---	---	442
3	---	---	812	786	764	775	714	642	683	---	---	478
4	---	---	819	788	766	775	696	656	674	---	---	550
5	---	---	825	790	710	760	766	692	719	---	---	593
6	---	---	831	748	648	687	800	764	778	---	---	637
7	---	---	845	788	754	777	812	614	785	---	---	701
8	---	---	856	798	778	789	730	482	573	---	---	756
9	---	---	512	794	774	783	580	480	523	---	---	772
10	---	---	518	804	780	791	684	588	638	---	---	786
11	---	---	560	814	394	749	768	686	721	---	---	799
12	---	---	475	492	312	433	814	772	798	---	---	809
13	594	518	549	476	446	459	814	788	804	---	---	815
14	648	578	610	540	448	483	836	806	818	---	---	830
15	724	646	684	654	552	604	818	796	807	---	---	843
16	758	650	685	746	610	693	828	758	789	---	---	857
17	774	746	760	742	614	678	856	814	835	---	---	864
18	796	628	722	798	738	757	868	810	846	---	---	820
19	660	548	617	800	382	482	874	826	856	---	---	500
20	706	638	665	476	388	429	---	---	848	---	---	487
21	736	696	714	632	484	556	---	---	720	---	---	610
22	768	732	743	720	636	677	---	---	762	---	---	718
23	776	734	752	740	218	492	---	---	768	798	742	765
24	790	756	771	426	404	418	---	---	771	824	800	810
25	790	772	781	460	416	435	---	---	777	828	802	817
26	796	358	629	610	466	519	---	---	790	834	804	821
27	554	418	482	650	440	603	---	---	808	826	790	811
28	546	442	506	712	546	604	---	---	823	792	342	576
29	648	548	586	806	610	682	---	---	831	614	518	574
30	---	---	---	818	552	687	---	---	846	694	618	646
31	---	---	---	816	804	812	---	---	---	754	676	703
MONTH	796	358	687	818	218	639	874	480	763	834	342	709

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	816	752	775	776	690	735	826	792	809	806	752	777
2	832	806	819	764	716	746	836	802	820	800	734	769
3	832	784	812	784	752	766	862	822	841	---	---	510
4	836	774	803	798	764	781	896	562	824	---	---	590
5	852	812	830	782	690	750	856	682	777	---	---	670
6	850	324	533	762	662	728	794	692	724	---	---	708
7	424	340	376	792	706	767	826	778	803	---	---	717
8	568	418	489	800	748	776	818	780	800	---	---	723
9	674	574	616	776	722	749	808	778	794	---	---	736
10	688	650	668	---	---	770	836	790	811	---	---	747
11	730	682	698	824	782	800	874	706	817	---	---	756
12	752	712	727	864	730	828	790	502	706	---	---	760
13	768	742	757	886	608	787	564	408	476	810	730	764
14	786	742	762	832	666	728	648	558	593	776	730	757
15	794	772	782	742	678	710	720	640	674	798	718	761
16	796	770	783	758	698	720	790	730	759	782	726	752
17	794	754	776	804	754	781	820	788	800	790	706	744
18	804	758	780	820	766	796	866	822	847	818	762	793
19	822	794	808	830	798	813	886	812	845	822	784	801
20	834	812	826	842	802	820	862	810	835	796	758	783
21	852	806	830	854	804	828	892	836	865	812	776	790
22	862	814	845	856	784	817	954	880	915	846	790	817
23	864	798	836	842	796	820	902	846	873	818	750	786
24	844	776	812	878	810	833	884	842	866	798	738	769
25	824	764	793	870	816	837	908	836	880	806	760	784
26	846	788	817	848	784	823	886	808	851	802	738	775
27	848	812	827	828	718	764	848	768	812	794	620	771
28	840	786	816	770	578	708	874	804	832	818	702	763
29	862	640	754	778	694	719	856	750	799	814	738	781
30	768	656	720	760	706	728	802	754	774	780	748	764
31	---	---	---	794	788	785	796	750	770	---	---	---
MONTH	864	324	749	886	578	775	954	408	793	846	620	747

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	7.1	7.2	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.3	7.4
2	7.3	7.1	7.2	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.3	7.3
3	7.2	7.1	7.2	7.5	7.2	7.3	7.5	7.3	7.4	7.3	7.2	7.3
4	7.2	7.1	7.1	7.4	7.3	7.3	7.5	7.3	7.4	7.3	7.2	7.2
5	7.2	7.0	7.2	7.4	7.3	7.4	7.3	7.2	7.3	7.3	7.2	7.2
6	7.2	7.1	7.1	7.6	7.4	7.4	7.4	7.3	7.3	7.4	7.2	7.2
7	7.4	7.1	7.2	7.5	7.4	7.4	7.5	7.3	7.4	7.3	7.2	7.2
8	7.5	7.3	7.3	7.5	7.4	7.4	7.5	7.4	7.4	7.3	7.2	7.2
9	7.6	7.4	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.3	7.2	7.3
10	7.4	7.2	7.3	7.5	7.4	7.4	7.6	7.4	7.5	7.4	7.3	7.3
11	7.6	7.2	7.3	7.5	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3
12	7.5	7.2	7.4	7.5	7.4	7.4	7.5	7.3	7.4	7.4	7.3	7.3
13	7.4	7.2	7.3	7.4	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3
14	7.3	7.2	7.3	7.4	7.3	7.3	7.5	7.4	7.4	7.4	7.3	7.4
15	7.4	7.2	7.3	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.3
16	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.3	7.3
17	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.2	7.3
18	7.3	7.2	7.2	7.4	7.3	7.4	7.4	7.2	7.3	7.3	7.2	7.2
19	7.3	7.2	7.3	7.5	7.3	7.4	7.3	7.1	7.2	7.3	7.2	7.2
20	7.4	7.2	7.3	7.4	7.4	7.4	7.2	7.1	7.1	7.4	7.3	7.3
21	7.4	7.2	7.3	7.5	7.3	7.4	7.3	7.1	7.2	7.3	7.2	7.3
22	7.3	7.2	7.3	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.3	7.3
23	7.3	7.2	7.2	7.4	7.2	7.3	7.2	7.0	7.1	7.5	7.3	7.4
24	7.3	7.2	7.2	7.3	7.3	7.3	7.2	7.1	7.2	7.6	7.3	7.4
25	7.3	7.2	7.2	7.3	7.2	7.3	7.2	7.1	7.1	7.5	7.2	7.3
26	7.4	7.2	7.3	7.6	7.2	7.3	7.2	7.1	7.2	7.3	7.2	7.3
27	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.1	7.3	7.6	7.2	7.4
28	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.2	7.2	7.4	7.3	7.4
29	7.4	7.3	7.4	7.4	7.3	7.4	7.2	7.0	7.2	7.3	7.3	7.3
30	7.4	7.3	7.3	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.3	7.4
31	7.4	7.2	7.3	---	---	---	7.4	7.3	7.3	---	---	---
MONTH	7.6	7.0	7.3	7.6	7.2	7.4	7.6	7.0	7.3	7.6	7.2	7.3

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.4	7.3	7.4	7.5	7.5	7.5	---	---	---
2	---	---	---	7.4	7.3	7.3	7.7	7.5	7.6	---	---	---
3	---	---	---	7.3	7.3	7.3	7.6	7.5	7.6	---	---	---
4	---	---	---	7.4	7.3	7.3	7.6	7.5	7.5	---	---	---
5	---	---	---	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---
6	---	---	---	7.4	7.3	7.4	7.5	7.3	7.4	---	---	---
7	---	---	---	7.3	7.3	7.3	7.5	7.4	7.5	---	---	---
8	---	---	---	7.3	7.3	7.3	7.6	7.5	7.6	7.4	7.4	7.4
9	---	---	---	7.4	7.3	7.3	7.5	7.4	7.5	7.5	7.3	7.4
10	---	---	---	7.3	7.3	7.3	7.5	7.4	7.4	7.6	7.4	7.4
11	---	---	---	7.4	7.3	7.3	7.4	7.4	7.4	7.5	7.4	7.4
12	---	---	---	7.6	7.4	7.5	7.6	7.4	7.5	7.5	7.4	7.4
13	7.4	7.3	7.3	7.6	7.5	7.6	7.5	7.4	7.4	7.5	7.4	7.4
14	7.3	7.3	7.3	7.5	7.4	7.4	7.4	7.4	7.4	7.5	7.4	7.4
15	7.5	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.4	7.4
16	7.5	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.4
17	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.4
18	7.4	7.3	7.3	7.4	7.3	7.4	7.3	7.2	7.3	7.4	7.2	7.4
19	7.4	7.3	7.4	7.5	7.4	7.5	7.3	7.1	7.3	7.5	7.2	7.3
20	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	7.3	7.2	7.2
21	7.4	7.3	7.3	7.4	7.3	7.3	---	---	---	7.3	7.2	7.2
22	7.3	7.3	7.3	7.4	7.3	7.4	---	---	---	7.4	7.2	7.3
23	7.3	7.3	7.3	7.8	7.4	7.5	---	---	---	7.4	7.3	7.3
24	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	7.4	7.3	7.4
25	7.3	7.3	7.3	7.4	7.3	7.4	---	---	---	7.4	7.4	7.4
26	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---	7.4	7.4	7.4
27	7.5	7.4	7.5	7.4	7.3	7.4	---	---	---	7.4	7.3	7.4
28	7.6	7.4	7.5	7.5	7.3	7.4	---	---	---	7.4	7.2	7.3
29	7.4	7.3	7.4	7.6	7.3	7.5	---	---	---	7.3	7.2	7.3
30	---	---	---	7.6	7.5	7.5	---	---	---	7.2	7.1	7.1
31	---	---	---	7.5	7.4	7.5	---	---	---	7.1	7.1	7.1
MONTH	7.6	7.2	7.4	7.8	7.3	7.4	7.7	7.1	7.5	7.6	7.1	7.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	7.1	7.1	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.1
2	7.2	7.1	7.1	7.2	7.1	7.2	7.2	7.1	7.2	7.1	7.0	7.0
3	7.2	7.1	7.1	7.2	7.2	7.2	7.3	7.2	7.2	---	---	---
4	7.3	7.1	7.2	7.3	7.2	7.2	7.3	7.2	7.3	---	---	---
5	7.3	7.2	7.3	7.2	7.2	7.2	7.4	7.2	7.3	---	---	---
6	7.4	7.3	7.4	7.2	7.1	7.1	7.4	7.2	7.3	---	---	---
7	7.5	7.3	7.4	7.3	7.1	7.2	7.4	7.3	7.3	---	---	---
8	7.3	7.2	7.3	7.2	7.2	7.2	7.4	7.3	7.4	---	---	---
9	7.3	7.2	7.3	7.2	7.1	7.2	7.4	7.3	7.4	---	---	---
10	7.2	7.2	7.2	---	---	7.3	7.5	7.4	7.4	---	---	---
11	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---
12	7.3	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.3	---	---	---
13	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2
14	7.2	7.1	7.1	7.5	7.3	7.4	7.4	7.3	7.3	7.5	7.1	7.2
15	7.2	7.1	7.1	7.5	7.4	7.4	7.3	7.2	7.3	7.3	7.1	7.2
16	7.2	7.0	7.1	7.4	7.3	7.3	7.3	7.1	7.2	7.3	7.1	7.2
17	7.2	7.1	7.1	7.3	7.2	7.3	7.3	7.1	7.2	7.2	7.1	7.2
18	7.2	7.1	7.1	7.3	7.1	7.2	7.3	7.2	7.2	7.2	7.1	7.2
19	7.3	7.1	7.2	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.1	7.2
20	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.1	7.2	7.2	7.1	7.2
21	7.3	7.2	7.2	7.3	7.2	7.3	7.5	7.2	7.4	7.3	7.1	7.2
22	7.3	7.2	7.2	7.3	7.2	7.2	7.8	7.2	7.4	7.3	7.2	7.3
23	7.3	7.2	7.2	7.2	7.0	7.1	7.3	7.2	7.2	7.3	7.2	7.3
24	7.3	7.2	7.2	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.3	7.3
25	7.2	7.0	7.2	7.4	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3
26	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.2
27	7.3	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3
28	7.2	7.2	7.2	7.3	7.1	7.2	7.5	7.2	7.3	7.3	7.3	7.3
29	7.4	7.1	7.2	7.3	7.2	7.2	7.5	7.1	7.2	7.3	7.3	7.3
30	7.3	7.1	7.2	7.2	7.1	7.2	7.5	7.1	7.3	7.3	7.2	7.3
31	---	---	---	7.2	7.2	7.2	7.1	7.1	7.1	---	---	---
MONTH	7.5	7.0	7.2	7.5	7.0	7.2	7.8	7.1	7.3	7.5	7.0	7.2

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	25.0	26.0	24.0	23.0	23.5	15.5	14.0	15.0	10.0	8.0	8.5
2	26.0	25.5	26.0	24.5	23.5	24.0	17.0	15.5	16.0	11.0	9.0	10.0
3	26.5	25.5	26.0	25.0	24.0	24.5	16.5	13.5	15.0	11.0	9.5	10.5
4	27.0	26.0	26.5	25.0	24.0	24.5	15.5	13.5	14.5	13.5	11.0	12.5
5	27.0	25.5	26.5	24.5	23.0	24.0	17.0	15.5	16.0	14.0	12.0	13.5
6	26.0	25.0	25.5	23.0	21.0	21.5	16.0	14.0	15.0	15.0	13.5	14.0
7	25.0	22.5	23.5	21.0	20.5	21.0	16.0	14.0	15.0	15.0	13.5	14.5
8	23.0	21.5	22.5	21.0	20.0	20.5	16.5	15.0	15.5	15.0	13.5	14.5
9	22.0	21.0	21.0	21.5	19.5	21.0	18.0	16.0	17.0	15.0	13.5	14.0
10	23.0	21.0	22.0	19.5	17.5	18.5	19.0	18.0	18.5	13.5	9.0	10.5
11	24.0	22.0	23.0	18.5	17.0	18.0	18.5	17.5	18.0	10.0	8.0	9.0
12	23.5	21.5	22.5	18.5	17.5	18.0	17.5	16.0	17.0	11.0	8.5	10.0
13	22.0	20.5	21.0	19.0	18.0	18.5	17.0	16.0	17.0	11.0	9.0	10.0
14	22.5	21.0	22.0	20.0	18.5	19.5	16.5	15.0	16.0	10.5	8.0	9.5
15	23.0	21.0	22.0	20.0	19.0	19.5	16.0	15.0	15.5	11.5	10.0	10.5
16	24.5	22.5	23.5	19.5	18.0	19.0	15.0	13.0	14.0	12.5	10.0	11.5
17	25.5	24.5	25.0	19.5	18.0	19.0	14.0	12.5	13.5	12.0	11.0	11.5
18	26.0	25.0	25.5	20.5	18.5	19.5	14.0	11.0	12.5	11.5	9.5	10.5
19	26.0	25.0	25.5	20.5	19.5	20.0	11.0	9.5	10.0	10.0	7.5	9.0
20	25.0	24.0	24.5	19.5	18.0	18.5	11.0	9.0	10.0	10.5	9.0	10.0
21	24.0	22.5	23.0	19.5	17.5	19.0	11.0	9.5	10.5	11.5	9.0	10.0
22	22.5	21.5	22.0	21.5	19.5	20.5	9.5	7.5	8.5	10.5	9.5	10.0
23	22.5	21.0	22.0	21.0	17.5	19.0	9.5	8.0	8.5	10.5	9.0	10.0
24	22.5	21.0	22.0	17.5	16.0	16.5	8.5	6.0	7.5	11.0	7.5	9.5
25	23.0	21.5	22.0	17.5	16.0	16.5	7.0	5.0	6.0	12.5	9.0	10.5
26	22.0	20.5	21.5	18.0	15.5	17.0	8.0	7.0	7.5	12.5	10.0	11.5
27	22.0	20.5	21.5	16.0	13.5	15.0	9.0	7.5	8.0	13.5	10.0	12.0
28	22.0	20.5	21.5	13.5	11.5	12.5	9.0	8.0	8.5	12.5	9.0	11.0
29	22.5	21.0	22.0	14.0	11.5	13.0	8.0	6.0	6.5	14.5	12.5	13.5
30	23.0	22.0	22.5	15.5	13.5	14.5	7.0	5.5	6.5	14.5	13.5	14.0
31	23.5	22.5	23.0	---	---	---	7.5	6.0	7.0	---	---	---
MONTH	27.0	20.5	23.5	25.0	11.5	19.0	19.0	5.0	12.5	15.0	7.5	11.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	15.0	12.5	14.0	18.0	17.0	17.5	---	---	---
2	---	---	---	17.0	15.0	16.0	18.0	17.0	18.0	---	---	---
3	---	---	---	18.5	17.0	18.0	18.5	17.0	17.5	---	---	---
4	---	---	---	19.0	18.0	18.5	17.5	16.5	17.0	---	---	---
5	---	---	---	18.0	14.0	16.0	19.0	16.5	17.5	---	---	---
6	---	---	---	15.5	12.5	14.0	20.0	18.0	19.0	---	---	---
7	---	---	---	17.0	15.0	16.0	20.0	18.0	19.0	---	---	---
8	---	---	---	17.5	16.0	16.5	18.5	17.0	18.0	23.5	23.0	23.5
9	---	---	---	17.0	15.5	16.5	19.5	17.5	18.5	24.0	22.0	23.0
10	---	---	---	17.5	16.0	16.5	20.0	19.5	20.0	24.0	22.5	23.5
11	---	---	---	17.0	13.5	16.0	21.0	19.0	20.0	24.5	23.0	24.0
12	---	---	---	13.5	12.0	13.0	21.5	20.0	21.0	26.0	24.0	25.0
13	14.5	13.0	14.5	14.5	12.5	13.5	21.5	19.5	21.0	27.0	25.5	26.0
14	15.5	13.5	15.0	17.5	14.5	15.5	21.5	20.0	21.0	27.5	26.0	27.0
15	17.5	15.5	16.0	20.0	17.5	18.5	20.5	19.5	20.0	27.5	26.5	27.0
16	16.5	14.5	15.5	20.5	19.0	20.0	19.5	18.5	19.0	27.0	26.0	26.5
17	17.0	15.0	16.0	19.5	19.0	19.0	21.0	18.0	19.5	26.0	25.5	26.0
18	17.5	16.5	17.0	20.5	19.0	19.5	21.0	19.5	20.5	25.5	24.5	25.5
19	16.5	14.5	15.0	20.0	15.0	16.5	21.0	20.5	21.0	25.0	24.5	24.5
20	15.0	14.0	14.5	15.5	14.0	14.5	---	---	---	25.5	24.5	25.0
21	15.5	13.0	14.5	17.5	15.0	16.5	---	---	---	27.0	25.0	26.0
22	16.0	14.0	15.0	19.5	17.5	18.5	---	---	---	27.0	25.5	26.5
23	17.0	15.0	16.0	19.5	16.5	18.0	---	---	---	28.0	27.0	27.5
24	17.5	15.5	16.5	16.5	15.5	16.0	---	---	---	28.0	27.0	27.5
25	17.5	15.5	16.5	17.0	15.5	16.5	---	---	---	28.5	27.5	28.0
26	17.0	14.5	16.0	19.0	16.5	17.5	---	---	---	29.0	27.5	28.5
27	14.5	12.0	13.0	20.0	19.0	19.5	---	---	---	29.0	28.0	28.5
28	12.0	10.5	11.5	19.5	17.5	18.5	---	---	---	28.0	25.0	26.5
29	13.5	11.0	12.5	18.0	16.0	17.0	---	---	---	25.5	24.0	24.5
30	---	---	---	18.5	16.0	17.0	---	---	---	25.5	23.5	24.5
31	---	---	---	18.5	17.5	18.0	---	---	---	26.0	24.0	25.0
MONTH	17.5	10.5	15.0	20.5	12.0	17.0	21.5	16.5	19.0	29.0	22.0	26.0

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	24.5	25.5	30.0	29.0	29.5	29.5	28.0	29.0	30.5	29.5	30.0
2	27.0	25.0	26.0	30.0	29.0	29.5	29.5	28.0	29.0	30.0	29.0	29.5
3	27.5	26.0	27.0	30.5	29.5	30.0	30.0	28.5	29.5	---	---	---
4	27.0	26.5	26.5	30.5	29.0	30.0	30.0	28.5	29.5	---	---	---
5	27.0	25.5	26.5	30.0	29.0	29.5	30.0	28.5	29.0	---	---	---
6	27.0	23.0	25.0	30.5	29.0	30.0	30.0	29.0	29.5	---	---	---
7	25.5	24.0	24.5	31.0	29.5	30.5	30.0	29.0	29.5	---	---	---
8	27.5	25.5	26.5	31.0	30.0	30.5	30.5	29.0	29.5	---	---	---
9	27.5	26.5	27.0	31.0	29.5	30.0	30.5	29.5	30.0	---	---	---
10	27.5	27.0	27.0	---	---	30.0	30.5	29.0	30.0	---	---	---
11	28.0	26.5	27.5	31.0	29.5	30.0	30.5	28.0	29.5	---	---	---
12	28.5	27.5	28.0	30.5	29.0	30.0	28.0	27.0	27.5	---	---	---
13	29.0	27.5	28.5	30.0	29.0	29.5	28.0	26.0	27.0	30.0	29.5	30.0
14	29.5	28.0	28.5	30.5	29.0	29.5	29.5	28.0	28.5	30.0	29.0	29.5
15	30.0	28.0	29.0	30.5	29.0	30.0	29.5	28.0	29.0	30.0	27.5	28.5
16	30.0	28.5	29.0	31.0	29.5	30.5	30.0	28.5	29.5	27.0	25.5	26.5
17	29.5	28.5	29.0	30.5	30.0	30.5	30.5	29.0	30.0	27.0	25.0	26.0
18	29.5	28.0	29.0	31.0	29.5	30.0	31.0	29.5	30.0	27.5	25.5	26.5
19	29.5	28.5	29.0	30.0	29.0	29.5	31.0	30.0	30.5	27.5	26.0	26.5
20	30.0	28.5	29.5	30.5	29.5	30.0	31.0	30.0	31.0	27.0	26.0	26.5
21	30.0	28.5	29.5	31.0	29.5	30.5	31.0	30.0	30.5	27.0	26.0	26.5
22	30.5	28.5	29.5	30.5	29.5	30.0	30.5	30.0	30.5	28.0	26.0	27.0
23	30.5	29.0	30.0	30.5	29.5	30.0	30.5	30.0	30.0	28.0	27.0	27.5
24	30.5	29.5	30.0	30.0	29.0	29.5	30.5	29.5	30.0	28.5	27.5	28.0
25	30.5	29.0	30.0	30.0	28.5	29.0	30.5	29.0	30.0	28.5	27.0	28.0
26	30.0	29.0	29.5	30.0	28.5	29.5	30.0	29.0	29.5	27.0	24.0	25.0
27	30.0	28.5	29.0	30.5	29.0	29.5	30.5	29.0	30.0	24.0	23.0	23.5
28	30.0	29.0	29.5	30.0	28.5	29.5	31.0	30.0	30.5	24.0	22.0	23.0
29	30.0	28.0	29.0	30.0	28.5	29.5	31.0	30.0	30.5	22.0	21.0	21.5
30	30.0	28.5	29.0	29.0	28.0	28.5	31.0	30.0	30.5	22.0	20.0	21.5
31	---	---	---	29.5	29.0	28.5	30.5	29.5	30.0	---	---	---
MONTH	30.5	23.0	28.0	31.0	28.0	30.0	31.0	26.0	29.5	30.5	20.0	26.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.5	3.8	4.2	4.8	4.2	4.6	6.7	6.2	6.5	9.4	8.6	9.0
2	4.6	3.5	4.1	4.7	3.2	4.2	6.2	5.6	5.9	8.6	8.1	8.3
3	4.6	3.9	4.4	4.7	3.5	4.3	7.7	5.9	6.8	8.0	7.7	7.9
4	4.5	3.8	4.3	4.5	3.8	4.2	7.0	6.5	6.7	7.9	7.4	7.6
5	4.4	3.9	4.2	4.6	3.9	4.2	6.5	6.1	6.3	7.6	7.0	7.4
6	4.6	3.8	4.3	5.0	3.0	4.3	6.6	6.1	6.4	7.0	6.3	6.8
7	5.2	3.7	4.5	5.3	4.9	5.1	6.7	6.0	6.4	6.8	6.0	6.5
8	5.8	4.8	5.3	5.3	5.0	5.2	6.6	5.8	6.3	6.7	6.2	6.5
9	4.7	1.9	3.9	4.9	4.0	4.5	6.4	4.6	5.7	7.1	6.3	6.6
10	6.0	4.4	5.1	5.7	4.9	5.3	5.9	2.9	4.9	9.4	6.9	8.1
11	6.7	5.2	6.0	5.8	5.1	5.5	5.8	2.9	4.9	8.7	7.8	8.1
12	6.6	4.3	5.8	5.8	5.3	5.6	6.1	4.9	5.7	8.4	8.1	8.3
13	6.6	4.6	6.2	5.7	5.2	5.5	6.0	5.2	5.7	8.7	8.4	8.6
14	6.4	3.0	5.9	5.5	5.0	5.3	6.3	5.9	6.1	9.7	8.3	8.9
15	6.2	2.9	5.7	5.5	4.9	5.2	6.5	5.9	6.2	8.3	7.9	8.1
16	5.8	4.0	5.4	5.6	4.8	5.4	7.0	6.3	6.6	8.0	7.8	7.9
17	5.7	4.9	5.3	5.6	5.1	5.4	7.0	6.6	6.9	8.0	7.6	7.8
18	5.3	4.7	5.0	5.8	5.1	5.6	7.7	6.6	7.1	8.5	7.9	8.2
19	5.0	4.3	4.7	5.6	4.8	5.3	8.0	7.6	7.8	9.1	8.6	8.8
20	5.2	4.2	4.8	5.4	4.6	5.0	8.1	7.9	8.0	8.5	8.0	8.3
21	5.9	4.6	5.3	5.5	5.0	5.2	8.1	7.8	7.9	8.5	8.1	8.3
22	6.0	5.8	5.9	5.1	4.5	4.8	8.6	7.9	8.2	8.5	8.1	8.3
23	5.9	5.5	5.8	5.4	4.6	4.9	8.5	8.2	8.3	8.9	7.9	8.4
24	5.8	5.4	5.6	5.7	5.3	5.6	9.6	8.3	8.7	9.2	7.5	8.7
25	5.8	5.2	5.6	5.9	5.4	5.6	9.6	9.1	9.4	8.7	6.9	8.3
26	5.5	3.9	5.3	7.0	5.2	5.7	9.1	8.9	9.0	8.5	8.0	8.3
27	5.3	4.9	5.1	7.6	6.5	7.1	9.0	8.4	8.8	8.2	6.7	7.9
28	5.5	5.2	5.3	7.6	7.3	7.4	8.7	8.2	8.4	9.8	7.6	8.8
29	5.3	4.7	5.0	7.5	7.0	7.3	9.7	8.7	9.3	8.2	7.6	7.8
30	5.1	3.7	4.6	7.0	6.6	6.8	10.0	9.6	9.8	7.5	7.3	7.4
31	4.9	4.4	4.7	---	---	---	9.9	9.5	9.7	---	---	---
MONTH	6.7	1.9	5.1	7.6	3.0	5.3	10.0	2.9	7.2	9.8	6.0	8.0

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.6	7.2	7.4	6.9	6.7	6.8	---	---	---
2	---	---	---	7.1	6.5	6.8	7.9	6.6	7.1	---	---	---
3	---	---	---	6.4	5.8	6.1	7.3	6.6	7.0	---	---	---
4	---	---	---	5.9	5.5	5.7	7.4	6.8	7.1	---	---	---
5	---	---	---	7.4	5.7	6.1	7.3	6.6	6.8	---	---	---
6	---	---	---	8.0	6.7	7.4	6.8	6.0	6.4	---	---	---
7	---	---	---	6.7	6.3	6.5	7.2	5.9	6.3	---	---	---
8	---	---	---	6.4	6.1	6.3	7.1	5.8	6.6	5.6	4.6	5.6
9	---	---	---	6.5	5.9	6.2	6.3	4.7	5.5	5.6	5.1	5.4
10	---	---	---	6.3	5.9	6.1	6.7	5.7	6.2	5.5	4.9	5.2
11	---	---	---	8.1	5.7	6.2	6.7	6.2	6.5	5.4	4.9	5.2
12	---	---	---	8.6	7.1	7.9	6.5	5.6	6.2	5.2	4.5	4.9
13	7.3	6.7	6.9	7.8	6.7	7.3	6.5	6.1	6.3	4.9	4.2	4.6
14	7.1	6.6	6.9	6.8	6.2	6.5	6.5	6.0	6.3	4.7	4.1	4.5
15	8.0	6.2	6.8	7.0	5.9	6.5	6.6	6.1	6.4	4.7	4.1	4.5
16	7.9	5.8	7.1	6.8	5.6	5.9	6.8	6.3	6.6	4.8	4.1	4.5
17	6.3	5.4	6.0	6.8	5.9	6.2	6.7	4.6	5.7	4.9	4.3	4.7
18	6.5	5.4	6.1	6.2	5.8	6.0	6.3	4.7	5.7	5.1	3.1	4.5
19	7.0	6.3	6.8	7.2	5.9	6.7	6.3	3.8	5.5	4.6	2.1	3.8
20	7.2	6.4	6.8	7.1	6.4	6.7	---	---	---	4.7	4.1	4.5
21	7.1	6.6	7.0	6.8	6.5	6.6	---	---	---	4.9	4.3	4.7
22	6.8	6.3	6.6	6.8	6.5	6.6	---	---	---	5.0	4.4	4.8
23	6.4	6.0	6.3	7.8	6.6	7.1	---	---	---	4.9	4.1	4.6
24	6.5	5.0	6.0	6.9	6.5	6.7	---	---	---	4.6	3.7	4.3
25	6.5	6.1	6.3	6.6	5.5	6.1	---	---	---	4.4	3.9	4.2
26	7.7	5.8	6.6	6.6	6.2	6.5	---	---	---	4.3	3.7	4.1
27	8.0	7.2	7.6	7.1	6.2	6.6	---	---	---	4.3	3.6	4.0
28	8.6	7.0	8.0	7.5	5.7	6.6	---	---	---	4.9	3.6	4.1
29	8.1	7.6	7.9	7.4	6.8	7.1	---	---	---	4.6	3.6	4.2
30	---	---	---	8.2	6.8	7.5	---	---	---	4.8	3.8	4.3
31	---	---	---	6.8	6.2	6.6	---	---	---	4.7	4.2	4.5
MONTH	8.6	5.0	6.8	8.6	5.5	6.6	7.9	3.8	6.4	5.6	2.1	4.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.8	4.4	4.6	4.5	3.7	4.1	3.9	2.7	3.5	2.8	1.6	2.3
2	4.6	4.1	4.4	4.7	3.7	4.3	3.6	2.6	3.3	2.9	1.8	2.4
3	4.4	3.5	4.1	4.8	4.1	4.6	3.4	2.7	3.2	---	---	---
4	4.7	3.7	4.3	5.1	4.1	4.6	4.0	2.2	3.1	---	---	---
5	4.5	2.3	4.2	4.7	3.5	4.2	3.5	2.8	3.2	---	---	---
6	5.7	4.2	4.8	4.1	3.4	3.8	3.8	2.6	3.3	---	---	---
7	4.8	3.8	4.1	4.5	3.6	4.1	3.8	2.8	3.4	---	---	---
8	4.1	3.3	3.8	4.5	3.8	4.2	2.8	1.5	2.4	---	---	---
9	4.3	2.9	3.9	4.7	3.9	4.4	2.6	1.5	2.2	---	---	---
10	3.9	3.5	3.7	---	---	4.4	2.0	1.4	1.6	---	---	---
11	4.1	3.0	3.8	4.6	3.4	4.3	3.5	2.0	2.8	---	---	---
12	4.0	3.2	3.7	4.3	2.6	3.4	4.2	2.8	3.5	---	---	---
13	3.7	3.2	3.5	4.0	2.9	3.6	4.1	3.6	4.0	2.5	1.7	2.1
14	3.4	3.0	3.2	4.0	3.3	3.7	4.1	3.2	3.9	2.6	1.5	2.2
15	3.3	1.7	2.6	4.1	3.6	3.8	3.8	3.1	3.5	2.7	1.6	2.2
16	3.3	1.7	2.8	4.1	3.2	3.7	4.1	3.0	3.5	3.3	2.2	2.7
17	3.5	2.6	3.1	4.0	3.3	3.7	3.8	3.2	3.6	3.4	2.7	3.2
18	3.3	2.5	2.9	3.9	1.9	3.3	3.6	2.9	3.3	3.4	2.6	3.0
19	5.7	2.4	4.0	4.1	3.4	3.9	3.5	2.6	3.2	3.1	2.3	2.8
20	5.6	4.2	4.8	4.0	3.2	3.7	3.7	2.7	3.3	3.0	1.9	2.6
21	5.3	4.2	4.6	3.8	3.0	3.5	4.2	2.7	3.3	2.8	2.0	2.5
22	5.2	4.2	4.6	3.9	2.6	3.4	4.1	2.4	3.2	2.8	2.0	2.4
23	5.4	4.1	4.7	3.9	.4	2.4	3.4	2.4	3.0	2.6	1.8	2.2
24	5.3	4.1	4.8	3.9	2.9	3.6	3.3	2.4	2.9	2.6	1.9	2.4
25	5.1	3.9	4.7	3.9	2.2	3.2	3.2	1.9	2.7	2.8	1.8	2.3
26	5.0	3.7	4.5	3.7	2.8	3.3	3.3	2.3	2.8	3.1	2.4	2.7
27	4.8	3.6	4.3	3.7	2.2	2.9	3.3	2.4	2.9	3.3	2.3	3.1
28	4.7	3.6	4.2	3.4	2.1	2.9	3.1	2.1	2.8	3.6	3.1	3.3
29	4.4	2.5	3.3	3.4	1.7	2.8	3.0	2.1	2.7	3.7	3.1	3.4
30	4.2	2.3	3.6	3.8	2.8	3.3	3.0	1.9	2.5	3.8	3.4	3.6
31	---	---	---	4.0	3.5	3.6	2.8	1.8	2.4	---	---	---
MONTH	5.7	1.7	4.0	5.1	.4	3.7	4.2	1.4	3.1	3.8	1.5	2.7

08057445 PRAIRIE CREEK AT U.S. HIGHWAY 175, DALLAS, TX

LOCATION.--Lat 32°42'17", long 96°40'11", Dallas County, Hydrologic Unit 12030105, on left bank at downstream side of of the downstream access road bridge on U.S. Highway 175, 3.4 mi upstream from mouth, and 9.0 mi southeast of Dallas City Hall.

DRAINAGE AREA.--9.03 mi^2.

PERIOD OF RECORD.--October 1975 to September 1980, April to September 1984.

GAGE.--Water-stage recorder. Datum of gage is 390.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1976-80), 5.34 ft^3/s, 3,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,970 ft^3/s Apr. 19, 1976 (gage height, 22.38 ft); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 226 ft^3/s Apr. 20 at 2330 hours (gage height, 13.73 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							.86	1.10	.04	.39	.00	.00
2							20.00	5.80	.02	.07	.00	.02
3							6.00	.86	.02	.03	.00	.00
4							1.20	.40	.02	.01	.01	.00
5							.60	.14	.04	1.70	.04	.00
6							1.30	.06	53.00	.04	.01	.00
7							13.00	.14	5.20	.02	.00	.00
8							23.00	.05	1.40	.00	.00	.00
9							3.20	.05	.36	.00	.00	.00
10							1.40	.07	.16	.00	.00	.00
11							.78	.09	.11	.00	.00	.00
12							1.10	.14	.07	.91	.00	.00
13							1.10	.29	.05	.04	.00	.00
14							2.30	.30	.05	.00	.00	.00
15							2.50	.17	.04	.00	.00	.01
16							2.40	.13	.04	.00	.00	.00
17							3.00	.09	.04	.00	.00	.00
18							4.00	.06	.04	.00	.00	.00
19							4.10	3.00	.03	.00	.00	.00
20							14.00	4.50	.02	.00	.00	.00
21							40.00	.94	.01	.00	.00	.00
22							1.20	.36	.00	.00	.00	.06
23							.25	.14	.00	.00	.00	.00
24							.08	.07	.00	.00	.00	.00
25							.05	.03	.00	.00	.00	.00
26							.04	.02	.00	2.20	.00	.00
27							.04	.02	.00	4.30	.00	.00
28							.04	30.00	.00	.76	.02	.03
29							.06	2.60	.00	.10	.00	.03
30							.04	.55	.70	.02	.00	.00
31							---	.11	---	.00	.00	---
TOTAL							147.64	52.28	61.46	10.59	.08	.15
MEAN							4.92	1.69	2.05	.34	.003	.005
MAX							40	30	53	4.3	.04	.06
MIN							.04	.02	.00	.00	.00	.00
AC-FT							293	104	122	21	.2	.3

WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

08043000 BRIDGEPORT RESERVOIR ABOVE BRIDGEPORT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 07...	1210	342	19.5	130	23	42	6.7	17

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 07...	.7	5.0	110	18	27	.20	.6	180

08044000 BIG SANDY CREEK NEAR BRIDGEPORT, TX

LOCATION.--Lat 33°13'54", long 97°41'40", Wise County, Hydrologic Unit 12030101, on downstream side of bridge on U.S. Highway 380, 1.9 mi upstream from Greathouse Branch, 4.0 mi east of Bridgeport, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--333 mi^2.

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1148: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 727.44 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Since May 1, 1956, flow from 100 mi^2 above this station is affected at times by storage in Lake Amon G. Carter, 30 mi upstream, with a capacity of 15,240 acre-ft at elevation 920.0 ft, spillway crest. During year, the city of Bowie diverted water from Lake Amon G. Carter for municipal use and discharged sewage effluent into tributaries to Big Sandy Creek upstream from this station. Flow was also affected at times by discharge from the flood-detention pools of 19 floodwater-retarding structures with a combined capacity of 11,430 acre-ft. These structures control runoff from 46.0 mi^2 between this station and Lake Amon G. Carter. Gage-height telemeter at this station.

AVERAGE DISCHARGE.--48 years, 71.0 ft^3/s (51,440 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft^3/s June 10, 1941 (gage height, 15.69 ft, from floodmark), from rating curve extended above 22,000 ft^3/s; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887 occurred in 1908 and 1915 and reached about the same stage as that of June 10, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 468 ft^3/s June 10 at 1330 hours (gage height, 5.97 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	0	0	.00	.16	7.6	3.20	.16	.07	0	0	0
2	.00	0	0	.00	.12	5.0	3.60	.23	.07	0	0	0
3	.00	0	0	.00	.09	4.1	4.00	.61	.07	0	0	0
4	.00	0	0	.00	.04	3.6	3.40	.50	.07	0	0	0
5	.00	0	0	.00	.03	2.9	2.80	.43	.07	0	0	0
6	.00	0	0	.00	.05	2.3	2.40	.40	.07	0	0	0
7	.00	0	0	.00	.07	1.8	2.60	.23	.06	0	0	0
8	62.00	0	0	.00	.12	1.5	5.90	.15	.07	0	0	0
9	139.00	0	0	.00	.87	1.3	8.00	.12	.07	0	0	0
10	33.00	0	0	.00	1.60	1.9	6.30	.12	233.00	0	0	0
11	7.60	0	0	.55	2.60	3.6	4.00	.12	320.00	0	0	0
12	1.10	0	0	3.70	2.80	42.0	3.40	.12	86.00	0	0	0
13	.21	0	0	2.20	1.50	88.0	2.10	.12	22.00	0	0	0
14	.00	0	0	.85	.99	44.0	1.30	.10	8.10	0	0	0
15	.00	0	0	.39	.65	24.0	1.10	.09	2.10	0	0	0
16	.00	0	0	.16	.43	16.0	1.10	.09	.85	0	0	0
17	.00	0	0	.05	.36	11.0	1.80	.09	.20	0	0	0
18	.00	0	0	.02	.78	9.5	1.60	.09	.10	0	0	0
19	.00	0	0	.02	.80	9.1	1.50	.09	.08	0	0	0
20	.00	0	0	.02	2.40	9.6	1.70	.09	.07	0	0	0
21	.00	0	0	.02	2.60	8.5	7.40	.09	.05	0	0	0
22	.00	0	0	.02	1.70	7.9	7.20	.09	.05	0	0	0
23	.00	0	0	.01	1.20	8.3	2.50	.09	.03	0	0	0
24	.00	0	0	.01	1.30	7.2	1.20	.09	.03	0	0	0
25	.00	0	0	1.20	1.10	5.6	.80	.09	.02	0	0	0
26	.00	0	0	1.30	2.80	4.5	.66	.09	.02	0	0	0
27	.00	0	0	1.10	26.00	4.5	.56	.09	.01	0	0	0
28	.00	0	0	.85	35.00	4.6	.37	.09	.00	0	0	0
29	.00	0	0	.82	15.00	3.8	.22	.09	.00	0	0	0
30	.00	0	0	.49	---	4.1	.17	.08	.00	0	0	0
31	.00	---	0	.26	---	3.2	---	.07	---	0	0	---
TOTAL	242.91	0	0	14.04	103.16	351.0	82.88	4.91	673.33	0	0	0
MEAN	7.84	.000	.000	.45	3.56	11.3	2.76	.16	22.4	.000	.000	.000
MAX	139	.00	.00	3.7	35	88	8.0	.61	320	.00	.00	.00
MIN	.00	.00	.00	.00	.03	1.3	.17	.07	.00	.00	.00	.00
AC-FT	482	.00	.00	28	205	696	164	9.7	1340	.00	.00	.00

CAL YR 1983	TOTAL	2998.54	MEAN 8.22	MAX 318	MIN .00	AC-FT 5950		
WTR YR 1984	TOTAL	1472.23	MEAN 4.02	MAX 320	MIN .00	AC-FT 2920		

08044500 WEST FORK TRINITY RIVER NEAR BOYD, TX

LOCATION.--Lat 33°05'07", long 97°33'30", Wise County, Hydrologic Unit 12030101, on right bank at downstream side of highway embankment, 10 ft right of right abutment of bridge on Farm Road 730, 0.6 mi northeast of Boyd, 3.5 mi downstream from Boggy Creek, and at mile 602.

DRAINAGE AREA.--1,725 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 660.57 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 14, 1954, water-stage recorder at site 2.2 mi downstream at datum 5.48 ft lower.

REMARKS.--Records fair. During the current year, sustained flows were the result of releases for water supply from Bridgeport Reservoir (station 08043000) 25 mi upstream from this station (drainage area, 1,111 mi^2). In addition, flow from 100 mi^2 is affected by storage in Lake Amon G. Carter (capacity, 15,240 acre-ft) on Big Sandy Creek. Flow is also affected at times by discharge from the flood-detention pools of 36 floodwater-retarding structures with a combined detention capacity of 24,450 acre-ft. These structures control runoff from 91.2 mi^2 in the Big Sandy and Salt Creeks drainage basins. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--37 years, 229 ft^3/s (165,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,400 ft^3/s Oct. 14, 1981 (gage height, 25.87 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, about 25 ft in May 1908, present site and datum, from information by local residents, who also reported a flood of about the same gage height between 1870-80. A flood in April 1942 reached a stage of 20.6 ft, present site and datum, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 736 ft^3/s June 11 at 0400 hours (gage height, 12.74 ft); minimum daily, 0.84 ft^3/s Sept. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.9	11.0	13	83	97	70	72	78	291	380	7.00
2	2.2	9.7	7.0	38	83	94	70	73	77	290	345	4.20
3	11.0	4.6	5.2	242	84	91	72	94	93	292	329	3.40
4	5.6	4.2	4.6	177	84	91	70	82	197	292	347	3.20
5	3.4	3.4	4.5	201	83	90	69	75	28	292	345	2.60
6	2.2	4.5	4.5	115	83	87	60	73	28	292	315	1.80
7	3.4	4.7	4.5	97	83	68	75	72	108	292	349	1.50
8	17.0	4.7	4.6	96	90	66	85	71	92	291	338	1.30
9	95.0	4.6	4.5	96	73	64	86	71	96	289	315	1.00
10	110.0	4.4	4.5	98	88	70	83	192	206	288	321	5.00
11	32.0	3.8	4.5	93	89	75	83	373	642	292	338	3.40
12	14.0	4.4	4.5	86	90	255	80	264	316	306	340	1.70
13	7.6	3.4	4.5	86	89	249	75	76	84	316	316	1.10
14	5.0	3.2	4.5	86	89	196	75	68	33	340	306	7.40
15	4.0	3.1	4.5	85	88	164	74	66	109	340	304	6.20
16	3.4	7.5	4.5	85	88	86	74	125	112	340	281	2.60
17	2.7	5.4	8.9	85	88	79	74	394	112	340	268	1.20
18	3.3	4.5	7.7	84	88	76	73	272	112	342	268	3.40
19	3.6	4.5	7.0	85	87	96	74	86	133	343	261	6.40
20	4.0	4.5	5.6	86	86	84	75	88	145	348	264	2.30
21	3.8	4.5	5.2	86	89	74	77	82	146	346	288	1.10
22	3.8	7.4	4.8	86	88	69	87	78	194	348	339	.88
23	3.8	4.6	4.5	86	87	102	85	77	214	351	308	.84
24	3.8	4.6	4.5	85	86	91	82	78	216	350	281	.84
25	3.8	6.0	4.4	85	89	80	77	77	221	359	266	.91
26	4.0	4.8	4.5	85	105	75	74	78	245	291	266	6.30
27	4.1	4.7	4.6	86	110	75	69	78	288	152	266	2.50
28	3.6	4.6	4.7	85	122	75	69	77	290	262	266	1.10
29	3.3	4.5	20.0	83	112	69	75	78	291	317	266	.89
30	3.4	4.5	12.0	83	---	69	73	76	293	345	216	.89
31	3.4	---	8.6	82	---	70	---	76	---	417	29	---
TOTAL	372.4	144.2	188.9	2966	2604	3027	2265	3542	5199	9754	9121	82.95
MEAN	12.0	4.81	6.09	95.7	89.8	97.6	75.5	114	173	315	294	2.77
MAX	110	9.7	20	242	122	255	87	394	642	417	380	7.4
MIN	2.2	3.1	4.4	13	73	64	60	66	28	152	29	.84
AC-FT	739	286	375	5880	5170	6000	4490	7030	10310	19350	18090	165

CAL YR 1983 TOTAL 31093.50 MEAN 85.2 MAX 414 MIN 2.2 AC-FT 61670
WTR YR 1984 TOTAL 39266.45 MEAN 107 MAX 642 MIN .84 AC-FT 77880

08045000 EAGLE MOUNTAIN RESERVOIR ABOVE FORT WORTH, TX

LOCATION.--Lat 32°52'39", long 97°28'29", Tarrant County, Hydrologic Unit 12030101, at right end of main section (left) of Eagle Mountain Dam on West Fork Trinity River, 11.8 mi northwest of Fort Worth, and at mile 583.3.

DRAINAGE AREA.--1,970 mi².

PERIOD OF RECORD.--February 1934 to current year (prior to October 1950, monthend figures only).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 24, 1943, nonrecording gages at several sites within 1.0 mi of present site at present datum.

REMARKS.--The reservoir is formed by two sections of rolled earthfill and a concrete spillway separated by high natural ground. Total length of the dam, including spillway, is 4,800 ft. The dam was completed Oct. 24, 1932, and storage began Feb. 28, 1934. The emergency spillway is a 1,300-foot-wide cut through natural ground located between the two sections of earthfill that make up the dam. The original service spillway, located in the section to the right of the main dam, contains a concrete spillway with four 25-foot bays, three are equipped with vertical lift gates and the fourth is left open. In 1971, a side-channel spillway was constructed. The newest spillway is located 300 ft to the left of the original service spillway and has six 11.25- by 22-foot-wide roller lift gates. The main section of the dam contains the outlet works that consist of two concrete conduits with two 48-inch-diameter valves in each conduit. The reservoir is used for flood control and for part of the municipal water supply for the city of Fort Worth. Capacities are based on a survey made in 1968. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08044500. For storage above the reservoir, see REMARKS for West Fork Trinity River near Boyd (station 08044500). Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	682.0	-
Crest of spillway	676.0	558,000
Top of gates (new side-channel spillway)	659.0	295,400
Crest of (old service) spillway (top of conservation pool)	649.1	190,400
Crest of spillway (new side-channel spillway)	637.0	99,120
Lowest gated outlet (invert)	599.9	94

COOPERATION.--Daily elevation records furnished by Tarrant County Water Control and Improvement District No. 1. Capacity table furnished by Freese and Nichols, Consulting Engineers, for Tarrant County Water Control and Improvement District No. 1.

EXTREMES (at 0700) FOR PERIOD OF RECORD.--Maximum contents observed, 333,500 acre-ft Apr. 26, 1942 (elevation, 659.9 ft); minimum observed since first appreciable storage in 1935, 57,690 acre-ft Nov. 19, 20, 1956.

EXTREMES (at 0700) FOR CURRENT YEAR.--Maximum contents observed, 157,900 acre-ft Oct. 1 (elevation, 645.32 ft); minimum observed, 120,500 acre-ft Sept. 30 (elevation, 640.28 ft).

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

640.0	118,600	644.0	147,500
642.0	132,600	646.0	163,300

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157900	149300	141700	134400	135400	136000	139600	137800	138100	137600	137100	137800
2	157300	149100	141600	134200	135300	136000	139500	138500	137800	137600	137100	137100
3	156700	148800	141600	134100	135400	136000	139500	138700	137700	137600	137100	136900
4	156300	148400	141100	134200	135400	136000	139500	138500	137500	137200	137200	136000
5	156000	148300	140900	134500	135300	135900	139400	138400	137800	137400	137100	135400
6	155500	148600	140600	134600	135200	135800	139200	138300	139500	137300	137100	134700
7	155700	148400	140100	134700	135200	135700	139000	138200	139300	137400	137000	133900
8	156200	148100	140000	134800	135200	135700	139700	138100	139300	137300	137000	133100
9	156200	147900	139900	134900	135600	135600	139800	137900	139200	137200	136900	132400
10	156300	147500	139600	135600	135600	135500	139600	137600	139300	137100	137000	131700
11	156300	146900	139400	135400	135600	135500	139700	137400	139200	137000	137000	131100
12	156300	146600	139200	135200	135900	136800	139800	137700	139900	137100	137600	130500
13	155800	146300	138700	135200	135900	137600	139600	138100	140300	137200	137700	129900
14	155300	146000	138600	135400	135900	137900	139500	138200	140200	137100	137700	129400
15	154800	145800	138300	135300	135700	137900	139400	138100	139900	137000	137700	128800
16	154700	145400	137900	135300	135700	138300	139200	138000	139700	136900	137800	128100
17	154300	145100	137900	135200	135700	138300	139000	137800	139400	136900	137900	127400
18	154100	144800	137700	135200	136100	138300	138900	138200	139200	136900	137900	126800
19	153900	145100	137400	135200	135900	139300	138800	139300	138900	136900	138000	126300
20	153600	144700	137100	135200	135800	139300	138800	139500	138700	136700	138100	125600
21	153700	144200	136900	135100	135800	139200	139000	139500	138500	136600	138100	125200
22	153200	144000	136700	135100	135700	139200	138900	139300	138200	136600	138000	124700
23	152800	144100	136400	135200	135600	139600	138800	139300	138100	136600	138100	124100
24	152300	143800	136200	135400	135600	140100	138600	139300	138000	136700	138100	123500
25	152000	144000	136000	135300	135600	140100	138500	139200	137700	136900	138000	123100
26	151600	144000	135900	135400	136100	140100	138300	139000	137400	137100	138000	122400
27	151200	143900	135400	135400	136600	140100	138300	138900	137400	137200	138000	122000
28	150800	142700	135300	135400	136300	140100	138200	139100	137400	137100	138100	121500
29	150400	142300	135200	135400	136100	139800	138000	139000	137500	137100	138100	120700
30	150100	142100	135100	135400	---	139600	137900	138700	137700	137200	138200	120500
31	149700	---	135500	135300	---	139600	---	138400	---	137100	138300	---
MAX	157900	149300	141700	135600	136600	140100	139800	139500	140300	137600	138300	137800
MIN	149700	142100	135100	134100	135200	135500	137900	137400	137400	136600	136900	120500
(†)	644.29	643.29	642.40	642.37	642.48	642.96	642.73	642.79	642.69	642.62	642.78	640.28
(‡)	-8600	-7600	-6600	-200	+800	+3500	-1700	+500	-700	-600	+1200	-17800

CAL YR 1983 MAX 178600 MIN 135100 ‡ -37300
WTR YR 1984 MAX 157900 MIN 120500 ‡ -37800

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

08045400 LAKE WORTH ABOVE FORT WORTH, TX

LOCATION.--Lat 32°47'21", long 97°24'58", Tarrant County, Hydrologic Unit 12030102, on top of Lake Worth Dam on West Fork Trinity River, 240 ft to right of right end of uncontrolled concrete spillway, 2.9 mi upstream from Farmers Branch, 3.3 mi upstream from bridge on State Highway 183 crossing West Fork Trinity River, 5.3 mi northwest of Tarrant County Courthouse in Fort Worth, and at river mile 572.0.

DRAINAGE AREA.--2,064 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to current year.

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

REMARKS.--The lake is formed by a rolled earthfill dam 3,200 ft long, with an uncontrolled concrete spillway 700 ft long near the center of the dam. Deliberate impoundment began in June 1914 and the dam was completed in October 1914. There is a 48-inch-diameter pipe controlled by a 36-inch valve, which may be used to make small releases through the dam. The dam is owned by the city of Fort Worth. Area-capacity curves are based on a survey made in 1968. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	606.3	-
Crest of concrete spillway	594.0	37,070
Lowest gated outlet (invert)	584.25	12,290

COOPERATION.--Copies of the capacity table (prepared by the Corps of Engineers), area-capacity curves (prepared by Freese, Nichols, and Endress, Consulting Engineers), and record of observed elevations were furnished by Tarrant County Water Control and Improvement District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,900 acre-ft Oct. 15, 1981, at 0800 hours (elevation, 598.23 ft); minimum observed, 26,010 acre-ft Oct. 6, 1981 (elevation, 590.42 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum contents observed, 52,080 acre-ft May 25, 1957 (elevation, 598.47 ft); minimum observed, 20,540 acre-ft June 30, 1955 (elevation, 589.45 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,420 acre-ft Oct. 8 at 1500 hours (elevation, 591.62 ft, from graph); minimum, 24,830 acre-ft June 19 (elevation, 589.99 ft).

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

589.0	22,300	591.0	27,600
590.0	24,860	592.0	30,540

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
140.0 PERCENTILE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28680	27890	27430	27830	27740	28180	27740	26960	25270	24990	25210	25320
2	28600	27890	27460	27600	27710	28240	27890	27160	25210	24940	25240	25510
3	28600	27920	27430	27490	27740	28240	27740	27100	25050	25160	25320	25650
4	28570	28040	27430	27540	27710	28330	27510	27160	25020	25130	25400	25680
5	28600	28070	27460	27540	27600	28270	27400	27160	24910	25100	25460	25680
6	28680	28120	27290	27430	27570	28180	27210	27180	25650	25020	25490	25650
7	28800	28070	27290	27430	27540	28100	27380	27100	25620	24960	25510	25540
8	29390	28070	27290	27490	27650	28070	27270	26990	25490	24860	25540	25570
9	29180	28180	27320	27830	27740	28070	27130	26880	25400	24990	25590	25620
10	28980	28010	27290	27950	27600	28100	27050	26750	25350	25070	25680	25570
11	28770	27920	27240	27860	27830	28480	26830	26750	25320	25130	26170	25540
12	28540	27950	27160	27890	27800	28770	26690	26660	25160	25070	26420	25460
13	28390	27920	27180	27920	27770	28770	26550	26640	25160	25020	26580	25460
14	28300	27950	27240	27920	27710	28770	26420	26500	25130	24860	26750	25570
15	28300	27830	27290	27800	27740	28770	26420	26360	25070	24860	26770	25490
16	28270	27770	27320	27800	27710	28770	26390	26230	24960	24990	26720	25590
17	28270	27680	27460	27800	27570	28770	26390	26200	24940	24990	26640	25620
18	28150	27650	27570	27890	27800	29040	26390	26390	24860	24990	26580	25590
19	28120	27650	27600	27800	27770	28830	26390	26390	24830	25020	26470	25590
20	28330	27620	27620	27710	27770	28740	26580	26390	25020	24990	26330	25700
21	28150	27600	27800	27650	27770	28630	26690	26250	25050	25020	26230	25840
22	28070	27740	27800	27710	27740	28480	26530	26230	25160	25100	26120	25950
23	28040	27620	27830	27770	27740	28950	26530	26230	25070	25130	26010	26090
24	27950	27600	27890	27800	27710	28800	26360	26140	25050	25490	25950	26060
25	27950	27460	27890	27740	27600	28630	26390	26030	24990	25540	25810	26030
26	27950	27570	27890	27740	28450	28630	26390	25980	24880	25510	25790	26060
27	27950	27570	27830	27800	28270	28650	26420	25870	24860	25400	25650	25950
28	27950	27430	27830	27740	28100	28420	26420	25730	24860	25380	25510	25950
29	27920	27460	27830	27800	28100	28210	26440	25590	24860	25290	25350	25920
30	27920	27460	27830	27740	---	28010	26440	25570	24960	25210	25320	25870
31	27920	---	27830	27740	---	27980	---	25290	---	25180	25320	---
MAX	29390	28180	27890	27950	28450	29040	27890	27180	25650	25540	26770	26090
MIN	27920	27430	27160	27430	27540	27980	26360	25290	24830	24860	25210	25320
(†)	591.11	590.95	591.08	591.05	591.17	591.13	590.58	590.16	590.04	590.12	590.17	590.37
(‡)	-650	-460	+370	-90	+360	-120	-1540	-1150	-330	+220	+140	-550

CAL YR 1983 MAX 31260 MIN 27160 ‡ -3400
WTR YR 1984 MAX 29390 MIN 24830 ‡ -2700

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

08045400 LAKE WORTH ABOVE FORT WORTH, TX

LOCATION.--Lat 32°47'21", long 97°24'58", Tarrant County, Hydrologic Unit 12030102, 2.9 mi upstream from Farmers Branch, 3.3 mi upstream from bridge on State Highway 183, and 5.3 mi northwest of the Tarrant County Courthouse in Fort Worth.

DRAINAGE AREA.--2,064 mi².

PERIOD OF RECORD.--Chemical analyses: January 1970 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 10...	1354	442	24.0	160	27	48	8.9	29

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 10...	1	5.1	130	26	42	.30	3.8	240

08045850 CLEAR FORK TRINITY RIVER NEAR WEATHERFORD, TX

LOCATION.--Lat 32°44'25", long 97°39'06", Parker County, Hydrologic Unit 12030102, near left end of bridge on weigh station exit road associated with Interstate Highway 20, 150 ft downstream from Squaw Creek, 2.8 mi downstream from Lake Weatherford Dam on the Clear Fork Trinity River, 3.8 mi upstream form South Fork Trinity River, and 8.5 mi east of county courthouse in Weatherford.

DRAINAGE AREA.--121 mi².

PERIOD OF RECORD.--May 1980 to current year.
Water-quality records.--Chemical and biochemical analysis: October 1980 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 810.00 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Records good. Flow is regulated by Lake Weatherford. The city of Weatherford diverts water from Lake Weatherford for Municipal use and returns sewage effluent to the South Fork Trinity River, a tributary downstream from this station. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,080 ft³/s Nov. 1, 1981 (gage height, 21.58 ft); no flow Sept. 12-15, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 187 ft³/s June 6 at 0445 hours (gage height, 11.21 ft); no flow Sept. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.50	1.60	.80	1.1	1.10	1.40	3.30	.50	.39	.23	.11
2	.59	.53	1.70	.76	1.1	1.20	1.70	1.30	.47	.39	.23	.10
3	.59	.59	1.50	.74	1.2	1.20	1.40	.78	.49	.43	.21	.12
4	.55	.87	1.50	.72	1.2	1.20	1.20	.73	.50	.38	.21	.11
5	.53	1.10	1.50	.72	1.1	1.20	1.20	.82	.59	.42	.25	.08
6	.63	2.20	1.50	.70	1.1	1.20	1.40	.77	23.00	.37	.22	.09
7	.84	1.10	1.40	.70	1.1	1.50	4.10	.71	.77	.39	.20	.03
8	2.60	1.00	1.40	.64	1.1	1.40	2.00	.58	.66	.38	.22	.06
9	.79	1.00	1.40	6.00	1.1	1.40	1.20	.59	.60	.36	.26	.08
10	.71	.90	1.20	1.50	1.1	1.50	1.00	.56	.57	.35	.21	.06
11	.64	.93	1.20	1.30	1.1	4.80	1.00	.55	.57	.35	1.20	.03
12	.57	.98	1.20	1.30	1.1	6.10	.86	.55	.57	.36	.26	.00
13	.51	.86	1.20	1.20	1.1	1.70	.86	.55	.57	.42	.19	.00
14	.53	.87	1.20	1.20	1.1	1.50	.86	.57	.56	.37	.16	.00
15	.49	.97	1.00	1.20	1.1	1.20	.93	.55	.59	.31	.19	.00
16	.47	.93	1.50	1.10	1.0	1.20	1.00	.54	.60	.27	.20	.08
17	.51	.93	1.30	1.10	1.0	1.40	.93	.53	.58	.24	.20	.10
18	.51	.88	1.20	1.10	1.4	2.40	.93	.59	.57	.29	.19	.10
19	.54	.93	1.10	1.00	1.0	2.00	.93	.67	.57	.27	.18	.08
20	.57	1.00	1.10	1.00	1.0	1.20	.86	.63	.57	.24	.15	.09
21	.53	1.20	1.00	1.00	1.1	1.20	.73	.60	.53	.27	.14	.16
22	.51	1.30	1.00	2.00	1.1	1.20	.73	.57	.47	.28	.13	.18
23	.53	1.40	.94	1.60	1.1	10.00	.67	.57	.44	.26	.13	.15
24	.51	1.40	.94	1.40	1.1	1.00	.67	.57	.49	.40	.15	.13
25	.49	1.40	.90	1.30	1.0	.93	.67	.57	.50	.39	.15	.10
26	.50	1.10	.90	1.20	4.1	.93	.67	.49	.47	.36	.13	.12
27	.47	1.40	.86	1.20	1.0	1.00	.61	.54	.51	.34	.14	.18
28	.49	1.40	.86	1.10	1.0	1.10	.57	.56	.48	.30	.12	.20
29	.42	1.40	.84	1.10	1.1	1.20	.67	.53	.43	.30	.08	.20
30	.46	1.40	.82	1.10	---	1.40	.53	.53	.41	.24	.06	.20
31	.52	---	.80	1.10	---	1.40	---	.53	---	.24	.11	---
TOTAL	19.18	32.47	36.56	38.88	34.7	57.76	32.28	21.93	38.63	10.36	6.50	2.94
MEAN	.62	1.08	1.18	1.25	1.20	1.86	1.08	.71	1.29	.33	.21	.098
MAX	2.6	2.2	1.7	6.0	4.1	10	4.1	3.3	23	.43	1.2	.20
MIN	.42	.50	.80	.64	1.0	.93	.53	.49	.41	.24	.06	.00
AC-FT	38	64	73	77	69	115	64	43	77	21	13	5.8

CAL YR 1983 TOTAL 1406.53 MEAN 3.85 MAX 93 MIN .42 AC-FT 2790
WTR YR 1984 TOTAL 332.19 MEAN .91 MAX 23 MIN .00 AC-FT 659

NOTE.--No gage-height record Dec. 15 to Jan. 30.

08046500 BENBROOK LAKE NEAR BENBROOK, TX

LOCATION.--Lat 32°39'02", long 97°26'54", Tarrant County, Hydrologic Unit 12030102, in intake structure of Benbrook Dam on Clear Fork Trinity River, 2.5 mi south of Benbrook, 3.5 mi upstream from Marys Creek, and 14.6 mi upstream from mouth.

DRAINAGE AREA.--429 mi².

PERIOD OF RECORD.--September 1952 to current year. Prior to October 1970, published as Benbrook Reservoir. Water-quality records.--Chemical analyses: October 1969 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

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

REMARKS.--The lake is formed by a rolled earthfill dam 9,130 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with a 100-foot notch in center of ogee weir section. The outlet works consist of a 13.0-foot-diameter concrete conduit controlled by two 6.5- by 13.0-foot broome-type gates and two 30-inch steel pipes controlled by slide gates. Deliberate impoundment began Sept. 29, 1952. From August 1950 to Sept. 28, 1952, the lake was operated as a detention basin only. The capacity table is based on a survey made in 1945. The lake was built for flood control, navigation, and low-flow regulation. Inflow is affected at times by the discharge from flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 11,170 acre-ft. These structures control runoff from 37.6 mi². Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	747.0	-
Crest of spillway	724.0	258,600
Crest of notch in spillway	710.0	164,800
Top of conservation storage	694.0	88,250
Crest of intake to wet wells (inverts)	656.0	6,550
Lowest gated outlet (invert)	622.0	12

COOPERATION.--Records of elevations and contents furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 185,000 acre-ft June 6, 1957 (elevation, 713.35 ft); minimum since lake first filled in 1957, 61,790 acre-ft Sept. 30, 1984 (elevation, 686.27 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 80,960 acre-ft Apr. 8 at 1600 hours (elevation, 692.02 ft); minimum daily, 61,790 acre-ft Sept. 30 at 2400 hours (elevation, 686.27 ft).

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

686.0	60,950	690.0	73,900
688.0	67,250	692.0	80,890

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77910	76420	73690	71340	71400	71610	73620	73150	71270	69640	66840	64340
2	77840	76420	73690	71440	71400	71570	73730	73260	71170	69580	66740	64250
3	77810	76310	73660	71400	71370	71610	73660	73260	71070	69450	66680	64150
4	77670	76480	73620	71400	71340	71540	73620	73190	71070	69280	66610	64020
5	77600	76450	73520	71370	71300	71500	73590	73190	71030	69250	66550	63960
6	77630	76380	73460	71370	71300	71500	73560	73150	71500	69120	66450	63840
7	80640	76310	73360	71370	71270	71470	73790	73050	71640	69020	66320	63710
8	80960	76210	73320	71340	71340	71400	73760	72980	71640	68920	66130	63620
9	80930	76040	73260	71570	71470	71370	73790	72920	71540	68790	66130	63530
10	80860	75900	73220	71610	71500	71440	73760	72820	71470	68630	66200	63400
11	80710	75790	73090	71610	71610	71740	73760	72720	71400	68530	66230	63280
12	80610	75620	73050	71610	71570	72110	73690	72650	71340	68530	66200	63190
13	80500	75550	72980	71610	71570	72210	73660	72580	71270	68460	66100	63120
14	80390	75410	72920	71570	71570	72410	73560	72550	71170	68360	66000	63030
15	80320	75310	72780	71540	71540	72410	73490	72480	71100	68270	65940	62910
16	80290	75210	72780	71540	71500	72450	73420	72380	71030	68200	65880	62780
17	80290	75100	72750	71500	71570	72450	73390	72310	70930	68070	65780	62720
18	80250	75000	72620	71500	71570	72510	73390	72310	70860	67970	65680	62630
19	80250	74900	72550	71470	71540	72480	73360	72310	70700	67910	65590	62530
20	80290	74720	72480	71440	71540	72450	73360	72240	70600	67780	65520	62470
21	80110	74550	72450	71440	71540	72410	73290	72210	70500	67640	65400	62470
22	80000	74520	72410	71400	71540	72350	73220	72110	70360	67510	65330	62410
23	79930	74410	72310	71440	71500	73520	73150	72080	70270	67450	65240	62350
24	79860	74340	72180	71440	71470	73660	73120	72040	70170	67450	65140	62280
25	79760	74240	72080	71440	71470	73730	73050	71940	70140	67380	65050	62130
26	79680	74170	71980	71440	71670	73690	73020	71840	70000	67320	64950	62000
27	79650	74140	71810	71440	71670	73790	72950	71770	69970	67320	64850	62070
28	79580	73960	71740	71440	71640	73690	72920	71710	69910	67220	64760	61970
29	79540	73890	71640	71440	71610	73660	72850	71610	69810	67150	64630	61850
30	79470	73760	71570	71400	---	73620	72780	71500	69740	67030	64540	61790
31	79440	---	71500	71400	---	73620	---	71440	---	66930	64440	---
MAX	80960	76480	73690	71610	71670	73790	73790	73260	71640	69640	66840	64340
MIN	77600	73760	71500	71340	71270	71370	72780	71440	69740	66930	64440	61790
(†)	691.59	689.96	689.29	689.26	689.32	689.92	689.67	689.27	688.76	687.90	687.12	686.27
(‡)	-1420	-5680	-2260	-100	+210	+2010	-840	-1340	-1700	-2810	-2490	-2650

CAL YR 1983 MAX 84930 MIN 71500 ‡ -9000
WTR YR 1984 MAX 80960 MIN 61790 ‡ -16230

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

08047000 CLEAR FORK TRINITY RIVER NEAR BENBROOK, TX

LOCATION.--Lat 32°39'54", long 97°26'30", Tarrant County, Hydrologic Unit 12030102, on left bank 1.5 mi downstream from Benbrook Dam, 1.7 mi southeast of Benbrook, 2.9 mi upstream from Marys Creek, and 13.1 mi upstream from mouth.

DRAINAGE AREA.--431 mi^2.

PERIOD OF RECORD.--July 1947 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 604.22 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good. Flow regulated by Benbrook Lake (station 08046500) since September 1952. Diversion 1.0 mi upstream for Pecan Valley Golf Course. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--5 years (water years 1948-52) prior to regulation by Benbrook Lake, 105 ft^3/s (76,070 acre-ft/yr); 32 years (water years 1953-84) regulated, unadjusted, 66.9 ft^3/s (48,470 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,900 ft^3/s May 17, 1949 (gage height, 28.72 ft), from rating curve extended above 11,000 ft^3/s on basis of velocity-area studies and slope-area measurement of 82,900 ft^3/s; no flow at times most years. Maximum discharge since construction of Benbrook Dam in 1952, 4,710 ft^3/s May 7, 1979 (gage height, 11.27 ft); maximum gage height, 12.20 ft Apr. 7, 1977.
Maximum stage since at least 1922, that of May 17, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 172 ft^3/s Mar. 23 at 0715 hours (gage height, 3.84 ft); minimum daily, 4.7 ft^3/s June 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	11	20	25.0	5.9	10.0	12	16.0	8.5	12.0	8.7	9.6
2	10.0	24	21	24.0	6.1	11.0	13	11.0	9.3	11.0	9.0	9.9
3	9.9	35	21	16.0	6.4	12.0	13	11.0	9.9	11.0	9.1	8.8
4	10.0	38	21	8.5	6.8	12.0	12	11.0	9.5	10.0	9.6	9.1
5	9.9	36	21	8.6	7.2	12.0	12	11.0	8.8	11.0	9.0	8.9
6	9.8	36	22	8.9	6.9	12.0	13	10.0	12.0	10.0	8.9	9.2
7	11.0	36	25	7.3	5.0	12.0	16	9.8	8.6	11.0	8.6	8.8
8	13.0	37	25	7.5	7.0	12.0	12	9.4	4.7	9.1	8.0	9.3
9	8.9	36	26	8.4	7.2	12.0	11	9.3	4.9	10.0	8.1	12.0
10	9.4	36	26	6.9	6.1	13.0	11	9.3	5.6	31.0	8.5	15.0
11	8.4	37	26	6.3	7.1	19.0	12	9.4	14.0	25.0	10.0	14.0
12	8.1	37	27	6.7	7.6	16.0	12	9.8	8.5	8.1	10.0	14.0
13	8.5	37	27	7.2	6.8	7.2	12	9.6	7.6	8.4	9.3	13.0
14	8.2	36	27	6.8	8.1	7.2	13	9.5	7.8	8.5	8.3	13.0
15	9.2	36	25	6.8	10.0	7.2	13	9.3	8.3	8.9	8.8	14.0
16	10.0	37	26	6.8	10.0	7.2	12	9.2	8.9	8.5	8.4	13.0
17	9.1	37	27	6.9	12.0	7.2	13	9.2	9.0	8.6	8.6	11.0
18	9.9	48	27	6.9	13.0	7.2	13	10.0	9.3	8.8	8.9	11.0
19	10.0	58	28	6.6	13.0	7.2	13	10.0	10.0	7.9	8.9	12.0
20	11.0	58	29	6.4	11.0	6.8	13	10.0	9.8	8.1	8.4	12.0
21	10.0	57	29	6.0	10.0	18.0	13	9.6	10.0	8.1	12.0	14.0
22	11.0	58	28	5.8	11.0	21.0	13	9.3	11.0	7.8	7.1	15.0
23	11.0	49	27	5.9	12.0	28.0	12	8.5	11.0	8.1	8.0	15.0
24	10.0	27	27	5.1	12.0	12.0	12	9.9	11.0	7.9	9.6	13.0
25	10.0	27	28	5.2	12.0	12.0	12	9.2	11.0	7.6	9.8	12.0
26	10.0	28	27	5.8	13.0	11.0	12	9.2	11.0	7.8	9.3	12.0
27	10.0	28	28	5.8	11.0	12.0	12	8.9	11.0	7.7	9.2	10.0
28	11.0	29	28	6.8	11.0	12.0	12	9.0	11.0	7.5	9.2	8.5
29	11.0	28	27	6.6	11.0	12.0	12	9.0	12.0	7.8	9.6	8.8
30	11.0	25	27	6.4	---	12.0	12	8.5	12.0	7.5	9.5	10.0
31	10.0	---	26	6.4	---	12.0	---	8.4	---	7.9	9.5	---
TOTAL	309.2	1102	799	254.3	266.2	372.2	373	303.3	286.0	312.6	279.9	345.9
MEAN	9.97	36.7	25.8	8.20	9.18	12.0	12.4	9.78	9.53	10.1	9.03	11.5
MAX	13	58	29	25	13	28	16	16	14	31	12	15
MIN	8.1	11	20	5.1	5.0	6.8	11	8.4	4.7	7.5	7.1	8.5
AC-FT	613	2190	1580	504	528	738	740	602	567	620	555	686

CAL YR 1983 TOTAL 5361.88 MEAN 14.7 MAX 168 MIN .07 AC-FT 10640
WTR YR 1984 TOTAL 5003.60 MEAN 13.7 MAX 58 MIN 4.7 AC-FT 9920

08047500 CLEAR FORK TRINITY RIVER AT FORT WORTH, TX

LOCATION.--Lat 32°43'56", long 97°21'31", Tarrant County, Hydrologic Unit 12030102, at Fort Worth pumping station on left bank, 240 ft upstream from the Texas and Pacific Railway Co. bridge in Fort Worth, 830 ft upstream from East-West Expressway bridge, 2.5 mi upstream from mouth, 5 mi downstream from Marys Creek, and 10 mi downstream from Benbrook Dam.

DRAINAGE AREA.--518 mi^2.

PERIOD OF RECORD.--March 1924 to current year.

REVISED RECORDS.--WSP 1392: 1924-25, 1927. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 532.91 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 3, 1970, various nonrecording and recording gages were located within 650 ft of present site at different datums.

REMARKS.--Records good. Since September 1952, flow largely regulated by Benbrook Lake (station 08046500). The city of Fort Worth diverted water from pool at gage during the current year. The Benbrook Water and Sewage Authority diverted water from the river upstream from the station for municipal use. Several observations of water temperature were made during the year. Gage-height telemeter is located at station.

AVERAGE DISCHARGE.--28 years (water years 1925-52) prior to regulation by Benbrook Lake, 112 ft^3/s (81,140 acre-ft/yr); 32 years (water years 1953-84) regulated, unadjusted, 96.8 ft^3/s (70,130 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft^3/s May 17, 1949 (gage height, 28.20 ft, present datum), from rating curve extended above 16,000 ft^3/s on basis of contracted-opening measurement of 107,000 ft^3/s; no flow at times most years.
Maximum stage since at least 1900, 28.20 ft May 17, 1949, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 25, 1922, reached a stage of 27.5 ft, present datum (discharge, 74,300 ft^3/s, by slope-area measurement of peak flow); data furnished by Fort Worth city engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft^3/s Oct. 8 at 0330 hours (gage height, 13.72 ft); no flow Dec. 6-8, due to pumping from pool at gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	9.5	.06	22.0	4.9	8.2	23.0	295.0	8.9	15.00	1.30	.23
2	6.4	5.2	.11	21.0	5.3	6.9	35.0	71.0	8.0	10.00	1.30	.45
3	6.4	4.8	4.20	20.0	4.3	7.6	24.0	31.0	7.7	5.70	6.00	2.10
4	6.4	23.0	1.20	12.0	4.3	8.1	20.0	26.0	12.0	4.10	8.60	2.40
5	6.8	14.0	.05	8.9	4.6	7.2	19.0	22.0	69.0	19.00	7.20	2.90
6	10.0	20.0	.00	8.0	4.0	6.5	19.0	19.0	219.0	15.00	5.50	3.20
7	50.0	9.9	.00	7.7	4.0	5.9	145.0	14.0	21.0	7.80	4.00	2.50
8	1540.0	10.0	.00	6.6	19.0	4.0	34.0	12.0	12.0	5.10	2.60	2.30
9	78.0	7.4	1.80	63.0	99.0	5.0	24.0	13.0	8.4	2.80	1.00	1.70
10	20.0	5.5	2.90	26.0	13.0	42.0	22.0	12.0	6.6	.71	1.00	1.20
11	16.0	4.8	2.90	11.0	11.0	158.0	19.0	12.0	6.7	3.10	75.00	.60
12	14.0	8.8	2.90	7.3	23.0	525.0	19.0	10.0	8.5	18.00	28.00	.53
13	13.0	10.0	2.00	5.7	10.0	32.0	19.0	11.0	7.3	15.00	14.00	.43
14	10.0	10.0	1.60	5.5	6.5	25.0	18.0	11.0	6.0	9.40	10.00	.33
15	9.0	8.2	1.60	6.0	5.4	22.0	18.0	11.0	5.2	5.20	8.10	.09
16	8.1	7.9	1.60	6.4	3.5	19.0	15.0	11.0	5.5	3.40	6.40	.06
17	8.1	4.9	5.40	5.6	3.9	18.0	14.0	18.0	4.7	2.00	5.00	.23
18	8.1	5.3	3.30	5.2	25.0	117.0	13.0	40.0	4.0	1.40	4.00	.43
19	78.0	19.0	1.30	4.9	11.0	56.0	14.0	28.0	4.0	1.30	3.30	.60
20	22.0	15.0	.07	4.9	8.1	22.0	15.0	20.0	5.0	1.60	6.40	1.40
21	17.0	9.9	2.60	4.9	6.9	13.0	16.0	18.0	5.5	1.30	4.00	4.70
22	11.0	9.8	20.00	5.6	4.5	4.0	12.0	16.0	4.3	1.00	2.60	8.50
23	9.5	35.0	21.00	10.0	5.7	493.0	12.0	13.0	3.3	1.00	2.00	7.10
24	9.5	12.0	20.00	7.7	5.8	40.0	14.0	13.0	3.3	25.00	1.00	4.30
25	9.3	9.0	22.00	6.1	5.1	31.0	9.6	11.0	4.3	10.00	.79	1.60
26	8.7	7.2	25.00	5.5	147.0	30.0	10.0	8.6	4.1	6.80	.60	4.10
27	8.3	22.0	22.00	5.5	24.0	32.0	15.0	28.0	7.3	5.50	.60	7.20
28	8.6	11.0	16.00	5.5	12.0	31.0	9.5	22.0	12.0	4.00	.60	9.90
29	8.8	5.3	23.00	5.9	9.2	24.0	17.0	13.0	34.0	3.30	.60	7.20
30	9.0	3.5	22.00	5.2	---	23.0	15.0	11.0	20.0	2.90	.16	6.40
31	9.5	---	22.00	4.5	---	23.0	---	9.2	---	1.60	.12	---
TOTAL	2025.9	327.9	248.59	324.1	490.0	1839.4	659.1	849.8	527.6	208.01	211.77	84.68
MEAN	65.4	10.9	8.02	10.5	16.9	59.3	22.0	27.4	17.6	6.71	6.83	2.82
MAX	1540	35	25	63	147	525	145	295	219	25	75	9.9
MIN	6.4	3.5	.00	4.5	3.5	4.0	9.5	8.6	3.3	.71	.12	.06
AC-FT	4020	650	493	643	972	3650	1310	1690	1050	413	420	168

CAL YR 1983 TOTAL 9718.29 MEAN 26.6 MAX 1540 MIN .00 AC-FT 19280
WTR YR 1984 TOTAL 7796.85 MEAN 21.3 MAX 1540 MIN .00 AC-FT 15470

08048000 WEST FORK TRINITY RIVER AT FORT WORTH, TX

LOCATION.--Lat 32°45'39", long 97°19'56", Tarrant County, Hydrologic Unit 12030102, on left bank 125 ft upstream from Texas Electric Service Co.'s concrete dam, 980 ft downstream from centerline of Paddock Viaduct (North Main Street) at Fort Worth, 2,600 ft downstream from Clear Fork Trinity River, and at mile 556.8.

DRAINAGE AREA.--2,615 mi^2.

PERIOD OF RECORD.--October 1920 to current year. Gage-height records collected in this vicinity since 1910 are contained in reports of the National Weather Service.
Water-quality records.--Chemical and biochemical analyses: October 1967 to September 1976.

REVISED RECORDS.--WSP 1392: 1925. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete dam control with angle-iron-crested notch for flow below 50 ft^3/s. Datum of gage is 519.24 ft Texas Reclamation Department datum. Prior to Aug. 22, 1954, at site 1,200 ft upstream at same datum. Aug. 22, 1954, to Oct. 15, 1955, at site 2,000 ft upstream at same datum.

REMARKS.--Records good. Flow is largely regulated by Lake Worth on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. The city of Fort Worth diverts water upstream from station and diverts from Cedar Creek Reservoir for municipal and industrial uses. Many small diversions upstream from station. Gage-height telemeter is located at station.

AVERAGE DISCHARGE.--64 years, 368 ft^3/s (266,600 acre-ft/yr, unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft^3/s, Apr. 25, 1922 (gage height, 23.95 ft), site then in use, by slope-area measurement of peak flow by city engineer of Fort Worth; maximum gage height, 25.91 ft May 17, 1949, site then in use (discharge, 64,300 ft^3/s); no flow at times. Maximum stage since at least 1866, that of May 17, 1949. Maximum stages have been affected by levee construction, levee breaks, and channel rectification.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft^3/s Oct. 8 at 0445 hours (gage height, 5.30 ft); minimum daily, 0.31 ft^3/s Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	36	23	52	24	31	59	647	4.2	22	3.7	.35
2	15	35	22	47	23	31	135	164	4.0	17	3.1	.31
3	11	26	26	43	21	31	73	26	3.8	13	3.9	2.4
4	9.7	74	22	35	20	32	45	25	5.7	10	18	4.2
5	9.2	55	16	29	19	31	43	27	15	18	24	4.4
6	13	86	12	27	18	30	45	24	575	27	13	4.6
7	137	37	12	26	18	30	286	21	26	17	8.7	3.5
8	2500	31	11	25	34	30	151	17	18	13	6.2	2.7
9	81	29	13	216	231	36	55	16	14	9.9	3.7	2.5
10	44	25	16	136	40	129	47	16	11	7.7	2.5	2.1
11	42	24	16	35	43	368	44	17	9.3	6.4	197	1.2
12	38	24	16	28	83	1140	45	17	9.8	12	53	.97
13	34	27	17	23	35	134	42	19	10	22	24	.76
14	37	29	15	22	26	94	38	19	11	15	16	.50
15	35	25	15	22	23	69	35	19	10	10	12	.33
16	34	26	23	21	22	61	35	19	10	6.9	9.8	.44
17	36	26	25	21	20	55	32	26	10	4.7	7.5	.60
18	39	22	20	19	126	330	31	127	9.9	3.5	6.0	.67
19	184	62	15	18	43	194	33	31	10	2.5	5.5	.94
20	69	45	14	18	33	60	37	16	7.0	1.7	5.5	1.3
21	52	33	15	19	32	47	48	13	6.1	1.2	6.8	3.0
22	32	34	29	20	27	35	39	11	5.7	.90	5.8	7.0
23	28	130	46	31	28	872	36	9.9	5.1	.63	5.0	10
24	27	38	46	26	29	160	36	8.8	5.0	16	3.9	9.3
25	28	27	72	22	27	122	34	8.2	5.2	27	2.9	6.6
26	27	24	94	20	330	103	34	7.1	5.1	13	2.5	5.1
27	26	79	69	19	89	124	36	6.9	5.6	8.3	2.1	7.0
28	33	35	42	19	38	111	34	83	12	6.6	1.3	13
29	39	26	51	22	32	65	59	10	57	5.5	.87	15
30	39	28	51	26	---	60	51	6.5	28	5.1	.58	12
31	37	---	51	27	---	57	---	5.3	---	4.6	.53	---
TOTAL	3749.9	1198	915	1114	1534	4672	1718	1462.7	908.5	328.13	455.38	122.77
MEAN	121	39.9	29.5	35.9	52.9	151	57.3	47.2	30.3	10.6	14.7	4.09
MAX	2500	130	94	216	330	1140	286	647	575	27	197	15
MIN	9.2	22	11	18	18	30	31	5.3	3.8	.63	.53	.31
AC-FT	7440	2380	1810	2210	3040	9270	3410	2900	1800	651	903	244

CAL YR 1983 TOTAL 20319.80 MEAN 55.7 MAX 2500 MIN 8.4 AC-FT 40300
WTR YR 1984 TOTAL 18178.38 MEAN 49.7 MAX 2500 MIN .31 AC-FT 36060

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX

LOCATION.--Lat 32°45'06", long 97°17'21", Tarrant County, HHyrologic Unit 12030102, at downstream side of bridge on Beach Street, 1,700 ft downstream from Sycamore Creek, 0.9 mi downstream from Riverside Drive bridge, 2.6 mi east of the Tarrant County Courthouse, and at mile 549.6.

DRAINAGE AREA.--2,685 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 478.70 ft State Department of Highways and Public Transportation datum.

REMARKS.--Water-discharge records good except those below 30 ft^3/s, which are fair. Flow is largely regulated by Lake Worth on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. There are many diversions upstream from this station for municipal, industrial, and other uses. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--8 years, 388 ft^3/s (281,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft^3/s Oct. 13, 1981 (gage height, 36.26 ft); minimum, 0.84 ft^3/s July 25, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1866 probably occurred in May 1949 (stage and discharge unknown). Maximum stages have been affected by levee construction, levee breaks, and channel rectification.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,120 ft^3/s Oct. 8 at 0730 hours (gage height, 24.52 ft); minimum daily, 6.0 ft^3/s Sept. 1, 15-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	33	36	69	30	40	69	957	27	31	14.0	6.0
2	16	30	42	64	28	38	196	466	25	28	13.0	16.0
3	15	28	51	58	28	37	96	56	23	24	32.0	25.0
4	14	72	40	52	28	36	66	41	87	23	36.0	19.0
5	13	65	37	45	28	36	63	39	53	22	38.0	15.0
6	34	95	36	42	28	35	61	37	1140	32	29.0	11.0
7	229	47	34	40	28	33	451	34	59	24	19.0	9.0
8	3980	39	33	38	45	33	244	31	35	22	15.0	8.0
9	165	35	33	272	349	34	61	30	29	20	13.0	7.2
10	69	31	32	236	56	165	52	29	28	19	12.0	7.2
11	60	29	32	60	72	395	47	28	27	19	296.0	7.2
12	54	28	32	49	101	1910	46	28	26	39	117.0	6.6
13	46	31	31	42	47	131	44	27	25	24	38.0	6.4
14	41	34	31	41	38	74	39	26	24	22	28.0	6.2
15	40	31	31	40	33	61	37	25	24	19	21.0	6.0
16	39	30	45	39	32	55	37	24	23	17	18.0	6.0
17	37	32	43	39	28	52	38	24	23	16	14.0	6.0
18	37	31	37	38	131	384	36	158	23	16	12.0	6.0
19	461	55	37	41	52	363	38	88	23	15	11.0	6.2
20	132	47	40	38	40	62	46	40	22	15	11.0	6.4
21	81	38	45	36	37	52	46	34	22	15	13.0	6.4
22	44	41	49	39	35	41	37	33	22	15	12.0	6.4
23	39	169	57	58	32	1700	32	37	21	15	10.0	6.4
24	37	54	61	44	32	220	31	33	21	63	9.0	11.0
25	37	40	81	38	32	110	30	29	21	52	8.0	10.0
26	36	36	104	36	476	91	30	27	20	37	7.0	9.4
27	34	99	98	32	127	108	29	27	20	18	6.6	9.0
28	31	52	72	31	54	106	28	153	20	16	6.4	10.0
29	34	40	81	31	43	72	48	36	59	15	6.4	11.0
30	37	39	78	30	---	69	44	32	35	14	6.2	12.0
31	35	---	69	30	---	68	---	29	---	14	6.2	---
TOTAL	5944	1431	1528	1748	2090	6611	2122	2658	2007	721	877.8	278.0
MEAN	192	47.7	49.3	56.4	72.1	213	70.7	85.7	66.9	23.3	28.3	9.27
MAX	3980	169	104	272	476	1910	451	957	1140	63	296	25
MIN	13	28	31	30	28	33	28	24	20	14	6.2	6.0
AC-FT	11790	2840	3030	3470	4150	13110	4210	5270	3980	1430	1740	551

CAL YR 1983 TOTAL 33104.0 MEAN 90.7 MAX 3980 MIN 12 AC-FT 65660
WTR 1984 TOTAL 28015.8 MEAN 76.5 MAX 3980 MIN 6.0 AC-FT 55570

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to current year.
pH: October 1976 to current year.
WATER TEMPERATURES: October 1976 to current year.
DISSOLVED OXYGEN: October 1976 to current year.

INSTRUMENTATION.--Beginning October 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,000 micromhos Nov. 6, 1978; minimum, 102 micromhos June 7, 1982.
pH (1976-84): Maximum, 9.8 units Aug. 8, Sept. 2. 1980; minimum, 6.7 units Aug. 18, 1981.
WATER TEMPERATURES: Maximum, 38.0°C July 14, 16, 1978; minimum, 0.5°C Jan. 11, 19, 20, 1978, Jan. 8, 14, 1979.
DISSOLVED OXYGEN (1976-84): Maximum, 22.1 mg/L Oct. 4, 1983; minimum, 0.0 mg/L on several days during 1977 and 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 810 micromhos Sept. 5; minimum daily, 130 micromhos June 6.
pH: Maximum, 9.3 units Oct. 5, Sept. 14; minimum, 7.0 units Mar. 23.
WATER TEMPERATURES: Maximum, 36.0°C Aug. 19, 20.
DISSOLVED OXYGEN: Maximum, 22.1 mg/L Oct. 4; minimum, 1.0 mg/L July 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT 25...	1040	38	486	7.9	18.0	7.4	78	2.6	170	17
JAN 19...	0940	39	644	8.0	.0	13.5	92	5.7	220	39
FEB 14...	1520	36	604	8.3	17.0	11.5	122	7.0	190	56
MAY 07...	1015	34	494	7.7	25.0	5.6	69	5.4	180	33
JUN 20...	1000	22	560	7.9	26.5	6.8	86	2.8	160	21
AUG 21...	0930	6.1	600	7.9	28.5	5.8	77	2.3	140	33

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 25...	57	5.9	29	1	7.7	150	47	34	.30
JAN 19...	74	8.1	42	1	8.2	180	60	53	.40
FEB 14...	63	6.9	37	1	5.0	130	67	44	.50
MAY 07...	64	5.6	29	1	7.4	150	51	34	.30
JUN 20...	52	7.5	45	2	10	140	56	54	.40
AUG 21...	44	8.0	57	2	11	110	55	73	.50

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 25...	6.1	280	.63	.070	.70	.170	1.0	1.2	.150
JAN 19...	5.8	360	.76	.040	.80	.520	.48	1.0	.390
FEB 14...	5.0	310	.54	.060	.60	.640	.46	1.1	.250
MAY 07...	5.1	290	.81	.090	.90	.130	.57	.70	.110
JUN 20...	3.7	310	.19	.010	.20	.100	1.1	1.2	.180
AUG 21...	7.8	320	--	<.010	.10	.490	.51	1.0	.190

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	5944	265	151	2420	12	200	25	409	110
NOV.	1983	1431	493	281	1090	38	147	49	191	170
DEC.	1983	1528	524	298	1230	43	176	53	218	170
JAN.	1984	1748	537	306	1440	45	214	54	256	170
FEB.	1984	2090	541	308	1740	46	262	55	309	170
MAR.	1984	6611	409	233	4160	27	490	40	722	150
APR.	1984	2122	564	321	1840	49	283	57	328	180
MAY	1984	2658	448	256	1830	32	227	45	319	160
JUNE	1984	2007	433	247	1340	30	161	43	232	150
JULY	1984	721	539	307	597	45	88	54	106	180
AUG.	1984	877.8	523	298	707	43	102	53	125	170
SEPT	1984	278.0	628	357	268	62	46	65	49	190
TOTAL		28015.8	**	**	18700	**	2400	**	3260	**
WTD.AVG.		77	433	247	**	32	**	43	**	150

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	560	454	512	508	472	495	538	526	530	---	---	512
2	540	448	498	522	496	509	570	494	543	---	---	514
3	520	444	490	540	512	529	536	486	513	---	---	518
4	526	452	493	576	446	524	544	528	536	524	516	520
5	530	460	499	512	408	471	578	548	565	534	522	528
6	562	278	501	452	340	415	---	---	565	540	530	536
7	404	---	374	514	452	484	---	---	569	538	528	534
8	404	---	200	530	516	523	---	---	570	554	536	543
9	400	---	317	536	528	534	---	---	570	598	320	460
10	402	392	398	546	536	542	---	---	572	556	370	439
11	424	398	405	546	538	542	---	---	572	582	562	578
12	430	390	400	560	544	553	---	---	576	586	576	581
13	428	390	413	550	538	545	---	---	580	610	584	597
14	442	418	424	550	526	542	---	---	585	604	592	598
15	438	422	430	544	528	538	---	---	591	592	588	589
16	498	440	477	554	526	541	---	---	515	588	574	581
17	496	462	482	556	528	542	---	---	523	576	570	574
18	484	462	477	564	530	549	---	---	538	588	572	582
19	490	150	321	576	380	504	---	---	545	620	576	600
20	414	250	355	512	500	507	---	---	559	622	592	606
21	446	386	411	528	510	520	---	---	551	602	572	589
22	488	442	468	544	428	515	---	---	546	600	556	589
23	506	486	495	450	334	423	---	---	537	586	498	557
24	500	480	492	504	446	479	---	---	532	600	560	576
25	488	462	475	518	506	514	---	---	515	642	606	626
26	480	464	474	548	522	541	---	---	423	664	640	650
27	484	468	478	538	358	445	---	---	470	652	606	635
28	518	480	498	490	450	472	---	---	485	640	606	628
29	494	478	487	540	490	513	---	---	492	646	606	636
30	486	456	474	542	516	525	---	---	499	636	610	626
31	492	464	479	---	---	---	---	---	508	646	610	620
MONTH	562	150	442	576	334	511	578	486	538	664	320	572

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	654	618	641	600	572	584	634	608	616	---	---	450
2	658	606	638	620	582	601	626	350	514	---	---	355
3	666	630	657	610	584	596	576	518	549	---	---	460
4	720	666	692	612	582	597	610	578	601	---	---	500
5	726	686	706	606	578	592	616	586	603	518	478	502
6	712	684	700	608	580	596	626	580	603	482	466	475
7	698	684	692	606	570	588	636	216	531	494	472	482
8	712	236	642	594	546	574	590	372	535	498	482	493
9	510	264	444	570	498	546	584	564	573	512	478	495
10	654	526	603	560	310	449	574	556	564	516	478	500
11	684	286	627	492	244	419	582	556	569	518	494	508
12	550	486	511	384	286	326	576	552	568	508	476	496
13	562	518	550	466	384	428	556	532	548	506	478	494
14	628	564	600	490	472	479	568	518	548	512	494	503
15	686	630	646	530	486	510	574	538	554	532	508	521
16	680	606	652	552	528	544	590	552	571	562	532	545
17	710	654	687	572	548	557	590	552	573	590	544	567
18	684	444	511	580	184	504	594	554	574	550	248	436
19	672	530	632	642	320	521	594	556	580	478	408	460
20	676	632	654	656	614	628	636	436	584	504	480	493
21	654	606	637	616	594	605	698	520	639	514	494	504
22	662	632	650	664	594	631	668	618	642	512	484	502
23	672	646	659	666	168	330	654	612	637	702	500	554
24	666	640	654	---	---	452	650	602	631	624	528	553
25	684	642	667	---	---	496	670	626	649	576	534	561
26	684	262	455	---	---	507	672	634	653	590	540	566
27	556	494	527	---	---	504	650	600	629	588	504	563
28	564	534	551	526	478	498	636	604	629	450	142	405
29	570	556	565	606	524	583	662	544	603	462	434	447
30	---	---	---	610	594	601	592	546	561	500	466	489
31	---	---	---	644	594	615	---	---	---	530	502	521
MONTH	726	236	616	666	168	531	698	216	588	702	142	497

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	536	514	529	516	456	493	618	580	599	714	682	703
2	556	526	543	512	474	495	676	576	614	736	352	652
3	556	538	549	534	498	514	678	608	640	---	---	575
4	566	218	477	546	526	536	622	514	583	---	---	600
5	438	326	416	580	532	553	520	472	504	810	746	770
6	448	130	375	578	510	537	520	492	506	794	686	725
7	470	440	453	524	498	513	534	502	524	754	684	709
8	508	452	477	532	514	524	558	514	539	766	710	739
9	526	502	514	550	532	544	586	538	562	746	698	731
10	528	490	511	590	550	576	620	578	592	758	744	724
11	520	498	507	620	578	601	628	266	493	746	690	718
12	552	502	525	696	166	544	454	330	424	732	686	711
13	554	518	536	542	488	527	500	444	474	714	688	704
14	588	512	534	536	506	525	---	---	500	700	668	678
15	536	508	519	---	---	538	534	520	528	718	690	700
16	562	522	538	566	526	551	---	---	532	726	704	716
17	532	512	524	614	554	585	---	---	580	728	544	655
18	538	510	527	642	602	614	---	---	585	542	528	537
19	550	520	536	658	610	635	630	552	593	568	534	550
20	564	532	548	660	630	647	590	562	574	590	572	580
21	554	534	545	670	646	661	640	574	603	596	516	563
22	608	548	561	682	654	671	626	590	605	578	542	561
23	562	544	552	698	676	685	656	568	617	550	540	546
24	562	536	552	700	258	415	714	620	655	548	538	542
25	596	540	567	554	452	494	732	634	680	---	---	525
26	572	536	551	520	486	507	662	628	647	---	---	545
27	556	528	543	544	526	536	668	644	656	---	---	570
28	562	530	546	570	544	561	692	660	680	---	---	545
29	576	448	484	594	556	576	710	678	696	---	---	560
30	502	458	478	628	552	587	730	706	717	---	---	570
31	---	---	---	614	578	596	748	700	724	---	---	---
MONTH	608	130	517	700	166	559	748	266	588	810	352	633

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.2	7.6	8.4	8.7	7.6	8.1	8.1	7.8	8.0	---	---	---
2	9.0	7.6	8.3	8.8	7.7	8.2	7.9	7.6	7.7	---	---	---
3	9.2	7.6	8.3	8.7	7.6	8.1	7.7	7.4	7.6	---	---	---
4	9.2	7.4	8.3	8.0	7.6	7.7	8.0	7.6	7.8	---	---	---
5	9.3	7.6	8.4	7.7	7.4	7.6	8.2	7.6	7.9	8.2	7.8	8.0
6	8.7	7.4	8.1	7.6	7.4	7.5	---	---	7.9	8.4	7.8	8.1
7	8.1	7.6	7.8	8.0	7.4	7.7	---	---	---	8.3	7.8	8.1
8	---	---	---	7.9	7.6	7.8	---	---	---	8.3	7.8	8.0
9	8.0	7.6	7.8	8.1	7.6	7.9	---	---	---	---	---	---
10	7.7	7.6	7.6	8.1	7.8	8.0	---	---	---	8.5	7.6	8.0
11	7.7	7.6	7.7	8.0	7.8	8.0	---	---	---	8.5	8.1	8.2
12	7.8	7.6	7.7	8.1	7.8	8.0	---	---	---	8.1	7.8	8.0
13	---	---	---	8.1	7.8	8.0	---	---	---	8.0	7.8	7.9
14	---	---	---	8.3	7.8	8.0	---	---	---	7.9	7.8	7.9
15	8.1	7.6	7.8	8.3	7.8	8.1	---	---	---	7.9	7.8	7.8
16	8.3	7.6	7.8	8.4	7.8	8.1	---	---	---	8.1	7.8	7.9
17	8.3	7.6	8.0	8.5	7.8	8.2	---	---	---	8.0	7.8	7.9
18	8.4	7.6	8.0	8.5	7.9	8.2	---	---	---	8.1	7.8	8.0
19	---	---	---	8.2	7.8	8.0	---	---	---	8.1	8.0	8.0
20	7.9	7.6	7.7	8.3	7.8	8.0	---	---	---	8.2	8.1	8.1
21	7.9	7.6	7.7	8.4	7.8	7.9	---	---	---	8.2	8.1	8.1
22	8.0	7.6	7.8	8.1	7.6	7.8	---	---	---	8.2	8.1	8.1
23	8.0	7.6	7.8	8.1	7.6	7.9	---	---	---	8.4	8.0	8.1
24	8.2	7.6	7.7	8.1	7.4	7.8	---	---	---	8.4	8.0	8.2
25	8.4	7.6	7.8	8.1	7.8	7.9	---	---	---	8.5	8.1	8.3
26	8.4	7.6	8.1	8.0	7.6	7.8	---	---	---	8.6	8.1	8.3
27	8.6	7.6	8.1	8.1	7.6	7.9	---	---	---	8.6	8.0	8.2
28	8.7	7.8	8.2	8.1	7.8	8.0	---	---	---	8.6	8.0	8.3
29	8.8	7.7	8.2	8.1	7.8	7.9	---	---	---	8.5	8.0	8.3
30	8.8	7.7	8.2	8.1	7.8	7.9	---	---	---	8.7	8.1	8.4
31	8.8	7.6	8.2	---	---	---	---	---	---	8.9	8.1	8.5
MONTH	9.3	7.4	8.0	8.8	7.4	7.9	8.2	7.4	7.8	8.9	7.6	8.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.8	8.2	8.5	8.3	8.0	8.1	8.4	7.9	8.1	---	---	---
2	9.0	8.1	8.5	8.3	7.8	8.0	8.2	7.7	8.0	---	---	---
3	8.8	8.1	8.4	8.6	7.8	8.1	8.3	7.9	8.1	---	---	---
4	9.0	8.1	8.5	8.8	7.8	8.3	8.4	8.0	8.2	7.9	7.7	7.8
5	9.0	8.2	8.6	8.9	8.1	8.5	8.5	8.0	8.2	8.2	7.7	7.9
6	8.9	8.3	8.5	8.8	8.1	8.5	8.6	7.9	8.3	8.5	7.6	7.9
7	8.7	8.2	8.4	8.9	8.2	8.5	8.4	7.8	8.0	8.6	7.7	8.1
8	9.1	7.8	8.3	8.8	8.1	8.5	8.3	7.9	8.2	8.6	7.9	8.2
9	7.9	7.4	7.7	9.0	8.2	8.5	8.2	7.9	8.0	8.7	7.9	8.2
10	8.0	7.8	7.8	8.4	7.6	8.1	8.3	7.9	8.1	8.7	7.8	8.2
11	8.1	7.6	7.8	8.1	7.8	7.9	8.5	7.9	8.2	8.7	7.8	8.2
12	7.7	7.6	7.6	8.1	7.8	8.0	8.5	7.9	8.1	8.7	7.6	8.1
13	7.8	7.6	7.7	7.9	7.6	7.8	8.7	7.9	8.3	8.7	7.5	8.1
14	---	---	---	7.8	7.6	7.7	8.9	7.8	8.3	8.6	7.5	8.0
15	8.6	7.8	8.2	7.9	7.8	7.8	8.8	7.8	8.3	8.6	7.5	8.0
16	8.4	7.8	8.2	8.0	7.8	7.8	8.7	7.9	8.3	8.6	7.7	8.1
17	8.6	8.1	8.3	8.0	7.8	7.9	8.8	7.9	8.3	8.6	7.6	8.1
18	8.3	7.8	8.0	8.3	7.7	7.9	8.7	7.7	8.2	8.0	7.6	7.8
19	8.6	8.1	8.4	8.3	7.8	8.1	8.6	7.7	8.0	8.0	7.6	7.8
20	8.7	8.2	8.3	8.0	7.8	7.9	8.7	7.7	8.1	8.2	7.6	7.9
21	8.5	8.1	8.3	8.0	7.8	7.9	8.1	7.6	7.9	8.5	7.6	8.0
22	8.5	8.0	8.2	8.3	7.8	8.0	8.7	7.8	8.2	8.7	7.7	8.1
23	8.6	7.8	8.3	7.9	7.0	7.3	8.8	7.8	8.2	8.5	7.7	8.0
24	8.7	8.0	8.3	---	---	---	8.7	7.7	8.1	8.6	7.6	8.0
25	8.7	7.8	8.3	---	---	---	8.7	7.8	8.1	8.6	7.7	8.1
26	8.4	7.7	7.9	---	---	---	8.5	7.7	8.0	8.6	7.7	8.1
27	8.5	8.4	8.4	---	---	---	8.6	7.7	8.0	8.7	7.6	8.0
28	8.3	8.2	8.3	8.2	7.9	8.1	8.5	7.7	8.0	8.2	7.6	7.9
29	8.2	8.1	8.2	8.1	7.9	8.0	8.0	7.6	7.7	8.6	7.7	8.1
30	---	---	---	8.2	7.9	8.1	8.3	7.7	8.0	8.7	7.7	8.1
31	---	---	---	8.2	7.9	8.1	---	---	---	8.7	7.6	8.1
MONTH	9.1	7.4	8.2	9.0	7.0	8.1	8.9	7.6	8.1	8.7	7.5	8.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.7	7.7	8.2	8.6	7.6	8.1	8.8	7.9	8.4	9.1	8.1	8.7
2	8.7	7.7	8.1	8.7	7.6	8.1	8.9	8.0	8.5	9.1	7.6	8.5
3	8.7	7.6	8.1	8.6	7.7	8.1	9.0	7.8	8.4	8.5	7.5	7.9
4	8.6	7.7	8.0	8.7	7.7	8.2	8.6	7.4	7.9	8.9	7.7	8.2
5	8.5	7.5	7.9	8.6	7.6	8.0	8.8	7.5	8.1	8.8	7.7	8.2
6	---	---	---	8.7	7.5	8.1	8.8	7.6	8.2	8.8	7.7	8.2
7	8.1	7.7	7.8	8.6	7.6	8.1	8.9	7.6	8.2	9.0	7.8	8.4
8	8.5	7.7	8.0	8.6	7.6	8.1	8.8	7.8	8.3	9.0	7.9	8.5
9	8.7	7.7	8.1	8.6	7.6	8.1	8.7	7.8	8.2	9.0	7.9	8.4
10	8.7	7.8	8.2	8.6	7.7	8.1	8.8	7.8	8.2	8.9	7.8	8.3
11	8.7	7.7	8.2	8.5	7.7	8.1	7.9	7.6	7.7	9.1	7.9	8.4
12	8.8	7.6	8.2	---	---	---	7.8	7.6	7.7	9.2	7.9	8.5
13	8.8	7.7	8.2	8.5	7.5	7.9	8.2	7.6	7.8	9.2	7.8	8.5
14	8.7	7.6	8.1	8.7	7.5	8.0	8.4	7.6	7.9	9.3	7.8	9.0
15	8.7	7.6	8.1	8.7	7.6	8.1	8.7	7.5	8.1	8.8	7.8	8.2
16	8.7	7.6	8.1	8.8	7.6	8.2	8.8	7.5	8.2	9.2	7.8	8.5
17	8.7	7.7	8.1	8.6	7.7	8.2	8.8	7.6	8.2	8.8	8.0	8.4
18	8.6	7.6	8.1	8.9	7.8	8.4	8.7	7.8	8.2	8.8	7.6	8.2
19	8.6	7.6	8.0	9.1	7.8	8.4	8.6	7.7	8.1	8.5	7.9	8.2
20	8.6	7.6	8.1	9.1	7.8	8.4	8.7	7.6	8.1	8.5	7.8	8.1
21	8.6	7.7	8.1	9.1	7.7	8.4	8.6	7.6	8.0	8.4	7.7	7.9
22	8.6	7.6	8.0	9.1	7.8	8.4	8.6	7.7	8.2	8.3	7.7	8.0
23	8.6	7.6	8.1	9.0	7.7	8.3	8.6	7.7	8.2	8.5	7.8	8.1
24	8.6	7.6	8.0	8.2	7.4	7.7	8.7	7.7	8.3	8.4	7.9	8.1
25	8.6	7.6	8.0	8.8	7.4	8.0	8.9	7.8	8.4	---	---	---
26	8.6	7.5	8.0	8.7	7.5	8.0	8.8	7.8	8.3	---	---	---
27	8.6	7.6	8.0	8.7	7.5	8.1	8.8	7.8	8.3	---	---	---
28	8.6	7.6	8.0	8.8	7.5	8.2	9.0	7.6	8.4	---	---	---
29	8.6	7.5	8.1	8.8	7.8	8.4	9.1	7.9	8.5	---	---	---
30	8.6	7.6	8.1	8.8	7.9	8.4	9.0	7.9	8.5	---	---	---
31	---	---	---	8.8	7.9	8.4	9.2	7.9	8.6	---	---	---
MONTH	8.8	7.5	8.1	9.1	7.4	8.2	9.2	7.4	8.2	9.3	7.5	8.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	20.0	23.5	24.0	20.0	21.5	11.5	8.0	9.5	---	---	---
2	27.0	21.0	24.0	25.0	21.0	23.0	12.0	11.0	11.5	---	---	---
3	28.0	22.0	25.0	24.5	21.0	23.0	13.5	11.0	12.5	---	---	---
4	28.0	22.5	25.5	23.5	21.5	22.5	14.0	9.0	11.5	---	---	---
5	26.5	20.0	23.5	22.0	19.0	20.5	14.5	10.5	12.5	11.5	5.5	8.5
6	24.0	19.5	21.5	20.5	19.0	19.5	---	---	---	11.0	6.5	9.0
7	22.0	19.5	20.5	20.0	18.0	19.0	---	---	---	10.5	6.0	8.5
8	21.5	20.0	21.0	19.5	17.0	18.0	---	---	---	11.5	6.0	9.0
9	22.5	20.5	21.5	18.0	13.5	16.5	---	---	---	10.5	8.5	10.0
10	24.5	19.5	21.5	14.5	10.5	12.5	---	---	---	8.5	5.5	7.0
11	24.0	20.0	22.0	15.0	10.0	12.5	---	---	---	8.0	4.0	5.5
12	21.0	17.5	19.5	16.5	11.0	14.0	---	---	---	8.5	3.5	6.0
13	21.5	15.5	18.5	15.0	12.5	14.0	---	---	---	6.0	3.0	4.5
14	22.0	16.0	19.0	19.0	13.5	16.0	---	---	---	4.5	3.5	4.0
15	23.0	17.0	20.0	16.5	12.5	15.0	---	---	---	5.0	3.5	4.0
16	25.0	19.5	22.5	16.5	11.0	14.0	---	---	---	7.5	3.5	5.5
17	25.5	21.5	23.5	18.0	12.0	15.0	---	---	---	5.0	3.0	4.0
18	25.5	22.0	23.5	21.0	16.0	18.5	---	---	---	3.5	1.0	2.0
19	24.0	22.0	23.0	19.5	14.5	17.0	---	---	---	---	---	---
20	24.5	22.0	23.0	17.0	13.0	15.0	---	---	---	3.5	1.0	2.0
21	22.0	19.0	20.5	19.0	12.0	15.5	---	---	---	4.5	1.0	2.5
22	21.5	17.5	19.5	21.5	18.0	19.5	---	---	---	3.5	2.0	3.0
23	22.0	16.0	19.0	17.5	13.5	15.5	---	---	---	5.5	3.5	4.5
24	22.5	16.5	19.5	15.5	11.5	13.5	---	---	---	9.0	5.0	6.5
25	20.5	17.5	19.0	15.5	10.5	13.0	---	---	---	10.5	4.0	7.0
26	20.5	15.0	18.0	16.0	13.5	14.5	---	---	---	11.0	4.0	8.0
27	21.0	15.5	18.5	14.0	9.5	12.0	---	---	---	10.5	6.0	8.5
28	20.5	15.5	18.5	11.0	7.0	9.0	---	---	---	12.0	5.5	9.0
29	22.5	17.5	20.0	10.5	6.5	8.5	---	---	---	13.5	6.5	10.0
30	22.5	18.0	20.5	13.0	10.0	11.0	---	---	---	11.5	8.0	10.0
31	23.0	18.5	21.0	---	---	---	---	---	---	10.5	6.0	7.5
MONTH	28.0	15.0	21.0	25.0	6.5	16.0	14.5	8.0	11.5	13.5	1.0	6.5

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.0	6.0	10.0	16.0	7.5	11.0	16.5	13.5	15.0	20.5	17.5	19.0
2	14.0	9.5	11.5	19.0	11.5	15.5	18.0	14.5	16.0	---	---	---
3	14.0	7.5	11.0	20.0	15.0	17.0	19.5	14.0	16.5	---	---	---
4	13.5	8.0	11.0	17.5	13.5	16.5	18.0	12.5	15.0	27.5	19.5	23.5
5	12.5	7.5	9.5	13.0	10.0	11.0	21.0	11.5	16.0	29.5	21.0	25.5
6	11.0	5.0	8.0	16.0	8.0	12.0	21.5	14.0	17.5	31.0	23.5	27.0
7	13.0	6.5	10.0	17.5	9.0	13.5	17.5	16.0	16.5	28.5	22.0	25.5
8	11.0	8.0	9.5	17.0	11.0	14.0	21.0	15.5	18.0	24.5	17.0	21.0
9	14.5	10.0	12.0	15.0	10.0	12.5	23.5	16.0	19.5	26.0	18.0	22.0
10	17.0	11.5	14.0	14.0	11.5	13.0	21.0	17.5	19.0	25.0	18.5	22.0
11	19.0	13.0	16.0	13.0	12.0	12.5	23.0	15.5	19.0	27.0	18.5	23.0
12	16.5	12.5	14.5	15.0	12.0	13.5	20.0	17.0	18.0	30.0	22.0	26.0
13	17.5	11.0	14.0	19.0	12.5	15.5	24.5	15.5	19.5	31.0	23.5	27.0
14	18.0	10.5	14.5	22.5	16.5	19.0	22.5	16.0	19.0	31.0	24.0	27.5
15	18.5	13.5	15.5	23.0	19.5	21.0	19.5	14.5	17.0	29.0	24.5	27.0
16	17.0	11.0	14.0	20.0	18.5	19.0	19.5	13.5	16.5	27.0	23.0	25.0
17	16.5	10.5	13.5	18.5	17.0	17.5	24.0	13.0	18.5	28.0	22.0	25.0
18	17.0	13.5	15.5	20.5	16.0	18.0	22.0	16.0	19.5	25.5	23.0	24.0
19	15.0	11.0	13.0	16.5	13.0	15.0	19.5	17.5	18.5	26.5	23.0	24.5
20	12.0	10.0	11.0	18.5	11.5	14.5	27.0	17.5	21.5	26.5	22.5	24.5
21	15.5	8.0	11.5	20.5	13.0	16.5	25.5	19.5	22.0	30.5	22.0	26.0
22	17.0	8.5	12.5	20.5	14.5	17.5	23.5	15.5	19.0	30.0	23.5	26.5
23	17.0	10.5	13.5	21.5	16.5	19.0	24.5	15.0	19.5	30.0	25.0	27.5
24	17.5	10.5	14.0	---	---	---	26.0	16.5	21.0	31.0	25.0	28.0
25	17.0	11.0	14.0	---	---	---	23.0	17.0	20.0	31.5	24.5	28.0
26	16.5	13.0	15.0	---	---	---	28.0	20.0	23.5	32.5	25.0	28.5
27	12.5	9.0	10.5	---	---	---	27.5	20.0	23.5	32.0	25.5	28.5
28	12.0	6.5	9.0	17.5	13.5	15.5	26.0	19.5	23.0	27.0	23.0	25.0
29	14.0	6.0	10.0	18.5	11.5	15.0	23.5	19.0	22.5	26.5	19.0	22.5
30	---	---	---	19.5	13.0	16.0	25.5	17.0	21.0	27.0	19.5	23.0
31	---	---	---	15.5	14.5	15.0	---	---	---	28.0	20.5	24.5
MONTH	19.0	5.0	12.5	23.0	7.5	15.5	28.0	11.5	19.0	32.5	17.0	25.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	20.0	24.5	33.5	26.5	30.0	32.5	25.5	29.0	33.0	26.5	29.5
2	30.0	21.0	25.5	33.5	26.5	30.5	33.5	26.0	29.5	33.0	26.0	28.5
3	30.0	23.5	26.5	33.5	27.0	30.0	34.0	26.5	29.5	30.0	25.5	27.5
4	29.0	23.0	25.5	32.5	26.0	29.5	31.0	26.5	29.0	30.5	23.5	26.5
5	29.5	23.0	25.5	34.0	27.0	30.5	34.0	26.5	30.0	31.0	22.5	26.5
6	27.0	21.5	24.5	35.5	27.5	31.0	33.5	27.0	30.0	30.5	23.5	26.5
7	29.0	24.5	26.0	35.0	27.5	31.0	31.5	27.0	29.0	30.5	23.0	26.0
8	31.0	24.5	27.0	34.0	27.5	31.0	33.0	26.5	29.5	31.5	24.5	27.5
9	31.0	24.5	27.5	34.0	27.0	30.5	34.0	27.5	29.5	32.5	25.0	28.5
10	29.0	24.5	27.0	33.5	27.0	30.5	33.5	26.5	29.5	32.5	26.0	28.5
11	31.0	24.5	27.5	34.0	27.0	30.5	29.0	26.0	27.0	32.0	25.0	28.5
12	31.5	25.5	28.0	32.0	27.5	29.0	28.5	26.0	27.0	33.0	25.5	29.0
13	32.5	25.0	29.0	33.0	26.5	29.5	34.0	25.0	29.0	34.0	26.5	29.5
14	33.0	26.0	29.5	33.5	26.5	30.0	33.5	26.5	30.0	34.0	26.0	32.0
15	33.5	26.5	30.0	34.5	27.0	30.5	32.5	25.5	29.0	29.0	22.5	24.5
16	33.0	26.5	30.0	35.0	28.5	31.5	32.5	26.5	30.0	27.0	20.5	23.0
17	33.0	26.0	29.5	32.0	28.5	30.5	34.5	27.0	30.5	28.5	19.5	24.0
18	34.0	26.5	30.0	33.5	27.5	30.0	34.5	27.5	31.0	28.0	22.5	26.0
19	34.0	27.5	30.5	34.5	26.0	30.0	36.0	28.5	32.0	22.0	17.5	19.0
20	33.0	27.0	30.0	35.5	26.5	30.5	36.0	29.0	32.0	20.0	17.0	18.0
21	33.5	26.5	30.0	35.0	27.5	31.0	33.0	28.5	30.5	19.5	16.5	18.0
22	34.0	27.0	30.5	35.0	26.5	30.5	32.0	27.5	29.5	16.5	15.0	16.0
23	35.0	27.5	31.0	34.5	26.5	30.5	32.5	28.0	30.0	19.5	13.5	16.5
24	33.5	28.5	30.5	29.0	26.5	27.5	34.5	28.0	30.5	18.0	14.5	16.5
25	35.0	28.0	31.5	33.5	25.5	29.0	34.0	27.5	30.5	---	---	---
26	32.0	29.0	30.5	33.0	27.0	30.0	34.0	26.0	29.5	---	---	---
27	33.0	26.5	29.5	33.0	27.5	30.0	35.0	27.0	30.5	---	---	---
28	33.0	27.5	30.0	33.0	27.0	30.0	34.0	27.5	31.0	---	---	---
29	33.0	27.5	30.0	32.0	27.0	29.5	35.0	27.5	31.0	---	---	---
30	34.0	27.0	30.5	32.0	26.0	29.0	34.0	27.5	30.0	---	---	---
31	---	---	---	32.5	25.5	28.5	34.0	26.5	30.0	---	---	---
MONTH	35.0	20.0	28.5	35.5	25.5	30.0	36.0	25.0	30.0	34.0	13.5	25.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.2	4.6	11.8	14.7	5.8	9.4	11.9	8.6	10.0	---	---	---
2	19.2	4.5	11.1	15.9	5.7	10.0	9.3	7.6	8.4	---	---	---
3	20.8	4.5	10.9	14.1	5.7	9.3	8.7	6.7	7.8	---	---	---
4	22.1	4.0	10.9	9.0	5.6	6.9	11.6	7.9	9.5	---	---	---
5	20.0	4.2	11.5	8.0	5.3	6.7	12.2	7.9	9.9	13.2	10.1	11.1
6	12.7	4.3	8.5	8.3	6.4	7.3	---	---	---	13.2	9.6	11.0
7	7.0	5.7	6.4	7.9	6.5	6.9	---	---	---	14.1	9.3	11.3
8	8.2	5.6	6.6	8.4	5.9	7.0	---	---	---	14.2	9.3	11.3
9	6.2	5.9	6.1	9.0	6.2	7.5	---	---	---	9.9	8.4	9.1
10	6.1	5.9	6.0	9.7	7.8	8.6	---	---	---	10.7	9.8	10.4
11	6.1	5.5	5.9	10.1	8.3	9.0	---	---	---	11.0	10.4	10.6
12	7.2	5.7	6.5	10.5	8.2	9.1	---	---	---	11.2	10.4	10.7
13	8.0	7.0	7.3	10.3	7.2	8.8	---	---	---	11.4	10.1	10.7
14	8.9	6.7	7.5	11.3	7.2	9.0	---	---	---	11.7	10.5	11.0
15	10.0	6.8	8.0	11.7	7.3	9.3	---	---	---	12.1	10.5	11.2
16	11.1	6.4	8.2	13.1	8.1	10.3	---	---	---	12.5	10.4	11.4
17	11.2	6.1	8.2	13.1	8.0	10.1	---	---	---	12.2	10.4	11.4
18	11.5	5.9	8.2	12.7	7.0	9.3	---	---	---	12.9	10.0	11.8
19	7.6	5.9	6.6	9.9	6.3	7.8	---	---	---	12.5	12.0	12.3
20	6.9	5.7	6.2	10.9	7.2	8.7	---	---	---	13.0	10.9	12.2
21	8.2	5.9	7.1	11.7	7.6	8.5	---	---	---	13.1	11.7	12.4
22	9.0	6.8	7.7	9.2	6.0	7.0	---	---	---	12.7	11.0	11.8
23	9.9	6.9	8.1	8.6	5.8	7.4	---	---	---	12.4	10.2	11.2
24	11.3	6.8	8.6	9.6	6.6	7.9	---	---	---	14.0	10.3	11.8
25	11.7	6.8	8.2	10.5	7.0	8.6	---	---	---	14.4	10.2	12.0
26	13.1	6.9	9.6	9.5	7.1	8.1	---	---	---	14.1	10.0	11.4
27	15.1	6.3	10.0	9.6	6.9	8.3	---	---	---	15.3	9.3	12.0
28	16.1	7.0	10.6	11.0	8.9	9.8	---	---	---	16.1	9.6	12.3
29	16.5	6.2	10.5	11.1	9.0	9.9	---	---	---	16.9	9.6	12.3
30	16.0	5.9	10.1	11.4	8.1	9.7	---	---	---	17.7	9.3	13.0
31	16.2	5.5	10.1	---	---	---	---	---	---	18.0	9.9	13.1
MONTH	22.1	4.0	8.5	15.9	5.3	8.5	12.2	6.7	9.1	18.0	8.4	11.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	18.2	9.6	12.9	11.6	8.7	9.7	12.5	7.7	9.8	---	---	---
2	18.0	7.6	12.1	11.7	7.4	9.2	9.0	5.8	7.9	---	---	---
3	17.9	8.0	12.3	13.2	6.4	9.1	10.5	7.4	8.8	---	---	---
4	17.3	8.4	12.3	14.4	6.4	9.8	11.7	7.9	9.6	7.8	5.7	6.6
5	16.9	8.4	12.1	16.9	8.3	11.7	14.1	7.9	10.6	9.6	5.7	7.1
6	16.9	9.2	12.5	17.4	9.2	13.6	15.0	7.3	10.5	11.8	5.3	7.7
7	17.1	9.3	12.5	18.0	8.9	12.6	10.9	6.6	8.0	12.2	4.9	8.0
8	15.2	8.2	10.9	16.1	8.0	11.6	9.2	7.8	8.4	12.8	6.9	9.5
9	10.0	8.7	9.5	17.7	8.4	12.3	10.3	7.2	8.4	15.4	7.0	10.6
10	10.6	8.2	9.2	11.1	6.6	9.1	10.8	6.9	8.6	13.8	6.6	10.1
11	10.9	7.2	8.6	9.0	8.1	8.6	13.5	7.3	9.8	18.3	6.0	10.8
12	10.2	6.9	8.5	9.4	8.2	8.8	12.4	7.0	8.6	19.0	5.2	11.1
13	10.5	7.6	8.8	8.6	6.7	8.0	15.7	7.1	10.8	18.8	4.8	10.8
14	---	---	---	7.7	6.0	7.1	16.3	7.2	11.0	17.5	4.8	10.0
15	12.7	6.9	9.2	7.5	6.3	6.9	15.1	7.0	10.9	15.7	4.7	9.4
16	11.4	6.5	8.9	7.7	6.0	6.8	14.7	7.1	10.6	12.5	5.2	8.7
17	13.0	7.7	9.6	8.3	6.6	7.3	18.1	7.1	11.6	12.3	4.7	8.0
18	9.6	6.7	7.9	9.2	6.9	7.6	18.1	6.5	11.0	8.5	4.9	6.2
19	10.3	7.4	8.8	8.5	7.4	8.0	14.0	6.0	9.4	8.3	5.0	6.3
20	11.5	7.9	9.5	8.6	7.6	8.1	17.7	5.1	9.4	9.8	5.1	7.1
21	12.8	7.9	10.1	9.2	7.4	8.1	9.9	3.3	6.5	12.8	5.2	8.2
22	13.2	8.0	10.2	10.8	7.2	8.6	14.2	5.6	9.3	15.0	5.5	9.3
23	13.2	7.2	9.9	7.6	6.1	6.7	16.3	5.8	10.2	12.4	4.9	8.0
24	14.7	7.2	10.3	---	---	---	17.8	5.6	9.8	17.9	4.4	9.6
25	13.5	6.5	9.4	---	---	---	13.9	5.7	8.8	17.5	4.8	10.0
26	8.7	5.2	7.3	---	---	---	17.3	5.0	9.1	16.9	4.7	10.5
27	10.3	8.1	9.5	---	---	---	15.9	4.7	9.0	16.6	4.7	10.0
28	10.7	9.4	10.0	9.2	6.9	8.3	13.4	4.9	8.4	9.0	4.9	6.7
29	11.0	9.4	10.1	9.6	7.7	8.6	7.8	4.4	5.5	13.0	5.5	8.6
30	---	---	---	10.8	7.7	9.1	10.8	5.2	7.7	15.6	6.0	10.1
31	---	---	---	10.8	7.6	8.9	---	---	---	18.4	6.5	11.6
MONTH	18.2	5.2	10.1	18.0	6.0	9.0	18.1	3.3	9.3	19.0	4.4	9.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.1	6.0	11.1	16.8	4.4	9.7	13.2	6.0	9.5	15.1	4.6	9.1
2	17.9	5.5	11.0	16.4	4.4	9.5	13.5	6.6	9.7	15.3	3.0	7.5
3	17.6	5.0	10.3	16.0	4.1	9.0	13.9	3.9	9.0	8.8	1.7	5.3
4	13.2	4.9	7.7	15.6	4.3	9.0	11.3	1.4	5.8	12.6	3.6	7.1
5	10.4	3.8	6.6	10.7	4.1	7.0	15.4	3.1	8.5	12.3	2.1	6.6
6	---	---	---	15.2	3.7	8.4	14.2	3.5	8.6	12.1	3.1	7.2
7	7.8	5.8	6.5	15.0	3.9	8.4	14.0	3.9	8.8	13.2	4.3	8.2
8	10.4	6.0	7.7	13.4	3.8	8.2	12.9	5.3	9.1	13.4	4.3	7.9
9	13.1	5.8	8.6	12.9	3.9	8.2	13.2	5.6	8.7	13.4	4.2	7.8
10	16.8	5.4	10.0	12.6	4.3	8.3	12.9	5.2	8.5	11.7	4.5	7.1
11	18.3	5.9	11.7	12.0	4.8	8.3	6.1	3.8	5.0	14.4	4.6	8.4
12	17.4	5.6	10.9	7.8	1.0	4.3	5.9	4.4	5.1	15.6	4.3	8.8
13	17.2	5.2	10.5	11.2	2.8	6.5	9.0	4.3	6.2	16.7	3.8	9.0
14	16.4	4.8	9.2	13.1	3.5	8.0	12.6	4.0	7.5	14.9	3.6	8.4
15	15.0	4.6	9.2	13.1	4.0	8.4	15.3	4.4	9.4	12.3	3.3	8.7
16	14.2	4.6	8.9	12.9	4.1	8.6	15.2	4.7	10.1	16.1	6.7	11.1
17	15.3	4.7	9.3	11.4	5.0	8.4	16.3	5.0	10.6	13.8	6.0	9.0
18	16.6	4.8	10.0	13.9	5.7	9.4	14.8	5.8	10.3	11.9	3.7	7.7
19	16.3	4.8	9.9	14.6	6.1	9.6	14.9	5.5	10.1	10.1	5.9	7.9
20	15.1	4.4	9.1	16.7	5.4	10.0	15.3	6.2	10.2	11.4	5.7	8.7
21	15.9	4.6	9.2	17.4	3.8	9.8	13.3	6.0	9.5	10.1	4.1	6.3
22	12.1	3.7	7.3	17.3	4.8	10.0	13.5	6.1	10.0	10.6	5.6	7.8
23	15.2	4.0	8.8	17.0	4.5	9.7	13.3	6.0	9.6	12.0	6.2	9.1
24	13.6	4.0	8.4	7.0	2.1	4.5	13.4	6.4	9.5	---	---	---
25	16.0	4.6	9.4	12.7	2.1	6.7	14.0	6.1	9.5	---	---	---
26	11.3	4.4	8.0	13.2	3.1	7.7	14.4	5.9	9.3	---	---	---
27	12.5	4.4	8.2	13.1	3.2	8.1	16.9	6.0	10.1	---	---	---
28	14.5	4.3	8.5	13.4	3.1	8.5	16.4	5.7	10.2	---	---	---
29	11.0	3.9	7.3	12.8	4.9	9.1	16.6	5.4	10.1	---	---	---
30	16.5	4.4	9.1	13.8	6.3	9.9	15.4	4.6	9.2	---	---	---
31	---	---	---	13.1	6.7	9.9	16.3	4.7	9.5	---	---	---
MONTH	18.3	3.7	9.1	17.4	1.0	8.4	16.9	1.4	8.9	16.7	1.7	8.0

08049200 LAKE ARLINGTON AT ARLINGTON, TX

LOCATION.--Lat 32°42'58", long 97°11'32", Tarrant County, Hydrologic Unit 12030102, in new pumphouse at right end of Arlington Dam on Village Creek near western boundary of Arlington, 1.5 mi upstream from The Texas and Pacific Railway Co. bridge, and 7 mi upstream from mouth.

DRAINAGE AREA.--143 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1957 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1957, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by a rolled earthfill dam 6,482 ft long. The service spillway is a 10-foot-diameter uncontrolled circular drop inlet. The emergency spillway is an 882-foot-wide cut through natural ground near the right end of dam. The dam was completed and storage began Mar. 31, 1957. Capacities are based on a 1955 survey. The dam was built by city of Arlington to impound water for municipal and industrial uses. Water is diverted from Cedar Creek Reservoir (station 08063010) into Lake Arlington. Water is pumped from lake to generating plant of Texas Electric Service Co. Figures given here in represent total contents. Data regarding the dam and lake are the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	572.0	-
Crest of spillway	559.7	70,140
Crest of drop inlet (top of conservation pool)	550.0	45,710
Lowest gated outlet (invert)	505.0	180

COOPERATION.--Capacity table furnished by Freese and Nichols, Inc., Consulting Engineers, for the city of Arlington.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,580 acre-ft May 4, 1979 (elevation, 556.20 ft); minimum since lake first filled in April 1957, 18,110 acre-ft Oct. 17, 1971 (elevation, 534.27 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 43,670 acre-ft Mar. 24 at 1200 hours (elevation, 549.06 ft); minimum, 26,740 acre-ft Sept. 26 (elevation, 540.13 ft).

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

540.0	26,520	547.0	39,380
541.0	28,210	550.0	45,710
544.0	35,570		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33890	32600	30570	29330	29070	33000	42880	40160	39020	36110	32160	28610
2	33660	32430	30840	29180	29180	33050	43030	40320	38880	36040	31980	28550
3	33420	32290	30980	29040	29300	33310	42900	40360	38740	35840	31900	28570
4	33200	32210	31090	28900	29370	33440	42730	40300	38700	35590	31830	28540
5	32940	32250	31130	28780	29490	33590	42610	40280	38680	35520	31740	28570
6	32870	32180	31180	28670	29600	33650	42440	40260	39040	35330	31560	28570
7	32800	32050	31220	28550	29700	33650	42760	40200	39120	35120	31400	28490
8	35580	31940	31290	28420	29950	33740	42800	40090	39140	34930	31290	28400
9	35560	31740	31360	28660	30220	33810	42710	40030	39120	34720	31110	28230
10	35380	31510	31450	28710	30410	34120	42540	39890	39080	34470	31020	28130
11	35270	31360	31470	28640	30570	34760	42440	39750	39020	34250	31290	27890
12	35060	31180	31510	28640	30700	36590	42270	39620	38940	34320	31470	27670
13	34890	31060	31630	28670	30840	36910	42100	39500	38760	34340	31490	27510
14	34700	30880	31560	28710	31060	37100	41890	39360	38640	34250	31510	27360
15	34510	30720	31490	28690	31020	37120	41720	39160	38480	34040	31560	27230
16	34320	30570	31540	28670	31090	37200	41580	39000	38240	33830	31580	27140
17	34250	30520	31510	28660	31270	37230	41390	38940	37980	33660	31560	27060
18	34130	30610	31470	28640	31470	37390	41390	39140	37790	33480	31470	27040
19	34530	30640	31400	28610	31560	37430	41270	39280	37630	33310	31310	26860
20	34510	30700	31250	28570	31740	37510	41180	39420	37470	33110	31130	26810
21	34360	30770	31090	28640	31850	37890	41080	39480	37330	32910	30930	26810
22	34210	30840	30910	28660	31870	37980	40830	39460	37120	32670	30790	26890
23	34040	30820	30720	28670	32010	43480	40690	39500	36980	32520	30680	26940
24	33870	30680	30500	28690	32070	43650	40590	39540	36870	32580	30560	26890
25	33740	30560	30400	28710	32230	43630	40320	39400	36730	32670	30310	26790
26	33570	30480	30230	28730	32650	43540	40240	39260	36560	32720	30070	26810
27	33440	30470	30070	28740	32740	43540	39950	39200	36460	32690	29840	26860
28	33240	30360	29910	28760	32890	43410	39790	39200	36320	32650	29530	26990
29	33070	30450	29740	28790	32910	43240	39620	39180	36250	32560	29280	27070
30	32910	30480	29620	28830	---	43120	39440	39200	36210	32450	29070	27160
31	32830	---	29440	28920	---	42990	---	39160	---	32290	28830	---
MAX	35580	32600	31630	29330	32910	43650	43030	40360	39140	36110	32160	28610
MIN	32800	30360	29440	28420	29070	33000	39440	38940	36210	32290	28830	26790
(†)	543.60	542.30	541.71	541.41	543.64	548.74	547.03	546.89	545.39	543.30	541.36	540.38
(‡)	-1300	-2350	-1040	-520	+3990	+10080	-3550	-280	-2950	-3920	-3460	-1670

CAL YR 1983 MAX 44380 MIN 29440 ‡ -4190
WTR YR 1984 MAX 43650 MIN 26790 ‡ -6970

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

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

324304097113601 LAKE ARLINGTON SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
22...	1248	1.00	324	7.9	12.5	.90	8.8	85	110
22...	1249	10.0	324	7.9	12.0	.90	8.7	83	--
22...	1250	20.0	324	7.9	11.5	--	8.6	81	--
22...	1251	30.0	324	7.8	11.5	--	8.6	81	--
22...	1252	42.0	324	7.8	11.5	--	8.6	81	110
MAY									
22...	0910	1.00	318	8.1	26.0	1.20	7.0	88	110
22...	0911	10.0	318	8.1	26.0	--	6.9	87	--
22...	0912	20.0	318	7.7	24.5	--	5.2	64	--
22...	0913	25.0	319	7.5	23.0	--	3.7	44	--
22...	0914	30.0	329	7.3	23.0	--	.6	7	--
22...	0915	40.0	334	7.2	22.5	--	.3	4	--
22...	0916	46.0	334	7.2	22.5	--	.3	4	120
JUL									
26...	0950	1.00	315	8.4	31.5	1.60	5.9	80	110
26...	0951	10.0	317	8.4	31.0	--	5.9	80	--
26...	0952	15.0	317	8.4	31.0	--	5.8	78	--
26...	0953	20.0	330	7.5	29.0	--	.2	3	--
26...	0954	30.0	342	7.2	27.5	--	.2	3	--
26...	0955	40.0	351	7.1	26.1	--	.2	2	130

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
22...	16	36	5.0	19	.8	4.7	95	28	23
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	16	36	5.0	19	.8	4.6	95	28	22
MAY									
22...	18	37	4.8	19	.8	4.6	94	30	23
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	14	42	4.7	18	.7	5.1	110	30	25
JUL									
26...	20	35	5.1	20	.9	5.0	89	30	21
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	9	43	5.1	19	.8	4.6	120	21	20

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324304097113601. LAKE ARLINGTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
22...	.30	2.6	180	.10	.70	.80	<.010	6	1
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	.10	.80	.90	<.010	20	<10
22...	--	--	--	--	--	--	--	--	--
22...	--	2.7	170	.10	.70	.80	.010	15	11
MAY									
22...	.30	.5	180	.30	.70	1.0	.020	6	11
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	.30	.80	1.1	.020	50	30
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	.40	1.1	1.5	.040	<10	330
22...	--	--	--	--	--	--	--	--	--
22...	--	1.7	190	.30	.90	1.2	.080	69	830
JUL									
26...	.30	2.7	170	<.10	.80	--	.010	<3	6
26...	--	--	--	<.10	.50	--	.010	40	30
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	<.10	.70	--	.030	80	810
26...	--	--	--	--	--	--	--	--	--
26...	--	5.7	190	<.10	1.9	--	.050	390	1400

324320097121101 LAKE ARLINGTON SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
22...	1230	1.00	324	7.9	12.5	9.0	86
22...	1231	10.0	324	7.9	12.0	9.1	86
22...	1232	20.0	324	7.8	12.0	8.8	84
22...	1233	30.0	324	7.8	12.0	8.8	84
22...	1234	34.0	324	7.7	12.0	8.6	82
MAY							
22...	0936	1.00	318	8.1	26.0	7.0	88
22...	0937	10.0	318	8.1	26.0	6.9	87
22...	0938	20.0	318	8.0	26.0	6.9	87
22...	0939	30.0	324	7.4	23.0	3.3	39
22...	0940	37.0	334	7.3	22.5	.3	4
JUL							
26...	1040	1.00	315	8.3	31.5	5.8	79
26...	1041	10.0	315	8.3	31.0	5.8	78
26...	1042	20.0	324	7.5	30.0	2.1	28
26...	1043	25.0	339	7.3	28.0	.2	3
26...	1044	29.0	344	7.2	27.0	.2	3

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324253097121801 LAKE ARLINGTON SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
22...	1324	1.00	324	7.9	13.0	8.3	81
22...	1325	10.0	324	7.9	12.0	8.3	79
22...	1326	20.0	324	7.9	11.5	8.2	77
22...	1327	30.0	318	7.9	10.5	8.1	74
22...	1328	34.0	318	7.8	10.5	8.0	73
MAY							
22...	0945	1.00	318	8.1	26.0	6.9	87
22...	0946	10.0	318	8.1	26.0	6.9	87
22...	0947	20.0	318	8.0	25.5	6.2	78
22...	0948	30.0	327	7.4	23.0	.8	10
22...	0949	42.0	333	7.4	23.0	.3	4
JUL							
26...	1100	1.00	315	8.2	31.5	5.8	79
26...	1101	10.0	315	8.2	31.0	5.6	76
26...	1102	20.0	316	7.6	29.5	3.5	46
26...	1103	33.0	346	7.2	27.0	.3	4

324301097123301 LAKE ARLINGTON SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
22...	1315	1.00	324	7.9	13.0	8.3	81
22...	1316	10.0	324	7.9	11.5	8.4	79
22...	1317	20.0	324	7.9	11.5	8.4	79
22...	1318	26.0	318	7.9	10.5	8.6	79
MAY							
22...	1000	1.00	318	8.0	26.0	6.5	82
22...	1001	10.0	318	8.0	26.0	6.4	81
22...	1002	20.0	318	8.0	25.5	6.3	79
22...	1003	32.0	328	7.4	23.0	.3	4
JUL							
26...	1110	1.00	315	8.3	31.5	5.9	80
26...	1111	10.0	315	8.3	31.0	5.6	76
26...	1112	20.0	326	7.3	30.0	.2	3
26...	1113	26.0	331	7.3	29.0	.2	3

324257097130301 LAKE ARLINGTON SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
22...	1445	1.00	324	7.8	17.5	8.0	86
22...	1446	10.0	324	7.8	17.5	8.0	86
MAY							
22...	1130	1.00	318	7.9	30.5	6.4	88
22...	1131	10.0	318	7.9	30.0	6.5	88
JUL							
26...	1140	1.00	312	8.2	36.5	5.1	75
26...	1141	10.0	312	8.2	36.5	5.1	75

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324228097130301 LAKE ARLINGTON SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
22...	1500	1.00	324	7.8	15.5	7.8	80
22...	1501	5.00	324	7.8	12.5	8.1	78
22...	1502	13.0	324	7.8	12.0	8.1	77
MAY							
22...	1111	1.00	318	8.0	27.5	6.4	83
22...	1112	10.0	318	8.0	25.0	6.1	76
22...	1113	18.0	318	7.7	24.5	5.0	61
JUL							
26...	1125	1.00	315	8.0	34.0	4.9	70
26...	1126	5.00	316	8.0	32.5	4.5	62
26...	1127	10.0	316	7.9	30.5	4.1	55
26...	1128	13.0	316	7.8	30.5	3.8	51

324143097132201 LAKE ARLINGTON SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
22...	1340	1.00	306	8.0	12.5	.70	8.8	85	110
22...	1341	10.0	306	8.0	11.5	--	8.7	82	--
22...	1342	15.0	275	7.8	9.5	--	8.4	75	--
22...	1343	21.0	275	7.7	9.5	--	8.4	75	89
MAY									
22...	1015	1.00	312	8.1	25.0	.50	6.8	84	110
22...	1016	10.0	318	7.9	24.5	--	5.8	71	--
22...	1017	20.0	319	7.6	24.0	--	4.3	52	--
22...	1018	25.0	325	7.4	23.5	--	2.8	34	110
JUL									
26...	1200	1.00	316	8.3	31.5	1.10	5.9	80	110
26...	1201	10.0	316	8.2	30.5	--	5.1	68	--
26...	1202	15.0	309	8.0	30.0	--	4.5	60	--
26...	1203	22.0	300	7.5	29.5	--	2.8	37	100

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
22...	13	34	4.9	19	.8	4.7	92	28	23
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	14	28	4.6	18	.9	4.4	75	27	22
MAY									
22...	15	35	4.8	19	.8	4.7	92	28	22
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	15	37	4.8	18	.8	5.0	97	29	22
JUL									
26...	20	35	5.0	20	.9	4.9	88	30	21
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	20	32	4.9	19	.9	4.8	80	28	21

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324143097132201 LAKE ARLINGTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (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)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB								
22...	2.8	170	.10	.70	.80	.010	6	3
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	3.4	150	<.10	.80	--	.020	19	12
MAY								
22...	1.0	170	.30	1.1	1.4	.040	4	3
22...	--	--	.30	.80	1.1	.040	40	<10
22...	--	--	--	--	--	--	--	--
22...	1.8	180	.30	1.1	1.4	.050	10	95
JUL								
26...	2.7	170	<.10	.70	--	.020	<3	2
26...	--	--	<.10	.60	--	.030	40	40
26...	--	--	--	--	--	--	--	--
26...	2.5	160	<.10	.80	--	.060	8	200

324133097130601 LAKE ARLINGTON SITE EL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
22...	1400	1.00	306	8.0	12.5	8.9	86
22...	1401	13.0	283	7.8	10.5	8.4	77
MAY							
22...	1030	1.00	312	8.1	25.0	6.8	84
22...	1031	10.0	318	7.9	24.5	5.8	71
22...	1032	18.0	318	7.7	24.0	3.1	38
JUL							
26...	1215	1.00	316	8.3	32.0	5.9	81
26...	1216	11.0	311	8.1	30.5	4.5	60

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324041097134601 LAKE ARLINGTON SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
22...	1415	1.00	284	7.8	11.5	.60	8.4	79	95
22...	1416	9.00	266	7.6	10.0	--	8.5	77	84
MAY									
22...	1045	1.00	305	8.0	24.0	.30	6.4	78	100
22...	1046	10.0	305	7.9	24.0	--	6.1	74	--
22...	1047	15.0	305	7.9	24.0	--	5.4	66	100
JUL									
26...	1230	1.00	309	8.5	32.0	.50	6.3	87	100
26...	1231	5.00	265	8.0	29.5	--	5.4	71	--
26...	1232	9.00	265	7.8	29.0	--	5.1	67	81

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
22...	10	30	4.8	18	.8	4.6	85	28	22
22...	15	26	4.7	18	.9	4.4	69	26	21
MAY									
22...	16	34	4.8	18	.8	4.5	89	29	22
22...	--	--	--	--	--	--	--	--	--
22...	15	34	4.7	18	.8	5.0	89	30	22
JUL									
26...	17	32	4.9	20	.9	5.2	83	30	22
26...	--	--	--	--	--	--	--	--	--
26...	18	25	4.5	18	.9	4.5	63	27	21

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
22...	3.2	160	<.10	.80	--	.010	6	10
22...	3.7	150	<.10	.90	--	.020	9	18
MAY								
22...	1.4	170	.30	1.2	1.5	.060	6	12
22...	--	--	--	--	--	--	--	--
22...	1.7	170	.30	1.1	1.4	.070	22	43
JUL								
26...	2.4	170	<.10	.60	--	.040	5	3
26...	--	--	--	--	--	--	--	--
26...	1.0	140	<.10	.80	--	.040	9	28

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX

LOCATION.--Lat 32°45'46", long 96°59'42", Dallas County, Hydrologic Unit 12030102, on left bank at upstream side of bridge on Belt Line Road, 1.3 mi northeast of Grand Prairie, 3.7 mi upstream from Bear Creek, 6.5 mi upstream from Mountain Creek, and at mile 514.6.

DRAINAGE AREA.--3,065 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1925 to current year.

REVISED RECORDS.--WSP 628: 1925. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 405.42 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 6, 1933, nonrecording gage at bridge on old channel 2,500 ft southeast of present site at datum 7.56 ft higher. Dec. 6, 1933, to May 24, 1956, water-stage recorder at site 440 ft downstream from site of nonrecording gage at datum 7.56 ft higher than present datum. May 25, 1956, to Apr. 18, 1957, nonrecording gage at site 1.5 mi downstream at different datum. Apr. 19 to Aug. 13, 1957, nonrecording gage on bridge at present site and at datum 5.00 ft higher than present datum. Aug. 14, 1957, to Sept. 30, 1982, water-stage recorder at present site and at datum 5.00-foot higher than present datum.

REMARKS.--Water-discharge records good. Flow is affected at times by three upstream reservoirs with a combined capacity of 248,600 acre-ft, of which 76,550 acre-ft is for flood control. During the current year, the city of Fort Worth discharged sewage effluent into the river upstream from this station. There are many diversions upstream from this station for municipal, industrial, and other uses. The river channel at this station was relocated and rectified in 1956. Gage-height telemeter at station.

AVERAGE DISCHARGE.--59 years (water years 1926-84), 556 ft^3/s (402,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft^3/s May 17, 1949 (gage height, 28.00 ft, site and datum then in use), from rating curve extended above 36,000 ft^3/s; minimum observed, 3.2 ft^3/s June 6, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 30.6 ft in May 1908 (former site and datum), from information by local resident. Flood in April 1922 reached a stage of 29.0 ft (former site and datum), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,990 ft^3/s Oct. 9 at 0245 hours (gage height, 18.44 ft); minimum daily, 46 ft^3/s July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	188	210	288	162	222	277	597	129	114	73	77
2	169	186	247	275	168	209	355	2660	122	92	62	302
3	163	184	322	281	156	193	522	710	110	98	58	210
4	179	174	269	259	155	188	311	377	130	79	136	115
5	169	259	239	250	160	181	261	285	329	131	85	100
6	152	508	207	243	150	172	253	258	1660	88	104	87
7	475	321	195	207	150	167	390	244	1320	99	97	79
8	2370	224	196	208	160	169	1210	218	309	90	84	78
9	3100	200	201	366	667	165	450	201	196	67	80	84
10	424	185	201	869	435	186	328	194	145	71	75	86
11	345	177	208	390	287	482	288	188	116	68	192	83
12	324	163	209	267	565	2950	266	177	111	187	939	82
13	276	158	205	238	326	1470	252	164	100	414	396	81
14	257	167	197	212	234	492	244	164	96	118	185	77
15	235	175	207	208	201	401	228	164	96	93	123	72
16	213	180	238	200	184	363	219	155	90	78	103	80
17	213	170	256	203	178	335	223	148	79	74	90	77
18	205	174	243	196	363	397	214	470	76	62	83	68
19	719	181	223	195	390	1900	209	969	85	62	78	79
20	563	234	220	194	240	580	293	345	77	59	76	78
21	455	218	217	184	209	371	412	247	79	54	85	81
22	295	203	211	195	199	321	246	220	80	53	78	84
23	237	387	222	251	185	2760	200	203	77	46	83	89
24	228	351	253	256	171	2820	197	210	69	75	82	113
25	212	224	253	216	163	556	192	165	64	262	82	124
26	198	252	280	194	516	419	194	139	81	167	73	112
27	195	410	321	189	867	391	195	127	70	117	70	98
28	192	351	312	171	340	413	188	792	131	105	79	134
29	176	244	287	170	245	359	199	348	227	89	80	107
30	183	214	292	157	---	297	257	212	184	78	74	113
31	193	---	289	161	---	274	---	182	---	80	78	---
TOTAL	13287	7062	7430	7693	8226	20203	9073	11533	6438	3270	3983	3050
MEAN	429	235	240	248	284	652	302	372	215	105	128	102
MAX	3100	508	322	869	867	2950	1210	2660	1660	414	939	302
MIN	152	158	195	157	150	165	188	127	64	46	58	68
AC-FT	26350	14010	14740	15260	16320	40070	18000	22880	12770	6490	7900	6050

CAL YR 1983 TOTAL 117090 MEAN 321 MAX 3100 MIN 104 AC-FT 232200
WTR YR 1984 TOTAL 101248 MEAN 277 MAX 3100 MIN 46 AC-FT 200800

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1956 to current year. Chemical and biochemical analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to current year.
pH: October 1976 to current year.
WATER TEMPERATURES: October 1966 to current year.
DISSOLVED OXYGEN: October 1976 to current year.

INSTRUMENTATION.--Beginning November 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,320 micromhos Dec. 12, 1978; minimum, 154 micromhos Aug. 19, 1983.
pH: Maximum, 8.6 units July 2, 1981, June 27, 1982, and Mar. 26, 1983; minimum, 6.6 units Jan. 6, 1979.
WATER TEMPERATURES: Maximum, 35.0°C Aug. 8, 1982; minimum, 3.0°C Jan. 9, 1973.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L Dec. 14, 16, 1983; minimum, 0.0 mg/L on several days each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,210 micromhos Jan. 9; minimum, 187 micromhos May 18.
pH: Maximum, 8.2 units Feb. 9; minimum, 7.3 units Jan. 9, Feb. 10, Apr. 21.
WATER TEMPERATURES: Maximum, 32.5°C July 23, Aug. 19, 20; minimum, 5.5°C Dec. 25, 29, 30.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L Dec. 14, 16; minimum, 1.3 mg/L Sept. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT										
25...	1500	225	746	7.7	21.0	7.4	83	1.3	160	21
JAN										
17...	1535	205	770	7.5	10.5	8.2	74	12	170	14
FEB										
14...	1320	220	616	7.6	15.5	6.5	66	12	160	29
MAY										
07...	1340	243	775	7.6	25.0	5.7	70	4.3	190	22
JUN										
19...	1010	79	854	7.7	28.0	6.5	84	1.8	160	18
AUG										
21...	1230	83	805	7.8	31.0	5.8	80	1.5	150	17

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
25...	52	7.6	85	3	9.7	140	75	81	.60
JAN									
17...	57	7.7	78	3	12	160	84	75	.80
FEB									
14...	53	6.5	60	2	11	130	72	57	.60
MAY									
07...	65	7.1	79	3	9.8	170	84	80	.70
JUN									
19...	51	7.4	100	4	11	140	78	110	.80
AUG									
21...	46	7.8	97	4	12	130	62	100	.80

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 25...	10	400	7.5	.050	7.5	.120	2.0	2.1	3.10
JAN 17...	8.5	420	6.5	.520	7.0	2.00	2.7	4.7	2.40
FEB 14...	9.0	350	4.0	.630	4.6	1.00	1.6	2.6	1.60
MAY 07...	8.9	440	3.0	.280	3.3	.460	1.2	1.7	1.70
JUN 19...	7.5	450	3.5	.040	3.5	.080	1.4	1.5	1.20
AUG 21...	7.9	410	8.5	.060	8.6	.140	1.3	1.4	4.80

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	13287	565	318	11400	46	1670	60	2150	150
NOV.	1983	7062	710	400	7640	61	1160	78	1490	170
DEC.	1983	7430	756	427	8560	66	1330	84	1690	180
JAN.	1984	7693	712	402	8340	61	1270	78	1620	170
FEB.	1984	8226	664	374	8310	56	1250	72	1600	170
MAR.	1984	20203	532	300	16300	43	2350	56	3030	150
APR.	1984	9073	732	413	10100	64	1560	81	1990	170
MAY	1984	11533	608	343	10700	51	1580	65	2030	160
JUNE	1984	6438	618	348	6050	52	904	67	1160	160
JULY	1984	3270	729	411	3630	63	558	81	712	170
AUG.	1984	3983	670	378	4060	57	615	73	787	170
SEPT	1984	3050	788	445	3660	70	574	89	731	180
TOTAL		101248	**	**	98800	**	14800	**	19000	**
WTD.AVG.		277	641	361	**	54	**	69	**	160

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	830	808	819	762	724	746	772	716	751	694	678	685
2	826	778	802	818	734	767	792	660	763	694	670	685
3	834	794	811	844	816	831	750	592	676	678	644	665
4	---	---	815	838	790	821	762	610	707	718	662	692
5	---	---	817	818	728	794	768	750	761	744	716	728
6	---	---	820	650	514	590	734	742	765	778	748	765
7	---	---	770	634	528	587	804	752	785	802	728	776
8	---	---	450	630	614	635	806	794	801	822	774	801
9	---	---	365	728	674	701	814	796	803	1210	480	738
10	---	---	470	780	734	762	842	802	826	656	460	577
11	614	506	574	798	756	785	838	820	828	580	464	523
12	728	558	672	880	768	805	870	834	854	662	584	630
13	730	676	698	814	784	800	840	800	819	714	668	695
14	740	710	723	800	780	791	840	798	822	764	714	744
15	762	722	742	794	750	778	886	848	866	880	764	790
16	758	740	745	788	750	778	866	812	831	794	764	779
17	784	742	767	812	788	801	856	816	836	774	738	754
18	766	720	741	820	804	814	820	806	813	774	744	762
19	738	394	607	820	788	812	818	780	800	780	764	772
20	430	338	379	856	808	833	784	750	768	786	772	779
21	---	---	560	852	744	778	792	754	774	780	762	772
22	---	---	673	792	752	777	792	776	783	786	748	776
23	---	---	708	794	542	707	796	760	782	748	720	735
24	---	---	720	742	632	654	760	706	722	754	702	717
25	---	---	736	670	634	640	740	712	727	762	706	734
26	758	740	748	724	476	670	728	674	710	764	744	755
27	792	748	778	640	466	565	672	638	650	796	762	783
28	798	784	792	628	568	599	658	630	644	816	764	790
29	814	790	806	684	634	653	666	644	653	880	798	811
30	798	786	794	720	692	706	694	662	681	824	798	814
31	796	743	779	---	---	---	720	690	705	800	774	785
MONTH	834	338	699	880	466	733	886	592	765	1210	460	736

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	816	768	790	770	712	745	828	808	818	812	252	654
2	850	818	833	796	756	780	850	778	816	582	330	408
3	844	810	824	804	794	800	762	662	681	576	398	497
4	850	826	835	824	802	813	720	632	669	680	574	620
5	850	824	834	814	796	808	782	730	758	744	670	703
6	828	784	807	796	766	781	812	784	798	828	748	799
7	792	766	780	812	764	785	830	438	753	810	745	777
8	834	774	792	832	792	820	748	404	525	771	755	762
9	752	584	670	840	816	826	612	470	538	819	773	803
10	610	452	525	842	814	828	720	616	663	820	806	815
11	668	448	629	326	320	728	804	728	764	834	810	820
12	666	374	578	466	292	409	812	804	808	848	824	836
13	538	464	505	502	360	422	846	818	833	860	840	852
14	664	600	621	652	516	587	848	820	836	861	827	848
15	738	668	711	706	646	671	858	832	843	843	791	821
16	810	740	765	740	694	713	848	796	823	839	789	811
17	820	790	809	748	704	730	880	750	797	829	821	825
18	796	538	700	768	444	720	826	800	814	875	187	718
19	752	676	704	678	280	401	838	820	827	744	414	523
20	694	656	675	582	398	493	858	542	794	616	452	521
21	716	696	706	716	584	647	770	534	698	728	620	673
22	740	718	730	790	718	746	762	674	710	748	706	727
23	766	734	745	810	296	459	778	754	766	780	734	758
24	810	768	794	472	302	365	768	746	755	804	782	790
25	846	806	822	634	484	583	820	772	796	818	772	789
26	848	384	668	696	632	666	858	828	848	832	814	823
27	636	408	499	750	690	720	870	854	861	844	816	826
28	606	500	550	772	718	745	876	846	861	804	376	555
29	708	610	664	782	742	765	874	848	858	556	524	542
30	---	---	---	814	778	791	856	818	841	668	548	588
31	---	---	---	820	796	809	---	---	---	772	678	735
MONTH	850	374	709	842	280	682	880	404	772	875	187	717

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	814	780	795	772	750	758	862	774	824	830	804	816
2	834	794	818	784	772	777	850	834	846	840	210	719
3	854	804	830	784	730	758	886	836	860	768	222	634
4	862	662	827	798	738	775	878	502	765	826	686	749
5	780	654	741	---	---	700	836	724	806	722	702	711
6	646	264	490	---	---	785	832	786	804	796	718	761
7	466	272	375	---	---	820	788	732	746	804	790	796
8	636	474	569	---	---	843	792	738	763	822	816	820
9	712	640	671	---	---	861	836	796	817	838	824	832
10	744	716	729	---	---	878	832	794	810	834	818	825
11	758	744	752	---	---	891	818	516	706	824	774	794
12	796	764	780	---	---	690	794	272	489	858	766	793
13	840	776	812	---	---	525	510	374	443	944	874	912
14	852	832	843	---	---	538	656	516	571	880	844	856
15	888	842	868	---	---	663	710	660	684	856	814	828
16	902	866	885	---	---	724	746	722	737	834	820	829
17	908	890	898	774	754	764	790	752	775	844	820	832
18	916	860	898	808	752	785	804	768	787	840	766	789
19	878	806	837	832	806	820	812	788	801	802	756	772
20	836	808	820	842	826	833	820	802	813	826	804	812
21	854	828	840	872	832	859	822	760	787	880	822	848
22	872	834	856	870	858	862	818	764	790	880	832	847
23	866	838	855	868	466	833	834	812	824	864	836	851
24	836	822	830	868	716	831	818	796	802	872	828	841
25	842	822	831	798	638	751	814	792	804	824	748	781
26	848	796	826	708	662	681	820	800	809	798	744	770
27	834	792	816	730	696	711	814	794	805	848	796	822
28	834	406	826	770	700	749	808	766	791	846	738	792
29	788	476	660	802	682	779	806	768	784	842	788	811
30	820	716	781	816	778	795	840	796	811	850	822	839
31	---	---	---	790	752	768	840	822	830	---	---	---
MONTH	916	264	779	872	466	768	886	272	764	944	210	803

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.8	7.5	7.7	7.8	7.7	7.8	7.7	7.6	7.7	7.7	7.6	7.7
2	7.8	7.5	7.7	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.6	7.6
3	7.8	7.7	7.7	7.8	7.7	7.8	7.6	7.6	7.6	7.6	7.5	7.6
4	---	---	7.7	7.8	7.7	7.8	7.6	7.6	7.6	7.5	7.5	7.5
5	---	---	---	7.8	7.6	7.7	7.6	7.6	7.6	7.5	7.5	7.5
6	---	---	---	8.0	7.6	7.7	7.7	7.6	7.7	7.5	7.4	7.5
7	---	---	---	7.7	7.6	7.6	7.7	7.6	7.7	7.5	7.4	7.5
8	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7	7.5	7.4	7.4
9	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7	7.6	7.3	7.5
10	---	---	---	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.4	7.5
11	7.7	7.6	7.7	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.5
12	7.8	7.7	7.7	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.6
13	7.8	7.7	7.7	7.8	7.7	7.7	7.7	7.7	7.7	7.6	7.6	7.6
14	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.6	7.6
15	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.7	7.7	7.6	7.6	7.6
16	7.8	7.7	7.8	7.7	7.6	7.7	7.8	7.7	7.7	7.6	7.5	7.5
17	7.8	7.7	7.7	7.8	7.7	7.7	7.7	7.7	7.7	7.5	7.5	7.5
18	7.7	7.7	7.7	7.8	7.7	7.8	7.8	7.6	7.7	7.6	7.5	7.6
19	7.9	7.5	7.6	7.8	7.7	7.7	7.8	7.7	7.7	7.6	7.5	7.6
20	7.8	7.5	7.6	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.6
21	---	---	7.7	7.8	7.7	7.7	7.7	7.6	7.6	7.7	7.6	7.6
22	---	---	---	7.7	7.6	7.7	7.7	7.6	7.6	7.6	7.6	7.6
23	---	---	---	7.7	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6
24	---	---	---	7.7	7.5	7.6	7.8	7.6	7.7	7.6	7.5	7.6
25	7.7	7.7	7.7	7.6	7.5	7.6	7.7	7.7	7.7	7.6	7.6	7.6
26	7.7	7.7	7.7	7.6	7.6	7.6	7.7	7.6	7.7	7.6	7.5	7.6
27	7.8	7.7	7.8	7.6	7.5	7.6	7.7	7.7	7.7	7.6	7.5	7.5
28	7.8	7.7	7.8	7.6	7.5	7.6	7.7	7.7	7.7	7.6	7.6	7.6
29	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.7	7.7	7.6	7.5	7.5
30	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.7	7.7	7.6	7.5	7.5
31	7.8	7.8	7.8	---	---	---	7.7	7.7	7.7	7.6	7.5	7.5
MONTH	7.9	7.5	7.7	8.0	7.5	7.7	7.8	7.6	7.7	7.7	7.3	7.6

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.6	7.5	7.5	7.6	7.5	7.5	7.7	7.6	7.7	8.0	7.6	7.7
2	7.5	7.5	7.5	7.5	7.5	7.5	7.7	7.6	7.6	7.8	7.4	7.6
3	7.6	7.5	7.6	7.5	7.5	7.5	7.7	7.6	7.7	7.5	7.5	7.5
4	7.6	7.5	7.6	7.5	7.5	7.5	7.7	7.5	7.6	7.6	7.5	7.6
5	7.6	7.5	7.5	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.6
6	7.7	7.5	7.5	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.5
7	7.8	7.5	7.5	7.5	7.5	7.5	7.7	7.6	7.7	7.6	7.5	7.5
8	7.5	7.5	7.5	7.6	7.5	7.5	7.7	7.4	7.5	7.6	7.6	7.6
9	8.2	7.4	7.6	7.6	7.5	7.5	7.6	7.5	7.6	7.6	7.6	7.6
10	7.6	7.3	7.4	7.5	7.5	7.5	7.6	7.6	7.6	7.7	7.6	7.6
11	7.6	7.5	7.5	7.8	7.4	7.6	7.6	7.6	7.6	7.7	7.6	7.6
12	8.1	7.4	7.6	7.8	7.4	7.6	7.6	7.6	7.6	7.6	7.6	7.6
13	7.6	7.5	7.5	7.8	7.4	7.6	7.7	7.6	7.6	7.7	7.6	7.6
14	7.5	7.4	7.5	7.6	7.5	7.5	7.7	7.7	7.7	7.7	7.6	7.7
15	7.5	7.5	7.5	7.6	7.5	7.6	7.7	7.7	7.7	7.7	7.6	7.6
16	7.5	7.5	7.5	7.6	7.5	7.5	7.7	7.6	7.7	7.7	7.6	7.6
17	7.5	7.5	7.5	7.6	7.5	7.5	7.7	7.7	7.7	7.6	7.6	7.6
18	7.7	7.5	7.5	7.7	7.5	7.5	7.7	7.6	7.7	7.9	7.6	7.6
19	7.7	7.5	7.6	7.8	7.5	7.6	7.7	7.6	7.6	7.6	7.4	7.4
20	7.6	7.5	7.5	7.6	7.5	7.5	7.7	7.6	7.6	7.5	7.4	7.5
21	7.5	7.4	7.4	7.6	7.5	7.6	7.7	7.3	7.5	7.5	7.4	7.5
22	7.5	7.4	7.5	7.6	7.6	7.6	7.7	7.5	7.6	7.5	7.4	7.5
23	7.5	7.5	7.5	8.0	7.6	7.8	7.7	7.6	7.6	7.6	7.5	7.5
24	7.5	7.5	7.5	7.7	7.5	7.6	7.7	7.5	7.6	7.5	7.5	7.5
25	7.5	7.5	7.5	7.6	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.6
26	7.8	7.4	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
27	7.6	7.5	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.7	7.6	7.6
28	7.6	7.5	7.6	7.7	7.6	7.7	7.7	7.6	7.6	7.7	7.4	7.5
29	7.6	7.5	7.5	7.7	7.7	7.7	7.6	7.5	7.6	7.6	7.5	7.5
30	---	---	---	7.7	7.6	7.7	7.6	7.5	7.6	7.6	7.4	7.5
31	---	---	---	7.7	7.6	7.7	---	---	---	7.6	7.5	7.6
MONTH	8.2	7.3	7.5	8.0	7.4	7.6	7.7	7.3	7.6	8.0	7.4	7.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.6	7.7	7.8	7.6	7.7	7.7	7.5	7.6	7.9	7.7	7.8
2	7.7	7.7	7.7	7.8	7.6	7.7	7.7	7.6	7.7	8.1	7.7	7.8
3	7.7	7.7	7.7	7.8	7.6	7.7	7.7	7.6	7.6	7.9	7.5	7.6
4	7.7	7.7	7.7	7.8	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.6
5	7.7	7.5	7.6	---	---	---	7.6	7.6	7.6	7.7	7.5	7.6
6	7.8	7.6	7.7	---	---	---	7.6	7.5	7.6	7.8	7.6	7.7
7	7.7	7.5	7.5	---	---	---	7.6	7.5	7.5	7.8	7.7	7.7
8	7.5	7.5	7.5	---	---	---	7.6	7.5	7.6	7.8	7.7	7.8
9	7.6	7.5	7.6	---	---	---	7.7	7.5	7.6	7.8	7.7	7.8
10	7.6	7.6	7.6	---	---	---	7.7	7.6	7.6	7.8	7.7	7.8
11	7.7	7.6	7.6	---	---	---	7.6	7.5	7.6	7.7	7.7	7.7
12	7.7	7.7	7.7	---	---	---	7.7	7.4	7.5	7.8	7.6	7.7
13	7.7	7.6	7.6	---	---	---	7.5	7.4	7.5	7.9	7.8	7.9
14	7.7	7.6	7.7	---	---	---	7.6	7.4	7.5	7.9	7.8	7.8
15	7.8	7.7	7.7	---	---	---	7.7	7.6	7.6	7.8	7.8	7.8
16	7.8	7.7	7.7	---	---	---	7.7	7.7	7.7	7.9	7.8	7.8
17	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.7	7.7	7.8	7.7	7.8
18	8.0	7.7	7.8	7.7	7.6	7.6	8.0	7.7	7.8	7.8	7.7	7.8
19	7.9	7.7	7.8	7.7	7.6	7.7	7.9	7.7	7.7	7.8	7.7	7.8
20	7.9	7.7	7.8	7.7	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.8
21	8.0	7.8	7.9	7.7	7.7	7.7	7.7	7.6	7.7	7.9	7.8	7.8
22	8.0	7.8	7.9	7.8	7.7	7.7	7.7	7.6	7.7	7.8	7.7	7.8
23	8.1	7.8	7.9	7.8	7.7	7.7	7.7	7.6	7.7	7.8	7.7	7.8
24	8.1	7.8	7.9	7.7	7.5	7.6	7.7	7.6	7.7	7.7	7.7	7.7
25	8.1	7.7	7.9	7.6	7.5	7.5	7.8	7.7	7.7	7.7	7.5	7.6
26	7.9	7.7	7.8	7.7	7.5	7.6	7.8	7.7	7.7	7.7	7.5	7.6
27	7.9	7.6	7.8	7.6	7.5	7.6	7.8	7.7	7.7	7.8	7.6	7.7
28	8.0	7.6	7.8	7.6	7.5	7.6	7.8	7.7	7.7	7.8	7.7	7.7
29	7.8	7.4	7.5	7.7	7.5	7.6	7.7	7.6	7.7	7.7	7.7	7.7
30	7.7	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.7	7.8	7.7	7.7
31	---	---	---	7.7	7.6	7.6	7.9	7.7	7.8	---	---	---
MONTH	8.1	7.4	7.7	7.8	7.5	7.6	8.0	7.4	7.7	8.1	7.5	7.7

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	25.5	26.0	23.5	22.5	22.5	15.0	14.5	15.0	9.5	8.0	8.5
2	26.5	25.5	26.0	24.0	23.0	23.5	16.0	15.0	15.5	9.5	9.0	9.5
3	27.5	26.0	26.5	24.5	23.5	24.0	16.5	15.0	16.0	9.5	8.5	9.0
4	---	---	---	24.5	23.5	24.0	15.5	14.5	15.0	12.0	9.5	11.0
5	---	---	---	23.5	21.5	23.0	16.0	14.5	15.5	12.5	11.0	12.0
6	---	---	---	21.5	20.0	20.5	15.0	14.0	14.5	13.5	12.5	13.0
7	---	---	---	21.0	20.0	20.5	14.5	13.5	14.0	13.5	12.0	13.0
8	---	---	---	20.5	20.0	20.0	16.0	14.0	15.0	14.0	12.5	13.5
9	---	---	---	20.5	18.5	20.0	17.5	15.5	16.5	14.0	11.5	13.0
10	---	---	---	18.5	17.5	18.0	18.5	17.5	18.0	12.5	9.5	11.0
11	24.0	20.0	22.5	18.0	16.5	17.0	18.0	17.0	17.5	10.0	9.0	9.5
12	23.0	22.0	22.5	18.0	16.5	17.5	16.5	16.0	16.0	10.5	9.0	10.0
13	22.0	20.5	21.5	18.0	17.5	18.0	15.5	15.0	15.5	10.5	10.0	10.5
14	22.5	21.0	21.5	19.5	18.0	19.0	15.5	14.5	15.0	10.5	10.0	10.0
15	23.0	21.0	22.0	19.5	18.0	18.5	14.5	14.0	14.5	10.5	10.0	10.5
16	24.5	22.5	23.5	18.5	17.5	18.0	13.5	12.0	12.5	11.5	10.5	11.0
17	25.0	24.0	24.5	18.5	17.5	18.0	13.0	12.0	13.0	10.5	10.0	10.5
18	25.5	24.0	25.0	20.5	18.5	19.5	13.0	10.0	12.0	10.0	8.5	9.5
19	26.0	23.5	24.5	20.5	19.0	20.0	10.0	9.0	9.5	9.5	8.0	8.5
20	24.5	23.5	24.0	19.5	18.5	19.0	10.0	9.0	9.5	9.5	8.5	9.0
21	---	---	---	19.0	17.5	18.5	10.5	9.0	10.0	10.0	8.5	9.0
22	---	---	---	20.5	19.0	20.0	8.5	8.0	8.5	9.5	9.0	9.0
23	---	---	---	19.5	17.0	18.5	8.0	7.5	8.0	10.5	8.5	9.5
24	---	---	---	18.5	15.5	16.5	7.5	6.0	7.0	11.0	10.0	10.5
25	21.5	16.0	19.5	16.0	15.5	16.0	6.5	5.5	6.0	11.0	10.0	10.5
26	21.5	20.0	20.5	17.0	15.5	16.5	8.0	6.5	7.0	12.0	10.5	11.0
27	21.5	20.0	20.5	16.5	14.5	15.5	8.0	7.0	7.5	12.5	11.5	12.0
28	21.0	20.0	20.5	14.5	12.5	13.0	8.0	6.5	7.0	13.0	11.5	12.5
29	22.0	20.5	21.5	13.5	12.0	12.5	6.0	5.5	6.0	14.0	12.0	13.0
30	23.0	21.5	22.0	15.0	13.5	14.5	7.0	5.5	6.5	14.0	13.0	13.5
31	23.0	22.0	22.5	---	---	---	8.0	6.5	7.0	13.0	---	---
MONTH	27.5	16.0	23.0	24.5	12.0	18.5	18.5	5.5	12.0	14.0	8.0	11.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.0	12.0	13.0	15.0	12.5	14.0	18.0	17.0	17.5	21.5	18.0	20.5
2	14.5	13.5	14.0	17.0	14.5	16.0	18.5	17.5	18.0	20.5	19.0	19.5
3	15.0	13.0	14.0	18.0	16.5	17.5	18.5	17.0	18.0	23.0	20.0	21.5
4	14.5	13.5	14.0	18.0	17.0	18.0	18.5	16.5	17.5	24.0	21.5	23.0
5	14.0	13.0	13.5	17.0	14.5	15.5	19.5	16.5	18.0	25.5	22.5	24.0
6	13.0	12.0	12.5	16.0	14.0	15.0	20.0	17.5	19.0	27.0	24.5	25.5
7	13.5	12.0	12.5	17.0	14.5	15.5	19.5	17.0	18.5	26.0	24.5	25.5
8	13.5	13.0	13.5	17.0	15.5	16.0	18.0	17.0	18.0	24.0	22.0	23.0
9	15.0	11.0	13.0	16.5	15.0	16.0	20.5	17.5	19.0	24.5	21.5	23.0
10	15.0	12.0	13.5	16.5	15.5	16.0	21.0	19.0	20.0	24.5	22.0	23.0
11	17.0	14.0	16.0	16.5	12.5	15.0	22.0	19.5	20.5	25.0	22.0	23.5
12	17.0	13.0	15.5	15.5	12.5	14.0	21.0	20.0	20.5	26.5	23.5	25.0
13	14.5	13.0	14.0	16.0	15.5	15.0	22.0	19.5	20.5	27.5	25.0	26.0
14	16.0	14.0	15.0	19.0	16.0	17.5	21.5	19.5	20.5	28.0	25.5	27.0
15	17.5	15.5	16.5	20.5	18.5	19.5	20.5	19.0	19.5	27.0	25.5	26.5
16	17.0	15.5	16.0	20.5	20.0	20.0	19.5	18.0	19.0	26.5	25.0	25.5
17	16.5	15.0	16.0	19.5	19.0	19.5	20.5	17.5	19.5	26.0	24.5	25.5
18	17.0	15.0	16.5	20.0	16.5	19.0	20.5	19.0	20.0	25.5	24.0	25.0
19	16.5	14.5	15.5	18.5	15.5	16.5	20.5	19.5	20.0	24.5	24.0	24.0
20	14.5	14.0	14.0	17.0	15.0	16.0	23.0	20.0	21.5	25.5	23.5	24.5
21	15.0	13.0	14.0	18.5	15.5	17.0	23.0	21.5	22.0	26.5	24.0	26.0
22	16.0	14.0	15.0	19.5	17.0	18.5	21.5	20.0	21.0	27.0	25.0	26.0
23	16.5	14.5	15.5	19.0	17.0	18.5	22.0	19.0	20.5	27.5	26.0	26.5
24	16.5	15.0	16.0	18.5	17.0	18.0	22.5	19.5	21.0	28.0	26.0	27.0
25	16.5	15.0	16.0	18.5	16.5	17.5	22.0	21.0	21.5	28.5	26.5	27.5
26	17.0	14.5	16.0	20.0	17.0	18.5	23.5	21.5	22.5	29.0	27.0	28.0
27	15.5	13.0	14.0	20.5	19.0	19.5	24.5	22.5	23.5	29.0	27.0	28.0
28	13.5	12.0	12.5	19.5	18.0	18.5	24.0	22.5	23.0	28.0	24.5	25.5
29	14.0	12.0	13.0	18.5	16.5	17.5	23.5	22.0	23.0	25.5	24.0	25.0
30	---	---	---	19.0	17.0	18.0	23.0	21.0	22.0	25.0	22.5	24.0
31	---	---	---	18.0	17.0	17.5	---	---	---	25.5	23.0	24.5
MONTH	17.5	11.0	14.5	20.5	12.5	17.0	24.5	16.5	20.0	29.0	18.0	25.0

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	24.0	25.0	31.5	29.5	30.5	30.0	28.0	29.0	31.0	29.5	30.5
2	27.0	24.5	25.5	31.5	29.0	30.0	30.5	28.5	29.5	31.0	27.0	29.5
3	27.5	25.5	26.5	31.5	29.5	30.5	31.0	29.0	30.0	30.5	27.5	29.0
4	27.0	25.5	26.5	31.5	29.5	30.5	30.5	29.0	29.5	29.5	27.5	28.5
5	27.0	25.0	26.0	---	---	30.5	31.5	29.0	30.0	29.0	27.0	28.0
6	26.5	22.0	24.5	---	---	---	31.5	29.5	30.5	29.5	27.0	28.0
7	26.5	23.5	25.0	---	---	---	31.0	29.5	30.0	29.0	27.0	28.0
8	28.0	25.5	27.0	---	---	---	31.0	29.0	30.0	29.0	27.5	28.0
9	28.5	26.5	27.5	---	---	---	31.0	29.5	30.5	30.0	27.5	29.0
10	28.0	26.5	27.5	---	---	---	31.5	29.5	30.5	30.5	28.5	29.5
11	28.5	26.5	27.5	---	---	---	30.0	27.0	28.5	30.5	28.5	29.5
12	29.0	27.0	28.0	---	---	---	28.5	25.0	27.0	30.5	28.5	29.5
13	29.5	27.0	28.5	---	---	---	29.0	26.0	27.5	31.0	29.0	30.0
14	30.0	27.5	29.0	---	---	---	30.5	28.0	29.0	31.5	29.0	30.0
15	30.5	28.0	29.0	---	---	---	30.5	28.0	29.5	30.5	25.0	28.0
16	30.5	23.0	29.5	---	---	---	31.0	28.5	30.0	27.5	25.0	26.5
17	30.5	28.5	29.5	31.0	31.0	31.0	31.5	29.5	30.5	29.5	24.5	26.0
18	30.5	28.5	29.5	32.0	30.0	30.5	32.0	29.5	31.0	28.0	25.5	26.5
19	30.5	29.0	29.5	31.5	29.0	30.5	32.5	30.0	31.0	27.5	25.5	26.5
20	31.0	28.5	29.5	31.5	29.5	30.5	32.5	30.5	31.5	27.0	26.0	26.5
21	31.0	29.0	30.0	32.0	30.0	31.0	32.0	30.5	31.5	26.5	26.0	26.0
22	31.5	29.0	30.0	32.0	30.0	30.5	31.5	30.0	31.0	28.0	26.0	27.0
23	32.0	29.5	30.5	32.5	29.5	30.5	31.0	30.0	30.5	29.0	27.0	28.0
24	31.5	29.5	30.5	30.5	28.5	29.5	31.5	29.5	30.5	29.5	28.0	28.5
25	31.5	29.5	30.5	30.5	28.0	29.0	32.0	30.0	31.0	28.5	26.0	28.0
26	30.5	29.5	30.0	30.5	28.5	29.5	31.0	29.5	30.5	26.0	23.5	24.5
27	30.5	28.5	29.5	31.0	29.0	30.0	32.0	29.5	30.5	23.5	22.5	23.0
28	31.0	29.0	30.0	31.0	29.0	30.0	32.0	30.0	31.0	23.0	21.0	22.0
29	30.0	27.5	29.0	30.5	29.0	30.0	32.0	30.0	31.0	21.5	21.0	21.5
30	31.5	28.5	30.0	30.0	28.0	29.5	32.0	30.5	31.0	22.5	20.5	21.5
31	---	---	---	30.0	28.0	29.0	31.5	29.5	30.5	---	---	---
MONTH	32.0	22.0	28.5	32.5	28.0	30.0	32.5	25.0	30.0	31.5	20.5	27.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.7	6.0	7.1	10.6	7.0	8.2	12.0	11.2	11.5	9.9	9.1	9.6
2	9.3	6.0	6.6	10.1	6.3	7.9	11.4	7.2	10.4	9.6	8.8	9.2
3	7.2	6.0	6.5	10.1	6.1	7.6	9.6	6.8	7.4	11.5	6.9	8.8
4	---	---	---	10.2	6.1	7.8	11.3	7.2	8.5	6.9	6.1	6.5
5	---	---	---	8.6	5.9	6.4	12.4	6.9	9.5	9.3	5.6	7.3
6	---	---	---	7.5	6.1	6.6	12.7	7.8	10.7	8.6	8.0	8.3
7	---	---	---	6.6	6.1	6.2	12.3	8.0	9.1	8.2	7.6	8.0
8	---	---	---	9.7	5.6	6.6	13.0	7.8	9.7	11.6	6.1	7.2
9	---	---	---	12.9	5.9	7.8	12.4	7.4	8.7	9.7	5.3	7.6
10	---	---	---	13.5	6.3	8.9	12.3	6.9	8.1	9.9	8.1	8.9
11	---	---	6.7	13.2	6.8	9.6	12.6	6.7	8.6	10.0	9.4	9.9
12	6.8	6.5	6.6	12.6	7.1	10.0	14.3	7.0	9.3	9.9	9.7	9.8
13	10.4	6.8	7.6	13.1	7.0	10.7	13.8	7.8	10.2	9.7	9.3	9.5
14	11.0	7.0	8.1	12.2	6.8	10.1	14.8	7.7	10.5	9.4	9.3	9.4
15	---	---	---	12.0	7.2	10.6	14.5	7.2	9.9	9.2	9.0	9.1
16	---	---	---	12.6	7.0	10.3	14.8	7.6	8.8	10.5	8.8	9.1
17	---	---	---	12.9	11.3	11.8	8.6	8.0	8.2	8.9	8.2	8.6
18	---	---	---	11.9	10.4	10.9	13.0	7.9	9.3	11.7	8.0	8.9
19	9.6	4.5	6.3	11.7	6.8	10.5	12.7	8.7	10.1	10.9	8.2	8.7
20	6.5	4.4	5.4	12.0	6.4	8.3	12.6	9.1	10.2	11.5	8.4	8.9
21	---	---	---	12.0	6.7	8.8	14.7	8.5	10.1	12.2	8.3	9.5
22	---	---	---	11.0	6.6	8.4	13.2	8.4	10.2	10.7	8.5	8.7
23	---	---	---	7.5	5.8	6.4	11.9	8.7	9.3	8.9	8.4	8.6
24	---	---	---	7.0	5.9	6.7	10.5	8.8	9.6	9.2	8.2	8.6
25	---	---	---	10.8	6.3	8.6	10.6	10.3	10.4	8.8	8.4	8.6
26	10.1	7.1	7.6	12.0	7.4	10.4	10.1	9.7	9.9	11.0	8.1	8.7
27	10.6	7.3	7.9	7.9	7.1	7.4	10.3	9.7	10.0	8.0	7.6	7.7
28	10.8	7.2	8.1	8.0	7.6	7.9	10.6	9.8	10.3	10.6	7.4	8.4
29	10.7	7.1	8.3	11.9	7.9	10.1	10.7	10.3	10.5	10.6	7.2	8.4
30	10.7	7.0	8.2	13.4	11.2	12.2	10.4	9.8	10.1	11.9	6.9	8.8
31	10.5	7.0	7.9	---	---	---	10.3	9.8	10.0	12.1	---	---
MONTH	11.0	4.4	7.3	13.5	5.6	8.8	14.8	6.7	9.7	12.2	5.3	8.6

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.3	7.3	9.2	7.7	6.7	7.4	7.3	7.1	7.2	8.1	6.5	7.0
2	11.8	6.8	8.4	7.1	5.9	6.6	7.2	6.8	7.0	7.7	4.5	6.1
3	12.9	7.3	11.2	10.0	6.2	8.3	7.4	6.8	7.1	6.3	5.1	5.9
4	12.8	7.2	11.7	10.7	5.6	8.9	6.9	4.8	6.4	6.5	6.2	6.4
5	12.3	5.0	8.7	11.6	5.2	8.5	7.1	6.8	7.0	6.2	5.9	6.1
6	13.8	11.6	13.2	12.1	7.9	11.4	7.0	6.8	6.9	5.9	5.6	5.7
7	13.9	6.9	8.9	12.3	11.0	11.7	7.8	6.6	6.9	6.3	5.5	5.8
8	7.6	6.5	6.8	12.3	10.4	11.5	7.2	3.7	6.0	6.7	6.3	6.5
9	8.7	5.6	7.5	12.3	10.3	11.3	6.8	6.5	6.7	6.7	6.4	6.5
10	7.0	2.0	5.2	12.0	6.0	9.1	6.9	6.7	6.8	6.8	6.5	6.6
11	7.9	6.2	6.6	8.6	5.8	6.9	6.7	6.5	6.6	6.8	6.3	6.5
12	8.3	6.1	6.9	9.0	5.5	8.1	6.5	6.3	6.4	6.8	6.2	6.4
13	7.4	6.2	7.2	9.0	7.1	7.2	6.9	6.5	6.7	9.3	6.0	6.6
14	7.0	6.5	6.6	7.3	6.6	7.0	7.2	6.6	6.9	7.0	6.2	6.6
15	10.1	6.1	6.8	6.8	6.2	6.6	7.4	6.9	7.1	7.3	6.3	6.8
16	10.3	6.0	6.6	6.2	5.8	6.0	7.8	7.1	7.4	6.9	6.3	6.6
17	6.4	5.9	6.0	6.2	5.5	5.8	8.0	7.4	7.7	6.8	5.9	6.3
18	7.8	5.2	6.4	7.6	5.4	6.0	7.5	7.1	7.3	6.9	6.0	6.4
19	6.8	4.4	6.3	7.3	4.6	5.9	7.1	6.7	6.9	6.3	3.4	4.8
20	6.5	5.8	6.2	7.2	6.6	7.1	7.0	6.6	6.8	5.5	3.4	4.8
21	6.5	6.2	6.4	7.2	6.5	7.0	6.7	3.0	5.6	5.7	5.5	5.6
22	6.4	6.2	6.3	6.8	6.6	6.8	6.8	5.4	6.4	5.6	5.2	5.4
23	6.4	6.1	6.3	8.6	6.3	7.7	6.9	6.7	6.8	5.4	5.0	5.2
24	6.4	6.1	6.2	8.5	5.7	7.1	7.0	6.6	6.8	5.6	4.8	5.2
25	10.1	6.1	7.1	7.1	6.6	6.9	6.9	6.2	6.5	6.0	5.2	5.6
26	8.2	6.0	6.6	7.3	6.4	7.1	6.4	5.9	6.2	9.1	5.4	6.5
27	7.4	4.9	6.5	6.8	6.5	6.7	6.2	5.8	6.0	9.3	5.4	6.8
28	7.9	7.4	7.7	6.8	6.5	6.7	6.7	5.8	6.1	6.7	5.1	5.8
29	7.7	7.5	7.6	7.1	6.8	7.0	6.0	5.5	5.8	6.3	5.0	5.7
30	---	---	---	7.1	6.9	7.0	6.7	6.0	6.3	6.8	5.8	6.3
31	---	---	---	7.3	6.8	7.0	---	---	---	6.9	6.4	6.7
MONTH	13.9	2.0	7.5	12.3	4.6	7.7	8.0	3.0	6.7	9.3	3.4	6.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.6	6.4	7.0	9.6	5.4	6.7	11.0	6.0	7.9	---	---	---
2	9.8	6.4	7.3	10.1	5.6	7.1	10.9	5.9	7.8	---	---	---
3	9.7	6.3	7.6	11.1	5.7	7.4	10.7	5.8	7.7	9.0	5.3	6.2
4	9.6	6.3	7.1	11.0	5.6	7.9	10.5	4.9	6.2	9.9	5.7	6.7
5	6.5	5.7	6.2	10.9	5.4	7.0	6.6	5.4	5.9	10.5	6.0	7.3
6	7.1	5.5	6.2	---	---	---	6.7	5.6	6.0	10.6	6.0	7.8
7	5.6	3.9	4.9	---	---	---	6.5	5.6	6.0	10.9	6.0	8.7
8	5.9	5.6	5.8	---	---	---	9.5	5.7	6.5	---	---	---
9	5.9	5.6	5.8	---	---	---	9.1	5.3	6.2	---	---	---
10	5.9	5.5	5.7	---	---	---	10.1	5.3	7.2	---	---	---
11	6.4	5.9	6.2	---	---	---	6.1	5.2	5.4	11.0	5.8	8.6
12	7.0	6.1	6.5	---	---	---	6.2	3.9	4.9	11.2	6.0	9.2
13	6.5	5.8	6.1	---	---	---	5.3	4.0	5.0	10.7	6.2	9.3
14	7.1	5.5	6.2	---	---	---	5.6	5.3	5.4	10.4	6.3	9.1
15	7.6	6.0	6.7	---	---	---	6.0	5.5	5.7	---	---	---
16	9.1	6.0	7.1	---	---	---	7.8	5.5	5.9	---	---	---
17	9.4	6.1	7.5	10.6	6.1	9.2	8.4	5.5	6.2	---	---	---
18	9.6	6.1	7.5	10.7	5.6	7.9	8.9	5.6	6.8	---	---	---
19	10.5	6.2	7.6	10.7	5.7	8.4	---	---	---	11.6	6.3	10.1
20	10.3	6.1	7.7	10.8	5.6	8.4	9.2	5.4	6.9	11.0	6.1	9.8
21	12.0	6.1	8.1	10.9	5.7	8.5	9.7	5.5	6.6	10.3	4.5	8.0
22	12.0	6.2	8.1	---	---	---	10.2	5.6	7.0	---	---	---
23	12.1	6.1	8.5	11.4	5.8	9.3	10.2	5.4	6.8	8.2	3.4	5.2
24	12.3	6.2	8.8	11.6	5.9	8.1	10.2	5.5	7.2	7.9	3.0	4.6
25	12.6	6.1	9.2	5.9	5.3	5.6	10.3	5.5	7.1	6.9	2.3	2.8
26	11.6	6.1	7.9	6.0	5.3	5.6	---	---	---	5.5	2.1	2.8
27	11.9	5.9	8.4	9.1	5.4	6.3	---	---	7.6	6.1	1.9	3.5
28	11.7	5.9	7.4	9.4	5.6	6.4	10.4	5.8	7.6	5.6	1.6	2.7
29	6.5	3.0	4.8	10.2	5.5	7.2	10.1	5.6	7.5	4.8	1.5	2.5
30	6.7	4.8	5.7	10.8	6.0	8.2	10.1	5.4	7.7	4.8	1.3	2.3
31	---	---	---	10.9	6.1	8.1	10.2	5.6	7.8	---	---	---
MONTH	12.6	3.0	7.0	11.6	5.3	7.5	11.0	3.9	6.6	11.6	1.3	6.4

08049565 TRIGG BRANCH AT DALLAS-FORT WORTH AIRPORT NEAR EULESS, TX

LOCATION.--Lat 32°52'02", long 97°02'20", Tarrant County, Hydrologic Unit 12030102, at left end of upstream headwall of box culvert under International Parkway Road, near south toll booth entrance plaza to Dallas-Fort Worth Airport, 2.0 mi upstream from Bear Creek, and 2.2 miles north of intersection of Airport Freeway (State Highway 183) and International Parkway.

DRAINAGE AREA.--1.73 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 516.20 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 502 ft^3/s Mar. 18 at 1915 hours (gage height, 4.24 ft), no other peak above base of 400 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.09	.09	.05	.09	.07	17.00	.00	.16	.16	.00
2	.03	.03	8.40	.09	.05	.09	3.60	.92	.00	.05	.09	.00
3	.02	.03	.66	.09	.17	.09	.37	.08	.00	.05	.71	.03
4	.02	.02	.09	.09	.09	.09	.26	.07	.09	.18	.01	.02
5	.02	3.50	.09	.09	.09	.09	.32	.07	.08	.38	.03	.02
6	7.30	1.40	.07	.09	.09	.07	.36	.07	20.00	.36	.02	.02
7	4.40	.00	.07	.09	.09	.07	8.60	.07	.00	.18	.20	.05
8	26.00	.00	.07	.17	4.80	.07	.37	.05	.00	.19	.48	.05
9	.09	.00	.07	8.00	4.10	.07	.10	.03	.00	.09	.31	.07
10	.05	.00	.07	.36	.07	.07	.09	.08	.00	.09	.18	.05
11	1.40	.00	.07	.17	16.00	9.80	.09	.16	.00	.13	.96	.03
12	.11	.00	.07	.09	1.40	13.00	.09	.06	.00	.06	15.00	.03
13	.07	.02	.09	.09	.30	1.10	.13	.13	.00	.06	.05	.03
14	.13	.02	.07	.07	.28	.74	.17	.07	.00	.03	.02	.04
15	.07	.07	.17	.07	.27	.60	.09	.07	.01	.16	.02	.00
16	.07	.09	1.00	.07	.17	.56	.61	.07	.01	.08	.03	.03
17	.07	.03	.17	.07	.10	.45	.37	.05	.03	.05	.03	.02
18	.09	.05	.17	.07	5.40	23.00	.28	3.70	.03	.07	.03	.02
19	1.40	2.20	.09	.05	.16	1.60	.27	.04	.03	.03	.02	.03
20	1.60	.07	.09	.05	.09	.36	.25	.02	.03	.16	.02	.03
21	.07	.05	.09	.05	.09	.28	.10	.02	.02	.05	.00	.06
22	.07	1.50	.00	1.40	.09	.30	.05	.02	.03	.05	.00	.39
23	.03	2.80	.00	.09	.09	33.00	.07	.02	.02	.04	.00	.29
24	.03	.05	.00	.09	.09	.44	.07	.02	.02	.16	.00	.17
25	.02	.05	.00	.09	.13	.17	.07	.05	.00	.14	.00	.14
26	.02	7.80	.00	.07	7.40	.17	.09	.05	.00	.05	.00	.08
27	.03	5.10	.00	.07	.76	.64	.09	.04	.05	.03	.00	.05
28	.03	.09	.00	.07	.09	.24	.09	6.60	4.40	.14	.00	.27
29	.03	.09	.00	.05	.09	.09	1.00	.02	.08	.11	.00	.05
30	.03	.09	.02	.05	---	.07	.09	.00	.04	.04	.00	.05
31	.03	---	.05	.05	---	.07	---	.00	---	.05	.00	---
TOTAL	43.37	25.18	11.83	12.04	42.60	87.48	18.21	29.65	24.97	3.42	18.37	2.12
MEAN	1.40	.84	.38	.39	1.47	2.82	.61	.96	.83	.11	.59	.071
MAX	26	7.8	8.4	8.0	16	33	8.6	17	20	.38	15	.39
MIN	.02	.00	.00	.05	.05	.07	.05	.00	.00	.03	.00	.00
AC-FT	86	50	23	24	84	174	36	59	50	6.8	36	4.2

CAL YR 1983 TOTAL 434.74 MEAN 1.19 MAX 55 MIN .00 AC-FT 862
WTR YR 1984 TOTAL 319.24 MEAN .87 MAX 33 MIN .00 AC-FT 633

NOTE.--No gage-height record Dec. 22 to Feb. 2.

08049600 MOUNTAIN CREEK NEAR CEDAR HILL, TX

LOCATION.--Lat 32°35'03", long 97°01'23", Dallas County, Hydrologic Unit 12030102, on left bank at downstream side of county road bridge, 3.5 mi downstream from Texas and New Orleans Railroad Co. bridge, 4.5 mi southwest of Cedar Hill, and 12 mi upstream from Mountain Creek Lake Dam.

DRAINAGE AREA.--119 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to September 1984 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 478.31 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1960, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Flow is affected at times by discharge from flood-detention pools of three floodwater-retarding structures with combined detention capacity of 5,560 acre-ft. These structures control runoff from 14.2 mi². Gage-height telemeter is located at station.

AVERAGE DISCHARGE.--24 years, 45.7 ft³/s (33,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,300 ft³/s May 7, 1969 (gage height, 25.10 ft), from rating curve extended above 14,000 ft³/s; maximum gage height, 25.11 ft May 3, 1979; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 30 ft May 25, 1922, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 12	0945	6,860	22.10
Mar. 23	1815	*7,550	22.37

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	11.00	.77	4.6	31	17.0	1.00	.00	0	0	0
2	.00	.03	11.00	1.30	4.4	28	13.0	.91	.00	0	0	0
3	.00	.04	18.00	1.50	4.4	26	15.0	.84	.00	0	0	0
4	.00	.05	16.00	1.60	4.7	23	9.4	.72	.00	0	0	0
5	.00	.08	14.00	1.80	4.4	21	7.5	.63	.00	0	0	0
6	.00	.37	13.00	1.90	4.3	18	6.8	.56	.17	0	0	0
7	.00	1.80	12.00	1.90	4.0	15	6.5	.45	1.20	0	0	0
8	236.00	1.40	7.90	1.80	4.0	13	6.9	.35	1.10	0	0	0
9	435.00	1.30	1.30	2.40	5.7	11	8.1	.30	1.10	0	0	0
10	34.00	.95	.72	25.00	14.0	62	7.2	.25	.97	0	0	0
11	19.00	.25	.50	19.00	15.0	101	6.6	.21	.87	0	0	0
12	14.00	.22	.36	11.00	13.0	3590	6.2	.19	.76	0	0	0
13	11.00	.21	.27	6.60	10.0	361	5.8	.16	.67	0	0	0
14	9.60	.20	.29	4.80	8.6	110	5.3	.13	.59	0	0	0
15	5.80	.17	.24	4.00	7.6	87	4.8	.10	.51	0	0	0
16	3.00	.15	.21	3.50	6.9	80	4.3	.10	.44	0	0	0
17	2.10	.14	.56	3.60	5.1	68	3.9	.07	.38	0	0	0
18	1.50	.14	1.10	3.50	5.2	54	3.4	.06	.32	0	0	0
19	1.00	.13	1.00	3.30	6.1	59	3.1	.06	.27	0	0	0
20	.92	.15	.99	2.90	5.7	34	2.9	.05	.24	0	0	0
21	2.40	.24	.85	2.60	5.4	22	2.7	.05	.21	0	0	0
22	2.10	.32	.77	2.50	5.0	20	2.5	.04	.16	0	0	0
23	.83	3.90	.70	2.70	4.9	2970	2.2	.04	.10	0	0	0
24	.36	6.70	.53	4.10	4.7	761	2.0	.03	.07	0	0	0
25	.18	4.70	.35	6.50	4.7	113	1.9	.03	.06	0	0	0
26	.11	3.80	.38	6.60	184.0	88	1.6	.02	.04	0	0	0
27	.10	230.00	.38	6.20	143.0	417	1.5	.02	.03	0	0	0
28	.07	77.00	.49	5.30	47.0	167	1.5	.02	.01	0	0	0
29	.04	18.00	.77	4.70	35.0	81	1.2	.01	.01	0	0	0
30	.03	12.00	.49	4.60	---	61	1.1	.00	.00	0	0	0
31	.03	---	.49	4.60	---	33	---	.00	---	0	0	---
TOTAL	779.17	364.47	116.64	152.57	571.4	9525	161.9	7.40	10.28	0	0	0
MEAN	25.1	12.1	3.76	4.92	19.7	307	5.40	.24	.34	.000	.000	.000
MAX	435	230	18	25	184	3590	17	1.0	1.2	.00	.00	.00
MIN	.00	.03	.21	.77	4.0	11	1.1	.00	.00	.00	.00	.00
AC-FT	1550	723	231	303	1130	18890	321	15	20	.00	.00	.00

CAL YR 1983 TOTAL 11165.40 MEAN 30.6 MAX 3410 MIN .00 AC-FT 22150
WTR YR 1984 TOTAL 11688.83 MEAN 31.9 MAX 3590 MIN .00 AC-FT 23180

08049600 MOUNTAIN CREEK NEAR CEDAR HILL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1974 to September 1984 (discontinued). Sediment analyses: October 1976 to September 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 30...	1115	12	1140	8.0	8.5	70	74	10.7	93	4.2	220
JAN 11...	1130	20	1440	8.1	3.0	100	39	11.8	89	2.6	370
FEB 09...	1230	4.2	1490	8.1	11.0	15	25	11.5	106	1.2	340
MAR 12...	1315	6160	354	7.7	12.0	560	660	8.6	82	3.6	120

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 30...	68	76	6.8	110	3	62	150	220	100	.70	7.6
JAN 11...	190	130	10	160	4	27	180	420	96	.70	6.2
FEB 09...	150	120	10	170	4	36	190	430	110	.60	1.5
MAR 12...	49	45	2.8	17	.7	5.1	75	64	11	.40	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 30...	670	91	21	1.0	.070	1.1	.160	1.8	2.0	.270	10
JAN 11...	960	53	23	.26	.040	.30	.030	.67	.70	.100	8.7
FEB 09...	990	37	16	--	<.010	<.10	.030	.67	.70	.070	6.4
MAR 12...	200	976	142	4.4	.900	5.3	.230	2.3	2.5	.700	22

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 30...	1115	4	65	<1	<10	2	17
JAN 11...	1130	1	61	<1	<10	3	400
MAR 12...	1315	4	36	<1	<10	5	43

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 30...	3	15	.1	1	<1	7
JAN 11...	2	52	.1	<1	<1	19
MAR 12...	<1	11	.1	<1	<1	13

08049700 WALNUT CREEK NEAR MANSFIELD, TX

LOCATION.--Lat 32°34'51", long 97°06'06", Tarrant County, Hydrologic Unit 12030102, on right bank at downstream side of bridge on county road, 2.6 mi northeast of Mansfield, 3.3 mi downstream from Texas and New Orleans Railroad Co. bridge, and 10.2 mi upstream from mouth.

DRAINAGE AREA.--62.8 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 531.08 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. The city of Mansfield diverts water from the Cedar Creek Reservoir pipeline to Fort Worth for municipal use and discharges sewage effluent into a tributary 2.5 mi upstream from station. Several observations of water temperature were made during the year. Gage-height telemeter at this station.

AVERAGE DISCHARGE.--24 years, 14.5 ft^3/s (3.14 in/yr), 10,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,570 ft^3/s May 3, 1979 (gage height, 29.7 ft, from floodmark); no flow at times in 1960-74, 1976-83.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 12	1100	1,420	16.57
Mar. 23	1800	*2,580	20.55

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.64	.45	.57	.28	.36	4.8	4.0	.38	.00	.00	.00
2	.00	.64	.42	.57	.28	.34	4.6	3.2	.33	.00	.00	1.6
3	.00	.64	.47	.48	.26	.37	7.2	1.7	.28	.00	.00	3.2
4	.00	1.4	.52	.47	.26	.32	4.5	1.3	.26	.00	.00	.01
5	.00	2.8	1.4	.47	.26	.31	3.9	1.1	.22	.00	.00	.00
6	.00	8.5	.73	.44	.24	.28	3.2	.93	12	.00	.00	.00
7	2.2	1.9	.41	.44	.24	.26	3.0	.79	2.4	.00	.00	.00
8	210	1.3	.38	.37	.24	.26	6.7	.88	.82	.00	.00	.00
9	17	1.1	.38	13	8.1	.25	12	.80	.56	.00	.00	.00
10	2.3	.94	.38	14	1.2	9.7	6.8	.68	.43	.00	.00	.00
11	1.8	.94	.38	2.2	.55	41	3.9	.65	.30	.00	.00	.00
12	1.5	.94	.38	1.0	1.1	844	3.0	.64	.28	.00	.00	.00
13	.60	.94	.38	.61	.40	40	2.7	.60	.24	.00	.00	.00
14	.44	.94	.38	.29	.28	14	2.3	.61	.22	.00	.00	.00
15	.33	.94	.38	.27	.24	8.8	2.1	.59	.15	.00	.00	.00
16	.36	.94	2.1	.28	.21	6.8	2.2	.57	.12	.00	.00	.00
17	.36	.98	1.9	.21	.19	5.6	2.1	.57	.35	.00	.00	.00
18	.36	1.1	.71	.28	.69	4.8	1.9	7.0	.31	.00	.00	.00
19	2.4	1.3	.49	.24	.44	7.0	1.8	3.9	.13	.00	.00	.00
20	1.3	1.7	.45	.24	.26	4.6	1.7	1.2	.09	.00	.00	.00
21	2.8	1.6	.43	.24	.20	3.6	1.6	.79	.07	.00	.00	.00
22	1.1	1.6	.37	.54	.20	3.2	1.6	.73	.00	.00	.00	.00
23	.80	11	.47	2.6	.19	710	1.5	.65	.00	.00	.00	.00
24	.73	1.3	.58	1.1	.18	483	1.4	.64	.00	.00	.00	.00
25	.73	.59	.87	.61	.18	20	1.4	.60	.00	.00	.00	.00
26	.63	1.1	.94	.38	11	11	1.3	.60	.00	.00	.00	.00
27	.60	13	.67	.31	3.0	68	1.3	.57	.00	.41	.00	.00
28	.60	1.8	.52	.28	.60	69	1.2	4.8	.00	.58	.00	.00
29	.61	.80	.43	.28	.44	11	1.2	.94	.00	.02	.00	.00
30	.60	.56	.72	.28	---	8.0	1.1	.58	.00	.00	.00	.00
31	.61	---	.68	.28	---	5.6	---	.48	---	.00	.00	---
TOTAL	250.76	63.93	19.77	43.33	31.71	2381.45	94.0	43.09	19.94	1.01	.00	4.81
MEAN	8.09	2.13	.64	1.40	1.09	76.8	3.13	1.39	.66	.033	.000	.16
MAX	210	13	2.1	14	11	844	12	7.0	12	.58	.00	3.2
MIN	.00	.56	.37	.21	.18	.25	1.1	.48	.00	.00	.00	.00
CFSM	.13	.03	.01	.02	.02	1.22	.05	.02	.01	.001	.000	.003
IN.	.15	.04	.01	.03	.02	1.41	.06	.03	.01	.00	.00	.00
AC-FT	497	127	39	86	63	4720	186	85	40	2.0	.00	9.5

CAL YR 1983 TOTAL 1785.32 MEAN 4.89 MAX 731 MIN .00 CFSM .08 IN 1.06 AC-FT 3540
WTR YR 1984 TOTAL 2953.80 MEAN 8.07 MAX 844 MIN .00 CFSM .13 IN 1.75 AC-FT 5860

08049900 MOUNTAIN CREEK NEAR DUNCANVILLE, TX

LOCATION.--Lat 32°39'43", long 96°58'56", Dallas County, Hydrologic Unit 12030102, at downstream side of bridge on Farm Road 1382, 2.3 mi downstream from Walnut Creek, 4.5 mi west of Duncanville, and 5.5 mi upstream from Mountain Creek Lake Dam.

DRAINAGE AREA.--225 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Elevation records good except those for Nov. 7-30 and June 14 to Sept. 30, which are fair. This station is used to aid in the operation of Mountain Creek Lake. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see Mountain Creek near Cedar Hill (station 08049600). Gage-height telemeter at this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 469.83 ft Apr. 19, 1976; channel dry at times June 16 to Sept. 28, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 465.14 ft Mar. 14 at 0200 hours; minimum, 455.26 ft Sept. 29, 30.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456.49	457.09	457.63	457.47	457.47	457.94	458.55	457.45	457.23	456.58	455.79	455.50
2	456.47	457.07	457.60	457.52	457.42	457.90	458.45	457.46	457.17	456.57	455.77	455.70
3	456.44	457.06	458.03	457.57	457.43	457.80	458.64	457.53	457.12	456.54	455.76	455.68
4	456.41	457.06	457.85	457.57	457.44	457.75	458.19	457.52	457.09	456.52	455.76	455.66
5	456.40	457.07	457.68	457.38	457.42	457.75	458.10	457.46	457.05	456.50	455.75	455.64
6	456.39	457.08	457.35	457.29	457.39	457.67	458.05	457.43	457.17	456.48	455.74	455.62
7	456.49	457.23	457.23	457.21	457.36	457.61	458.14	457.40	457.13	456.46	455.73	455.60
8	460.29	457.35	457.17	457.20	457.36	457.55	458.46	457.35	457.09	456.45	455.72	455.58
9	460.81	457.34	457.14	457.79	457.54	457.50	458.30	457.30	457.05	456.43	455.71	455.55
10	459.27	457.33	457.11	458.34	457.81	458.20	458.07	457.25	457.02	456.41	455.71	455.53
11	458.44	457.22	457.10	458.07	457.84	460.20	458.03	457.22	456.99	456.40	455.70	455.52
12	458.14	457.18	457.09	457.85	457.78	464.10	457.93	457.22	456.96	456.38	455.81	455.48
13	457.88	457.16	457.08	457.75	457.67	460.70	457.90	457.21	456.93	456.36	455.79	455.46
14	457.58	457.15	457.31	457.62	457.60	460.07	457.85	457.19	456.91	456.33	455.76	455.44
15	457.44	457.15	457.45	457.56	457.59	459.36	457.81	457.17	456.90	456.32	455.73	455.42
16	457.34	457.15	457.44	457.53	457.56	459.05	457.80	457.15	456.88	456.30	455.70	455.39
17	457.21	457.14	457.55	457.50	457.51	458.66	457.77	457.14	456.87	456.28	455.68	455.37
18	457.16	457.13	457.56	457.48	457.57	458.44	457.75	457.27	456.84	456.27	455.65	455.37
19	457.14	457.12	457.53	457.42	457.57	457.81	457.75	457.87	456.82	456.25	455.62	455.37
20	457.13	457.10	457.50	457.39	457.55	458.34	457.72	457.59	456.80	456.24	455.62	455.35
21	457.09	457.09	457.51	457.38	457.53	458.17	457.68	457.44	456.78	456.22	455.61	455.34
22	457.05	457.38	457.51	457.47	457.51	457.61	457.61	457.36	456.76	456.21	455.60	455.33
23	457.03	457.40	457.51	457.55	457.49	464.91	457.58	457.29	456.75	456.17	455.59	455.32
24	457.20	457.20	457.51	457.64	457.48	460.93	457.60	457.24	456.73	456.12	455.57	455.31
25	457.35	457.18	457.51	457.62	457.45	460.00	457.56	457.18	456.70	456.07	455.57	455.30
26	457.28	457.17	457.51	457.59	460.00	459.36	457.56	457.15	456.68	456.03	455.56	455.29
27	457.23	460.17	457.51	457.55	459.45	460.94	457.56	457.13	456.66	455.98	455.55	455.28
28	457.18	458.95	457.51	457.52	458.45	460.36	457.52	457.27	456.65	455.95	455.55	455.28
29	457.15	458.15	457.51	457.51	458.09	459.32	457.48	457.39	456.63	455.90	455.54	455.26
30	457.12	457.81	457.50	457.49	---	458.78	457.45	457.43	456.60	455.86	455.52	455.26
31	457.10	---	457.42	457.46	---	457.90	---	457.31	---	455.81	455.51	---
MEAN	457.41	457.39	457.45	457.56	457.74	459.12	457.90	457.33	456.90	456.27	455.67	455.44
MAX	460.81	460.17	458.03	458.34	460.00	464.91	458.64	457.87	457.23	456.58	455.81	455.70
MIN	456.39	457.06	457.08	457.20	457.36	457.50	457.45	457.13	456.60	455.81	455.51	455.26

CAL YR 1983 MEAN 457.49 MAX 463.75 MIN 456.35
WTR YR 1984 MEAN 457.18 MAX 464.91 MIN 455.26

08049900 MOUNTAIN CREEK NEAR DUNCANVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: July 1974 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV 30...	1245	998	7.9	8.5	50	85	9.8	85	3.3	220	87
JAN 11...	0950	1530	8.0	5.0	140	40	10.8	86	1.6	340	150
FEB 09...	1545	1480	8.0	10.0	60	35	12.6	114	1.8	370	180
MAR 12...	1530	445	7.9	12.0	1100	470	8.6	82	3.6	140	68

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 30...	76	6.6	97	3	42	130	220	85	.60	7.9	610
JAN 11...	120	10	180	4	33	190	440	110	.70	4.8	1000
FEB 09...	130	11	170	4	37	190	430	110	.60	1.8	1000
MAR 12...	50	4.3	26	1	7.0	75	100	17	.40	10	260

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 30...	96	14	1.5	.080	1.6	.040	2.0	2.0	.170	9.4
JAN 11...	53	24	.27	.030	.30	.060	.74	.80	.070	7.3
FEB 09...	42	14	--	<.010	<.10	.060	.54	.60	.060	7.1
MAR 12...	1030	120	2.5	.670	3.2	.170	2.8	3.0	.700	26

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV 30...	1245	3	58	<1	<10	2	20
JAN 11...	0950	1	64	<1	<10	3	330
MAR 12...	1530	2	39	1	<10	5	210

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 30...	1	6	.2	1	<1	10
JAN 11...	15	42	.1	1	1	27
MAR 12...	1	34	<.1	<1	<1	110

08050050 MOUNTAIN CREEK LAKE NEAR GRAND PRAIRIE, TX

LOCATION.--Lat 32°43'55", long 96°56'35", Dallas County, Hydrologic Unit 12030102, at right end of spillway in Mountain Creek Dam on Mountain Creek, 2.5 mi upstream from Texas and Pacific Railway Co. bridge, and 3.7 mi southeast of Grand Prairie.

DRAINAGE AREA.--295 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 21, 1960, non-recording gage at powerplant at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 5,800 ft long, including a controlled spillway six 34- by 27-foot tainter gates. The dam was completed in December 1936 and deliberate impoundment began on Mar. 24, 1937. The lake was built and is operated by Dallas Power and Light Co. to supply cooling water for their generating plant. The capacity curve is based on a survey made in 1963. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08049600. Figures given herein represent total contents. Gage-height telemeter located at station. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	467.0	-
Top of gates	458.0	25,720
Top of dry weather conservation pool	457.0	22,840
Top of wet weather conservation pool	456.0	20,260
Crest of spillway (sill of tainter gates)	431.0	0

COOPERATION.--The capacity curve was furnished by the Dallas Power and Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 27,440 acre-ft Mar. 27, 1977 (elevation, 458.52 ft); minimum, 14,120 acre-ft Oct. 18, 1972 (elevation, 453.25 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 23,910 acre-ft Jan. 12 at 1000 hours (elevation, 457.37 ft); minimum, 15,780 acre-ft Sept. 30 (elevation, 454.05 ft).

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

454.0	15,670	457.0	22,840
455.0	17,890	458.0	25,720
456.0	20,260		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22090	22980	23560	23420	23500	23240	23100	22610	21830	20240	18220	16850
2	22040	22960	23440	23420	23440	23300	22790	22710	21780	20210	18150	17140
3	22010	22930	23440	23390	23440	23330	22870	22630	21730	20090	18130	17090
4	21910	22870	23470	23330	23440	23420	22900	22610	21680	20000	18170	17050
5	21860	22900	23440	23360	23330	23300	22960	22580	21730	19980	18130	17000
6	21860	22980	23470	23360	23390	22870	22980	22610	22120	19900	18060	16960
7	21990	22980	23420	23360	23360	22980	22710	22430	22140	19830	18030	16890
8	22870	22980	23470	23390	23440	22930	22660	22350	21990	19710	17960	16870
9	23530	22840	23420	23730	23700	22840	22740	22320	21960	19620	17850	16780
10	23440	22790	23440	23730	23470	22840	22790	22220	21860	19550	17780	16690
11	23440	22760	23390	23850	23420	22930	22900	22090	21810	19480	17910	16600
12	23470	22710	23390	23850	23620	23680	22900	22010	21730	19450	18100	16560
13	23530	22710	23330	23590	23620	22270	22900	21990	21630	19430	18030	16490
14	23440	22610	23330	23620	23700	22810	22870	21910	21550	19360	18010	16450
15	23420	22580	23240	23650	23730	22900	22810	21860	21470	19260	17960	16340
16	23420	22610	23330	23650	22710	23270	22790	21780	21370	19190	17910	16270
17	23420	22660	23330	23620	22690	22960	22760	21730	21290	19050	17870	16230
18	23420	22580	23270	23590	22810	23100	22710	22010	21160	18930	17800	16160
19	23500	22560	23270	23590	22810	22900	22710	22200	21110	18860	17730	16110
20	23330	22580	23330	23590	22810	22960	22930	22170	21030	18810	17650	16110
21	23300	22560	23270	23620	22790	22960	22870	22170	20910	18740	17580	16050
22	23240	22610	23270	23700	22810	23100	22790	22140	20800	18650	17510	16070
23	23210	22630	23240	23760	22840	21290	22790	22090	20700	18600	17450	16030
24	23190	22660	23240	23790	22790	23560	22810	22070	20600	18530	17380	16030
25	23130	22660	23240	23850	22790	22870	22710	22010	20540	18510	17290	15850
26	23130	22810	23240	23850	22740	23300	22710	21940	20470	18480	17250	15850
27	23100	23160	23240	23420	22930	22930	22580	21990	20440	18460	17200	15830
28	23070	23420	23240	23420	22840	23160	22580	21990	20440	18410	17140	15830
29	23040	23560	23240	23390	23100	22740	22450	21960	20360	18340	17070	15800
30	23010	23500	23270	23420	---	22980	22430	21940	20310	18250	16980	15780
31	23010	---	23330	23440	---	23100	---	21910	---	18200	16910	---
MAX	23530	23560	23560	23850	23730	23680	23100	22710	22140	20240	18220	17140
MIN	21860	22560	23240	23330	22690	21290	22430	21730	20310	18200	16910	15780
(†)	457.06	457.23	457.17	457.21	457.09	457.09	456.84	456.64	456.02	455.13	454.56	454.05
(‡)	+870	+490	-170	+110	-340	0	-670	-520	-1600	-2110	-1290	-1130

CAL YR 1983 MAX 24310 MIN 20880 ‡ -140
WTR YR 1984 MAX 23850 MIN 15780 ‡ -6360

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

08050050 MOUNTAIN CREEK LAKE NEAR GRAND PRAIRIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 14...	1530	507	16.5	140	47	49	4.9	43

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 14...	2	9.7	96	120	24	.60	6.3	320

08050100 MOUNTAIN CREEK AT GRAND PRAIRIE, TX

LOCATION.--Lat 32°44'52", long 96°55'33", Dallas County, Hydrologic Unit 12030102, on right bank at downstream side of downstream bridge on Jefferson Street, 1,000 ft upstream from bridge on U.S. Highway 80, 1.2 mi upstream from Texas and Pacific Railroad Co. bridge, 1.5 mi downstream from Mountain Creek Lake Dam, and 4.4 mi east of Grand Prairie.

DRAINAGE AREA.--298 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 407.31 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those when well was isolated July 1 to Aug. 10 and Aug. 14 to Sept. 30, which are poor. Flow regulated by Mountain Creek Lake (station 08050050), 1.5 mi upstream. Gage-height telemeters are located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 97.3 ft^3/s (70,490 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s Apr. 19, 1976 (gage height, 24.21 ft); maximum gage height, 24.62 ft May 7, 1969; no flow in 1964, 1972-74.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,150 ft^3/s Mar. 24 at 0400 hours (gage height, 15.60 ft); no flow Dec. 26-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.10	.13	.16	.50	29.00	64.00	1.60	.28	.75	.41	.42
2	.25	.10	341.00	.09	.68	21.00	662.00	3.90	.27	.68	.40	.42
3	.24	.10	95.00	.09	1.60	.40	53.00	1.10	.25	.54	.39	.42
4	.24	.20	.73	.09	.68	1.30	12.00	.50	.24	.50	.38	.42
5	.24	.14	.45	.09	.43	496.00	46.00	.35	.56	.48	.37	.42
6	.26	.31	.23	.08	.40	111.00	5.60	.30	.95	.47	.36	.42
7	.49	.18	1.80	.08	.44	21.00	384.00	.32	.67	.45	.36	.41
8	44.00	.13	3.70	.08	.43	1.40	451.00	.29	.64	.45	.36	.41
9	20.00	.12	.27	51.00	112.00	.34	25.00	.27	.40	.45	.35	.41
10	924.00	.15	.14	450.00	478.00	.22	4.70	.60	.57	.45	.35	.41
11	352.00	.16	.11	1.60	248.00	53.00	5.80	1.00	61.00	.44	.97	.40
12	159.00	.11	.11	.24	425.00	4120.00	1.60	.80	102.00	.45	1.40	.40
13	.77	.11	.18	369.00	65.00	2930.00	1.20	.40	188.00	.44	.60	.40
14	.67	.10	.25	44.00	38.00	849.00	.87	.36	1.80	.44	.50	.40
15	1.10	.11	.23	4.50	781.00	438.00	.85	.31	2.90	.46	.49	.40
16	.42	.10	.44	1.40	97.00	663.00	1.00	.27	3.50	.45	.48	.39
17	.34	.17	.77	.99	5.30	88.00	1.20	.25	2.10	.44	.47	.39
18	.32	21.00	.50	.87	137.00	404.00	.99	.63	1.90	.44	.47	.39
19	.34	20.00	.57	.92	34.00	166.00	.97	1.20	1.70	.44	.46	.39
20	262.00	.24	.65	.96	3.10	35.00	38.00	1.70	1.60	.42	.46	.39
21	62.00	.20	.25	.83	1.60	4.20	91.00	.45	1.40	.42	.46	.40
22	.22	.22	.14	.72	1.20	8.40	1.30	.30	59.00	.42	.45	.40
23	.15	3.00	.08	1.70	.99	4310.00	.81	.26	16.00	.42	.45	.40
24	.14	.28	.04	1.40	.91	4440.00	.87	.25	.96	.42	.44	.40
25	.13	.15	.02	.76	6.40	1480.00	41.00	.24	.60	.41	.44	.39
26	.14	52.00	.00	.61	492.00	231.00	22.00	.22	.97	.42	.44	.39
27	.14	203.00	.00	444.00	521.00	920.00	1.00	.22	2.30	.42	.44	.40
28	.12	3.90	.00	97.00	264.00	847.00	.68	1.80	17.00	.41	.43	.40
29	.11	.47	.00	1.50	52.00	662.00	63.00	.50	20.00	.41	.43	.39
30	.11	.16	.62	.60	---	171.00	32.00	.40	1.10	.41	.43	.39
31	.10	---	.56	.48	---	61.00	---	.30	---	.41	.43	---
TOTAL	1830.29	307.01	448.97	1475.84	3768.66	23562.26	2013.44	21.09	490.66	14.21	14.87	12.07
MEAN	59.0	10.2	14.5	47.6	130	760	67.1	.68	16.4	.46	.48	.40
MAX	924	203	341	450	781	4440	662	3.9	188	.75	1.4	.42
MIN	.10	.10	.00	.08	.40	.22	.68	.22	.24	.41	.35	.39
AC-FT	3630	609	891	2930	7480	46740	3990	42	973	28	29	24

CAL YR 1983 TOTAL 25711.54 MEAN 70.4 MAX 3070 MIN .00 AC-FT 51000
WTR YR 1984 TOTAL 33959.37 MEAN 92.8 MAX 4440 MIN .00 AC-FT 67360

08050500 ELM FORK TRINITY RIVER NEAR SANGER, TX

LOCATION.--Lat 33°23'11", long 97°05'05", Denton County, Hydrologic Unit 12030103, on right bank on downstream side of pier of bridge on Farm Road 455, 4.1 mi downstream from Spring Creek, 5.0 mi upstream from Isle du Bois Creek, and 5.4 mi northeast of Sanger.

DRAINAGE AREA.--381 mi .

PERIOD OF RECORD.--April 1949 to current year.
Water-quality records.--Chemical and biochemical anlyses: October 1969 to September 1982. Sediment records: January 1966 to September 1976.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 548.72 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1982, at datum 5.00 ft higher. Prior to May 7, 1955, at site 500 ft downstream at 5.00 ft higher datum.

REMARKS.--Records good. Flow is affected at times by the discharge from the flood-detention pools of 41 floodwater-retarding structures with a combined capacity of 26,720 acre-ft. These structures control runoff from 94.7 mi in the Elm Fork Trinity River watershed. Records furnished by the city of Gainesville discharged sewage effluent into the river upstream from this station. Gage-hight telemeter is located at station.

AVERAGE DISCHARGE.--35 years, 157 ft^3/s (113,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft^3/s Oct. 13, 1981 (gage height, 33.50 ft); no flow at times.
Maximum stage since at least 1903, that of Oct. 13, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1908 reached a stage of 30.7 ft, from information by local residents. Flood of May 18, 1935, reached a stage of 29.7 ft, from floodmarks.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 17	1500	*5,770	27.79
Feb. 27	0500	4,050	24.16
Mar. 12	1500	4,630	25.59

Minimum discharge, 0.19 ft^3/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.9	8.0	11	11.0	614	73	20.0	9.1	6.0	1.4	1.60
2	1.2	3.6	10.0	12	11.0	441	72	54.0	9.0	4.5	1.3	2.90
3	1.3	3.6	10.0	12	11.0	312	84	88.0	8.8	3.5	1.2	2.30
4	1.6	134.0	9.6	13	10.0	282	225	48.0	7.0	2.8	1.3	6.00
5	2.2	121.0	10.0	14	9.6	245	150	34.0	6.4	2.5	1.4	4.00
6	2.1	43.0	10.0	14	8.7	172	100	26.0	11.0	2.2	3.8	2.10
7	1910.0	43.0	11.0	14	8.1	101	80	20.0	17.0	1.8	2.9	1.60
8	2150.0	36.0	11.0	14	8.4	84	70	16.0	8.1	1.5	2.7	1.00
9	778.0	26.0	12.0	16	11.0	65	63	14.0	5.0	1.2	2.5	.82
10	65.0	23.0	12.0	24	16.0	58	57	13.0	125.0	1.5	42.0	.72
11	31.0	56.0	12.0	22	13.0	58	52	14.0	817.0	1.3	31.0	.82
12	19.0	51.0	11.0	19	12.0	2910	48	16.0	255.0	1.3	58.0	.77
13	12.0	18.0	10.0	18	12.0	1580	45	14.0	174.0	6.4	24.0	.41
14	10.0	10.0	9.2	17	17.0	677	42	14.0	132.0	6.6	11.0	.37
15	8.2	9.7	9.6	17	15.0	226	39	12.0	107.0	11.0	7.0	.33
16	7.8	9.5	12.0	16	13.0	141	37	12.0	69.0	3.5	5.1	.31
17	6.0	8.8	12.0	15	12.0	96	36	10.0	50.0	2.0	4.8	.32
18	5.9	8.3	15.0	13	13.0	607	35	8.8	40.0	1.8	3.1	.27
19	12.0	9.8	12.0	12	21.0	729	33	11.0	34.0	1.3	2.3	2.40
20	25.0	13.0	12.0	12	17.0	153	60	36.0	20.0	1.4	2.5	.32
21	24.0	10.0	12.0	11	17.0	93	268	32.0	25.0	4.1	2.3	.25
22	34.0	8.4	11.0	11	15.0	66	65	17.0	22.0	5.0	1.9	.34
23	21.0	19.0	11.0	12	15.0	67	43	15.0	19.0	2.5	2.1	2.40
24	9.9	10.0	11.0	23	14.0	158	36	12.0	16.0	1.9	18.0	.65
25	9.5	8.5	10.0	17	14.0	77	32	11.0	20.0	1.9	10.0	.35
26	8.7	7.3	10.0	15	277.0	52	30	9.2	18.0	4.0	4.8	1.70
27	6.7	8.4	11.0	14	2900.0	324	29	8.2	15.0	1.7	2.9	6.90
28	6.2	22.0	11.0	13	1360.0	1320	26	7.3	12.0	2.8	2.1	1.50
29	4.4	12.0	11.0	12	986.0	253	22	13.0	9.0	6.1	2.1	.68
30	4.7	8.8	11.0	11	---	101	19	11.0	7.5	3.1	1.9	.38
31	3.5	---	11.0	10	---	80	---	9.0	---	1.4	1.3	---
TOTAL	5182.3	745.6	338.4	454	5847.8	12142	1971	625.5	2067.9	98.6	258.7	44.51
MEAN	167	24.9	10.9	14.6	202	392	65.7	20.2	68.9	3.18	8.35	1.48
MAX	2150	134	15	24	2900	2910	268	88	817	11	58	6.9
MIN	1.2	3.6	8.0	10	8.1	52	19	7.3	5.0	1.2	1.2	.25
AC-FT	10280	1480	671	901	11600	24080	3910	1240	4100	196	513	88

CAL YR 1983 TOTAL 23016.61 MEAN 63.1 MAX 2150 MIN .38 AC-FT 45650
WTR YR 1984 TOTAL 29776.31 MEAN 81.4 MAX 2910 MIN .25 AC-FT 59060

08050500 ELM FORK TRINITY RIVER NEAR SANGER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year. Sediment records: January 1966 to September 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 30...	1545	8.8	713	7.6	7.0	30	6.2	10.4	87	3.2	190
JAN 23...	1540	11	874	7.8	2.0	<1	2.0	15.4	113	.8	240
MAR 27...	1500	59	672	7.9	18.0	30	22	9.8	108	2.4	210
MAY 09...	1535	14	721	8.0	22.0	25	2.6	8.0	93	1.5	220
JUN 20...	1630	18	460	8.4	30.0	35	9.3	11.9	160	5.6	140
SEP 12...	1505	.77	645	8.3	28.5	35	8.1	8.6	113	2.0	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 30...	0	67	5.3	87	3	5.6	270	--	--	--	--
JAN 23...	0	86	6.8	94	3	4.4	270	69	74	.30	1.7
MAR 27...	25	77	5.5	47	1	3.6	190	47	71	.30	4.7
MAY 09...	0	76	7.0	60	2	4.0	220	52	64	.30	7.5
JUN 20...	0	51	3.7	37	1	4.3	160	28	31	.30	6.1
SEP 12...	0	52	4.6	84	3	5.3	250	41	31	.30	5.9

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 30...	--	9	<1	1.9	.020	1.9	.040	1.4	1.4	1.20	8.8
JAN 23...	500	5	<2	2.9	.100	3.0	.060	.64	.70	.950	4.6
MAR 27...	370	48	3	.73	.070	.80	.030	.77	.80	.230	6.1
MAY 09...	400	62	18	1.1	.050	1.1	.070	1.0	1.1	.240	6.4
JUN 20...	260	58	20	--	<.010	<.10	.020	.68	.70	.340	11
SEP 12...	370	15	1	--	<.010	<.10	<.010	--	1.1	.300	6.1

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 23...	1540	2	75	<1	<10	2	16
MAY 09...	1535	2	100	<1	<10	1	28
SEP 12...	1505	6	81	<1	10	3	3

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 23...	<1	26	.4	<1	<1	15
MAY 09...	<1	60	.2	<1	<1	10
SEP 12...	5	10	<.1	<1	<1	11

08051000 ISLE DU BOIS CREEK NEAR PILOT POINT, TX

LOCATION.--Lat 33°24'23", long 97°00'45", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of bridge on Farm Road 372, 2.4 mi downstream from Wolf Creek, 3.0 mi west of Pilot Point, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--266 mi^2.

PERIOD OF RECORD.--April 1949 to current year.
Water-quality records.--Chemical analyses: November 1961 to April 1963. Sediment records: February 1966 to September 1975.

REVISED RECORDS.--WSP 1512: 1950. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 555.48 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Feb. 8, 1958, water-stage recorder at site 1.0 mi upstream at datum 4.22 ft higher.

REMARKS.--Records fair. No known diversion above station. Data collection plateform located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years (water years 1950-84), 120 ft^3/s (6.13 in/yr), 86,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft^3/s Oct. 31, 1974 (gage height, 29.43 ft), present site and datum; maximum gage height, 29.84 ft Oct. 16, 1981; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 30.4 ft in May 1908, present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,570 ft^3/s Mar. 19 at 1400 hours (gage height, 12.19 ft), no peak above base of 2,500 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.6	.25	.66	35	14	3.9	1.8	.07	.00	.00
2	.00	.00	1.5	.34	.73	28	13	5.5	.59	.01	.00	.00
3	.00	.00	1.2	.47	.73	24	12	80	.15	.00	.00	.00
4	.00	.00	1.1	.66	.81	22	11	46	.10	.00	.00	.00
5	.00	.00	.73	.73	.73	21	11	16	.08	.00	.00	.00
6	.00	2.1	.53	.81	.66	20	9.9	8.9	4.3	.00	.00	.00
7	8.9	2.7	.42	.73	.73	20	8.2	5.5	5.7	.00	.00	.00
8	13	1.9	.28	.66	.66	19	11	3.9	3.6	.00	.00	.00
9	9.2	1.4	.24	.88	1.3	18	12	5.5	.97	.00	.00	.00
10	6.0	1.2	.17	1.1	1.6	18	12	3.6	.10	.00	.00	.00
11	3.6	1.0	.20	.97	1.8	18	10	2.2	.10	.00	.00	.00
12	.20	.90	.15	.73	1.6	613	8.9	1.8	.05	.00	.00	.00
13	.15	.80	.12	.88	1.2	664	8.2	1.5	.07	.00	.00	.00
14	.06	.90	.12	.73	1.1	202	8.2	1.5	.08	.00	.00	.00
15	.06	.75	.17	.73	.81	47	7.6	1.5	.15	.00	.00	.00
16	.03	.65	.37	.66	.81	35	8.2	1.2	.07	.00	.00	.00
17	.02	.60	.47	.59	.81	30	8.9	.66	.04	.00	.00	.00
18	.01	.75	.42	.53	1.1	147	8.5	.17	.04	.00	.00	.00
19	.59	1.2	.40	.42	1.1	914	7.6	.47	.07	.00	.00	.00
20	3.3	2.0	.36	.37	1.1	433	7.0	1.9	.20	.00	.00	.00
21	6.5	3.0	.30	.37	.81	73	238	3.6	.17	.00	.00	.00
22	6.2	1.8	.24	.47	.81	40	169	3.6	.07	.00	.00	.00
23	5.0	2.5	.15	.73	.81	52	30	93	.03	.00	.00	.00
24	.88	2.1	.08	1.3	.81	547	14	18	.02	.00	.00	.00
25	.17	1.9	.04	1.1	.88	264	8.9	4.6	.00	.00	.00	.00
26	.59	1.7	.00	1.2	6.7	48	6.5	2.4	.04	.00	.00	.00
27	2.4	2.0	.00	1.1	336	146	5.0	2.2	.32	.00	.00	.00
28	1.6	2.4	.00	1.0	364	333	3.9	2.9	1.8	.00	.00	.00
29	.00	3.5	.00	.81	81	74	3.7	2.1	.73	.00	.00	.00
30	.00	4.5	.00	.73	---	32	3.9	2.4	.28	.00	.00	.00
31	.00	---	.10	.66	---	18	---	2.7	---	.00	.00	---
TOTAL	68.46	44.25	12.46	22.71	811.86	4955	680.1	329.20	21.72	.08	.00	.00
MEAN	2.21	1.48	.40	.73	28.0	160	22.7	10.6	.72	.003	.000	.000
MAX	13	4.5	2.6	1.3	364	914	238	93	5.7	.07	.00	.00
MIN	.00	.00	.00	.25	.66	18	3.7	.17	.00	.00	.00	.00
CFSM	.008	.006	.002	.003	.11	.60	.09	.04	.003	.000	.000	.000
IN.	.01	.01	.00	.00	.11	.69	.10	.05	.00	.00	.00	.00
AC-FT	136	88	25	45	1610	9830	1350	653	43	.2	.00	.00

CAL YR 1983 TOTAL 16008.02 MEAN 43.9 MAX 2160 MIN .00 CFSM .17 IN 2.24 AC-FT 31750
WTR YR 1984 TOTAL 6945.84 MEAN 19.0 MAX 914 MIN .00 CFSM .07 IN .97 AC-FT 13780

TRINITY RIVER BASIN

08051000 ISLE DU BOIS CREEK NEAR PILOT POINT, TX

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1983 to September 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 30...	1300	4.3	320	7.6	7.0	200	130	7.8	65	4.8	65
JAN 19...	0950	.41	617	7.4	1.0	20	15	16.0	112	3.4	94
MAR 27...	1100	26	327	7.7	16.0	560	150	7.9	83	2.5	96
MAY 09...	1210	5.9	487	7.6	19.0	130	120	7.2	78	1.0	130
JUN 20...	0958	.57	668	7.9	28.0	75	34	5.6	73	3.0	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 30...	0	19	4.3	40	2	6.4	79	44	26	.20	11
JAN 19...	0	27	6.4	92	4	4.9	170	60	49	.30	7.8
MAR 27...	21	30	5.2	22	1	4.3	75	35	27	.30	11
MAY 09...	15	41	7.9	48	2	5.0	120	45	47	.40	9.6
JUN 20...	0	45	8.3	88	3	6.5	210	61	61	.40	5.2

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 30...	200	58	<1	1.7	.150	1.8	.210	2.1	2.3	.710	9.7
JAN 19...	350	17	6	1.1	.030	1.1	1.60	.60	2.2	1.00	6.7
MAR 27...	180	138	26	.24	.160	.40	.160	4.8	5.0	.250	22
MAY 09...	280	126	27	1.4	.140	1.5	.110	6.4	6.5	.060	4.8
JUN 20...	400	47	19	--	.010	<.10	.020	1.4	1.4	.040	10

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 19...	0950	2	27	<1	<10	10	48
MAY 09...	1210	<1	81	<1	<10	2	61

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 19...	<1	49	.3	<1	<1	33
MAY 09...	4	78	.2	<1	<1	10

08051500 CLEAR CREEK NEAR SANGER, TX

LOCATION.--Lat 33°20'21", long 97°10'51", Denton County, Hydrologic Unit 12030103, at the downstream side of left abutment of main channel bridge on Interstate Highway 35, 600 ft downstream from Duck Creek, 1.3 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 1.7 mi south of Sanger.

DRAINAGE AREA.--295 mi^2.

PERIOD OF RECORD.--March 1949 to current year.
Water-quality records.--Specific conductance, water temperature, and sediment records: May 1968 to September 1976.

REVISED RECORDS.--WSP 1512: 1950, 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 582.23 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Apr. 18, 1975, water-stage recorder at site 950 ft downstream at datum 5.00 ft higher.

REMARKS.--Records fair. No appreciable diversion above station. Flow is affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 38,850 acre-ft. These structures control runoff from 149 mi^2 in the Clear Creek watershed. Several observations of water temperature were made during the year. Gage-height telemeter located at this station.

AVERAGE DISCHARGE.--31 years (water years 1950-80) prior to regulation, 74.3 ft^3/s (53,830 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft^3/s Oct. 13, 1981 (gage height, 35.70 ft, site and datum then in use); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 36.5 ft in May 1908, from information by Gulf, Colorado, and Santa Fe Railway Co. Flood in May 1935 reached a stage of 34.0 ft, from information by State Department of Highways and Public Transportation. Both peaks now referenced to present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft^3/s Oct. 8 at about 0300 hours (gage height, 16.61 ft, from graph); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	1.9	6.0	4.7	7.0	141	62	26.0	6.7	2.40	.00	0
2	.0	1.9	6.0	6.4	6.8	105	64	42.0	5.4	1.40	.00	0
3	.0	1.6	6.4	9.4	6.8	84	78	52.0	3.4	.70	.00	0
4	.0	1.8	6.8	14.0	7.8	73	69	38.0	3.0	.18	.00	0
5	.0	14.0	7.3	16.0	6.1	61	59	29.0	2.8	.04	.00	0
6	.0	12.0	6.4	15.0	5.3	53	52	22.0	7.3	.02	.00	0
7	710.0	15.0	6.4	12.0	6.0	48	46	17.0	9.4	.02	.00	0
8	1610.0	15.0	6.0	8.8	6.0	43	82	12.0	7.7	.03	.00	0
9	650.0	9.4	6.0	9.4	10.0	36	70	9.4	3.5	.00	.00	0
10	231.0	7.8	6.0	12.0	14.0	34	59	8.2	283.0	.00	.00	0
11	101.0	5.5	6.4	21.0	16.0	35	53	8.4	382.0	.01	.00	0
12	63.0	5.1	6.4	15.0	15.0	545	52	7.6	177.0	.01	14.00	0
13	45.0	4.3	6.8	10.0	12.0	426	51	6.7	125.0	.00	5.30	0
14	33.0	4.7	6.8	8.8	21.0	220	59	6.1	73.0	.00	.24	0
15	25.0	3.6	6.8	8.8	15.0	138	56	5.9	46.0	.00	.02	0
16	18.0	3.3	7.8	8.3	9.4	72	52	5.2	30.0	.00	.00	0
17	13.0	3.3	9.4	8.3	7.9	59	48	5.9	18.0	.00	.00	0
18	10.0	3.6	10.0	6.0	9.5	122	46	5.4	13.0	.00	.00	0
19	17.0	6.8	7.8	4.3	11.0	338	43	8.3	8.3	.00	.00	0
20	31.0	10.0	6.4	5.1	12.0	114	43	14.0	8.5	.00	.00	0
21	24.0	15.0	7.8	5.1	8.7	63	279	32.0	7.6	.00	.00	0
22	14.0	8.3	5.1	6.0	8.3	58	122	20.0	8.0	.00	.00	0
23	10.0	11.0	3.9	12.0	8.3	62	59	12.0	5.3	.00	.00	0
24	7.3	6.8	3.6	15.0	6.9	71	43	11.0	6.1	.00	.00	0
25	5.5	6.4	2.8	15.0	6.4	64	37	9.2	6.2	.00	.00	0
26	3.9	6.0	2.8	12.0	17.0	55	36	7.7	5.7	.00	.00	0
27	3.3	6.8	2.8	11.0	391.0	45	34	6.8	5.5	.00	.00	0
28	2.8	12.0	3.6	11.0	254.0	38	32	8.2	4.0	.00	.00	0
29	2.5	12.0	3.6	9.6	169.0	102	30	20.0	5.0	.00	.00	0
30	2.1	8.3	3.3	8.3	---	81	27	15.0	7.1	.00	.00	0
31	2.1	---	3.6	7.9	---	65	---	8.0	---	.00	.00	---
TOTAL	3634.5	223.2	180.8	316.2	1074.2	3451	1843	479.0	1273.5	4.81	19.56	0
MEAN	117	7.44	5.83	10.2	37.0	111	61.4	15.5	42.5	.16	.63	.000
MAX	1610	15	10	21	391	545	279	52	382	2.4	14	.00
MIN	.00	1.6	2.8	4.3	5.3	34	27	5.2	2.8	.00	.00	.00
AC-FT	7210	443	359	627	2130	6850	3660	950	2530	9.5	39	.00

CAL YR 1983 TOTAL 10082.60 MEAN 27.6 MAX 1610 MIN .00 AC-FT 20000
WTR YR 1984 TOTAL 12499.77 MEAN 34.2 MAX 1610 MIN .00 AC-FT 24790

08052700 LITTLE ELM CREEK NEAR AUBREY, TX

LOCATION.--Lat 33°17'00", long 96°53'33", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of bridge on Farm Road 1385, 1.5 mi upstream from Mustang Creek, 5.5 mi east of Aubrey, and 18 mi upstream from Lewisville Dam on the Elm Fork Trinity River.

DRAINAGE AREA.--75.5 mi^2.

PERIOD OF RECORD.--June 1956 to September 1976, October 1979 to current year.
Water-quality records.--Chemical analyses: January 1968. Specific conductance: December 1966 to September 1975. Water temperatures: February 1966 to September 1975. Sediment records: February 1966 to September 1975.

REVISED RECORDS.--WRD TX-70-1: 1969.

GAGE.--Water-stage recorder. Datum of gage is 534.76 ft National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Records good. Some small diversions for irrigation above station. Flow is affected at times by discharge from the flood-detention pools of 17 floodwater-retarding structures with a combined detention capacity of 10,460 acre-ft. These structures control runoff from 36.4 mi^2 above station. Several observations of water temperature were obtained during the year.

AVERAGE DISCHARGE.--25 years (water year 1957-76, 1980-1984), 46.8 ft^3/s (33,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft^3/s May 13, 1982 (gage height, 17.80 ft); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 18.2 ft in May 1941, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 819 ft^3/s Mar. 12 at 1700 hours (gage height, 13.52 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.45	.18	.08	3.20	6.30	.49	.00	0	0	0
2	.00	.00	.29	.19	.12	1.60	5.80	16.00	.00	0	0	0
3	.00	.00	.38	.21	.23	.96	8.30	5.00	.00	0	0	0
4	.00	.00	.95	.21	.23	.73	5.90	3.00	.00	0	0	0
5	.00	.00	1.10	.21	.12	.57	3.60	1.30	.00	0	0	0
6	.00	.14	.72	.16	.05	.40	2.40	2.90	.00	0	0	0
7	.00	.65	.44	.13	.08	.29	2.60	2.00	.00	0	0	0
8	.00	.57	.23	.13	.10	.14	15.00	.75	.00	0	0	0
9	.00	.32	.19	.13	.76	.06	9.80	.39	.00	0	0	0
10	.00	.16	.10	.13	1.10	.06	4.80	.04	.05	0	0	0
11	.00	.06	.10	.13	.63	.11	3.40	.00	.04	0	0	0
12	.00	.06	.07	.13	5.80	502.00	2.70	.00	.00	0	0	0
13	.00	.08	.06	.11	3.80	184.00	1.70	.00	.00	0	0	0
14	.00	.06	.06	.11	1.60	62.00	1.10	.00	.00	0	0	0
15	.00	.02	.06	.11	.70	31.00	.74	.00	.00	0	0	0
16	.00	.00	.12	.11	.38	20.00	.59	.00	.00	0	0	0
17	.00	.00	.15	.11	.14	13.00	.47	.00	.00	0	0	0
18	.00	.00	.17	.11	.26	9.50	.37	.00	.00	0	0	0
19	.00	1.20	.09	.01	.57	29.00	.38	.00	.00	0	0	0
20	.00	1.60	.09	.00	.34	21.00	.29	.00	.00	0	0	0
21	4.10	.53	.10	.08	.14	14.00	.25	.00	.00	0	0	0
22	1.60	.23	.02	.41	.08	9.30	.15	.00	.00	0	0	0
23	.70	.15	.00	.82	.05	52.00	.16	.00	.00	0	0	0
24	.40	.55	.00	1.10	.02	80.00	.11	.00	.00	0	0	0
25	.27	.39	.00	.65	.00	31.00	.09	.00	.00	0	0	0
26	.20	.25	.02	.47	87.00	19.00	.08	.00	.00	0	0	0
27	.11	5.90	.12	.31	131.00	15.00	.09	.00	.00	0	0	0
28	.06	7.80	.21	.18	17.00	38.00	.03	.00	.00	0	0	0
29	.02	2.00	.08	.15	6.70	26.00	.06	.00	.00	0	0	0
30	.01	.91	.08	.12	---	13.00	.11	.00	.00	0	0	0
31	.00	---	.10	.09	---	8.70	---	.00	---	0	0	---
TOTAL	7.47	23.63	6.55	6.99	259.08	1185.62	77.37	31.87	.09	0	0	0
MEAN	.24	.79	.21	.23	8.93	38.2	2.58	1.03	.003	.000	.000	.000
MAX	4.1	7.8	1.1	1.1	131	502	15	16	.05	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.06	.03	.00	.00	.00	.00	.00
AC-FT	15	47	13	14	514	2350	153	63	.2	.00	.00	.00

CAL YR 1983 TOTAL 2462.81 MEAN 6.75 MAX 555 MIN .00 AC-FT 4880
WTR YR 1984 TOTAL 1598.67 MEAN 4.37 MAX 502 MIN .00 AC-FT 3170

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX

LOCATION.--lat 33°04'09", long 96°57'51", Denton County, Hydrologic Unit 12030103, in intake structure of Lewisville Dam on Elm Fork Trinity River, 2 mi upstream from bridge on State Highway 121, 2.4 mi northeast of Lewisville, 12 mi upstream from Denton Creek, and 30.0 mi upstream from mouth.

DRAINAGE AREA.--1,660 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1954 to current year. Prior to October 1970, published as Garza-Little Elm Reservoir near Lewisville.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 17, 1955, non-recording gage at site 4,000 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 32,888 ft long, including a 560-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov. 1, 1954, and the dam was completed in August 1955. The controlled low-flow outlet works consist of a 16.0-foot-diameter conduit that is controlled by three 6.5- by 13.0-foot broome-type gates and two 60-inch steel pipes with service valves. The lake was built for flood control and water conservation. The city of Dallas obtains most of its municipal water supply from this lake. The capacity table is based on a survey made in 1965. Inflow is affected at times by discharge from the flood-detention pools of 118 floodwater-retarding structures with a combined detention capacity of 81,670 acre-ft. These structures control runoff from 298 mi^2 in the Elm Fork Trinity River, Clear, Little Elm, and Hickory Creeks watersheds. Gage-height telemeter at station. An unknown amount of water was diverted for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	560.0	-
Crest of spillway	532.0	981,800
Top of conservation pool	515.0	457,600
Lowest intakes to wet wells (invert)	481.0	42,560
Invert of three broome-type gates	448.0	0

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,168,000 acre-ft Nov. 1, 1981 (elevation, 536.46 ft); minimum since initial filling in 1957, 184,700 acre-ft Sept. 28, 1980 (elevation, 498.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 441,100 acre-ft Apr. 8 at 0800 hours (elevation, 514.28 ft); minimum daily, 309,100 acre-ft Sept. 30 at 2400 (elevation, 507.50 ft).

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

507.0	300,900	510.0	351,900	514.0	434,700
508.0	317,300	512.0	391,000	515.0	457,600
509.0	334,300				

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370800	403500	401400	388700	380200	388000	438300	438100	418800	398000	356800	327900
2	369900	403500	401800	388200	380400	389300	439900	439700	418200	396200	355300	327900
3	369100	403500	401800	387600	380200	389300	440600	439700	417100	394800	354000	327800
4	368900	403500	401200	387400	380000	389900	439500	439200	416400	393700	352800	326900
5	368100	404600	401200	387000	379800	389500	439200	438800	414900	392000	351500	326200
6	368100	405300	400300	386800	379000	388700	438300	438600	419000	390800	350400	325000
7	377600	404800	399900	386400	378800	388700	440400	438300	418200	389500	351100	322300
8	390500	404400	399400	385700	379400	388400	441100	437000	417500	387800	350400	321200
9	399400	404400	399400	386600	379600	388000	440600	435800	417100	385700	349700	320200
10	402500	404400	399200	386800	379200	387800	441300	433300	416600	384300	349000	319200
11	406600	403500	398800	386000	380400	388200	440600	433300	417100	383300	349900	318500
12	406600	403500	397700	386000	380400	396500	440800	433100	417500	382200	349700	317800
13	406100	403100	398200	386000	380400	405900	440800	432400	417500	381000	348800	317200
14	405500	403500	397700	385500	379200	409600	440400	432000	417100	379000	348300	316500
15	405700	402900	397500	384900	380000	412900	439900	430900	416400	377800	347600	315200
16	405700	402000	397700	384500	379600	413500	439200	429700	415100	376600	346800	314000
17	405700	400900	397500	384500	379400	414200	438800	428800	414000	375600	346100	312800
18	405000	399900	397300	384100	380200	417500	438600	428600	412900	373800	345400	312000
19	405900	402200	396500	383300	379800	422600	438100	428400	411800	372800	344500	311200
20	407900	400500	395800	383100	379600	426600	437600	427900	410300	371200	341900	310400
21	407600	400500	395600	382500	378800	428400	437900	427300	408900	369700	340300	309700
22	407000	402000	395400	382900	378200	428400	437900	427100	407600	368500	339400	308900
23	406300	402200	394600	382900	378200	432700	437400	427300	406800	367200	338800	308400
24	406300	401800	393500	382700	377800	434000	435800	426400	405700	366200	338200	307200
25	406100	400900	392900	382500	376200	435200	435600	425700	404600	365000	337000	307200
26	405500	402200	392200	382200	382200	436100	435200	424600	403300	363900	335800	305900
27	405000	403100	391800	382000	383300	437400	435400	424400	402000	362800	334300	305600
28	404400	402500	394100	381800	384700	437600	434700	424400	401200	361600	332400	305100
29	404200	401600	390300	381800	386200	438800	434200	422800	399700	360100	330100	304300
30	404000	402000	389300	381200	---	439000	433300	421500	399000	359000	329300	303300
31	403700	---	388900	380800	---	439500	---	420400	---	357900	328300	---
MAX	407900	405300	401800	388700	386200	439500	441300	439700	419000	398000	356800	327900
MIN	368100	399900	388900	380800	376200	387800	433300	420400	399000	357900	328300	303300
(†)	512.60	512.52	511.90	511.51	511.77	514.21	513.94	513.36	512.38	510.33	508.65	507.15
(‡)	+32100	-1700	-13100	-8100	+5400	+53300	-6200	-12900	-21400	-41100	-29600	-25000

CAL YR 1983 MAX 485100 MIN 368100 ‡ -63200
WTR YR 1984 MAX 441300 MIN 303300 ‡ -68300

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

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

330419096575401 LEWISVILLE LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV												
16...	1145	1.00	358	7.8	16.0	.70	7.5	77	27	K15	110	18
16...	1146	1.20	--	--	--	--	--	--	--	--	--	--
16...	1147	10.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1148	20.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1149	30.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1150	40.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1151	50.0	358	7.7	16.0	--	7.3	75	--	--	--	--
16...	1152	58.0	358	7.7	16.0	--	7.3	75	--	--	120	18
APR												
17...	1240	1.00	394	8.1	17.5	.50	9.2	98	K2	K4	130	23
17...	1241	.90	--	--	--	--	--	--	--	--	--	--
17...	1242	10.0	394	8.1	16.0	--	9.4	97	--	--	--	--
17...	1243	20.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1244	30.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1245	40.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1246	50.0	394	8.1	15.5	--	9.0	92	--	--	--	--
17...	1247	60.0	394	8.1	15.5	--	9.0	92	--	--	130	34
AUG												
14...	0845	1.00	378	7.9	27.0	1.60	6.7	85	K4	K13	120	21
14...	0847	10.0	379	7.9	27.0	--	6.4	81	--	--	--	--
14...	0848	20.0	379	7.8	27.0	--	5.6	71	--	--	--	--
14...	0849	30.0	383	7.5	26.5	--	4.0	50	--	--	--	--
14...	0850	35.0	388	7.3	26.0	--	1.3	16	--	--	--	--
14...	0851	40.0	399	7.3	25.5	--	.1	1	--	--	--	--
14...	0852	51.0	434	7.2	22.5	--	.1	1	--	--	140	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
NOV												
16...	38	4.1	23	1	4.4	94	34	25	.30	3.6	190	6
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	39	4.3	23	1	4.4	97	34	25	--	4.0	190	11
APR												
17...	46	4.4	26	1	4.4	110	37	29	.30	1.9	210	10
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	46	4.5	26	1	4.3	100	38	28	--	2.0	210	37
AUG												
14...	40	4.7	27	1	4.5	98	41	30	.30	2.7	210	2
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	50	4.8	26	1	4.4	150	28	27	--	7.5	240	8

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330419096575401 LEWISVILLE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
16...	.29	.010	.30	.060	.94	1.0	1.3	<.010	.030	3	3
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	<.010	.30	.030	.77	.80	1.1	<.010	.020	40	30
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	.28	.020	.30	.070	1.1	1.2	1.5	<.010	.030	10	10
APR											
17...	.26	.040	.30	.070	.53	.60	.90	<.010	.040	11	<1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.17	.030	.20	.040	.66	.70	.90	<.010	.050	30	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.42	.080	.50	.180	.52	.70	1.2	.020	.040	10	14
AUG											
14...	--	<.010	<.10	<.010	--	.50	--	<.010	.010	<3	3
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.010	<.10	.120	--	--	--	<.010	.010	30	50
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	<.010	<.10	.340	1.3	1.6	--	<.010	.040	40	990
14...	--	.020	<.10	1.10	.60	1.7	--	.240	.260	1700	1600

330410096584501 LEWISVILLE LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV							
16...	1215	1.00	358	7.8	16.0	7.5	77
16...	1216	10.0	358	7.7	16.0	7.3	75
16...	1217	20.0	358	7.7	16.0	7.3	75
16...	1218	30.0	358	7.7	16.0	7.3	75
16...	1219	40.0	358	7.7	16.0	7.3	75
16...	1220	50.0	358	7.7	16.0	7.3	75
APR							
17...	1302	1.00	394	8.1	17.5	9.2	98
17...	1303	10.0	394	8.1	16.0	9.4	97
17...	1304	20.0	394	8.1	15.5	9.0	92
17...	1305	30.0	394	8.1	15.5	9.0	92
17...	1306	40.0	394	8.1	15.5	9.0	92
17...	1307	48.0	394	8.1	15.5	9.0	92
AUG							
14...	0910	1.00	375	8.0	27.0	7.3	93
14...	0911	10.0	376	8.0	27.0	7.0	89
14...	0912	20.0	377	7.8	27.0	6.0	76
14...	0913	30.0	380	7.6	26.5	4.4	55
14...	0914	35.0	385	7.4	26.0	2.0	25
14...	0915	42.0	409	7.3	24.5	.2	2

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330450096560501 LEWISVILLE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV							
16...	1230	1.00	357	7.8	16.0	7.6	78
16...	1231	10.0	357	7.7	16.0	7.4	76
16...	1232	20.0	371	7.7	15.5	7.2	73
16...	1233	30.0	380	7.7	15.0	7.0	70
APR							
17...	1315	1.00	400	8.1	17.5	9.6	102
17...	1316	5.00	441	8.3	17.0	9.3	98
17...	1317	10.0	444	8.2	16.5	9.2	96
17...	1318	20.0	443	8.1	16.0	8.9	92
17...	1319	25.0	420	8.1	15.5	8.7	89
17...	1320	32.0	400	8.1	15.5	8.7	89
AUG							
14...	0930	1.00	382	8.3	27.5	8.7	111
14...	0931	10.0	378	7.8	27.0	6.8	86
14...	0932	20.0	383	7.6	27.0	4.3	55
14...	0933	26.0	397	7.4	26.5	2.5	31

330606097025601 LEWISVILLE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	1615	1.00	394	8.2	18.0	9.2	99
17...	1616	10.0	394	8.0	16.0	8.6	89
17...	1617	20.0	394	8.0	16.0	8.3	86
17...	1618	25.0	394	7.9	16.0	7.3	75
AUG							
14...	1210	1.00	364	8.6	30.1	9.3	125
14...	1211	5.00	365	8.5	28.5	8.8	115
14...	1212	10.0	369	7.8	28.0	5.1	66
14...	1213	18.0	374	7.5	27.0	1.2	15

330755096572001 LEWISVILLE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
NOV										
16...	1255	1.00	356	7.8	15.5	.40	7.4	75	.27	.030
16...	1256	10.0	356	7.7	15.0	--	7.3	73	--	--
16...	1257	20.0	356	7.7	15.0	--	7.2	72	--	--
16...	1258	30.0	356	7.7	15.0	--	7.0	70	--	--
16...	1259	35.0	356	7.7	15.0	--	6.9	69	.24	.060
APR										
17...	1345	1.00	398	8.1	18.0	.40	9.3	100	.36	.040
17...	1346	5.00	398	8.1	16.5	--	9.3	97	--	--
17...	1347	10.0	398	8.1	15.5	--	9.0	92	--	--
17...	1348	20.0	398	8.0	15.5	--	8.8	90	.36	.040
17...	1349	30.0	398	8.0	15.5	--	8.6	88	--	--
17...	1350	37.0	398	8.0	15.5	--	8.6	88	.44	.060
AUG										
14...	1000	1.00	367	8.3	28.0	.80	8.3	107	--	<.010
14...	1001	10.0	370	8.1	27.5	--	6.8	87	--	--
14...	1002	20.0	377	7.7	27.0	--	4.0	51	--	.030
14...	1003	30.0	378	7.6	27.0	--	3.4	43	--	.050

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330755096572001 LEWISVILLE LAKE SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV									
16...	.30	.050	.95	1.0	1.3	<.010	.040	50	10
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	.30	.090	1.1	1.2	1.5	.020	.100	70	30
APR									
17...	.40	.060	.64	.70	1.1	<.010	.030	40	<10
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	.40	.040	.66	.70	1.1	.010	.010	50	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.140	.86	1.0	1.5	.010	.050	80	20
AUG									
14...	<.10	.020	.68	.70	--	<.010	.030	60	<10
14...	--	--	--	--	--	--	--	--	--
14...	<.10	.160	.44	.60	--	<.010	.020	40	20
14...	<.10	.170	.63	.80	--	<.010	.040	20	30

330959096565301 LEWISVILLE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
16...	1315	1.00	354	8.0	14.5	.40	7.8	77	<1	K16	110	18
16...	1316	10.0	354	8.0	14.5	--	7.7	76	--	--	--	--
16...	1317	20.0	354	8.0	14.0	--	7.5	74	--	--	--	--
16...	1318	24.0	354	8.0	14.0	--	7.3	72	--	--	110	20
APR												
17...	1415	1.00	412	8.2	18.5	.30	9.5	103	<1	<1	140	32
17...	1416	5.00	422	8.1	16.5	--	8.8	92	--	--	--	--
17...	1417	10.0	427	8.1	16.0	--	8.5	88	--	--	--	--
17...	1418	20.0	427	8.1	16.0	--	8.1	84	--	--	--	--
17...	1419	25.0	427	8.0	16.0	--	7.3	75	--	--	--	--
AUG												
14...	1035	1.00	358	8.6	29.0	.60	10.4	137	K2	K16	110	23
14...	1036	5.00	366	8.3	28.5	--	8.0	104	--	--	--	--
14...	1037	10.0	374	7.7	27.0	--	3.9	50	--	--	--	--
14...	1038	19.0	387	7.5	26.5	--	1.6	20	--	--	120	21

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
NOV											
16...	38	4.1	23	1	4.4	94	36	24	3.0	190	18
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	39	4.1	23	1	4.3	94	35	24	2.6	190	55
APR											
17...	49	4.6	25	1	4.5	110	49	25	2.1	230	31
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	110	--	--	--	--	--
AUG											
14...	35	4.6	29	1	4.6	84	42	31	2.8	200	2
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	39	4.4	28	1	4.7	95	39	31	3.8	210	39

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330959096565301 LEWISVILLE LAKE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
16...	.07	.030	.10	.040	1.2	1.2	1.3	<.010	.050	20	3
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	.08	.020	.10	.050	1.2	1.2	1.3	<.010	.090	6	6
APR											
17...	.75	.050	.80	.060	.84	.90	1.7	.010	.030	<3	<1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.95	.050	1.0	.060	1.2	1.3	2.3	.010	.050	54	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.95	.050	1.0	.200	1.2	1.4	2.4	.030	.150	20	10
AUG											
14...	--	<.010	<.10	.020	.78	.80	--	.010	.050	<3	1
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.020	<.10	.070	--	--	--	<.010	.040	30	<10
14...	--	.060	<.10	.280	.72	1.0	--	.080	.090	4	78

330722096592201 LEWISVILLE LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
NOV										
16...	1430	1.00	352	7.8	15.5	.40	7.4	75	.29	.010
16...	1431	10.0	352	7.7	15.0	--	7.3	73	--	--
16...	1432	20.0	352	7.7	14.5	--	7.4	73	--	--
16...	1433	28.0	352	7.7	14.0	--	7.4	73	.69	.010
APR										
17...	1450	1.00	405	8.0	18.5	.30	9.0	98	.77	.030
17...	1451	5.00	399	8.0	16.0	--	8.9	92	--	--
17...	1452	10.0	396	8.1	15.5	--	8.9	91	.43	.070
17...	1453	20.0	396	8.0	15.5	--	8.6	88	--	--
17...	1454	26.0	396	8.0	15.5	--	8.4	86	.44	.060
AUG										
14...	1115	1.00	380	8.5	28.0	.90	8.4	109	--	<.010
14...	1116	5.00	387	8.3	28.0	--	7.4	96	--	--
14...	1117	10.0	405	7.6	27.0	--	3.1	39	.16	.040
14...	1118	18.0	405	7.6	27.0	--	3.0	38	.06	.040

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV									
16...	.30	.040	.86	.90	1.2	<.010	.040	50	10
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	.70	.040	1.1	1.1	1.8	.020	.110	70	<10
APR									
17...	.80	.040	.86	.90	1.7	.040	.080	20	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.150	.65	.80	1.3	.020	.020	10	<10
17...	--	--	--	--	--	--	--	--	--
17...	.50	.120	.68	.80	1.3	.020	.040	20	<10
AUG									
14...	<.10	.040	.76	.80	--	<.010	.030	30	10
14...	--	--	--	--	--	--	--	--	--
14...	.20	.160	.94	1.1	1.3	.070	.120	20	20
14...	.10	.160	.64	.80	.90	.070	.110	30	60

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330944097003601 LEWISVILLE LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV												
16...	1410	1.00	353	7.8	14.5	.40	7.7	76	K4	67	110	13
16...	1411	.60	--	--	--	--	--	--	--	--	--	--
16...	1412	9.00	353	7.7	13.5	--	7.2	70	--	--	--	--
APR												
17...	1530	1.00	437	8.1	17.5	.20	8.8	94	K20	K14	150	16
17...	1531	.40	--	--	--	--	--	--	--	--	--	--
17...	1532	5.00	410	8.0	16.0	--	8.3	86	--	--	--	--
17...	1533	11.0	408	7.9	16.0	--	8.0	82	--	--	140	27
AUG												
14...	1135	1.00	389	8.7	29.0	.30	10.4	137	K2	K20	110	16
14...	1137	3.00	387	8.5	28.0	--	8.5	110	--	--	--	--
14...	1138	5.00	397	8.0	27.5	--	6.4	82	--	--	110	17

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
NOV											
16...	38	3.9	24	1	4.3	98	31	24	4.5	190	16
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
17...	50	5.0	29	1	4.5	130	35	32	4.8	240	39
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	47	4.6	27	1	4.5	110	35	29	4.2	220	63
AUG											
14...	36	4.8	35	2	5.5	94	36	37	1.7	210	19
14...	--	--	--	--	--	--	--	--	--	--	--
14...	37	4.7	35	2	5.4	95	36	37	2.5	210	51

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV											
16...	.67	.030	.70	.060	1.1	1.2	1.9	.050	.110	8	<1
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
17...	.56	.040	.60	.120	.98	1.1	1.7	.060	.160	4	1
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.74	.060	.80	.150	.95	1.1	1.9	.120	.120	12	10
AUG											
14...	--	.020	<.10	.040	1.4	1.4	--	.050	.150	3	<1
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	.030	<.10	.030	1.2	1.2	--	.060	.170	4	10

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	11-16-83
Time	1146
TOTAL CELLS/ml	13,200
NUMBER OF SPECIES	19
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	100
Ankistrodesmus falcatus var. mirabilis	100
Ankistrodesmus nannoselene	200
Chlamydomonas sp.	200
Scenedesmus accuminatus	400
Scenedesmus quadricauda	400
Tetraedron trigonum var. gracile	100
Tetrastrum heteracanthum	800
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	500
Chroococcus dispersus	200
Dactylococcopsis raphidioides	700
Merismopedia minima	6800
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvulina	100
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	300
Melosira tirata	1400
Stephanodiscus astrea	100
Stephanodiscus niagarae	100
Order Pennales	
Navicula sp.	100
Nitzschia palea	600

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1241
TOTAL CELLS/ml	10,527
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	329
Chlamydomonas sp.	197
Nephrocytium sp.	329
Schroederia setigera	66
Tetraedron minimum	66
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1315
Aphanothece sp.	1645
Chroococcus pallidus	1645
Dactylococcopsis raphidioides	197
Synechococcus aeruginosa	263
Synechococcus elongatus	329
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus astrea	219
Stephanodiscus niagarae	110
Stephanodiscus tenuis	2895
Order Pennales	
Achnanthes minutissima	66
Navicula sp.	395
Nitzschia latens	329
Nitzschia subacicularis	132

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1983 to September 1984

Date	8-14-84
Time	0846
TOTAL CELLS/ml	345,326
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	2.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Cosmarium sp.	125
Oocystis sp.	1000
Selenastrum minutum	125
Tetraedron minimum	125
Tetrastrum heteracanthum	1000
CYANOPHYTA (Blue-green algae)	
Anabaena catenata	28646
Anabaena circinalis	37760
Anabaena sp.	1000
Anabaenopsis circularis	1250
Anabaenopsis raciborskii	36250
Aphanocapsa delicatissima	85625
Aphanocapsa elachista	1250
Chroococcus dispersus	1500
Chroococcus limneticus	3500
Dactylococcopsis smithii	125
Lyngbya contorta	4375
Lyngbya limnetica	8500
Merismopedia minima	12500
Merismopedia punctata	15625
Merismopedia tenuissima	4250
Microcystis sp.	24875
Oscillatoria geminata	1750
Oscillatoria limnetica	11375
Oscillatoria subtilissima	36458
Oscillatoria sp.	2750
Pseudoanabaena sp.	3000
Raphidiopsis curvata	7625
Rhabdoderma lineare	2250
Rhabdoderma sigmoidea	1250
Spirulina laxa	2000
Spirulina laxissima	2875
Synechococcus aeruginosa	375
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	125
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	500
Melosira granulata	1750
Stephanodiscus dubius	125
Order Pennales	
Navicula halophila	125
Nitzschia palea	553
Nitzschia subconfinis	34
Synedra sp.	1000

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	11-16-83
Time	1411
TOTAL CELLS/ml	51,760
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	P
Ankistrodesmus falcatus var. mirabilis	300
Chlamydomonas sp.	100
Cosmarium tinctum var. tumidum	100
Scenedesmus quadricauda	200
Selenastrum capricornutum	700
CHRYSOPHYTA (Golden-brown algae)	
Unicellular flagellate	300
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	600
Dactylococcopsis raphidioides	500
Merismopedia minima	45100
Pseudoanabaena sp.	600
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	100
Phacus sp.	100
Trachelomonas volvulina	100
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	380
Stephanodiscus hantzschii	1180
Order Pennales	
Nitzschia sp.	1400

P = Species observed after counts completed.

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1531
TOTAL CELLS/ml	32,136
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	395
Ankistrodesmus falcatus var. mirabilis	132
Chlamydomonas sp.	921
Closterium sp.	263
Scenedesmus quadricauda	263
Scenedesmus serratus	263
Schroederia setigera	789
CYANOPHYTA (Blue-green algae)	
Chroococcus multicoloratus	3289
Chroococcus pallidus	1974
Dactylococcopsis raphidioides	1974
Gloeothece sp.	526
Merismopedia minima	3684
Merismopedia tenuissima	2105
Synechococcus aeruginosa	P
Synechococcus elongatus	3947
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	132
CRYPTOPHYTA (Cryptomonads)	
Chilomonas sp.	132
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	601
Cyclotella ocellata	75
Melosira lirata	2632
Melosira sp.	5865
Stephanodiscus astrea	1353
Stephanodiscus niagarae	225
Stephanodiscus tenuis	301
Order Pennales	
Navicula sp.	32
Nitzschia amphibia	66
Nitzschia frustulum	32
Nitzschia palea	99
Nitzschia sp.	66

P = Species observed after counts completed.

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1983 to September 1984

Date	8-14-84
Time	1136
TOTAL CELLS/ml	1,922,197
NUMBER OF SPECIES	66
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Actinastrum sp.	1364
Ankistrodesmus falcatus var. mirabilis	114
Botryococcus sp.	2500
Carteria polychloris	114
Carteria sp.	114
Chlamydomonas sp. 1	455
Chlamydomonas sp. 2	341
Chlamydomonas sp. 3	568
Chlamydomonas sp. 4	114
Chlorogonium sp.	227
Closterium sp.	114
Dictyosphaerium pulchellum	909
Gloeocystis botryoides	455
Gloeocystis sp.	455
Lagerheimia sp. 1	114
Lagerheimia sp. 2	227
Micratinium sp.	1136
Nephrocytium sp.	909
Pteromonas angulosa	1023
Pteromonas sp.	227
Scenedesmus acuminatus	455
Scenedesmus quadricauda	227
Schroederia setigera	227
Tetrastrum heteracanthum	455
Tetrastrum staurogeniaeforme	455
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	50000
Anabaenopsis raciborskii	90909
Aphanocapsa delicatissima	561364
Aphanocapsa elachista	181818
Dactylococcopsis acicularis	2273
Dactylococcopsis fasciculata	4545
Lyngbya contorta	22727
Lyngbya limnetica	47727
Merismopedia minima	227273
Merismopedia punctata	81818
Merismopedia tenuissima	27273
Microcystis aeruginosa	72727
Oscillatoria limnetica	100000
Oscillatoria minnesotensis	22727
Pseudoanabaena sp.	170455
Raphidiopsis curvata	29545
Rhabdoderma sigmoidea	20455
Spirulina laxa	50000
Spirulina laxissima	122727
Synechococcus aeruginosa	2273
Synechococcus lineare	2273
EUGLENOPHYTA (Euglenoids)	
Euglena acus	114
Euglena viridis	114
Euglena sp.	114
Lepocinclis ovum	455
Phacus orbicularis	114
Trachelomonas hispida	455
Trachelomonas volvocina	114
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	568
Cryptomonas sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	9545
Melosira granulata	1326
Melosira italica	152
Melosira lirata	152
Melosira varians	409
Stephanodiscus dubius	568
Order Pennales	
Navicula halophila	38
Navicula viridula var. rostellata	227
Navicula sp.	568
Nitzschia palea	1421
Nitzschia subconfinis	1421

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX

LOCATION.--Lat 33°02'43", long 96°57'41", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of pier of bridge on State Highway 121, 1.8 mi east of Lewisville, 1.9 mi downstream from Lewisville Lake, 8.3 mi upstream from Denton Creek, and 28.2 mi upstream from mouth.

DRAINAGE AREA.--1,673 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 432.39 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Jan. 6, 1950, nonrecording gage 0.6 mi upstream at datum 3.26 ft lower.

REMARKS.--Water-discharge records good. Flow regulated by Lewisville Lake (see station 08052800) since November 1954. Most of low flow is used by city of Dallas for municipal supply (see station 08055500). Gage-height telemeter located at station.

AVERAGE DISCHARGE.--5 years (water years 1950-54), prior to regulation, 402 ft^3/s (291,200 acre-ft/yr); 30 years (water years 1955-84), regulated, 642 ft^3/s (465,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft^3/s Sept. 15, 1950 (gage height, 30.75 ft); minimum daily, 0.28 ft^3/s Nov. 1, 3, 4, 9, 10, 1984. Maximum discharge since construction of Lewisville Dam in 1954, 15,000 ft^3/s Nov. 2, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 33.8 ft in 1908, present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 814 ft^3/s May 2 at 0100 hours (gage height, 9.19 ft); minimum daily, 0.28 ft^3/s Nov. 1, 3, 4, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151.00	.28	112	300	143	116	113	258	244	321	357	314
2	167.00	12.00	181	300	119	133	162	386	262	321	362	357
3	183.00	.28	140	270	101	160	84	140	281	359	376	306
4	167.00	.28	136	230	102	159	55	167	281	458	378	254
5	141.00	.30	136	200	102	138	64	258	270	389	359	219
6	37.00	.30	142	215	106	120	77	232	335	308	334	194
7	123.00	.30	154	220	111	120	70	208	183	390	287	285
8	149.00	.30	141	231	112	127	70	208	173	435	242	313
9	43.00	.28	104	191	128	136	55	208	200	440	250	256
10	39.00	.28	104	160	113	137	54	222	257	403	293	255
11	47.00	.38	104	166	114	130	53	257	238	400	272	288
12	53.00	.38	104	193	127	240	53	253	283	390	257	303
13	41.00	.38	104	175	113	97	71	269	216	372	217	256
14	36.00	.38	106	173	112	89	92	269	248	416	201	268
15	30.00	.94	111	173	108	89	92	280	137	416	199	280
16	34.00	133.00	140	174	102	87	92	290	197	416	209	254
17	60.00	262.00	169	174	95	86	92	248	282	417	239	250
18	84.00	186.00	140	163	90	135	106	224	362	405	285	254
19	88.00	96.00	111	148	85	184	122	205	356	379	313	227
20	79.00	96.00	109	146	97	92	123	177	343	380	348	210
21	69.00	96.00	119	144	260	67	136	185	343	379	393	210
22	64.00	103.00	205	146	183	56	146	191	366	378	332	207
23	63.00	112.00	201	149	145	120	142	169	415	377	263	170
24	33.00	100.00	103	149	160	70	170	199	415	374	285	199
25	.47	90.00	102	150	219	59	198	239	416	330	341	230
26	57.00	75.00	127	151	269	56	181	255	391	307	341	199
27	127.00	86.00	311	149	186	55	198	260	334	352	341	165
28	45.00	76.00	290	148	146	53	306	235	339	352	341	144
29	59.00	75.00	282	148	115	53	249	215	331	354	339	131
30	68.00	74.00	285	148	---	53	207	247	276	357	330	131
31	35.00	---	300	149	---	53	---	245	---	357	298	---
TOTAL	2372.47	1677.06	4873	5633	3863	3270	3633	7199	8774	11732	9382	7129
MEAN	76.5	55.9	157	182	133	105	121	232	292	378	303	238
MAX	183	262	311	300	269	240	306	386	416	458	393	357
MIN	.47	.28	102	144	85	53	53	140	137	307	199	131
AC-FT	4710	3330	9670	11170	7660	6490	7210	14280	17400	23270	18610	14140

CAL YR 1983 TOTAL 83844.53 MEAN 230 MAX 1060 MIN .28 AC-FT 166300
WTR YR 1984 TOTAL 69537.53 MEAN 190 MAX 458 MIN .28 AC-FT 137900

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to current year.
WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Water temperature was recorded continuously at this station (November 1976 to September 1980).

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos Nov. 14, 1983; minimum daily, 200 micromhos May 13, 1982.
WATER TEMPERATURES: Maximum daily, 33.0°C July 27, 1977; minimum daily, 0.0°C Jan. 31 and Feb. 9, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos Nov. 14; minimum daily, 250 micromhos Dec. 27.
WATER TEMPERATURES: Maximum daily, 29.0°C on several days during July and August; minimum daily, 3.0°C Dec. 22, 28, 31, Jan. 20, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 28...	1022	92	406	7.8	10.5	10	13	8.3	76	5.0	130
JAN 16...	1115	167	396	7.5	3.0	5	4.0	13.0	97	1.8	120
MAR 26...	1035	52	477	8.0	14.0	50	15	9.7	96	3.0	150
MAY 07...	1325	208	412	7.9	20.5	18	3.5	8.2	93	.7	140
JUN 18...	1710	370	411	8.0	26.0	10	3.8	7.8	98	1.2	130
SEP 10...	1520	254	420	8.2	28.0	25	7.1	7.4	96	1.1	120

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 28...	27	43	4.6	29	1	4.6	100	39	32	.30	4.0
JAN 16...	10	41	4.2	26	1	4.2	110	28	21	.30	2.9
MAR 26...	29	51	5.3	35	1	4.8	120	61	34	.40	2.2
MAY 07...	29	48	4.6	28	1	3.9	110	44	29	.30	2.4
JUN 18...	32	46	4.2	25	1	4.5	100	40	29	.40	2.3
SEP 10...	28	40	4.3	28	1	5.0	90	39	34	.40	3.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 28...	220	76	16	.35	.050	.40	1.00	1.2	2.2	.550	6.6
JAN 16...	190	7	4	.48	.020	.50	.460	.54	1.0	.230	6.0
MAR 26...	270	15	<2	.82	.180	1.0	.500	.70	1.2	.310	5.1
MAY 07...	230	33	11	.77	.030	.80	.080	.42	.50	.160	7.9
JUN 18...	210	12	11	--	<.010	.60	--	--	.90	.100	4.8
SEP 10...	210	12	5	--	<.010	.10	.130	.57	.70	.170	4.5

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 16...	1115	2	50	<1	<10	2	<3
JUN 18...	1710	<1	51	<1	<10	4	3
SEP 10...	1520	2	49	95	<10	5	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 16...	<1	9	.3	<1	<1	11
JUN 18...	<1	5	.6	<1	<1	52
SEP 10...	8	24	.1	<1	<1	95

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	2372.47	382	210	1350	24	154	38	242	130
NOV.	1983	1677.06	390	214	971	25	112	39	178	130
DEC.	1983	4873	364	201	2640	23	298	35	457	130
JAN.	1984	5633	393	216	3290	25	379	40	605	130
FEB.	1984	3863	410	225	2350	26	275	43	449	140
MAR.	1984	3270	427	234	2070	28	246	47	412	140
APR.	1984	3633	419	230	2260	27	266	45	441	140
MAY	1984	7199	404	222	4320	26	502	42	813	140
JUNE	1984	8774	408	224	5310	26	619	43	1010	140
JULY	1984	11732	398	219	6930	25	802	41	1290	140
AUG.	1984	9382	387	213	5400	24	619	39	978	130
SEPT	1984	7129	387	213	4100	24	470	39	744	130
TOTAL		69537.53	**	**	41000	**	4740	**	7620	**
WTD.AVG.		190	397	218	**	25	**	41	**	130

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	729	401	384	401	411	403	400	416	401	386	383
2	369	700	372	383	415	414	450	368	412	406	388	365
3	367	727	251	386	414	404	479	422	414	408	384	376
4	366	726	325	385	410	415	457	426	412	405	389	386
5	371	742	384	387	413	414	455	402	415	412	388	388
6	395	725	388	385	412	412	440	405	385	415	389	394
7	385	705	387	380	410	407	451	407	425	407	390	389
8	377	733	395	387	407	408	489	412	421	400	390	370
9	399	747	376	424	414	412	455	407	411	405	389	378
10	402	757	398	409	405	409	464	409	400	407	387	389
11	404	776	395	389	401	415	457	400	416	409	395	391
12	394	777	398	386	425	435	459	403	375	403	391	389
13	400	784	402	389	409	456	450	402	413	402	390	389
14	404	790	392	394	411	437	425	401	400	404	393	390
15	406	788	385	393	413	431	421	400	413	402	391	389
16	410	376	380	396	415	430	420	400	410	403	392	382
17	396	350	376	394	416	428	417	403	410	400	389	388
18	386	391	352	398	421	431	408	407	411	391	388	390
19	380	392	399	396	427	467	412	413	413	390	385	392
20	387	393	396	395	420	435	410	411	412	390	387	393
21	396	394	392	396	395	473	408	410	412	394	385	393
22	388	391	381	398	398	462	400	410	408	388	391	394
23	390	390	382	404	407	366	407	409	407	387	395	383
24	439	393	385	401	400	381	412	414	406	386	386	393
25	639	395	390	400	412	470	404	406	405	385	385	396
26	380	397	375	400	410	461	408	400	408	390	375	397
27	365	406	250	397	420	471	397	403	409	389	382	398
28	402	403	323	399	416	473	400	409	405	393	387	401
29	393	400	345	398	412	461	402	403	406	387	386	403
30	385	401	366	399	---	469	404	406	412	391	385	401
31	406	---	385	400	---	467	---	408	---	387	384	---
MEAN	398	569	372	395	411	433	429	406	409	398	388	389

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

08053500 DENTON CREEK NEAR JUSTIN, TX

LOCATION.--Lat 33°07'08", long 97°17'25", Denton County, Hydrologic Unit 12030104, on right bank at downstream side of bridge on Farm Road 156, 100 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.2 mi north of Justin, 3.0 mi upstream from Olivers Creek, 12.9 mi upstream from Harriet Creek, and 32.9 mi upstream from Grapevine Dam.

DRAINAGE AREA.--400 mi^2.

PERIOD OF RECORD.--October 1949 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1732: 1950(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.66 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several small diversions above station. Flow is affected at times by discharge from the flood-detention pools of 84 floodwater-retarding structures with a combined detention capacity of 52,750 acre-ft. These structures control runoff from 197 mi^2 in the Denton Creek watershed. Gage-height telemeter located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years (water years 1950-80) prior to completion of floodwater-retarding structures, 77.4 ft^3/s (56,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,700 ft^3/s Oct. 13, 1981 (gage height, 18.68 ft), from high-water mark; no flow at times in 1949-65, 1967-74, 1976-83.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1935 was the highest since 1908 and reached a stage of 20.6 ft at site about 1,500 ft upstream, from information by local resident. Flood in May 1908 reached a stage about 1.0 ft higher than flood in May 1935, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s Oct. 8 at 1200 hours (gage height, 12.05 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	9.8	15.0	8.4	14	36	29	22.0	1.30	0	0	0
2	0	9.8	15.0	11.0	14	28	29	27.0	.78	0	0	0
3	0	9.5	15.0	14.0	14	24	31	25.0	.35	0	0	0
4	0	9.5	15.0	18.0	13	22	30	15.0	.11	0	0	0
5	0	11.0	15.0	24.0	13	20	27	11.0	.06	0	0	0
6	0	16.0	15.0	25.0	12	18	26	9.5	3.70	0	0	0
7	0	21.0	14.0	24.0	12	17	26	8.2	4.30	0	0	0
8	1760	20.0	13.0	20.0	12	16	30	7.4	4.60	0	0	0
9	1240	16.0	13.0	18.0	13	15	35	7.2	3.20	0	0	0
10	639	13.0	13.0	18.0	17	15	31	6.8	1.40	0	0	0
11	409	11.0	13.0	26.0	18	15	29	6.8	209.00	0	0	0
12	220	9.8	13.0	26.0	18	265	28	6.7	121.00	0	0	0
13	123	9.1	13.0	22.0	17	261	27	6.4	64.00	0	0	0
14	66	9.1	13.0	18.0	15	125	26	6.0	35.00	0	0	0
15	46	8.8	13.0	17.0	14	73	24	5.7	20.00	0	0	0
16	37	8.8	13.0	16.0	14	49	24	5.3	13.00	0	0	0
17	30	7.8	13.0	16.0	13	36	24	4.7	8.80	0	0	0
18	25	7.1	15.0	13.0	13	43	24	4.6	5.50	0	0	0
19	29	9.4	16.0	10.0	14	211	24	4.6	3.20	0	0	0
20	30	12.0	11.0	9.8	18	60	24	6.4	2.00	0	0	0
21	27	19.0	11.0	9.8	17	48	26	9.0	.77	0	0	0
22	23	16.0	10.0	12.0	16	42	35	9.8	.20	0	0	0
23	20	14.0	10.0	14.0	15	48	28	7.1	.04	0	0	0
24	17	13.0	7.8	18.0	15	55	26	6.8	.00	0	0	0
25	16	12.0	6.2	19.0	14	44	25	6.5	.00	0	0	0
26	14	12.0	4.9	19.0	32	39	25	4.7	.00	0	0	0
27	13	11.0	5.5	18.0	53	35	24	3.2	.00	0	0	0
28	12	14.0	6.5	17.0	125	37	23	2.4	.00	0	0	0
29	11	24.0	6.5	16.0	60	38	21	2.5	.00	0	0	0
30	11	20.0	6.8	15.0	---	34	21	4.8	.00	0	0	0
31	11	---	7.8	14.0	---	30	---	2.4	---	0	0	---
TOTAL	4829	383.5	359.0	526.0	635	1799	802	255.5	502.31	0	0	0
MEAN	156	12.8	11.6	17.0	21.9	58.0	26.7	8.24	16.7	.000	.000	.000
MAX	1760	24	16	26	125	265	35	27	209	.00	.00	.00
MIN	.00	7.1	4.9	8.4	12	15	21	2.4	.00	.00	.00	.00
AC-FT	9580	761	712	1040	1260	3570	1590	507	996	.00	.00	.00

CAL YR 1983 TOTAL 11838.90 MEAN 32.4 MAX 1760 MIN .00 AC-FT 23480
WTR YR 1984 TOTAL 10091.31 MEAN 27.6 MAX 1760 MIN .00 AC-FT 20020

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX

LOCATION.--Lat 32°58'21", long 97°03'22", Tarrant County, Hydrologic Unit 12030104, in intake structure of Grapevine Dam on Denton Creek, 2.7 mi northeast of Grapevine, 4.3 mi upstream from bridge on State Highway 121, and 11.7 mi upstream from mouth.

DRAINAGE AREA.--695 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970, published as Grapevine Reservoir.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 16, 1953, non-recording gage at site 1,000 ft upstream at present datum.

REMARKS.--The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-foot (150 m) uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in June 1952 and deliberate impoundment began July 3, 1952. The controlled outlet works consist of a 13.0-foot-diameter concrete conduit that is controlled by two 6.5- by 13.0-foot broome-type gates and two 30-inch steel pipes with service valves. The capacity table used since April 1972 is based on a survey made in October 1966. The lake was built for flood control, navigation, and water conservation. The city of Dallas uses part of this water for their municipal supply. An unknown amount of water is diverted for industrial and municipal uses. Inflow is affected at times by discharge from the flood-detention pools of 87 floodwater-retarding structures with a combined detention capacity of 57,850 acre-ft. These structures control runoff from 217 mi² in the Denton Creek watershed. Gage-height telemeter at station. Figures give herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	588.0	-
Crest of spillway	560.0	425,500
Top of conservation pool	535.0	181,100
Lowest intake to wet wells (invert)	500.5	22,140
Invert of two broome-type gates	475.0	100

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 471,200 acre-ft Nov. 1, 1981 (elevation, 563.29 ft); minimum since lake first filled in 1957, 94,480 acre-ft Feb. 26, 1979 (elevation, 520.67 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 162,700 acre-ft Oct. 11 at 2400 hours (elevation, 532.40 ft); minimum daily, 110,200 acre-ft Sept. 30 at 2400 hours (elevation, 523.70 ft).

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

523.0	106,500	529.0	140,400	534.0	173,900
525.0	117,200	531.0	153,300	535.0	181,200
527.0	128,400	532.0	160,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154900	155700	141100	128800	130500	131300	137500	134200	129600	128900	122000	116700
2	154500	155200	140900	128800	130500	131400	137600	134300	129400	128700	121800	116300
3	154100	154700	140700	128700	130500	131400	137300	134300	129200	128400	121500	116200
4	153700	154100	140300	128600	130500	131500	137100	134200	129200	128300	121400	116100
5	153100	154000	140100	128600	130400	130300	136500	134100	129100	128100	121200	115900
6	152600	153600	139900	128600	130200	130200	136100	134100	131500	127900	120900	115800
7	152100	153000	139600	128500	130200	130100	136500	134100	131400	127700	120800	115600
8	157200	152400	139400	128500	130400	129900	136400	133900	131200	127400	120700	115400
9	160400	152000	139200	128900	130500	129900	136100	133600	131100	127100	120500	115300
10	161600	151100	138900	128900	130500	130000	136100	133300	131100	127000	120300	114900
11	162700	150300	137700	128900	130800	130700	135800	133200	131100	126900	120200	114000
12	162600	149800	137200	128900	130800	132700	135600	133100	131400	126700	120200	113800
13	162400	149200	137000	128800	130800	133600	135400	133000	131500	126600	120100	113600
14	162000	148700	136500	128800	130700	134100	135100	132900	131500	126300	119800	113500
15	161700	148000	136200	128800	130700	134500	134900	132700	131400	126100	119700	113300
16	161500	147500	136000	128800	130700	134700	134600	132500	131200	125900	119500	112900
17	161300	146100	135600	128800	130400	134800	134200	132300	131200	125800	119300	112500
18	160900	145700	135300	128700	130800	136400	134100	132300	131000	125300	119100	112300
19	161100	145600	134800	128600	130700	137000	133800	132200	130900	125200	119000	112100
20	161300	145100	134400	128500	130700	137100	133800	132000	130700	124800	118700	112000
21	160900	144700	134200	128400	130500	137200	133600	131800	130500	124600	118400	111700
22	160400	144600	133500	128500	130500	137200	133300	131700	130300	124400	118200	111700
23	160000	144400	133200	128400	130500	138300	133100	131700	130200	124100	118000	111500
24	159500	144000	132700	128400	130400	138400	132900	131500	130100	123900	117900	111200
25	159000	143600	132300	128400	130100	138300	132600	131200	130000	123700	117700	111200
26	158400	143400	131700	128400	130100	138400	132500	131100	129700	123500	117500	111000
27	157900	143200	131500	128400	130500	138900	132600	130900	129600	123200	117300	110900
28	157500	142400	131100	128400	131200	138400	132400	130900	129500	123100	117200	110700
29	157100	141900	130900	128300	131200	138100	132400	130500	129200	122900	116900	110500
30	156700	141500	130400	128300	---	137900	132300	130200	129100	122700	116900	110200
31	156300	---	130100	130600	---	137800	---	129900	---	122300	116800	---
MAX	162700	155700	141100	130600	131200	138900	137600	134300	131500	128900	122000	116700
MIN	152100	141500	130100	128300	130100	129900	132300	129900	129100	122300	116800	110200
(†)	531.45	529.17	527.29	527.38	527.49	528.57	527.66	527.27	527.12	525.93	524.92	523.70
(±)	-1000	-14800	-11400	+500	+600	-6600	-5500	-2400	-800	-6800	-5500	-6600

CAL YR 1983 MAX 183200 MIN 130100 ± -42400
WTR YR 1984 MAX 162700 MIN 110200 ± -45100

† Elevation, in feet, at end of year.
± Change in contents, in acre-feet.

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

325751097033001 GRAPEVINE LAKE SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	0920	1.00	412	8.2	16.5	9.1	95
17...	0921	10.0	412	8.1	16.0	8.9	92
17...	0922	20.0	412	8.1	16.0	8.9	92
17...	0923	30.0	412	8.1	16.0	8.9	92
17...	0924	42.0	412	8.1	16.0	8.9	92
AUG							
13...	1240	1.00	388	8.4	29.5	7.8	104
13...	1241	10.0	388	8.3	27.5	6.9	88
13...	1242	20.0	391	8.0	27.5	5.4	69
13...	1243	30.0	396	7.7	27.5	2.6	33
13...	1244	36.0	401	7.5	27.0	.8	10

325822097030401 GRAPEVINE LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	0845	1.00	412	8.2	16.5	.50	9.1	95	<1	<1	150	29
17...	0846	.90	--	--	--	--	--	--	--	--	--	--
17...	0847	10.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0848	20.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0849	30.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0850	40.0	412	8.1	16.0	--	8.9	92	--	--	--	--
17...	0851	50.0	412	8.1	16.0	--	8.8	91	--	--	150	29
AUG												
13...	1150	1.00	388	8.5	29.0	1.20	8.5	112	K6	K3	140	30
13...	1152	10.0	390	8.1	28.0	--	6.3	81	--	--	--	--
13...	1153	20.0	394	7.8	27.5	--	4.4	56	--	--	--	--
13...	1154	30.0	400	7.5	27.0	--	2.4	30	--	--	--	--
13...	1155	35.0	403	7.4	27.0	--	1.0	13	--	--	--	--
13...	1156	40.0	416	7.4	26.0	--	.0	0	--	--	--	--
13...	1157	45.0	435	7.4	24.0	--	.0	0	--	--	160	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR												
17...	48	7.1	21	.8	4.0	120	35	27	.30	2.6	220	7
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	48	7.1	21	.8	4.1	120	35	28	--	2.6	220	19
AUG												
13...	44	7.3	23	.9	4.7	110	34	31	.30	3.0	210	2
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	50	7.6	22	.8	4.5	160	23	29	--	6.0	240	9

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325822097030401 GRAPEVINE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.130	.47	.60	.80	.030	.030	9	2
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.15	.050	.20	.120	.48	.60	.80	.040	.040	30	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.140	.46	.60	.80	.040	.050	8	11
AUG											
13...	--	<.010	<.10	.020	.68	.70	--	<.010	.010	4	6
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.030	<.10	.160	.74	.90	--	<.010	.030	20	70
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	<.010	<.10	.460	.54	1.0	--	<.010	.040	70	1700
13...	--	.010	<.10	1.00	.70	1.7	--	.130	.150	300	3500

325930097053801 GRAPEVINE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	0940	1.00	414	8.1	16.0	.40	9.0	93	K1	K2	150	29
17...	0941	10.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0942	20.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0943	30.0	414	8.1	15.5	--	8.9	91	--	--	--	--
17...	0944	40.0	414	8.1	15.5	--	8.9	91	--	--	150	29
AUG												
13...	1300	1.00	388	8.5	30.0	1.20	8.2	110	<1	K6	140	31
13...	1301	10.0	388	8.4	28.0	--	8.0	103	--	--	--	--
13...	1302	20.0	389	8.1	27.5	--	5.8	74	--	--	--	--
13...	1303	30.0	392	7.9	27.5	--	4.2	54	--	--	--	--
13...	1304	35.0	406	7.5	26.5	--	.1	1	--	--	--	--
13...	1305	42.0	437	7.5	25.0	--	.1	1	--	--	160	6

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR											
17...	48	7.1	21	.8	4.0	120	36	27	2.5	220	13
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	48	7.1	21	.8	4.1	120	35	27	2.6	220	22
AUG											
13...	44	7.5	23	.9	4.4	110	34	31	3.1	210	3
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	50	7.5	22	.8	4.6	150	23	29	6.2	240	14

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325930097053801 GRAPEVINE LAKE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.120	.48	.60	.80	.040	.030	8	3
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.15	.050	.20	.130	.47	.60	.80	.030	.040	50	<10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.130	.37	.50	.70	.040	.040	11	15
AUG											
13...	--	<.010	<.10	.010	.69	.70	--	<.010	<.010	3	7
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.020	<.10	.120	.68	.80	--	<.010	.020	30	130
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	.030	<.10	1.30	1.0	2.3	--	.190	.220	630	3200

325933097081401 GRAPEVINE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	1006	1.00	429	8.2	15.5	9.5	97
17...	1007	9.00	429	8.1	15.0	8.7	88
AUG							
13...	1335	1.00	385	8.4	31.0	7.8	106
13...	1336	7.00	382	8.5	27.5	7.1	91

330106097094601 GRAPEVINE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
17...	1015	1.00	461	8.2	16.0	8.1	84
17...	1016	5.00	454	8.1	15.0	8.1	82
17...	1017	9.00	460	8.1	15.0	7.9	80
AUG							
13...	1400	1.00	369	8.9	31.0	11.2	153
13...	1401	3.00	378	8.9	28.5	9.7	126
13...	1402	6.00	385	8.1	28.0	5.2	67

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

330207097103701 GRAPEVINE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
APR												
17...	1035	1.00	417	8.2	15.5	.30	9.1	93	K2	K2	150	32
17...	1036	.50	--	--	--	--	--	--	--	--	--	--
17...	1037	6.00	420	8.1	15.0	--	8.3	84	--	--	150	22
AUG												
13...	1430	1.00	377	8.8	32.0	.50	9.7	134	K4	K24	130	35
13...	1432	4.00	389	8.7	29.0	--	8.3	109	--	--	140	41

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
APR											
17...	49	7.2	21	.8	4.0	120	37	28	2.6	220	15
17...	--	--	--	--	--	--	--	--	--	--	--
17...	49	7.2	21	.8	4.0	130	36	28	2.6	230	35
AUG											
13...	42	7.2	23	.9	5.1	100	35	31	3.9	210	4
13...	44	7.4	23	.9	4.4	100	35	31	4.0	210	35

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
APR											
17...	.15	.050	.20	.130	.47	.60	.80	.030	.040	12	4
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.14	.060	.20	.140	1.1	1.2	1.4	.040	.040	12	13
AUG											
13...	--	.010	<.10	.040	.76	.80	--	.010	.030	4	3
13...	--	.030	<.10	<.010	--	1.0	--	.040	.060	5	3

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	0846
TOTAL CELLS/ml	6,055
NUMBER OF SPECIES	20
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	197
Closterium sp. 1	33
Closterium sp. 2	99
Pediastrum duplex	1382
CYANOPHYTA (Blue-green algae)	
Chroococcus pallidus	132
Dactylococcopsis raphidioides	132
Synechococcus aeruginosa	296
Synechococcus sp.	560
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	66
Cyclotella ocellata	66
Melosira granulata	394
Melosira lirata	P
Stephanodiscus astrea	362
Stephanodiscus hantzschii	33
Stephanodiscus niagarea	362
Stephanodiscus tenuis	1743
Order Pennales	
Achnanthes sp.	33
Navicula sp.	P
Nitzschia amphibia	99
Nitzschia palea	66

P = Species observed after counts completed.

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1983 to September 1984

Date	8-13-84
Time	1151
TOTAL CELLS/ml	360,226
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	2.0

Organisms	Cells/ml
CYANOPHYTA (Blue-green algae)	
Anabaena wisconsinense	3409
Anabaenopsis raciborskii	63636
Aphanocapsa delicatissima	6818
Chroococcus limneticus	12500
Gloeothece linearis	3409
Gomphosphaeria lacustris	14773
Lyngbya nana	75000
Microcoleus lacustris	38636
Pseudoanabaena sp.	62500
Raphidiopsis curvata	64773
Spirulina okensis	4545
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	3409
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus sp.	3409
Order Pennales	
Achnanthes deflexa	614
Achnanthes linearis	1659
Synedra delicatissima	490
Synedra rumpens	646

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake EC (330207097103701)

Phytoplankton Analyses October 1983 to September 1984

Date	4-17-84
Time	1036
TOTAL CELLS/ml	9,650
NUMBER OF SPECIES	26
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus sp.	66
Chlamydomonas sp. 1	132
Chlamydomonas sp. 2	263
Coelastrum microporum	789
CYANOPHYTA (Blue-green algae)	
Chroococcus turgidus	197
Dactylococcopsis raphidioides	526
Synechococcus aeruginosa	658
Synechococcus sp.	526
EUGLENOPHYTA (Euglenoids)	
Euglena caudata	1711
Euglena sp.	66
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	66
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	407
Melosira granulata	120
Stephanodiscus artrea	312
Stephanodiscus hantzschii	480
Stephanodiscus niagarea	264
Stephanodiscus tenuis	2759
Order Pennales	
Achnanthes linearis	15
Caloneis bacillum	29
Cymbella cistula	15
Navicula cryptocephala	15
Navicula halophila	29
Navicula symmetrica	15
Nitzschia dissipata	117
Nitzschia microcephala	44
Nitzschia paleacea	29

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake EC (330207097103701)

Phytoplankton Analyses October 1983 to September 1984

Date	8-13-84
Time	1431
TOTAL CELLS/ml	348,142
NUMBER OF SPECIES	48
DEPTH COLLECTED (ft.)	0.8

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlamydomonas sp.	1705
Golenkinia radiata	112
Lagerheimia sp.	568
Lobomonas sp.	568
Scenedesmus sp.	5682
CYANOPHYTA (Blue-green algae)	
Anabaena wisconsinense	10795
Anabaenopsis circularis	9659
Anabaenopsis raciborskii	9659
Aphanocapsa delicatissima	60795
Aphanocapsa elachista	15909
Aphanothece sp.	2273
Chroococcus dispersus	2273
Chroococcus giganteus	2273
Chroococcus multicoloratus	568
Chroococcus pallidus	1136
Gloeothece linearis	568
Lyngbya nana	17045
Merismopedia punctata	13068
Microcoleus lacustris	9659
Microcystis aeruginosa	14773
Oscillatoria geminata	12500
Oscillatoria limnetica	17614
Pseudoanabaena sp.	81818
Raphidiopsis curvata	20455
Rhabdoderma sigmoidea f. minor	1136
Spirulina contorta	11932
Spirulina okensis	568
Spirulina sp.	15909
Synechococcus aeruginosa	568
EUGLENOPHYTA (Euglenoids)	
Euglena acus	568
Euglena viridis	568
Trachelomonas hispida	568
Trachelomonas volvocina	568
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	1136
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	504
Stephanodiscus sp.	63
Order Pennales	
Achnanthes deflexa	108
Achnanthes linearis	433
Achnanthes minutissima	108
Navicula sp.	108
Nitzschia acicularis	108
Nitzschia palea	108
Nitzschia paleacea	108
Nitzschia subconfinis	541
Nitzschia thermalis	200
Synedra delicatissima	108
Synedra rumpens	433
Synedra ulna	216

08055000 DENTON CREEK NEAR GRAPEVINE, TX

LOCATION.--Lat 32°59'13", long 97°00'45", Denton County, Hydrologic Unit 12030104, on left bank at downstream side of left pier of bridge on State Highway 121, 1.3 mi downstream from Bakers Branch, 4.1 mi downstream from Grapevine Dam, 5.0 mi northeast of Grapevine, and 6.1 mi upstream from mouth.

DRAINAGE AREA.--705 mi^2.

PERIOD OF RECORD.--October 1947 to current year.
Water-quality words.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 439.11 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Grapevine Lake since July 1952 (see preceding page). Much of flow is used by the city of Dallas for municipal supply (see station 08055500). The Corps of Engineers diverts water from Denton Creek just downstream from Grapevine Dam. Several observations of water temperature were made during the year. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--5 years (water years 1948-52), prior to regulation, 140 ft^3/s (101,400 acre-ft/yr); 32 years (water years 1953-84), regulated, unadjusted, 156 ft^3/s (113,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s Feb. 26, 1948 (gage height, 30.38 ft), from rating curve extended above 6,000 ft^3/s on basis of conveyance-slope study; no flow at times. Maximum discharge since construction of Grapevine Dam in 1952, 9,700 ft^3/s Nov. 1, 1981 (gage height, 27.93 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 was slightly higher than the flood in April 1942, which reached a stage of 35.9 ft, from floodmarks, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 620 ft^3/s May 1 at 1930 hours (gage height, 10.39 ft, from floodmark); minimum daily, 18 ft^3/s July 3, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	299	230	68	31	32	111	165	65	22	50	49
2	154	300	180	66	31	32	158	90	65	21	50	49
3	156	299	181	67	31	32	180	44	65	18	49	50
4	156	302	180	53	31	31	158	37	61	20	52	48
5	240	302	179	33	30	31	144	35	25	22	52	47
6	389	305	189	32	30	31	180	33	84	21	50	46
7	326	300	201	33	31	31	168	31	32	21	50	47
8	262	304	202	32	32	31	132	31	29	21	50	47
9	237	308	202	35	36	31	114	27	28	20	50	46
10	234	306	202	32	34	31	113	23	27	19	51	47
11	238	301	203	24	35	39	113	24	25	20	52	46
12	240	302	204	26	34	87	112	24	26	20	59	47
13	239	301	203	27	33	34	109	22	25	20	55	47
14	204	300	203	26	32	32	109	22	24	19	54	46
15	174	299	204	27	32	31	109	36	23	18	54	49
16	172	231	206	28	32	31	109	67	23	24	53	50
17	175	174	204	28	32	31	107	68	23	50	50	43
18	175	178	203	27	34	68	106	69	22	50	49	41
19	176	183	203	27	32	63	94	70	27	51	49	43
20	180	183	204	27	32	33	71	70	20	50	48	44
21	179	185	203	28	32	34	70	70	23	51	49	44
22	177	187	201	29	32	61	71	70	21	51	49	45
23	179	194	202	29	31	157	71	68	22	51	49	45
24	225	189	202	30	31	118	68	68	23	52	49	44
25	280	188	202	29	32	113	70	66	23	54	48	44
26	255	189	208	29	50	80	60	66	22	54	48	45
27	177	215	225	29	34	36	27	66	23	53	48	38
28	180	249	225	29	32	65	28	70	22	52	47	38
29	180	246	219	29	32	117	30	67	22	52	49	40
30	180	246	191	30	---	108	29	65	21	51	48	38
31	234	---	103	29	---	94	---	65	---	51	49	---
TOTAL	6526	7565	6164	1038	951	1745	3021	1729	941	1099	1560	1353
MEAN	211	252	199	33.5	32.8	56.3	101	55.8	31.4	35.5	50.3	45.1
MAX	389	308	230	68	50	157	180	165	84	54	59	50
MIN	153	174	103	24	30	31	27	22	20	18	47	38
AC-FT	12940	15010	12230	2060	1890	3460	5990	3430	1870	2180	3090	2680

CAL YR 1983 TOTAL 37225 MEAN 102 MAX 389 MIN 27 AC-FT 73840
WTR YR 1984 TOTAL 33692 MEAN 92.1 MAX 389 MIN 18 AC-FT 66830

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX

LOCATION.--Lat 32°57'57", long 96°56'39", Dallas County, Hydrologic Unit 12030103, near left bank at downstream side of bridge on Sandy Lake Road, 40 ft upstream from Carrollton Dam, 0.3 mi downstream from Denton Creek, 1.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 2.3 mi northwest of Carrollton, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--2,459 mi^2.

PERIOD OF RECORD.--January 1907 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to November 1923, published as "near Dallas".

REVISED RECORDS.--WSP 788: 1924. WSP 1148: Drainage area at former site. WSP 1632: 1908(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 433.40 ft National Geodetic Vertical Datum of 1929. Prior to November 1923, nonrecording gage at site 15.5 mi downstream at different datum. Nov. 1, 1923, to Nov. 13, 1934, nonrecording gage, and Nov. 14, 1934, to July 6, 1938, water-stage recorder at present site and datum. July 7, 1938, to Apr. 14, 1939, nonrecording gage at site 9.3 mi downstream at datum 22.94 ft lower. Apr. 15, 1939, to Sept. 30, 1955, water-stage recorder at site 8.5 mi downstream at datum 22.94 ft lower.

REMARKS.--Records good. Flow is largely regulated by Lewisville Lake (station 08052800) since November 1954 and by Grapevine Lake (station 08054500) since July 1952. The city of Dallas diverts water from pool at gage and from river 14 mi downstream for municipal use. A water treament plant returns water to river below this station. In addition, the Dallas Power and Light Co. diverts water from pool at gage into North Lake for cooling water at their electric generating plant. Several observations of water temperature were made during the year. Gage-height telemeters located at station.

AVERAGE DISCHARGE.--47 years (water years 1908-54), prior to regulation by Lewisville and Grapevine Lakes, 818 ft^3/s (592,600 acre-ft/yr); 30 years (water years 1955-84), regulated, unadjusted, 728 ft^3/s (527,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, about 17 ft May 25, 1908, present site and datum, from information by local resident; estimated discharge, 145,000 ft^3/s, at site 8.5 mi downstream (from information by Corps of Engineers); maximum gage height subsequent to 1908, 14.5 ft Apr. 26, 1942, present site and datum, from observation by National Weather Service; discharge at site 8.5 mi downstream, 90,700 ft^3/s; no flow at times.
Flood in 1866 reached about the same stage as flood of May 25, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s May 1 at 2400 hours (gage height, 3.70 ft); minimum daily, 1.5 ft^3/s Apr. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	103	156	94.0	168	96	148.0	453.0	83	133	144	129
2	122	126	209	91.0	161	108	288.0	822.0	106	93	146	180
3	148	119	100	82.0	146	146	191.0	65.0	119	94	161	128
4	140	112	109	95.0	134	144	119.0	22.0	123	162	168	92
5	140	129	136	50.0	133	138	84.0	87.0	146	168	141	102
6	238	190	144	53.0	134	111	122.0	74.0	799	49	116	40
7	232	140	176	54.0	139	103	180.0	35.0	110	145	112	134
8	288	136	160	62.0	146	115	234.0	35.0	58	156	74	163
9	72	133	136	55.0	205	129	63.0	25.0	73	183	44	98
10	82	140	133	34.0	109	141	14.0	8.2	132	144	105	93
11	106	140	136	4.4	107	179	17.0	29.0	106	153	91	107
12	119	140	143	40.0	282	788	13.0	32.0	121	163	72	148
13	115	140	138	20.0	79	161	1.5	26.0	155	136	62	85
14	103	112	116	38.0	88	98	19.0	40.0	149	174	43	76
15	47	126	114	69.0	56	76	19.0	37.0	94	158	52	142
16	45	194	151	81.0	43	83	24.0	109.0	126	157	69	114
17	67	329	192	96.0	35	77	25.0	121.0	182	186	89	91
18	106	261	177	99.0	64	281	12.0	102.0	158	182	99	89
19	133	122	137	89.0	36	701	54.0	182.0	140	154	106	46
20	133	126	118	92.0	28	132	27.0	103.0	120	156	122	25
21	96	100	97	91.0	113	64	20.0	87.0	119	164	200	41
22	72	100	157	88.0	118	44	40.0	102.0	112	153	144	77
23	80	122	194	150.0	75	682	20.0	43.0	152	154	100	20
24	82	82	93	176.0	93	312	23.0	22.0	159	165	85	17
25	94	67	93	169.0	179	173	52.0	65.0	162	112	152	53
26	126	136	97	168.0	359	143	55.0	81.0	167	109	159	100
27	202	140	195	166.0	119	63	33.0	111.0	114	143	158	52
28	112	126	244	165.0	102	41	59.0	166.0	85	142	163	63
29	112	185	219	168.0	105	127	102.0	88.0	126	142	151	54
30	119	136	215	167.0	---	124	33.0	132.0	75	129	165	34
31	115	---	133	169.0	---	111	---	99.0	---	159	129	---
TOTAL	3752	4212	4618	2975.4	3556	5691	2091.5	3403.2	4371	4518	3622	2593
MEAN	121	140	149	96.0	123	184	69.7	110	146	146	117	86.4
MAX	288	329	244	176	359	788	288	822	799	186	200	180
MIN	45	67	93	4.4	28	41	1.5	8.2	58	49	43	17
AC-FT	7440	8350	9160	5900	7050	11290	4150	6750	8670	8960	7180	5140

CAL YR 1983	TOTAL	69792.9	MEAN 191	MAX 1260	MIN 1.9	AC-FT	138400
WTR YR 1984	TOTAL	45403.1	MEAN 124	MAX 822	MIN 1.5	AC-FT	90060

08056500 TURTLE CREEK AT DALLAS, TX

LOCATIONS.--Lat 32 48'26", long 96 48'08", Dallas County, Hydrologic Unit 12030105, on left bank 68 ft upstream from Hall Street Dam, 210 ft upstream from Hall Street in Dallas, and 2.0 mi north of Dallas County Courthouse.

DRAINAGE AREA.--7.98 mi^2.

PERIOD OF RECORD.--Water years 1948-51 (annual maximums only), October 1951 to September 1980, April to September 1984. Daily discharge records for April 1948 to September 1951, published in WSP 1392, are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 428.13 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1951, at site 52 ft upstream at same datum.

REMARKS.--Records good. Flow is slightly affected by eight small channel dams above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years 8.17 ft^3/s, 5,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12,200 ft^3 Apr. 28, 1966 (gage height, 10.54 ft, from rating curve extended above 2,460 ft^3/s on basis of contracted-opening measurement of 12,200 ft^3/s); no flow at times during most years.
Maximum stage since at least 1903, that of Apr. 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during the period April to September, 2,140 ft^3/s Sept. 2 at 1845 hours *gage height, 5.58 ft); minimum, 0.62 ft^3/s June 24-26, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							4.5	76.0	2.30	1.90	1.1	1.40
2							65.0	6.5	2.20	1.70	1.1	103.00
3							10.0	3.0	2.20	1.20	1.2	7.50
4							5.0	2.4	2.50	1.30	1.3	3.50
5							4.3	2.4	3.40	6.10	2.4	3.70
6							3.9	3.7	115.00	1.70	1.7	5.50
7							60.0	2.6	2.50	1.50	2.7	5.20
8							8.2	2.0	1.90	1.50	1.6	4.80
9							5.1	1.7	1.70	1.30	1.4	4.40
10							4.5	2.0	1.50	1.10	1.1	2.80
11							4.0	1.7	1.60	1.10	28.0	.87
12							3.7	1.5	1.50	1.20	9.4	.83
13							3.5	2.0	1.40	1.40	4.1	.87
14							3.0	1.7	1.30	1.10	3.8	1.50
15							2.9	1.7	1.10	1.00	1.9	1.00
16							3.0	1.9	1.10	1.10	1.7	.92
17							2.2	2.1	1.00	1.00	1.3	.92
18							2.9	86.0	1.10	1.10	1.1	1.90
19							2.4	111.0	1.10	1.20	1.0	1.80
20							13.0	6.3	.98	1.50	1.2	2.50
21							5.8	4.2	.85	.95	1.4	1.00
22							2.3	3.3	1.10	.95	1.4	1.40
23							2.1	3.1	.80	1.10	4.3	1.10
24							2.0	3.1	.83	2.10	5.0	1.00
25							2.1	3.2	6.60	6.00	4.6	1.60
26							2.2	2.7	.80	2.40	1.2	2.20
27							1.9	12.0	.75	2.20	2.9	3.90
28							1.6	56.0	6.30	18.00	2.8	7.20
29							2.4	3.3	4.10	3.70	5.3	2.50
30							2.2	2.8	19.00	2.20	3.3	2.10
31							---	2.6	---	1.40	1.9	---
TOTAL							235.7	414.5	188.51	72.00	103.2	178.91
MEAN							7.86	13.4	6.28	2.32	3.33	5.96
MAX							65	111	115	18	28	103
MIN							1.6	1.5	.75	.95	1.0	.83
AC-FT							468	822	374	143	205	355

WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

08057000 TRINITY RIVER AT DALLAS, TX

LOCATION.--Lat 32°46'29", long 96°49'18", Dallas County, Hydrologic Unit 12030105, on right bank (levee) 90 ft downstream from Commerce Street viaduct in Dallas, 5.2 mi downstream from confluence of West and Elm Forks, and at mile 500.3.

DRAINAGE AREA.--6,106 mi^2.

PERIOD OF RECORD.--October 1898 to December 1899 (gage heights only published in WSP 28 and 37), July 1903 to current year.

REVISED RECORDS.--WSP 850: 1903-6 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WRD TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 368.02 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1898, to Dec. 31, 1899, nonrecording gage at site 2 mi upstream at different datum. July 1, 1903, to July 20, 1930, nonrecording gage at present site and datum. July 21, 1930, to Sept. 30, 1932, nonrecording gage at site 6 mi downstream at datum 3.08 ft lower.

REMARKS.--Records good. At times flow is affected by storage in seven upstream reservoirs, combined capacity 1,703,000 acre-ft, of which 846,200 acre-ft is for flood control. The city of Dallas diverts water for municipal use from Elm Fork, Lake Ray Hubbard (on the East Fork), and Lake Tawakoni (on the Sabine River), and purchases water from North Texas Municipal Water District (from the East Fork). Sewage effluent is returned to the river downstream from this station. Thr Trininty River Authority discharges sewage effluent into the river upstream from the station. For additional information on diversions and effluent returns upstream from this station, see stations 08048000, 08049200, and 08049500. Gage-height telemeters located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--81 years, 1,520 ft^3/s (1,101,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184,000 ft^3/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft^3/s; minimum observed for periods 1903-6, 1920-75, 1.2 ft^3/s July 4, 1953, result of storage behind temporary dam 4 mi upstream. Maximum stage since at least 1840, that of May 25, 1908.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1866 reached about the same stage as that of May 25, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft^3/s Mar. 24 at 0730 hours (gage height, 34.24 ft); minimum daily, 215 ft^3/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	319	403	826	363	351	424	585	297	333	320	273
2	277	321	716	737	354	336	994	4600	292	318	317	537
3	279	322	1710	725	323	324	1050	2840	280	316	320	1130
4	291	322	993	688	312	320	535	688	282	306	350	304
5	277	365	636	650	318	534	393	456	384	377	375	277
6	286	1160	538	663	302	327	372	433	2780	334	353	243
7	823	901	451	579	310	303	558	382	3840	315	358	232
8	2290	429	511	537	323	301	2710	354	828	310	343	226
9	5320	370	515	1140	1700	297	1210	330	458	299	332	233
10	1840	344	455	2610	1860	294	554	315	394	305	329	233
11	930	322	437	1420	825	577	445	300	371	299	454	229
12	1130	332	453	610	2600	6950	402	311	363	336	1240	227
13	546	306	435	638	1230	8210	369	300	346	637	994	224
14	431	331	438	398	515	3210	344	292	327	374	404	225
15	391	308	421	344	930	1370	341	299	323	350	336	218
16	347	314	559	342	452	960	327	279	316	332	302	217
17	349	416	650	332	328	594	335	283	308	332	289	215
18	349	558	725	360	812	743	326	604	307	329	278	218
19	697	608	591	346	786	5200	320	2010	312	324	278	226
20	1340	478	495	336	394	3060	371	878	307	320	277	226
21	1040	439	475	333	335	807	667	395	310	319	276	229
22	536	399	481	346	337	479	372	346	309	316	291	225
23	367	1080	478	698	322	6330	315	346	299	310	289	226
24	350	966	678	656	302	11800	310	335	294	314	290	233
25	347	448	674	504	298	5530	304	316	290	424	282	237
26	340	829	712	432	1470	2340	331	306	306	399	274	235
27	381	2560	861	515	2150	1520	313	283	311	355	275	225
28	369	1460	946	623	1060	1340	299	1180	344	367	281	270
29	319	684	1110	364	415	982	339	669	548	356	279	235
30	316	471	1090	344	---	817	370	349	410	337	276	228
31	321	---	1030	359	---	440	---	324	---	321	275	---
TOTAL	23169	18162	20667	19455	21726	66646	16000	21388	16536	10664	11337	8256
MEAN	747	605	667	628	749	2150	533	690	551	344	366	275
MAX	5320	2560	1710	2610	2600	11800	2710	4600	3840	637	1240	1130
MIN	277	306	403	332	298	294	299	279	280	299	274	215
AC-FT	45960	36020	40990	38590	43090	132200	31740	42420	32800	21150	22490	16380

CAL YR 1983 TOTAL 293292 MEAN 804 MAX 7730 MIN 211 AC-FT 581700
WTR YR 1984 TOTAL 254006 MEAN 694 MAX 11800 MIN 215 AC-FT 503800

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX

LOCATION.--Lat 32°45'04", long 96°47'07", Dallas County, Hydrologic Unit 12030105, on right bank at abandoned bridge abutment, 0.2 mi upstream from Cedar Crest Blvd. bridge, 1.8 mi southeast of Dallas City Hall, 2.1 mi downstream from Coombs Creek, and 2.7 mi downstream from Commerce Street Bridge (station 08057000).

PERIOD OF RECORD.--Chemical and biochemical analyses: February to September 1984.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February to September 1984.
pH: February to September 1984.
WATER TEMPERATURES: February to September 1984.
DISSOLVED OXYGEN: February to September 1984.

INSTRUMENTATION.--Beginning February 1984, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 946 micromhos Aug. 21; minimum, 128 micromhos Mar. 23.
pH: Maximum, 8.1 units Feb. 9, June 6, 17, 29, Sept. 2; minimum, 7.0 units Mar. 20, 29, Apr. 22, July 18.
WATER TEMPERATURES: Maximum, 32.5°C July 7, Aug. 19, 20; minimum, 10.0°C Feb. 28.
DISSOLVED OXYGEN: Maximum, 9.7 mg/L Mar. 12, 29, 30; minimum, 1.1 mg/L June 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
FEB										
13...	1225	866	516	7.8	13.0	7.3	70	12	170	44
MAY										
08...	1510	262	783	7.8	23.0	5.9	69	16	180	12
JUN										
21...	1010	241	864	8.0	26.5	5.0	63	11	160	4
AUG										
22...	0845	220	890	7.7	29.0	4.0	53	12	180	29

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB									
13...	61	5.2	41	1	7.5	130	83	38	.50
MAY									
08...	62	6.6	81	3	8.4	170	100	72	.80
JUN									
21...	54	7.0	110	4	11	160	100	95	1.1
AUG									
22...	60	6.9	100	3	12	150	100	96	1.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
FEB									
13...	9.7	320	1.1	.600	1.7	1.60	1.3	2.9	.970
MAY									
08...	8.7	440	1.8	.540	2.3	4.70	.30	5.0	2.50
JUN									
21...	7.6	480	4.0	.900	4.9	1.70	1.2	2.9	3.10
AUG									
22...	8.6	470	6.0	.820	6.8	3.20	.40	3.6	4.80

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	23169	*	*	*	*	*	*	*	*
NOV.	1983	18162	*	*	*	*	*	*	*	*
DEC.	1983	20667	*	*	*	*	*	*	*	*
JAN.	1984	19455	*	*	*	*	*	*	*	*
FEB.	1984	21726	567	337	19800	47	2770	82	4830	160
MAR.	1984	66646	503	308	55500	36	6550	80	14400	160
APR.	1984	16000	721	414	17900	68	2920	95	4110	170
MAY	1984	21388	592	351	20300	49	2850	86	4950	170
JUNE	1984	16536	623	363	16200	55	2470	86	3840	160
JULY	1984	10664	804	453	13000	81	2320	100	2870	170
AUG.	1984	11337	763	432	13200	75	2300	96	2940	170
SEPT	1984	8256	762	431	9600	75	1680	96	2130	170
TOTAL		254006	**	**	166000	**	23900	**	40000	**
WTD.AVG.		694	409	241	**	35	**	58	**	110

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	789	722	758	866	842	860	844	497	777
2	---	---	---	841	793	818	874	480	676	515	320	389
3	---	---	---	878	841	855	746	649	697	486	362	417
4	---	---	---	895	865	889	755	688	718	619	494	572
5	---	---	---	883	687	818	815	740	767	709	613	679
6	---	---	---	869	710	814	859	819	840	732	681	707
7	---	---	897	866	849	859	870	474	789	799	714	761
8	---	---	820	872	847	856	672	462	541	784	746	771
9	774	470	606	893	871	879	577	451	505	---	---	786
10	665	584	626	900	886	895	660	586	621	---	---	793
11	672	457	596	---	360	829	810	712	756	---	---	815
12	648	441	518	518	242	465	860	812	831	---	---	821
13	568	514	534	501	458	476	890	847	864	---	---	828
14	679	562	609	626	490	538	897	879	886	---	---	843
15	736	623	684	699	587	635	891	861	880	---	---	856
16	798	643	721	771	597	693	887	855	870	---	---	868
17	832	767	794	809	629	751	874	838	861	---	---	874
18	843	553	688	822	499	782	866	835	845	---	---	800
19	708	539	655	615	301	403	886	868	874	---	---	540
20	778	706	742	475	335	401	866	457	789	---	---	610
21	782	749	766	646	482	567	858	631	737	---	---	708
22	855	772	806	779	654	714	798	699	746	781	743	761
23	870	790	818	787	128	469	783	742	760	804	785	794
24	854	821	838	416	349	382	828	786	813	851	800	824
25	896	839	866	489	385	440	850	807	835	861	835	849
26	891	350	625	642	492	572	844	804	830	874	841	855
27	629	438	511	693	518	600	863	808	839	897	842	870
28	589	521	555	754	524	622	893	838	867	705	241	516
29	715	593	657	800	476	693	881	790	849	603	490	556
30	---	---	---	822	499	702	828	779	803	685	609	652
31	---	---	---	858	825	840	---	---	---	699	670	683
MONTH	896	350	693	900	128	678	897	451	785	897	241	728

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	760	834	755	799	874	839	852	887	869	878
2	---	---	840	803	748	783	898	860	879	879	136	729
3	---	---	860	824	793	806	928	891	908	621	285	405
4	890	836	873	822	805	811	918	340	820	691	477	606
5	870	776	846	804	646	753	868	680	770	761	674	737
6	783	188	451	783	614	701	826	675	777	798	755	780
7	395	299	339	837	789	814	807	767	789	834	795	812
8	576	400	490	839	814	825	799	784	790	857	833	840
9	693	571	649	829	800	811	816	784	800	868	847	857
10	760	696	733	830	791	806	845	815	830	864	845	855
11	808	742	767	---	---	870	846	623	753	864	850	857
12	801	747	777	---	---	815	738	328	584	861	840	853
13	837	779	805	---	---	780	494	344	436	843	822	832
14	846	752	804	---	---	795	606	491	541	927	832	892
15	848	785	832	---	---	806	726	609	659	911	871	885
16	865	823	841	---	---	813	790	733	769	881	863	875
17	887	802	858	---	---	818	888	791	843	860	841	847
18	868	829	848	---	---	820	913	877	894	861	854	858
19	861	803	827	840	806	822	911	876	895	870	826	851
20	881	813	839	856	837	844	891	858	874	831	810	818
21	858	815	847	893	845	861	946	861	886	856	837	850
22	888	847	863	887	854	866	913	870	891	874	836	849
23	890	846	869	886	847	871	879	845	862	883	854	869
24	888	871	879	880	859	870	907	868	884	868	848	857
25	878	842	856	871	743	828	906	870	884	869	764	850
26	859	838	848	832	596	790	913	886	900	846	807	825
27	870	840	860	774	458	732	901	870	882	828	788	802
28	878	529	805	790	654	739	875	855	866	841	669	764
29	839	596	714	783	688	741	882	867	873	825	793	809
30	784	656	717	828	754	791	869	843	856	851	796	819
31	---	---	---	849	804	822	873	857	866	---	---	---
MONTH	890	188	777	893	458	807	946	328	810	927	136	812

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.4	7.3	7.4	7.5	7.5	7.5	7.7	7.5	7.5
2	---	---	---	7.4	7.3	7.3	7.8	7.5	7.6	7.8	7.7	7.8
3	---	---	---	7.3	7.2	7.3	7.6	7.6	7.6	7.7	7.4	7.6
4	---	---	---	7.3	7.2	7.3	7.7	7.6	7.6	7.6	7.5	7.6
5	---	---	---	7.5	7.3	7.4	7.6	7.4	7.5	7.6	7.4	7.5
6	---	---	---	7.5	7.2	7.3	7.6	7.5	7.6	7.5	7.3	7.3
7	7.8	7.7	7.8	7.2	7.2	7.2	7.7	7.6	7.7	7.5	7.4	7.5
8	7.8	7.6	7.7	7.2	7.1	7.1	7.8	7.7	7.7	7.5	7.5	7.5
9	8.1	7.6	7.7	7.2	7.1	7.1	7.7	7.5	7.6	---	---	---
10	7.7	7.5	7.6	7.2	7.1	7.1	7.5	7.4	7.5	---	---	---
11	7.9	7.5	7.6	7.4	7.1	7.2	7.5	7.4	7.4	---	---	---
12	---	---	---	7.7	7.4	7.6	7.5	7.4	7.5	---	---	---
13	---	---	---	7.7	7.5	7.6	7.5	7.5	7.5	---	---	---
14	---	---	---	7.5	7.4	7.5	7.5	7.5	7.5	---	---	---
15	---	---	---	7.6	7.3	7.4	7.5	7.4	7.4	---	---	---
16	---	---	7.5	7.5	7.4	7.4	7.4	7.4	7.4	---	---	---
17	7.5	7.5	7.5	7.5	7.4	7.5	7.4	7.4	7.4	---	---	---
18	7.7	7.5	7.5	7.5	7.4	7.4	7.4	7.4	7.4	---	---	---
19	7.5	7.5	7.5	7.5	7.3	7.3	7.5	7.4	7.5	---	---	---
20	7.5	7.5	7.5	7.3	7.0	7.1	7.7	7.5	7.6	---	---	---
21	7.5	7.5	7.5	---	---	---	7.9	7.3	7.6	---	---	---
22	7.5	7.4	7.4	---	---	---	7.3	7.0	7.2	7.9	7.9	7.9
23	7.5	7.4	7.4	---	---	---	7.2	7.2	7.2	8.0	7.9	7.9
24	7.4	7.3	7.3	7.5	7.3	7.5	7.2	7.2	7.2	7.9	7.8	7.9
25	7.4	7.3	7.3	7.4	7.3	7.4	7.3	7.2	7.2	---	---	7.9
26	7.8	7.3	7.5	7.4	7.3	7.4	7.8	7.2	7.6	---	---	---
27	7.7	7.4	7.5	7.5	7.3	7.4	7.8	7.8	7.8	---	---	---
28	7.5	7.3	7.4	7.4	7.2	7.3	7.7	7.7	7.7	---	---	---
29	7.5	7.4	7.4	7.6	7.0	7.2	7.7	7.4	7.6	---	---	---
30	---	---	---	7.6	7.4	7.5	7.6	7.5	7.6	---	---	---
31	---	---	---	7.5	7.4	7.5	---	---	---	---	---	---
MONTH	8.1	7.3	7.5	7.7	7.0	7.4	7.9	7.0	7.5	8.0	7.3	7.7

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	7.9	7.8	7.9	7.6	7.5	7.6	7.7	7.5	7.5
2	---	---	---	7.9	---	7.9	7.8	7.5	7.7	8.1	7.4	7.5
3	---	---	---	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
4	---	---	7.9	---	---	---	7.8	7.7	7.8	7.4	7.3	7.3
5	8.0	7.9	8.0	---	---	---	7.8	7.7	7.7	7.8	7.3	7.5
6	8.1	7.7	7.8	---	---	---	7.9	7.7	7.8	7.5	7.4	7.5
7	7.7	7.4	7.6	---	---	---	7.8	7.7	7.8	7.5	7.4	7.5
8	7.5	7.4	7.5	---	---	---	7.8	7.7	7.8	7.6	7.3	7.5
9	---	---	7.9	---	---	---	7.9	7.8	7.8	7.6	7.5	7.5
10	---	---	---	---	---	---	7.9	7.8	7.8	7.5	7.4	7.5
11	---	---	---	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
12	7.8	7.7	7.7	---	---	---	7.9	7.7	7.8	7.5	7.3	7.4
13	7.9	7.6	7.8	---	---	---	7.9	7.7	7.8	7.4	7.3	7.3
14	7.9	7.8	7.9	---	---	---	7.9	7.8	7.8	7.4	7.1	7.3
15	8.0	---	7.9	---	---	---	8.0	7.8	7.9	7.3	7.2	7.2
16	7.9	---	7.9	---	---	---	8.0	7.9	8.0	7.3	7.2	7.2
17	8.1	7.8	8.0	---	---	---	8.0	7.7	7.9	7.3	7.2	7.2
18	---	---	8.1	7.4	7.0	7.2	7.8	7.8	7.8	7.3	7.2	7.2
19	---	---	8.0	7.4	7.3	7.4	7.8	7.8	7.8	7.4	7.2	7.3
20	---	---	8.0	7.5	7.4	7.4	7.8	7.7	7.8	7.2	7.2	7.2
21	---	---	8.0	7.5	7.4	7.4	7.9	7.7	7.8	7.3	7.2	7.2
22	---	---	8.0	7.5	7.4	7.5	7.9	7.7	7.8	7.3	7.2	7.2
23	---	---	8.0	7.5	7.4	7.5	7.8	7.7	7.8	7.3	7.2	7.2
24	8.0	7.8	7.9	7.5	7.4	7.5	7.9	7.8	7.8	7.2	7.2	7.2
25	7.9	7.8	7.8	7.5	7.4	7.5	7.9	7.7	7.8	7.2	7.2	7.2
26	---	---	---	7.5	7.4	7.4	7.9	7.7	7.8	7.2	7.1	7.1
27	7.9	7.8	7.9	7.5	7.4	7.4	7.9	7.8	7.8	7.2	7.1	7.1
28	---	---	---	7.9	7.4	7.5	8.0	7.8	7.9	7.5	7.1	7.2
29	8.1	7.8	7.9	7.5	7.4	7.5	8.0	7.8	7.9	7.2	7.2	7.2
30	7.8	7.8	7.8	7.6	7.4	7.5	7.8	7.4	7.6	7.2	7.2	7.2
31	---	---	---	7.6	7.5	7.5	7.6	7.4	7.5	---	---	---
MONTH	8.1	7.4	7.9	7.9	7.0	7.5	8.0	7.4	7.8	8.1	7.1	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.5	12.0	13.0	17.5	16.0	16.5	21.5	19.0	20.5
2	---	---	---	16.0	14.0	15.0	17.5	16.0	17.0	19.5	18.5	19.0
3	---	---	---	18.0	16.0	17.0	17.5	16.0	17.0	22.0	19.5	20.5
4	---	---	---	18.0	16.5	17.5	17.0	15.5	16.5	23.5	21.0	22.0
5	---	---	---	16.5	12.5	14.5	18.5	16.0	17.0	25.0	22.5	23.5
6	---	---	---	15.5	12.0	13.5	19.5	17.0	18.5	26.0	23.5	25.0
7	13.5	12.5	13.0	16.0	13.5	15.0	19.0	17.0	18.0	25.5	24.0	25.0
8	13.0	12.0	12.5	16.5	14.5	15.5	18.0	16.5	17.0	---	---	---
9	13.0	10.5	11.5	15.5	14.0	15.0	19.5	17.0	18.0	---	---	---
10	13.5	12.0	12.5	16.0	15.0	15.5	19.5	18.5	19.0	---	---	---
11	16.0	12.5	14.5	15.5	12.5	15.0	21.0	18.5	20.0	---	---	---
12	15.5	12.0	13.5	13.0	11.5	12.5	21.5	19.5	20.5	---	---	---
13	14.0	12.0	13.0	14.0	12.0	13.0	22.0	19.5	20.5	---	---	---
14	15.0	13.0	14.0	18.0	14.0	15.5	21.0	19.5	20.5	---	---	---
15	16.0	14.5	15.0	20.0	16.5	18.0	20.0	19.0	19.5	---	---	---
16	15.5	14.0	14.5	19.5	17.0	19.0	19.5	18.0	18.5	---	---	---
17	16.0	14.5	15.0	19.0	18.0	19.0	21.0	17.5	19.0	---	---	---
18	16.0	15.0	15.5	19.5	18.0	19.0	20.5	19.0	20.0	---	---	---
19	15.0	14.0	14.5	17.5	15.0	16.0	20.5	19.5	20.0	---	---	---
20	14.5	12.0	13.5	15.5	14.0	14.5	22.5	19.5	21.0	---	---	---
21	14.5	12.5	13.5	17.0	15.0	16.0	22.5	21.5	22.0	---	---	---
22	15.5	13.0	14.0	18.5	16.5	17.5	21.5	20.0	20.5	---	---	---
23	16.0	14.0	15.0	18.5	15.5	17.0	21.5	19.5	20.5	27.5	26.0	26.5
24	16.5	14.0	15.0	16.5	15.5	16.0	22.5	19.5	21.0	28.0	25.5	26.5
25	16.0	14.5	15.5	17.0	15.5	16.0	22.0	20.5	21.0	28.5	26.0	27.5
26	16.0	13.5	15.0	19.0	16.0	17.0	23.5	21.0	22.0	29.0	26.5	27.5
27	13.5	12.5	13.0	19.0	18.5	19.0	24.5	22.0	23.0	29.0	26.5	28.0
28	12.0	10.0	11.0	18.5	16.5	17.5	24.0	22.5	23.0	26.0	24.0	25.0
29	13.0	11.0	12.0	18.0	15.5	16.5	23.5	21.5	23.0	25.0	23.0	24.0
30	---	---	---	18.0	15.5	16.5	22.5	20.0	21.5	25.5	23.0	24.0
31	---	---	---	17.5	16.5	17.0	---	---	---	24.5	23.0	23.5
MONTH	16.5	10.0	14.0	20.0	11.5	16.0	24.5	15.5	19.5	29.0	18.5	24.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	31.0	28.5	29.5	29.5	27.0	28.0	31.0	29.0	30.0
2	---	---	---	31.0	29.0	30.0	30.5	27.0	29.0	30.5	25.0	28.5
3	---	---	---	31.0	29.0	30.0	30.5	27.5	29.0	28.5	26.5	27.5
4	27.5	25.5	26.5	31.5	28.5	30.0	29.5	27.5	29.0	28.5	26.5	27.5
5	27.0	25.0	26.0	30.5	27.0	29.5	30.5	28.0	29.5	29.0	26.5	27.5
6	26.0	22.0	24.0	31.5	29.0	30.0	30.5	28.5	29.5	29.0	26.5	28.0
7	25.0	23.5	24.0	32.5	29.5	30.5	30.0	28.5	29.0	28.5	26.0	27.5
8	27.5	25.0	26.0	32.0	29.5	30.5	31.0	28.5	29.5	28.5	26.5	27.5
9	28.0	26.0	27.0	31.5	29.5	30.5	31.0	29.0	30.0	29.5	27.0	28.0
10	27.5	26.0	27.0	31.5	29.0	30.0	31.0	28.5	30.0	30.0	27.5	28.5
11	28.5	26.0	27.0	31.5	29.0	30.5	30.0	27.0	28.5	30.0	27.5	28.5
12	29.0	26.5	27.5	30.5	29.5	30.0	28.0	26.0	27.0	30.5	28.0	29.0
13	29.5	27.0	28.0	30.5	27.5	29.5	28.5	26.0	27.0	30.5	28.0	29.5
14	30.0	27.5	28.5	30.5	28.5	29.5	30.0	27.5	28.5	30.5	28.0	29.5
15	30.5	28.0	29.0	31.0	28.5	29.5	30.0	27.5	28.5	29.5	26.0	27.5
16	30.5	28.0	29.5	31.5	29.5	30.5	30.5	28.5	29.5	26.5	24.5	25.5
17	30.0	28.0	29.0	31.0	29.5	30.5	31.5	29.0	30.0	26.5	23.5	25.0
18	30.5	28.0	29.0	31.5	29.0	30.0	31.5	29.0	30.5	27.0	24.5	25.5
19	31.0	28.5	29.5	31.0	28.0	29.5	32.5	29.5	30.5	27.0	24.5	26.0
20	31.0	28.5	29.5	31.5	28.5	30.0	32.5	30.0	31.0	26.5	25.0	26.0
21	31.0	27.5	29.5	31.5	29.0	30.0	31.5	29.5	30.5	26.0	25.0	25.5
22	31.5	28.5	30.0	31.5	28.5	30.0	31.0	29.0	30.0	27.5	25.0	26.0
23	32.0	29.0	30.5	31.0	28.5	30.0	30.5	29.5	30.0	28.0	26.5	27.0
24	31.0	29.5	30.5	29.5	28.0	28.5	31.0	28.5	29.5	28.5	27.0	27.5
25	31.5	29.0	30.5	29.5	27.5	28.5	31.0	28.5	29.5	28.5	25.5	27.5
26	30.5	29.0	29.5	30.0	27.0	29.0	30.5	28.0	29.5	25.5	23.0	24.0
27	30.5	28.5	29.5	30.5	28.0	29.0	31.5	28.5	30.0	23.5	22.5	23.0
28	31.5	28.0	29.5	30.5	28.0	29.0	31.5	29.0	30.0	23.0	21.0	21.5
29	29.5	27.0	29.0	30.0	27.5	28.5	31.5	29.0	30.5	21.5	20.0	20.5
30	30.5	28.5	29.0	29.5	27.0	28.5	31.0	29.5	30.0	22.0	19.5	20.5
31	---	---	---	29.5	27.0	28.0	31.0	29.0	30.0	---	---	---
MONTH	32.0	22.0	28.5	32.5	27.0	29.5	32.5	26.0	29.5	31.0	19.5	26.5

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.3	7.8	8.0	7.3	6.6	6.9	7.4	5.5	6.0
2	---	---	---	7.9	6.9	7.3	9.4	6.9	8.0	7.4	5.2	6.2
3	---	---	---	6.8	5.9	6.5	8.2	7.6	8.1	6.3	5.5	5.8
4	---	---	---	6.1	5.7	5.9	8.0	7.4	7.8	6.3	5.8	6.0
5	---	---	---	9.2	5.7	6.9	7.2	6.5	6.9	6.2	5.8	6.0
6	---	---	---	8.6	6.7	7.2	6.5	5.7	6.1	5.9	5.5	5.7
7	---	---	---	6.8	6.2	6.6	7.9	5.1	5.9	5.7	5.4	5.5
8	6.8	5.5	6.2	6.4	5.8	6.1	8.5	5.8	7.8	5.9	5.8	5.8
9	8.5	6.6	7.7	6.2	5.8	6.0	7.3	5.4	6.5	---	---	---
10	7.3	4.9	6.7	5.8	5.2	5.6	7.1	6.9	7.0	---	---	---
11	7.0	3.5	5.4	8.9	5.4	6.0	7.0	6.6	6.9	---	---	---
12	7.9	6.3	7.3	9.7	8.1	8.8	6.8	6.4	6.6	---	---	---
13	7.5	6.0	7.0	8.8	7.9	8.3	6.8	6.4	6.5	---	---	---
14	7.7	7.2	7.5	8.4	7.4	7.9	6.8	6.1	6.5	---	---	---
15	9.3	6.7	7.8	8.5	6.7	7.5	7.0	6.3	6.7	---	---	---
16	8.8	5.6	6.9	8.4	6.3	7.1	7.3	6.6	7.0	---	---	---
17	6.8	6.5	6.6	7.6	6.4	6.8	7.2	6.7	6.9	---	---	---
18	7.6	6.2	7.1	8.5	6.3	6.6	6.8	6.3	6.6	---	---	---
19	7.5	6.3	6.9	8.0	6.8	7.4	6.5	5.5	6.1	---	---	---
20	7.2	6.4	6.9	7.9	7.0	7.4	6.4	5.6	6.1	---	---	---
21	7.2	6.6	6.9	7.1	6.4	6.9	5.5	3.5	4.7	---	---	---
22	6.8	6.1	6.5	6.3	5.7	6.1	5.7	4.7	5.1	---	---	---
23	6.6	5.7	6.1	9.4	5.5	7.7	5.8	5.3	5.7	5.3	4.6	5.0
24	6.2	5.6	6.0	8.0	6.9	7.6	6.1	5.3	5.8	4.9	4.5	4.7
25	6.0	4.8	5.5	8.0	6.4	7.3	5.0	1.8	2.7	4.9	4.4	4.6
26	8.2	5.4	7.0	7.8	6.8	7.2	4.9	2.4	3.9	4.6	4.1	4.3
27	8.4	6.6	7.3	8.1	6.4	7.2	5.6	4.8	5.2	4.4	3.8	4.1
28	9.0	7.7	8.6	8.7	6.9	7.7	5.7	5.1	5.3	6.2	3.6	4.5
29	8.6	8.4	8.5	9.7	7.0	7.7	5.7	5.1	5.4	4.6	3.5	4.1
30	---	---	---	9.7	7.4	8.1	6.1	5.6	5.9	4.4	4.0	4.2
31	---	---	---	7.3	7.0	7.2	---	---	---	4.2	3.7	3.9
MONTH	9.3	3.5	6.9	9.7	5.2	7.1	9.4	1.8	6.2	7.4	3.5	5.1

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	4.2	3.2	3.8	5.5	4.0	4.6	6.6	4.2	5.1
2	---	---	---	5.4	3.7	4.5	5.6	4.2	4.8	8.1	4.5	5.6
3	---	---	---	5.4	4.3	4.8	5.6	4.0	4.6	5.5	2.7	3.7
4	5.6	4.9	5.4	5.6	4.4	5.0	5.2	3.1	4.2	5.7	4.5	5.2
5	5.5	4.4	4.9	5.0	3.8	4.3	4.4	3.9	4.2	6.8	5.6	6.3
6	7.3	4.9	5.9	4.4	3.4	3.9	4.8	3.8	4.3	7.0	6.3	6.6
7	4.9	4.3	4.6	4.6	3.7	4.1	5.0	4.0	4.3	7.2	6.5	6.8
8	5.2	4.5	4.9	4.8	3.6	4.0	4.7	3.9	4.3	7.5	6.5	7.0
9	5.1	1.2	4.4	4.8	2.8	3.9	4.8	4.0	4.3	7.7	6.7	7.1
10	4.9	4.4	4.7	5.2	3.3	4.2	4.7	3.8	4.2	7.7	6.7	7.1
11	5.0	3.7	4.6	5.1	3.6	4.3	4.3	3.0	3.8	---	---	---
12	5.5	4.5	4.9	---	---	---	4.7	3.6	4.2	---	---	---
13	5.4	4.4	5.0	---	---	---	5.1	4.0	4.5	---	---	---
14	6.1	4.8	5.3	---	---	---	5.4	5.1	5.2	---	---	---
15	6.6	4.6	5.5	---	---	---	5.3	5.1	5.2	4.5	4.0	4.2
16	6.8	4.7	5.7	---	---	---	5.1	4.9	5.0	6.0	4.3	5.0
17	6.7	4.8	5.7	---	---	---	4.9	4.4	4.7	---	---	---
18	6.9	4.7	5.6	---	---	---	4.8	4.1	4.4	---	---	---
19	7.2	4.9	5.8	4.6	4.0	4.3	4.9	3.9	4.3	---	---	---
20	6.8	4.6	5.5	4.6	3.9	4.2	5.3	3.9	4.5	---	---	---
21	6.3	4.7	5.4	4.6	3.8	4.1	5.0	2.6	3.9	---	---	---
22	6.0	4.4	5.2	4.4	3.2	4.0	4.9	3.6	4.0	---	---	---
23	6.5	4.2	5.3	4.4	3.1	3.8	4.3	3.5	3.9	---	---	---
24	6.1	4.1	4.9	3.7	2.8	3.3	4.2	3.2	3.6	---	---	---
25	6.4	3.7	4.9	3.1	1.8	2.7	4.1	2.6	3.3	---	---	---
26	5.3	3.7	4.4	3.1	1.9	2.7	4.0	2.5	3.1	---	---	---
27	4.7	3.0	3.9	3.4	1.9	2.5	4.3	2.1	3.0	---	---	---
28	4.8	3.1	4.0	3.0	2.1	2.4	5.5	2.8	3.9	---	---	---
29	4.0	1.1	3.0	2.9	2.0	2.5	7.0	3.7	5.1	---	---	---
30	3.7	2.9	3.5	4.2	2.5	3.3	5.8	3.9	4.9	---	---	---
31	---	---	---	4.4	3.0	3.7	6.4	4.0	4.9	---	---	---
MONTH	7.3	1.1	4.9	5.6	1.8	3.8	7.0	2.1	4.3	8.1	2.7	5.8

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX

LOCATION--Lat 32 53'21", long 96 45'23", Dallas County, Hydrologic Unit 12030105, on left bank 20 ft upstream from bridge on Greenville Avenue in Dallas, 1.1 mi downstream from Texas and New Orleans Railroad Co. bridge, 1.2 mi downstream from Cottonwood Creek, 2.9 mi upstream from White Rock Lake, and 8.2 mi northeast of Dallas County Courthouse.

DRAINAGE AREA.--66.4 mi^2.

PERIOD OF RECORD.--August 1961 to September 1980, April to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1961, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for period of no elevation records which are poor. Some regulation at low flow on- and off-channel dams from which many small diversions are made. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1962-80), 53.9 ft^3/s, (11.02 in/yr), 39,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s Sept. 21, 1964 (elevation, 490.43 ft); minimum daily, 0.01 ft^3/s July 8, 1970, June 27, July 14, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1886, that of Sept. 21, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 5,610 ft^3/s June 6 at 0730 hours (elevation, 486.22 ft); minimum daily, 2.4 ft^3/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							30	565	16	5.5	3.5	2.4
2							180	330	15	4.5	3.5	59
3							78	97	15	4.0	3.5	28
4							50	70	15	5.1	5.5	8.2
5							39	53	19	33	4.0	5.7
6							37	43	800	7.0	3.5	4.6
7							218	46	110	4.8	3.4	4.6
8							93	32	70	4.7	3.2	5.3
9							52	31	40	4.1	3.1	4.8
10							45	33	25	4.0	3.0	5.0
11							37	32	19	16	15	3.7
12							33	22	15	7.9	40	3.6
13							31	19	12	5.8	11	3.6
14							28	18	10	4.7	8.5	3.6
15							26	14	9.0	4.3	7.0	4.1
16							25	14	8.0	4.3	6.5	4.6
17							26	16	7.5	4.2	6.1	4.3
18							25	113	7.0	4.0	5.7	4.8
19							25	73	6.6	4.0	5.4	4.3
20							28	32	6.2	3.9	5.2	4.3
21							29	24	5.8	3.8	4.6	4.8
22							22	20	5.5	3.8	4.8	5.9
23							19	17	5.2	3.9	5.5	5.5
24							16	16	4.9	4.1	6.6	6.6
25							16	15	4.7	10	4.5	5.5
26							16	15	4.5	5.8	5.3	5.9
27							16	16	4.3	4.5	4.3	6.4
28							13	128	45	4.1	3.9	6.6
29							27	26	11	3.9	3.9	5.5
30							21	20	8.0	3.7	3.9	5.3
31							---	18	---	3.6	3.6	---
TOTAL							1301	1968	1324.2	187.0	197.5	226.5
MEAN							43.4	63.5	44.1	6.03	6.37	7.55
MAX							218	565	800	33	40	59
MIN							13	14	4.3	3.6	3.0	2.4
CFSM							.65	.96	.66	.09	.10	.11
IN.							.73	1.10	.74	.10	.11	.13
AC-FT							2580	3900	2630	371	392	449

WTR YR 1984 TOTAL - MEAN - MAX - MIN - CFSM - IN. - AC-FT

NOTE.--No gage-height record June 7 to July 3 and July 13 to August 20.

08057410 TRINITY RIVER BELOW DALLAS, TX

LOCATION.--Lat 32°42'26", long 96°44'08", Dallas County, Hydrologic Unit 12030105, on right bank at downstream side of bridge on South Loop Highway 12, 1.0 mi downstream from White Rock Creek, 1.5 mi upstream from Fivemile Creek, 6.4 mi southeast of Dallas County Courthouse in Dallas, and at mile 491.8.

DRAINAGE AREA.--6,278 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1956 to September 1961 (monthly records only), October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 365.89 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow is affected at times by eight upstream reservoirs with a combined capacity of 1,714,400 acre-ft, of which 846,200 acre-ft is for flood control. Several cities within the Fort Worth-Dallas metroplex divert water for municipal use and return it to the river as sewage effluents above this station. Low flows are sustained by sewage effluents.

AVERAGE DISCHARGE.--27 years (water years 1958-84), 1,781 ft^3/s (1,290,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,700 ft^3/s May 27, 1957 (gage height, 32.02 ft); minimum daily, 131 ft^3/s Dec. 9, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 25, 1908, reached a stage of 41.1 ft, from information by Corps of Engineers, and is the highest since that date. Floods in 1866 and 1908 reached about the same stage at Dallas.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft^3/s Mar. 24 at 1900 hours (gage height, 25.53 ft); minimum daily, 504 ft^3/s Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	549	539	653	746	614	699	850	865	632	604	562	516
2	531	527	689	695	591	646	1370	4260	604	593	553	703
3	544	530	1310	695	575	599	1650	4020	576	582	550	1750
4	568	543	1080	669	547	581	1180	1380	584	555	597	802
5	556	553	784	642	546	763	916	936	696	650	645	664
6	541	1110	693	639	525	712	839	877	2540	617	579	604
7	1020	1110	609	588	566	566	896	825	4600	567	594	568
8	2040	742	596	575	547	552	2930	763	1740	556	580	542
9	4630	624	595	844	1310	549	2070	717	902	547	554	538
10	2460	607	551	2120	1750	529	1170	665	721	548	551	545
11	1180	555	539	1680	1130	709	969	632	697	551	678	553
12	1480	544	569	971	2210	5390	855	645	657	570	1270	556
13	1070	512	551	885	1850	8720	847	619	626	954	1560	530
14	748	543	554	739	1010	5210	785	616	618	644	832	532
15	643	534	538	628	1050	1980	764	642	598	557	690	517
16	555	543	595	625	965	1260	739	613	574	544	625	504
17	558	599	635	597	629	1080	730	614	549	549	601	525
18	565	735	646	604	1000	878	727	917	552	537	562	513
19	781	827	656	631	1230	4280	683	2280	572	534	536	520
20	1480	719	603	614	863	4340	788	1630	563	537	550	524
21	1320	683	576	579	677	1580	1200	911	564	520	534	534
22	957	647	580	573	627	1020	846	769	564	517	551	524
23	649	1060	590	848	608	4550	728	731	543	515	552	519
24	595	1100	650	866	579	12900	695	694	528	518	551	532
25	581	730	663	793	557	9990	676	670	536	654	542	553
26	571	754	670	730	1380	4590	679	631	556	688	523	550
27	589	2150	775	633	2520	2040	716	582	563	633	535	528
28	601	1690	822	883	1680	1870	669	1550	581	667	545	629
29	527	1060	905	637	899	1420	704	1300	910	608	543	555
30	511	752	884	606	---	1340	779	783	752	604	538	523
31	529	---	860	611	---	876	---	695	---	571	531	---
TOTAL	29929	23622	21421	23946	29035	82219	29450	33832	25698	18291	19614	17953
MEAN	965	787	691	772	1001	2652	982	1091	857	590	633	598
MAX	4630	2150	1310	2120	2520	12900	2930	4260	4600	954	1560	1750
MIN	511	512	538	573	525	529	669	582	528	515	523	504
AC-FT	59360	46850	42490	47500	57590	163100	58410	67110	50970	36280	38900	35610

CAL YR 1983 TOTAL 392482 MEAN 1075 MAX 7710 MIN 482 AC-FT 778500
WTR YR 1984 TOTAL 355010 MEAN 970 MAX 12900 MIN 504 AC-FT 704200

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: October 1971 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
pH: January 1977 to current year.
WATER TEMPERATURES: October 1967 to current year.
DISSOLVED OXYGEN: January 1977 to current year.

INSTRUMENTATION.--Beginning October 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1967-68, 1973-84): Maximum, 1,130 micromhos Dec. 17, 1977; minimum, 148 micromhos May 16, 1982.
pH (1976-82): Maximum, 8.8 units Jan. 23, 1980; minimum, 6.8 units Sept. 17, 18, 1981.
WATER TEMPERATURES (1967-68, 1973-83): Maximum, 34.0°C June 30, Aug. 31, 1977; minimum, 4.0°C Jan. 10, 1968.
DISSOLVED OXYGEN: Maximum, 12.5 mg/L Feb. 8, 1982; minimum, 0.0 mg/L on many days during spring and summer of 1977-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 954 micromhos Aug. 22; minimum, 218 micromhos Mar. 23.
pH: Maximum, 7.8 units Mar. 23, Aug. 22; minimum, 7.0 units several days during year.
WATER TEMPERATURES: Maximum, 31.0°C on several days during July and August; minimum, 5.0°C Dec. 25.
DISSOLVED OXYGEN: Maximum, 10.0 mg/L Dec. 30; minimum, 0.4 mg/L July 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT 26...	1300	555	758	7.4	21.0	5.2	58	15	150	10
JAN 17...	1250	415	736	7.7	8.5	7.0	60	22	160	0
FEB 13...	1010	1910	518	7.4	13.0	7.3	70	18	170	40
MAY 08...	1330	777	756	7.4	22.0	5.3	61	21	170	11
JUN 19...	1325	560	822	7.2	28.5	4.3	56	14	150	4
AUG 21...	1506	549	768	7.3	30.5	3.1	42	12	130	0

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 26...	50	6.1	88	3	11	140	91	76	1.1
JAN 17...	54	6.2	93	3	13	190	100	73	1.1
FEB 13...	60	4.8	42	1	6.6	130	85	38	.50
MAY 08...	59	5.7	78	3	9.5	160	98	71	.90
JUN 19...	51	6.4	100	4	12	150	84	87	1.1
AUG 21...	42	5.7	97	4	13	140	89	79	1.4

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 26...	12	420	3.7	.770	4.5	2.90	5.1	8.0	3.10
JAN 17...	9.8	460	1.3	.440	1.7	8.00	4.0	12	3.80
FEB 13...	11	330	1.2	.470	1.7	.070	3.3	3.4	1.20
MAY 08...	9.8	430	2.1	.840	2.9	4.80	.70	5.5	2.60
JUN 19...	9.0	440	2.2	1.00	3.2	1.60	2.6	4.2	4.40
AUG 21...	9.9	420	2.2	.830	3.0	4.00	1.0	5.0	5.60

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	29929	580	331	26700	44	3520	76	6140	150
NOV.	1983	23622	656	374	23900	51	3260	86	5480	160
DEC.	1983	21421	714	408	23600	57	3320	93	5400	170
JAN.	1984	23946	704	402	26000	56	3630	92	5960	170
FEB.	1984	29035	629	359	28200	48	3780	82	6460	160
MAR.	1984	82219	515	294	65300	36	8070	68	15000	150
APR.	1984	29450	730	416	33100	59	4730	95	7590	170
MAY	1984	33832	630	360	32900	49	4450	83	7540	160
JUNE	1984	25698	660	376	26100	52	3630	86	5990	160
JULY	1984	18291	774	441	21800	64	3180	100	4990	170
AUG.	1984	19614	770	439	23200	64	3410	100	5320	160
SEPT	1984	17953	728	415	20100	59	2870	95	4610	170
TOTAL		355010	**	**	351000	**	47800	**	80500	**
WTD.AVG.		970	641	366	**	50	**	84	**	160

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	788	748	770	824	778	804	722	674	689	686	650	667
2	820	766	794	844	792	820	752	666	738	704	662	687
3	814	732	774	858	802	823	752	538	611	728	688	701
4	790	750	766	850	816	831	590	534	562	750	702	724
5	794	762	781	872	812	847	686	596	633	738	712	723
6	816	768	789	830	606	716	716	688	697	768	726	741
7	798	552	692	636	578	608	752	708	731	776	742	763
8	622	342	518	636	620	627	796	744	767	784	756	772
9	386	258	303	726	674	699	800	762	779	784	618	721
10	470	330	411	744	690	709	846	786	813	662	516	584
11	578	474	523	786	752	763	842	768	803	568	538	551
12	536	432	493	816	774	798	826	760	787	652	552	600
13	628	494	560	784	730	762	836	784	811	698	654	669
14	732	630	675	792	718	754	848	822	836	716	648	684
15	734	690	703	764	732	748	836	816	827	740	718	727
16	748	716	731	820	752	775	836	794	817	802	740	760
17	768	720	750	810	744	771	812	784	799	818	794	807
18	774	742	759	734	664	684	810	730	775	814	768	793
19	796	720	756	680	576	641	758	712	735	792	736	755
20	714	504	593	740	668	686	784	728	764	798	764	782
21	522	492	502	758	716	738	800	762	780	812	778	799
22	632	528	590	770	736	754	794	736	764	812	742	779
23	652	612	624	746	524	630	778	734	755	812	698	739
24	722	660	674	680	546	614	768	690	743	708	664	684
25	746	722	731	676	624	645	690	672	679	720	696	702
26	774	734	741	672	260	619	688	652	673	740	708	721
27	770	746	758	448	268	398	684	658	674	792	746	761
28	766	700	726	534	440	472	690	652	671	806	672	733
29	790	730	770	606	526	553	672	614	644	774	744	767
30	810	748	781	672	614	646	626	618	622	786	772	782
31	812	750	782	---	---	---	646	616	631	---	---	790
MONTH	820	258	672	872	260	698	848	534	729	818	516	725

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	798	706	652	683	816	796	806	---	---	794
2	---	---	804	760	710	732	838	542	690	---	---	442
3	---	---	812	786	764	775	714	642	683	---	---	478
4	---	---	819	788	766	775	696	656	674	---	---	550
5	---	---	825	790	710	760	766	692	719	---	---	593
6	---	---	831	748	648	687	800	764	778	---	---	637
7	---	---	845	788	754	777	812	614	785	---	---	701
8	---	---	856	798	778	789	730	482	573	---	---	756
9	---	---	512	794	774	783	580	480	523	---	---	772
10	---	---	518	804	780	791	684	588	638	---	---	786
11	---	---	560	814	394	749	768	686	721	---	---	799
12	---	---	475	492	312	433	814	772	798	---	---	809
13	594	518	549	476	446	459	814	788	804	---	---	815
14	648	578	610	540	448	483	836	806	818	---	---	830
15	724	646	684	654	552	604	818	796	807	---	---	843
16	758	650	685	746	610	693	828	758	789	---	---	857
17	774	746	760	742	614	678	856	814	835	---	---	864
18	796	628	722	798	738	757	868	810	846	---	---	820
19	660	548	617	800	382	482	874	826	856	---	---	500
20	706	638	665	476	388	429	---	---	848	---	---	487
21	736	696	714	632	484	556	---	---	720	---	---	610
22	768	732	743	720	636	677	---	---	762	---	---	718
23	776	734	752	740	218	492	---	---	768	798	742	765
24	790	756	771	426	404	418	---	---	771	824	800	810
25	790	772	781	460	416	435	---	---	777	828	802	817
26	796	358	629	610	466	519	---	---	790	834	804	821
27	554	418	482	650	440	603	---	---	808	826	790	811
28	546	442	506	712	546	604	---	---	823	792	342	576
29	648	548	586	806	610	682	---	---	831	614	518	574
30	---	---	---	818	552	687	---	---	846	694	618	646
31	---	---	---	816	804	812	---	---	---	754	676	703
MONTH	796	358	687	818	218	639	874	480	763	834	342	709

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	816	752	775	776	690	735	826	792	809	806	752	777
2	832	806	819	764	716	746	836	802	820	800	734	769
3	832	784	812	784	752	766	862	822	841	---	---	510
4	836	774	803	798	764	781	896	562	824	---	---	590
5	852	812	830	782	690	750	856	682	777	---	---	670
6	850	324	533	762	662	728	794	692	724	---	---	708
7	424	340	376	792	706	767	826	778	803	---	---	717
8	568	418	489	800	748	776	818	780	800	---	---	723
9	674	574	616	776	722	749	808	778	794	---	---	736
10	688	650	668	---	---	770	836	790	811	---	---	747
11	730	682	698	824	782	800	874	706	817	---	---	756
12	752	712	727	864	730	828	790	502	706	---	---	760
13	768	742	757	886	608	787	564	408	476	810	730	764
14	786	742	762	332	666	728	648	558	593	776	730	757
15	794	772	782	742	678	710	720	640	674	798	718	761
16	796	770	783	758	698	720	790	730	759	782	726	752
17	794	754	776	804	754	781	820	788	800	790	706	744
18	804	758	780	820	766	796	866	822	847	818	762	793
19	822	794	808	830	798	813	886	812	845	822	784	801
20	834	812	826	842	802	820	862	810	835	796	758	783
21	852	806	830	854	804	828	892	836	865	812	776	790
22	862	814	845	856	784	817	954	880	915	846	790	817
23	864	798	836	842	796	820	902	846	873	818	750	786
24	844	776	812	878	810	833	884	842	866	798	738	769
25	824	764	793	870	816	837	908	836	880	806	760	784
26	846	788	817	848	784	823	886	808	851	802	738	775
27	848	812	827	828	718	764	848	768	812	794	620	771
28	840	786	816	770	578	708	874	804	832	818	702	763
29	862	640	754	778	694	719	856	750	799	814	738	781
30	768	656	720	760	706	728	802	754	774	780	748	764
31	---	---	---	794	788	785	796	750	770	---	---	---
MONTH	864	324	749	886	578	775	954	408	793	846	620	747

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	7.1	7.2	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.3	7.4
2	7.3	7.1	7.2	7.4	7.2	7.3	7.3	7.2	7.3	7.4	7.3	7.3
3	7.2	7.1	7.2	7.5	7.2	7.3	7.5	7.3	7.4	7.3	7.2	7.3
4	7.2	7.1	7.1	7.4	7.3	7.3	7.5	7.3	7.4	7.3	7.2	7.2
5	7.2	7.0	7.2	7.4	7.3	7.4	7.3	7.2	7.3	7.3	7.2	7.2
6	7.2	7.1	7.1	7.6	7.4	7.4	7.4	7.3	7.3	7.4	7.2	7.2
7	7.4	7.1	7.2	7.5	7.4	7.4	7.5	7.3	7.4	7.3	7.2	7.2
8	7.5	7.3	7.3	7.5	7.4	7.4	7.5	7.4	7.4	7.3	7.2	7.2
9	7.6	7.4	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.3	7.2	7.3
10	7.4	7.2	7.3	7.5	7.4	7.4	7.6	7.4	7.5	7.4	7.3	7.3
11	7.6	7.2	7.3	7.5	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3
12	7.5	7.2	7.4	7.5	7.4	7.4	7.5	7.3	7.4	7.4	7.3	7.3
13	7.4	7.2	7.3	7.4	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3
14	7.3	7.2	7.3	7.4	7.3	7.3	7.5	7.4	7.4	7.4	7.3	7.4
15	7.4	7.2	7.3	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.3
16	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.3	7.3
17	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.4	7.2	7.3
18	7.3	7.2	7.2	7.4	7.3	7.4	7.4	7.2	7.3	7.3	7.2	7.2
19	7.3	7.2	7.3	7.5	7.3	7.4	7.3	7.1	7.2	7.3	7.2	7.2
20	7.4	7.2	7.3	7.4	7.4	7.4	7.2	7.1	7.1	7.4	7.3	7.3
21	7.4	7.2	7.3	7.5	7.3	7.4	7.3	7.1	7.2	7.3	7.2	7.3
22	7.3	7.2	7.3	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.3	7.3
23	7.3	7.2	7.2	7.4	7.2	7.3	7.2	7.0	7.1	7.5	7.3	7.4
24	7.3	7.2	7.2	7.3	7.3	7.3	7.2	7.1	7.2	7.6	7.3	7.4
25	7.3	7.2	7.2	7.3	7.2	7.3	7.2	7.1	7.1	7.5	7.2	7.3
26	7.4	7.2	7.3	7.6	7.2	7.3	7.2	7.1	7.2	7.3	7.2	7.3
27	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.1	7.3	7.6	7.2	7.4
28	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.2	7.2	7.4	7.3	7.4
29	7.4	7.3	7.4	7.4	7.3	7.4	7.2	7.0	7.2	7.3	7.3	7.3
30	7.4	7.3	7.3	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.3	7.4
31	7.4	7.2	7.3	---	---	---	7.4	7.3	7.3	---	---	---
MONTH	7.6	7.0	7.3	7.6	7.2	7.4	7.6	7.0	7.3	7.6	7.2	7.3

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.4	7.3	7.4	7.5	7.5	7.5	---	---	---
2	---	---	---	7.4	7.3	7.3	7.7	7.5	7.6	---	---	---
3	---	---	---	7.3	7.3	7.3	7.6	7.5	7.6	---	---	---
4	---	---	---	7.4	7.3	7.3	7.6	7.5	7.5	---	---	---
5	---	---	---	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---
6	---	---	---	7.4	7.3	7.4	7.5	7.3	7.4	---	---	---
7	---	---	---	7.3	7.3	7.3	7.5	7.4	7.5	---	---	---
8	---	---	---	7.3	7.3	7.3	7.6	7.5	7.6	7.4	7.4	7.4
9	---	---	---	7.4	7.3	7.3	7.5	7.4	7.5	7.5	7.3	7.4
10	---	---	---	7.3	7.3	7.3	7.5	7.4	7.4	7.6	7.4	7.4
11	---	---	---	7.4	7.3	7.3	7.4	7.4	7.4	7.5	7.4	7.4
12	---	---	---	7.6	7.4	7.5	7.6	7.4	7.5	7.5	7.4	7.4
13	7.4	7.3	7.3	7.6	7.5	7.6	7.5	7.4	7.4	7.5	7.4	7.4
14	7.3	7.3	7.3	7.5	7.4	7.4	7.4	7.4	7.4	7.5	7.4	7.4
15	7.5	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.4	7.4
16	7.5	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.4
17	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.4
18	7.4	7.3	7.3	7.4	7.3	7.4	7.3	7.2	7.3	7.4	7.2	7.4
19	7.4	7.3	7.4	7.5	7.4	7.5	7.3	7.1	7.3	7.5	7.2	7.3
20	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	7.3	7.2	7.2
21	7.4	7.3	7.3	7.4	7.3	7.3	---	---	---	7.3	7.2	7.2
22	7.3	7.3	7.3	7.4	7.3	7.4	---	---	---	7.4	7.2	7.3
23	7.3	7.3	7.3	7.8	7.4	7.5	---	---	---	7.4	7.3	7.3
24	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	7.4	7.3	7.4
25	7.3	7.3	7.3	7.4	7.3	7.4	---	---	---	7.4	7.4	7.4
26	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---	7.4	7.4	7.4
27	7.5	7.4	7.5	7.4	7.3	7.4	---	---	---	7.4	7.3	7.4
28	7.6	7.4	7.5	7.5	7.3	7.4	---	---	---	7.4	7.2	7.3
29	7.4	7.3	7.4	7.6	7.3	7.5	---	---	---	7.3	7.2	7.3
30	---	---	---	7.6	7.5	7.5	---	---	---	7.2	7.1	7.1
31	---	---	---	7.5	7.4	7.5	---	---	---	7.1	7.1	7.1
MONTH	7.6	7.2	7.4	7.8	7.3	7.4	7.7	7.1	7.5	7.6	7.1	7.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	7.1	7.1	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.1
2	7.2	7.1	7.1	7.2	7.1	7.2	7.2	7.1	7.2	7.1	7.0	7.0
3	7.2	7.1	7.1	7.2	7.2	7.2	7.3	7.2	7.2	---	---	---
4	7.3	7.1	7.2	7.3	7.2	7.2	7.3	7.2	7.3	---	---	---
5	7.3	7.2	7.3	7.2	7.2	7.2	7.4	7.2	7.3	---	---	---
6	7.4	7.3	7.4	7.2	7.1	7.1	7.4	7.2	7.3	---	---	---
7	7.5	7.3	7.4	7.3	7.1	7.2	7.4	7.3	7.3	---	---	---
8	7.3	7.2	7.3	7.2	7.2	7.2	7.4	7.3	7.4	---	---	---
9	7.3	7.2	7.3	7.2	7.1	7.2	7.4	7.3	7.4	---	---	---
10	7.2	7.2	7.2	---	---	7.3	7.5	7.4	7.4	---	---	---
11	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---
12	7.3	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.3	---	---	---
13	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2
14	7.2	7.1	7.1	7.5	7.3	7.4	7.4	7.3	7.3	7.5	7.1	7.2
15	7.2	7.1	7.1	7.5	7.4	7.4	7.3	7.2	7.3	7.3	7.1	7.2
16	7.2	7.0	7.1	7.4	7.3	7.3	7.3	7.1	7.2	7.3	7.1	7.2
17	7.2	7.1	7.1	7.3	7.2	7.3	7.3	7.1	7.2	7.2	7.1	7.2
18	7.2	7.1	7.1	7.3	7.1	7.2	7.3	7.2	7.2	7.2	7.1	7.2
19	7.3	7.1	7.2	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.1	7.2
20	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.1	7.2	7.2	7.1	7.2
21	7.3	7.2	7.2	7.3	7.2	7.3	7.5	7.2	7.4	7.3	7.1	7.2
22	7.3	7.2	7.2	7.3	7.2	7.2	7.8	7.2	7.4	7.3	7.2	7.3
23	7.3	7.2	7.2	7.2	7.0	7.1	7.3	7.2	7.2	7.3	7.2	7.3
24	7.3	7.2	7.2	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.3	7.3
25	7.2	7.0	7.2	7.4	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3
26	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.2
27	7.3	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3
28	7.2	7.2	7.2	7.3	7.1	7.2	7.5	7.2	7.3	7.3	7.3	7.3
29	7.4	7.1	7.2	7.3	7.2	7.2	7.5	7.1	7.2	7.3	7.3	7.3
30	7.3	7.1	7.2	7.2	7.1	7.2	7.5	7.1	7.3	7.3	7.2	7.3
31	---	---	---	7.2	7.2	7.2	7.1	7.1	7.1	---	---	---
MONTH	7.5	7.0	7.2	7.5	7.0	7.2	7.8	7.1	7.3	7.5	7.0	7.2

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	25.0	26.0	24.0	23.0	23.5	15.5	14.0	15.0	10.0	8.0	8.5
2	26.0	25.5	26.0	24.5	23.5	24.0	17.0	15.5	16.0	11.0	9.0	10.0
3	26.5	25.5	26.0	25.0	24.0	24.5	16.5	13.5	15.0	11.0	9.5	10.5
4	27.0	26.0	26.5	25.0	24.0	24.5	15.5	13.5	14.5	13.5	11.0	12.5
5	27.0	25.5	26.5	24.5	23.0	24.0	17.0	15.5	16.0	14.0	12.0	13.5
6	26.0	25.0	25.5	23.0	21.0	21.5	16.0	14.0	15.0	15.0	13.5	14.0
7	25.0	22.5	23.5	21.0	20.5	21.0	16.0	14.0	15.0	15.0	13.5	14.5
8	23.0	21.5	22.5	21.0	20.0	20.5	16.5	15.0	15.5	15.0	13.5	14.5
9	22.0	21.0	21.0	21.5	19.5	21.0	18.0	16.0	17.0	15.0	13.5	14.0
10	23.0	21.0	22.0	19.5	17.5	18.5	19.0	18.0	18.5	13.5	9.0	10.5
11	24.0	22.0	23.0	18.5	17.0	18.0	18.5	17.5	18.0	10.0	8.0	9.0
12	23.5	21.5	22.5	18.5	17.5	18.0	17.5	16.0	17.0	11.0	8.5	10.0
13	22.0	20.5	21.0	19.0	18.0	18.5	17.0	16.0	17.0	11.0	9.0	10.0
14	22.5	21.0	22.0	20.0	18.5	19.5	16.5	15.0	16.0	10.5	8.0	9.5
15	23.0	21.0	22.0	20.0	19.0	19.5	16.0	15.0	15.5	11.5	10.0	10.5
16	24.5	22.5	23.5	19.5	18.0	19.0	15.0	13.0	14.0	12.5	10.0	11.5
17	25.5	24.5	25.0	19.5	18.0	19.0	14.0	12.5	13.5	12.0	11.0	11.5
18	26.0	25.0	25.5	20.5	18.5	19.5	14.0	11.0	12.5	11.5	9.5	10.5
19	26.0	25.0	25.5	20.5	19.5	20.0	11.0	9.5	10.0	10.0	7.5	9.0
20	25.0	24.0	24.5	19.5	18.0	18.5	11.0	9.0	10.0	10.5	9.0	10.0
21	24.0	22.5	23.0	19.5	17.5	19.0	11.0	9.5	10.5	11.5	9.0	10.0
22	22.5	21.5	22.0	21.5	19.5	20.5	9.5	7.5	8.5	10.5	9.5	10.0
23	22.5	21.0	22.0	21.0	17.5	19.0	9.5	8.0	8.5	10.5	9.0	10.0
24	22.5	21.0	22.0	17.5	16.0	16.5	8.5	6.0	7.5	11.0	7.5	9.5
25	23.0	21.5	22.0	17.5	16.0	16.5	7.0	5.0	6.0	12.5	9.0	10.5
26	22.0	20.5	21.5	18.0	15.5	17.0	8.0	7.0	7.5	12.5	10.0	11.5
27	22.0	20.5	21.5	16.0	13.5	15.0	9.0	7.5	8.0	13.5	10.0	12.0
28	22.0	20.5	21.5	13.5	11.5	12.5	9.0	8.0	8.5	12.5	9.0	11.0
29	22.5	21.0	22.0	14.0	11.5	13.0	8.0	6.0	6.5	14.5	12.5	13.5
30	23.0	22.0	22.5	15.5	13.5	14.5	7.0	5.5	6.5	14.5	13.5	14.0
31	23.5	22.5	23.0	---	---	---	7.5	6.0	7.0	---	---	---
MONTH	27.0	20.5	23.5	25.0	11.5	19.0	19.0	5.0	12.5	15.0	7.5	11.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	15.0	12.5	14.0	18.0	17.0	17.5	---	---	---
2	---	---	---	17.0	15.0	16.0	18.0	17.0	18.0	---	---	---
3	---	---	---	18.5	17.0	18.0	18.5	17.0	17.5	---	---	---
4	---	---	---	19.0	18.0	18.5	17.5	16.5	17.0	---	---	---
5	---	---	---	18.0	14.0	16.0	19.0	16.5	17.5	---	---	---
6	---	---	---	15.5	12.5	14.0	20.0	18.0	19.0	---	---	---
7	---	---	---	17.0	15.0	16.0	20.0	18.0	19.0	---	---	---
8	---	---	---	17.5	16.0	16.5	18.5	17.0	18.0	23.5	23.0	23.5
9	---	---	---	17.0	15.5	16.5	19.5	17.5	18.5	24.0	22.0	23.0
10	---	---	---	17.5	16.0	16.5	20.0	19.5	20.0	24.0	22.5	23.5
11	---	---	---	17.0	13.5	16.0	21.0	19.0	20.0	24.5	23.0	24.0
12	---	---	---	13.5	12.0	13.0	21.5	20.0	21.0	26.0	24.0	25.0
13	14.5	13.0	14.5	14.5	12.5	13.5	21.5	19.5	21.0	27.0	25.5	26.0
14	15.5	13.5	15.0	17.5	14.5	15.5	21.5	20.0	21.0	27.5	26.0	27.0
15	17.5	15.5	16.0	20.0	17.5	18.5	20.5	19.5	20.0	27.5	26.5	27.0
16	16.5	14.5	15.5	20.5	19.0	20.0	19.5	18.5	19.0	27.0	26.0	26.5
17	17.0	15.0	16.0	19.5	19.0	19.0	21.0	18.0	19.5	26.0	25.5	26.0
18	17.5	16.5	17.0	20.5	19.0	19.5	21.0	19.5	20.5	25.5	24.5	25.5
19	16.5	14.5	15.0	20.0	15.0	16.5	21.0	20.5	21.0	25.0	24.5	24.5
20	15.0	14.0	14.5	15.5	14.0	14.5	---	---	---	25.5	24.5	25.0
21	15.5	13.0	14.5	17.5	15.0	16.5	---	---	---	27.0	25.0	26.0
22	16.0	14.0	15.0	19.5	17.5	18.5	---	---	---	27.0	25.5	26.5
23	17.0	15.0	16.0	19.5	16.5	18.0	---	---	---	28.0	27.0	27.5
24	17.5	15.5	16.5	16.5	15.5	16.0	---	---	---	28.0	27.0	27.5
25	17.5	15.5	16.5	17.0	15.5	16.5	---	---	---	28.5	27.5	28.0
26	17.0	14.5	16.0	19.0	16.5	17.5	---	---	---	29.0	27.5	28.5
27	14.5	12.0	13.0	20.0	19.0	19.5	---	---	---	29.0	28.0	28.5
28	12.0	10.5	11.5	19.5	17.5	18.5	---	---	---	28.0	25.0	26.5
29	13.5	11.0	12.5	18.0	16.0	17.0	---	---	---	25.5	24.0	24.5
30	---	---	---	18.5	16.0	17.0	---	---	---	25.5	23.5	24.5
31	---	---	---	18.5	17.5	18.0	---	---	---	26.0	24.0	25.0
MONTH	17.5	10.5	15.0	20.5	12.0	17.0	21.5	16.5	19.0	29.0	22.0	26.0

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	24.5	25.5	30.0	29.0	29.5	29.5	28.0	29.0	30.5	29.5	30.0
2	27.0	25.0	26.0	30.0	29.0	29.5	29.5	28.0	29.0	30.0	29.0	29.5
3	27.5	26.0	27.0	30.5	29.5	30.0	30.0	28.5	29.5	---	---	---
4	27.0	26.5	26.5	30.5	29.0	30.0	30.0	28.5	29.5	---	---	---
5	27.0	25.5	26.5	30.0	29.0	29.5	30.0	28.5	29.0	---	---	---
6	27.0	23.0	25.0	30.5	29.0	30.0	30.0	29.0	29.5	---	---	---
7	25.5	24.0	24.5	31.0	29.5	30.5	30.0	29.0	29.5	---	---	---
8	27.5	25.5	26.5	31.0	30.0	30.5	30.5	29.0	29.5	---	---	---
9	27.5	26.5	27.0	31.0	29.5	30.0	30.5	29.5	30.0	---	---	---
10	27.5	27.0	27.0	---	---	30.0	30.5	29.0	30.0	---	---	---
11	28.0	26.5	27.5	31.0	29.5	30.0	30.5	28.0	29.5	---	---	---
12	28.5	27.5	28.0	30.5	29.0	30.0	28.0	27.0	27.5	---	---	---
13	29.0	27.5	28.5	30.0	29.0	29.5	28.0	26.0	27.0	30.0	29.5	30.0
14	29.5	28.0	28.5	30.5	29.0	29.5	29.5	28.0	28.5	30.0	29.0	29.5
15	30.0	28.0	29.0	30.5	29.0	30.0	29.5	28.0	29.0	30.0	27.5	28.5
16	30.0	28.5	29.0	31.0	29.5	30.5	30.0	28.5	29.5	27.0	25.5	26.5
17	29.5	28.5	29.0	30.5	30.0	30.5	30.5	29.0	30.0	27.0	25.0	26.0
18	29.5	28.0	29.0	31.0	29.5	30.0	31.0	29.5	30.0	27.5	25.5	26.5
19	29.5	28.5	29.0	30.0	29.0	29.5	31.0	30.0	30.5	27.5	26.0	26.5
20	30.0	28.5	29.5	30.5	29.5	30.0	31.0	30.0	31.0	27.0	26.0	26.5
21	30.0	28.5	29.5	31.0	29.5	30.5	31.0	30.0	30.5	27.0	26.0	26.5
22	30.5	28.5	29.5	30.5	29.5	30.0	30.5	30.0	30.5	28.0	26.0	27.0
23	30.5	29.0	30.0	30.5	29.5	30.0	30.5	30.0	30.0	28.0	27.0	27.5
24	30.5	29.5	30.0	30.0	29.0	29.5	30.5	29.5	30.0	28.5	27.5	28.0
25	30.5	29.0	30.0	30.0	28.5	29.0	30.5	29.0	30.0	28.5	27.0	28.0
26	30.0	29.0	29.5	30.0	28.5	29.5	30.0	29.0	29.5	27.0	24.0	25.0
27	30.0	28.5	29.0	30.5	29.0	29.5	30.5	29.0	30.0	24.0	23.0	23.5
28	30.0	29.0	29.5	30.0	28.5	29.5	31.0	30.0	30.5	24.0	22.0	23.0
29	30.0	28.0	29.0	30.0	28.5	29.5	31.0	30.0	30.5	22.0	21.0	21.5
30	30.0	28.5	29.0	29.0	28.0	28.5	31.0	30.0	30.5	22.0	20.0	21.5
31	---	---	---	29.5	29.0	28.5	30.5	29.5	30.0	---	---	---
MONTH	30.5	23.0	28.0	31.0	28.0	30.0	31.0	26.0	29.5	30.5	20.0	26.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.5	3.8	4.2	4.8	4.2	4.6	6.7	6.2	6.5	9.4	8.6	9.0
2	4.6	3.5	4.1	4.7	3.2	4.2	6.2	5.6	5.9	8.6	8.1	8.3
3	4.6	3.9	4.4	4.7	3.5	4.3	7.7	5.9	6.8	8.0	7.7	7.9
4	4.5	3.8	4.3	4.5	3.8	4.2	7.0	6.5	6.7	7.9	7.4	7.6
5	4.4	3.9	4.2	4.6	3.9	4.2	6.5	6.1	6.3	7.6	7.0	7.4
6	4.6	3.8	4.3	5.0	3.0	4.3	6.6	6.1	6.4	7.0	6.3	6.8
7	5.2	3.7	4.5	5.3	4.9	5.1	6.7	6.0	6.4	6.8	6.0	6.5
8	5.8	4.8	5.3	5.3	5.0	5.2	6.6	5.8	6.3	6.7	6.2	6.5
9	4.7	1.9	3.9	4.9	4.0	4.5	6.4	4.6	5.7	7.1	6.3	6.6
10	6.0	4.4	5.1	5.7	4.9	5.3	5.9	2.9	4.9	9.4	6.9	8.1
11	6.7	5.2	6.0	5.8	5.1	5.5	5.8	2.9	4.9	8.7	7.8	8.1
12	6.6	4.3	5.8	5.8	5.3	5.6	6.1	4.9	5.7	8.4	8.1	8.3
13	6.6	4.6	6.2	5.7	5.2	5.5	6.0	5.2	5.7	8.7	8.4	8.6
14	6.4	3.0	5.9	5.5	5.0	5.3	6.3	5.9	6.1	9.7	8.3	8.9
15	6.2	2.9	5.7	5.5	4.9	5.2	6.5	5.9	6.2	8.3	7.9	8.1
16	5.8	4.0	5.4	5.6	4.8	5.4	7.0	6.3	6.6	8.0	7.8	7.9
17	5.7	4.9	5.3	5.6	5.1	5.4	7.0	6.6	6.9	8.0	7.6	7.8
18	5.3	4.7	5.0	5.8	5.1	5.6	7.7	6.6	7.1	8.5	7.9	8.2
19	5.0	4.3	4.7	5.6	4.8	5.3	8.0	7.6	7.8	9.1	8.6	8.8
20	5.2	4.2	4.8	5.4	4.6	5.0	8.1	7.9	8.0	8.5	8.0	8.3
21	5.9	4.6	5.3	5.5	5.0	5.2	8.1	7.8	7.9	8.5	8.1	8.3
22	6.0	5.8	5.9	5.1	4.5	4.8	8.6	7.9	8.2	8.5	8.1	8.3
23	5.9	5.5	5.8	5.4	4.6	4.9	8.5	8.2	8.3	8.9	7.9	8.4
24	5.8	5.4	5.6	5.7	5.3	5.6	9.6	8.3	8.7	9.2	7.5	8.7
25	5.8	5.2	5.6	5.9	5.4	5.6	9.6	9.1	9.4	8.7	6.9	8.3
26	5.5	3.9	5.3	7.0	5.2	5.7	9.1	8.9	9.0	8.5	8.0	8.3
27	5.3	4.9	5.1	7.6	6.5	7.1	9.0	8.4	8.8	8.2	6.7	7.9
28	5.5	5.2	5.3	7.6	7.3	7.4	8.7	8.2	8.4	9.8	7.6	8.8
29	5.3	4.7	5.0	7.5	7.0	7.3	9.7	8.7	9.3	8.2	7.6	7.8
30	5.1	3.7	4.6	7.0	6.6	6.8	10.0	9.6	9.8	7.5	7.3	7.4
31	4.9	4.4	4.7	---	---	---	9.9	9.5	9.7	---	---	---
MONTH	6.7	1.9	5.1	7.6	3.0	5.3	10.0	2.9	7.2	9.8	6.0	8.0

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.6	7.2	7.4	6.9	6.7	6.8	---	---	---
2	---	---	---	7.1	6.5	6.8	7.9	6.6	7.1	---	---	---
3	---	---	---	6.4	5.8	6.1	7.3	6.6	7.0	---	---	---
4	---	---	---	5.9	5.5	5.7	7.4	6.8	7.1	---	---	---
5	---	---	---	7.4	5.7	6.1	7.3	6.6	6.8	---	---	---
6	---	---	---	8.0	6.7	7.4	6.8	6.0	6.4	---	---	---
7	---	---	---	6.7	6.3	6.5	7.2	5.9	6.3	---	---	---
8	---	---	---	6.4	6.1	6.3	7.1	5.8	6.6	5.6	4.6	5.6
9	---	---	---	6.5	5.9	6.2	6.3	4.7	5.5	5.6	5.1	5.4
10	---	---	---	6.3	5.9	6.1	6.7	5.7	6.2	5.5	4.9	5.2
11	---	---	---	8.1	5.7	6.2	6.7	6.2	6.5	5.4	4.9	5.2
12	---	---	---	8.6	7.1	7.9	6.5	5.6	6.2	5.2	4.5	4.9
13	7.3	6.7	6.9	7.8	6.7	7.3	6.5	6.1	6.3	4.9	4.2	4.6
14	7.1	6.6	6.9	6.8	6.2	6.5	6.5	6.0	6.3	4.7	4.1	4.5
15	8.0	6.2	6.8	7.0	5.9	6.5	6.6	6.1	6.4	4.7	4.1	4.5
16	7.9	5.8	7.1	6.8	5.6	5.9	6.8	6.3	6.6	4.8	4.1	4.5
17	6.3	5.4	6.0	6.8	5.9	6.2	6.7	4.6	5.7	4.9	4.3	4.7
18	6.5	5.4	6.1	6.2	5.8	6.0	6.3	4.7	5.7	5.1	3.1	4.5
19	7.0	6.3	6.8	7.2	5.9	6.7	6.3	3.8	5.5	4.6	2.1	3.8
20	7.2	6.4	6.8	7.1	6.4	6.7	---	---	---	4.7	4.1	4.5
21	7.1	6.6	7.0	6.8	6.5	6.6	---	---	---	4.9	4.3	4.7
22	6.8	6.3	6.6	6.8	6.5	6.6	---	---	---	5.0	4.4	4.8
23	6.4	6.0	6.3	7.8	6.6	7.1	---	---	---	4.9	4.1	4.6
24	6.5	5.0	6.0	6.9	6.5	6.7	---	---	---	4.6	3.7	4.3
25	6.5	6.1	6.3	6.6	5.5	6.1	---	---	---	4.4	3.9	4.2
26	7.7	5.8	6.6	6.6	6.2	6.5	---	---	---	4.3	3.7	4.1
27	8.0	7.2	7.6	7.1	6.2	6.6	---	---	---	4.3	3.6	4.0
28	8.6	7.0	8.0	7.5	5.7	6.6	---	---	---	4.9	3.6	4.1
29	8.1	7.6	7.9	7.4	6.8	7.1	---	---	---	4.6	3.6	4.2
30	---	---	---	8.2	6.8	7.5	---	---	---	4.8	3.8	4.3
31	---	---	---	6.8	6.2	6.6	---	---	---	4.7	4.2	4.5
MONTH	8.6	5.0	6.8	8.6	5.5	6.6	7.9	3.8	6.4	5.6	2.1	4.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.8	4.4	4.6	4.5	3.7	4.1	3.9	2.7	3.5	2.8	1.6	2.3
2	4.6	4.1	4.4	4.7	3.7	4.3	3.6	2.6	3.3	2.9	1.8	2.4
3	4.4	3.5	4.1	4.8	4.1	4.6	3.4	2.7	3.2	---	---	---
4	4.7	3.7	4.3	5.1	4.1	4.6	4.0	2.2	3.1	---	---	---
5	4.5	2.3	4.2	4.7	3.5	4.2	3.5	2.8	3.2	---	---	---
6	5.7	4.2	4.8	4.1	3.4	3.8	3.8	2.6	3.3	---	---	---
7	4.8	3.8	4.1	4.5	3.6	4.1	3.8	2.8	3.4	---	---	---
8	4.1	3.3	3.8	4.5	3.8	4.2	2.8	1.5	2.4	---	---	---
9	4.3	2.9	3.9	4.7	3.9	4.4	2.6	1.5	2.2	---	---	---
10	3.9	3.5	3.7	---	---	4.4	2.0	1.4	1.6	---	---	---
11	4.1	3.0	3.8	4.6	3.4	4.3	3.5	2.0	2.8	---	---	---
12	4.0	3.2	3.7	4.3	2.6	3.4	4.2	2.8	3.5	---	---	---
13	3.7	3.2	3.5	4.0	2.9	3.6	4.1	3.6	4.0	2.5	1.7	2.1
14	3.4	3.0	3.2	4.0	3.3	3.7	4.1	3.2	3.9	2.6	1.5	2.2
15	3.3	1.7	2.6	4.1	3.6	3.8	3.8	3.1	3.5	2.7	1.6	2.2
16	3.3	1.7	2.8	4.1	3.2	3.7	4.1	3.0	3.5	3.3	2.2	2.7
17	3.5	2.6	3.1	4.0	3.3	3.7	3.8	3.2	3.6	3.4	2.7	3.2
18	3.3	2.5	2.9	3.9	1.9	3.3	3.6	2.9	3.3	3.4	2.6	3.0
19	5.7	2.4	4.0	4.1	3.4	3.9	3.5	2.6	3.2	3.1	2.3	2.8
20	5.6	4.2	4.8	4.0	3.2	3.7	3.7	2.7	3.3	3.0	1.9	2.6
21	5.3	4.2	4.6	3.8	3.0	3.5	4.2	2.7	3.3	2.8	2.0	2.5
22	5.2	4.2	4.6	3.9	2.6	3.4	4.1	2.4	3.2	2.8	2.0	2.4
23	5.4	4.1	4.7	3.9	.4	2.4	3.4	2.4	3.0	2.6	1.8	2.2
24	5.3	4.1	4.8	3.9	2.9	3.6	3.3	2.4	2.9	2.6	1.9	2.4
25	5.1	3.9	4.7	3.9	2.2	3.2	3.2	1.9	2.7	2.8	1.8	2.3
26	5.0	3.7	4.5	3.7	2.8	3.3	3.3	2.3	2.8	3.1	2.4	2.7
27	4.8	3.6	4.3	3.7	2.2	2.9	3.3	2.4	2.9	3.3	2.3	3.1
28	4.7	3.6	4.2	3.4	2.1	2.9	3.1	2.1	2.8	3.6	3.1	3.3
29	4.4	2.5	3.3	3.4	1.7	2.8	3.0	2.1	2.7	3.7	3.1	3.4
30	4.2	2.3	3.6	3.8	2.8	3.3	3.0	1.9	2.5	3.8	3.4	3.6
31	---	---	---	4.0	3.5	3.6	2.8	1.8	2.4	---	---	---
MONTH	5.7	1.7	4.0	5.1	.4	3.7	4.2	1.4	3.1	3.8	1.5	2.7

08057445 PRAIRIE CREEK AT U.S. HIGHWAY 175, DALLAS, TX

LOCATION.--Lat 32°42'17", long 96°40'11", Dallas County, Hydrologic Unit 12030105, on left bank at downstream side of of the downstream access road bridge on U.S. Highway 175, 3.4 mi upstream from mouth, and 9.0 mi southeast of Dallas City Hall.

DRAINAGE AREA.--9.03 mi^2.

PERIOD OF RECORD.--October 1975 to September 1980, April to September 1984.

GAGE.--Water-stage recorder. Datum of gage is 390.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1976-80), 5.34 ft^3/s, 3,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,970 ft^3/s Apr. 19, 1976 (gage height, 22.38 ft); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 226 ft^3/s Apr. 20 at 2330 hours (gage height, 13.73 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							.86	1.10	.04	.39	.00	.00
2							20.00	5.80	.02	.07	.00	.02
3							6.00	.86	.02	.03	.00	.00
4							1.20	.40	.02	.01	.01	.00
5							.60	.14	.04	1.70	.04	.00
6							1.30	.06	53.00	.04	.01	.00
7							13.00	.14	5.20	.02	.00	.00
8							23.00	.05	1.40	.00	.00	.00
9							3.20	.05	.36	.00	.00	.00
10							1.40	.07	.16	.00	.00	.00
11							.78	.09	.11	.00	.00	.00
12							1.10	.14	.07	.91	.00	.00
13							1.10	.29	.05	.04	.00	.00
14							2.30	.30	.05	.00	.00	.00
15							2.50	.17	.04	.00	.00	.01
16							2.40	.13	.04	.00	.00	.00
17							3.00	.09	.04	.00	.00	.00
18							4.00	.06	.04	.00	.00	.00
19							4.10	3.00	.03	.00	.00	.00
20							14.00	4.50	.02	.00	.00	.00
21							40.00	.94	.01	.00	.00	.00
22							1.20	.36	.00	.00	.00	.06
23							.25	.14	.00	.00	.00	.00
24							.08	.07	.00	.00	.00	.00
25							.05	.03	.00	.00	.00	.00
26							.04	.02	.00	2.20	.00	.00
27							.04	.02	.00	4.30	.00	.00
28							.04	30.00	.00	.76	.02	.03
29							.06	2.60	.00	.10	.00	.03
30							.04	.55	.70	.02	.00	.00
31							---	.11	---	.00	.00	---
TOTAL							147.64	52.28	61.46	10.59	.08	.15
MEAN							4.92	1.69	2.05	.34	.003	.005
MAX							40	30	53	4.3	.04	.06
MIN							.04	.02	.00	.00	.00	.00
AC-FT							293	104	122	21	.2	.3

WTR YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -

08058900 EAST FORK TRINITY RIVER AT MCKINNEY, TX

LOCATION.--Lat 33°14'38", long 96°36'31", Collin County, Hydrologic Unit 12030106, on downstream side of highway embankment near left end of main channel bridge on State Highways 5 and 121, 750 ft downstream from Honey Creek, 1.2 mi upstream from Southern Pacific Railway Co. bridge, 1.7 mi upstream from Clemons Creek, 3.3 mi north of McKinney, 26.1 mi upstream from Lavon Dam, and 86.5 mi upstream from mouth.

DRAINAGE AREA.--164 mi^2.

PERIOD OF RECORD.--October 1975 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 528.74 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. At end of year, flow from 89.1 mi above this station was affected at times by discharge from the flood-detention pools of 49 floodwater-retarding structures with a combined detention capacity of 26,080 acre-ft. A nonrecording rain gage is located at station. Gage-height telemeter is located at station.

AVERAGE DISCHARGE.--9 years regulated, 85.0 ft^3/s (61,580 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,800 ft^3/s May 13, 1982 (gage height, 22.17 ft, from graph); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, about 28 ft in April 1942 (discharge not determined), from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft^3/s Mar. 12 at 1600 hours (gage height, 16.10 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	29.0	6.2	6.0	54	90	15.0	2.90	0	0	0
2	.00	.00	23.0	8.2	5.4	51	92	35.0	1.10	0	0	0
3	.00	.00	33.0	12.0	5.9	46	141	32.0	.23	0	0	0
4	.00	.00	47.0	13.0	5.5	38	91	28.0	.04	0	0	0
5	.00	.00	34.0	14.0	5.0	30	73	25.0	.00	0	0	0
6	.00	10.00	27.0	14.0	4.3	25	63	32.0	7.30	0	0	0
7	.00	5.00	23.0	13.0	3.4	22	57	25.0	17.00	0	0	0
8	.00	2.70	20.0	12.0	3.2	20	120	22.0	6.90	0	0	0
9	.00	.85	18.0	11.0	5.3	19	95	19.0	2.40	0	0	0
10	.00	.12	18.0	12.0	18.0	17	75	17.0	.35	0	0	0
11	.00	.00	17.0	14.0	29.0	17	72	14.0	.08	0	0	0
12	.00	.00	17.0	13.0	193.0	681	59	12.0	.00	0	0	0
13	.00	.32	16.0	12.0	73.0	385	47	10.0	.00	0	0	0
14	.00	.90	15.0	11.0	50.0	246	37	8.0	.00	0	0	0
15	.00	1.40	15.0	9.8	34.0	191	32	7.0	.00	0	0	0
16	.00	1.20	14.0	9.2	24.0	148	28	6.2	.00	0	0	0
17	.00	2.00	14.0	8.0	19.0	115	26	5.0	.00	0	0	0
18	.00	.86	15.0	8.0	17.0	100	24	4.4	.00	0	0	0
19	.00	7.50	14.0	6.5	22.0	158	22	6.7	.00	0	0	0
20	.00	19.00	16.0	4.9	18.0	128	23	8.4	.00	0	0	0
21	24.00	14.00	13.0	4.8	16.0	87	21	13.0	.00	0	0	0
22	14.00	9.00	13.0	4.1	15.0	72	22	12.0	.00	0	0	0
23	5.00	14.00	8.7	5.2	14.0	208	20	160.0	.00	0	0	0
24	.03	25.00	6.5	9.1	12.0	302	19	68.0	.00	0	0	0
25	.00	14.00	5.1	11.0	12.0	179	17	28.0	.00	0	0	0
26	.00	11.00	5.1	11.0	80.0	132	15	17.0	.00	0	0	0
27	.00	112.00	5.8	9.2	261.0	140	18	13.0	.00	0	0	0
28	.00	114.00	6.0	8.7	116.0	374	14	10.0	.00	0	0	0
29	.00	61.00	6.6	8.1	72.0	186	11	12.0	.00	0	0	0
30	.00	39.00	5.2	7.1	---	130	9	8.1	.00	0	0	0
31	.00	---	5.5	6.6	---	104	---	5.0	---	0	0	---
TOTAL	43.03	464.85	505.5	296.7	1139.0	4405	1433	677.8	38.30	0	0	0
MEAN	1.39	15.5	16.3	9.57	39.3	142	47.8	21.9	1.28	.000	.000	.000
MAX	24	114	47	14	261	681	141	160	17	.00	.00	.00
MIN	.00	.00	5.1	4.1	3.2	17	9.0	4.4	.00	.00	.00	.00
AC-FT	85	922	1000	589	2260	8740	2840	1340	76	.00	.00	.00

CAL YR 1983 TOTAL 16645.18 MEAN 45.6 MAX 979 MIN .00 AC-FT 33020
WTR YR 1984 TOTAL 9003.18 MEAN 24.6 MAX 681 MIN .00 AC-FT 17860

08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX

LOCATION.--Lat 33°17'40", long 96°28'58", Collin County, Hydrologic Unit 12030106, on left bank at upstream side of highway embankment of bridge on Farm Road 545, 3.5 mi upstream from Hatler Banch, 4.8 mi west of Blue Ridge, 7.4 mi upstream from Stiff Creek, 14.7 mi upstream from mouth, and 24.7 mi upstream from Lavon Dam.

DRAINAGE AREA.--83.1 mi^2.

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 536.29 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. At end of year, flow from 47.4 mi^2 above this station was affected at times by discharge from the flood-detention pools of 34 floodwater-retarding structures with a combined detention capacity of 12,710 acre-ft. Several observations of water temperature were made during the year. Gage-height telemeter located at this station.

AVERAGE DISCHARGE.--9 years regulated, 42.3 ft^3/s (30,650 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s May 13, 1982 (gage height, 22.5 ft, from floodmarks); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 20.7 ft probably in July 1913, from information furnished by State Department of Highways and Public Transportation. The probable date is from published records for discontinued station 08059500 located 9.7 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft^3/s May. 1 at 2400 hours (gage height, 13.73 ft,); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.0	3.3	3.3	5.3	26	47	175.0	6.00	4.30	0	0
2	0	.0	3.1	3.8	5.2	24	69	418.0	5.10	3.30	0	0
3	0	.0	4.7	4.1	5.0	23	101	188.0	4.40	2.40	0	0
4	0	.0	8.0	4.4	4.8	22	64	149.0	4.10	1.60	0	0
5	0	.0	7.4	4.8	4.4	22	48	82.0	3.90	.80	0	0
6	0	.0	6.2	5.9	4.2	19	43	57.0	8.50	.40	0	0
7	0	.0	5.6	5.9	3.8	17	42	43.0	16.00	.20	0	0
8	0	.0	5.3	4.9	3.5	17	105	34.0	6.80	.20	0	0
9	0	.0	4.9	4.6	3.5	15	72	28.0	4.70	.10	0	0
10	0	.0	4.6	5.3	9.0	15	56	27.0	3.80	.10	0	0
11	0	.0	4.4	6.9	14.0	17	48	25.0	3.70	.08	0	0
12	0	.0	4.3	6.7	51.0	358	42	24.0	3.30	.04	0	0
13	0	.0	4.2	5.9	27.0	287	35	23.0	2.70	.00	0	0
14	0	.0	4.3	5.4	17.0	171	31	22.0	2.30	.00	0	0
15	0	.0	4.2	5.1	12.0	117	28	22.0	2.10	.00	0	0
16	0	.0	4.8	4.5	10.0	88	25	21.0	1.60	.00	0	0
17	0	.0	4.9	4.4	8.0	74	24	20.0	1.20	.00	0	0
18	0	.0	5.2	4.2	8.0	70	24	18.0	.80	.00	0	0
19	0	.0	4.9	3.6	12.0	93	23	25.0	.60	.00	0	0
20	0	.0	4.9	3.2	9.7	65	26	22.0	.50	.00	0	0
21	0	.0	4.9	3.0	8.1	53	27	19.0	.50	.00	0	0
22	0	.0	4.8	3.2	7.7	47	26	13.0	.40	.00	0	0
23	0	.0	3.8	4.8	7.3	139	22	52.0	.30	.00	0	0
24	0	.0	2.7	5.6	6.6	201	19	44.0	.30	.00	0	0
25	0	.0	2.0	7.3	5.8	89	19	26.0	.20	.00	0	0
26	0	2.1	2.6	6.7	26.0	65	18	17.0	.71	.00	0	0
27	0	29.0	2.9	6.4	106.0	92	19	12.0	14.00	.00	0	0
28	0	25.0	3.5	6.1	47.0	199	15	10.0	7.10	.00	0	0
29	0	7.4	3.3	5.8	31.0	106	16	12.0	6.10	.00	0	0
30	0	4.1	3.6	5.8	---	68	15	8.2	6.60	.00	0	0
31	0	---	4.5	5.9	---	53	---	7.0	---	.00	0	---
TOTAL	0	67.6	137.8	157.5	462.9	2652	1149	1643.2	118.31	13.52	0	0
MEAN	.000	2.25	4.45	5.08	16.0	85.5	38.3	53.0	3.94	.44	.000	.000
MAX	.00	29	8.0	7.3	106	358	105	418	16	4.3	.00	.00
MIN	.00	.00	2.0	3.0	3.5	15	15	7.0	.20	.00	.00	.00
AC-FT	.00	134	273	312	918	5260	2280	3260	235	27	.00	.00

CAL YR 1983	TOTAL	11515.71	MEAN 31.5	MAX 866	MIN .00	AC-FT	22840
WTR YR 1984	TOTAL	6401.83	MEAN 17.5	MAX 418	MIN .00	AC-FT	12700

08060500 LAVON LAKE NEAR LAVON, TX

LOCATION.--Lat 33°01'54", long 96°28'56", Collin County, Hydrologic Unit 12030106, in right abutment of spillway in dam on East Fork Trinity River, 3,850 ft upstream from St. Louis Southwestern Railway Lines bridge, 4,000 ft upstream from bridge on State Highway 78, 2.9 mi west of Lavon, and 55.9 mi upstream from mouth.

DRAINAGE AREA.--770 mi².

PERIOD OF RECORD.--September 1953 to current year. Prior to October 1970, published as Lavon Reservoir.
Water-quality records.--Chemical analyses: October 1969 to September 1974, October 1975 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Jan. 20, 1954, nonrecording gage in the approach channel at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 18,860 ft long, including a 568-foot gated spillway with twelve 40.0- by 28.0-foot tainter gates. The original dam was 9,499 ft long, but conservation capacity was increased to the present size in December 1975. Deliberate impoundment began Sept. 14, 1953, and the dam was completed in October 1953. The low-flow outlets consist of five 36-inch-diameter controlled sluice gates. The capacity table is based on Table No. 9 (Design Memo 1970 Conditions). The lake was designed for flood control and water conservation. Water for municipal supply can be released down to elevation 453.0 ft. Flow is affected at times by discharge from the flood-detention pools of 149 floodwater-retarding structures with a combined detention capacity of 69,170 acre-ft. These structures control runoff from 242 mi² in the East Fork Trinity River, Pilot Grove Creek, and Sister Grove Creek drainage basins. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	514.0	-
Design flood	509.0	921,200
Top of tainter gates	503.5	748,200
Top of conservation pool	492.0	456,500
Crest of spillway (sill of tainter gates)	475.5	178,300
Lowest gated outlet (invert)	453.0	12,700

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 734,000 acre-ft May 26, 1982 (elevation, 503.02 ft); minimum since lake first filled in 1957, 80,150 acre-ft Apr. 17, 1976 (elevation, 465.96 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 454,800 acre-ft May 7 at 1600 hours (elevation, 491.92 ft); minimum daily, 352,900 acre-ft Sept. 30 at 2400 hours (elevation, 486.75 ft).

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

486.0	339,200	488.0	376,200	491.0	435,500
487.0	357,500	489.0	395,500	492.0	456,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401700	394100	388100	377800	372300	376600	430000	438500	441800	425500	397000	373600
2	401000	393900	389100	377600	372400	377000	432500	445400	441400	424500	396300	373800
3	400000	393500	388700	377200	372300	377000	435600	451700	440300	423300	395100	373400
4	399400	393500	388500	377200	371700	378000	436000	453200	439700	422300	394100	372300
5	399000	393700	388300	377000	371500	377000	436200	453600	439100	421900	393300	371100
6	398200	393700	387500	377000	370800	376400	436000	454100	442000	420900	392600	370000
7	402300	393100	387300	376600	370600	376200	437900	454900	441800	420000	393100	368900
8	401900	392400	386800	376400	370800	376200	439500	453400	441200	419800	392800	367400
9	401600	392200	386800	377400	371300	375700	440300	452600	440600	417600	392200	367000
10	401000	391600	386400	377600	370900	375500	441000	451100	440800	416600	391400	365900
11	400800	390600	386200	377000	373000	377400	440800	451500	440100	416000	390800	365100
12	400200	390400	385400	377000	374700	383700	441200	451100	440100	415400	390600	364400
13	399400	389800	385200	377000	375500	388500	441200	450700	438900	414200	390000	363600
14	398600	389800	384800	376600	375100	389800	440800	450200	438300	413200	389500	362900
15	398200	388900	384600	376200	375100	391400	440600	449800	437600	412000	388900	361900
16	398000	388300	384600	376000	375300	392200	440100	449000	436600	411200	388100	360600
17	397800	387300	384300	376000	374700	392600	439700	448300	436000	410600	387300	359700
18	397400	387000	384300	375700	375900	400600	439700	448100	435000	409300	386600	358600
19	398800	388500	383700	374900	375500	403500	439500	448100	434300	408100	385600	357700
20	399800	387300	382700	374700	375100	403900	439300	448100	433300	407100	384600	357100
21	399400	387100	382600	374200	374900	404300	439100	447300	432100	405900	383100	356400
22	398600	387900	382000	374500	374500	404300	438700	447300	431200	405100	382500	358200
23	398200	387900	382300	374700	374500	417800	438100	447100	430600	403900	382200	357700
24	397600	387000	381200	374500	374200	422600	436800	446400	430000	403300	381200	356600
25	397000	386400	380400	374300	373200	423700	436600	445400	428800	402700	380000	356600
26	396700	388500	380000	374200	373600	425100	436400	445200	428600	400000	378900	356200
27	396100	389100	379900	373800	375500	426300	436800	445400	428000	401200	378000	355300
28	395500	389100	379500	373600	377000	428200	436400	446200	427100	401000	376800	355300
29	395300	388500	378000	373200	376800	429200	436000	445200	426700	399800	376200	354000
30	394900	388900	378100	373000	---	429600	435400	443900	426300	398800	375500	353100
31	394500	---	378000	372600	---	430200	---	442900	---	397800	374300	---
MAX	402300	394100	389100	377800	377000	430200	441200	454900	442000	425500	397000	373800
MIN	394500	386400	378000	372600	370600	375500	430000	438500	426300	397800	374300	353100
(†)	488.94	488.65	488.08	487.80	488.02	490.73	490.98	491.34	490.54	489.11	487.89	486.75
(‡)	-8000	-5600	-10900	-5400	+4200	+53400	+5200	+7500	-16600	-28500	-23500	-21200

CAL YR 1983 MAX 505700 MIN 378000 ‡ -84200
WTR YR 1984 MAX 454900 MIN 353100 ‡ -49400

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

08061000 EAST FORK TRINITY RIVER NEAR LAVON, TX

LOCATION.--Lat 33°01'25", long 96°28'31", Collin County, Hydrologic Unit 12030106, on left bank at downstream side of St. Louis Southwestern Railway Lines bridge, 150 ft upstream from bridge on State Highway 78, 3,550 ft downstream from Lavon Dam, 2.5 mi west of Lavon, and 54.9 mi upstream from mouth.

DRAINAGE AREA.--773 mi^2.

PERIOD OF RECORD.--October 1953 to current year.
Water-quality record.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 429.58 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1969, at site 150 ft downstream at same datum.

REMARKS.--Records fair except those for October through January, which are poor. Flow is regulated by Lavon Lake (station 08060500).

AVERAGE DISCHARGE.--31 years, 339 ft^3/s (245,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/s May 26, 27, 1957, from records of released flow from Lavon Lake furnished by Corps of Engineers; maximum gage height, 17.34 ft May 26, 1957; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1894, 22.3 ft in 1913 and in April 1942, from information by St. Louis Southwestern Railway Lines and local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 446 ft^3/s Mar. 23 at 1030 hours (gage height, 10.26 ft); no flow Dec. 23-30, June 22 to Sept. 21, and Sept. 23-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.22	.11	.03	.59	2.00	7.80	9.00	.56	0	0	.00
2	.22	.22	.38	.07	.82	2.00	11.00	7.60	.56	0	0	.00
3	.22	.16	.78	.11	.82	1.20	11.00	1.70	.56	0	0	.00
4	.22	.16	.29	.16	.82	.82	9.90	.82	.56	0	0	.00
5	.23	.22	.16	.22	.82	.82	9.90	.82	.56	0	0	.00
6	.44	1.20	.15	.22	.82	.82	8.80	.82	4.20	0	0	.00
7	2.60	.56	.19	.22	.82	.82	6.40	.58	1.40	0	0	.00
8	.69	.36	.36	.22	.56	.82	6.00	.23	1.10	0	0	.00
9	.36	.22	.36	.82	1.10	.99	5.10	.22	.82	0	0	.00
10	.36	.22	.36	3.00	1.20	1.20	5.10	.22	.82	0	0	.00
11	1.20	.22	.53	2.50	1.20	1.70	5.10	.22	.82	0	0	.00
12	.67	.16	.66	.82	3.20	18.00	3.70	.22	.68	0	0	.00
13	.22	.16	.64	.56	2.20	7.20	3.00	.22	5.10	0	0	.00
14	.22	.22	.22	.36	1.80	5.10	2.50	.22	2.00	0	0	.00
15	.36	.22	.22	.36	1.30	5.10	2.00	.97	1.30	0	0	.00
16	.36	.22	.51	.36	.56	5.10	1.50	3.60	.86	0	0	.00
17	.36	.68	.44	.36	.56	4.00	1.20	1.80	.39	0	0	.00
18	.50	.94	.28	.22	.56	38.00	.82	.86	.21	0	0	.00
19	3.00	1.10	.22	.22	6.00	27.00	.56	.22	.07	0	0	.00
20	1.40	.54	.22	.22	1.50	25.00	.42	.22	.07	0	0	.00
21	1.80	.37	.22	.22	2.40	12.00	.22	.22	.06	0	0	.00
22	.97	.33	.07	.36	2.90	8.50	.22	.22	.00	0	0	.02
23	.91	.30	.00	2.00	3.00	79.00	.22	.22	.00	0	0	.00
24	1.20	.22	.00	1.20	2.50	18.00	.22	.22	.00	0	0	.00
25	.56	.22	.00	.82	2.10	15.00	.22	.22	.00	0	0	.00
26	.36	1.00	.00	.82	3.20	12.00	.22	.22	.00	0	0	.00
27	.36	1.90	.00	.56	2.50	11.00	.22	.28	.00	0	0	.00
28	.22	.16	.00	.56	2.30	12.00	.36	1.60	.00	0	0	.00
29	.22	.09	.00	.56	2.00	7.80	.36	.56	.00	0	0	.00
30	.22	.11	.00	.56	---	7.80	.36	.56	.00	0	0	.00
31	.22	---	.01	.36	---	7.80	---	.56	---	0	0	---
TOTAL	20.89	12.70	7.38	19.07	50.15	338.59	104.42	35.44	22.70	0	0	.02
MEAN	.67	.42	.24	.62	1.73	10.9	3.48	1.14	.76	.000	.000	.001
MAX	3.0	1.9	.78	3.0	6.0	79	11	9.0	5.1	.00	.00	.02
MIN	.22	.09	.00	.03	.56	.82	.22	.22	.00	.00	.00	.00
AC-FT	41	25	15	38	99	672	207	70	45	.00	.00	.04

CAL YR 1983	TOTAL	87574.15	MEAN	240	MAX	1770	MIN	.00	AC-FT	173700
WTR YR 1984	TOTAL	611.36	MEAN	1.67	MAX	79	MIN	.00	AC-FT	1210

08061540 ROWLETT CREEK NEAR SACHSE, TX

LOCATION.--Lat 32°57'35", long 96°36'51", Dallas County, Hydrologic Unit 12030106, on left bank at downstream side of bridge on State Highway 78, 150 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 250 ft downstream from Spring Creek, and 1.5 mi southwest of Sachse.

DRAINAGE AREA.--120 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 450.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No known diversions above station. The North Texas Municipal Water District returns sewage effluent into a tributary above station. A rain gage and gage-height telemeter are located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1969-84), 90.5 ft^3/s (65,570 acre-ft).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft^3/s Mar. 27, 1977 (gage height, 29.31 ft); no flow Aug. 24 to Sept. 2, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1942, 35.4 ft in 1942, from information by State Department of Highways and Public Transportation.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 7	1530	3,350	18.16	Mar. 18	2345	6,980	23.74
Feb. 12	0100	2,200	14.75	Mar. 23	1315	*7,600	24.40
Feb. 26	1130	2,080	14.33	May 1	2230	4,020	19.60
Mar. 12	0345	2,640	16.18	June 6	0730	3,890	19.36

Minimum discharge, 3.5 ft^3/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	23	29	27	29	68	112	741	28	21	14	14
2	15	21	212	28	29	63	429	992	27	19	16	40
3	16	20	143	28	29	58	140	128	25	18	16	20
4	14	19	58	25	28	78	106	81	26	17	32	19
5	13	20	49	25	29	58	97	70	28	31	20	16
6	15	85	43	23	31	49	91	67	951	21	20	16
7	922	30	39	22	25	49	368	61	75	17	240	16
8	171	23	37	22	27	47	298	56	42	16	60	16
9	71	21	35	123	263	45	119	51	34	18	30	18
10	39	21	34	132	48	46	103	49	31	18	22	18
11	212	20	35	43	140	112	95	45	30	20	25	14
12	140	20	33	37	645	1530	85	44	28	28	53	15
13	29	19	31	33	100	201	79	44	26	24	30	15
14	26	22	29	31	75	120	72	41	25	16	33	14
15	24	19	29	35	66	103	69	39	24	16	36	15
16	24	20	47	33	59	101	68	37	23	16	20	16
17	24	21	35	35	55	90	63	36	22	14	17	16
18	21	20	26	30	150	736	60	36	21	13	15	16
19	138	57	24	28	65	1350	62	65	18	13	15	17
20	44	35	23	29	56	170	63	47	19	16	17	16
21	47	23	23	28	54	136	64	51	19	14	15	21
22	28	20	22	32	50	119	57	38	18	15	15	36
23	25	86	23	94	49	2440	54	36	17	17	15	21
24	25	29	22	40	47	412	53	34	17	16	16	21
25	23	22	25	38	45	199	49	33	17	24	16	21
26	22	322	26	35	581	162	49	30	53	22	16	18
27	22	497	28	35	129	300	47	29	27	21	16	19
28	23	64	29	33	80	151	47	245	31	64	15	26
29	22	39	27	33	70	126	53	39	66	36	14	22
30	22	32	25	29	---	117	55	33	33	19	14	19
31	23	---	25	28	---	114	---	29	---	16	15	---
TOTAL	2254	1670	1266	1214	3054	9350	3107	3327	1801	636	898	571
MEAN	72.7	55.7	40.8	39.2	105	302	104	107	60.0	20.5	29.0	19.0
MAX	922	497	212	132	645	2440	429	992	951	64	240	40
MIN	13	19	22	22	25	45	47	29	17	13	14	14
AC-FT	4470	3310	2510	2410	6060	18550	6160	6600	3570	1260	1780	1130

CAL YR 1983 TOTAL 31909 MEAN 87.4 MAX 1450 MIN 12 AC-FT 63290
WTR YR 1984 TOTAL 29148 MEAN 79.6 MAX 2440 MIN 13 AC-FT 57820

08061550 LAKE RAY HUBBARD NEAR FORNEY, TX

LOCATION.--Lat 32°48'00", long 96°29'45", Kaufman County, Hydrologic Unit 12030106, near right end of spillway in Forney Dam on East Fork Trinity River, 0.5 mi upstream from Duck Creek, 1.8 mi upstream from bridge on Interstate Highway 20, 3.8 mi northwest of Forney, 24 mi downstream from Lavon Dam, and 31.8 mi upstream from mouth.

DRAINAGE AREA.--1,071 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1968 to current year.
Water-quality records.--Chemical analyses: October 1969 to September 1979.

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

REMARKS.--The lake is formed by a rolled earthfill dam 12,500 ft long, including a 664-foot gated spillway with fourteen 40- by 28-foot tainter gates. Closure was made in September 1967, but the gates were not closed until Mar. 22, 1970. Low-flow releases are made through three 4.5- by 6.75-foot sluiceways. The lake was built by the city of Dallas for municipal water supply. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 12,530 acre-ft. These structures control runoff from 44.5 mi² above this station and below Lavon Lake station (08060500). There are two gage-height telemeters at station. Area and capacity tables are based on surveys made in 1953 and 1959. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	450.0	-
Design flood	440.5	611,500
Top of tainter gates	437.5	536,700
Top of conservation pool	435.5	489,900
Crest of spillway (sill of tainter gates)	409.5	83,130
Lowest gated outlet (invert)	388.0	80

COOPERATION.--The area and capacity tables were furnished by Forrest and Cotton, Consulting Engineers for the city of Dallas.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 513,900 acre-ft May 13, 1982 (elevation, 436.54 ft); minimum since first appreciable filling following closure of gates on Mar. 22, 1970, 326,600 acre-ft Sept. 29, 30, 1978 (elevation, 427.48 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 488,600 acre-ft May 8 at 0100 hours (elevation, 435.44 ft); minimum, 420,400 acre-ft Sept. 30 (elevation, 432.31 ft).

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

432.0	414,000	435.0	478,600
433.0	435,000	436.0	501,400
434.0	456,500		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	438600	433500	432200	430700	428600	432800	480400	483800	475000	468400	446500	432000
2	437500	433500	433900	430700	429500	433900	483100	486100	475000	466800	445700	432800
3	436200	433100	434500	430500	429200	433500	483800	486500	474200	466200	445400	433700
4	437500	433500	434100	430700	428800	436700	483400	485800	473500	465900	444600	431600
5	435600	433900	435000	430500	428800	435000	482700	485600	473000	465100	443700	430900
6	436000	434300	433900	430700	427800	433100	481800	485400	477500	464400	443700	429900
7	437300	433900	434100	430500	427800	432800	484700	488100	477100	464000	443700	428600
8	437900	432800	433900	430300	428000	433900	486300	484300	476600	463100	443300	427100
9	437700	433100	434100	432800	429700	432800	486700	483100	477300	462000	443100	427600
10	436700	433300	434500	431800	428600	432800	487700	481600	477500	460900	442400	427100
11	440700	431800	435000	431400	430700	435800	486700	482000	477100	460900	442000	426700
12	438200	432000	433700	431800	432400	443100	487400	481800	476400	460400	442400	426500
13	436900	431600	434700	431600	432600	443700	487700	482000	476400	459100	442400	426100
14	436000	431400	435000	431100	431800	443500	487200	481800	475900	458200	442200	425700
15	435800	430900	435200	430900	432600	445200	486700	481100	475500	457800	441800	425300
16	435800	430100	434500	430700	432200	445700	485600	480700	474400	456900	441400	424200
17	435800	428200	435000	431600	432800	446300	485400	479800	473900	456500	441100	423600
18	435400	429000	435200	431100	433700	448900	484900	479300	473500	455200	440500	422700
19	436400	429900	434500	430300	432800	455200	485400	479300	472800	454300	440500	422300
20	437900	428600	434100	430300	432800	455200	485400	479800	471700	453200	439200	421900
21	437500	429000	434300	429500	432200	455200	485200	478600	471000	452400	438400	421500
22	436900	431800	433500	430100	431800	455000	484700	479100	470600	451900	438200	423400
23	435800	429900	435000	430700	432600	474800	483800	478600	471000	451300	438200	423400
24	436000	429000	434300	430500	431800	475900	481600	477500	470100	450400	437300	422300
25	435200	428600	432600	430500	430700	476800	481600	477100	469000	450400	436200	424600
26	435800	431400	432200	430500	439200	478200	481600	476600	470100	450000	435800	422700
27	435000	432800	432600	430100	436700	481600	482900	478000	469500	449300	435000	422500
28	433900	432400	433100	430100	435600	480700	482200	480400	469000	449300	434700	422900
29	433900	431800	431800	431400	433300	480200	482900	478200	469500	448700	433900	421700
30	433700	433100	430700	429700	---	480000	481600	477100	469300	448000	433500	420400
31	433900	---	430700	429700	---	481100	---	476200	---	447200	432800	---
MAX	440700	434300	435200	432800	439200	481600	487700	488100	477500	468400	446500	433700
MIN	433700	428200	430700	429500	427800	432800	480400	476200	469000	447200	432800	420400
(†)	432.95	432.91	432.80	432.75	432.92	435.11	435.13	434.89	434.58	433.57	432.90	432.31
(‡)	-5700	-800	-2400	-1000	+3600	+47800	+500	-5400	-6900	-22100	-14400	-12400

CAL YR 1983 MAX 492900 MIN 428200 ‡ -48480
WTR YR 1984 MAX 488100 MIN 420400 ‡ -19200

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

TRINITY RIVER BASIN

08061550 LAKE RAY HUBBARD NEAR FORNEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1984 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
APR 09...	1340	288	110	12	40	2.8	13	.6

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (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)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
APR 09...	3.6	100	25	9.7	.40	.6	160

TRINITY RIVER BASIN

08061700 DUCK CREEK NEAR GARLAND, TX

LOCATION.--Lat 32°49'58", long 96°35'43", Dallas County, Hydrologic Unit 12030106, on right bank in the median area between the dual bridges on Belt Line Road, 6.0 mi southeast of Garland, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--31.6 mi².

PERIOD OF RECORD.--January 1958 to current year.
Water-quality records.--Sediment records: October 1976 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 430.02 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 4.00 ft higher.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Flow is slightly regulated by several small on-channel dams. Small diversions for irrigation of golf course above station. Low flows may be sustained by effluents from the city of Garland. A recording rain gage is located at station.

AVERAGE DISCHARGE.--26 years, 28.5 ft³/s (12.25 in/yr), 20,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s July 27, 1962 (gage height, 20.80 ft, present datum); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, 21.5 ft (present datum) June 13, 1949, from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 12	0345	2,970	16.17	Mar. 23	1115	*8,140	18.51
Mar. 19	0045	3,780	16.64	June 6	0930	2,870	16.11

Minimum discharge, no flow at times in August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	1.7	5.0	1.7	3.2	4.7	8.3	299	1.9	4.6	.30	.00
2	.06	1.7	54	1.7	4.4	4.5	205	93	1.6	2.8	.44	67
3	.13	1.6	24	1.7	4.2	4.0	16	6.2	1.4	2.1	.41	50
4	.18	1.5	6.8	1.6	4.1	3.8	8.3	4.0	1.3	1.3	1.4	2.1
5	.01	1.4	4.5	1.6	3.3	3.8	6.5	3.1	3.1	5.7	4.2	.74
6	.01	60	3.3	1.5	2.8	3.3	5.7	2.7	547	4.0	1.4	.56
7	114	19	2.7	1.5	2.6	2.9	186	1.9	7.5	1.8	.94	.13
8	42	7.0	2.5	1.4	3.6	2.7	75	2.2	3.5	1.4	2.8	.09
9	7.5	5.0	2.4	100	146	2.7	11	1.2	1.7	1.3	2.0	.01
10	2.2	3.0	2.2	69	10	2.9	9.1	1.2	1.2	1.2	.95	.00
11	84	2.1	2.3	8.5	12	28	7.5	1.1	1.3	19	1.7	.06
12	58	2.0	2.1	6.2	108	763	5.9	1.1	.94	16	25	.38
13	3.3	1.7	2.0	5.1	9.9	16	4.5	.94	.82	3.1	5.1	.09
14	1.7	1.5	1.9	4.7	8.9	9.9	4.2	1.4	.77	2.4	2.3	.00
15	1.1	1.4	1.9	4.8	6.9	9.1	3.5	1.2	.78	2.1	2.1	.09
16	.84	1.5	2.4	5.0	5.7	9.9	3.8	.84	.49	1.4	1.5	.13
17	2.1	1.4	2.0	3.5	5.6	7.2	3.3	.74	.30	.95	1.2	.01
18	3.5	1.4	1.9	3.5	79	167	2.9	1.1	.26	.91	1.1	.23
19	92	30	1.8	3.5	4.5	446	4.0	7.2	1.4	.74	1.4	.13
20	75	10	1.7	3.5	3.8	13	5.9	6.5	1.8	.48	.71	.00
21	29	3.0	1.7	3.3	3.5	9.9	16	2.6	1.2	.65	.18	.00
22	5.9	1.7	1.6	4.0	3.5	8.3	3.8	1.6	.65	.62	.37	51
23	3.5	40	1.6	62	4.0	1440	2.6	.64	.23	.56	.01	2.1
24	3.3	10	1.5	9.0	3.5	44	2.4	.48	.09	.59	.00	.30
25	2.6	6.0	1.6	6.5	3.3	12	1.9	.56	.18	1.3	.00	5.0
26	2.6	30	1.7	5.6	235	6.5	1.7	.38	.17	.68	.00	3.8
27	2.5	100	1.7	5.0	11	72	1.7	1.2	1.2	.48	1.6	1.2
28	2.2	16	1.8	4.6	6.2	15	1.7	137	.69	.87	1.1	7.2
29	2.1	6.8	1.7	4.4	5.3	7.9	1.6	6.5	98	5.5	.22	2.1
30	1.9	5.3	1.6	4.1	---	6.8	2.1	2.9	105	1.3	.00	1.1
31	1.7	---	1.6	3.5	---	7.9	---	2.2	---	.65	.00	---
TOTAL	544.97	373.7	145.5	342.0	703.8	3134.7	611.9	592.68	786.47	86.48	60.43	195.55
MEAN	17.6	12.5	4.69	11.0	24.3	101	20.4	19.1	26.2	2.79	1.95	6.52
MAX	114	100	54	100	235	1440	205	299	547	19	25	67
MIN	.01	1.4	1.5	1.4	2.6	2.7	1.6	.38	.09	.48	.00	.00
CFSM	.56	.40	.15	.35	.77	3.20	.65	.60	.83	.09	.06	.21
IN.	.64	.44	.17	.40	.83	3.69	.72	.70	.93	.10	.07	.23
AC-FT	1080	741	289	678	1400	6220	1210	1180	1560	172	120	388

CAL YR 1983 TOTAL 10469.87 MEAN 28.7 MAX 1320 MIN .01 CFSM .91 IN 12.32 AC-FT 20770
WTR YR 1984 TOTAL 7578.18 MEAN 20.7 MAX 1440 MIN .00 CFSM .66 IN 8.92 AC-FT 15030

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX

LOCATION.--Lat 32°46'27", long 96°30'12", Kaufman County, Hydrologic Unit 12030106, on right bank 25 ft downstream from bridge on Interstate Highway 20, 0.2 mi downstream from Duck Creek, 1.9 mi downstream from Lake Ray Hubbard Dam, 2.5 mi upstream from Texas and Pacific Railroad Co. bridge, 2.6 mi northwest of Forney, and 30.8 mi upstream from mouth.

DRAINAGE AREA.--1,118 mi^2, of which 1,071 mi^2 is above Lake Ray Hubbard.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 377.86 ft National Geodetic Vertical Datum of 1929 (from State Department of Highways and Public Transportation bridge plans). Prior to Aug. 26, 1975, recording gage at same datum located at site 126 ft upstream and 868 ft to left. From Aug. 26, 1975, to May 12, 1977, recording gage at same datum located at site 105 ft downstream.

REMARKS.--Water-discharge records good. Flow is regulated by Lake Ray Hubbard (station 08061550). Low flow is sustained by sewage effluent from the city of Garland into Duck Creek, which enters the East Fork Trinity River 0.2 mi upstream from this station. Gage-height telemeters at station.

AVERAGE DISCHARGE.--11 years (water years 1974-84), 515 ft^3/s (373,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s Mar. 27, 1977 (gage height, 16.34 ft); minimum daily, 13 ft^3/s Oct. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,980 ft^3/s Mar. 23 at 1815 hours (gage height, 11.75 ft); minimum daily, 20 ft^3/s Mar. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	51	36	32	34	31	60	32	32	52	30	26
2	47	53	37	30	33	27	179	445	31	36	30	29
3	51	56	115	34	37	28	217	74	27	32	29	130
4	54	48	56	34	34	25	88	44	28	32	30	47
5	55	48	43	32	32	25	60	41	31	41	32	36
6	55	126	42	30	32	25	56	38	450	60	33	29
7	93	90	37	29	30	22	70	37	158	39	33	29
8	169	57	36	28	28	21	368	41	50	35	29	29
9	98	57	35	54	195	22	88	35	40	35	33	28
10	55	59	33	263	66	22	63	32	36	31	31	27
11	55	59	34	69	40	20	62	31	35	34	34	32
12	227	59	38	48	172	1010	56	35	34	65	44	27
13	69	56	34	42	63	192	48	34	34	39	57	32
14	50	58	33	42	41	70	45	29	33	33	38	30
15	46	60	36	40	36	53	51	36	33	31	33	28
16	45	60	35	39	32	55	45	33	29	31	30	27
17	56	59	60	38	33	55	38	35	26	39	36	30
18	50	61	42	41	94	43	37	33	59	32	32	27
19	139	111	37	38	70	630	36	35	33	31	29	30
20	104	131	35	40	38	102	37	50	30	31	28	27
21	175	71	34	38	41	56	54	39	30	29	26	40
22	74	65	37	39	35	46	42	35	31	28	28	62
23	54	148	33	101	32	1920	29	33	31	31	31	60
24	76	101	32	66	31	711	32	30	31	31	26	32
25	62	58	30	45	30	126	42	29	29	31	27	36
26	52	54	26	42	263	87	33	30	28	41	28	43
27	43	602	32	40	265	136	30	31	28	33	28	34
28	48	117	39	39	46	190	27	294	27	32	29	35
29	49	48	39	37	33	80	30	65	27	33	38	46
30	49	38	35	39	---	59	33	34	28	36	32	32
31	49	---	33	39	---	56	---	29	---	32	28	---
TOTAL	2296	2661	1224	1528	1916	5945	2056	1819	1519	1116	992	1120
MEAN	74.1	88.7	39.5	49.3	66.1	192	68.5	58.7	50.6	36.0	32.0	37.3
MAX	227	602	115	263	265	1920	368	445	450	65	57	130
MIN	43	38	26	28	28	20	27	29	26	28	26	26
AC-FT	4550	5280	2430	3030	3800	11790	4080	3610	3010	2210	1970	2220

CAL YR 1983	TOTAL	178991	MEAN	490	MAX 4520	MIN 26	AC-FT	355000
WTR YR 1984	TOTAL	24192	MEAN	66.1	MAX 1920	MIN 20	AC-FT	47980

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to current year.
WATER TEMPERATURES: October 1981 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 micromhos June 20, 1984; minimum daily, 220 micromhos Mar. 23, 1984.
WATER TEMPERATURES: Maximum daily, 30.5°C Aug. 3, 26, 1982; minimum daily, 4.0°C Jan. 16, Feb. 6, 1982.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 micromhos June 20; minimum daily, 220 micromhos Mar. 23.
WATER TEMPERATURES: Maximum daily, 29.0°C on several days during summer months; minimum daily, 9.0°C Jan. 23, Feb. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 17...	0915	58	840	8.2	18.0	70	17	.4	4	33	160
DEC 22...	1255	35	712	8.3	8.0	30	12	2.8	24	54	170
MAR 14...	1715	68	730	8.0	19.0	40	30	4.8	53	22	240
APR 25...	1335	39	930	7.6	22.0	100	28	.4	5	66	230
JUL 19...	1115	25	980	7.6	28.5	57	10	--	--	59	220
SEP 07...	1015	29	964	7.6	26.0	60	5.6	.0	0	69	240

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 17...	0	60	3.1	71	3	13	200	51	87	2.9	10
DEC 22...	0	62	3.5	59	2	9.7	210	50	53	1.2	8.2
MAR 14...	36	89	3.2	42	1	6.3	200	95	48	1.2	7.2
APR 25...	4	87	3.9	79	2	11	230	74	100	2.9	8.2
JUL 19...	0	81	4.1	82	3	11	220	57	120	2.5	7.7
SEP 07...	3	91	3.7	77	2	13	240	50	120	2.4	8.4

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 17...	420	30	30	--	.020	<.10	21.0	7.0	28	5.00	36
DEC 22...	370	26	2	--	.050	<.10	12.0	6.0	18	4.60	43
MAR 14...	410	58	20	.54	.160	.70	5.60	6.4	12	1.50	20
APR 25...	500	170	48	--	.020	<.10	14.0	10	24	3.80	47
JUL 19...	500	17	11	--	.010	<.10	8.50	12	20	2.90	36
SEP 07...	510	40	22	--	.030	<.10	.100	22	22	2.20	30

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	2296	595	328	2030	45	279	48	299	170
NOV.	1983	2661	602	330	2370	47	335	49	349	170
DEC.	1983	1224	712	384	1270	61	200	56	187	190
JAN.	1984	1528	718	386	1590	63	260	57	234	190
FEB.	1984	1916	642	350	1810	52	268	51	266	180
MAR.	1984	5945	375	215	3440	21	333	32	511	130
APR.	1984	2056	672	364	2020	56	314	54	297	180
MAY	1984	1819	648	350	1720	55	270	51	253	170
JUNE	1984	1519	675	361	1480	61	249	53	217	170
JULY	1984	1116	816	430	1300	79	239	63	190	190
AUG.	1984	992	830	437	1170	81	217	64	171	190
SEPT	1984	1120	739	395	1190	67	203	58	175	180
TOTAL		24192	**	**	21400	**	3170	**	3150	**
WTD.AVG.		66	601	328	**	48	**	48	**	170

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	721	770	792	616	793	773	775	876	1040	645	871	839
2	748	818	659	664	864	801	690	356	990	674	867	761
3	674	786	430	723	782	844	455	616	895	855	963	371
4	823	794	603	789	828	711	672	695	914	839	992	564
5	854	826	614	846	851	667	765	777	831	845	761	766
6	870	512	764	820	866	774	816	757	338	570	674	869
7	855	498	806	860	888	799	802	732	466	607	813	944
8	462	673	857	882	999	793	391	773	690	753	828	889
9	469	695	854	804	508	842	576	881	787	708	911	859
10	559	756	836	415	632	800	734	931	795	766	848	875
11	686	816	848	622	782	737	801	945	735	929	943	779
12	321	827	710	710	384	283	757	906	812	549	757	889
13	570	783	837	796	573	471	779	862	898	752	533	911
14	672	654	909	838	780	676	835	717	899	875	770	909
15	634	867	875	853	846	714	743	850	946	910	833	818
16	660	774	890	858	843	715	731	945	926	790	960	822
17	686	840	662	860	971	699	862	974	930	815	900	730
18	710	846	670	947	879	664	897	933	755	883	856	897
19	450	700	695	850	596	280	889	929	983	959	838	818
20	475	588	720	807	637	521	936	728	1050	950	739	902
21	334	646	733	873	805	725	731	712	963	958	775	878
22	660	788	712	824	884	750	720	903	997	906	750	596
23	653	616	735	664	851	220	701	926	946	938	720	528
24	648	645	749	660	854	373	850	947	817	902	947	713
25	684	711	765	795	784	556	873	960	761	910	914	818
26	791	761	790	796	507	690	936	915	927	989	895	998
27	805	303	730	863	485	635	930	841	904	946	812	828
28	812	419	665	837	718	527	929	465	901	975	917	784
29	802	696	645	835	827	635	1010	559	896	927	807	676
30	780	814	651	787	---	755	828	883	875	898	909	752
31	700	---	676	758	---	844	---	943	---	938	941	---
MEAN	663	707	738	782	759	654	780	814	856	837	840	793

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	23.0	18.0	13.0	13.0	14.0	18.0	21.0	29.0	---	26.0	29.0
2	28.0	25.0	18.0	13.0	14.0	15.0	18.0	18.0	25.0	26.0	27.0	28.0
3	28.0	25.0	15.0	15.0	15.0	18.0	16.0	19.0	26.0	27.0	27.0	26.0
4	25.0	24.0	16.0	14.0	14.0	19.0	16.0	---	---	26.0	29.0	26.0
5	26.0	22.0	17.0	13.0	13.0	14.0	18.0	24.0	25.0	25.0	29.0	26.0
6	28.0	20.0	15.0	14.0	12.0	14.0	19.0	25.0	24.0	28.0	28.0	26.0
7	28.0	20.0	15.0	15.0	13.0	16.0	19.0	25.0	25.0	27.0	27.0	24.0
8	25.0	21.0	16.0	16.0	14.0	15.0	18.0	21.0	25.0	---	29.0	27.0
9	23.0	---	17.0	16.0	12.0	15.0	18.0	21.0	26.0	27.0	28.0	29.0
10	23.0	19.0	18.0	12.0	15.0	---	19.0	21.0	25.0	25.0	27.0	29.0
11	24.0	19.0	18.0	12.0	18.0	16.0	19.0	---	26.0	25.0	27.0	28.0
12	22.0	19.0	16.0	12.0	15.0	14.0	21.0	24.0	25.0	28.0	26.0	27.0
13	23.0	20.0	17.0	13.0	15.0	14.0	20.0	26.0	25.0	26.0	26.0	28.0
14	20.0	20.0	16.0	12.0	16.0	18.0	22.0	24.0	26.0	29.0	27.0	27.0
15	21.0	19.0	15.0	13.0	17.0	20.0	20.0	24.0	26.0	26.0	24.0	26.0
16	---	18.0	---	14.0	15.0	19.0	18.0	24.0	26.0	26.0	27.0	25.0
17	---	---	13.0	14.0	15.0	18.0	18.5	24.0	28.0	27.0	28.0	24.0
18	---	20.0	12.0	13.0	16.0	19.0	21.0	24.0	28.0	26.0	29.0	24.0
19	25.0	21.0	---	12.0	16.0	14.0	21.0	24.0	26.0	20.0	29.0	25.0
20	24.0	18.0	---	12.0	14.0	14.0	21.0	25.0	27.0	25.0	28.0	24.0
21	21.0	17.0	---	13.0	14.0	19.0	22.0	24.0	27.0	27.0	---	25.0
22	22.0	21.0	---	12.0	14.0	---	22.0	24.0	26.0	27.0	---	---
23	25.0	19.0	---	9.0	14.0	16.0	19.0	26.0	28.0	26.0	---	25.0
24	20.0	---	---	11.0	16.0	16.0	---	25.0	27.0	27.0	29.0	27.0
25	22.0	17.0	---	12.0	16.0	16.0	22.0	26.0	27.0	27.0	29.0	27.0
26	20.0	18.0	---	12.0	17.0	17.0	23.0	28.0	27.0	27.0	26.0	22.0
27	---	15.0	---	12.0	11.0	---	23.0	27.0	27.0	28.0	29.0	22.0
28	20.0	11.0	11.0	15.0	9.0	15.0	24.0	---	28.0	29.0	29.0	22.0
29	21.0	14.0	11.0	15.0	14.0	15.0	24.0	22.0	27.0	28.0	25.0	19.0
30	24.0	17.0	12.0	16.0	---	16.0	20.0	23.0	25.0	28.0	25.0	20.0
31	20.0	---	11.0	14.0	---	18.0	---	24.0	---	26.0	28.0	---
MEAN	23.5	19.5	15.0	13.0	14.5	16.0	20.0	23.5	26.5	26.5	27.5	25.5

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX

LOCATION.--Lat 32°38'19", long 96°29'17", Kaufman County, Hydrologic Unit 12030106, on right bank 15 ft downstream from downstream eastbound bridge on U.S. Highway 175, 0.7 mi downstream from Mustang Creek, 1.8 mi northwest of Crandall, 4.0 mi upstream from Buffalo Creek, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--1,256 mi^2.

PERIOD OF RECORD.--June 1949 to current year.
Water-quality records.--Chemical and biochemical anlyses: October 1967 to September 1981. Pesticide analyses: October 1976 to September 1981.

REVISED RECORDS.--WSP 1922: Drainage area. WDR TX-75-1: 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 338.69 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1983, at datum 5.00 ft higher.

REMARKS.--Records good except those below 60 ft^3/s in July, August, and September, which are fair. Flow largely regulated by Lavon Lake (station 08060500) since September 1953 and Lake Ray Hubbard (station 08061550) since Mar. 22, 1970. The city of Forney discharges sewage effluent into a tributary below Lake Ray Hubbard and above this station. The North Texas Municipal Water District discharges sewage effluent into tributaries above station from the Mesquite and Chandler's Landing sewage treatment plants. Gage-height telemeter located at station. Flow is affected at times by discharge from the flood-detention pools of 20 floodwater-retarding structures with a combined detention capacity of 11,760 acre-ft. These structures control runoff from 39.2 mi^2.

AVERAGE DISCHARGE.--4 years (water years 1950-53) prior to regulation by Lavon Lake, 652 ft^3/s (472,400 acre-ft/yr); 31 years (water years 1954-84) regulated, 579 ft^3/s (419,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft^3/s May 28, 1957 (gage height, 22.81 ft); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft^3/s Mar. 24 at 2030 hours (gage height, 15.53 ft); minimum daily, 32 ft^3/s Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	50	51	66	54	82	125	53	48	129	57	43
2	52	51	34	68	50	75	118	127	48	62	53	46
3	53	53	33	66	51	70	292	183	46	57	56	75
4	53	53	34	72	53	68	197	114	44	54	50	45
5	53	50	57	70	51	62	135	88	51	57	56	47
6	48	79	33	69	50	63	110	64	121	84	50	44
7	58	143	32	67	54	60	100	68	312	75	54	48
8	164	78	37	60	55	56	258	67	93	61	53	44
9	137	59	37	74	131	54	247	63	60	63	47	47
10	76	51	34	315	195	58	139	57	61	61	57	46
11	54	51	33	179	89	63	111	53	52	60	52	49
12	183	50	34	99	220	650	97	56	54	62	58	50
13	163	50	40	74	204	880	88	60	56	81	84	53
14	68	49	33	67	97	439	78	56	60	53	66	56
15	52	48	32	66	75	230	71	55	56	50	50	50
16	50	48	43	63	68	168	71	54	50	49	48	60
17	52	48	43	60	63	153	70	56	44	63	47	48
18	58	46	44	50	70	140	70	62	42	75	70	53
19	96	52	46	50	140	251	67	58	58	52	66	47
20	173	132	60	46	89	369	65	76	49	49	60	47
21	166	84	40	48	67	188	104	68	48	51	60	46
22	141	57	34	57	67	133	115	57	45	47	58	100
23	73	89	40	88	61	491	83	55	45	50	61	125
24	58	150	43	138	56	1780	69	54	48	53	58	72
25	78	76	43	89	57	1220	62	61	46	59	59	59
26	57	52	44	74	179	333	61	55	47	76	59	79
27	50	334	46	67	490	502	61	55	50	69	58	63
28	52	392	60	60	191	466	57	132	49	58	59	65
29	53	98	53	56	101	290	55	145	50	57	57	87
30	53	74	44	53	---	176	53	67	140	58	66	66
31	51	---	42	54	---	141	---	52	---	55	47	---
TOTAL	2525	2647	1279	2465	3128	9711	3229	2271	1973	1930	1776	1760
MEAN	81.5	88.2	41.3	79.5	108	313	108	73.3	65.8	62.3	57.3	58.7
MAX	183	392	60	315	490	1780	292	183	312	129	84	125
MIN	48	46	32	46	50	54	53	52	42	47	47	43
AC-FT	5010	5250	2540	4890	6200	19260	6400	4500	3910	3830	3520	3490

CAL YR 1983	TOTAL	201512	MEAN	552	MAX	11200	MIN 31	AC-FT 399700
WTR YR 1984	TOTAL	34694	MEAN	94.8	MAX	1780	MIN 32	AC-FT 68820

08062500 TRINITY RIVER NEAR ROSSER, TX

LOCATION.--Lat 32°25'35", long 96°27'46", Ellis County, Hydrologic Unit 12030105, on right bank at downstream side of right pier of bridge on State Highway 34, 2.5 mi south of Rosser, 8.5 mi downstream from East Fork Trinity River, and at mile 451.4.

DRAINAGE AREA.--8,147 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to September 1925, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1922: Drainage area. WDR TX-77-1: 1942(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 302.65 ft National Geodetic Vertical Datum of 1929. July 25, 1924, to Sept. 30, 1925, nonrecording gage at abandoned lock and dam No. 7, 1.7 mi upstream from present site at datum 6.94 ft higher.

REMARKS.--Water-discharge records good. At times, flow is affected by storage in 15 upstream reservoirs having a combined capacity of 3,572,000 acre-ft, of which 1,138,000 acre-ft is for flood control. A levee system constructed in 1916 extends several miles upstream and downstream from station. The cities of Fort Worth and Dallas and several small cities divert considerable water for municipal use, of which about 60 percent is returned as sewage effluents which sustain low flows at this site. Flow is affected at times by discharge from the flood-detention pools of 38 floodwater-retarding structures with a combined detention capacity of 22,680 acre-ft. These structures control runoff from 76.7 mi^2. Two separate gage-height telemeters at station.

AVERAGE DISCHARGE.--47 years (water years 1925, 1939-84), 2,590 ft^3/s (1,876,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft^3/s Apr. 23, 1942, following numerous breaks in levee systems along both banks; maximum gage height, 41.55 ft Apr. 22, 1942, just prior to levee breaks; minimum discharge, 32 ft^3/s for several days in 1924-25.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 reached a stage of about 33 ft (present site and datum), from information by Corps of Engineers (discharged believed to have been about the same as that of Apr. 22, 1942).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft^3/s Mar. 25 at 1500 hours (gage height, 23.27 ft); minimum daily, 560 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	597	594	868	967	772	1060	1420	839	790	1070	701	645
2	573	605	787	876	765	904	1400	1770	731	788	697	623
3	560	594	1070	846	744	855	2460	5410	706	761	687	1550
4	573	589	1510	846	727	809	2280	3710	675	732	682	1710
5	597	603	1120	817	710	782	1530	1460	716	714	808	885
6	583	741	878	791	706	992	1240	1080	1100	858	745	758
7	645	1350	806	782	690	828	1150	1010	4780	799	730	703
8	1450	1110	737	742	728	746	2060	941	4630	732	729	675
9	3390	763	726	775	930	726	3820	888	1660	712	705	657
10	4780	673	713	1800	2090	736	2300	821	1010	706	685	643
11	2080	652	671	2780	1900	793	1480	768	866	706	684	644
12	1420	611	666	1700	1780	3790	1280	739	838	712	905	633
13	1660	605	692	1080	3140	9270	1150	753	813	958	1780	640
14	1030	573	679	1030	1830	9210	1100	717	793	1120	1490	633
15	779	605	673	867	1110	5920	1020	725	780	765	911	633
16	687	586	679	800	1390	2320	982	741	756	704	802	622
17	622	597	799	789	946	1770	949	708	724	689	748	599
18	631	682	814	761	842	1360	938	711	689	707	724	606
19	683	836	813	778	1460	2390	841	1710	718	691	692	605
20	1230	959	787	781	1360	5980	817	2850	728	674	668	619
21	1670	832	737	763	957	4350	1170	1570	717	675	670	614
22	1470	746	697	739	838	1770	1340	997	715	650	658	647
23	954	837	723	821	794	2130	928	876	704	640	676	700
24	702	1370	706	1150	766	11300	829	834	680	644	679	656
25	665	1140	796	1050	738	12500	792	801	667	670	671	631
26	645	766	789	946	1170	11300	775	769	690	869	657	683
27	643	1750	824	871	3660	6920	783	730	717	834	643	659
28	664	3080	923	882	3190	6650	781	1070	722	804	658	644
29	645	1850	959	929	1710	3520	736	2230	821	803	677	763
30	587	1110	1000	778	---	2460	795	1330	1070	738	674	658
31	579	---	984	755	---	1850	---	885	---	744	680	---
TOTAL	33794	27809	25626	30292	38443	115991	39146	40443	32006	23669	23916	21738
MEAN	1090	927	827	977	1326	3742	1305	1305	1067	764	771	725
MAX	4780	3080	1510	2780	3660	12500	3820	5410	4780	1120	1780	1710
MIN	560	573	666	739	690	726	736	708	667	640	643	599
AC-FT	67030	55160	50830	60080	76250	230100	77650	80220	63480	46950	47440	43120

CAL YR 1983	TOTAL	620896	MEAN	1701	MAX	14600	MIN 553	AC-FT 1232000
WTR YR 1984	TOTAL	452873	MEAN	1237	MAX	12500	MIN 560	AC-FT 898300

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1954 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: January 1968 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1954 to current year.
pH: March 1977 to current year.
WATER TEMPERATURES: October 1954 to current year.
DISSOLVED OXYGEN: March 1977 to current year.

INSTRUMENTATION.--Beginning March 1977, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,990 micromhos Oct. 13, 1956; minimum, 122 micromhos Sept. 30, 1981.
pH: Maximum, 9.9 units July 12, 1982; minimum, 6.8 units Oct. 3, 19, 20, Nov. 19, 1980.
WATER TEMPERATURES: Maximum, 36.0°C July 1, 1955; minimum, 1.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 10.7 mg/L Nov. 9, 1977; minimum, 0.0 mg/L on several days during 1979-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 846 micromhos Feb. 7, June 25; minimum, 268 micromhos Mar. 24.
pH: Maximum, 7.8 units Feb. 28, Mar. 24; minimum, 7.1 units on several days during year.
WATER TEMPERATURE: Maximum, 32.0°C June 24, 25; minimum, 3.0°C Dec. 25.
DISSOLVED OXYGEN: Maximum, 8.7 mg/L Dec. 22; minimum, 0.2 mg/L May 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV										
28...	1230	2630	410	7.7	13.0	6.8	65	15	110	8
JAN										
09...	1330	776	761	7.5	13.0	4.4	43	8.0	150	0
MAR										
28...	1400	5370	440	7.7	19.0	6.1	67	12	150	29
MAY										
08...	1040	979	672	7.4	22.5	3.8	44	35	170	23
JUN										
20...	1340	722	768	7.6	29.5	6.3	83	16	150	7
AUG										
22...	1125	666	742	7.6	30.0	3.8	51	20	140	9

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 K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV									
28...	37	3.2	34	2	5.6	98	45	30	.40
JAN									
09...	50	5.7	81	3	12	160	89	69	1.1
MAR									
28...	54	3.3	26	1	5.7	120	52	21	.40
MAY									
08...	61	5.0	62	2	8.3	150	89	55	.90
JUN									
20...	50	5.4	92	3	12	140	91	77	1.2
AUG									
22...	47	5.3	89	3	12	130	79	77	1.2

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV 28...	5.9	220	1.4	.420	1.8	1.20	2.6	3.8	1.30
JAN 09...	9.7	410	2.04	.960	3.0	8.50	.50	9.0	3.70
MAR 28...	8.8	240	1.4	.320	1.7	.960	3.0	4.0	1.50
MAY 08...	8.3	380	2.2	.960	3.2	2.90	1.9	4.8	2.40
JUN 20...	8.2	420	4.1	1.30	5.4	1.80	2.2	4.0	3.60
AUG 22...	9.6	400	2.7	2.10	4.8	2.90	1.1	4.0	4.00

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	33794	576	323	29400	41	3730	70	6420	150
NOV.	1983	27809	625	350	26300	46	3450	77	5760	160
DEC.	1983	25626	700	391	27100	54	3720	86	5980	160
JAN.	1984	30292	681	381	31100	52	4220	84	6860	160
FEB.	1984	38443	629	352	36500	46	4770	77	8000	160
MAR.	1984	115991	486	273	85600	31	9760	59	18300	150
APR.	1984	39146	672	376	39700	51	5360	83	8750	160
MAY	1984	40443	616	345	37700	45	4910	76	8250	160
JUNE	1984	32006	649	363	31300	49	4240	80	6910	160
JULY	1984	23669	732	409	26100	58	3680	91	5800	160
AUG.	1984	23916	706	394	25500	55	3530	87	5640	160
SEPT	1984	21738	671	375	22000	51	2980	83	4850	160
TOTAL		452873	**	**	418000	**	54400	**	91500	**
WTD.AVG.		1237	611	342	**	44	**	75	**	160

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	794	768	779	756	746	759	602	550	569	632	626	629
2	790	750	770	774	736	757	666	606	642	630	618	622
3	794	754	773	774	736	754	734	652	701	648	624	635
4	764	742	755	778	754	766	752	618	712	654	636	648
5	788	754	771	782	742	761	606	558	585	688	630	662
6	778	740	757	768	742	754	592	548	565	724	684	711
7	768	748	756	782	634	740	---	---	630	726	706	717
8	782	688	758	674	588	637	---	---	670	764	722	741
9	672	374	537	596	560	577	---	---	704	758	732	744
10	386	284	323	612	588	598	---	---	728	772	608	733
11	476	372	401	686	616	652	---	---	739	606	502	565
12	534	478	498	712	688	702	---	---	747	546	516	540
13	564	446	524	740	692	715	---	---	756	560	532	541
14	520	484	490	788	742	758	778	762	767	642	562	599
15	596	498	541	794	766	779	794	756	770	672	644	653
16	670	602	635	764	736	752	792	772	781	686	654	671
17	704	670	687	768	732	749	800	784	791	732	680	709
18	712	684	700	778	740	754	790	766	775	760	728	745
19	726	688	713	---	---	730	780	754	764	806	750	781
20	742	710	726	---	---	681	778	738	766	800	782	795
21	742	556	678	---	---	712	732	710	721	780	744	763
22	548	490	507	---	---	738	756	704	720	780	746	763
23	518	492	505	---	---	700	756	742	747	790	762	775
24	608	522	558	---	---	575	758	738	747	786	718	758
25	616	608	613	---	---	595	752	726	738	746	696	718
26	662	614	640	---	---	650	740	726	733	696	668	681
27	712	664	687	---	---	569	728	666	684	704	686	698
28	732	706	718	---	---	340	666	646	660	726	704	716
29	750	722	734	462	450	453	660	648	654	772	718	747
30	752	722	742	554	468	516	666	642	655	786	688	748
31	740	706	718	---	---	---	664	628	646	770	702	745
MONTH	794	284	645	794	450	674	800	548	705	806	502	695

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	778	760	769	594	546	564	674	560	624	810	802	806
2	792	760	779	646	596	616	710	676	691	802	756	781
3	792	776	784	720	650	690	740	500	668	698	378	454
4	790	768	778	746	718	730	644	518	584	460	424	441
5	808	770	787	784	748	765	612	592	603	538	462	502
6	832	792	808	790	776	781	666	612	637	638	538	589
7	846	808	826	798	754	773	700	668	682	696	634	664
8	828	790	803	798	688	721	742	680	713	704	670	681
9	814	780	799	794	720	761	748	482	543	708	688	695
10	806	552	701	804	792	795	528	498	508	730	704	720
11	632	554	589	794	762	781	606	522	567	726	710	717
12	620	534	593	758	316	602	676	604	642	760	726	740
13	556	490	514	480	334	435	728	676	698	792	754	770
14	528	508	516	492	454	470	752	728	743	804	784	793
15	586	526	556	528	464	486	766	750	761	804	774	785
16	672	584	619	602	534	585	792	766	782	780	760	769
17	700	650	676	696	598	647	786	772	780	792	760	777
18	692	650	659	724	642	676	788	774	780	796	776	786
19	744	698	731	750	576	656	804	784	792	824	658	783
20	702	564	647	610	408	466	800	784	793	700	434	533
21	644	560	612	496	410	456	820	784	798	526	440	475
22	---	---	711	566	498	535	794	554	684	562	516	532
23	---	---	723	622	520	585	752	650	693	648	564	593
24	---	---	732	520	268	364	708	668	698	714	648	682
25	---	---	740	412	396	401	720	702	711	756	714	734
26	---	---	641	446	412	430	762	710	737	786	758	777
27	---	---	500	484	402	455	776	764	770	806	782	793
28	546	496	526	502	376	432	804	778	796	804	760	783
29	546	474	510	580	462	502	798	778	790	742	412	609
30	---	---	---	628	516	558	818	778	803	644	484	544
31	---	---	---	586	552	613	---	---	---	588	528	555
MONTH	846	474	677	804	268	591	820	482	702	824	378	673

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	652	590	619	790	664	727	706	690	698	740	712	727
2	692	654	681	678	606	643	746	700	717	740	726	734
3	774	694	733	734	678	704	768	746	752	768	610	726
4	810	760	788	730	704	720	774	758	768	582	372	471
5	814	798	805	728	696	714	798	770	781	482	362	392
6	808	764	784	750	718	731	822	764	798	538	414	474
7	798	390	546	748	712	728	786	658	729	636	540	602
8	408	352	380	722	686	708	786	686	729	680	638	665
9	468	410	444	722	662	693	766	686	730	698	674	682
10	578	470	526	752	726	742	766	742	750	738	698	713
11	664	580	614	752	724	737	754	734	743	762	738	747
12	690	670	679	736	710	723	764	736	746	752	704	725
13	712	690	699	772	712	744	790	644	718	736	704	719
14	742	712	729	774	622	727	702	440	507	746	728	739
15	762	738	752	824	620	763	530	476	502	754	720	735
16	778	758	767	770	622	720	572	536	553	742	714	729
17	782	750	766	712	670	689	642	576	616	760	732	749
18	794	784	788	710	678	692	712	644	673	760	714	743
19	796	780	787	752	700	715	742	716	724	750	722	734
20	794	768	780	754	724	737	758	738	745	726	688	709
21	818	784	798	752	728	742	760	744	753	746	720	737
22	814	788	800	756	742	750	762	718	738	744	724	732
23	826	802	811	768	748	757	740	710	726	722	696	710
24	826	796	810	774	744	760	790	728	751	712	660	676
25	846	814	832	790	758	775	792	766	776	742	688	712
26	830	780	806	---	---	778	768	740	753	704	664	682
27	800	764	783	812	778	792	774	748	760	702	662	678
28	786	764	775	796	770	787	778	738	759	710	682	693
29	808	788	797	800	748	773	760	710	735	704	692	698
30	808	782	797	748	644	702	736	708	722	766	684	705
31	---	---	---	728	686	710	736	704	720	---	---	---
MONTH	846	352	723	824	606	732	822	440	715	768	362	685

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.3	7.4	7.4	7.3	7.3	7.6	7.5	7.6	7.5	7.4	7.5
2	7.3	7.2	7.3	7.3	7.3	7.3	7.5	7.5	7.5	7.4	7.4	7.4
3	7.3	7.2	7.2	7.3	7.2	7.3	7.5	7.5	7.5	7.4	7.4	7.4
4	7.2	7.2	7.2	7.3	7.2	7.2	7.5	7.4	7.5	7.4	7.3	7.4
5	7.2	7.2	7.2	7.3	7.2	7.2	7.5	7.5	7.5	7.6	7.3	7.5
6	7.2	7.2	7.2	7.3	7.2	7.2	7.5	7.5	7.5	7.6	7.5	7.5
7	7.2	7.2	7.2	7.3	7.2	7.2	---	---	---	7.6	7.5	7.5
8	7.3	7.2	7.2	7.3	7.2	7.2	---	---	---	7.6	7.5	7.5
9	7.4	7.2	7.3	7.4	7.2	7.3	---	---	---	7.6	7.5	7.6
10	7.5	7.4	7.5	7.4	7.4	7.4	---	---	---	7.6	7.5	7.6
11	7.4	7.3	7.3	7.5	7.4	7.4	---	---	---	7.7	7.6	7.6
12	7.5	7.3	7.4	7.5	7.4	7.5	---	---	---	7.7	7.7	7.7
13	7.5	7.3	7.4	7.5	7.4	7.4	---	---	---	7.7	7.7	7.7
14	7.4	7.4	7.4	7.5	7.4	7.4	7.6	7.5	7.5	7.7	7.6	7.7
15	7.4	7.4	7.4	7.5	7.4	7.4	7.6	7.5	7.6	7.7	7.6	7.7
16	7.4	7.4	7.4	7.4	7.4	7.4	7.6	7.6	7.6	7.7	7.6	7.7
17	7.4	7.3	7.4	7.4	7.4	7.4	7.7	7.6	7.6	7.7	7.6	7.7
18	7.3	7.3	7.3	7.4	7.3	7.4	7.7	7.6	7.6	7.7	7.7	7.7
19	7.3	7.2	7.2	7.3	7.3	7.3	7.7	7.6	7.6	7.7	7.7	7.7
20	7.2	7.2	7.2	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7
21	7.2	7.2	7.2	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7
22	7.2	7.1	7.1	---	---	---	7.7	7.6	7.7	7.7	7.6	7.7
23	7.2	7.1	7.1	---	---	---	7.7	7.6	7.7	7.7	7.6	7.6
24	7.1	7.1	7.1	---	---	---	7.7	7.6	7.7	7.7	7.6	7.6
25	7.1	7.1	7.1	---	---	---	7.7	7.6	7.7	7.7	7.6	7.6
26	7.1	7.1	7.1	---	---	---	7.7	7.6	7.6	7.7	7.6	7.6
27	7.4	7.1	7.2	---	---	---	7.7	7.7	7.7	7.6	7.5	7.6
28	7.4	7.3	7.4	---	---	---	7.6	7.6	7.6	7.5	7.5	7.5
29	7.4	7.3	7.4	7.6	7.5	7.6	7.6	7.5	7.6	7.6	7.5	7.5
30	7.4	7.3	7.3	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.5	7.5
31	7.4	7.3	7.3	---	---	---	7.5	7.5	7.5	7.7	7.4	7.6
MONTH	7.5	7.1	7.3	7.6	7.2	7.4	7.7	7.4	7.6	7.7	7.3	7.6

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.7	7.7	7.7	7.7	7.6	7.7	7.7	7.7	7.7	7.5	7.5	7.5
2	7.7	7.6	7.6	7.6	7.6	7.6	7.7	7.7	7.7	7.5	7.3	7.5
3	7.6	7.6	7.6	7.6	7.6	7.6	7.7	7.6	7.7	7.5	7.3	7.5
4	7.7	7.6	7.6	7.6	7.5	7.5	7.7	7.6	7.7	7.5	7.4	7.4
5	7.6	7.6	7.6	7.6	7.5	7.6	7.7	7.7	7.7	7.4	7.4	7.4
6	7.6	7.6	7.6	7.6	7.5	7.5	7.7	7.7	7.7	7.4	7.4	7.4
7	7.6	7.6	7.6	7.5	7.5	7.5	7.7	7.6	7.6	7.4	7.4	7.4
8	7.7	7.6	7.6	7.5	7.4	7.4	7.7	7.5	7.6	7.5	7.4	7.4
9	7.7	7.5	7.6	7.4	7.3	7.4	7.6	7.5	7.6	7.4	7.4	7.4
10	7.4	7.3	7.4	7.3	7.3	7.3	7.6	7.5	7.6	7.4	7.4	7.4
11	7.4	7.3	7.3	7.3	7.3	7.3	7.6	7.6	7.6	7.4	7.4	7.4
12	7.4	7.3	7.4	7.4	7.2	7.3	7.6	7.6	7.6	7.4	7.4	7.4
13	7.4	7.3	7.4	7.7	7.4	7.5	7.6	7.5	7.6	7.4	7.4	7.4
14	7.5	7.4	7.5	7.7	7.6	7.6	7.6	7.6	7.6	7.4	7.4	7.4
15	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.5	7.6	7.4	7.4	7.4
16	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.4	7.4	7.4
17	7.6	7.5	7.5	7.6	7.5	7.5	7.6	7.6	7.6	7.4	7.4	7.4
18	7.6	7.5	7.5	7.6	7.5	7.5	7.6	7.5	7.6	7.4	7.4	7.4
19	7.5	7.4	7.5	7.6	7.5	7.6	7.6	7.5	7.5	7.4	7.2	7.3
20	7.5	7.4	7.4	7.6	7.5	7.6	7.5	7.5	7.5	7.3	7.2	7.2
21	7.4	7.4	7.4	7.6	7.6	7.6	7.5	7.4	7.5	7.3	7.2	7.3
22	7.4	7.4	7.4	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.3	7.3
23	---	---	---	7.5	7.5	7.5	7.4	7.4	7.4	7.3	7.3	7.3
24	---	---	---	7.8	7.5	7.6	7.4	7.4	7.4	7.3	7.3	7.3
25	---	---	---	7.6	7.5	7.6	7.6	7.4	7.5	7.4	7.3	7.3
26	---	---	---	7.5	7.5	7.5	7.5	7.5	7.5	7.4	7.3	7.4
27	---	---	---	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.4	7.4
28	7.8	7.7	7.7	7.4	7.3	7.4	7.5	7.5	7.5	7.4	7.3	7.4
29	7.7	7.6	7.7	7.6	7.3	7.4	7.5	7.5	7.5	7.4	7.2	7.3
30	---	---	---	7.6	7.6	7.6	7.5	7.5	7.5	7.3	7.3	7.3
31	---	---	---	7.7	7.6	7.7	---	---	---	7.3	7.3	7.3
MONTH	7.8	7.3	7.5	7.8	7.2	7.5	7.7	7.3	7.6	7.5	7.2	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.3	7.3	7.3	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.2	7.2
2	7.4	7.3	7.3	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.1	7.2
3	7.4	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.1
4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.4	7.2	7.3
5	7.4	7.4	7.4	7.5	7.2	7.4	7.2	7.2	7.2	7.3	7.2	7.2
6	7.4	7.3	7.4	7.5	7.4	7.5	7.3	7.2	7.2	7.2	7.1	7.1
7	7.4	7.2	7.3	7.5	7.4	7.4	7.2	7.2	7.2	7.1	7.1	7.1
8	7.5	7.4	7.4	7.4	7.3	7.4	7.3	7.2	7.2	7.1	7.1	7.1
9	7.4	7.3	7.4	7.4	7.3	7.4	7.2	7.2	7.2	7.2	7.1	7.1
10	7.4	7.4	7.4	7.5	7.4	7.4	7.3	7.2	7.2	7.3	7.2	7.2
11	7.4	7.4	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.3	7.2	7.3
12	7.4	7.4	7.4	7.4	7.3	7.4	7.2	7.2	7.2	7.3	7.2	7.3
13	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1	7.2	7.3	7.2	7.2
14	7.5	7.4	7.4	7.3	7.3	7.3	7.2	7.1	7.2	7.3	7.2	7.3
15	7.5	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.3	7.2	7.2
16	7.5	7.4	7.5	7.3	7.3	7.3	7.2	7.2	7.2	7.3	7.2	7.2
17	7.5	7.4	7.5	7.3	7.3	7.3	7.3	7.2	7.2	7.3	7.2	7.2
18	7.5	7.4	7.5	7.3	7.3	7.3	7.3	7.2	7.2	7.3	7.2	7.3
19	7.6	7.5	7.5	7.4	7.3	7.4	7.3	7.3	7.3	7.3	7.2	7.2
20	7.7	7.5	7.6	7.4	7.3	7.3	7.3	7.3	7.3	7.2	7.2	7.2
21	7.6	7.6	7.6	7.4	7.3	7.3	7.3	7.3	7.3	7.2	7.2	7.2
22	7.6	7.5	7.6	7.4	7.3	7.4	7.3	7.3	7.3	7.2	7.2	7.2
23	7.6	7.5	7.6	7.3	7.3	7.3	7.3	7.3	7.3	7.2	7.2	7.2
24	7.6	7.5	7.5	7.3	7.3	7.3	7.4	7.3	7.3	7.2	7.2	7.2
25	7.6	7.5	7.5	7.3	7.2	7.3	7.4	7.3	7.3	7.2	7.2	7.2
26	7.6	7.5	7.5	7.3	7.2	7.2	7.3	7.3	7.3	7.2	7.2	7.2
27	7.5	7.4	7.4	7.3	7.2	7.2	7.3	7.2	7.2	7.2	7.2	7.2
28	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
29	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
30	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
31	---	---	---	7.3	7.2	7.3	7.2	7.2	7.2	---	---	---
MONTH	7.7	7.2	7.4	7.5	7.2	7.3	7.4	7.1	7.2	7.4	7.1	7.2

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.0	25.0	25.5	22.0	21.5	21.5	13.5	12.0	12.5	7.0	5.5	6.5
2	25.5	25.0	25.5	23.0	22.0	22.5	14.5	13.5	14.0	8.0	7.0	7.5
3	26.0	25.0	25.5	23.5	22.5	23.0	15.5	14.5	15.0	9.0	7.5	8.5
4	26.5	25.5	26.0	23.5	23.5	23.5	15.5	14.5	15.0	10.5	9.0	10.0
5	26.5	25.5	26.0	23.5	22.0	23.0	15.5	14.0	14.5	11.5	10.5	11.0
6	25.5	24.5	25.0	22.0	21.5	21.5	---	---	---	12.5	11.0	11.5
7	24.5	23.5	24.0	21.5	20.5	21.0	---	---	---	12.5	12.0	12.0
8	23.5	23.0	23.5	20.0	19.5	20.0	---	---	---	13.0	12.0	12.5
9	23.0	22.0	22.5	19.5	18.5	19.0	---	---	---	13.0	12.5	13.0
10	22.0	21.0	21.5	18.5	17.0	17.5	---	---	---	12.5	11.5	12.0
11	22.5	21.5	22.0	17.0	16.5	16.5	---	---	---	11.0	8.5	10.0
12	22.5	21.5	22.0	16.5	16.0	16.0	---	---	---	9.0	8.5	8.5
13	21.5	21.0	21.5	16.0	15.5	16.0	---	---	---	8.5	8.0	8.0
14	21.0	20.5	20.5	17.5	15.5	16.5	14.0	13.5	13.5	8.5	8.0	8.0
15	21.0	20.0	20.5	17.5	16.5	17.0	13.0	12.5	13.0	8.5	8.0	8.0
16	22.5	21.0	22.0	17.0	16.0	16.5	12.5	10.5	11.5	8.5	8.0	8.0
17	24.0	22.5	23.0	17.5	16.5	17.0	11.0	10.5	11.0	8.5	8.0	8.0
18	24.5	23.5	24.0	19.0	17.5	18.0	11.0	9.0	10.5	8.0	7.5	8.0
19	25.0	24.0	24.5	---	---	---	9.0	8.0	8.0	7.5	6.5	7.0
20	25.0	25.0	25.0	---	---	---	8.5	8.0	8.0	7.5	7.0	7.5
21	25.0	23.0	24.0	---	---	---	8.0	6.0	7.5	7.0	6.0	6.5
22	23.0	22.0	22.5	---	---	---	6.0	5.0	5.5	7.5	6.5	7.0
23	21.5	21.0	21.0	---	---	---	5.5	5.0	5.5	8.5	7.0	8.0
24	21.0	20.5	21.0	---	---	---	5.0	4.0	4.5	9.0	8.5	9.0
25	21.0	20.0	21.0	---	---	---	4.5	3.0	4.0	9.5	8.5	9.0
26	20.0	19.5	20.0	---	---	---	5.0	4.5	4.5	10.5	9.0	9.5
27	20.5	19.5	20.0	---	---	---	5.0	4.5	4.5	10.5	10.0	10.0
28	20.0	19.5	20.0	---	---	---	6.0	5.0	5.5	11.5	10.0	10.5
29	20.5	19.5	20.0	12.5	12.0	12.0	6.0	5.0	5.5	12.0	11.5	11.5
30	21.0	20.0	20.5	13.0	12.0	12.5	6.0	5.5	6.0	12.0	10.5	11.5
31	21.5	20.5	21.0	---	---	---	6.0	5.0	5.5	11.5	10.5	11.0
MONTH	26.5	19.5	22.5	23.5	12.0	18.5	15.5	3.0	9.0	13.0	5.5	9.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	11.0	12.0	12.0	10.5	11.5	17.0	15.0	16.0	22.5	21.5	22.0
2	13.0	12.0	12.5	14.5	12.5	13.5	17.5	16.5	17.0	22.5	21.0	21.5
3	13.0	12.0	12.5	16.0	14.5	15.5	18.0	17.0	17.5	21.5	20.0	21.0
4	13.5	12.5	13.0	17.0	16.0	16.5	17.5	16.5	17.0	22.5	20.5	21.5
5	13.0	12.5	12.5	16.5	14.0	15.0	17.5	16.0	16.5	24.5	22.5	23.5
6	12.0	11.5	11.5	15.5	14.0	14.5	18.0	16.5	17.5	25.5	24.5	25.0
7	12.5	11.0	12.0	15.0	14.5	15.0	18.0	17.5	18.0	25.5	25.0	25.5
8	12.0	12.0	12.0	14.5	14.0	14.5	19.0	17.5	18.5	24.5	23.5	24.0
9	13.5	12.0	12.5	15.0	14.0	14.5	19.0	17.5	18.5	24.0	23.0	23.5
10	15.0	14.0	14.5	15.5	15.0	15.0	19.0	18.5	19.0	23.5	23.0	23.0
11	15.5	14.0	15.0	15.0	14.5	15.0	21.0	18.5	20.0	24.0	22.5	23.5
12	15.5	14.5	15.0	15.0	13.5	14.5	21.0	20.0	20.5	25.0	23.5	24.5
13	15.5	14.0	14.5	14.0	13.0	13.5	21.0	20.0	20.5	26.5	24.5	25.5
14	14.0	13.5	14.0	15.5	13.5	14.5	21.0	20.5	21.0	27.0	26.0	26.5
15	15.0	14.0	14.5	18.0	15.5	17.0	20.5	19.5	20.0	27.5	26.5	27.0
16	15.5	14.5	15.0	19.0	18.5	18.5	19.5	19.0	19.0	27.0	26.0	26.5
17	15.5	15.0	15.0	19.5	19.0	19.5	19.5	18.5	19.0	26.5	26.0	26.0
18	16.0	15.5	15.5	19.5	19.0	19.5	19.5	19.5	19.5	26.5	25.5	26.0
19	15.5	15.0	15.5	19.5	17.0	18.0	21.5	19.5	20.5	25.5	24.5	25.0
20	15.0	13.5	14.0	17.5	15.0	16.0	22.5	21.0	22.0	24.5	24.0	24.5
21	13.5	12.5	13.0	16.0	14.5	15.0	23.0	22.5	22.5	25.5	24.0	25.0
22	---	---	---	17.5	16.0	16.5	22.5	21.0	21.5	26.0	25.0	25.5
23	---	---	---	18.5	17.5	18.0	21.5	20.5	21.0	27.5	26.0	26.5
24	---	---	---	18.0	15.5	16.5	21.5	20.5	21.0	28.0	27.0	27.5
25	---	---	---	16.0	15.5	16.0	21.5	21.0	21.5	28.5	27.5	28.0
26	---	---	---	17.5	16.0	17.0	23.0	21.5	22.5	28.5	28.0	28.0
27	---	---	---	19.5	17.5	18.5	24.0	22.5	23.5	29.0	28.0	28.5
28	15.0	11.5	13.0	19.5	18.0	18.5	24.0	23.0	23.5	28.0	26.5	27.5
29	11.5	11.0	11.0	17.5	16.0	16.5	24.0	23.0	24.0	26.0	24.0	25.0
30	---	---	---	17.0	15.5	16.0	23.0	21.5	22.5	25.0	23.5	24.0
31	---	---	---	17.0	15.5	16.0	---	---	---	24.5	23.5	24.0
MONTH	16.0	11.0	13.5	19.5	10.5	16.0	24.0	15.0	20.0	29.0	20.0	25.0

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	24.0	24.5	30.5	29.5	30.0	29.0	27.5	28.5	30.0	29.5	29.5
2	26.0	24.5	25.0	30.5	29.5	30.0	29.5	28.0	28.5	30.0	29.0	29.5
3	26.5	25.5	26.0	31.0	30.0	30.5	30.0	28.0	29.0	29.5	28.0	29.0
4	26.5	25.5	26.0	31.0	30.0	30.5	30.0	29.0	29.5	28.0	26.5	27.0
5	26.5	25.5	26.5	31.0	30.0	30.5	30.0	29.0	29.5	27.5	26.5	27.0
6	27.0	26.0	26.5	31.5	30.0	31.0	30.5	29.5	29.5	27.5	27.0	27.0
7	27.0	25.0	26.0	31.5	30.5	31.0	30.0	29.5	29.5	27.5	26.5	27.0
8	26.5	24.5	25.5	31.5	31.0	31.0	30.0	28.5	29.0	28.0	27.0	27.5
9	27.0	26.0	26.5	31.5	30.5	31.0	30.5	29.0	29.5	28.0	27.0	27.5
10	27.0	26.5	26.5	31.5	30.5	31.0	30.5	29.5	30.0	29.0	27.5	28.0
11	27.5	26.5	27.0	31.5	30.5	31.0	30.5	29.0	30.0	29.0	28.0	28.5
12	28.0	27.5	27.5	31.0	30.5	31.0	29.0	28.5	29.0	29.0	28.0	28.5
13	29.0	27.5	28.0	31.5	30.0	30.5	28.5	28.0	28.5	29.5	28.5	29.0
14	29.5	28.5	29.0	30.5	29.5	30.0	28.5	27.5	28.0	30.0	29.0	29.5
15	30.0	28.5	29.5	31.0	30.0	30.5	28.5	27.0	27.5	29.5	26.5	28.5
16	30.5	29.0	30.0	31.5	30.5	31.0	29.5	28.0	28.5	26.5	25.5	26.0
17	30.0	29.5	29.5	31.0	30.5	30.5	30.0	28.5	29.5	26.0	25.0	25.5
18	30.5	29.5	30.0	31.0	30.0	30.5	30.5	29.0	29.5	26.0	25.0	25.5
19	31.0	29.5	30.5	30.5	30.0	30.5	31.0	29.5	30.5	25.5	25.0	25.0
20	31.0	30.0	30.5	31.0	29.5	30.5	31.5	30.0	30.5	25.5	25.0	25.0
21	31.0	30.0	30.5	31.0	30.0	30.5	31.0	30.0	30.5	25.0	24.5	25.0
22	31.5	30.0	30.5	30.5	29.5	30.0	31.0	30.0	30.5	26.5	25.0	25.5
23	31.5	30.5	31.0	30.5	30.0	30.0	30.5	30.0	30.0	27.0	26.5	26.5
24	32.0	31.0	31.5	30.0	29.0	29.5	30.5	29.5	30.0	27.5	26.5	27.0
25	32.0	31.0	31.5	30.0	29.0	29.5	30.0	29.0	29.5	27.5	26.0	27.0
26	31.5	30.5	31.0	---	---	29.5	30.0	29.0	29.5	26.0	23.5	24.5
27	30.5	29.5	30.0	30.0	29.0	29.5	30.5	29.5	30.0	23.5	22.5	23.0
28	31.0	30.0	30.5	30.0	29.0	29.5	30.5	29.5	30.0	23.0	21.0	22.0
29	31.0	30.0	30.5	30.0	29.0	29.5	30.5	29.5	30.0	21.0	20.0	20.5
30	31.0	30.0	30.5	29.5	28.5	29.0	31.0	30.0	30.0	20.5	19.5	20.0
31	---	---	---	29.0	28.0	28.5	30.0	29.0	29.5	---	---	---
MONTH	32.0	24.0	28.5	31.5	28.0	30.0	31.5	27.0	29.5	30.0	19.5	26.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.8	3.4	3.6	4.0	3.6	3.9	7.2	7.0	7.1	8.4	7.9	8.2
2	3.7	3.2	3.5	4.0	3.6	3.7	6.9	6.0	6.4	7.9	7.3	7.6
3	3.5	3.0	3.2	3.7	3.5	3.6	5.9	5.2	5.6	7.3	6.6	6.8
4	3.4	2.8	3.1	3.6	3.2	3.4	5.9	4.7	5.0	6.5	5.4	5.8
5	3.2	2.6	2.9	3.5	3.0	3.2	6.0	5.2	5.6	5.5	4.8	5.1
6	3.1	2.7	2.9	3.4	3.0	3.2	6.2	5.8	6.0	4.8	3.3	3.9
7	3.0	2.6	2.8	3.0	2.2	2.7	---	---	---	4.2	3.9	4.0
8	2.7	1.7	2.4	3.2	2.5	3.0	---	---	---	4.2	3.7	3.9
9	3.1	1.5	2.6	4.5	3.2	4.0	---	---	---	4.5	4.0	4.2
10	3.5	1.2	2.8	5.2	4.4	4.8	---	---	---	5.2	4.3	4.6
11	4.0	2.6	3.4	5.0	4.7	4.8	---	---	---	7.9	5.1	6.4
12	4.5	4.0	4.2	5.3	4.8	5.0	---	---	---	7.7	7.5	7.6
13	4.5	2.7	3.5	5.3	4.7	5.0	---	---	---	7.6	7.5	7.5
14	4.4	3.6	4.2	4.8	4.4	4.7	5.2	5.0	5.1	7.6	7.3	7.4
15	4.6	4.1	4.4	4.7	4.4	4.6	5.4	5.1	5.2	7.5	7.0	7.3
16	4.2	3.7	4.0	4.9	4.5	4.7	6.1	5.3	5.6	7.6	7.0	7.3
17	3.8	3.1	3.5	4.9	4.6	4.7	6.2	5.9	6.1	7.3	6.7	7.0
18	3.7	3.1	3.3	5.0	4.5	4.7	6.2	5.9	6.0	7.2	6.7	6.9
19	3.8	3.2	3.4	4.7	4.3	4.5	6.6	6.3	6.5	7.4	6.5	7.0
20	3.2	2.6	2.9	---	---	---	7.4	6.5	6.8	7.1	6.6	6.8
21	2.8	2.5	2.6	---	---	---	7.6	7.2	7.4	7.6	7.1	7.4
22	3.7	3.0	3.3	---	---	---	8.7	7.6	8.0	7.6	6.1	6.7
23	4.1	3.2	3.7	---	---	---	8.6	6.9	8.1	6.3	5.1	5.7
24	4.4	3.7	4.1	---	---	---	8.5	7.4	8.1	6.5	5.6	6.0
25	4.3	4.0	4.1	---	---	---	8.6	8.2	8.4	6.7	5.8	6.3
26	4.5	3.3	4.1	---	---	---	8.5	7.9	8.2	7.3	6.3	6.8
27	4.9	4.3	4.5	---	---	---	8.5	8.3	8.4	6.8	6.1	6.3
28	4.9	4.3	4.5	---	---	---	8.3	7.8	7.9	6.4	5.9	6.2
29	4.6	4.3	4.4	7.3	7.2	7.3	8.1	7.5	7.8	6.2	5.5	5.8
30	4.3	4.0	4.1	7.4	7.1	7.3	7.9	7.3	7.7	6.9	5.5	6.2
31	4.3	3.9	4.1	---	---	---	8.6	7.8	8.2	6.9	6.1	6.5
MONTH	4.9	1.2	3.6	7.4	2.2	4.4	8.7	4.7	6.9	8.4	3.3	6.3

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.5	6.1	6.3	8.1	7.2	7.6	7.0	6.3	6.5	3.7	3.5	3.6
2	6.3	5.6	6.0	7.1	6.4	6.8	6.4	5.8	6.1	3.8	1.4	3.3
3	6.0	5.5	5.8	6.3	5.6	6.0	6.2	5.4	5.9	3.6	1.6	3.0
4	6.1	5.4	5.9	5.6	5.1	5.3	6.2	5.3	5.8	4.3	3.6	4.0
5	6.0	5.3	5.8	5.7	5.1	5.3	6.2	5.8	6.1	4.2	3.6	3.9
6	6.2	5.7	6.0	5.6	5.2	5.4	6.0	5.7	5.9	4.0	3.4	3.7
7	6.6	5.8	6.1	6.1	5.4	5.7	5.6	5.1	5.3	3.5	3.3	3.3
8	6.8	6.1	6.5	6.5	5.8	6.3	5.3	4.3	5.0	4.0	3.3	3.7
9	7.1	5.1	6.4	6.3	5.8	6.1	5.6	3.7	5.2	4.0	3.8	3.9
10	5.3	2.1	3.9	5.9	5.6	5.7	5.5	4.6	5.1	4.4	3.7	4.1
11	5.4	3.8	4.8	5.7	5.5	5.6	5.3	4.9	5.2	4.6	4.3	4.4
12	5.2	4.2	4.8	6.4	4.9	5.8	5.0	4.9	5.0	4.5	3.9	4.2
13	6.1	4.1	5.0	7.1	6.1	6.5	4.9	4.5	4.7	4.0	3.8	3.9
14	6.2	5.9	6.1	6.9	6.3	6.7	4.9	4.3	4.6	4.0	3.6	3.8
15	6.0	5.3	5.6	6.3	5.7	6.0	4.8	4.3	4.5	3.9	3.6	3.8
16	5.4	4.9	5.1	6.0	5.5	5.8	5.1	4.3	4.7	4.0	3.4	3.7
17	5.8	5.0	5.3	5.7	5.1	5.4	5.1	4.8	5.0	3.9	3.5	3.7
18	5.9	5.1	5.6	5.6	5.0	5.3	5.0	4.7	4.9	3.8	3.5	3.7
19	5.1	4.6	4.8	6.1	5.4	5.7	5.0	4.2	4.6	3.8	.7	2.9
20	5.6	4.2	5.0	6.6	5.6	6.2	4.5	3.6	4.0	2.5	.2	1.4
21	6.0	5.7	5.9	6.9	6.6	6.8	3.8	2.8	3.3	3.4	2.0	2.9
22	---	---	---	6.7	6.2	6.4	3.5	2.0	2.7	3.8	3.4	3.6
23	---	---	---	6.4	5.7	6.2	3.6	3.0	3.4	3.8	3.3	3.5
24	---	---	---	6.4	5.6	6.3	4.2	3.7	3.9	3.5	3.3	3.4
25	---	---	---	6.4	6.2	6.3	4.6	4.1	4.3	3.7	3.3	3.5
26	---	---	---	6.2	6.0	6.1	4.5	4.1	4.2	3.5	3.1	3.3
27	---	---	---	6.1	5.6	5.9	4.0	3.5	3.8	3.7	3.1	3.4
28	---	---	7.2	5.9	5.4	5.7	3.5	3.0	3.3	3.8	2.2	3.5
29	8.1	7.3	7.6	6.3	5.6	5.9	3.7	3.0	3.3	3.1	1.4	2.0
30	---	---	---	6.7	6.3	6.6	3.9	3.6	3.8	3.8	2.5	3.2
31	---	---	---	7.1	6.2	6.6	---	---	---	4.2	3.2	3.7
MONTH	8.1	2.1	5.7	8.1	4.9	6.1	7.0	2.0	4.7	4.6	.2	3.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.2	2.8	3.4	2.9	1.0	1.8	3.7	3.0	3.4	3.4	2.6	2.9
2	4.4	3.9	4.1	4.1	2.6	3.2	4.1	3.3	3.6	3.7	2.7	3.1
3	4.2	3.8	4.0	3.7	2.9	3.4	4.5	3.1	3.6	2.7	.4	1.7
4	4.1	3.8	4.0	4.4	3.5	4.0	3.8	2.8	3.2	1.4	.3	.8
5	4.1	3.7	3.9	5.4	3.9	4.7	3.2	2.5	2.9	2.6	1.3	2.1
6	3.9	2.8	3.7	5.7	4.1	5.0	3.1	2.2	2.7	3.3	2.6	2.8
7	3.1	1.0	2.2	5.6	3.7	4.7	2.8	2.1	2.4	3.7	3.1	3.4
8	3.9	2.5	3.5	4.7	3.4	4.2	3.1	2.3	2.7	3.5	2.9	3.2
9	3.8	3.3	3.6	4.7	3.7	4.4	3.2	2.5	2.9	3.2	2.8	3.0
10	3.9	3.5	3.7	5.3	4.1	4.6	3.8	2.6	3.1	2.9	1.3	2.1
11	4.4	3.5	3.9	4.9	4.0	4.5	3.4	2.5	2.9	3.7	2.5	3.1
12	4.3	3.5	3.9	4.7	4.1	4.4	3.0	2.1	2.5	4.0	2.9	3.4
13	4.4	3.7	4.0	4.2	1.7	3.5	2.2	.6	1.3	4.0	2.9	3.4
14	4.5	3.3	3.9	2.5	1.9	2.3	2.1	.7	1.3	3.6	2.6	3.0
15	4.9	3.5	4.2	3.4	2.4	2.9	2.9	1.9	2.4	2.6	2.0	2.2
16	5.3	3.9	4.7	3.3	2.9	3.0	3.2	2.9	3.1	3.1	2.1	2.5
17	5.2	4.2	4.8	3.0	2.6	2.9	3.6	2.7	3.2	3.2	2.4	2.8
18	5.2	3.7	4.5	3.3	2.7	3.0	3.6	2.9	3.2	3.4	2.6	3.0
19	6.5	5.2	5.9	5.0	3.0	4.0	3.6	2.8	3.2	3.5	2.7	3.0
20	6.8	5.7	6.2	5.0	4.0	4.5	3.6	2.7	3.2	3.4	2.5	2.9
21	6.5	5.3	5.8	6.1	3.5	4.7	4.5	3.0	3.7	2.9	2.5	2.7
22	6.3	4.8	5.5	6.4	4.8	5.5	4.2	3.1	3.6	2.7	2.2	2.4
23	6.5	4.7	5.6	5.5	4.1	4.8	3.7	3.0	3.2	2.3	1.3	1.7
24	6.3	4.5	5.3	4.7	3.4	4.0	3.8	2.8	3.2	2.4	1.2	1.9
25	6.5	4.5	5.2	4.5	2.9	3.8	3.6	2.8	3.1	2.5	1.6	2.0
26	5.7	3.9	4.7	3.8	2.4	3.8	3.8	2.8	3.2	2.3	1.9	2.1
27	4.9	3.6	4.0	3.9	2.8	3.4	3.8	2.7	3.2	2.5	2.1	2.3
28	4.5	3.7	4.1	3.8	2.9	3.4	3.6	2.7	3.1	2.5	2.2	2.3
29	4.4	3.8	4.2	3.7	2.8	3.3	3.7	2.8	3.2	2.8	2.5	2.6
30	4.2	2.8	3.5	4.0	3.1	3.5	3.4	2.9	3.1	3.2	2.8	3.0
31	---	---	---	3.5	3.0	3.3	3.2	2.4	2.9	---	---	---
MONTH	6.8	1.0	4.3	6.4	1.0	3.8	4.5	.6	3.0	4.0	.3	2.6

08062700 TRINITY RIVER AT TRINIDAD, TX
(National stream-quality accounting network)

LOCATION.--Lat 32°08'05", long 96°06'20", Henderson County, Hydrologic Unit 12030105, on left bank at pumping station of Texas Power and Light Co., near southwest boundary of Trinidad, 0.5 mi downstream from St. Louis Southwestern Railway Lines bridge, 0.9 mi downstream from bridge on State Highway 31, 8 mi upstream from Cedar Creek, and at mile 391.2.

DRAINAGE AREA.--8,538 mi², not including 1,007 mi² upstream from Cedar Creek Reservoir.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Records of gage height collected in this vicinity for period October 1913 to September 1915 are contained in reports of Corps of Engineers, and records collected since October 1915 are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 239.21 ft National Geodetic Vertical Datum of 1929. Prior to May 3, 1967, at site 0.9 mi upstream at datum 1.28 ft higher.

REMARKS.--Water-discharge records good. There are 62 floodwater-retarding structures with a combined detention capacity of 38,690 acre-ft in drainage basin above this station. These structures control runoff from 126 mi². For regulation by upstream reservoirs, see Trinity River near Rosser (station 08062500). The spillway outflow from Cedar Creek Reservoir (station 08062650) enters the Trinity River 13 mi upstream from station. Many diversions above station for municipal supply for the cities of Fort Worth, Dallas, and several small towns. Low flows are maintained by sewage effluent from the Dallas-Fort Worth metroplex. A gage-height telemeter is located at station. Additional telemeter (data collection paltform, battery, and antenna) equipment was discontinued Jan. 31, 1982, and subsequently removed.

AVERAGE DISCHARGE.--20 years, 3,576 ft³/s (2,591,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,000 ft³/s May 8, 1969 (gage height, 44.10 ft); minimum daily, 312 ft³/s Aug. 9, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, 49.8 ft Apr. 25, 1942 (present site and datum), from records of the National Weather Service. Flood in 1908 reached a stage of 48.3 ft, present site and datum, from records of the National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft³/s Mar. 27 at 2100 hours (gage height, 24.55 ft); minimum daily, 555 ft³/s July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	630	645	1230	1020	792	1800	2000	908	957	964	626	609
2	643	659	948	998	797	1140	1820	973	843	996	604	582
3	630	672	922	921	798	979	2560	1800	779	749	597	568
4	611	663	1060	885	780	923	2540	4830	750	690	592	1230
5	624	662	1500	880	760	976	2350	3750	731	667	596	1580
6	643	700	1220	858	737	920	1700	1680	766	651	666	834
7	648	775	948	830	726	1020	1410	1150	1120	746	666	694
8	672	1290	857	818	706	933	1350	1050	4010	728	619	643
9	1360	1200	788	803	763	814	2270	983	4110	659	628	621
10	3060	876	769	827	899	798	3710	927	1830	636	616	599
11	4190	759	763	1660	1910	824	2490	870	1010	627	607	586
12	2380	740	714	2500	2120	2700	1620	824	843	624	613	585
13	1440	699	702	1730	1820	6310	1370	814	800	628	771	576
14	1620	688	727	1120	2830	8800	1240	819	776	803	1480	580
15	1140	663	716	1020	1910	9490	1180	790	747	967	1400	579
16	864	677	729	926	1220	7930	1100	782	736	702	840	577
17	764	670	723	841	1340	3730	1060	811	712	600	736	570
18	692	678	800	827	1090	1920	1030	776	685	588	675	557
19	691	753	852	796	904	1470	1010	790	654	594	653	556
20	731	887	839	796	1380	2630	1000	1620	663	584	627	561
21	1160	995	833	810	1400	5450	970	2600	683	574	601	563
22	1630	926	781	793	1040	4320	1220	1690	671	575	601	577
23	1490	857	737	789	891	2290	1520	1090	667	563	591	592
24	1060	873	750	838	840	3420	1150	941	661	564	602	632
25	790	1330	750	1120	816	8420	983	894	640	555	606	613
26	731	1240	808	1090	965	9880	935	856	624	570	603	585
27	727	910	831	988	1720	10400	914	832	639	710	596	619
28	708	1630	842	918	3470	10000	912	800	658	708	580	616
29	719	2810	937	883	3070	7880	932	1060	665	666	589	596
30	721	1950	984	980	---	5730	881	2010	732	666	603	685
31	662	---	1040	832	---	3130	---	1440	---	619	599	---
TOTAL	34431	28877	27100	31097	38494	127027	45227	41160	30162	20973	21183	19765
MEAN	1111	963	874	1003	1327	4098	1508	1328	1005	677	683	659
MAX	4190	2810	1500	2500	3470	10400	3710	4830	4110	996	1480	1580
MIN	611	645	702	789	706	798	881	776	624	555	580	556
AC-FT	68290	57280	53750	61680	76350	252000	89710	81640	59830	41600	42020	39200

CAL YR 1983 TOTAL 813668 MEAN 2229 MAX 26600 MIN 609 AC-FT 1614000
WTR YR 1984 TOTAL 465496 MEAN 1272 MAX 10400 MIN 555 AC-FT 923300

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: October 1977 to September 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to September 1981.
WATER TEMPERATURES: November 1977 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos Dec. 28, 1977; minimum daily, 240 micromhos June 5, 1981.
WATER TEMPERATURES: Maximum daily, 34.0°C July 17, 1979, and July 9, 13, 1980; minimum daily 3.5°C Jan. 5, 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 29...	1145	2940	743	7.6	13.0	300	4.5	43	16	1600	3200	130
JAN 10...	1200	813	721	7.7	10.0	--	7.6	67	8.5	K94	420	150
MAR 27...	1140	10400	410	7.7	17.0	200	6.1	65	7.5	700	2200	140
MAY 08...	1155	1060	550	7.6	23.5	41	2.8	33	23	560	1000	160
JUN 19...	1450	654	749	8.5	30.5	1.8	10.4	141	11	80	960	160
SEP 17...	1300	566	730	7.8	25.0	34	5.5	67	13	48	290	140

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 29...	14	46	4.4	50	2	7.6	120	56	46	.70	8.1
JAN 10...	0	49	5.8	74	3	11	150	81	62	.90	7.5
MAR 27...	30	50	3.6	22	.8	6.0	110	63	17	.40	6.9
MAY 08...	42	57	4.5	42	2	7.1	120	73	39	.60	7.2
JUN 19...	26	55	5.4	88	3	11	134	94	75	1.1	8.9
SEP 17...	11	45	5.4	81	3	15	124	86	79	1.6	7.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 29...	370	300	4.4	1.10	8.5	2.30	1.40	1.40	--	--	--
JAN 10...	401	400	3.4	7.00	7.5	3.60	3.50	3.80	11	24	94
MAR 27...	247	240	1.2	.240	2.5	.570	.170	.100	402	11300	91
MAY 08...	326	310	3.9	.090	1.4	.920	.900	.870	115	329	97
JUN 19...	450	420	6.3	.010	2.6	3.30	3.00	.890	--	--	--
SEP 17...	443	410	6.2	.670	2.7	4.50	4.40	4.20	76	--	84

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 29...	1145	3	32	<.5	<1	1	<3	5	58	<1
JAN 10...	1200	2	28	<.5	1	7	<3	6	51	1
MAY 08...	1155	2	55	<1.0	<1	<1	<3	4	10	4
SEP 17...	1300	4	41	<1.0	<1	<1	<3	6	11	2

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 29...	9	7	<.1	<10	11	<1	1	370	<6	14
JAN 10...	15	70	.2	<10	15	2	1	390	<6	28
MAY 08...	16	10	.2	<10	9	<1	<1	470	<6	15
SEP 17...	16	4	.4	<10	12	<1	<1	360	<6	21

08062800 CEDAR CREEK NEAR KEMP, TX

LOCATION.--Lat 32°30'18", long 96°06'57", Kaufman County, Hydrologic Unit 12030107, on left bank at downstream side of bridge on Farm Road 1836, 3.6 mi upstream from Williams Creek, 8.1 mi northeast of Kemp, and 51.5 mi upstream from mouth.

DRAINAGE AREA.--189 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 341.48 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 10 ft^3/s, which are fair. Flow is affected at times by storage in Terrell Municipal Lake (capacity, 8,300 acre-ft). The city of Terrell diverts water from Terrell Municipal Lake (above this station) for municipal use and returns sewage effluent to a tributary of Kings Creek that enters the creek downstream from this station. Flow is affected at times by discharge from the flood-detention pools of 20 floodwater-retarding structures with a combined detention capacity of 18,880 acre-ft. These structures control runoff from 55.9 mi^2.

AVERAGE DISCHARGE.--21 years (water years 1964-84), 110 ft^3/s (79,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s Apr. 26, 1966 (gage height, 16.8 ft); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1889, about 20.5 ft in 1945, from information by State Department of Highways and Public Transportation and local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft^3/s Mar. 28 at 2400 hours (gage height, 12.80 ft), no other peak above base of 2,000 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.09	.75	18.0	51.0	1.10	.08	.01	.00	0
2	.00	.00	.09	.09	.45	12.0	36.0	1.20	.04	.01	.00	0
3	.00	.00	6.30	.10	.36	7.8	30.0	.89	.03	.00	.00	0
4	.00	.00	57.00	.12	.27	6.0	25.0	.62	.01	.00	.00	0
5	.00	.00	16.00	.13	.19	7.8	20.0	.64	.05	.01	.00	0
6	.00	.03	5.90	.13	.16	19.0	16.0	.62	.09	.04	.00	0
7	.00	.00	3.00	.13	.13	8.8	13.0	.55	.04	.00	.00	0
8	.00	.00	1.50	.19	.15	4.6	15.0	.66	.02	.00	.00	0
9	.00	.03	.69	.56	.52	3.6	25.0	.46	.04	.00	.00	0
10	.00	.00	.29	.88	6.70	2.9	19.0	.40	.09	.00	.00	0
11	.00	.00	.18	6.60	9.90	2.7	14.0	.31	.05	.00	.00	0
12	.00	.00	.11	6.70	121.00	374.0	11.0	.24	.00	.00	.00	0
13	.00	.00	.07	4.00	250.00	1560.0	9.0	.21	.00	.00	.00	0
14	.00	.00	.09	3.00	65.00	617.0	6.4	.19	.00	.00	.00	0
15	.00	.00	.09	2.30	24.00	105.0	4.3	.19	.00	.00	.00	0
16	.00	.00	.09	1.70	12.00	45.0	3.8	.15	.00	.00	.00	0
17	.00	.00	.10	1.30	6.80	33.0	3.1	.13	.00	.00	.00	0
18	.00	.00	.12	1.10	4.50	28.0	2.6	.13	.00	.00	.00	0
19	.00	.02	.12	.93	3.70	26.0	1.9	.14	.00	.00	.00	0
20	.01	.00	.11	.89	3.20	40.0	1.6	.16	.00	.00	.00	0
21	.00	.00	.15	.70	3.00	41.0	1.6	.15	.00	.00	.00	0
22	.00	.00	.91	.62	2.20	28.0	1.4	.15	.00	.00	.00	0
23	.00	.03	.80	.84	1.90	23.0	1.3	.13	.00	.00	.00	0
24	.00	.00	.66	.80	1.70	242.0	2.2	.10	.00	.02	.00	0
25	.00	.00	.48	3.70	1.40	413.0	2.2	.08	.00	.00	.00	0
26	.00	.00	.28	3.70	18.00	128.0	1.7	.04	.00	.00	.00	0
27	.00	.00	.22	2.60	126.00	118.0	1.3	.03	.00	.00	.00	0
28	.00	.00	.19	2.10	80.00	1360.0	1.2	.21	.00	.00	.00	0
29	.00	.00	.13	1.50	37.00	1520.0	1.1	.18	.00	.00	.00	0
30	.00	.00	.12	1.10	---	221.0	1.1	.18	.05	.00	.02	0
31	.00	---	.10	1.00	---	89.0	---	.13	---	.00	.00	---
TOTAL	.01	.11	95.89	49.60	780.98	7104.2	322.8	10.37	.59	.09	.02	0
MEAN	.000	.004	3.09	1.60	26.9	229	10.8	.33	.020	.003	.001	.000
MAX	.01	.03	57	6.7	250	1560	51	1.2	.09	.04	.02	.00
MIN	.00	.00	.00	.09	.13	2.7	1.1	.03	.00	.00	.00	.00
AC-FT	.02	.2	190	98	1550	14090	640	21	1.2	.2	.04	.00

CAL YR 1983	TOTAL	39715.39	MEAN	109	MAX	4740	MIN	.00	AC-FT	78780
WTR YR 1984	TOTAL	8364.66	MEAN	22.9	MAX	1560	MIN	.00	AC-FT	16590

08062900 KINGS CREEK NEAR KAUFMAN, TX

LOCATION.--Lat 32°30'48", long 96°19'44", Kaufman County, Hydrologic Unit 12030107, on left bank at downstream side of bridge on Farm Road 1388, 3.6 mi upstream from Big Cottonwood Creek, 4.8 mi downstream from Big Brushy Creek, and 5.3 mi south of Kaufman.

DRAINAGE AREA.--233 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 343.24 ft State Department of Highways and Public Transportation datum.

REMARKS.--Records fair. During the year, the cities of Terrell and Kaufman returned sewage effluent into the creek above this station. Flow is affected at times by discharge from the flood-detention pools of 28 floodwater-retarding structures with a combined detention capacity of 14,560 acre-ft. These structures control runoff from 46.8 mi in the Cedar Creek drainage basins. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--21 years (water years 1964-84), 145 ft^3/s (105,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,200 ft^3/s Apr. 19, 1976 (gage height, 26.19 ft), from rating curve extended above 50,000 ft^3/s; no flow at times most years. Maximum stage since at least 1942, that of Apr. 19, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1949 reached a stage of 23.1 ft, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,680 ft^3/s Mar. 24 at 1815 hours (gage height, 18.39 ft), no other peak above base of 3,000 ft^3/s; no flow Oct. 1-4 and Aug. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.70	13.0	2.6	4.6	39.0	51.0	2.3	1.7	1.40	.99	3.5
2	.00	.70	12.0	2.7	4.2	27.0	35.0	2.4	1.7	1.30	1.10	3.4
3	.00	.70	8.1	2.6	4.0	19.0	63.0	2.6	1.8	1.50	1.30	2.7
4	.00	.85	7.6	2.5	4.1	16.0	56.0	2.8	2.2	1.00	1.30	3.0
5	.01	.80	9.7	2.7	3.8	13.0	29.0	2.1	3.5	.99	1.10	2.3
6	.05	.75	7.1	2.7	3.8	9.4	20.0	1.9	4.6	1.10	.72	2.0
7	.10	.85	5.7	2.9	3.7	8.3	15.0	2.0	9.3	1.60	.60	1.7
8	.10	.83	6.9	2.7	3.6	7.1	99.0	1.5	8.0	1.90	.49	2.0
9	.10	.81	5.8	7.1	4.7	5.9	120.0	1.6	4.1	1.40	.22	2.1
10	.16	.85	4.3	17.0	16.0	8.2	45.0	1.6	3.1	.96	.16	1.4
11	.30	.82	3.8	77.0	14.0	8.0	25.0	1.3	3.0	.50	.13	1.4
12	.49	.80	3.2	24.0	336.0	750.0	18.0	1.4	3.1	.57	.30	3.1
13	1.60	.75	3.0	11.0	485.0	1730.0	12.0	1.3	3.5	.71	.13	3.0
14	1.30	.70	2.5	9.3	102.0	370.0	9.3	1.3	3.6	1.00	.66	3.1
15	.78	.70	2.2	6.4	47.0	144.0	6.8	1.6	3.6	1.10	.66	2.7
16	.72	.66	3.0	8.1	27.0	92.0	5.4	1.4	3.4	.97	.49	2.6
17	.66	.99	4.0	4.9	16.0	54.0	5.9	1.6	3.7	.60	.44	2.1
18	.60	.85	4.8	4.6	13.0	22.0	5.3	1.6	4.6	.50	.10	1.8
19	.60	1.60	4.7	3.8	9.8	43.0	4.8	2.4	4.7	.23	.02	2.6
20	19.00	27.00	3.7	3.8	11.0	36.0	4.3	2.2	6.8	.08	.05	3.5
21	4.80	7.20	3.0	3.6	8.3	13.0	4.1	2.0	6.1	.29	.01	10.0
22	2.00	1.90	2.1	3.9	6.7	5.2	14.0	2.2	5.2	.50	.02	16.0
23	1.20	2.90	2.2	5.6	5.6	434.0	9.2	2.0	3.4	.62	.00	12.0
24	.90	3.90	1.7	16.0	4.7	2710.0	5.1	1.8	3.5	1.10	.00	10.0
25	.80	3.40	2.3	27.0	4.0	1480.0	3.8	1.9	3.3	.72	.39	13.0
26	.80	1.80	2.6	15.0	78.0	250.0	3.1	2.0	3.4	.72	1.30	19.0
27	.78	2.60	2.8	9.2	523.0	985.0	3.0	1.9	3.6	1.00	1.30	16.0
28	.76	96.00	2.8	6.2	140.0	2790.0	2.8	3.1	5.0	1.40	.72	18.0
29	.75	43.00	2.2	4.7	62.0	652.0	2.3	7.0	3.7	1.50	.54	17.0
30	.75	20.00	2.2	4.0	---	150.0	1.9	4.8	2.7	1.20	1.40	16.0
31	.73	---	2.3	3.9	---	89.0	---	2.8	---	.99	1.90	---
TOTAL	40.84	225.41	141.3	297.5	1945.6	12960.1	679.1	68.4	119.9	29.45	18.54	197.0
MEAN	1.32	7.51	4.56	9.60	67.1	418	22.6	2.21	4.00	.95	.60	6.57
MAX	19	96	13	77	523	2790	120	7.0	9.3	1.9	1.9	19
MIN	.00	.66	1.7	2.5	3.6	5.2	1.9	1.3	1.7	.08	.00	1.4
AC-FT	81	447	280	590	3860	25710	1350	136	238	58	37	391

CAL YR 1983 TOTAL 38286.52 MEAN 105 MAX 8990 MIN .00 AC-FT 75940
WTR YR 1984 TOTAL 16723.14 MEAN 45.7 MAX 2790 MIN .00 AC-FT 33170

NOTE.--No gage-height record Oct. 9 to Nov. 15.

08062980 LACY FORK NEAR MABANK, TX

LOCATION.--Lat 32°25'27", long 96°06'33", Kaufman County, Hydrologic Unit 12030107, on left bank at downstream side of bridge on Farm Road 90, 1.7 mi upstream from Caney Creek, 3.4 mi upstream from Cedar Creek Reservoir, and 4.1 mi north of intersection of U.S. Highway 175 and Farm Road 90 in Mabank.

DRAINAGE AREA.--118 mi^2.

PERIOD OF RECORD.--October 1982 to February 1984 (discontinued).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 326.955 ft, State Department of Highways and Public Transportation datum.

REMARKS.--Records fair. No known diversion or return effluent above station. Several observations of water temperature were made during the period October 1983 to February 1984.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,360 ft^3/s Dec. 3, 1982 (gage height, 21.43 ft), from rating curve extended above 627 ft^3/s on basis of velocity-area study; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1983 to February 1984, 300 ft^3/s Feb. 12 at 2015 hours (gage height, 15.22 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1983 TO FEBRUARY 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.06	.45	.58							
2	.00	.00	.18	.49	.58							
3	.00	.00	5.0	.49	.60							
4	.00	.00	4.0	.51	.59							
5	.00	.01	2.0	.51	.55							
6	.00	.19	1.2	.51	.55							
7	.00	.04	.83	.49	.61							
8	.00	.00	.67	.49	.66							
9	.00	.00	.55	.64	4.8							
10	.00	.00	.51	1.4	4.7							
11	.02	.00	.45	1.7	18							
12	.07	.00	.39	1.4	234							
13	.00	.00	.35	1.0	140							
14	.00	.00	.33	.80	63							
15	.00	.00	.33	.67	29							
16	.00	.00	.39	.80	12							
17	.00	.00	.47	.80	6.0							
18	.00	.00	.43	.77	4.2							
19	.00	.16	.51	.73	3.8							
20	.00	.06	.58	.70	3.0							
21	.00	.04	.58	.67	2.3							
22	.00	.04	.55	.67	1.9							
23	.00	.21	.49	1.5	1.7							
24	.00	.06	.45	2.6	1.5							
25	.00	.05	.41	1.9	1.3							
26	.00	.05	.39	1.5	56							
27	.00	.16	.41	1.2	124							
28	.00	.09	.47	1.0	54							
29	.00	.08	.49	.83	21							
30	.00	.08	.45	.73	---							
31	.00	---	.43	.64	---							
TOTAL	.09	1.32	24.35	28.59	790.92							
MEAN	.003	.044	.79	.92	27.3							
MAX	.07	.21	5.0	2.6	234							
MIN	.00	.00	.06	.45	.55							
CFSM	.000	.000	.007	.008	.23							
IN.	.00	.00	.01	.01	.25							
AC-FT	.2	2.6	48	57	1570							

CAL YR 1983	TOTAL	8202.46	MEAN	22.5	MAX	1210	MIN	.00	CFSM	.19	IN	2.59	AC-FT	16270
WTR YR 1984	TOTAL	-	MEAN	-	MAX	-	MIN	-	CFSM	-	IN	-	AC-FT	-

08063003 SOUTH TWIN CREEK NEAR EUSTACE, TX

LOCATION.--Lat 32°19'18", long 96°01'43", Henderson County, Hydrologic Unit 12030107, near left downstream end of bridge on U. S. Highway 175, 1.6 mi northwest of Eustace, 3.2 mi upstream from Cedar Creek Reservoir, and 6.8 mi southeast of Mabank.

DRAINAGE AREA.--27.4 mi^2.

PERIOD OF RECORD.--October 1982 to September 1984 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 339.797 ft National Geodetic vertical datum of 1929.

REMARKS.--Records fair. No known diversion or return effluent above station. Several observations of water temperature were made during the October 1983 to February 1984.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft^3/s Dec. 3, 1982 (gage height, 14.00 ft), from rating curve extended above 270 ft^3/s on basis of velocity-area study; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October to February, 557 ft^3/s Feb. 12 at 0930 hours (gage height, 11.99 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1983 TO FEBRUARY 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.52	.90	1.1							
2	.00	.00	.80	1.0	1.2							
3	.00	.00	6.5	1.0	1.6							
4	.00	.00	2.5	1.0	1.6							
5	.00	.00	1.2	.86	1.6							
6	.00	.33	.86	1.0	1.6							
7	.00	.44	.77	.90	1.5							
8	.00	.27	.71	1.1	1.6							
9	.00	.22	.65	2.4	6.5							
10	.00	.17	.68	5.7	3.4							
11	.03	.17	.74	2.1	27							
12	.22	.17	.74	1.4	341							
13	.25	.16	.65	1.2	96							
14	.04	.16	.77	1.2	18							
15	.00	.16	.65	1.3	8.5							
16	.00	.16	.90	1.4	4.7							
17	.00	.14	1.5	1.3	2.9							
18	.00	.12	1.8	1.2	3.2							
19	.00	.33	1.6	1.1	3.7							
20	.00	.71	1.5	1.0	2.4							
21	.00	.42	1.4	1.0	2.6							
22	.00	.31	1.3	1.0	3.4							
23	.00	1.3	1.2	2.0	3.5							
24	.00	1.2	1.1	2.9	4.4							
25	.00	.57	1.1	1.8	4.8							
26	.00	.47	1.0	1.4	67							
27	.00	.57	1.0	1.3	90							
28	.00	.90	1.0	1.2	13							
29	.00	.62	.90	1.1	6.1							
30	.00	.49	.74	1.1	---							
31	.00	---	.74	1.0	---							
TOTAL	.54	10.56	37.52	44.86	723.9							
MEAN	.017	.35	1.21	1.45	25.0							
MAX	.25	1.3	6.5	5.7	341							
MIN	.00	.00	.52	.86	1.1							
CFSM	.001	.01	.04	.05	.91							
IN.	.00	.01	.05	.06	.98							
AC-FT	1.1	21	74	89	1440							

CAL YR 1983 TOTAL 3248.58 MEAN 8.90 MAX 510 MIN .00 CFSM .33 IN 4.41 AC-FT 6440

08063010 CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX

LOCATION.--Lat 32°14'35", long 96°08'26", Henderson County, Hydrologic Unit 12030107, inside pumphouse on lower level, 1,000 ft north of spillway, 5.5 mi upstream from Joe B. Hogsett Dam on Cedar Creek, and 8.0 mi northwest of Trinidad.

DRAINAGE AREA.--1,007 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 15, 1972, at unfinished pumphouse at same site and datum. May 16, 1972, to Sept. 8, 1975, at site 0.25 mi north and upstream from pumphouse at same datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam 17,539 ft long. The spillway is located on the right bank 5.5 mi upstream from the dam and discharges into the Trinity River through a cut channel 2 mi long. Deliberate impoundment began July 2, 1965, and the dam was completed in February 1966. The spillway is 474 ft long and has eight 40- by 24-foot radial gates and two automatically operated 40- by 8.5-foot hinged gates. Low-flow releases may be made downstream through a 5.0-foot-diameter conduit through the dam. The dam is the property of Tarrant County Water Control and Improvement District No. 1 and was built for municipal and industrial supply and for recreational purposes. The area and capacity tables were based on a survey during the period 1940-58. Water is diverted from the reservoir for municipal and industrial uses by lakeside developments and by the cities of Arlington, Fort Worth, Mansfield, Kemp, Trinidad, and Mabank. Flow is affected at times by discharge from the flood-detention pools of 83 floodwater-retarding structures with a combined detention capacity of 54,680 acre-ft. These structures control runoff from 174 mi². Figures given herein represent total contents. Gage-height telemeter located at station. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	340.0	-
Top of radial gates	325.0	785,100
Top of automatic gates	322.5	696,400
Top of conservation pool	322.0	679,200
Crest of spillway (automatic gates)	314.0	441,000
Crest of spillway (radial gates)	302.0	197,800
Lowest gated outlet (invert)	263.5	430

COOPERATION.--Records of diversions furnished by the Tarrant County Water Control and Improvement District No. 1. The area and capacity tables were furnished by Freese and Nichols, Consulting Engineers, for Tarrant County Water Control and Improvement District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 722,000 acre-ft June 4, 1973 (elevation, 323.24 ft); minimum since first appreciable storage in 1966, 332,900 acre-ft Mar. 19, 1967 (elevation, 309.42 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 681,600 acre-ft Mar. 29 at 1900 hours (elevation, 322.07 ft); minimum, 539,100 acre-ft Sept. 30 (elevation, 317.55 ft).

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

317.0	523,000	321.0	646,000
319.0	582,600	323.0	713,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	636400	626400	620300	613500	609500	623200	679200	668600	645400	627700	595100	566000
2	635100	625700	623200	613200	610400	623500	679200	667600	644700	626700	594500	565100
3	634800	625700	625400	613200	609500	622500	678200	668300	644100	625400	592600	564500
4	634800	626100	625100	613200	609200	626700	677600	666600	644400	623500	592600	563500
5	634100	627700	625700	612600	609200	626700	677200	664000	641800	623500	592600	562300
6	632200	628000	624500	612600	607300	626700	676900	665300	646000	622800	591100	560500
7	632800	626700	623200	612300	607000	626100	678900	667600	644400	621600	590100	558700
8	633200	626100	622500	612300	607300	626700	679200	664600	644700	619900	588200	556900
9	632500	626100	623200	616400	608500	625400	678600	663000	644400	618700	588900	556900
10	631900	626400	623500	615400	607600	625700	677900	661300	644100	617100	587300	555700
11	632500	624800	622200	613500	612300	629000	678900	660600	642800	616100	586700	555400
12	633200	623500	621600	615400	616700	630600	678900	660000	642200	615400	586100	554500
13	631900	624500	622200	613800	619000	651000	680600	659300	641500	613200	585400	553800
14	631200	623800	620300	614500	619000	654300	678200	658300	641200	612000	584800	553200
15	630900	622500	622500	614200	620300	655700	678600	657700	640200	611600	582900	552300
16	630900	620600	621900	613500	620300	656300	676200	656700	638900	610400	582600	550900
17	629900	620600	621900	613800	617700	656700	675900	656000	638300	610100	581700	549700
18	630300	620300	622500	613800	620300	658000	675200	654000	637300	609200	580500	548500
19	629900	623200	620300	612900	619600	658000	675900	656300	638300	607300	579300	547600
20	629900	621900	619600	612600	619300	657300	672900	656700	637300	605700	577800	546500
21	630900	622800	619300	610700	618700	656700	674600	655300	636400	605100	576900	545300
22	630600	623200	618300	612300	617700	656300	674300	654300	635100	604200	576000	546200
23	629600	623200	618700	612300	618000	660600	672900	654300	634800	602900	575400	545000
24	629300	623200	618000	612300	616700	665000	669300	653000	634100	604500	573800	544400
25	628600	621600	616400	612000	615400	669300	671300	652000	632800	603200	573200	543800
26	628000	622500	615800	611600	623500	670900	670300	650700	632500	602300	572300	542700
27	627700	623500	616700	612300	625100	675200	670900	651000	631200	601700	570800	542100
28	626700	622200	616100	612000	624800	677600	670300	654700	630300	600700	569600	542100
29	626700	621900	613800	612300	624100	680900	671600	650700	630600	599500	569000	540900
30	626100	622200	613800	610700	---	678900	668900	649000	628600	597900	568400	539100
31	626100	---	613200	610400	---	680600	---	647000	---	596700	567200	---
MAX	636400	628000	625700	616400	625100	680900	680600	668600	646000	627700	595100	566000
MIN	626100	620300	613200	610400	607000	622500	668900	647000	628600	596700	567200	539100
(†)	320.38	320.26	319.98	319.89	320.32	322.04	321.69	321.03	320.46	319.45	318.49	317.55
(‡)	-11600	-3900	-9000	-2800	+13700	+56500	-11700	-21900	-18400	-31900	-29500	-28100

CAL YR 1983 MAX 687800 MIN 613200 ‡ -64400
WTR YR 1984 MAX 680900 MIN 539100 ‡ -98600

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

08063010 CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

321111096042901 CEDAR CREEK RESERVOIR SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
23...	1050	1.00	235	7.5	7.5	9.2	78
23...	1052	10.0	235	7.5	7.5	9.2	78
23...	1054	20.0	235	7.5	7.0	9.1	76
23...	1056	30.0	235	7.5	7.0	9.1	76
23...	1058	40.0	235	7.5	7.0	9.1	76
23...	1100	48.0	235	7.5	7.0	9.1	76
MAY							
23...	0926	1.00	226	8.2	23.0	8.3	97
23...	0927	10.0	226	7.9	22.5	7.7	89
23...	0928	20.0	226	7.8	22.5	7.5	87
23...	0929	30.0	226	7.6	22.0	7.3	84
23...	0930	40.0	226	7.3	21.5	5.9	67
23...	0931	48.0	229	7.2	21.0	4.5	51
AUG							
15...	0940	1.00	247	7.9	28.0	6.8	87
15...	0941	10.0	247	7.8	28.0	6.6	84
15...	0942	20.0	247	7.4	27.5	5.0	63
15...	0943	30.0	247	7.0	27.0	1.7	21
15...	0944	37.0	247	6.9	27.0	.2	3

321113096041201 CEDAR CREEK RESERVOIR SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
23...	1020	1.00	235	7.6	7.5	1.80	9.4	80	71
23...	1022	10.0	235	7.6	7.5	--	9.4	80	--
23...	1024	20.0	235	7.5	7.5	--	9.3	79	--
23...	1026	30.0	235	7.5	7.5	--	9.3	79	--
23...	1028	40.0	235	7.5	7.5	--	9.2	78	--
23...	1030	50.0	235	7.4	7.0	--	9.2	77	--
23...	1032	60.0	235	7.3	7.0	--	9.0	75	67
MAY									
23...	0900	1.00	226	8.2	23.0	.90	8.1	95	68
23...	0901	10.0	226	7.9	22.5	--	7.8	90	--
23...	0902	20.0	226	7.7	22.5	--	7.4	86	--
23...	0903	30.0	226	7.6	22.0	--	7.2	83	--
23...	0904	40.0	226	7.3	21.5	--	6.0	68	--
23...	0905	45.0	229	7.1	21.0	--	4.0	45	--
23...	0906	50.0	229	7.1	21.0	--	3.5	39	--
23...	0907	56.0	229	7.1	20.5	--	3.4	38	68
AUG									
15...	0920	1.00	247	7.9	28.0	1.70	7.2	92	74
15...	0921	10.0	247	7.8	27.5	--	6.9	87	--
15...	0922	20.0	247	7.2	27.5	--	4.2	53	--
15...	0923	30.0	247	7.0	27.0	--	1.6	20	--
15...	0924	35.0	248	6.9	26.5	--	.1	1	--
15...	0925	40.0	251	7.0	25.5	--	.1	1	--
15...	0926	50.0	259	7.1	23.0	--	.1	1	--
15...	0927	55.0	264	7.1	22.0	--	.1	1	80

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321113096041201 CEDAR CREEK RESERVOIR SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
23...	12	21	4.5	17	.9	4.4	59	24	18
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	11	20	4.2	16	.9	4.3	56	25	18
MAY									
23...	15	20	4.3	16	.9	4.4	53	26	19
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	12	20	4.3	16	.9	4.8	56	26	20
AUG									
15...	15	22	4.7	18	.9	4.8	59	27	19
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	0	24	4.8	17	.9	4.6	80	20	18

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
23...	.20	3.4	130	<.10	.70	--	<.010	34	8
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	<.10	.60	--	.010	30	<10
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	3.3	120	<.10	.60	--	<.010	12	10
MAY									
23...	.20	1.0	120	.10	.60	.70	.020	<3	3
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	.20	.60	.80	.030	50	10
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	.20	.70	.90	.030	<10	30
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	4.4	130	.30	1.2	1.5	.080	40	150
AUG									
15...	.20	1.0	130	<.10	.70	--	.010	5	3
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	<.10	.60	--	<.010	30	60
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	<.10	1.1	--	.030	110	1200
15...	--	--	--	--	--	--	--	--	--
15...	--	7.6	150	<.10	1.8	--	.570	2700	3600

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321116096035301 CEDAR CREEK RESERVOIR SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
23...	1105	1.00	235	7.6	8.0	9.3	80
23...	1106	10.0	235	7.6	7.5	9.3	79
23...	1107	20.0	235	7.6	7.5	9.2	78
23...	1108	30.0	235	7.5	7.5	9.2	78
23...	1109	40.0	235	7.5	7.5	9.2	78
23...	1110	43.0	235	7.5	7.5	9.2	78
MAY							
23...	0943	1.00	226	8.2	23.0	8.2	96
23...	0944	10.0	226	8.0	23.0	7.8	91
23...	0945	20.0	226	8.0	22.5	7.8	90
23...	0946	30.0	226	7.7	22.5	7.2	83
23...	0947	38.0	226	7.6	21.5	6.6	75
AUG							
15...	1000	1.00	247	7.9	28.0	6.8	87
15...	1001	10.0	247	7.8	27.5	6.4	81
15...	1002	20.0	247	7.7	27.5	6.2	78
15...	1003	30.0	247	7.0	27.0	1.6	20
15...	1004	35.0	247	7.0	26.5	.1	1
15...	1005	40.0	253	7.0	25.0	.1	1
15...	1006	45.0	253	7.0	24.0	.1	1

321227096032701 CEDAR CREEK RESERVOIR SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
23...	1120	1.00	235	7.6	8.0	1.50	9.2
23...	1121	10.0	235	7.6	8.0	--	9.2
23...	1122	20.0	235	7.6	7.5	--	9.2
23...	1123	30.0	235	7.5	7.5	--	9.2
23...	1124	40.0	235	7.5	7.5	--	9.2
23...	1125	51.0	235	7.4	7.5	--	9.0
MAY							
23...	0958	1.00	225	8.5	24.0	1.20	8.6
23...	0959	10.0	225	8.2	23.5	--	8.3
23...	1000	20.0	225	7.4	22.5	--	6.4
23...	1001	30.0	225	7.2	21.5	--	5.8
23...	1002	40.0	230	7.0	21.0	--	3.7
23...	1003	48.0	232	7.0	20.5	--	2.5
AUG							
15...	1015	1.00	246	8.4	28.0	1.50	7.6
15...	1016	10.0	246	8.2	28.0	--	7.2
15...	1017	20.0	246	8.1	28.0	--	7.0
15...	1018	25.0	246	7.3	27.5	--	4.6
15...	1019	30.0	246	7.0	27.0	--	1.4
15...	1020	35.0	246	7.0	26.5	--	.2
15...	1021	40.0	252	7.0	24.5	--	.2
15...	1022	45.0	258	7.0	24.0	--	.2

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321227096032701 CEDAR CREEK RESERVOIR SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB							
23...	79	<.10	.50	--	.010	30	<10
23...	79	--	--	--	--	--	--
23...	78	--	--	--	--	--	--
23...	78	--	--	--	--	--	--
23...	78	--	--	--	--	--	--
23...	76	<.10	.70	--	.020	40	20
MAY							
23...	103	.10	.80	.90	.020	<10	20
23...	98	--	--	--	--	--	--
23...	74	<.10	.70	--	.030	30	30
23...	66	--	--	--	--	--	--
23...	42	.30	.70	1.0	.050	40	250
23...	28	.30	1.4	1.7	.080	100	590
AUG							
15...	97	<.10	.70	--	.010	<10	10
15...	92	--	--	--	--	--	--
15...	89	<.10	1.1	--	.010	10	20
15...	58	--	--	--	--	--	--
15...	18	<.10	1.1	--	.010	30	60
15...	2	--	--	--	--	--	--
15...	2	--	--	--	--	--	--
15...	2	<.10	1.1	--	.130	590	2800

321403096060601 CEDAR CREEK RESERVOIR SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
23...	1150	1.00	235	7.5	7.5	9.0	76
23...	1151	10.0	235	7.4	7.5	9.0	76
23...	1152	20.0	235	7.4	7.5	9.0	76
23...	1153	30.0	235	7.4	7.5	9.1	77
23...	1154	40.0	235	7.4	7.5	9.2	78
23...	1155	47.0	235	7.4	7.5	9.2	78
MAY							
23...	1030	1.00	228	8.3	24.0	8.4	100
23...	1031	10.0	228	7.9	23.0	7.5	88
23...	1032	20.0	228	7.7	23.0	7.4	87
23...	1033	30.0	228	7.4	22.5	6.3	73
23...	1034	40.0	228	7.1	22.0	4.0	46
23...	1035	54.0	230	7.2	21.5	3.4	39
AUG							
15...	1040	1.00	247	8.1	28.5	7.2	93
15...	1041	10.0	247	7.9	28.0	6.6	84
15...	1042	20.0	247	8.0	28.0	6.8	87
15...	1043	30.0	247	7.8	28.0	6.4	82
15...	1044	35.0	249	7.1	27.0	1.0	13
15...	1045	40.0	255	7.1	25.5	.2	2
15...	1046	46.0	258	7.1	24.5	.2	2

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321548096082301 CEDAR CREEK RESERVOIR SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
23...	1215	1.00	235	7.5	8.0	.90	8.8	76	67
23...	1216	10.0	235	7.4	8.0	--	8.8	76	--
23...	1217	20.0	235	7.4	7.5	--	8.8	75	--
23...	1218	30.0	235	7.4	7.5	--	8.8	75	--
23...	1219	40.0	235	7.3	7.5	--	8.6	73	--
23...	1220	46.0	235	7.3	7.5	--	8.6	73	68
MAY									
23...	0815	1.00	228	7.8	23.5	.50	7.0	83	68
23...	0816	10.0	228	7.8	23.5	--	7.0	83	--
23...	0817	20.0	228	7.7	23.5	--	6.7	79	--
23...	0818	30.0	228	7.6	23.5	--	6.6	78	--
23...	0819	40.0	230	7.5	23.5	--	6.0	71	--
23...	0820	45.0	230	7.3	23.0	--	4.8	56	70
AUG									
15...	0840	1.00	251	7.6	27.5	1.10	6.2	78	77
15...	0841	10.0	252	7.5	27.5	--	6.2	78	--
15...	0842	20.0	252	7.5	27.5	--	6.2	78	--
15...	0843	30.0	254	7.0	27.5	--	2.8	35	--
15...	0844	35.0	255	7.0	27.5	--	1.6	20	--
15...	0845	40.0	257	6.8	27.0	--	.8	10	77

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
23...	11	20	4.2	17	.9	4.5	56	25	18
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	12	20	4.3	17	.9	4.5	56	25	19
MAY									
23...	13	20	4.3	16	.9	4.6	55	26	19
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	13	21	4.3	16	.9	4.8	57	26	19
AUG									
15...	17	23	4.8	18	.9	5.1	60	28	19
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	15	23	4.8	18	.9	4.6	62	27	19

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
23...	3.5	130	<.10	.40	--	.010	14	5
23...	--	--	--	--	--	--	--	--
23...	--	--	<.10	.50	--	.010	150	40
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	3.9	130	<.10	.80	--	.080	230	120
MAY								
23...	.7	120	.20	.70	.90	.040	18	6
23...	--	--	.20	1.6	1.8	.040	<10	10
23...	--	--	--	--	--	--	--	--
23...	--	--	.20	1.5	1.7	.060	<10	30
23...	--	--	--	--	--	--	--	--
23...	2.3	130	.20	1.1	1.3	.070	7	110
AUG								
15...	.7	130	<.10	.60	--	.020	8	2
15...	--	--	--	--	--	--	--	--
15...	--	--	<.10	.40	--	.020	30	20
15...	--	--	<.10	.50	--	.040	30	150
15...	--	--	--	--	--	--	--	--
15...	2.5	140	.10	.80	.90	.060	8	450

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321818096064301 CEDAR CREEK RESERVOIR SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
23...	1255	1.00	235	7.7	9.5	.50	9.0
23...	1256	10.0	235	7.6	9.5	--	9.0
23...	1257	18.0	235	7.6	9.0	--	9.0
MAY							
23...	1055	1.00	231	7.9	25.0	.70	7.5
23...	1056	10.0	231	7.8	24.5	--	7.1
23...	1057	19.0	231	7.3	23.5	--	5.2
AUG							
15...	1120	1.00	253	7.8	28.5	.70	6.4
15...	1121	10.0	253	7.5	28.5	--	4.7
15...	1122	16.0	253	7.5	28.0	--	4.5

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB							
23...	80	<.10	.50	--	.020	60	<10
23...	80	--	--	--	--	--	--
23...	79	<.10	.70	--	.030	60	<10
MAY							
23...	91	.10	.60	.70	.030	10	<10
23...	85	--	--	--	--	--	--
23...	61	.10	.60	.70	.050	30	<10
AUG							
15...	82	<.10	.70	--	.030	30	10
15...	60	--	--	--	--	--	--
15...	57	<.10	.80	--	.050	30	20

321843096101701 CEDAR CREEK RESERVOIR SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
23...	1320	1.00	235	7.5	9.0	8.6	76
23...	1321	10.0	235	7.5	9.0	8.7	76
23...	1322	20.0	235	7.5	9.0	8.7	76
23...	1323	28.0	235	7.4	9.0	8.7	76
MAY							
23...	0750	1.00	229	7.9	24.5	7.3	88
23...	0751	10.0	229	7.7	24.0	7.1	85
23...	0752	20.0	229	7.4	24.0	6.2	74
23...	0753	33.0	229	7.1	24.0	6.2	74
AUG							
15...	1140	1.00	249	8.2	29.0	7.3	95
15...	1141	10.0	252	7.8	28.0	6.1	78
15...	1142	20.0	252	7.8	28.0	6.1	78
15...	1143	29.0	252	7.8	28.0	6.0	76

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

322119096104901 CEDAR CREEK RESERVOIR SITE GR

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
23...	1440	1.00	235	7.6	9.5	8.5	76
23...	1441	10.0	235	7.6	9.5	8.7	77
23...	1442	18.0	235	7.6	9.5	8.7	77
MAY							
23...	1200	1.00	229	7.8	25.5	7.2	88
23...	1201	12.0	229	7.6	24.5	6.8	82
AUG							
15...	1210	1.00	255	8.1	28.5	7.2	93
15...	1211	10.0	255	7.9	28.0	6.7	85
15...	1212	14.0	255	7.9	28.0	6.6	84

322119096095401 CEDAR CREEK RESERVOIR SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
23...	1410	1.00	235	7.5	9.5	.50	8.7	77	68
23...	1411	10.0	235	7.5	9.5	--	8.7	77	--
23...	1412	21.0	235	7.5	9.5	--	8.7	77	67
MAY									
23...	1130	1.00	229	7.8	25.5	.20	7.1	87	69
23...	1131	10.0	229	7.6	24.5	--	6.8	82	--
23...	1132	17.0	229	7.3	24.0	--	5.6	67	69
AUG									
15...	1220	1.00	262	7.9	28.5	.50	6.8	87	77
15...	1221	5.00	262	7.9	28.5	--	6.8	87	--
15...	1222	10.0	262	7.8	28.0	--	6.4	82	--
15...	1223	17.0	262	7.8	27.5	--	6.4	81	80

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
23...	14	20	4.3	17	.9	4.4	54	25	20
23...	--	--	--	--	--	--	--	--	--
23...	13	20	4.2	17	.9	4.0	54	24	19
MAY									
23...	13	21	4.1	16	.9	4.5	56	26	19
23...	--	--	--	--	--	--	--	--	--
23...	17	21	4.1	16	.9	4.5	52	26	18
AUG									
15...	15	23	4.7	19	1	4.8	62	28	20
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	17	24	4.8	19	1	5.1	63	28	20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
23...	4.1	130	<.10	.60	--	.040	49	7
23...	--	--	--	--	--	--	--	--
23...	3.9	120	<.10	.60	--	.050	31	5
MAY								
23...	2.6	130	.30	.80	1.1	.090	7	3
23...	--	--	--	--	--	--	--	--
23...	4.1	120	.30	1.2	1.5	.100	10	16
AUG								
15...	1.0	140	<.10	.70	--	.040	<3	<1
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	1.0	140	<.10	.60	--	.050	6	8

08063050 NAVARRO MILLS LAKE NEAR DAWSON, TX

LOCATION.--Lat 31°57'27", long 96°41'21", Navarro County, Hydrologic Unit 12030108, in left abutment of spillway of Navarro Mills Dam on Richland Creek, 1.7 mi upstream from bridge on State Highway 31, 3.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 4.2 mi upstream from Post Oak Creek, 4.6 mi north of Dawson, and 63.9 mi upstream from mouth.

DRAINAGE AREA.--320 mi².

PERIOD OF RECORD.--August 1962 to current year. Prior to October 1970, published as Navarro Mills Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 8, 1962, nonrecording gage in low-water channel at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 7,570 ft long, including a 240-foot off-channel gated spillway with six 40.0- by 29.0-foot tainter gates. From Aug. 27, 1962, to Mar. 14, 1963, the lake was operated as a detention basin only. Deliberate impoundment began Mar. 15, 1963, and the dam was completed in September 1963. The low-flow outlet works consist of two 36-inch-diameter gate-controlled conduits. The lake was built for flood control and water conservation. The capacity table prior to September 1976 is based on a survey made in February 1956 by the Corps of Engineers. Capacity table after Aug. 31, 1976, is based on a sedimentation survey made in September 1972. Flow is affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 26,160 acre-ft. These structures control runoff from 86.9 mi² in the Richland Creek drainage basin. An unknown amount of water is diverted for municipal and industrial uses. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	457.0	-
Design flood	451.9	329,500
Top of gates (top of flood-control storage pool)	443.0	206,200
Top of conservation pool	424.5	56,960
Crest of spillway	414.0	18,840
Lowest gated outlet (invert)	400.0	1,150

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 183,300 acre-ft May 18, 1968 (elevation, 440.36 ft); minimum since since initial filling in May 1965, 32,490 acre-ft Dec. 28, 1978 (elevation, 418.89 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 63,630 acre-ft Mar. 15 at 0800 hours (elevation, 425.78 ft); minimum daily, 45,110 acre-ft Sept. 30 at 2400 hours (elevation, 422.02 ft).

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

422.0	45,020	425.0	59,520
423.0	49,590	426.0	64,810
424.0	54,460		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49880	54060	53370	52440	52740	54060	60040	56560	58850	56510	52340	48270
2	49740	54010	53520	52540	52690	54060	60250	56610	58800	56410	52200	48130
3	49690	54010	53620	52440	52690	54160	60300	56460	58590	56260	51860	47990
4	49590	54060	53570	52490	52690	54310	60250	56310	58700	56060	51760	47810
5	49500	54060	53570	52440	52590	54360	60140	56310	58850	55960	51610	47720
6	49400	54060	53520	52440	52490	54310	59260	56260	59310	55750	51470	47620
7	49540	54010	53420	52440	52440	54310	59110	56160	59210	55650	51320	47400
8	52150	53960	53370	52590	52540	54210	59310	55960	59110	55600	51180	47350
9	52780	53960	53370	52830	52640	54210	59160	55800	59000	55300	51030	47170
10	52880	53820	53370	52880	52690	54310	59210	55650	58950	55200	50890	47030
11	52930	53670	53320	52830	52980	54460	59160	55450	58900	55050	50790	46890
12	54260	53620	53220	52830	52930	61920	59160	55350	58750	54860	50700	46800
13	54360	53570	53220	52780	52980	63150	59160	55300	58640	54710	50600	46710
14	54410	53570	53220	52830	52930	63570	59060	55200	58590	54510	50460	46620
15	54410	53420	52980	52830	52980	63040	59000	55050	58440	54360	50410	46440
16	54460	53320	53220	52830	52880	61980	58540	55000	58290	54210	50310	46260
17	54460	53320	53180	52830	52780	60870	57720	54900	58180	54110	50170	46130
18	54510	53220	53220	52780	52930	59990	57370	54860	58030	53860	50120	46040
19	54560	53570	53080	52690	52880	58700	57320	59210	57930	53770	49930	45950
20	54900	53370	52980	52640	52880	57570	57270	59470	57780	53620	49930	45860
21	54810	53270	53080	52640	52830	57420	57370	59420	57670	53470	49640	45770
22	54660	53320	52930	52830	52740	57420	57220	59360	57470	53420	49450	45820
23	54610	53420	52880	52830	52690	61290	57060	59470	57320	53180	49360	45680
24	54560	53420	52830	52830	52590	62240	56960	59310	57220	53130	49160	45590
25	54460	53320	52690	52830	52540	62510	56860	59210	57120	53080	49020	45550
26	54410	53520	52780	52830	53960	62450	56910	59060	57060	53080	49120	45460
27	54310	53670	52740	52780	54260	62350	56810	58950	56910	53030	48840	45330
28	54260	53520	52690	52780	54110	61030	56710	59420	56810	52930	48690	45280
29	54210	53420	52590	52740	54010	60250	56710	59310	56660	52780	48550	45240
30	54210	53420	52540	52780	---	59990	56560	59160	56610	52690	48510	45110
31	54110	---	52490	52740	---	60140	---	59060	---	52540	48370	---
MAX	54900	54060	53620	52880	54260	63570	60300	59470	59310	56510	52340	48270
MIN	49400	53220	52490	52440	52440	54060	56560	54860	56610	52540	48370	45110
(†)	423.93	423.79	423.60	423.65	423.91	425.12	424.42	424.91	424.43	423.61	422.74	422.02
(±)	+4130	-690	-930	+250	+1270	+6130	-3580	+2500	-2450	-4070	-4170	-3260

CAL YR 1983 MAX 69360 MIN 44720 ± -7050
WTR YR 1984 MAX 63570 MIN 45110 ± -4870

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

08063100 RICHLAND CREEK NEAR DAWSON, TX

LOCATION.--Lat 31°56'18", long 96°40'52", Navarro County, Hydrologic Unit 12030108, at downstream side of bridge on State Highway 31, 1.3 mi upstream from St. Louis Southwestern Railway Lines bridge, 1.7 mi downstream from Navarro Mills Dam, 2.5 mi upstream from Post Oak Creek, and 3.6 mi northeast of Dawson.

DRAINAGE AREA.--333 mi^2.

PERIOD OF RECORD.--October 1960 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 367.52 ft National Geodetic Vertical Datum of 1929. Nov. 21, 1960, to Sept. 30, 1982, water-stage recorder at same site and 3.00-foot higher datum. Prior to Nov. 21, 1960, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow regulated since Mar. 15, 1963, by Navarro Mills Lake (station 08063050). Water is diverted from Navarro Mills Lake for municipal use. Flow is affected at times by discharge from the flood-detention pool of a floodwater-retarding structure with a detention capacity of 297 acre-ft. This structure controls runoff from 1.28 mi^2 below Navarro Mills Lake and above this station. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--24 years, 137 ft^3/s (99,260 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft^3/s July 3, 1961 (gage height, 25.50 ft), from rating curve extended above 14,000 ft^3/s; no flow at times. Maximum discharge since completion of Navarro Mills Dam in 1963, 3,850 ft^3/s Nov. 24, 1974 (gage height, 22.85 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, about 31 ft June 21, 1929, from information by local residents. Floods in 1946 and 1957 reached a stage of about 26 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 755 ft^3/s Mar. 15 at 1900 hours (gage height, 12.54 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.20	.34	1.10	.29	.00	1.80	.39	.59	1.10	3.90	.00
2	.21	.24	.20	.71	.22	.00	1.70	1.10	.30	.72	19.00	.00
3	.24	.25	1.20	1.10	.16	.03	1.50	1.20	.25	.54	33.00	.25
4	.27	.26	.35	.85	.10	.08	1.30	1.10	.48	.42	60.00	.30
5	1.30	.62	.19	1.50	.10	.49	1.10	1.10	1.90	.34	39.00	.03
6	.85	1.60	.13	.71	.10	.00	383.00	1.00	7.30	.29	13.00	.03
7	1.70	1.20	.13	.38	.10	.00	337.00	.71	4.70	.24	.95	.08
8	21.00	1.10	.13	.38	.11	.68	2.50	1.40	1.80	.22	.25	.08
9	1.80	1.10	.13	1.70	.29	.00	1.50	1.00	.59	.20	1.50	.00
10	.05	.88	.13	1.10	.27	.00	1.30	1.10	.30	.17	6.20	.00
11	.01	.71	.21	.48	.28	.00	1.20	.71	.23	.15	6.20	.22
12	.06	.71	.25	.48	.49	322.00	1.10	1.30	.20	.13	7.20	.31
13	.08	.59	.31	.48	.25	11.00	1.00	1.00	.16	.12	7.20	.48
14	.06	.59	.80	.38	.21	1.30	.89	.59	.14	.11	5.80	.30
15	.15	.45	.84	.38	.17	409.00	.74	.71	.12	.10	.85	1.00
16	.09	.25	1.30	.38	.17	748.00	155.00	1.50	.10	.09	.38	.38
17	.06	.25	1.60	.38	.15	741.00	426.00	1.30	.09	.09	.38	.16
18	.12	.25	1.30	.38	.20	733.00	288.00	.71	.08	.08	.38	.10
19	.85	.48	1.60	.38	.27	725.00	1.90	3.00	.59	.08	.05	.02
20	.32	.39	1.80	.38	.51	553.00	.99	1.90	1.50	.08	.00	.13
21	.49	.17	1.50	.30	.59	187.00	.79	.85	.59	.08	.00	.48
22	.49	.26	1.00	.30	.56	.00	.71	.38	.26	.08	.03	.85
23	.35	1.10	1.10	1.00	.71	77.00	.27	.38	.08	.08	.00	.48
24	.56	.46	.71	.85	.65	4.30	.22	.48	.59	.08	.00	.59
25	.26	.24	.38	.59	.27	.10	.25	.25	.08	1.00	.02	.38
26	.20	.17	.85	2.50	1.60	70.00	.25	.16	.71	.40	.03	.48
27	.24	.56	1.00	1.00	1.50	431.00	.36	.13	2.30	.71	.05	.25
28	.25	.55	1.10	.30	.04	505.00	.49	1.30	1.80	.71	.00	.38
29	.20	.31	.25	.25	.00	431.00	.67	.85	1.20	.59	.00	.30
30	.24	.58	.38	.17	---	188.00	.82	.25	2.00	.08	.05	.59
31	.25	---	.48	1.10	---	2.40	---	.71	---	.22	.30	---
TOTAL	33.00	16.52	21.69	21.99	10.36	6140.38	1614.35	28.56	31.03	9.30	205.72	8.65
MEAN	1.06	.55	.70	.71	.36	198	53.8	.92	1.03	.30	6.64	.29
MAX	21	1.6	1.8	2.5	1.6	748	426	3.0	7.3	1.1	60	1.0
MIN	.01	.17	.13	.17	.00	.00	.22	.13	.08	.08	.00	.00
AC-FT	65	33	43	44	21	12180	3200	57	62	18	408	17

CAL YR 1983 TOTAL 19074.48 MEAN 52.3 MAX 871 MIN .01 AC-FT 37830
WTR YR 1984 TOTAL 8141.55 MEAN 22.2 MAX 748 MIN .00 AC-FT 16150

08063500 RICHLAND CREEK NEAR RICHLAND, TX

LOCATION.--Lat 31°57'02", long 96°25'16", Navarro County, Hydrologic Unit 12030108, at left end of downstream bridge on U.S. Highway 75 (Interstate Highway 45), 800 ft downstream from Texas and New Orleans Railroad Co. bridge, 1.0 mi north of Richland, 3.5 mi downstream from Pin Oak Creek, and 36.7 mi upstream from mouth.

DRAINAGE AREA.--734 mi^2.

PERIOD OF RECORD.--December 1924 to February 1925 (discharge measurements and gage heights only), March 1939 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 299.12 ft National Geodetic Vertical Datum of 1929. Dec. 11, 1924, to Feb. 11, 1925, nonrecording gage at site 800 ft upstream. Mar. 17, 1939, to Feb. 14, 1958, water-stage recorder at site 50 ft upstream. Feb. 15, 1958, to Jan. 28, 1959, nonrecording gage at present site. June 8, 1955, to Feb. 14, 1958, and since Feb. 6, 1959, supplementary water-stage recorder at overflow channel 3,900 ft to right of main channel gage. All gages at present datum.

REMARKS.--Records fair. Since October 1962, flow is partly regulated by Navarro Mills Lake (station 08063050) about 25 mi upstream. Flow is also affected at times by discharge from the flood-detention pools of 73 floodwater-retarding structures with a combined detention capacity of 42,060 acre-ft. These structures control runoff from 143 mi^2 in the Richland Creek drainage basin. Several observsations of water temperature were made during the year. A gage-height telemeter with data collection platform and antenna is located at station.

AVERAGE DISCHARGE.--23 years (water years 1940-62) prior to regulation by Navarro Mills Lake, 404 ft^3/s (292,700 acre-ft/yr); 22 years (water years 1963-84) regulated, unadjusted, 315 ft^3/s (228,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,900 ft^3/s May 12, 1948 (gage height, 24.1'6 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 25.5 ft in December 1913 (discharge not determined), from information by Texas and New Orleans Railroad Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,590 ft^3/s Mar. 13 at 1800 hours (gage height, 20.82 ft); maximum gage height at main channel, 20.95 ft Mar. 13 at 1300 hours; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.85	.03	.03	1.2	116	36.0	2.50	13.00	.02	.00	12.00
2	.00	.73	.05	.05	1.4	63	26.0	2.40	8.50	.02	.00	10.00
3	.00	.60	.96	.10	1.4	39	23.0	2.40	5.50	.00	.00	4.90
4	.00	.41	.38	.16	1.3	31	21.0	1.90	4.00	.00	.00	2.40
5	.00	.25	19.00	.16	1.3	708	20.0	1.90	3.30	.00	29.00	.71
6	.00	.25	21.00	.16	1.2	846	18.0	1.80	16.00	.00	38.00	.16
7	.00	.25	14.00	.16	1.3	342	553.0	1.90	147.00	.00	24.00	.03
8	.00	.25	7.90	.10	1.3	142	164.0	1.40	71.00	.00	12.00	.00
9	147.00	.17	5.60	.38	1.6	62	36.0	1.20	35.00	.00	2.60	.00
10	48.00	.12	4.30	.31	1.7	43	29.0	1.00	23.00	.00	.81	.00
11	22.00	.10	3.60	.25	2.6	41	23.0	.89	15.00	.00	.31	.00
12	10.00	.14	2.70	.16	2.9	2450	20.0	.92	10.00	.00	.03	.00
13	25.00	.10	2.00	4.20	196.0	4770	16.0	.97	6.50	.00	.00	.00
14	23.00	.10	1.60	8.70	83.0	2300	14.0	1.00	4.20	.00	.00	.00
15	14.00	.10	1.20	7.50	34.0	902	12.0	.83	2.80	.00	1.30	.00
16	9.00	.09	.95	5.90	23.0	1190	14.0	.67	1.90	.00	3.20	.00
17	5.40	.11	.45	4.90	18.0	1060	187.0	.49	1.40	.00	2.80	.00
18	3.80	.11	.24	4.10	15.0	920	386.0	.30	1.00	.00	.92	.00
19	3.20	.10	.08	3.80	16.0	844	182.0	32.00	.69	.00	.16	.00
20	1.70	.07	.04	3.30	9.8	770	33.0	1580.00	.56	.00	.05	.00
21	.87	.62	.03	3.00	7.9	451	16.0	193.00	.48	.00	.00	.00
22	.99	.09	.03	2.80	7.5	131	10.0	69.00	.38	.00	.00	.00
23	4.50	.07	.02	3.20	7.8	82	7.4	36.00	.37	.00	.00	.00
24	7.50	.07	.02	3.00	7.0	126	5.7	30.00	.30	.02	.00	.00
25	5.90	.12	.02	2.50	6.1	395	5.3	24.00	.23	.00	.00	.00
26	5.40	.10	.02	2.50	472.0	300	5.7	19.00	.13	.00	.27	.00
27	13.00	.05	.02	2.20	1550.0	159	4.6	15.00	.07	.00	6.80	.00
28	5.20	.05	.02	2.10	438.0	622	4.0	14.00	.05	.00	3.20	.00
29	2.80	.05	.02	2.10	211.0	493	3.7	16.00	.04	.00	1.30	.00
30	1.70	.05	.02	1.70	---	428	2.8	18.00	.02	.00	4.40	.00
31	1.20	---	.02	1.40	---	131	---	18.00	---	.00	11.00	---
TOTAL	361.16	6.17	86.32	70.92	3121.3	20957	1878.2	2088.47	372.42	.06	142.15	30.20
MEAN	11.7	.21	2.78	2.29	108	676	62.6	67.4	12.4	.002	4.59	1.01
MAX	147	.85	21	8.7	1550	4770	553	1580	147	.02	38	12
MIN	.00	.05	.02	.03	1.2	31	2.8	.30	.02	.00	.00	.00
AC-FT	716	12	171	141	6190	41570	3730	4140	739	.1	282	60

CAL YR 1983 TOTAL 46880.55 MEAN 128 MAX 3920 MIN .00 AC-FT 92990
WTR YR 1984 TOTAL 29114.37 MEAN 79.5 MAX 4770 MIN .00 AC-FT 57750

08063500 RICHLAND CREEK NEAR RICHLAND, TX

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to December 1973. Chemical and biochemical analyses: October 1983 to September 1984.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1969, October 1983 to September 1984.
WATER TEMPERATURES: October 1967 to September 1969, October 1983 to September 1984.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,920 micromhos Nov. 5, 1968; minimum daily, 119 micromhos Oct. 30, 1967.
WATER TEMPERATURES: Maximum daily, 34.0°C Aug. 18, 1969; minimum daily, 2.0°C Dec. 22, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 950 micromhos Feb. 10; minimum daily, 150 micromhos Mar. 13.
WATER TEMPERATURES: Maximum daily, 31.0°C July 2, Aug. 26; minimum daily, 2.0°C Dec. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 30...	1055	.05	640	7.8	12.0	25	8.3	9.3	87	2.0	210
JAN 11...	1145	.30	769	8.0	8.0	50	23	10.0	85	3.4	230
MAR 28...	0920	604	340	8.1	17.0	50	200	10.0	106	1.8	120
MAY 09...	0830	1.2	755	7.9	20.0	12	2.1	6.6	73	2.1	250
JUN 20...	1110	.54	505	8.2	30.0	50	16	9.6	129	3.1	160

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 30...	52	73	7.0	49	2	4.9	160	83	49	.40	9.0
JAN 11...	42	79	8.3	69	2	6.1	190	95	68	.40	10
MAR 28...	13	43	3.7	19	.8	4.2	110	39	15	.40	5.3
MAY 09...	68	85	8.5	57	2	4.9	180	110	64	.40	4.6
JUN 20...	16	53	5.6	39	1	6.5	140	58	37	.40	8.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 30...	370	14	2	--	.020	<.10	.070	.93	1.0	.050	6.8
JAN 11...	450	39	24	--	.030	<.10	.040	.96	1.0	.100	9.7
MAR 28...	200	372	36	.44	.160	.60	.120	2.9	3.0	.290	11
MAY 09...	440	48	15	--	<.010	<.10	.020	.68	.70	.030	5.9
JUN 20...	290	31	14	.28	.020	.30	.060	2.3	2.4	.090	12

08063500 RICHLAND CREEK NEAR RICHLAND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 30...	1055	3	96	<1	<10	1	20
JAN 11...	1145	4	100	1	<10	<1	23
MAY 09...	0830	1	120	<1	<10	<1	6

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 30...	5	36	.2	1	<1	6
JAN 11...	<1	34	.3	<1	1	11
MAY 09...	<1	37	.2	<1	<1	13

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	361.16	385	224	218	25	24	45	44	130
NOV.	1983	6.17	497	289	4.8	35	0.6	60	1.0	160
DEC.	1983	86.32	712	415	97	60	14	94	22	230
JAN.	1984	70.92	803	468	90	72	14	110	21	250
FEB.	1984	3121.3	283	165	1390	18	151	33	277	94
MAR.	1984	20957	246	143	8090	14	769	27	1530	83
APR.	1984	1878.2	407	237	1200	27	136	48	244	130
MAY	1984	2088.47	267	155	876	15	86	30	168	90
JUNE	1984	372.42	442	257	258	30	30	53	53	140
JULY	1984	0.06	635	370	0.06	50	0.01	81	0.01	200
AUG.	1984	142.15	442	257	99	30	11	53	20	150
SEPT	1984	30.20	498	290	24	35	2.8	60	4.9	160
TOTAL		29114.37	**	**	12300	**	1240	**	2390	**
WTD.AVG.		80	270	157	**	16	**	30	**	90

08063500 RICHLAND CREEK NEAR RICHLAND, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	461	624	757	890	256	402	649	476	619	---	518
2	---	463	629	735	887	269	415	678	697	588	---	500
3	---	469	618	713	907	306	442	690	730	---	---	475
4	---	473	626	757	919	321	472	707	773	---	---	451
5	---	475	635	773	924	245	495	720	783	---	450	447
6	---	477	736	775	929	225	511	730	715	---	406	455
7	---	479	819	777	933	299	325	736	331	---	386	460
8	---	484	711	768	937	308	404	744	441	---	398	---
9	297	489	664	760	939	320	429	757	475	---	399	---
10	330	498	677	769	950	338	488	780	508	---	400	---
11	481	510	690	776	910	355	653	802	518	---	408	---
12	566	515	704	787	899	255	758	823	494	---	415	---
13	500	518	721	760	816	150	745	834	477	---	---	---
14	545	520	730	732	488	200	707	842	475	---	---	---
15	410	530	742	792	431	244	712	851	478	---	424	---
16	370	534	732	830	553	210	720	867	484	---	449	---
17	369	542	743	854	563	275	550	880	495	---	446	---
18	378	558	744	767	580	335	350	895	502	---	490	---
19	388	548	745	785	611	344	371	650	506	---	523	---
20	405	537	746	801	633	367	424	227	508	---	522	---
21	410	535	752	833	605	356	460	294	518	---	---	---
22	420	533	756	830	589	363	488	322	527	---	---	---
23	466	531	763	807	603	376	507	371	536	---	---	---
24	470	558	776	810	620	335	527	408	540	699	---	---
25	571	563	789	783	651	250	542	447	546	---	---	---
26	576	565	802	800	301	240	556	430	552	---	529	---
27	457	585	817	827	174	242	575	435	571	---	590	---
28	472	590	827	883	259	340	596	437	587	---	534	---
29	460	614	815	885	263	355	606	453	593	---	610	---
30	454	629	831	887	---	362	614	463	614	---	585	---
31	449	---	815	886	---	381	---	479	---	---	528	---
MEAN	445	526	735	797	682	297	528	626	548	635	475	472

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.0	13.0	9.0	8.0	8.0	18.0	20.0	21.0	30.0	---	26.5
2	---	20.0	13.0	---	10.0	10.0	16.0	21.0	25.0	31.0	---	---
3	---	19.0	13.0	4.0	11.0	14.0	16.0	23.0	---	---	---	---
4	---	20.0	---	8.0	11.0	15.0	16.0	22.0	22.0	---	---	25.0
5	---	---	14.0	12.0	---	---	14.0	---	23.0	---	---	24.0
6	---	---	10.0	15.0	8.0	---	15.0	25.0	26.0	---	26.0	24.0
7	---	18.0	9.0	14.0	8.0	12.0	---	24.0	24.0	---	26.0	23.0
8	---	18.0	9.0	---	9.0	12.0	18.0	21.0	24.0	---	26.0	---
9	19.0	18.0	12.0	12.0	11.0	11.0	16.0	19.0	---	---	26.0	---
10	19.0	13.0	---	8.0	14.0	14.0	18.0	20.0	26.0	---	29.0	---
11	20.0	16.0	15.0	7.0	15.0	---	18.0	20.0	24.0	---	27.0	---
12	16.0	---	10.0	12.0	16.0	16.0	19.0	23.0	25.0	---	---	---
13	17.0	15.0	12.0	6.0	13.0	16.0	18.0	---	25.0	---	---	---
14	17.0	14.0	10.0	6.0	13.0	15.0	21.0	23.0	25.0	---	---	---
15	---	13.0	9.0	---	14.0	19.0	21.0	23.0	25.0	---	24.0	---
16	21.0	11.0	9.0	6.0	13.0	18.0	17.0	24.0	26.0	---	25.0	---
17	20.0	12.0	8.0	6.0	12.0	18.0	20.0	23.0	27.0	---	25.0	---
18	21.0	18.0	7.0	4.0	---	19.0	---	23.0	26.0	---	---	---
19	21.0	---	5.0	4.0	13.0	16.0	18.0	---	26.0	---	26.0	---
20	22.0	18.0	4.0	4.0	13.0	15.0	23.0	22.0	26.0	---	26.0	---
21	20.0	19.0	3.0	4.0	10.0	15.0	---	22.0	26.0	---	---	---
22	---	---	2.0	5.0	9.0	16.0	24.0	22.0	26.0	---	---	---
23	21.0	18.0	4.0	7.0	11.0	18.0	19.0	23.0	30.0	---	---	---
24	17.0	15.0	---	6.0	11.0	---	20.0	24.0	---	26.0	---	---
25	17.0	16.0	---	5.0	15.0	17.0	20.0	24.0	27.0	---	---	---
26	15.0	16.0	---	6.0	15.0	17.0	22.0	25.0	28.0	---	31.0	---
27	15.0	12.0	5.0	8.0	11.0	18.0	21.0	---	26.0	---	26.0	---
28	18.0	10.0	5.0	10.0	9.0	17.0	24.0	24.0	26.0	---	30.0	---
29	---	20.0	5.0	---	8.0	16.0	25.0	23.0	30.0	---	26.0	---
30	19.0	12.0	5.0	9.0	---	15.0	20.0	21.0	30.0	---	26.0	---
31	16.0	---	5.0	9.0	---	16.0	---	21.0	---	---	26.0	---
MEAN	18.5	16.0	8.5	7.5	11.5	15.5	19.0	22.5	25.5	29.0	26.5	24.5

08063700 BARDWELL LAKE NEAR ENNIS, TX

LOCATION.--Lat 32°15'00", long 96°38'49", Ellis County, Hydrologic Unit 12030109, in intake structure of Bardwell Dam on Waxahachie Creek, 5 mi south of Ennis, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--November 1965 to current year. Prior to October 1970, published as Bardwell Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Apr. 25, 1966, nonrecording gage on intake structure at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 15,400 ft long, including a 350-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov. 20, 1965, and the dam was completed Mar. 27, 1966. The controlled low-flow outlet works consists of a 10.0-foot-diameter concrete conduit with two 5.0- by 10.0-foot sluice gates. The lake was built for flood control and water conservation. The capacity table beginning October 1976 is based on a survey completed in 1972. Flow from 81.4 mi² above this lake is modified by Lake Waxahachie, with a capacity of 13,500 acre-ft at spillway elevation. The city of Waxahachie diverted water from Lake Waxahachie and returned an unknown amount of effluent to Waxahachie Creek. Inflow is affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 15,370 acre-ft. These structures control runoff from 52.4 mi² in the Chambers Creek watershed. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	460.0	-
Design flood	455.9	-
Crest of spillway (top of flood-control pool)	439.0	137,600
Top of conservation pool	421.0	52,300
Lowest gated outlet (invert)	391.0	690

COOPERATION.--Records furnished by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,300 acre-ft May 19, 1969 (elevation, 432.35 ft); minimum since initial filling, 39,720 acre-ft Nov. 10, 1978 (elevation, 417.21 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 58,960 acre-ft Mar. 26 at 1600 hours (elevation, 422.81 ft); minimum daily, 42,770 acre-ft Sept. 30 at 2400 hours (elevation, 418.19 ft).

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

418.0	42,170	422.0	55,920
420.0	48,780	423.0	59,680

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49930	49130	48990	48880	49540	51620	56030	52610	51830	50380	47580	45030
2	49860	49130	49090	49060	49540	51720	55550	52610	51790	50280	47510	44900
3	49790	49090	49060	49090	49610	51790	55110	52650	51690	50140	47300	44870
4	49790	49200	49020	48950	49610	52040	54490	52610	51690	50030	47270	44800
5	49720	49300	49160	48950	49580	51970	53980	52540	51690	50070	47340	44730
6	49650	49300	49020	48990	49540	51900	53620	52580	51900	50000	47200	44600
7	49790	49260	48990	48950	49510	51940	53510	52650	51860	49890	47060	44440
8	49820	49200	48990	48950	49580	52010	53470	52470	51940	49720	47000	44310
9	49790	49160	49020	49200	49820	51900	53180	52360	51970	49680	46930	44240
10	49790	49090	49020	49230	49860	52330	52930	52180	51940	49510	46900	44150
11	49890	48950	49090	49200	50070	52650	52760	52110	51900	49440	46830	44050
12	49790	48950	48950	49230	50140	55520	52900	52110	51830	49370	46730	43990
13	49650	48920	48990	49260	50140	56030	52970	52080	51390	49260	46660	43920
14	49580	48880	48950	49340	50140	56330	52970	52040	51330	49130	46560	43890
15	49540	48810	49020	49340	50170	56780	53010	51970	51260	49020	46460	43790
16	49540	48740	49090	49340	50170	56960	52900	51970	51160	48950	46420	43660
17	49540	48670	49090	49370	50100	57230	52680	51940	51090	48850	46320	43570
18	49540	48640	49130	49370	50310	57560	52610	51940	50980	48710	46290	43470
19	49580	48880	49060	49300	50240	57530	52580	52010	50910	48640	46160	43380
20	49650	48740	49020	49300	50280	57110	52760	52040	50840	48540	45060	43340
21	49580	48670	49130	49260	50240	56550	52760	51940	50770	48430	45920	43250
22	49510	48850	48950	49400	50210	55960	52790	51940	50660	48330	45860	43310
23	49470	48880	49060	49400	50210	57260	52720	51940	50590	48260	45790	43250
24	49440	48850	48880	49470	50210	58240	52610	51900	50560	48190	45660	43150
25	49370	48780	48880	49470	50140	58810	52580	51830	50490	48230	45560	43150
26	49340	48950	48850	49510	51120	58880	52610	51790	50490	48190	45490	43120
27	49260	49130	48880	49540	51690	58620	52680	51790	50420	48050	45360	42990
28	49200	49020	48880	49540	54620	58160	52680	52040	50380	48020	45290	43020
29	49200	48990	48880	49540	51620	57530	52650	51940	50280	47880	45230	42900
30	49160	48990	48880	49580	---	57000	52580	51790	50450	47850	45190	42770
31	49160	---	48880	49580	---	56550	---	51720	---	47750	45130	---
MAX	49930	49300	49160	49580	54620	58880	56030	52650	51970	50380	47580	45030
MIN	49160	48640	48850	48880	49510	51620	52580	51720	50280	47750	45060	42770
(†)	420.11	420.06	420.03	420.23	420.81	422.17	421.08	420.84	420.48	419.70	418.92	418.19
(‡)	-870	-170	-110	+700	+2040	+4930	-3970	-860	-1270	-2700	-2620	-2360

CAL YR 1983 MAX 61680 MIN 46090 ‡ +2460
WTR YR 1984 MAX 58880 MIN 42770 ‡ -7260

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

08063800 WAXAHACHIE CREEK NEAR BARDWELL, TX

LOCATION.--Lat 32°14'36", long 96°38'24", Ellis County, Hydrologic Unit 12030109, on right bank 0.8 mi downstream from Bardwell Dam, 3.6 mi southeast of Bardwell, 3.8 mi downstream from bridge on State Highway 34, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--178 mi^2.

PERIOD OF RECORD.--October 1963 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 370.18 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. Flow is regulated by Bardwell Lake (station 08063700) 0.8 mi upstream. Gage-height telemeter located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 70.0 ft^3/s (50,720 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,960 ft^3/s Feb. 9, 1965 (gage height, 17.55 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1944, about 23 ft in 1944 and 1945, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 394 ft^3/s Mar. 20 at 0400 hours (gage height, 7.22 ft); minimum daily, 0.20 ft^3/s Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.70	1.20	.76	.35	.80	385.0	1.80	.66	.76	2.5	1.60
2	1.8	1.20	.94	.68	.35	.83	387.0	1.90	.68	.85	2.7	1.40
3	1.9	.20	.90	.68	.41	.85	388.0	1.90	.69	.87	2.9	1.50
4	1.7	1.40	.80	.68	.35	.84	390.0	1.60	.56	.86	2.9	.94
5	1.3	2.60	.64	.63	.35	.72	324.0	1.50	.54	.85	3.0	1.10
6	1.2	2.40	.64	.56	.37	.81	239.0	1.50	.60	.89	2.6	1.20
7	1.4	2.30	.64	.53	.38	.85	247.0	1.50	.62	.90	1.4	1.30
8	1.4	2.60	.66	.46	.40	.85	244.0	1.30	.57	.85	1.6	1.50
9	1.4	2.70	.69	.46	.64	.87	250.0	1.20	.52	.90	1.6	1.50
10	1.4	2.50	.67	.45	.53	1.40	252.0	1.40	.53	.79	1.7	1.40
11	1.4	2.50	.70	.43	.57	1.60	98.0	1.60	.56	.99	2.4	3.20
12	1.3	2.60	.68	.43	.85	3.30	3.8	1.60	.58	3.20	2.4	2.80
13	1.3	2.60	.68	.43	.67	.52	3.4	1.50	.62	3.20	2.5	3.00
14	1.2	2.40	.72	.46	.64	.33	3.2	3.30	.66	2.80	2.4	3.30
15	1.2	2.20	.73	.46	.63	.45	2.9	2.20	.71	2.80	2.3	3.40
16	1.2	2.10	.83	.46	.60	.98	2.5	1.20	.68	2.90	1.9	3.30
17	1.4	2.10	.85	.43	.65	1.10	55.0	.81	.66	3.10	2.0	3.30
18	1.5	2.30	.87	.39	.77	.96	90.0	.73	.46	3.00	2.1	3.20
19	1.9	2.10	1.00	.35	.65	63.00	43.0	.77	.40	3.00	2.0	2.70
20	1.7	1.80	1.00	.37	.57	390.00	3.2	.82	.45	3.10	2.0	2.20
21	1.7	1.80	1.00	.30	.60	393.00	3.0	.73	.42	2.80	2.0	2.50
22	1.5	1.70	1.00	.37	.60	391.00	2.9	.81	.45	2.60	2.1	2.80
23	1.6	1.00	.95	.40	.60	165.00	2.8	.64	.43	2.20	1.9	2.40
24	1.7	.64	.86	.40	.62	9.20	2.8	.84	.35	2.10	1.8	2.70
25	1.7	.68	.90	.37	.53	8.80	2.5	.78	.33	2.40	1.6	2.60
26	1.5	.95	.90	.38	1.60	223.00	2.2	.58	.37	2.20	1.4	2.30
27	1.5	1.40	.85	.35	1.10	376.00	1.7	.78	.50	2.40	1.3	2.40
28	1.7	1.40	.85	.37	.98	375.00	1.5	.58	.62	2.50	1.5	2.20
29	1.7	1.40	.80	.37	.90	377.00	1.6	.49	.67	2.70	1.7	2.30
30	1.6	1.30	.80	.37	---	377.00	1.8	.56	.65	2.70	1.7	3.50
31	1.5	---	.76	.35	---	377.00	---	.65	---	2.60	1.7	---
TOTAL	46.9	54.57	25.51	14.13	18.26	3543.06	3433.8	37.57	16.54	63.81	63.6	69.54
MEAN	1.51	1.82	.82	.46	.63	114	114	1.21	.55	2.06	2.05	2.32
MAX	1.9	2.7	1.2	.76	1.6	393	390	3.3	.71	3.2	3.0	3.5
MIN	1.2	.20	.64	.30	.35	.33	1.5	.49	.33	.76	1.3	.94
AC-FT	93	108	51	28	36	7030	6810	75	33	127	126	138

CAL YR 1983 TOTAL 12406.74 MEAN 34.0 MAX 396 MIN .00 AC-FT 24610
WTR YR 1984 TOTAL 7387.29 MEAN 20.2 MAX 393 MIN .20 AC-FT 14650

08064100 CHAMBERS CREEK NEAR RICE, TX

LOCATION.--Lat 32°11'54", long 96°31'12", Navarro County, Hydrologic Unit 12030109, on downstreamn side of highway embankment, 20 ft to left of left end of bridge on Farm Road 1126, 3.4 mi southwest of Rice, 3.6 mi downstream from Oak Branch, 3.9 mi upstream from Cummins Creek, 4.2 mi upstream from bridge on Interstate Highway 45, and 5.0 mi downstream from Waxahachie Creek.

DRAINAGE AREA.--807 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1983 to September 1984.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 340.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow from 178 mi^2 is affected by storage in Bardwell Lake on Waxahachie Creek. Flood releases from Bardwell Lake will sustain higher flows from time to time. In addition, flow is affected at times by discharge from the flood-detention pools of numerous floodwater-retarding structures in the drainage basin above this station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,630 ft^3/s Mar. 12 at 2400 hours (gage height, 26.00 ft); minimum daily, 0.07 ft^3/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.10	35.0	6.1	6.7	146	515	24.0	3.2	2.90	1.90	.81
2	2.8	1.80	26.0	8.1	6.7	112	511	24.0	2.4	2.10	.92	.91
3	2.9	1.60	22.0	9.2	7.3	94	508	29.0	2.1	3.40	2.00	.68
4	3.2	.79	15.0	7.6	6.4	85	513	28.0	2.4	2.70	2.00	.61
5	3.0	1.00	18.0	9.0	5.2	122	471	24.0	2.9	2.30	2.40	.99
6	2.9	4.30	33.0	14.0	4.5	85	364	21.0	4.4	2.80	2.70	1.00
7	2.7	4.20	28.0	24.0	3.9	65	356	19.0	6.6	2.70	2.80	.68
8	3.3	5.70	10.0	36.0	8.1	51	376	17.0	5.0	2.10	1.90	.61
9	1040.0	11.00	5.7	34.0	8.5	44	412	13.0	4.9	1.90	.61	.54
10	611.0	9.80	5.7	23.0	16.0	47	373	12.0	2.5	1.60	.16	.64
11	165.0	8.10	3.5	15.0	30.0	66	302	10.0	1.9	1.30	.11	.58
12	158.0	7.20	2.4	11.0	43.0	2630	115	9.7	2.3	.61	.14	.84
13	198.0	7.00	3.5	17.0	46.0	4200	104	9.2	2.2	.79	.30	.83
14	93.0	7.40	3.5	13.0	38.0	1920	95	8.0	1.7	1.00	.26	.70
15	42.0	6.70	2.8	12.0	26.0	663	86	10.0	1.3	1.00	1.00	.67
16	30.0	6.60	4.5	9.7	20.0	451	91	7.4	1.0	1.00	.84	.60
17	21.0	6.00	7.6	8.2	16.0	342	191	5.8	1.0	1.20	.39	.64
18	16.0	8.20	6.5	7.4	16.0	276	191	4.6	1.2	1.40	.09	.68
19	15.0	9.90	9.5	5.8	15.0	354	77	6.2	1.3	1.40	.07	.66
20	8.6	9.70	19.0	5.1	16.0	1110	59	11.0	1.3	1.50	.08	.45
21	7.0	7.80	16.0	3.9	16.0	662	55	8.5	1.6	1.70	.08	.73
22	16.0	8.40	8.5	4.2	14.0	597	50	7.2	1.7	1.70	.09	.81
23	14.0	12.00	2.6	5.2	14.0	570	43	5.6	1.4	1.60	.11	.91
24	11.0	12.00	1.6	7.7	13.0	1690	39	4.9	1.4	1.50	.15	.94
25	9.4	9.20	1.8	12.0	12.0	1710	37	4.2	1.4	1.40	.17	.90
26	6.4	15.00	2.6	13.0	277.0	646	36	3.8	1.3	1.40	.22	.61
27	4.7	25.00	2.8	13.0	1590.0	709	34	3.1	1.4	1.30	.23	.61
28	3.9	279.00	3.9	11.0	616.0	632	32	4.8	1.3	1.50	.17	.67
29	3.4	182.00	3.9	9.9	221.0	572	31	5.5	1.5	1.40	.11	.74
30	2.8	74.00	2.8	8.4	---	539	26	5.2	1.8	1.20	.17	.81
31	2.2	---	3.1	7.4	---	521	---	5.2	---	1.70	.70	---
TOTAL	2502.1	743.49	310.8	370.9	3112.3	21711	6093	350.9	66.4	52.10	22.87	21.85
MEAN	80.7	24.8	10.0	12.0	107	700	203	11.3	2.21	1.68	.74	.73
MAX	1040	279	35	36	1590	4200	515	29	6.6	3.4	2.8	1.0
MIN	2.2	.79	1.6	3.9	3.9	44	26	3.1	1.0	.61	.07	.45
AC-FT	4960	1470	616	736	6170	43060	12090	696	132	103	45	43

WTR YR 1984 TOTAL 35357.71 MEAN 96.6 MAX 4200 MIN .07 AC-FT 70130

08064100 CHAMBERS CREEK NEAR RICE, TX

WATER-QUALITY RECODS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1983 to September 1984.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1983 to September 1984.
WATER TEMPERATURES: October 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 959 micromhos Jan. 24; minimum daily, 305 micromhos Mar. 13.
WATER TEMPERATURES: Minimum daily, 3.0°C Jan. 1, 13, 20, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 28...	1610	402	546	7.9	9.0	40	1100	9.7	85	6.6	200
JAN 11...	1540	16	738	8.1	6.0	5	7.0	11.2	91	2.2	220
MAR 26...	1400	558	460	8.1	16.5	560	330	10.1	107	2.2	180
MAY 09...	1530	13	580	7.9	23.0	30	16	7.2	85	2.0	180
JUN 20...	1535	1.5	625	7.9	29.0	40	12	6.4	85	2.6	170
SEP 18...	1000	.69	520	7.8	21.0	40	20	4.8	54	1.4	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM, DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 28...	86	72	3.9	36	1	4.9	110	130	22	.50	8.6
JAN 11...	48	79	4.9	66	2	3.3	170	120	57	.50	1.0
MAR 26...	56	65	3.3	21	.7	3.9	120	76	15	.40	7.6
MAY 09...	34	66	4.6	46	2	3.2	150	92	37	.50	3.1
JUN 20...	24	62	4.5	62	2	4.2	150	75	52	.50	4.9
SEP 18...	2	54	4.0	44	2	4.9	150	57	35	.50	5.1

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 28...	340	1540	154	.28	.220	.50	.130	4.4	4.5	1.10	30
JAN 11...	430	24	19	.76	.040	.80	.040	.46	.50	.030	3.9
MAR 26...	260	784	74	1.4	.200	1.6	.120	2.9	3.0	1.30	16
MAY 09...	340	74	21	--	.010	<.10	.020	.38	.40	.060	5.7
JUN 20...	360	43	23	--	<.010	<.10	.020	1.3	1.3	.060	6.3
SEP 18...	290	38	5	--	<.010	<.10	<.010	--	.40	.050	5.0

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 28...	1610	1	41	<1	<10	1	120
JAN 11...	1540	2	55	<1	<10	<1	12
MAY 09...	1530	1	77	<1	<10	<1	8
SEP 18...	1000	1	81	<1	<10	15	4

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 28...	6	5	.4	1	<1	8
JAN 11...	<1	27	.5	<1	1	13
MAY 09...	1	12	.2	<1	<1	8
SEP 18...	2	7	.3	<1	<1	4

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	610	545	535	925	857	541	399	614	725	580	440	490
2	620	552	527	895	850	551	400	618	728	583	451	487
3	615	554	530	849	824	570	397	616	730	601	464	495
4	600	568	593	855	874	578	407	618	690	599	455	501
5	619	580	585	850	892	540	413	595	664	605	450	474
6	633	590	548	835	900	552	425	596	643	609	444	470
7	645	595	450	828	943	548	430	593	626	610	449	479
8	625	586	550	821	931	569	411	585	630	612	441	484
9	495	567	600	868	924	575	395	577	634	619	443	492
10	498	586	605	844	895	566	419	594	639	624	446	498
11	510	644	609	858	845	552	510	604	648	617	445	500
12	520	733	626	838	735	375	596	614	640	619	458	504
13	465	767	609	830	728	305	580	617	628	614	453	503
14	470	658	597	823	748	435	573	616	620	600	479	505
15	473	627	614	824	808	460	577	625	605	572	460	501
16	475	606	460	835	754	461	565	622	610	548	463	503
17	478	630	409	850	737	471	426	575	617	546	470	504
18	480	605	605	870	764	506	433	614	635	494	475	501
19	483	602	500	890	790	485	478	637	637	482	479	506
20	506	597	472	904	759	395	523	625	642	465	480	512
21	532	605	358	924	778	406	568	634	660	462	487	500
22	544	595	430	937	770	420	575	750	687	452	494	490
23	593	615	505	945	762	430	581	756	663	449	495	483
24	570	625	610	959	765	402	583	744	664	443	493	480
25	580	640	600	908	775	405	600	700	668	450	490	485
26	576	610	535	890	736	460	612	675	675	440	485	497
27	565	580	530	895	471	435	611	652	683	446	484	501
28	551	546	610	885	548	411	615	642	691	442	488	495
29	540	566	745	870	536	408	610	635	675	446	483	485
30	532	580	820	865	---	410	606	613	650	455	473	470
31	534	---	900	872	---	408	---	723	---	450	480	---
MEAN	546	605	570	872	783	472	511	635	657	533	468	493

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	10.0	3.0	7.0	8.0	15.0	20.0	---	31.0	---	30.0
2	---	18.0	10.0	4.0	9.0	12.0	16.0	20.0	---	28.0	26.0	32.0
3	---	20.0	11.0	4.0	12.0	15.0	15.0	22.0	---	29.0	27.0	---
4	---	21.0	11.0	---	8.0	16.0	14.0	22.0	---	31.0	26.0	---
5	---	20.0	12.0	4.0	9.0	14.0	17.0	---	---	33.0	---	25.0
6	---	19.0	9.0	6.0	5.0	10.0	16.0	24.0	---	30.0	28.0	---
7	---	---	9.0	---	6.0	10.0	17.0	28.0	---	31.0	30.0	---
8	---	18.0	---	---	6.0	11.0	18.0	24.0	---	30.0	32.0	---
9	---	18.0	12.0	10.0	9.0	12.0	18.0	20.0	---	30.0	---	---
10	---	18.0	13.0	8.0	13.0	13.0	20.0	20.0	---	31.0	32.0	28.0
11	---	15.0	13.0	5.0	17.0	13.0	21.0	22.0	---	34.0	30.0	27.0
12	---	15.0	13.0	4.0	17.0	12.0	21.0	22.0	---	30.0	32.0	28.0
13	---	12.0	11.0	3.0	14.0	14.0	22.0	24.0	---	30.0	30.0	---
14	---	13.0	10.0	4.0	14.0	16.0	21.0	24.0	---	31.0	28.0	29.0
15	---	15.0	8.0	6.0	14.0	14.0	20.0	25.0	---	---	---	28.0
16	---	14.0	7.0	6.0	14.0	20.0	19.0	25.0	---	31.0	---	26.0
17	---	---	6.0	6.0	12.0	20.0	18.0	24.0	32.0	30.0	---	25.0
18	---	15.0	5.0	5.0	14.0	14.0	20.0	24.0	31.0	31.0	---	26.0
19	24.0	17.0	4.0	4.0	13.0	14.0	---	24.0	32.0	34.0	37.0	26.0
20	24.0	15.0	4.0	3.0	12.0	13.0	---	25.0	31.0	33.0	29.0	---
21	22.0	---	4.0	4.0	10.0	14.0	23.0	23.0	---	30.0	---	---
22	20.0	17.0	---	3.0	8.0	15.0	---	---	30.0	30.0	30.0	27.0
23	19.0	18.0	---	---	10.0	---	19.0	28.0	31.0	28.0	30.0	26.0
24	18.0	---	---	4.0	10.0	16.0	20.0	---	33.0	29.0	28.0	---
25	15.0	---	---	6.0	---	16.0	20.0	---	30.0	27.0	29.0	---
26	17.0	---	---	4.0	13.0	18.0	22.0	---	30.0	28.0	32.0	---
27	---	---	---	5.0	11.0	18.0	23.0	---	30.0	29.0	30.0	---
28	18.0	9.0	---	6.0	8.0	10.0	25.0	---	31.0	28.0	31.0	---
29	16.0	8.0	---	5.0	7.0	15.0	---	---	28.0	29.0	29.0	---
30	18.0	10.0	---	7.0	---	16.0	20.0	---	28.0	27.0	31.0	---
31	18.0	---	---	5.0	---	15.0	---	---	---	26.0	---	---
MEAN	19.0	16.0	9.0	5.0	11.0	14.0	19.0	23.5	30.5	30.0	30.0	27.5

08064500 CHAMBERS CREEK NEAR CORSICANA, TX

LOCATION.--Lat 32°06'29", long 96°22'14", Navarro County, Hydrologic Unit 12030109, near center of channel at downstream side of downstream bridge on State Highway 31, 430 ft upstream from St. Louis Southwestern Railway Lines bridge, 6,000 ft upstream from city of Corsicana diversion dam, 5.3 mi east of Corsicana, and 23.0 mi upstream from mouth.

DRAINAGE AREA.--963 mi^2.

PERIOD OF RECORD.--March 1939 to September 1984 (discontinued).
Water-quality records.--Chemical analyses: September 1961 to September 1981. Water temperatures: September 1961 to September 1970.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 294.28 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Since November 1965, flow from 178 mi^2 above this station has been affected by Bardwell Lake (station 08063700). In addition, flow is affected at times by discharge from the flood-detention pools of 106 floodwater-retarding structures with a combined detention capacity of 84,920 acre-ft. These structures control runoff from 295 mi^2. During the year, the city of Ennis may have discharged sewage effluent into a tributary that enters Chambers Creek above the gage. A gage-height telemeter is located at station.

AVERAGE DISCHARGE.--45 years (water years 1940-84), 423 ft^3/s (306,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft^3/s May 3, 1944; maximum gage height, 28.10 ft May 3, 1958; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, 30 ft Aug. 27, 1887, from information by local residents. Flood in December 1913 reached a stage of 27.5 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,400 ft^3/s Mar. 13 at about 2100 hours (gage height, 23.20 ft), no peak above base of 13,000 ft^3/s, no flow Sept. 15-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	7.9	63	19.0	14.0	288	604	41.0	4.7	1.5	1.40	.48
2	5.4	7.4	42	18.0	9.0	113	598	39.0	4.2	6.5	1.30	.79
3	5.4	7.5	43	18.0	10.0	65	594	38.0	3.4	3.4	1.30	.61
4	4.0	6.7	29	18.0	11.0	45	605	39.0	2.8	2.7	1.60	.43
5	2.6	5.9	24	17.0	13.0	48	572	40.0	2.9	2.6	3.00	.28
6	3.0	8.8	23	16.0	15.0	121	427	38.0	4.0	2.5	2.40	.28
7	4.4	10.0	22	17.0	13.0	85	389	37.0	4.8	2.4	1.40	.24
8	4.7	16.0	19	18.0	11.0	54	409	34.0	8.5	2.4	1.30	.20
9	485.0	14.0	17	19.0	12.0	36	499	31.0	7.2	2.4	1.40	.16
10	941.0	16.0	16	19.0	15.0	28	433	30.0	5.6	2.2	1.10	.14
11	168.0	17.0	16	26.0	19.0	265	391	28.0	3.9	2.0	.70	.11
12	95.0	18.0	15	27.0	30.0	2210	175	26.0	3.1	2.0	.43	.08
13	143.0	17.0	14	26.0	56.0	4820	110	23.0	2.6	2.0	.31	.06
14	98.0	19.0	13	25.0	48.0	4440	97	22.0	2.4	2.0	.26	.03
15	51.0	20.0	13	22.0	39.0	1900	89	20.0	2.2	1.9	1.70	.00
16	35.0	19.0	14	20.0	31.0	1040	82	20.0	2.2	1.9	1.80	.00
17	27.0	19.0	14	19.0	22.0	348	130	19.0	2.1	2.0	.93	.00
18	22.0	19.0	17	18.0	16.0	170	187	18.0	1.9	2.0	.75	.00
19	21.0	18.0	19	16.0	13.0	497	157	65.0	1.8	1.9	.70	.00
20	26.0	20.0	19	15.0	12.0	1180	81	84.0	1.5	1.9	.54	.00
21	22.0	24.0	20	15.0	10.0	1660	68	44.0	1.5	1.9	.37	.00
22	17.0	23.0	19	15.0	9.1	1670	63	23.0	1.5	1.9	.21	.00
23	24.0	21.0	19	13.0	8.3	1470	61	7.2	1.4	1.9	.16	.00
24	24.0	20.0	19	10.0	7.6	1240	57	5.3	1.4	1.8	.13	.02
25	21.0	24.0	20	9.5	6.9	1120	52	4.4	1.4	1.7	.11	.11
26	20.0	25.0	20	10.0	7.6	1020	48	3.9	1.4	1.8	.11	.21
27	16.0	27.0	20	13.0	371.0	973	46	3.6	1.3	1.9	.12	1.10
28	14.0	164.0	20	18.0	1000.0	800	45	3.4	1.3	1.7	.11	.75
29	12.0	316.0	20	20.0	1020.0	709	45	3.5	1.3	1.7	.10	.50
30	11.0	113.0	20	20.0	---	644	43	5.8	1.3	1.7	.10	.51
31	8.7	---	20	19.0	---	619	---	4.9	---	1.6	.16	---
TOTAL	2336.6	1043.2	669	555.5	2849.5	29678	7157	801.0	85.6	67.8	26.00	7.09
MEAN	75.4	34.8	21.6	17.9	98.3	957	239	25.8	2.85	2.19	.84	.24
MAX	941	316	63	27	1020	4820	605	84	8.5	6.5	3.0	1.1
MIN	2.6	5.9	13	9.5	6.9	28	43	3.4	1.3	1.5	.10	.00
AC-FT	4630	2070	1330	1100	5650	58870	14200	1590	170	134	52	14

CAL YR 1983 TOTAL 51171.50 MEAN 140 MAX 7380 MIN 2.5 AC-FT 101500
WTR YR 1984 TOTAL 45276.29 MEAN 124 MAX 4820 MIN .00 AC-FT 89810

NOTE.--No gage-height record Jan. 23 to Mar. 27.

08064700 TEHUACANA CREEK NEAR STREETMAN, TX

LOCATION.--Lat 31°50'54", long 96°17'23", Freestone County, Hydrologic Unit 12030201, on downstream side of bridge on U.S. Highway 75, 2.8 mi southeast of Streetman, 3.1 mi downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 3.8 mi upstream from Caney Creek, and 25 mi upstream from mouth.

DRAINAGE AREA.--142 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 287.58 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--16 years, 67.7 ft^3/s (6.47 in/yr), 49,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft^3/s May 10, 1968 (gage height, 25.00 ft); no flow at times most years.
Maximum stage since at least 1932, that of May 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1932 reached a stage of about 24 ft, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,580 ft^3/s Mar. 12 at 1915 hours (gage height, 23.21 ft), no other peak above base of 2,500 ft^3/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	2.7	2.2	3.0	9.2	5.9	2.2	1.7	1.3	.00	.00	.00
2	.12	2.5	2.5	3.3	9.1	4.6	2.3	1.9	1.1	.00	.00	.00
3	.10	2.4	3.0	3.3	9.3	4.4	2.8	2.5	.82	.00	.00	.00
4	.08	2.3	20	3.5	9.2	36	2.8	2.2	.66	.00	.00	.00
5	.06	2.2	8.7	3.5	9.4	1020	2.7	1.8	.76	.00	.00	.00
6	.54	2.2	4.5	4.2	9.3	364	2.7	1.4	.33	.00	.00	.00
7	.68	2.2	3.2	4.6	9.4	40	3.1	1.2	1.3	.00	.00	.00
8	.68	2.0	2.4	5.1	10	11	6.9	1.2	.04	.00	.00	.00
9	.71	1.9	2.1	6.9	10	4.8	8.6	1.2	.03	.00	.00	.00
10	.85	1.7	2.5	25	11	3.4	5.4	1.0	.03	.00	.00	.00
11	2.5	1.7	3.3	21	11	3.9	3.6	.92	.03	.00	.00	.00
12	3.2	1.6	4.1	11	262	3180	2.6	.92	.03	.00	.00	.00
13	4.8	1.4	3.9	8.1	109	1500	2.2	.92	.02	.25	.00	.00
14	4.6	1.4	3.3	6.6	22	129	2.0	.98	.00	.07	.00	.00
15	3.9	1.5	3.8	5.8	9.3	41	1.8	1.0	.00	.06	.00	.00
16	3.6	1.4	4.5	6.1	5.9	24	1.6	1.0	.00	.05	.00	.00
17	3.4	1.4	45	5.8	4.8	17	1.4	1.6	.00	.05	.00	.00
18	3.6	1.3	21	5.5	4.6	13	1.8	1.2	.00	.05	.00	.00
19	4.3	1.4	9.3	6.8	4.9	11	1.8	1.2	.00	.05	.00	.00
20	4.7	1.4	6.2	6.2	4.4	8.2	1.7	1.3	.00	.05	.00	.00
21	4.6	1.7	5.3	5.6	4.5	6.2	1.6	1.5	.00	.05	.00	.00
22	4.3	1.7	4.8	5.2	4.7	5.1	1.3	1.6	.00	.05	.00	.00
23	3.9	2.9	4.2	6.3	4.5	4.7	1.6	1.4	.00	.05	.00	.01
24	3.6	3.4	3.8	8.1	4.7	4.5	1.7	1.9	.00	.05	.00	.01
25	4.1	2.5	3.4	9.1	5.0	4.2	1.6	1.6	.00	.05	.00	.02
26	3.9	3.0	3.1	11	290	3.6	1.6	1.2	.00	.09	.00	.02
27	3.5	2.5	3.1	8.9	266	3.4	1.8	1.0	.00	.05	.00	.02
28	3.4	2.0	3.3	8.1	19	2.8	1.9	1.4	.00	.02	.00	.02
29	3.2	2.3	3.2	7.9	7.7	2.2	1.8	1.4	.00	.01	.00	.02
30	2.9	2.2	3.0	8.6	---	1.9	2.2	1.3	.00	.02	.00	.02
31	2.7	---	3.0	8.9	---	2.1	---	1.2	---	.01	.00	---
TOTAL	82.66	60.8	195.7	233.0	1139.9	6461.9	77.1	42.64	6.45	1.08	.00	.14
MEAN	2.67	2.03	6.31	7.52	39.3	208	2.57	1.38	.22	.035	.000	.005
MAX	4.8	3.4	45	25	290	3180	8.6	2.5	1.3	.25	.00	.02
MIN	.06	1.3	2.1	3.0	4.4	1.9	1.3	.92	.00	.00	.00	.00
CFSM	.02	.01	.04	.05	.28	1.47	.02	.01	.002	.000	.000	.000
IN.	.02	.02	.05	.06	.30	1.69	.02	.01	.00	.00	.00	.00
AC-FT	164	121	388	462	2260	12820	153	85	13	2.1	.00	.3

CAL YR 1983 TOTAL 15381.90 MEAN 42.1 MAX 3640 MIN .06 CFSM .30 IN 4.03 AC-FT 30510
WTR YR 1984 TOTAL 8301.37 MEAN 22.7 MAX 3180 MIN .00 CFSM .16 IN 2.17 AC-FT 16470

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 18...	1420	3.4	1800	24.0	390	240	88	41	220
NOV 30...	0800	2.0	1800	11.0	420	220	97	42	220
JAN 11...	0950	18	864	6.5	200	82	48	20	97
FEB 14...	0900	25	340	12.5	89	23	22	8.2	31
MAR 27...	1710	3.4	1070	24.0	300	120	74	27	110
MAY 07...	1550	1.2	1980	--	500	210	120	49	240
JUL 31...	1015	.01	2820	23.0	570	300	110	72	390

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 18...	5	6.0	150	270	320	.40	3.9	1000
NOV 30...	5	6.0	200	250	320	.40	6.8	1100
JAN 11...	3	4.4	120	110	140	.30	4.8	500
FEB 14...	1	4.6	66	45	32	.30	11	190
MAR 27...	3	5.3	180	160	150	.30	12	650
MAY 07...	5	5.8	290	280	320	.40	8.8	1200
JUL 31...	7	6.0	270	390	560	.60	5.8	1700

08064800 CATFISH CREEK NEAR TENNESSEE COLONY, TX

LOCATION.--Lat 31°52'51", long 95°52'07", Anderson County, Hydrologic Unit 12030201, on left bank 35 ft downstream from bridge on U.S. Highway 287, 2 mi upstream from Beaver Creek, 3.5 mi northwest of Tennessee Colony, 12 mi downstream from Coon Creek Lake, and 12 mi upstream from mouth.

DRAINAGE AREA.--207 mi^2.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 234.93 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 5.0 ft^3/s, which are poor. Some regulation upstream by Coon Creek Lake. No known diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 98.3 ft^3/s (71,220 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,550 ft^3/s May 11, 1968 (gage height, 15.90 ft); minimum daily, 0.8 ft^3/s Aug. 19-21, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1927, 22 ft in June 1944 as a result of dam failure at Coon Creek Lake, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 618 ft^3/s Mar. 14 at 1900 hours (gage height, 10.30 ft), no peak above base of 1,400 ft^3/s; minimum daily (estimated), 1.4 ft^3/s Sept. 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	11	59	63	51	253	108	25	38	18.0	7.8	3.0
2	5.1	11	55	61	47	191	97	25	31	18.0	6.9	2.9
3	5.1	12	56	61	45	145	96	26	25	17.0	6.8	2.9
4	5.5	13	59	61	44	122	95	54	21	17.0	6.1	3.2
5	5.8	14	67	60	44	139	94	87	21	17.0	5.8	3.1
6	5.7	19	71	57	44	196	90	102	26	15.0	5.8	3.0
7	5.4	26	68	54	45	322	84	88	46	14.0	6.2	3.0
8	5.2	33	62	51	42	313	83	66	69	13.0	5.8	2.8
9	5.3	35	53	55	42	250	92	52	87	13.0	5.2	2.6
10	6.4	34	47	64	50	199	110	39	97	12.0	5.3	2.3
11	6.9	33	45	73	66	175	123	26	85	12.0	5.4	2.2
12	8.8	30	47	79	111	231	119	20	68	11.0	5.6	2.0
13	9.2	26	54	73	115	347	106	17	55	11.0	8.0	1.6
14	12.0	22	54	66	149	563	96	15	47	11.0	13.0	1.6
15	11.0	21	50	65	240	503	83	14	39	11.0	14.0	1.5
16	9.0	20	53	65	221	361	74	14	33	11.0	17.0	1.7
17	8.1	20	63	65	166	266	66	13	28	11.0	14.0	1.7
18	8.0	19	69	65	130	226	60	12	24	10.0	12.0	1.6
19	8.8	20	74	62	106	191	55	15	21	10.0	11.0	1.6
20	9.6	35	74	60	95	165	52	22	19	10.0	8.9	1.6
21	11.0	53	69	54	94	144	49	37	17	10.0	6.5	1.5
22	11.0	61	62	50	87	126	46	42	16	10.0	4.9	1.6
23	12.0	67	60	52	79	110	46	42	15	10.0	3.9	1.6
24	12.0	69	57	59	74	105	44	40	14	10.0	3.4	1.6
25	11.0	74	48	74	69	108	38	38	14	9.9	2.8	1.6
26	11.0	78	49	82	94	165	32	36	14	10.0	2.6	1.5
27	10.0	75	38	77	126	269	28	33	14	9.7	2.9	1.4
28	10.0	68	37	65	160	240	27	28	14	12.0	2.8	1.4
29	10.0	64	42	59	274	172	27	27	14	13.0	2.7	1.4
30	11.0	63	56	55	---	141	26	42	17	11.0	3.0	1.4
31	11.0	---	63	52	---	124	---	47	---	8.7	3.1	---
TOTAL	266.4	1126	1761	1939	2910	6862	2146	1144	1029	376.3	209.2	60.9
MEAN	8.59	37.5	56.8	62.5	100	221	71.5	36.9	34.3	12.1	6.75	2.03
MAX	12	78	74	82	274	563	123	102	97	18	17	3.2
MIN	5.1	11	37	50	42	105	26	12	14	8.7	2.6	1.4
AC-FT	528	2230	3490	3850	5770	13610	4260	2270	2040	746	415	121

CAL YR 1983 TOTAL 35142.5 MEAN 96.3 MAX 808 MIN 5.1 AC-FT 69710
WTR YR 1984 TOTAL 19829.8 MEAN 54.2 MAX 563 MIN 1.4 AC-FT 39330

08065000 TRINITY RIVER NEAR OAKWOOD, TX

LOCATION.--Lat 31°38'54", long 95°47'21", Anderson County, Hydrologic Unit 12030201, on left bank at downstream side of bridge on U.S. Highways 79 and 84, 1.5 mi upstream from Missouri Pacific Railroad Co. bridge, 6 mi northeast of Oakwood, and at mile 313.4.

DRAINAGE AREA.--12,833 mi^2.

PERIOD OF RECORD.--October 1923 to September 1924 (monthly discharge only), October 1924 to current year. Records of January 1905 to September 1923, published in WSP 850 and 878, have been found unreliable and should not be used. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1442: 1934. See also PERIOD OF RECORD. WSP 1922: Drainage area. WRD TX-81-1: 1980 (M,m).

GAGE.--Water-stage recorder. Datum of gage is 175.06 ft National Geodetic Vertical Datum of 1929. Prior to July 15, 1932, nonrecording gage at site 1.5 mi downstream at datum 1.06 ft lower. July 15, 1932, to Oct. 7, 1934, nonrecording gage at present site and datum. Telemetry at station.

REMARKS.--Records fair. Twenty-one major reservoirs with a capacity of 4,200,000 acre-ft, of which 1,362,000 acre-ft is for flood control, partly regulate the flow. Flow is affected at times by discharge from the flood-detention pools of 252 floodwater-retarding structures with a combined detention capacity of 183,300 acre-ft. These structures control runoff from 614 mi in the Richland, Chambers, and Tehuacana Creeks drainage basins. The Industrial Generating Co., Fairfield, makes a minor diversion from the river at a site about 34 mi upstream. The diversion to Big Brown Lake is used to maintain the normal pool elevation for that lake.

AVERAGE DISCHARGE.--30 years (water years 1924-53) unregulated, 5,045 ft^3/s (3,655,000 acre-ft/yr); 31 years (water years 1954-84) regulated, 4,414 ft^3/s (3,198,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft^3/s Apr. 29, 1942 (gage height, 51.64 ft); minimum observed, 28 ft^3/s Aug. 24, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1890 reached a stage of 53 ft (discharge about 180,000 ft^3/s) and was the highest since that date, from information in local newspapers. Flood of June 4, 1908, reached a stage of 52.2 ft, present site and datum, from information by the National Weather Service (discharge about 164,000 ft^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,600 ft^3/s Mar. 17 at 1600 hours (gage height, 33.15 ft); minimum daily, 536 ft^3/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	675	808	2910	1190	1150	5890	6650	1020	1880	806	713	621
2	663	762	2180	1220	1050	4250	4080	981	1370	927	661	606
3	656	746	1600	1270	900	2740	2880	1050	1040	1070	647	609
4	671	755	1400	1280	850	2210	3020	1340	910	990	623	618
5	681	761	1450	1250	800	3110	3250	3660	859	783	614	679
6	632	770	1670	1220	750	3780	3230	4420	840	712	608	1460
7	621	804	1320	1190	700	4700	2760	2980	924	683	609	1350
8	691	815	1180	1190	650	3820	2280	1750	1090	682	690	891
9	713	1020	1360	1210	700	2770	2360	1330	2780	761	689	752
10	854	1390	1120	1240	800	2020	2630	1190	4400	729	667	697
11	2310	1250	1240	1220	900	1880	3760	1080	3390	697	656	668
12	4580	992	1070	1410	2000	3480	3400	1010	1890	679	638	647
13	4140	871	1020	2510	4000	8030	2700	941	1220	671	626	631
14	2570	842	941	2740	4000	11600	2200	873	1020	668	647	610
15	1990	813	914	2060	3600	13600	1800	853	948	696	1000	590
16	1810	789	1000	1490	3200	14900	1600	854	899	922	1540	580
17	1370	759	1140	1310	2600	15500	1400	831	856	960	1280	573
18	1050	767	1100	1180	2100	14600	1300	822	826	708	907	574
19	936	849	1120	1100	1800	9860	1200	856	792	593	770	563
20	874	1030	1180	1090	1700	5330	1300	887	756	853	702	536
21	895	1020	1160	1060	1600	4160	1500	1440	720	718	666	550
22	950	1130	1190	1020	1600	6230	1400	3410	731	601	632	592
23	1510	1240	1160	1070	1700	6530	1200	2900	735	579	607	595
24	1780	1210	1130	1090	1400	5440	1300	1870	721	584	602	594
25	1550	1110	1100	1060	1300	7170	1400	1320	714	583	596	605
26	1170	1200	1070	1160	1500	9690	1220	1120	699	578	604	638
27	929	1510	1070	1420	4000	11100	1110	1030	675	598	607	612
28	854	1400	1070	1360	6000	11600	1050	970	667	625	603	596
29	832	1220	1070	1270	6450	11700	1030	917	684	770	592	659
30	813	2390	1100	1160	---	11200	1030	887	760	796	607	657
31	822	---	1180	1190	---	9460	---	1560	---	759	627	---
TOTAL	40592	31023	39215	41230	59800	228350	66040	46152	35796	22781	22030	20353
MEAN	1309	1034	1265	1330	2062	7366	2201	1489	1193	735	711	678
MAX	4580	2390	2910	2740	6450	15500	6650	4420	4400	1070	1540	1460
MIN	621	746	914	1020	650	1880	1030	822	667	578	592	536
AC-FT	80510	61530	77780	81780	118600	452900	131000	91540	71000	45190	43700	40370

CAL YR 1983 TOTAL 1217204 MEAN 3335 MAX 21800 MIN 621 AC-FT 2414000
WTR YR 1984 TOTAL 653362 MEAN 1785 MAX 15500 MIN 536 AC-FT 1296000

08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX

LOCATION.--Lat 31°34'11", long 95°53'17", Leon County, Hydrologic Unit 12030201, at right bank 20 ft downstream from bridge on U.S. Highway 79, 1.9 mi upstream from Missouri Pacific Railroad Co. bridge, 2 mi southwest of Oakwood, 11 mi upstream from Buffalo Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--150 mi^2.

PERIOD OF RECORD.--April 1962 to current year.
Water-quality records: Chemical analyses: June 1962 to April 1964, November 1967 to September 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.11 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No known diversions or regulation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years (water years 1963-84), 74.5 ft^3/s (6.74 in/yr), 53,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s May 16, 1965 (gage height, 14.91 ft), and Apr. 25, 1966, from rating curve extended above 5,800 ft^3/s; maximum gage height, 15.46 ft Oct. 31, 1974; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, about 21 ft in 1932, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft^3/s Mar. 13 at 2000 hrs (gage height 12.61 ft), no peak above base of 2,000 ft^3/s; minimum, 0.03 ft^3/s Sept. 17-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	1.9	9.6	11	11	23	17	2.6	.74	170	2.1	.09
2	.40	2.4	8.3	13	11	20	20	2.8	.57	120	1.8	.09
3	.37	3.0	36	13	11	18	30	3.2	.44	18	1.7	.10
4	.34	3.6	37	13	11	120	22	3.2	.35	8.8	1.5	.42
5	.28	3.9	22	13	11	393	18	2.8	1.0	5.4	1.1	.43
6	.26	5.7	16	12	10	335	16	2.7	1.7	3.7	.86	.42
7	.24	8.5	12	11	9.6	312	15	2.3	20	3.2	.74	.36
8	.22	7.9	9.8	10	9.4	121	14	1.9	51	4.0	26	.22
9	.20	7.3	8.6	19	11	56	14	1.8	9.9	4.2	16	.11
10	.20	6.7	129	30	15	46	14	1.5	4.3	4.1	5.9	.09
11	20	6.7	182	23	54	63	13	1.3	2.3	4.0	3.3	.08
12	40	6.6	43	20	358	380	11	1.3	1.5	3.5	2.2	.07
13	20	6.6	23	16	350	941	9.1	1.3	1.5	2.9	1.5	.06
14	10	6.3	16	14	124	927	7.9	1.2	1.3	2.3	1.2	.06
15	5.0	6.3	13	17	53	432	7.0	1.1	1.2	1.9	2.6	.06
16	3.0	5.7	25	20	38	122	8.5	.94	1.0	1.6	1.2	.05
17	20	4.9	62	18	29	83	6.2	.84	.97	1.4	.82	.04
18	10	4.9	46	17	28	68	6.2	.70	.87	1.4	1.3	.03
19	5.0	11	29	16	29	54	5.5	1.6	.53	1.2	1.2	.03
20	3.0	40	22	15	28	41	5.1	2.6	.34	29	.73	.03
21	2.2	20	19	13	25	35	5.0	3.0	.21	16	.54	.04
22	1.8	12	17	13	22	30	4.3	5.2	.15	5.5	.44	.14
23	1.6	12	15	19	20	31	3.6	6.2	.12	2.6	.31	.18
24	1.4	18	16	29	17	44	3.3	4.2	.12	1.8	.24	.18
25	1.3	15	10	24	15	35	3.9	2.8	.12	4.2	.22	.16
26	1.2	13	10	22	18	30	3.5	2.0	.10	8.0	.19	.16
27	1.1	12	11	18	58	28	3.4	1.5	.10	4.7	.15	.18
28	1.1	12	14	15	72	25	4.3	1.2	.18	4.1	.13	.24
29	1.2	12	24	14	32	20	3.1	1.2	.34	3.5	.12	.37
30	1.4	11	11	13	---	17	2.8	1.2	100	3.9	.11	.54
31	1.6	---	11	12	---	17	---	.98	---	2.4	.09	---
TOTAL	154.92	286.9	907.3	513	1480.0	4867	296.7	67.16	202.95	447.3	76.29	5.03
MEAN	5.00	9.56	29.3	16.5	51.0	157	9.89	2.17	6.77	14.4	2.46	.17
MAX	40	40	182	30	358	941	30	6.2	100	170	26	.54
MIN	.20	1.9	8.3	10	9.4	17	2.8	.70	.10	1.2	.09	.03
CFSM	.03	.06	.20	.11	.34	1.05	.07	.01	.05	.10	.02	.001
IN.	.04	.07	.23	.13	.37	1.21	.07	.02	.05	.11	.02	.00
AC-FT	307	569	1800	1020	2940	9650	589	133	403	887	151	10.0

CAL YR 1983 TOTAL 29903.30 MEAN 81.9 MAX 1960 MIN .20 CFSM .55 IN 7.42 AC-FT 59310
WTR YR 1984 TOTAL 9304.55 MEAN 25.4 MAX 941 MIN .03 CFSM .17 IN 2.31 AC-FT 18460

08065350 TRINITY RIVER NEAR CROCKETT, TX
(National stream-quality accounting network)

LOCATION (revised).--Lat 31°20'18", long 95°39'22",Houston-Leon County line, Hydrologic Unit 12030201, on left bank at an abandoned bridge abutment near left end of an abandoned lock and dam. 1,000 ft upstream from State Highway 7, 6.9 mi downstream from Upper Keechi Creek, 11.9 mi west of Crockett, and at mile 265.4.

DRAINAGE AREA.--13,911 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 141.15 ft (revised) National Geodetic Vertical Datum of 1929. Prior to Oct. 13, 1983, water-stage recorder at site 1,000 ft downstream at datum 4.56 ft lower.

REMARKS.--Water-discharge records fair. For statement regarding regulation by upstream reservoirs, see station 08065000. Flow from 44 mi of Elkhart Creek basin affected by storage in Houston County Lake near Crockett (capacity 19,500 acre-ft). Diversions above station for irrigation, municipal, and industrial uses. Telemeter at station.

AVERAGE DISCHARGE.--20 years (water years 1965-84), 5,568 ft^3/s (4,034,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,000 ft^3/s May 15, 1969 (gage height, 52.24 ft); at former site and datum; minimum, 275 ft^3/s Aug. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 56.1 ft Apr. 30 or May 1, 1942, at former site and datum, from information by Texas Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,800 ft^3/s Mar. 17 at 1800 hours (gage height, 23.45 ft); minimum daily (estimated), 700 ft^3/s July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	767	1030	3120	1520	1330	6130	10500	1160	2260	1550	1100	770
2	759	1010	3200	1620	1220	5670	6610	1120	2450	1760	973	750
3	755	909	2690	1680	1030	3940	4040	1110	1930	2320	805	750
4	747	898	2390	1680	952	3260	3200	1210	1420	2660	780	770
5	755	919	2010	1620	923	5480	3250	1930	1220	2000	770	785
6	760	1040	2010	1530	873	5810	3400	3810	1170	1500	770	1130
7	731	1330	2190	1470	803	5750	3350	3930	1110	1200	800	2520
8	750	1370	2110	1390	724	6030	3120	3020	1250	1000	900	2000
9	800	1260	1820	1380	762	4810	2890	2370	1890	1100	920	1500
10	750	1720	1740	1530	884	3610	2970	1960	3580	1100	898	1200
11	890	2120	2510	1560	979	3010	3250	1770	4070	1000	860	1000
12	3270	1880	2190	1540	1920	4030	4080	1650	3250	900	840	900
13	4490	1440	1950	1920	4200	8170	3490	1500	2410	850	820	830
14	3410	1200	1920	2920	4420	12300	2880	1340	1780	870	850	800
15	2560	1090	1700	2890	4200	15300	2370	1230	1450	900	919	770
16	2280	1010	1510	2270	4080	17700	1960	1180	1280	1100	1860	750
17	2040	941	1750	1760	3310	18700	1840	1190	1190	1200	2560	735
18	1620	888	1810	1540	2540	18600	1730	1150	1130	1000	2000	725
19	1180	1100	1750	1300	2230	16900	1630	1140	1080	850	1500	716
20	973	1510	1730	1180	2100	11000	1690	1140	1030	1100	1150	710
21	1370	1800	1680	1160	1770	5440	1960	1180	952	1000	900	730
22	1330	1810	1630	1070	1760	4940	1880	1920	883	850	820	760
23	1360	2010	1580	1200	1940	8350	1630	3720	893	785	800	750
24	2190	2090	1480	1390	1820	9410	1640	3290	896	736	780	760
25	2510	1960	1180	1420	1540	7910	1980	2460	885	720	770	780
26	2290	1810	1150	1350	1660	9720	1850	1990	863	700	800	805
27	1770	1990	1180	1430	4110	12200	1570	1670	827	750	780	888
28	1330	2210	1200	1640	5590	13700	1360	1460	802	900	770	815
29	1150	2050	1240	1580	6030	13900	1240	1310	755	1100	760	800
30	1050	2100	1260	1430	---	14000	1170	1180	995	1190	780	840
31	1030	---	1330	1320	---	13100	---	1190	---	1150	785	---
TOTAL	47667	44495	57010	49290	65700	288870	84530	56280	45701	35841	30820	28039
MEAN	1538	1483	1839	1590	2266	9318	2818	1815	1523	1156	994	935
MAX	4490	2210	3200	2920	6030	18700	10500	3930	4070	2660	2560	2520
MIN	731	888	1150	1070	724	3010	1170	1110	755	700	760	710
AC-FT	94550	88260	113100	97770	130300	573000	167700	111600	90650	71090	61130	55620

CAL YR 1983 TOTAL 1491611 MEAN 4087 MAX 21500 MIN 731 AC-FT 2959000
WTR YR 1984 TOTAL 834243 MEAN 2279 MAX 18700 MIN 700 AC-FT 1655000

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1964 to current year. Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: October 1971 to September 1981. Sediment records: October 1967 to September 1968.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1964 to current year.
pH: March 1975 to current year.
WATER TEMPERATURES: February 1964 to September 1971, March 1975 to current year.
DISSOLVED OXYGEN: March 1975 to current year.

INSTRUMENTATION.--Beginning March 1975, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,370 micromhos Sept. 22, 1964; minimum, 105 micromhos July 28, 1979.
pH: Maximum, 9.6 units Aug. 11, 12, 1981; minimum, 5.9 units Aug. 12, 1977.
WATER TEMPERATURES: Maximum, 37.0°C July 4, 1970, Sept. 4, 1978; minimum, 1.0°C Jan. 17, 1978.
DISSOLVED OXYGEN: Maximum, 19.3 mg/L Feb. 10, 1981; minimum, 0.0 mg/L Apr. 20, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 849 micromhos July 22; minimum, 204 micromhos Mar. 5, 6.
pH: Maximum, 8.6 units Aug. 6; minimum, 7.0 units Nov. 24-26, Feb. 14, 15.
WATER TEMPERATURES: Minimum, 35.5°C July 16; minimum, 2.0°C Dec. 31.
DISSOLVED OXYGEN: Maximum, 14.9 mg/L Mar. 7; minimum, 0.3 mg/L May 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 30...	1220	2000	605	7.3	13.5	25	23	7.1	69	3.0	150
JAN 05...	1300	1620	629	7.5	6.5	15	16	11.5	94	6.9	140
MAR 26...	1200	9690	238	7.8	17.0	560	510	6.5	68	3.4	110
MAY 03...	1200	1110	695	7.5	24.0	50	21	7.3	88	1.4	180
AUG 02...	1250	973	720	8.4	30.0	55	36	8.5	113	3.5	150
SEP 06...	1020	785	780	7.7	27.5	60	40	7.3	92	2.1	150

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 30...	41	50	6.3	64	2	8.3	110	71	71	.90	12
JAN 05...	25	47	6.6	66	2	8.9	120	79	68	.60	11
MAR 26...	29	38	3.1	18	.8	3.9	79	30	21	.30	10
MAY 03...	51	62	6.3	64	2	7.9	130	87	67	.70	8.4
AUG 02...	25	49	5.5	90	3	10	120	77	74	1.0	2.8
SEP 06...	29	50	5.9	98	4	11	120	93	88	1.2	3.6

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV											
30...	350	55	4	5.0	.220	5.2	.510	1.8	2.3	1.80	8.3
JAN											
05...	360	24	2	3.6	.220	3.8	3.50	.90	4.4	2.50	8.9
MAR											
26...	170	1770	192	.82	.080	.90	.020	2.5	2.5	.200	23
MAY											
03...	380	33	7	4.5	.030	4.5	.070	1.0	1.1	1.00	7.5
AUG											
02...	380	69	35	4.3	.080	4.4	.060	2.0	2.1	2.60	13
SEP											
06...	420	9	7	5.1	.150	5.2	.070	1.2	1.3	2.80	11

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV							
30...	1220	3	55	<1	<10	5	37
AUG							
02...	1250	4	57	<1	<10	5	280

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV						
30...	7	29	.2	<1	<1	22
AUG						
02...	4	37	.2	<1	<1	15

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-MHOS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	47667	593	333	42800	55	7100	73	9330	150
NOV.	1983	44495	604	339	40700	56	6710	74	8860	150
DEC.	1983	57010	555	312	48000	50	7670	67	10400	150
JAN.	1984	49290	626	351	46700	59	7820	77	10200	150
FEB.	1984	65700	519	292	51800	45	8040	62	11100	140
MAR.	1984	288870	361	205	160000	27	21300	42	32900	120
APR.	1984	84530	549	308	70400	49	11200	67	15200	150
MAY	1984	56280	611	343	52100	57	8680	75	11400	150
JUNE	1984	45701	599	336	41500	56	6880	73	9040	150
JULY	1984	35841	696	389	37600	69	6660	86	8370	160
AUG.	1984	30820	695	388	32300	70	5790	87	7210	150
SEPT	1984	28039	713	398	30100	71	5390	89	6720	160
TOTAL		834243	**	**	654000	**	103000	**	141000	**
WTD.AVG.		2279	516	290	**	46	**	62	**	140

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	759	715	745	562	552	555	---	---	580	---	---	730
2	760	738	749	566	552	560	---	---	592	---	---	702
3	743	729	734	585	555	562	616	479	575	---	---	670
4	745	730	738	609	562	584	460	357	406	---	---	621
5	731	714	724	636	612	630	446	380	429	---	---	578
6	---	---	730	638	633	636	450	418	436	---	---	587
7	---	---	738	649	634	641	---	---	450	---	---	594
8	---	---	728	643	625	634	---	---	425	---	---	604
9	---	---	715	676	643	661	---	---	437	---	---	605
10	---	---	720	689	677	683	---	---	460	---	---	587
11	---	---	695	707	673	686	---	---	490	---	---	584
12	---	---	710	710	703	706	---	---	438	---	---	587
13	---	---	730	713	698	703	---	---	422	---	---	614
14	582	411	494	710	698	706	---	---	470	689	619	644
15	407	340	358	718	708	714	---	---	541	694	673	683
16	387	344	361	732	708	719	---	---	590	707	679	698
17	422	389	410	736	708	726	---	---	620	675	572	616
18	432	420	424	706	581	652	---	---	640	571	554	559
19	505	433	465	---	365	558	---	---	590	567	524	555
20	531	508	521	---	---	575	---	---	615	539	515	526
21	546	514	533	---	---	590	---	---	634	548	539	542
22	526	502	513	---	---	560	---	---	641	545	538	542
23	555	483	519	---	---	525	---	---	653	555	545	551
24	547	521	529	---	---	508	---	---	659	603	553	574
25	644	543	595	---	---	516	---	---	665	628	602	612
26	664	647	657	---	---	528	---	---	680	629	616	622
27	683	661	671	---	---	542	---	---	692	650	620	636
28	691	682	688	---	---	557	---	---	701	686	651	669
29	694	682	689	---	---	568	---	---	723	728	688	716
30	682	659	668	---	---	575	---	---	730	726	694	712
31	660	565	609	---	---	---	---	---	738	712	686	698
MONTH	760	340	618	736	365	612	616	357	572	728	515	620

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	733	711	724	436	340	376	394	363	370	756	679	716
2	744	711	731	528	429	494	397	378	387	683	616	645
3	708	681	690	505	467	482	403	377	386	694	652	674
4	680	655	668	499	386	465	500	410	468	680	657	674
5	652	642	647	379	204	277	506	474	489	716	679	693
6	656	648	652	292	204	257	565	509	535	788	722	759
7	664	650	657	358	293	329	---	---	550	787	511	673
8	680	658	668	359	327	343	---	---	570	522	442	475
9	701	682	692	355	342	350	---	---	595	474	444	460
10	700	656	674	369	348	354	---	---	620	485	475	480
11	684	659	674	432	370	399	---	---	645	487	484	486
12	717	678	689	444	358	408	---	---	670	507	488	495
13	715	373	474	372	304	333	---	---	585	525	509	516
14	---	---	305	394	267	338	---	---	560	556	528	539
15	---	---	364	287	251	260	---	---	570	600	556	573
16	540	484	502	355	295	330	---	---	593	658	593	623
17	529	480	505	374	321	351	---	---	612	689	648	663
18	542	505	523	391	374	385	---	---	621	701	687	695
19	506	494	500	382	360	368	---	---	637	695	676	687
20	502	482	493	398	361	378	---	---	648	696	680	688
21	489	482	485	448	400	424	---	---	671	711	699	708
22	488	483	485	484	451	468	---	---	615	769	709	739
23	531	487	506	540	381	461	---	---	608	780	603	745
24	583	533	558	442	322	380	---	---	631	597	492	537
25	620	584	606	381	324	348	---	---	647	685	603	653
26	600	582	590	391	262	312	---	---	678	673	504	590
27	599	451	523	409	288	356	731	718	724	593	508	561
28	548	450	495	357	303	336	742	732	738	556	521	539
29	543	433	495	370	355	363	739	731	736	542	494	510
30	---	---	---	388	371	381	758	740	752	502	490	495
31	---	---	---	399	374	390	---	---	---	538	503	517
MONTH	744	373	572	540	204	371	758	363	597	788	442	607

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	626	541	561	744	693	711	739	722	729	---	---	720
2	697	591	645	771	647	690	764	740	748	---	---	725
3	726	694	713	724	567	620	777	762	768	---	---	725
4	752	727	743	592	507	542	796	779	789	---	---	720
5	751	722	738	641	549	575	793	781	786	---	---	715
6	719	630	674	715	633	685	780	747	764	---	---	730
7	627	499	563	755	718	739	776	741	757	777	764	770
8	616	500	566	776	755	763	760	690	738	771	742	756
9	607	536	559	816	774	789	784	698	750	742	725	734
10	686	562	617	810	778	797	787	766	780	746	735	740
11	764	557	715	801	780	795	---	---	785	773	746	757
12	535	444	471	811	747	769	---	---	795	785	754	775
13	463	425	442	765	674	720	---	---	795	751	652	715
14	424	410	415	731	677	707	---	---	815	641	503	553
15	439	414	424	737	725	730	---	---	820	---	---	540
16	470	437	454	752	733	742	---	---	825	---	---	560
17	473	465	468	773	747	761	---	---	820	---	---	575
18	488	473	477	791	759	774	---	---	415	---	---	585
19	520	485	498	764	746	754	---	---	398	620	586	601
20	555	515	528	755	702	721	---	---	470	667	637	658
21	614	557	584	753	505	626	---	---	528	---	---	675
22	---	---	625	849	507	693	---	---	584	714	698	705
23	---	---	670	817	618	697	---	---	620	747	706	729
24	---	---	720	624	503	558	---	---	645	750	745	748
25	---	---	740	720	630	678	---	---	690	754	742	746
26	---	---	742	739	716	727	---	---	660	756	749	753
27	---	---	745	764	718	744	---	---	690	765	756	761
28	---	---	750	---	---	750	---	---	715	772	756	762
29	---	---	760	---	---	768	---	---	722	786	757	767
30	---	---	775	697	686	690	---	---	717	784	766	779
31	---	---	---	726	697	709	---	---	715	---	---	---
MONTH	764	410	613	849	503	710	796	690	704	786	503	703

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.6	7.6	7.7	7.6	7.6	7.3	7.2	7.3	7.7	7.6	7.7
2	7.8	7.6	7.7	7.7	7.6	7.6	7.3	7.1	7.1	7.7	7.7	7.7
3	7.8	7.6	7.7	7.7	7.6	7.6	7.3	7.2	7.3	7.7	7.6	7.7
4	7.9	7.7	7.8	7.7	7.6	7.7	7.2	7.1	7.2	7.7	7.6	7.6
5	7.8	7.7	7.7	7.7	7.6	7.7	7.3	7.2	7.2	7.7	7.6	7.6
6	---	---	---	7.6	7.6	7.6	7.5	7.3	7.4	7.6	7.5	7.6
7	---	---	---	7.6	7.5	7.5	7.5	7.4	7.4	7.5	7.5	7.5
8	---	---	---	7.6	7.5	7.5	7.4	7.3	7.3	7.5	7.4	7.4
9	---	---	---	7.6	7.5	7.6	7.4	7.3	7.4	7.4	7.4	7.4
10	---	---	---	7.7	7.6	7.7	7.5	7.4	7.4	7.4	7.4	7.4
11	---	---	---	7.7	7.7	7.7	7.4	7.3	7.4	7.5	7.4	7.4
12	---	---	---	7.7	7.6	7.7	7.3	7.2	7.2	7.4	7.4	7.4
13	---	---	---	7.4	7.4	7.4	7.2	7.1	7.2	7.5	7.4	7.4
14	7.6	7.5	7.6	7.5	7.4	7.5	7.2	7.2	7.2	7.5	7.4	7.4
15	7.6	7.5	7.5	7.4	7.4	7.4	7.3	7.2	7.2	7.5	7.4	7.4
16	7.6	7.5	7.6	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.4	7.4
17	7.7	7.6	7.7	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3
18	7.8	7.7	7.8	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3
19	7.8	7.7	7.8	7.5	7.2	7.4	7.4	7.4	7.4	7.4	7.3	7.4
20	7.8	7.8	7.8	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4
21	7.8	7.7	7.8	7.4	7.3	7.3	7.6	7.4	7.4	7.4	7.4	7.4
22	7.8	7.7	7.7	7.3	7.1	7.2	7.6	7.3	7.6	7.4	7.4	7.4
23	7.8	7.7	7.7	7.2	7.1	7.1	7.6	7.6	7.6	7.5	7.4	7.5
24	7.9	7.8	7.8	7.1	7.0	7.1	7.7	7.6	7.7	7.5	7.4	7.5
25	7.9	7.9	7.9	7.1	7.0	7.1	7.7	7.6	7.6	7.5	7.4	7.5
26	7.9	7.8	7.9	7.2	7.0	7.1	7.6	7.5	7.6	7.5	7.4	7.5
27	7.8	7.7	7.8	7.4	7.2	7.3	7.6	7.5	7.6	7.5	7.4	7.5
28	7.7	7.7	7.7	7.4	7.3	7.4	7.6	7.5	7.6	7.6	7.4	7.5
29	7.7	7.7	7.7	7.3	7.3	7.3	7.7	7.6	7.6	7.6	7.5	7.5
30	7.9	7.7	7.8	7.3	7.2	7.2	7.7	7.6	7.6	7.5	7.5	7.5
31	7.9	7.9	7.9	---	---	---	7.7	7.6	7.7	7.5	7.3	7.4
MONTH	7.9	7.5	7.7	7.7	7.0	7.4	7.7	7.1	7.4	7.7	7.3	7.5

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.4	7.4	7.4	7.5	7.4	7.5	7.4	7.4	7.4	7.7	7.6	7.7
2	7.4	7.4	7.4	7.4	7.3	7.4	7.5	7.4	7.4	7.7	7.6	7.7
3	7.4	7.4	7.4	7.4	7.3	7.4	7.5	7.4	7.5	7.8	7.7	7.7
4	7.5	7.4	7.4	7.5	7.3	7.4	7.5	7.4	7.4	7.8	7.7	7.8
5	7.5	7.4	7.4	7.8	7.5	7.7	7.5	7.5	7.5	7.8	7.7	7.8
6	7.5	7.4	7.4	7.8	7.5	7.6	7.6	7.5	7.5	7.7	7.3	7.5
7	7.5	7.4	7.4	7.5	7.4	7.5	---	---	---	7.3	7.1	7.2
8	7.5	7.4	7.4	7.5	7.4	7.5	---	---	---	7.4	7.3	7.4
9	7.4	7.4	7.4	7.6	7.5	7.5	---	---	---	7.4	7.4	7.4
10	7.4	7.3	7.4	7.5	7.4	7.5	---	---	---	7.5	7.4	7.5
11	7.3	7.2	7.3	7.4	7.3	7.3	---	---	---	7.5	7.5	7.5
12	7.2	7.2	7.2	7.3	7.2	7.3	---	---	---	7.6	7.5	7.6
13	7.4	7.1	7.2	7.3	7.2	7.3	---	---	---	7.6	7.5	7.6
14	7.2	7.0	7.1	7.5	7.2	7.4	---	---	---	7.7	7.5	7.6
15	7.2	7.0	7.2	7.5	7.4	7.5	---	---	---	7.7	7.6	7.6
16	7.1	7.1	7.1	7.4	7.3	7.3	---	---	---	7.8	7.6	7.7
17	7.2	7.1	7.2	7.4	7.3	7.3	---	---	---	7.8	7.7	7.7
18	7.3	7.2	7.3	7.3	7.3	7.3	---	---	---	7.8	7.7	7.7
19	7.4	7.2	7.3	7.3	7.3	7.3	---	---	---	7.7	7.6	7.7
20	7.4	7.4	7.4	7.4	7.3	7.3	---	---	---	7.7	7.6	7.6
21	7.4	7.4	7.4	7.4	7.3	7.4	---	---	---	8.0	7.5	7.6
22	7.4	7.4	7.4	7.5	7.4	7.5	---	---	---	7.6	7.5	7.6
23	7.4	7.3	7.3	7.5	7.3	7.4	---	---	---	7.5	7.2	7.4
24	7.3	7.3	7.3	7.5	7.2	7.4	---	---	---	7.4	7.3	7.3
25	7.3	7.2	7.2	7.5	7.4	7.4	---	---	---	7.4	7.3	7.3
26	7.4	7.3	7.4	7.6	7.4	7.5	---	---	---	7.4	7.3	7.4
27	7.3	7.2	7.2	7.5	7.3	7.4	7.6	7.6	7.6	7.5	7.4	7.4
28	7.3	7.2	7.3	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.4	7.5
29	7.5	7.2	7.3	7.5	7.4	7.5	7.6	7.6	7.6	7.7	7.5	7.6
30	---	---	---	7.5	7.4	7.4	7.7	7.6	7.6	7.8	7.6	7.6
31	---	---	---	7.4	7.4	7.4	---	---	---	7.9	7.6	7.7
MONTH	7.5	7.0	7.3	7.8	7.2	7.4	7.7	7.4	7.5	8.0	7.1	7.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.6	7.7	7.9	7.7	7.8	8.4	7.9	8.2	---	---	---
2	7.6	7.6	7.6	7.9	7.5	7.7	8.4	8.1	8.2	---	---	---
3	7.7	7.6	7.6	7.9	7.5	7.6	8.3	7.9	8.1	---	---	---
4	7.8	7.6	7.7	7.5	7.4	7.5	7.9	7.7	7.8	---	---	---
5	7.7	7.6	7.7	7.9	7.5	7.5	8.1	7.7	7.9	---	---	---
6	7.7	7.6	7.7	7.9	7.5	7.7	8.6	7.8	8.2	---	---	---
7	7.8	7.5	7.6	8.1	7.7	7.9	8.1	7.8	7.9	7.6	7.4	7.6
8	7.8	7.5	7.7	8.2	7.8	7.9	7.8	7.6	7.7	7.6	7.5	7.5
9	7.7	7.6	7.6	8.1	7.8	7.9	7.9	7.6	7.8	7.6	7.5	7.5
10	7.6	7.4	7.5	8.2	7.9	8.0	7.7	7.6	7.7	7.6	7.5	7.5
11	7.4	7.2	7.3	8.1	7.9	8.0	---	---	---	7.6	7.5	7.5
12	7.5	7.3	7.4	8.2	7.8	8.0	---	---	---	7.6	7.5	7.5
13	7.5	7.5	7.5	8.2	7.9	8.1	---	---	---	7.6	7.5	7.6
14	7.5	7.5	7.5	8.1	7.8	7.9	---	---	---	7.6	7.5	7.5
15	7.6	7.5	7.6	8.4	7.9	8.1	---	---	---	---	---	---
16	7.8	7.6	7.7	8.4	8.0	8.2	---	---	---	---	---	---
17	7.9	7.6	7.7	8.3	7.9	8.1	---	---	---	---	---	---
18	8.1	7.7	7.8	8.2	8.0	8.1	---	---	---	---	---	---
19	8.2	7.7	7.9	8.0	7.7	7.8	---	---	---	---	---	---
20	8.2	7.7	7.9	7.9	7.7	7.8	---	---	---	---	---	---
21	8.2	7.7	7.9	7.8	7.3	7.5	---	---	---	---	---	---
22	8.1	7.7	7.8	7.6	7.3	7.5	---	---	---	---	---	---
23	---	---	---	7.5	7.4	7.4	---	---	---	8.3	7.8	8.1
24	---	---	---	7.4	7.3	7.3	---	---	---	7.8	7.7	7.8
25	---	---	---	7.7	7.4	7.5	---	---	---	7.8	7.6	7.7
26	---	---	---	7.9	7.7	7.8	---	---	---	7.7	7.6	7.6
27	7.9	7.8	7.8	8.2	7.8	7.9	---	---	---	7.7	7.6	7.7
28	7.9	7.7	7.8	---	---	---	---	---	---	7.7	7.4	7.6
29	8.1	7.7	7.8	---	---	---	---	---	---	7.6	7.5	7.6
30	8.0	7.8	7.9	8.4	8.0	8.3	---	---	---	7.6	7.5	7.6
31	---	---	---	8.2	7.9	8.1	---	---	---	---	---	---
MONTH	8.2	7.2	7.7	8.4	7.3	7.8	8.6	7.6	8.0	8.3	7.4	7.6

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.5	25.5	26.0	22.0	21.0	21.5	14.5	14.5	14.5	4.0	3.5	3.5
2	27.0	25.5	26.0	22.5	21.0	22.0	15.0	14.5	15.0	5.0	4.0	4.5
3	27.5	25.5	26.5	23.0	22.0	22.5	16.0	15.0	15.5	6.0	4.5	5.0
4	28.0	26.0	27.0	23.5	22.0	23.0	16.5	15.5	16.0	7.5	5.0	6.0
5	27.0	27.0	27.0	23.0	22.5	22.5	16.5	15.0	16.0	8.0	6.5	7.0
6	---	---	---	22.5	22.0	22.0	15.0	14.0	14.5	9.0	7.5	8.0
7	---	---	---	22.0	21.0	21.5	14.0	13.0	13.5	10.0	8.5	9.0
8	---	---	---	21.5	21.0	21.0	14.0	12.5	13.5	10.5	9.0	10.0
9	---	---	---	21.0	20.0	20.5	14.5	13.5	14.0	11.0	10.5	11.0
10	---	---	---	20.0	18.5	19.0	16.0	14.5	15.5	11.0	10.0	10.5
11	---	---	---	19.0	17.5	18.0	16.5	15.5	16.0	10.5	9.0	9.5
12	---	---	---	18.5	17.0	17.5	16.5	15.5	16.0	10.5	9.0	9.5
13	---	---	22.5	18.5	17.5	18.0	15.5	14.5	15.0	9.5	9.0	9.0
14	22.5	21.5	22.0	19.5	17.5	18.5	14.5	13.5	14.0	9.0	8.5	8.5
15	22.0	21.0	21.5	19.0	18.0	18.5	14.0	13.0	13.5	9.0	8.5	8.5
16	22.5	21.5	22.0	18.5	17.0	18.0	13.0	11.5	12.5	9.5	8.5	9.0
17	23.0	22.0	22.5	18.0	17.0	17.5	12.0	11.5	11.5	9.0	8.5	9.0
18	24.0	23.0	23.0	19.0	17.5	18.0	11.5	10.0	11.0	8.5	7.5	8.0
19	24.5	23.5	24.0	19.5	18.5	19.0	10.0	9.0	9.5	7.5	6.5	7.0
20	25.5	24.5	24.5	19.0	18.0	18.5	9.0	8.5	8.5	6.5	6.0	6.0
21	25.5	24.0	24.5	19.0	17.0	18.0	8.5	7.5	8.0	6.5	5.0	5.5
22	24.0	22.5	23.5	20.0	18.5	19.0	7.5	6.0	6.5	6.0	5.5	5.5
23	22.5	21.5	22.0	20.0	18.5	19.5	6.0	5.0	5.5	6.5	6.0	6.5
24	22.0	21.0	21.5	19.0	17.5	18.0	5.0	3.5	4.5	7.5	6.5	7.0
25	22.0	21.0	21.5	18.0	16.5	17.5	3.5	3.0	3.5	8.5	7.0	7.5
26	21.5	20.5	21.0	18.0	17.0	17.5	3.0	2.5	3.0	9.0	7.0	8.0
27	21.5	20.0	20.5	17.5	16.0	17.0	3.5	3.0	3.5	9.5	7.5	8.5
28	21.0	19.5	20.5	16.5	15.0	15.5	4.0	3.5	3.5	10.0	8.0	9.0
29	21.5	20.0	20.5	15.5	14.0	14.5	3.5	3.0	3.0	10.5	8.5	9.5
30	21.0	19.5	20.5	15.0	14.0	14.5	3.5	2.5	3.0	10.5	10.0	10.0
31	20.5	20.0	20.0	---	---	---	3.5	2.0	3.0	11.0	9.5	10.0
MONTH	28.0	19.5	23.0	23.5	14.0	19.0	16.5	2.0	10.5	11.0	3.5	8.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.5	9.5	10.5	13.5	12.0	12.5	19.5	18.0	18.5	24.5	23.5	24.0
2	11.5	10.5	11.0	14.0	13.0	13.5	19.0	17.5	18.5	24.5	24.0	24.0
3	12.5	10.5	11.5	15.0	13.5	14.0	20.0	17.5	18.5	26.0	24.0	25.0
4	12.5	11.0	11.5	15.5	14.5	15.0	19.0	16.5	17.5	26.5	24.5	25.5
5	12.5	11.0	11.5	16.0	14.5	15.0	19.5	15.5	17.5	27.0	25.0	26.0
6	11.5	10.0	11.0	15.0	13.5	14.0	19.0	15.5	16.5	27.0	26.0	26.5
7	11.5	10.0	11.0	15.0	13.0	13.5	---	---	---	26.5	25.0	25.5
8	12.0	10.5	11.0	15.0	13.5	14.0	---	---	---	25.0	24.0	24.5
9	12.5	11.5	12.0	15.0	13.5	14.5	---	---	---	25.5	23.5	24.5
10	14.5	12.5	13.5	15.5	14.5	14.5	---	---	---	25.5	23.5	24.5
11	16.0	14.0	15.0	16.5	14.5	15.5	---	---	---	26.0	24.0	25.0
12	16.5	15.5	16.0	17.5	15.5	16.5	---	---	---	27.0	25.0	26.0
13	17.0	15.5	16.0	18.0	16.0	17.0	---	---	---	28.0	26.0	27.0
14	17.5	15.5	16.0	18.5	17.5	18.0	---	---	---	29.0	27.0	27.5
15	16.5	16.0	16.0	19.0	18.0	18.5	---	---	---	28.5	27.0	28.0
16	16.5	15.5	16.0	19.5	19.0	19.5	---	---	---	28.5	27.5	28.0
17	17.0	15.5	16.0	20.0	19.5	19.5	---	---	---	28.5	27.0	27.5
18	17.0	16.5	16.5	21.0	19.5	20.5	---	---	---	27.5	27.0	27.5
19	16.0	15.5	16.0	20.5	20.0	20.5	---	---	---	27.0	26.5	26.5
20	15.5	14.5	15.0	21.0	19.0	20.0	---	---	---	27.5	26.0	26.5
21	15.5	14.0	14.5	21.0	18.0	19.5	---	---	---	27.0	26.0	26.5
22	15.5	13.5	14.5	20.5	18.5	19.5	---	---	---	27.0	25.5	26.0
23	16.0	13.5	14.5	19.5	18.5	19.0	---	---	---	27.0	26.0	26.5
24	16.0	14.5	15.0	19.5	17.5	18.5	---	---	---	27.0	25.5	26.5
25	16.5	14.5	15.5	19.5	17.0	18.0	---	---	---	28.5	26.5	27.5
26	16.5	15.5	15.5	19.5	18.5	19.0	---	---	---	29.0	27.0	28.0
27	15.0	13.5	14.5	20.5	19.0	19.5	25.0	24.5	25.0	29.5	28.0	29.0
28	13.5	12.5	13.0	19.0	18.0	18.5	25.5	24.5	25.0	30.5	28.5	29.5
29	13.5	12.0	12.5	19.0	17.5	18.0	25.5	25.0	25.0	29.0	27.5	28.5
30	---	---	---	19.0	17.5	18.5	25.0	24.0	24.5	28.5	27.0	27.5
31	---	---	---	18.5	18.0	18.5	---	---	---	28.0	26.5	27.0
MONTH	17.5	9.5	14.0	21.0	12.0	17.0	25.5	15.5	20.5	30.5	23.5	26.5

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	26.0	27.0	32.5	31.0	31.5	31.0	29.0	30.0	---	---	---
2	28.0	26.0	27.0	32.0	31.0	31.5	31.0	29.5	30.0	---	---	---
3	28.5	26.5	27.5	32.5	30.5	31.5	31.5	30.0	30.5	---	---	---
4	28.5	27.0	27.5	32.5	30.5	31.5	31.5	30.0	31.0	---	---	---
5	27.5	27.0	27.5	33.0	31.0	32.0	32.0	30.5	31.0	---	---	---
6	27.0	26.5	27.0	33.5	31.5	32.5	32.5	30.5	31.0	---	---	---
7	28.0	26.5	27.0	34.5	32.5	33.5	31.5	30.5	31.0	28.5	28.0	28.5
8	28.5	27.0	27.5	34.5	33.0	33.5	32.0	30.0	31.0	29.0	27.5	28.5
9	28.5	27.5	27.5	34.5	33.0	33.5	32.5	30.5	31.0	29.0	28.0	28.5
10	28.5	27.5	28.0	34.5	33.0	33.5	32.0	31.0	31.5	29.5	28.5	29.0
11	29.0	28.0	28.5	35.0	33.0	34.0	---	---	---	30.0	29.0	29.0
12	28.5	27.5	28.0	35.0	33.0	34.0	---	---	---	30.5	29.0	29.5
13	29.0	27.5	28.5	35.0	33.5	34.0	---	---	---	30.5	29.0	30.0
14	30.0	28.0	29.0	35.0	33.5	34.0	---	---	---	31.0	29.5	30.0
15	31.0	29.0	30.0	35.0	33.5	34.0	---	---	---	---	---	---
16	31.5	29.5	30.5	35.5	33.5	34.5	---	---	---	---	---	---
17	31.5	30.0	30.5	34.5	33.5	34.0	---	---	---	---	---	---
18	32.0	30.0	31.0	35.0	33.0	34.0	---	---	---	---	---	---
19	32.5	31.0	31.5	34.5	33.0	33.5	---	---	---	27.5	26.0	27.0
20	33.0	31.0	32.0	34.0	32.5	33.0	---	---	---	27.0	26.0	26.5
21	33.5	31.5	32.5	33.0	31.5	32.5	---	---	---	---	---	---
22	33.0	32.0	32.5	34.0	31.5	32.5	---	---	---	26.5	26.0	26.0
23	---	---	---	33.5	31.0	32.5	---	---	---	27.5	25.5	26.5
24	---	---	---	32.0	30.5	31.0	---	---	---	28.0	26.5	27.0
25	---	---	---	32.5	30.5	31.5	---	---	---	28.5	27.0	27.5
26	---	---	---	32.5	30.5	31.5	---	---	---	27.5	26.0	26.5
27	33.0	32.5	32.5	32.5	31.0	31.5	---	---	---	26.0	25.0	25.5
28	32.5	31.5	32.0	---	---	---	---	---	---	24.5	23.5	24.0
29	32.5	30.0	31.5	---	---	---	---	---	---	23.5	22.5	23.0
30	32.5	31.0	31.5	31.5	30.5	31.0	---	---	---	23.0	21.0	22.0
31	---	---	---	31.0	29.5	30.0	---	---	---	---	---	---
MONTH	33.5	26.0	29.5	35.5	29.5	32.5	32.5	29.0	31.0	31.0	21.0	27.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	5.5	6.2	7.6	7.2	7.4	7.7	6.9	7.4	12.5	12.0	12.2
2	7.3	5.9	6.4	7.7	7.2	7.4	7.4	5.9	6.6	12.4	11.9	12.1
3	7.4	6.0	6.6	7.7	7.2	7.4	7.4	7.0	7.2	11.9	11.3	11.6
4	7.7	6.1	6.8	7.6	7.0	7.2	7.4	6.9	7.2	11.6	10.7	11.1
5	7.0	6.5	6.6	7.1	6.7	6.9	8.3	7.2	7.6	10.8	10.1	10.4
6	---	---	---	7.1	6.6	6.8	9.1	8.4	8.7	10.1	9.1	9.6
7	---	---	---	7.0	6.5	6.8	9.3	8.9	9.1	9.2	8.5	8.8
8	---	---	---	7.5	6.7	7.1	9.3	8.5	9.0	8.6	7.8	8.2
9	---	---	---	7.7	7.3	7.5	9.2	8.8	9.0	8.1	7.5	7.8
10	---	---	---	7.9	7.6	7.7	9.0	8.1	8.6	8.2	7.6	7.9
11	---	---	---	8.0	7.7	7.9	8.3	6.9	7.7	8.3	7.7	8.0
12	---	---	---	7.9	7.6	7.8	7.5	6.8	7.2	8.4	7.8	8.0
13	---	---	---	7.9	7.6	7.7	7.5	6.9	7.2	9.4	7.7	8.4
14	5.8	2.7	4.7	7.7	7.2	7.5	8.4	7.4	8.0	9.0	8.3	8.6
15	6.7	5.8	6.3	7.5	7.1	7.3	8.6	8.1	8.3	8.3	7.5	7.9
16	7.0	6.7	6.9	7.3	6.8	7.1	9.5	8.5	9.1	7.5	7.2	7.4
17	7.1	6.8	6.9	7.2	6.7	6.9	9.7	9.3	9.5	7.2	6.9	7.0
18	7.2	6.9	7.1	7.1	6.5	6.8	9.9	9.5	9.7	8.2	7.0	7.5
19	7.2	7.1	7.2	7.5	6.8	7.1	10.1	9.6	9.9	9.0	8.3	8.7
20	7.2	7.0	7.1	7.8	7.2	7.5	10.3	9.8	10.0	9.5	9.0	9.3
21	7.3	7.0	7.1	7.9	7.5	7.6	10.2	9.9	10.1	10.3	9.5	10.0
22	7.0	6.9	7.0	7.6	6.2	7.1	10.7	10.0	10.5	10.4	10.0	10.2
23	7.4	7.0	7.2	6.6	6.1	6.3	11.1	10.6	10.9	10.2	9.9	10.0
24	7.7	7.4	7.6	6.3	5.8	6.1	11.8	11.0	11.3	9.9	9.6	9.8
25	7.8	7.6	7.7	6.1	5.7	5.9	12.0	11.5	11.7	9.9	9.4	9.7
26	7.5	6.8	7.2	6.0	5.4	5.7	12.2	11.7	11.9	9.7	9.1	9.4
27	7.0	6.6	6.9	6.4	5.8	6.1	12.1	11.7	11.9	9.3	8.9	9.1
28	6.7	6.3	6.5	6.9	6.4	6.6	12.1	11.6	11.9	9.2	8.7	8.9
29	6.9	6.4	6.6	7.3	6.8	7.0	12.3	11.9	12.1	8.7	8.1	8.4
30	7.6	6.5	7.1	7.5	6.7	7.2	12.4	11.9	12.2	8.3	7.8	8.0
31	7.7	7.5	7.6	---	---	---	12.6	12.0	12.3	8.4	7.4	7.9
MONTH	7.8	2.7	6.8	8.0	5.4	7.1	12.6	5.9	9.5	12.5	6.9	9.1

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.1	7.3	7.7	8.3	7.8	8.0	5.4	3.5	4.8	6.3	5.3	5.8
2	7.8	7.3	7.5	7.9	7.2	7.5	5.5	4.4	5.1	6.5	5.7	6.0
3	8.2	7.2	7.6	7.5	7.3	7.4	6.1	3.9	4.8	7.0	6.0	6.4
4	8.6	7.2	7.8	9.1	7.3	8.1	4.8	3.6	4.0	7.2	6.2	6.6
5	8.9	7.7	8.2	10.1	9.1	9.5	6.3	4.0	5.4	6.7	5.8	6.3
6	9.4	7.8	8.5	10.7	9.5	10.3	5.5	4.5	4.9	5.7	.4	3.0
7	9.7	8.0	8.8	14.9	8.8	11.6	---	---	---	2.5	.3	.7
8	9.4	8.2	8.7	14.7	13.8	14.2	---	---	---	3.6	2.7	3.2
9	8.5	7.7	8.1	14.3	12.6	13.4	---	---	---	4.1	3.6	3.8
10	8.9	6.9	7.8	13.6	12.6	13.1	---	---	---	4.9	4.2	4.6
11	7.2	6.0	6.5	13.0	10.9	11.9	---	---	---	5.4	5.0	5.3
12	6.0	4.2	5.4	11.1	9.7	10.6	---	---	---	5.7	5.4	5.5
13	4.0	2.7	3.5	9.6	6.3	8.5	---	---	---	5.8	5.2	5.5
14	3.4	3.0	3.3	6.4	2.8	4.4	---	---	---	6.2	5.2	5.6
15	3.1	2.4	2.8	3.6	2.6	3.0	---	---	---	6.5	5.2	5.7
16	3.3	2.9	3.1	4.1	3.6	3.9	---	---	---	6.7	5.3	5.9
17	4.4	3.1	3.8	3.7	2.6	3.3	---	---	---	7.0	5.6	6.2
18	5.0	3.9	4.5	2.6	1.6	2.1	---	---	---	6.8	5.7	6.1
19	6.7	3.7	4.8	2.7	1.1	1.9	---	---	---	6.3	5.6	5.9
20	7.9	6.8	7.4	2.5	1.0	1.5	---	---	---	6.5	5.5	5.9
21	8.6	7.9	8.2	2.4	.7	1.5	---	---	---	6.0	4.6	5.6
22	9.2	8.6	8.9	5.8	.7	4.0	---	---	---	5.5	4.7	5.2
23	9.2	8.1	8.7	4.9	1.7	3.6	---	---	---	4.6	.6	3.2
24	8.1	7.5	7.9	4.7	1.8	3.4	---	---	---	3.2	2.0	3.0
25	8.4	7.3	7.6	5.0	4.7	4.8	---	---	---	3.0	2.3	2.6
26	8.9	8.1	8.7	4.8	3.7	4.3	---	---	---	3.6	2.9	3.3
27	8.4	7.7	8.0	3.9	2.7	3.3	6.1	5.6	5.9	5.0	3.5	4.3
28	9.0	8.5	8.8	4.4	3.7	4.1	5.9	5.2	5.6	5.4	4.4	4.8
29	8.9	7.4	8.1	4.4	4.3	4.3	5.7	5.1	5.3	6.0	4.6	5.2
30	---	---	---	5.2	4.3	4.9	5.9	5.1	5.4	6.5	4.9	5.5
31	---	---	---	5.2	4.5	4.8	---	---	---	6.9	5.1	5.8
MONTH	9.7	2.4	6.9	14.9	.7	6.4	6.3	3.5	5.1	7.2	.3	4.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.6	5.0	5.4	11.8	6.4	9.2	9.1	5.6	7.2	---	---	---
2	5.0	4.5	4.7	7.3	6.3	6.8	9.1	6.3	7.5	---	---	---
3	5.3	4.3	4.7	6.4	5.9	6.1	8.2	5.6	6.7	---	---	---
4	6.1	4.4	5.1	5.9	5.2	5.6	6.0	4.5	5.2	---	---	---
5	6.9	5.4	6.0	5.8	5.5	5.7	6.1	4.3	5.0	---	---	---
6	6.5	5.4	6.0	6.8	5.2	5.8	7.6	4.4	5.3	---	---	---
7	7.3	5.2	6.1	7.4	5.2	6.1	5.4	4.0	4.6	8.2	7.1	7.4
8	7.6	5.7	6.4	9.6	5.7	7.7	4.7	3.7	4.1	7.4	6.6	6.9
9	6.9	5.8	6.3	9.0	6.7	7.5	5.1	3.8	4.3	7.7	6.7	7.1
10	6.0	3.5	5.2	8.8	6.7	7.5	4.6	3.9	4.1	7.9	6.9	7.3
11	3.2	1.3	1.7	8.4	6.0	7.0	---	---	---	7.6	6.5	7.0
12	4.4	1.7	3.6	8.0	5.6	6.6	---	---	---	7.5	6.6	6.9
13	5.0	4.3	4.7	8.4	6.1	7.0	---	---	---	7.5	6.4	6.9
14	5.6	5.0	5.3	8.2	5.6	6.7	---	---	---	7.0	6.2	6.5
15	6.3	5.4	5.8	10.7	7.0	8.6	---	---	---	---	---	---
16	7.2	5.7	6.3	10.5	7.0	8.4	---	---	---	---	---	---
17	8.2	6.1	6.9	8.5	6.1	7.2	---	---	---	---	---	---
18	6.5	4.7	5.7	7.8	6.2	7.0	---	---	---	---	---	---
19	5.3	4.5	4.8	6.2	4.5	5.4	---	---	---	7.7	6.6	7.1
20	5.1	4.3	4.7	6.8	4.9	5.8	---	---	---	6.9	6.1	6.4
21	4.9	---	4.5	5.6	3.7	4.5	---	---	---	---	---	---
22	---	4.2	---	5.5	3.8	4.7	---	---	---	---	---	---
23	---	---	---	5.9	4.3	4.8	---	---	---	7.2	6.1	6.6
24	---	---	---	5.6	4.4	4.9	---	---	---	6.8	6.0	6.3
25	---	---	---	6.6	4.6	5.4	---	---	---	6.7	6.1	6.4
26	---	---	---	7.0	5.1	5.8	---	---	---	6.7	6.3	6.6
27	---	---	---	8.2	5.4	6.5	---	---	---	7.0	6.5	6.7
28	---	---	---	---	---	---	---	---	---	7.9	6.8	6.8
29	---	---	---	---	---	---	---	---	---	8.1	7.4	7.8
30	---	---	---	8.9	6.0	7.6	---	---	---	8.8	7.6	8.3
31	---	---	---	7.4	3.8	5.8	---	---	---	---	---	---
MONTH	8.2	1.3	5.2	11.8	3.7	6.5	9.1	3.7	5.4	8.8	6.0	6.9

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX

LOCATION.--Lat 30°53'03", long 95°46'39", Madison-Walker County line, Hydrologic Unit 12030202, on right bank at downstream side of bridge on U.S. Highways 75 and 190, 0.5 mi upstream from Interstate Highway 45, 1.5 mi downstream from Caney Creek, and 9.5 mi southeast of Madisonville.

DRAINAGE AREA.--321 mi^2.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 150.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No diversion above station. Flow is affected at times by discharge from the flood-detention pools of three floodwater-retarding structures with a combined detention capacity of 1,290 acre-ft. These structures control runoff from 2.71 mi^2 in the Upper Caney Creek and Town Branch drainage basins. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 208 ft^3/s (8.80 in/yr), 150,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,800 ft^3/s Sept. 14, 1974 (gage height, 25.07 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 34 ft in May 1922 (discharge unknown), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft^3/s Dec. 4 at about 1800 hours (gage height, 14.52 ft, from crest stage gage), no peak above base of 3,400 ft^3/s; no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	2.1	6.2	7.6	22	33	8.1	1.0	.34	484	.59	.00
2	5.3	2.0	16	7.4	18	24	6.6	1.0	.24	751	.51	.00
3	4.4	1.9	458	7.2	16	17	5.6	.95	.16	526	.45	.03
4	4.0	1.9	1060	7.0	15	13	4.7	.95	.13	65	.67	.07
5	3.9	1.9	1020	7.0	13	11	5.3	.95	.13	23	.70	.10
6	3.5	4.5	711	7.0	12	34	9.5	.95	.13	10	.64	.10
7	3.0	14	144	6.8	11	92	6.9	.95	.15	5.9	5.2	.09
8	2.6	85	59	6.6	11	54	5.0	.93	36	4.1	7.2	.05
9	2.5	55	38	6.6	10	29	4.3	.84	24	2.8	3.3	.02
10	2.4	30	30	7.2	10	21	3.6	.74	5.2	1.8	1.8	.00
11	2.1	14	118	11	10	17	3.4	.66	1.7	1.3	1.3	.00
12	3.3	8.3	235	32	20	14	3.3	.55	.69	1.1	1.0	.00
13	2.8	5.8	190	33	49	16	3.2	.55	.36	.91	.85	.00
14	2.4	3.9	76	26	48	200	2.9	.55	16	.79	4.2	.00
15	2.4	2.7	43	20	46	139	2.5	.55	9.5	.71	3.6	.00
16	2.0	2.4	31	16	32	46	2.2	.55	2.6	.62	1.5	.00
17	1.8	2.2	26	13	27	33	2.0	.55	1.3	.54	.91	.00
18	2.2	2.0	22	11	21	26	2.1	.64	.85	.47	.74	.00
19	3.2	2.2	18	12	18	21	2.1	.92	.64	.44	.62	.00
20	158	2.9	16	11	16	17	2.0	.97	.59	.42	.57	.00
21	348	80	15	10	14	15	1.8	3.3	.48	.38	.59	.00
22	322	89	14	9.5	13	13	1.4	3.1	.39	.35	.59	.19
23	373	39	12	37	12	41	1.1	113	.33	.57	.64	3.2
24	112	21	11	285	12	181	.97	198	.25	.55	.64	23
25	39	26	11	443	11	379	.95	42	.19	.42	.65	9.2
26	21	32	10	236	9.8	181	.95	10	.10	.43	.47	2.7
27	11	24	9.8	90	12	51	1.0	4.0	.04	.45	.30	1.2
28	6.4	14	9.0	64	53	39	1.1	2.0	.30	.54	.20	.56
29	4.5	8.1	8.6	46	70	24	1.1	1.0	.43	.55	.10	.31
30	3.0	6.2	8.3	34	---	15	1.1	.63	71	.52	.02	.13
31	2.6	---	7.9	27	---	10	---	.45	---	.54	.00	---
TOTAL	1460.7	584.0	4433.8	1536.9	631.8	1806	96.77	393.23	174.22	1886.20	40.55	40.95
MEAN	47.1	19.5	143	49.6	21.8	58.3	3.23	12.7	5.81	60.8	1.31	1.37
MAX	373	89	1060	443	70	379	9.5	198	71	751	7.2	23
MIN	1.8	1.9	6.2	6.6	9.8	10	.95	.45	.04	.35	.00	.00
CFSM	.15	.06	.45	.16	.07	.18	.01	.04	.02	.19	.004	.004
IN.	.17	.07	.51	.18	.07	.21	.01	.05	.02	.22	.00	.00
AC-FT	2900	1160	8790	3050	1250	3580	192	780	346	3740	80	81

CAL YR 1983 TOTAL 82047.74 MEAN 225 MAX 8200 MIN .64 CFSM .70 IN 9.51 AC-FT 162700
WTR YR 1984 TOTAL 13085.12 MEAN 35.8 MAX 1060 MIN .00 CFSM .11 IN 1.52 AC-FT 25950

TRINITY RIVER BASIN

08066100 WHITE ROCK CREEK NEAR TRINITY, TX

LOCATION.--Lat 31°03'06", long 95°22'40", Trinity County, Hydrologic Unit 12030202, on right bank 3.9 mi upstream from Little White Rock Creek, 4.1 mi upstream from Tantaboque Creek, 7.3 mi north of Trinity, and 16.1 mi upstream from mouth.

DRAINAGE AREA.--222 mi^2. Prior to June 1974, 228 mi^2.

PERIOD OF RECORD.--December 1965 to current year. Peak discharge, supplemental peak discharges, and discharge measurements only October 1971 to May 1974 (low stages affected by storage in Livingston Reservoir).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 124.30 ft National Geodetic Vertical Datum of 1929. Prior to June 19, 1974, at site 1.9 mi downstream at same datum.

REMARKS.--Records good. No known diversion. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1967-71, 1975-84), 112 ft^3/s (6.85 in/yr), 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,800 ft^3/s Apr. 21, 1979 (gage height, 33.87 ft), from rating curve extended above 6,000 ft^3/s on basis of slope-area measurement of peak flow on that date; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft^3/s Dec. 3 at 1200 hours (gage height, 16.12 ft), no peak above base of 1,900 ft^3/s; no flow Aug. 22 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	.72	51	12	18	45	26	3.0	.19	580	2.4	.00
2	4.0	.37	44	11	16	34	24	3.0	.12	150	1.3	.00
3	2.0	.37	1070	10	16	31	23	2.8	.10	37	.65	.00
4	1.5	.37	1420	9.8	16	29	22	2.7	.08	26	.38	.00
5	1.0	.37	702	9.3	15	74	19	2.3	1.0	14	.21	.00
6	.80	.51	131	9.3	15	291	18	2.5	176	7.8	.13	.00
7	.60	.82	71	9.3	13	161	17	2.3	126	5.0	.36	.00
8	.50	.88	49	9.3	12	72	16	48	43	3.0	.40	.00
9	.45	1.5	40	12	12	46	16	15	18	2.3	.19	.00
10	.40	1.3	46	26	16	36	15	5.0	8.7	1.5	.12	.00
11	.35	1.0	222	30	21	32	16	2.7	5.1	1.1	.08	.00
12	2.0	.65	242	28	319	208	15	2.1	3.0	.75	5.4	.00
13	12	.72	88	20	773	940	13	1.7	2.1	.50	7.1	.00
14	9.0	.93	53	16	385	518	13	1.2	1.6	.34	2.0	.00
15	6.0	.93	41	18	104	139	11	.76	1.5	.20	.59	.00
16	4.0	.64	37	23	65	86	11	.84	1.1	.18	.17	.00
17	2.0	.60	50	27	50	65	9.2	2.7	.72	.13	.11	.00
18	1.2	.49	60	28	41	54	8.1	6.8	.61	.08	.07	.00
19	.89	2.6	50	26	35	47	11	42	.40	.07	.05	.00
20	.55	26	35	18	32	43	10	46	.32	26	.03	.00
21	2.8	18	25	18	30	39	9.3	39	.22	2.8	.03	.00
22	25	13	30	15	25	34	6.6	38	.13	.77	.00	.00
23	20	7.9	25	157	27	37	7.5	21	.15	.32	.00	.00
24	14	7.8	20	409	25	133	5.6	15	.11	4.6	.00	.00
25	12	7.8	18	225	23	337	5.0	8.3	.09	3.7	.00	.00
26	7.3	17	16	87	45	82	5.0	4.7	.09	1.2	.00	.00
27	3.3	192	15	50	495	48	4.7	3.2	.08	3.5	.00	.00
28	2.1	116	14	36	233	41	4.6	2.3	486	29	.00	.00
29	1.6	51	13	29	74	48	4.0	1.3	103	18	.00	.00
30	1.1	35	12	24	---	38	3.5	.82	445	11	.00	.00
31	.77	---	13	20	---	29	---	.43	---	5.9	.00	---
TOTAL	147.21	507.27	4703	1422.0	2951	3817	369.1	327.45	1424.51	936.74	21.77	.00
MEAN	4.75	16.9	152	45.9	102	123	12.3	10.6	47.5	30.2	.70	.000
MAX	25	192	1420	409	773	940	26	48	486	580	7.1	.00
MIN	.35	.37	12	9.3	12	29	3.5	.43	.08	.07	.00	.00
CFSM	.02	.08	.69	.21	.46	.55	.06	.05	.21	.14	.003	.000
IN.	.02	.09	.79	.24	.49	.64	.06	.05	.24	.16	.00	.00
AC-FT	292	1010	9330	2820	5850	7570	732	649	2830	1860	43	.00

CAL YR 1983	TOTAL	57012.98	MEAN	156	MAX	5090	MIN	.35	CFSM .70	IN 9.55	AC-FT	113100
WTR YR 1984	TOTAL	16627.05	MEAN	45.4	MAX	1420	MIN	.00	CFSM .21	IN 2.79	AC-FT	32980

08066170 KICKAPOO CREEK NEAR ONALASKA, TX

LOCATION.--Lat 30°54'25", long 95°05'18", Polk County, Hydrologic Unit 12030202, on right bank 114 ft downstream from old bridge site, 1.2 mi downstream from Magnolia Creek, 6.2 mi upstream from Rocky Creek, 7.3 mi northeast of Onalaska, and 15.9 mi upstream from mouth.

DRAINAGE AREA.--57.0 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 139.85 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 2.0 ft^3/s, which are poor. No diversion above station. Low flow is sustained by sewage effluent. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1967-84), 43.3 ft^3/s (10.31 in/yr), 31,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft^3/s June 7, 1981, from rating curve extended above 6,800 ft^3/s on basis of slope-area measurement of peak flow (gage height, 30.37 ft); minimum, 0.01 ft^3/s July 19, 20, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 3	0900	2,740	12.57
Mar. 5	0100	*2,900	12.86

Minimum discharge, 0.30 ft^3/s June 26, 27, Sept. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	.57	25	6.4	11	21	5.9	.90	1.6	33	1.2	.49
2	.78	.57	73	6.4	11	17	6.4	.90	1.3	15	1.0	.49
3	.78	.57	1050	6.4	12	15	5.9	.90	1.3	7.3	1.0	.71
4	.78	.57	113	6.4	12	74	5.4	.90	1.3	5.5	1.1	2.8
5	.78	.63	64	6.3	11	1200	4.6	.90	1.3	13	1.3	1.4
6	.67	3.5	43	5.9	9.0	190	4.2	.90	173	6.4	1.3	.85
7	.67	5.4	30	5.9	8.1	55	4.0	2.4	92	3.3	1.3	.63
8	.67	2.6	26	5.9	7.8	35	4.0	25	20	2.3	1.3	.57
9	.67	1.7	21	152	7.8	26	4.0	7.7	11	1.6	1.3	.57
10	.67	1.6	346	108	7.8	21	3.6	3.3	7.5	1.4	1.2	.57
11	.57	1.4	211	41	8.1	19	3.3	2.4	5.1	1.3	1.0	.57
12	.57	1.2	73	26	727	421	3.2	1.9	2.5	1.3	1.0	.55
13	.57	1.1	49	19	126	167	2.7	1.6	6.9	1.2	1.0	.49
14	.57	1.1	36	16	54	53	2.4	1.4	3.8	1.2	3.6	.49
15	.57	1.0	23	23	37	36	1.6	1.2	2.5	1.0	4.0	.49
16	.57	1.0	57	27	29	31	1.5	1.1	1.8	.90	1.4	.49
17	.90	.96	59	23	21	27	1.4	1.3	1.3	.78	1.1	.44
18	1.8	.90	33	22	17	22	1.3	12	1.2	.78	1.0	.35
19	1.3	3.1	21	20	14	20	1.3	158	1.0	.78	.85	.34
20	1.0	5.9	16	15	14	19	1.3	105	.90	.78	.78	.30
21	.90	2.4	15	13	17	14	1.3	506	.78	.78	.78	.56
22	.90	41	17	12	16	12	1.2	252	.57	.67	.78	1.6
23	.90	86	15	142	12	11	1.0	39	.42	.67	.74	1.2
24	.84	23	11	135	9.3	11	.90	17	.35	.67	.67	.90
25	.73	7.3	8.1	56	7.8	11	.90	10	.35	.67	.63	.90
26	.67	4.3	7.8	37	310	11	.90	6.9	.30	.67	.57	.85
27	.63	5.1	7.8	27	157	10	.90	4.7	.30	1.0	.57	.67
28	.57	5.5	7.8	21	43	8.5	.90	4.5	152	26	.57	.63
29	.57	3.2	7.8	18	29	5.9	.90	5.2	41	5.9	.54	.57
30	.57	19	7.1	15	---	5.7	.90	3.4	32	2.5	.49	.57
31	.57	---	6.6	13	---	5.5	---	1.9	---	1.4	.49	---
TOTAL	23.64	232.17	2480.0	1030.6	1745.7	2574.6	77.80	1180.30	565.37	139.75	34.56	22.04
MEAN	.76	7.74	80.0	33.2	60.2	83.1	2.59	38.1	18.8	4.51	1.11	.73
MAX	1.8	86	1050	152	727	1200	6.4	506	173	33	4.0	2.8
MIN	.57	.57	6.6	5.9	7.8	5.5	.90	.90	.30	.67	.49	.30
CFSM	.01	.14	1.40	.58	1.06	1.46	.05	.67	.33	.08	.02	.01
IN.	.02	.15	1.62	.67	1.14	1.68	.05	.77	.37	.09	.02	.01
AC-FT	47	461	4920	2040	3460	5110	154	2340	1120	277	69	44

CAL YR 1983 TOTAL 19077.61 MEAN 52.3 MAX 2450 MIN .57 CFSM .92 IN 12.45 AC-FT 37840
WTR YR 1984 TOTAL 10106.53 MEAN 27.6 MAX 1200 MIN .30 CFSM .48 IN 6.60 AC-FT 20050

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX

LOCATION.--Lat 30°38'00", long 95°00'36", Polk-San Jacinto County line, Hydrologic Unit 12030202, on upstream wingwall at left end of gated spillway at Livingston Dam on Trinity River, 4.4 mi northwest of Goodrich, 7 mi southwest of Livingston, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Trinity River Authority). Prior to Feb. 26, 1969, temporary nonrecording gages at site about 200 ft upstream and at same datum.

REMARKS.--The reservoir is formed by an earthfill dam 14,400 ft long. The dam was completed Sept. 29, 1968, and deliberate impoundment began June 26, 1969. The reservoir is operated for industrial water supply in the Houston metropolitan area. The spillway has twelve 40- by 35-foot tainter gates located near the left end of dam. Low-flow releases may be made through multi-gated inlet tower. There are five gated openings at various elevations located in the tower, and all discharge into a 10-foot-diameter concrete conduit through the dam. Flow is affected at times by discharge from the flood-detention pools of 254 floodwater-retarding structures with a combined detention capacity of 184,400 acre-ft. These structures control runoff from 616 mi² in the Richland, Chambers, Tehuacana, and Bedias Creeks drainage basins. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	145.0	-
Design flood	135.0	2,136,000
Top of tainter gates	134.0	2,046,000
Top of conservation pool	131.0	1,788,000
Crest of spillway (sill of tainter gates)	99.0	157,900
Lowest gated outlet (invert)	58.0	335

COOPERATION.--The capacity table, furnished by the Trinity River Authority, is based on Geological Survey topographic maps.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,948,000 acre-ft May 23, 1983 (elevation, 132.88 ft); minimum since conservation pool capacity was reached on Nov. 2, 1971, 1,415,000 acre-ft Nov. 19, 1978 (elevation, 126.19 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,847,000 acre-ft Mar. 5 at 1600 hours (elevation, 132.02 ft); minimum, 1,654,000 acre-ft Sept. 30 (elevation, 129.34 ft).

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

129.0	1,627,000
131.0	1,788,000
133.0	1,958,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790000	1805000	1807000	1797000	1794000	1824000	1840000	1770000	1770000	1802000	1737000	1683000
2	1787000	1807000	1811000	1798000	1798000	1830000	1843000	1768000	1772000	1803000	1735000	1683000
3	1786000	1804000	1870000	1798000	1797000	1829000	1836000	1768000	1769000	1805000	1734000	1686000
4	1787000	1807000	1865000	1801000	1796000	1848000	1815000	1759000	1766000	1807000	1731000	1684000
5	1788000	1799000	1859000	1801000	1798000	1869000	1799000	1756000	1769000	1806000	1730000	1680000
6	1782000	1805000	1842000	1803000	1792000	1866000	1788000	1756000	1778000	1802000	1727000	1676000
7	1780000	1802000	1822000	1803000	1840000	1853000	1791000	1779000	1775000	1801000	1727000	1673000
8	1779000	1798000	1810000	1803000	1788000	1849000	1794000	1779000	1774000	1794000	1726000	1672000
9	1779000	1801000	1799000	1825000	1794000	1830000	1793000	1774000	1774000	1793000	1726000	1671000
10	1779000	1795000	1805000	1814000	1790000	1821000	1797000	1766000	1774000	1789000	1725000	1671000
11	1776000	1789000	1808000	1804000	1793000	1801000	1791000	1765000	1776000	1790000	1724000	1671000
12	1786000	1790000	1789000	1806000	1827000	1813000	1798000	1765000	1782000	1788000	1722000	1671000
13	1779000	1792000	1797000	1798000	1823000	1819000	1798000	1764000	1783000	1783000	1720000	1671000
14	1783000	1796000	1791000	1791000	1817000	1824000	1802000	1761000	1783000	1779000	1719000	1671000
15	1790000	1789000	1789000	1791000	1818000	1827000	1799000	1757000	1780000	1778000	1718000	1669000
16	1793000	1784000	1795000	1788000	1814000	1836000	1797000	1760000	1774000	1774000	1717000	1665000
17	1794000	1779000	1793000	1793000	1798000	1847000	1796000	1756000	1774000	1774000	1717000	1663000
18	1795000	1779000	1802000	1792000	1801000	1848000	1788000	1762000	1769000	1768000	1715000	1661000
19	1793000	1793000	1798000	1793000	1789000	1863000	1786000	1775000	1769000	1768000	1713000	1659000
20	1797000	1788000	1794000	1793000	1788000	1854000	1780000	1776000	1768000	1766000	1710000	1657000
21	1805000	1788000	1806000	1792000	1786000	1838000	1793000	1795000	1765000	1765000	1708000	1661000
22	1803000	1797000	1798000	1787000	1786000	1823000	1788000	1796000	1762000	1763000	1707000	1663000
23	1802000	1812000	1801000	1804000	1787000	1822000	1785000	1799000	1760000	1761000	1705000	1661000
24	1802000	1802000	1802000	1810000	1790000	1823000	1776000	1795000	1758000	1760000	1704000	1661000
25	1807000	1797000	1794000	1810000	1779000	1827000	1774000	1793000	1756000	1756000	1701000	1663000
26	1805000	1802000	1794000	1809000	1806000	1823000	1776000	1795000	1747000	1754000	1698000	1664000
27	1803000	1803000	1795000	1807000	1811000	1832000	1783000	1790000	1749000	1751000	1696000	1662000
28	1803000	1802000	1804000	1805000	1816000	1834000	1772000	1798000	1779000	1748000	1693000	1661000
29	1803000	1795000	1795000	1802000	1817000	1834000	1779000	1792000	1774000	1746000	1691000	1658000
30	1803000	1807000	1793000	1800000	---	1834000	1774000	1787000	1793000	1742000	1688000	1654000
31	1803000	---	1788000	1798000	---	1843000	---	1775000	---	1739000	1686000	---
MAX	1807000	1812000	1870000	1825000	1840000	1869000	1843000	1799000	1793000	1807000	1737000	1686000
MIN	1776000	1779000	1788000	1787000	1779000	1801000	1772000	1756000	1747000	1739000	1686000	1654000
(†)	131.18	131.23	131.00	131.11	131.35	131.65	130.83	130.84	131.05	130.40	129.74	129.34
(‡)	+9000	+4000	-19000	+10000	+19000	+26000	-69000	+1000	+18000	-54000	-53000	-32000

CAL YR 1983 MAX 1947000 MIN 1761000 ‡ -63000
WTR YR 1984 MAX 1870000 MIN 1654000 ‡ -140000

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

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to current year.

303807095011101 LIVINGSTON RESERVOIR SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
31...	1220	1.00	378	8.6	8.0	1.08	11.9	99	110
31...	1222	10.0	378	8.5	7.0	--	11.9	97	--
31...	1224	20.0	378	8.5	7.0	--	11.7	95	--
31...	1226	30.0	378	8.4	6.5	--	11.7	94	--
31...	1228	40.0	378	8.4	6.5	--	11.7	94	--
31...	1230	50.0	378	8.4	6.5	--	11.7	94	--
31...	1232	60.0	378	8.4	6.5	--	11.8	95	--
31...	1234	74.0	378	8.4	6.5	--	11.8	95	110
AUG									
22...	1200	1.00	410	9.2	31.5	.44	9.6	129	130
22...	1202	10.0	415	8.8	29.5	--	5.3	69	--
22...	1204	20.0	420	8.3	28.5	--	1.4	18	--
22...	1206	30.0	420	8.1	28.5	--	.4	5	--
22...	1208	40.0	425	7.8	28.0	--	.0	0	--
22...	1210	50.0	430	7.1	25.0	--	.0	0	--
22...	1212	60.0	430	7.0	24.5	--	.0	0	--
22...	1214	73.0	460	6.9	23.5	--	.0	0	140

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
31...	20	39	4.0	30	1	4.8	94	42	32
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	22	39	3.8	29	1	4.8	91	45	32
AUG									
22...	31	45	4.4	34	1	5.6	100	48	36
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	0	50	4.6	32	1	6.0	170	31	34

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN									
31...	.30	8.9	220	.30	.60	.90	.050	20	<10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	.30	.50	.80	.080	50	<10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	7.7	220	.30	.60	.90	.070	5	<1
AUG									
22...	.40	6.5	240	<.10	.50	--	.240	9	<1
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	<.10	.50	--	.290	20	40
22...	--	--	--	<.10	.80	--	.420	40	550
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	14	280	<.10	5.0	--	1.70	150	2400

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

303821095005001 LIVINGSTON RESERVOIR SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
31...	1300	1.00	378	8.6	8.0	.90	12.1	101
31...	1302	10.0	378	8.6	7.0	--	12.1	98
31...	1304	20.0	378	8.5	7.0	--	11.9	97
31...	1306	30.0	378	8.5	7.0	--	11.7	95
31...	1308	43.0	378	8.4	6.5	--	11.8	95
AUG								
22...	1238	1.00	410	9.2	31.5	.41	9.4	126
22...	1240	10.0	415	8.9	29.5	--	6.7	87
22...	1242	20.0	420	8.5	29.0	--	2.3	30
22...	1244	30.0	425	8.0	28.5	--	.1	1
22...	1246	40.0	425	7.8	28.0	--	.0	0
22...	1248	52.0	435	7.1	26.0	--	.0	0

303935095055401 LIVINGSTON RESERVOIR SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
31...	1138	1.00	378	8.5	7.0	1.13	11.8	96
31...	1140	10.0	378	8.5	6.5	--	11.8	95
31...	1142	20.0	378	8.4	6.5	--	11.7	94
31...	1144	30.0	378	8.4	6.5	--	11.6	93
31...	1146	40.0	378	8.4	6.5	--	11.6	93
31...	1148	50.0	378	8.4	6.5	--	11.6	93
31...	1150	60.0	378	8.4	6.5	--	11.8	95
AUG								
22...	1130	1.00	415	8.7	30.0	.59	6.1	80
22...	1132	10.0	420	8.4	29.0	--	3.4	44
22...	1134	20.0	420	8.3	29.0	--	2.6	33
22...	1136	30.0	420	8.2	28.5	--	1.3	17
22...	1138	40.0	430	7.7	28.0	--	.0	0
22...	1140	50.0	430	7.3	27.0	--	.0	0
22...	1142	59.0	440	7.0	25.5	--	.0	0

304144095073001 LIVINGSTON RESERVOIR SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
31...	1106	1.00	378	8.4	7.0	1.04	11.6	94
31...	1108	10.0	378	8.4	7.0	--	11.6	94
31...	1110	20.0	378	8.4	6.5	--	11.6	93
31...	1112	30.0	378	8.4	6.5	--	11.5	92
31...	1114	40.0	378	8.4	6.5	--	11.3	91
31...	1116	57.0	378	8.2	6.5	--	11.1	89
AUG								
22...	1100	1.00	425	8.6	30.0	.56	4.4	58
22...	1102	10.0	430	8.2	29.0	--	3.3	42
22...	1104	20.0	430	8.2	29.0	--	3.1	40
22...	1106	30.0	430	8.1	29.0	--	2.7	35
22...	1108	40.0	430	8.1	28.5	--	1.5	19
22...	1110	55.0	445	6.9	25.5	--	.0	0

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304521095075501 LIVINGSTON RESERVOIR SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
31...	1010	1.00	395	8.4	7.5	.66	11.6	95	110
31...	1012	10.0	395	8.4	7.0	--	11.6	94	--
31...	1014	20.0	395	8.4	7.0	--	11.6	94	--
31...	1016	30.0	395	8.4	7.0	--	11.5	93	--
31...	1018	40.0	390	8.4	7.0	--	11.4	93	--
31...	1020	57.0	378	8.3	6.5	--	11.4	91	110
AUG									
22...	1004	1.00	425	8.8	30.0	.52	6.6	86	130
22...	1006	10.0	430	8.6	29.5	--	4.8	62	--
22...	1008	20.0	460	8.2	29.5	--	2.3	30	--
22...	1010	30.0	465	8.1	29.5	--	1.8	23	--
22...	1012	40.0	465	8.1	29.5	--	1.8	23	--
22...	1014	50.0	465	8.1	29.5	--	1.8	23	--
22...	1016	64.0	470	8.0	29.0	--	1.3	17	130

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
31...	22	36	4.0	33	1	5.3	85	47	37
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	22	38	3.9	31	1	5.0	89	43	35
AUG									
22...	21	45	4.4	35	1	5.7	110	49	37
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	14	46	4.7	41	2	6.2	120	50	45

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
31...	8.5	220	.90	.80	1.7	.180	9	<1
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	--	--	.80	.70	1.5	.160	30	<10
31...	--	--	--	--	--	--	--	--
31...	8.1	220	.50	.70	1.2	.120	22	8
AUG								
22...	7.1	250	<.10	.70	--	.340	5	3
22...	--	--	--	--	--	--	--	--
22...	--	--	<.10	1.2	--	.460	10	20
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	8.4	270	<.10	1.4	--	.500	4	75

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304453095064901 LIVINGSTON RESERVOIR SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
31...	0945	1.00	390	8.4	6.5	.79	11.9	95
31...	0947	10.0	390	8.4	6.5	--	11.9	95
31...	0949	21.0	390	8.4	6.5	--	12.0	96
AUG								
22...	0944	1.00	425	8.7	29.5	.46	5.2	67
22...	0946	10.0	425	8.6	29.5	--	4.8	62
22...	0948	19.0	425	8.6	29.5	--	4.6	60

304659095052001 LIVINGSTON RESERVOIR SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
31...	0924	1.00	378	8.4	7.0	.63	12.1
31...	0926	10.0	378	8.5	7.0	--	12.1
31...	0928	20.0	378	8.5	7.0	--	12.0
31...	0930	26.0	378	8.5	7.0	--	11.9
AUG							
22...	0920	1.00	420	8.8	30.0	.53	6.1
22...	0922	10.0	425	8.7	29.5	--	4.0
22...	0924	20.0	425	8.4	29.5	--	3.1
22...	0926	29.0	425	8.3	29.0	--	3.4

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN							
31...	98	.30	.60	.90	.080	30	<10
31...	98	--	--	--	--	--	--
31...	97	--	--	--	--	--	--
31...	97	.30	.60	.90	.090	30	10
AUG							
22...	80	<.10	.90	--	.350	<10	<10
22...	52	--	--	--	--	--	--
22...	40	--	--	--	--	--	--
22...	44	<.10	1.0	--	.390	10	50

304843095104001 LIVINGSTON RESERVOIR SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
31...	1350	1.00	430	8.3	8.5	.43	11.1	94
31...	1352	10.0	430	8.1	7.0	--	11.1	90
31...	1354	20.0	430	8.1	7.0	--	11.1	90
31...	1356	30.0	430	8.1	7.0	--	11.0	90
31...	1358	40.0	430	8.1	7.0	--	11.0	90
31...	1400	50.0	430	8.0	6.5	--	11.0	88
31...	1402	62.0	430	8.0	6.5	--	11.0	88
AUG								
22...	1352	1.00	460	8.8	31.5	.48	7.6	102
22...	1354	10.0	475	8.3	30.0	--	3.7	48
22...	1356	20.0	485	8.2	30.0	--	2.4	31
22...	1358	30.0	495	8.0	29.5	--	1.5	19
22...	1400	40.0	510	7.8	29.5	--	.0	0
22...	1402	50.0	510	7.8	29.5	--	.0	0
22...	1404	65.0	510	7.7	29.5	--	.0	0

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305411095144901 LIVINGSTON RESERVOIR SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
31...	1440	1.00	580	8.4	8.5	.58	11.5	97	140
31...	1442	10.0	580	8.2	7.5	--	10.9	90	--
31...	1444	20.0	585	8.1	7.0	--	10.7	87	--
31...	1446	30.0	585	8.1	7.0	--	10.4	85	--
31...	1448	40.0	600	8.0	7.0	--	9.7	79	--
31...	1450	50.0	605	7.9	7.0	--	9.6	78	140
AUG									
22...	1448	1.00	530	8.9	32.5	.45	9.5	130	150
22...	1450	10.0	545	8.4	30.5	--	4.2	56	--
22...	1452	20.0	550	8.2	30.0	--	3.1	41	--
22...	1454	30.0	560	8.1	30.0	--	2.2	29	--
22...	1456	40.0	600	8.1	29.5	--	1.0	13	--
22...	1458	46.0	600	8.1	29.5	--	.6	8	150

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
31...	38	44	6.3	55	2	7.0	98	73	63
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	45	47	6.7	58	2	7.2	100	78	65
AUG									
22...	26	50	5.1	53	2	7.1	120	58	54
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	17	50	5.4	64	2	8.0	130	64	63

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
31...	10	320	2.8	3.0	5.8	1.30	24	2
31...	--	--	--	--	--	--	--	--
31...	--	--	2.8	2.6	5.4	1.00	40	<10
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	11	330	2.9	3.1	6.0	1.50	25	8
AUG								
22...	8.4	310	<.10	1.3	--	.480	6	3
22...	--	--	--	--	--	--	--	--
22...	--	--	<.10	.90	--	.490	30	<10
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	9.1	340	.10	1.5	1.6	.560	6	32

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305447095161401 LIVINGSTON RESERVOIR SITE HC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
31...	1515	1.00	480	8.3	9.0	.40	11.1
31...	1517	10.0	480	7.8	7.5	--	10.1
31...	1519	20.0	480	7.8	7.5	--	9.8
31...	1521	30.0	575	7.9	7.5	--	9.5
31...	1523	42.0	600	7.9	7.5	--	10.0
AUG							
22...	1520	1.00	550	8.9	32.5	.34	9.7
22...	1522	10.0	530	8.0	30.0	--	2.5
22...	1524	20.0	520	7.8	29.5	--	1.9
22...	1526	30.0	520	7.7	29.5	--	1.4
22...	1528	42.0	520	7.6	30.0	--	1.0

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN							
31...	95	1.8	1.8	3.6	.700	170	20
31...	83	--	--	--	--	--	--
31...	81	--	--	--	--	--	--
31...	78	--	--	--	--	--	--
31...	83	2.7	2.9	5.6	1.60	110	10
AUG							
22...	133	<.10	.70	--	.500	<10	20
22...	33	--	--	--	--	--	--
22...	25	--	--	--	--	--	--
22...	18	--	--	--	--	--	--
22...	13	<.10	.90	--	.480	10	180

305135095193601 LIVINGSTON RESERVOIR SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
01...	0850	1.00	595	8.2	8.0	.32	11.4	95
01...	0852	10.0	595	7.8	8.0	--	9.7	81
01...	0854	20.0	600	7.8	7.5	--	9.0	74
01...	0856	30.0	610	7.6	7.0	--	9.0	73
01...	0858	39.0	610	7.6	7.0	--	9.7	79
AUG								
23...	0840	1.00	635	8.5	30.0	.40	4.9	64
23...	0842	10.0	635	7.7	30.0	--	.7	9
23...	0844	20.0	600	7.7	29.0	--	.8	10
23...	0846	30.0	605	7.7	28.5	--	.0	0
23...	0848	44.0	605	7.6	28.5	--	.0	0

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305135095235401 LIVINGSTON RESERVOIR SITE JC

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
01...	0920	1.00	560	8.2	8.0	.34	11.5	96	140
01...	0922	10.0	615	7.8	7.5	--	9.9	82	--
01...	0924	20.0	615	7.7	7.0	--	9.7	79	--
01...	0926	30.0	615	7.7	7.0	--	9.7	79	--
01...	0928	40.0	615	7.7	7.0	--	10.3	84	150
AUG									
23...	0914	1.00	690	8.4	30.5	.56	5.4	71	150
23...	0916	10.0	690	8.0	30.0	--	2.8	37	--
23...	0918	20.0	680	7.6	29.5	--	.2	3	--
23...	0920	30.0	640	7.4	29.0	--	.0	0	--
23...	0922	40.0	640	7.3	29.0	--	.0	0	150

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
01...	52	46	6.6	53	2	6.6	90	81	65
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	74	47	8.2	57	2	6.8	77	110	71
AUG									
23...	18	50	5.5	84	3	9.5	130	80	81
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	7	50	5.4	74	3	8.7	140	67	71

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
01...	14	330	1.7	2.2	3.9	.730	18	45
01...	--	--	--	--	--	--	--	--
01...	--	--	1.6	2.0	3.6	.530	80	130
01...	--	--	--	--	--	--	--	--
01...	14	360	1.5	1.8	3.3	.560	20	110
AUG								
23...	5.5	390	1.9	1.5	3.4	1.10	7	6
23...	--	--	2.2	.90	3.1	1.00	20	<10
23...	--	--	1.8	1.1	2.9	1.00	10	80
23...	--	--	--	--	--	--	--	--
23...	9.7	370	.60	1.6	2.2	1.20	14	460

08066191 LIVINGSTON RESERVOIR AT OUTFLOW WEIR NEAR GOODRICH, TX

LOCATION.--Lat 30°37'55", long 95°01'11", San Jacinto County, Hydrologic Unit 12030202, at end of conduit into stilling basin, 1,700 ft to right of right spillway abutment, 4.8 mi northwest of Goodrich, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi².

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

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Trinity River Authority). Oct. 1, 1974, to Jan. 30, 1976, staff gage and control only.

REMARKS.--Records good. For details concerning outlet works, see Livingston Reservoir (station 08066190). The purpose of this station is to record selective withdrawal releases at outflow weir, crest 61.90 ft. These releases do not

AVERAGE DISCHARGE.--15 years, 215 ft³/s (155,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,990 ft³/s Jan 7, 1982; maximum elevation, about 93.0 ft June 14, 1973 (backwater from Trinity River); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 355 ft³/s May 24; maximum elevation, 65.86 ft Mar. 2 at 1500 to 1800 hours (backwater from Trinity River); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	346	252	310	98	114	120	0	332	346	341	341	298
2	346	252	328	98	114	130	0	337	341	341	341	289
3	350	303	260	98	114	141	0	337	341	346	337	289
4	346	328	0	99	117	151	0	337	346	346	341	277
5	350	324	0	99	114	54	0	341	337	350	341	289
6	341	324	0	102	114	0	150	341	310	350	341	265
7	341	328	0	99	114	0	328	346	319	350	341	241
8	341	328	0	99	114	0	298	341	328	350	341	241
9	341	324	0	99	114	0	289	341	337	350	341	241
10	341	324	0	105	117	0	298	341	337	350	337	253
11	341	319	0	105	117	0	298	346	337	350	341	264
12	346	310	0	105	141	0	298	350	114	350	341	168
13	346	310	0	105	172	0	298	350	0	350	337	152
14	346	310	0	105	183	0	310	350	0	350	337	141
15	346	310	58	105	172	0	310	350	0	350	337	141
16	346	310	99	105	172	0	319	341	0	350	337	152
17	350	310	99	105	172	0	319	337	0	350	337	162
18	350	310	99	108	172	0	310	337	0	350	337	162
19	350	310	96	102	172	0	310	332	112	350	337	162
20	253	310	96	99	151	0	319	332	319	350	337	162
21	277	310	96	102	141	0	319	337	337	350	310	162
22	277	310	96	102	130	0	319	350	337	350	277	162
23	264	332	96	108	130	0	310	350	337	350	277	162
24	264	337	96	114	130	0	319	355	332	350	277	162
25	264	324	96	114	120	0	328	328	328	346	268	162
26	264	324	96	114	130	0	332	310	328	346	277	162
27	264	324	96	114	130	0	332	328	337	346	310	162
28	289	310	96	114	120	0	332	328	337	341	341	172
29	264	310	97	117	120	0	337	328	341	341	346	183
30	252	310	97	111	---	0	332	337	337	346	310	183
31	252	---	97	114	---	0	---	350	---	341	298	---
TOTAL	9748	9387	2504	3264	3921	596	7714	10520	7575	10781	10071	6021
MEAN	314	313	80.8	105	135	19.2	257	339	253	348	325	201
MAX	350	337	328	117	183	151	337	355	346	350	346	298
MIN	252	252	.00	98	114	.00	.00	310	.00	341	268	141
AC-FT	19340	18620	4970	6470	7780	1180	15300	20870	15030	21380	19980	11940

CAL YR 1983 TOTAL 109251.00 MEAN 299 MAX 793 MIN .00 AC-FT 216700
WTR YR 1984 TOTAL 82102.00 MEAN 224 MAX 355 MIN .00 AC-FT 162800

08066200 LONG KING CREEK AT LIVINGSTON, TX

LOCATION.--Lat 30°42'58", long 94°57'31", Polk County, Hydrologic Unit 12030202, on right bank at downstream side of bridge on U.S. Highway 190, 2 mi west of Livingston, 2 mi upstream from Choates Creek, and 14.8 mi upstream from mouth.

DRAINAGE AREA.--141 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 100.12 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 92.9 ft^3/s (8.95 in/yr), 67,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft^3/s Nov. 5, 1973 (gage height, 27.06 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, about 41 ft in May 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 12	1200	3,300	11.64
Mar. 5	0600	*3,620	12.20

Minimum discharge, 0.60 ft^3/s Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	4.4	110	16	20	61	26	7.8	14	19	3.8	1.8
2	5.4	4.6	61	16	19	58	36	7.8	12	19	3.5	3.8
3	4.9	4.5	770	16	19	52	54	7.3	11	16	3.2	2.9
4	4.8	4.6	714	16	22	52	39	6.2	10	14	3.2	3.2
5	4.4	5.8	140	15	19	2320	28	5.3	40	11	4.1	2.6
6	3.9	11	65	15	15	716	25	4.5	400	9.8	7.3	2.0
7	3.1	16	38	14	14	234	24	4.1	200	8.4	7.8	1.3
8	2.8	14	26	13	14	129	39	12	70	7.3	5.8	1.4
9	2.8	10	21	355	14	93	34	16	40	6.7	84	1.3
10	2.8	7.8	432	569	16	76	26	9.1	25	7.3	28	1.1
11	2.8	6.6	467	174	18	67	25	7.0	20	7.3	12	1.1
12	8.9	6.2	109	79	1820	322	23	6.0	25	7.3	9.1	1.0
13	7.4	6.2	55	49	864	1050	21	5.0	20	7.3	6.2	.89
14	5.9	6.2	38	36	214	308	18	4.5	17	6.7	18	.89
15	4.8	6.6	29	36	123	173	16	4.2	15	8.4	18	2.4
16	4.0	6.0	26	39	177	128	14	4.0	13	7.3	10	1.3
17	4.6	5.8	139	36	122	127	14	4.0	12	5.8	6.2	.78
18	6.6	5.8	66	34	82	100	15	30	11	6.2	4.5	.69
19	6.6	11	37	32	65	131	14	400	10	10	3.8	.69
20	6.6	25	27	24	98	151	14	250	30	4.9	2.9	.60
21	6.6	18	123	19	142	80	13	1200	20	3.8	2.6	2.0
22	6.3	107	288	18	88	60	12	600	15	3.5	2.4	4.9
23	4.9	398	92	171	62	54	11	200	13	3.2	2.2	1.8
24	4.9	145	51	546	51	54	9.7	100	12	2.9	2.0	1.6
25	5.2	44	28	183	43	48	9.6	70	11	3.8	2.0	1.4
26	4.5	22	24	90	234	42	9.1	50	10	25	1.8	1.4
27	4.0	24	24	54	473	41	9.1	40	9.8	26	1.6	1.4
28	4.0	37	26	39	144	39	9.1	30	21	56	1.4	1.3
29	4.0	23	24	32	79	32	9.1	25	24	16	1.3	1.3
30	4.0	27	18	28	---	28	8.4	20	20	8.4	1.4	1.3
31	4.4	---	15	23	---	26	---	17	---	5.3	1.8	---
TOTAL	152.5	1013.1	4083	2787	5071	6852	605.1	3146.8	1150.8	343.6	261.9	50.14
MEAN	4.92	33.8	132	89.9	175	221	20.2	102	38.4	11.1	8.45	1.67
MAX	8.9	398	770	569	1820	2320	54	1200	400	56	84	4.9
MIN	2.8	4.4	15	13	14	26	8.4	4.0	9.8	2.9	1.3	.60
CFSM	.04	.24	.94	.64	1.24	1.57	.14	.72	.27	.08	.06	.01
IN.	.04	.27	1.08	.74	1.34	1.81	.16	.83	.30	.09	.07	.01
AC-FT	302	2010	8100	5530	10060	13590	1200	6240	2280	682	519	99

CAL YR 1983 TOTAL 50066.20 MEAN 137 MAX 7400 MIN 2.8 CFSM .97 IN 13.21 AC-FT 99310
WTR YR 1984 TOTAL 25516.94 MEAN 69.7 MAX 2320 MIN .60 CFSM .49 IN 6.73 AC-FT 50610

NOTE.--No gage-height record May 11 to June 25.

08066250 TRINITY RIVER NEAR GOODRICH, TX

LOCATION.--Lat 30°34'19", long 94°56'55", Polk-San Jacinto County line, Hydrologic Unit 12030202, on left bank 40 ft downstream from downstream bridge on U.S. Highway 59, 0.2 mi downstream from Long King Creek, 3.0 mi southeast of Goodrich, and at mile 117.3.

DRAINAGE AREA.--16,844 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 40.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period June through September, which are poor. Regulated since Sept. 29, 1968, by Livingston Reservoir (station 08066190), capacity 2,046,000 acre-ft, 11.9 mi upstream. No diversions between Livingston Reservoir and gaging station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1967-84), 6,853 ft^3/s (4,965,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96,200 ft^3/s June 14, 1973 (gage height, 46.36 ft); minimum daily, 191 ft^3/s Aug. 6, 1971 (regulation by Livingston Reservoir).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1929, 52.0 ft in May 1942, from information by State Department of Highways and Public Transportation and by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,100 ft^3/s Mar 20 at 1500 hours (gage height, 21.55 ft); minimum daily, 663 ft^3/s Sept. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	973	728	1830	920	2560	1650	8800	1890	1920	1700	1150	920
2	968	753	1830	910	1930	3330	9440	1890	1900	1700	1150	880
3	964	1220	5000	899	1860	4510	10700	1870	1900	1700	1150	900
4	962	1450	10000	894	1830	4580	10700	1860	1880	1800	1150	880
5	928	2140	12000	894	1780	10300	10100	1860	1880	1950	1150	870
6	842	2240	11500	899	1200	13500	6760	1860	1950	1960	1150	860
7	836	2260	11000	904	1080	12500	3790	1860	3500	1950	1150	850
8	832	2260	9000	904	1070	12200	3050	1870	2500	1950	1150	840
9	826	2250	8500	3140	1260	12000	2700	1860	1800	1950	1140	830
10	821	1960	8210	5510	1260	11400	2620	1890	1700	1950	1200	820
11	821	1390	8720	5150	1140	10000	2950	1900	1650	1880	1250	810
12	821	1220	7160	4700	6020	8760	2630	1900	1650	1700	1250	750
13	821	1160	4360	4530	9890	9760	2090	1900	1600	1550	1250	700
14	821	1140	2420	4470	8630	9160	2040	1890	1550	1550	1200	670
15	821	1110	1600	3940	8180	9480	2020	1880	1550	1550	1170	665
16	821	1080	1140	2970	8130	9750	1910	1880	1550	1550	1140	665
17	821	862	1150	1740	7980	11000	1930	1900	1550	1550	1140	663
18	818	820	1140	1050	7850	12100	1960	1930	1550	1550	1120	663
19	816	824	1080	973	7100	13100	1950	3300	1550	1550	1100	663
20	796	836	1070	961	5020	15000	1960	4140	1500	1550	1080	663
21	787	830	1140	940	3490	14900	1950	4450	1500	1550	1060	701
22	789	875	1380	937	1920	12800	1920	12700	1500	1550	1040	701
23	785	1980	1240	1260	1250	10400	1910	6350	1500	1500	1020	682
24	788	2920	1120	3190	1160	9080	1910	4850	1500	1450	1010	678
25	787	2540	1070	3600	1120	8880	1910	3760	1500	1450	1000	678
26	783	1890	1060	3440	1270	8860	1910	2360	1500	1450	990	678
27	785	1830	1040	3330	1900	8860	1910	2030	1500	1600	980	678
28	785	1820	1040	3270	1450	8890	1900	1980	1480	1600	970	678
29	785	1810	997	3240	1190	8820	1910	1950	1700	1600	997	678
30	785	1820	969	3140	---	8800	1890	1940	1700	1500	1010	673
31	751	---	926	2430	---	8790	---	1920	---	1200	960	---
TOTAL	25739	46018	120692	75135	100520	303160	109220	85620	52010	51040	34277	22387
MEAN	830	1534	3893	2424	3466	9779	3641	2762	1734	1646	1106	746
MAX	973	2920	12000	5510	9890	15000	10700	12700	3500	1960	1250	920
MIN	751	728	926	894	1070	1650	1890	1860	1480	1200	960	663
AC-FT	51050	91280	239400	149000	199400	601300	216600	169800	103200	101200	67990	44400

CAL YR 1983 TOTAL 2076066 MEAN 5688 MAX 43300 MIN 728 AC-FT 4118000
WTR YR 1984 TOTAL 1025818 MEAN 2803 MAX 15000 MIN 663 AC-FT 2035000

08066300 MENARD CREEK NEAR RYE, TX

LOCATION.--Lat 30°28'52", long 94°46'46", Liberty County, Hydrologic Unit 12030202, on left bank 20 ft downstream from bridge on State Highway 146, 2.3 mi northwest of Rye, and about 6 mi upstream from mouth.

DRAINAGE AREA.--152 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.32 ft National Geodetic Vertical Datum of 1929. September 1974 to August 1976, wire-weight gage read twice daily.

REMARKS.--Water-discharge records good. No known diversions above station. Regulation by Bear Foot Lake on Mill Creek located 0.5 mi upstream.

AVERAGE DISCHARGE.--18 years (water years 1967-84), 118 ft^3/s (85,490 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,660 ft^3/s May 8, 1969 (gage height, 30.33 ft), from rating curve extended above 5,600 ft^3/s; minimum daily, 2.6 ft^3/s Nov. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1929 reached a stage of about 39.4 ft, from information by the State State Department of Highways and Public Transportation. Flood in September 1961 reached a stage of about 34.0 ft, from information by local resident. Flood of May 1929 may have been equaled or exceeded by other floods during the period 1929-65.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,270 ft^3/s May 23 at 0730 hours (gage height, 24.96 ft); minimum daily, 10 ft^3/s Sept. 13, 16-18

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	40	103	87	117	280	84	39	79	54	23	19
2	69	39	93	86	126	225	83	38	61	45	20	18
3	64	39	411	86	121	190	90	38	55	44	18	19
4	58	40	412	86	113	168	100	38	57	40	18	19
5	57	52	464	85	115	345	97	36	60	33	20	17
6	56	75	649	84	109	394	88	35	80	24	20	13
7	53	52	375	83	98	508	80	37	72	22	20	13
8	51	65	172	82	97	752	87	45	108	22	19	12
9	49	66	151	196	130	420	111	44	159	22	18	16
10	48	58	168	312	173	236	119	42	108	22	18	18
11	46	50	226	318	254	196	107	31	70	22	20	18
12	46	44	223	426	804	181	110	29	76	21	55	13
13	45	41	259	331	985	183	101	28	56	22	85	10
14	46	41	262	186	2250	239	78	27	54	22	56	21
15	46	41	151	159	1260	336	68	29	51	20	87	20
16	55	40	166	154	645	302	61	35	53	20	52	10
17	48	41	164	150	397	219	56	36	56	22	28	10
18	38	41	155	145	426	190	54	45	37	21	21	10
19	41	143	166	118	354	187	56	83	40	20	18	11
20	43	105	144	104	271	179	64	166	44	19	16	19
21	65	98	185	99	321	173	59	317	39	19	15	29
22	48	122	156	96	341	163	50	1150	35	21	15	16
23	48	131	135	188	395	169	40	3420	32	20	26	12
24	46	159	151	376	284	150	38	1720	30	32	30	14
25	45	222	124	366	199	121	37	873	30	25	11	26
26	43	282	105	439	289	102	54	392	30	16	11	29
27	41	171	97	345	468	97	53	200	29	54	11	21
28	40	132	96	198	323	100	38	137	43	48	11	16
29	35	122	100	145	367	103	39	114	33	47	11	21
30	33	129	100	139	---	94	39	107	48	42	22	14
31	37	---	93	126	---	89	---	92	---	31	35	---
TOTAL	1514	2681	6256	5795	11832	7091	2141	9423	1725	892	830	504
MEAN	48.8	89.4	202	187	408	229	71.4	304	57.5	28.8	26.8	16.8
MAX	74	282	649	439	2250	752	119	3420	159	54	87	29
MIN	33	39	93	82	97	89	37	27	29	16	11	10
AC-FT	3000	5320	12410	11490	23470	14060	4250	18690	3420	1770	1650	1000

CAL YR 1983 TOTAL 75582 MEAN 207 MAX 6270 MIN 30 AC-FT 149900
WTR YR 1984 TOTAL 50684 MEAN 138 MAX 3420 MIN 10 AC-FT 100500

08066300 MENARD CREEK NEAR RYE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: April 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 03...	1405	39	103	20.0	19	8	5.4	1.3	12
DEC 13...	1205	251	69	15.0	17	10	4.6	1.3	6.9
JAN 24...	1140	350	88	8.0	16	9	4.6	1.2	10
MAR 07...	0840	436	61	13.0	14	6	3.5	1.3	5.7
APR 16...	1545	60	89	18.5	19	8	5.2	1.4	9.9
JUN 05...	1115	61	77	21.5	17	6	4.8	1.3	8.5
AUG 28...	1515	11	79	--	19	6	5.5	1.2	8.6

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 03...	1	1.0	11	6.4	23	<.10	14	70
DEC 13...	.8	1.3	7	11	12	<.10	12	53
JAN 24...	1	1.1	7	6.5	18	<.10	10	56
MAR 07...	.7	1.4	8	4.0	12	<.10	8.6	41
APR 16...	1	.90	11	11	17	<.10	11	63
JUN 05...	.9	.90	11	9.8	14	<.10	14	60
AUG 28...	.9	1.2	13	6.6	14	<.10	13	58

08066400 BIG CREEK NEAR SHEPHERD, TX

LOCATION.--Lat 30°30'59", long 94°59'06", San Jacinto County, Hydrologic Unit 12030202, on left bank at downstream side of downstream bridge on U.S. Highway 59, 1.5 mi northeast of Shepherd, and 11.6 mi upstream from mouth.

DRAINAGE AREA.--38.8 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 94.90 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No known regulation above station.

AVERAGE DISCHARGE.--18 years, 27.1 ft^3/s (9.48 in/yr), 19,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft^3/s June 13, 1973 (gage height, 25.69 ft); minimum daily, 1.0 ft^3/s Aug. 7, 1967.
Maximum stage since at least 1949, that of June 13, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1957 reached a stage of 20.3 ft (discharge about 5,500 ft^3/s), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 12	1900	462	11.85
May 22	0600	*988	14.22

Minimum discharge, 5.6 ft^3/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	11	20	22	22	38	24	15	19	20	7.0	9.4
2	14	14	19	22	22	38	26	15	18	17	6.8	7.8
3	14	14	92	21	26	37	34	15	18	21	6.8	9.0
4	14	18	84	21	24	36	25	15	17	15	6.7	9.0
5	13	25	37	20	21	114	22	15	19	13	9.1	7.8
6	13	39	29	20	20	74	22	15	51	12	9.8	7.1
7	12	37	24	19	19	48	22	15	71	12	13	6.7
8	12	21	22	18	19	41	61	20	30	11	9.0	6.8
9	12	18	22	168	37	38	33	16	24	11	7.5	6.8
10	12	18	32	126	47	35	25	15	20	10	7.1	6.6
11	12	17	146	53	31	35	26	15	18	10	7.5	6.4
12	12	16	47	43	309	40	24	15	20	9.7	33	6.3
13	12	16	35	35	196	60	22	15	19	9.6	43	6.2
14	12	16	30	32	77	44	21	15	17	9.4	13	6.2
15	11	16	26	35	61	39	19	15	15	9.2	11	6.2
16	12	15	35	33	84	41	18	15	14	8.9	8.9	6.3
17	14	14	46	30	60	44	18	15	13	8.9	7.9	6.1
18	14	15	32	30	51	38	17	19	12	8.7	7.2	5.9
19	13	17	27	27	45	55	17	51	12	8.5	6.7	5.7
20	12	26	25	25	67	51	17	98	16	8.5	6.3	5.8
21	11	19	36	24	83	36	17	141	14	8.2	6.4	8.7
22	11	21	51	24	54	33	17	631	13	8.0	6.2	22
23	11	95	32	67	46	32	16	101	12	7.8	6.0	11
24	11	38	27	88	41	45	16	58	12	7.8	5.9	9.2
25	11	23	25	48	37	36	16	43	11	8.2	6.2	14
26	10	20	25	37	71	32	16	36	10	12	6.1	9.1
27	10	22	26	32	95	31	16	31	9.9	22	6.3	8.2
28	10	23	26	29	50	28	16	28	28	18	6.2	8.2
29	10	18	23	27	41	25	16	24	69	9.4	6.1	8.2
30	10	17	21	25	---	24	16	22	22	8.1	6.2	7.9
31	10	---	21	23	---	24	---	20	---	7.4	11	---
TOTAL	369	679	1143	1224	1756	1292	655	1564	643.9	350.3	299.9	244.6
MEAN	11.9	22.6	36.9	39.5	60.6	41.7	21.8	50.5	21.5	11.3	9.67	8.15
MAX	14	95	146	168	309	114	61	631	71	22	43	22
MIN	10	11	19	18	19	24	16	15	9.9	7.4	5.9	5.7
CFSM	.31	.58	.95	1.02	1.56	1.08	.56	1.30	.55	.29	.25	.21
IN.	.35	.65	1.10	1.17	1.68	1.24	.63	1.50	.62	.34	.29	.23
AC-FT	732	1350	2270	2430	3480	2560	1300	3100	1280	695	595	485

CAL YR 1983 TOTAL 16000.0 MEAN 43.8 MAX 1640 MIN 7.0 CFSM 1.13 IN 15.34 AC-FT 31740
WTR YR 1984 TOTAL 10220.7 MEAN 27.9 MAX 631 MIN 5.7 CFSM .72 IN 9.80 AC-FT 20270

08066400 BIG CREEK NEAR SHEPHERD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1963 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 02...	1145	13	69	19.5	15	4	3.8	1.3	7.5
DEC 12...	1200	46	59	14.0	14	8	3.4	1.3	5.8
JAN 23...	1130	49	72	7.5	16	7	4.0	1.4	7.4
MAR 05...	1310	146	56	15.0	15	7	4.0	1.1	6.6
APR 17...	1230	18	69	15.0	15	4	3.7	1.4	7.3
JUN 04...	1425	18	68	21.0	14	4	3.6	1.3	7.2
JUL 18...	1445	8.7	70	26.0	15	3	3.7	1.4	7.6
AUG 29...	1100	6.1	67	--	15	4	3.7	1.3	7.3

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 02...	.9	1.0	11	5.4	12	<.10	16	54
DEC 12...	.7	1.1	6	6.0	11	<.10	12	44
JAN 23...	.8	1.1	9	9.2	11	<.10	13	52
MAR 05...	.8	1.0	8	8.0	9.7	<.10	7.5	43
APR 17...	.8	.80	11	8.2	12	<.10	15	55
JUN 04...	.9	.90	10	5.7	12	<.10	17	54
JUL 18...	.9	.90	12	6.1	11	.10	16	54
AUG 29...	.9	1.1	11	6.1	11	<.10	16	53

08066500 TRINITY RIVER AT ROMAYOR, TX
(National stream-quality accounting network)

LOCATION.--Lat 30°25'30", long 94°51'02", Liberty County, Hydrologic Unit 12030202, near right bank on downstream side of bridge on State Highway 787 (revised), 1.9 mi south of Romayor, 1.9 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.7 mi downstream from Big Creek, and at mile 94.3.

DRAINAGE AREA.--17,186 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1392: 1932, 1935. WSP 1922: Drainage area. WKD TX-81-1: 1980(M, m).

GAGE.--Water-stage recorder. Datum of gage is 35.92 ft National Geodetic Vertical Datum of 1929. Prior to September 1943, nonrecording gage at datum 53.57 ft higher at railroad bridge 1.9 mi upstream. Sept. 15, 1975, to June 16, 1977, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except those for August and September, which are poor. Since Sept. 28, 1968, flow is regulated by Livingston Reservoir (station 08066190), capacity 1,788,000 acre-ft, 35 mi upstream. No large diversions between Livingston Reservoir and this station.

AVERAGE DISCHARGE.--44 years (water years 1925-68) unregulated, 7,155 ft³/s (5,184,000 acre-ft/yr); 16 years (water years 1969-84), flow regulated by Livingston Reservoir, 7,159 ft³/s (5,187,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s May 9, 1942 (gage height, 35.8 ft, from floodmarks), present site and datum; minimum, 102 ft³/s Aug. 24, 25, 1956.
Maximum stage since at least 1908, that of May 9, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,100 ft³/s May 22 at 1400 hours (gage height, 13.49 ft); maximum gage height, 13.53 ft, Mar. 21 at 1300 hours; minimum daily discharge, 686 ft³/s Sept. 18, 19, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	861	2090	1070	2710	1950	9920	2180	2240	1910	1360	985
2	1100	854	2120	1080	2440	3150	10100	2180	2200	1920	1330	971
3	1100	1110	3660	1040	2160	4860	11700	2180	2180	1900	1310	1010
4	1120	1460	11100	993	2080	5170	12000	2150	2160	2060	1310	985
5	1100	1980	13100	1040	2060	8670	11800	2150	2160	2150	1310	963
6	1020	2360	12800	1050	1730	15700	9400	2150	2300	2190	1310	949
7	978	2400	12400	1040	1330	15000	5500	2150	4240	2190	1330	927
8	971	2390	10500	978	1280	14600	3830	2150	3580	2180	1340	913
9	965	2370	9770	1750	1360	14200	3480	2150	2660	2160	1370	913
10	958	2300	7920	5370	1700	13600	3050	2130	2420	2160	1450	913
11	949	1670	8310	5900	1580	11900	3320	2150	2270	2160	1490	913
12	949	1400	7970	5540	4850	10500	3360	2150	2200	1870	1500	885
13	942	1320	6110	5310	12500	10700	2690	2150	1930	1750	1900	783
14	936	1290	3640	5010	12400	10700	2490	2150	1840	1740	1590	724
15	935	1280	2370	4910	11200	10700	2430	2140	1820	1740	1400	711
16	935	1250	1650	4520	10100	10900	2390	2140	1780	1740	1320	698
17	957	1150	1540	2650	9480	11700	2180	2140	1760	1730	1290	692
18	948	1020	1510	1650	9200	13400	2240	2160	1760	1730	1250	686
19	942	1080	1450	1290	8790	14000	2260	2890	1760	1730	1230	686
20	941	1230	1370	1210	6760	16500	2260	5150	1730	1730	1210	698
21	944	1120	1400	1180	5070	16900	2260	4300	1730	1730	1200	783
22	951	1120	1570	1160	3470	15600	2260	14800	1730	1730	1180	796
23	936	1760	1560	1270	2340	12700	2230	12500	1730	1700	1160	743
24	935	3140	1420	3070	1970	10700	2200	8810	1730	1680	1140	711
25	935	3180	1300	4210	1730	10200	2190	6120	1730	1670	1100	698
26	928	2560	1270	4200	1760	10000	2190	3870	1730	1660	1090	698
27	921	2300	1200	4050	2640	10000	2210	2860	1730	1740	1080	692
28	920	2150	1220	3780	2590	10000	2210	2590	1750	1860	1100	686
29	923	2100	1180	3620	2080	10000	2210	2440	2080	1800	1090	686
30	925	2090	1070	3540	---	9920	2200	2350	1970	1780	1120	686
31	920	---	963	3030	---	9890	---	2290	---	1560	1150	---
TOTAL	30094	52295	135533	86511	129360	343810	128560	109720	62900	57650	40010	24184
MEAN	971	1743	4372	2791	4461	11090	4285	3539	2097	1860	1291	806
MAX	1120	3180	13100	5900	12500	16900	12000	14800	4240	2190	1900	1010
MIN	920	854	963	978	1280	1950	2180	2130	1730	1560	1080	686
AC-FT	59690	103700	268800	171600	256600	681900	255000	217600	124800	114300	79360	47970

CAL YR 1983 TOTAL 2279842 MEAN 6246 MAX 51300 MIN 854 AC-FT 4522000
WTR YR 1984 TOTAL 1200627 MEAN 3280 MAX 16900 MIN 686 AC-FT 2381000

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1945 to November 1949, February 1950 to September 1951, April 1953 to current year. Chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: February 1968 to September 1981, August to September 1983. Sediment records: October 1974 to September 1975.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1945 to November 1949, February 1950 to current year.
WATER TEMPERATURES: February 1950 to September 1951, October 1953 to current year.
SUSPENDED SEDIMENT DISCHARGE: April 1968 to September 1971.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1945-50, 1953-84): Maximum daily, 3,800 micromhos Oct. 30, 1956; minimum daily, 103 micromhos Nov. 9, 1946.
WATER TEMPERATURES (1953-58, 1961-74, 1976-84): Maximum daily, 37.0°C July 18, 27, 1953; minimum daily, 3.0°C Jan. 18, 1956, Jan. 15, 16, 1968, Jan. 2, 3, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 432 micromhos Sept. 20; minimum daily, 163 micromhos May 22.
WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 4, 21; minimum daily, 4.0°C Dec. 25, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT											
05...	1112	1100	332	8.4	25.0	5	1.5	8.4	101	3.4	88
FEB											
01...	1355	2790	360	8.1	9.0	5	7.3	13.9	119	2.2	K12
21...	1250	5070	328	7.7	11.0	--	24	11.2	101	1.1	K550
MAR											
28...	1045	9980	400	8.1	15.5	30	7.3	9.6	97	2.5	K6
MAY											
14...	1320	2140	401	8.6	25.0	30	4.9	12.2	146	4.3	K8
JUN											
25...	1320	1740	399	8.5	28.0	35	6.8	10.2	130	3.3	K14
AUG											
06...	1500	1320	401	8.4	29.0	30	3.1	9.4	122	4.6	40

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
05...	230	110	17	38	3.7	24	1	3.9	94	32	27
FEB											
01...	60	110	23	36	3.7	27	1	4.5	82	36	32
21...	550	97	17	33	3.5	26	1	4.2	80	34	30
MAR											
28...	20	110	23	39	4.1	32	1	4.9	91	48	36
MAY											
14...	92	130	35	44	4.3	33	1	5.4	93	50	37
JUN											
25...	30	130	33	44	4.3	32	1	5.0	95	45	35
AUG											
06...	22	130	32	45	4.3	34	1	4.8	99	41	40

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, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT											
05...	.30	7.8	190	190	23	3	--	<.020	<.10	<.10	<.010
FEB											
01...	.30	8.1	--	200	4	<2	--	<.010	.20	--	.010
21...	.30	8.8	192	190	--	--	--	<.010	.20	.18	<.010
MAR											
28...	.40	7.1	246	230	35	29	--	<.010	.40	.37	<.010
MAY											
14...	.30	6.1	243	240	21	6	.26	.040	.30	.18	.040
JUN											
25...	.40	7.3	232	230	17	9	--	<.010	<.10	<.10	.040
AUG											
06...	.30	8.2	235	240	13	5	--	<.010	<.10	<.10	.010

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
05...	<.010	--	1.2	.100	.050	.060	6.5	8	24	89
FEB										
01...	--	4.1	4.1	.060	--	--	6.0	--	--	--
21...	.040	--	.50	.090	.050	.060	7.7	24	329	98
MAR										
28...	.040	--	.80	.130	.100	.100	6.5	32	862	54
MAY										
14...	.030	1.3	1.3	.130	.070	.030	8.6	16	92	82
JUN										
25...	.060	.86	.90	.190	.120	.090	7.3	10	47	87
AUG										
06...	.020	1.2	1.2	.270	.180	.140	8.8	8	29	81

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
OCT										
05...	1112	3	59	<.5	<1	<1	<3	1	18	1
FEB										
01...	1355	1	58	--	<1	<10	--	1	33	<1
21...	1250	1	58	<.5	1	<1	<3	4	96	3
MAY										
14...	1320	<1	62	1.0	<1	<1	<3	2	9	<1
AUG										
06...	1500	5	60	<.0	<1	<1	<3	<1	8	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
OCT										
05...	28	6	<.1	<10	4	<1	<1	270	<6	5
FEB										
01...	--	6	<.1	--	--	<1	<1	--	--	6
21...	11	5	<.1	<10	2	<1	<1	240	<6	9
MAY										
14...	17	1	<.1	<10	<1	<1	<1	300	<6	43
AUG										
06...	54	2	<.1	<10	<1	<1	<1	310	<6	14

DATE	TIME	AMETRYNE TOTAL	ATRAZINE, TOTAL (UG/L)	CYANAZINE TOTAL (UG/L)	METHOMYL TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)	PROPAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)
FEB												
01...	1355	<.10	.10	<.10	<2.0	.1	<.1	<.10	<2.0	<2.0	<.10	<.1
AUG												
06...	1500	<.10	.10	<.10	<2.0	.1	<.1	<.10	<2.0	<2.0	<.10	<.1

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1983 TO SEPTEMBER 1984

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED SOLIDS (MG/L)	DISSOLVED SOLIDS (TONS)	DISSOLVED CHLORIDE (MG/L)	DISSOLVED CHLORIDE (TONS)	DISSOLVED SULFATE (MG/L)	DISSOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1983	30094	344	193	15700	27	2220	33	2650	110
NOV.	1983	52295	341	192	27000	27	3820	32	4560	110
DEC.	1983	135533	342	192	70300	27	9930	32	11900	110
JAN.	1984	86511	337	190	44300	27	6210	32	7460	110
FEB.	1984	129360	319	180	62900	25	8620	30	10500	100
MAR.	1984	343810	382	212	197000	32	29400	36	33700	120
APR.	1984	128560	403	223	77300	34	11900	38	13300	120
MAY	1984	109720	310	174	51600	24	7230	29	8690	99
JUNE	1984	62900	379	211	35800	31	5340	36	6120	120
JULY	1984	57650	401	222	34500	34	5300	38	5950	120
AUG.	1984	40010	404	223	24100	34	3720	39	4160	120
SEPT	1984	24184	422	232	15200	37	2400	40	2630	120
TOTAL		1200627	**	**	655000	**	96100	**	112000	**
WTD.AVG.		3280	363	202	**	30	**	34	**	110

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	356	348	353	362	290	406	407	391	375	405	412
2	332	355	347	355	363	347	405	405	400	377	407	416
3	335	357	299	354	353	376	405	408	395	366	409	419
4	333	359	320	353	361	379	404	409	398	396	410	418
5	335	358	338	354	362	359	408	408	395	395	407	419
6	334	350	345	356	361	332	406	410	385	399	405	421
7	335	353	350	357	356	364	403	409	321	400	403	423
8	338	352	359	356	359	368	398	407	264	403	407	424
9	339	353	363	342	355	376	392	406	364	405	408	423
10	340	354	362	296	342	383	391	408	348	404	403	422
11	339	356	318	313	299	384	391	407	385	402	402	421
12	340	358	347	329	260	383	392	410	388	404	385	423
13	346	360	348	360	274	378	393	409	390	405	384	425
14	348	358	337	355	284	356	396	410	393	404	361	427
15	349	357	338	337	301	372	399	411	391	404	379	422
16	349	358	342	360	329	377	401	410	398	405	392	429
17	348	359	329	353	343	386	400	409	393	406	402	430
18	349	360	331	342	350	382	405	406	399	406	410	430
19	347	346	324	336	355	386	402	392	398	407	412	429
20	346	329	330	343	352	387	401	205	400	405	413	430
21	345	347	335	349	334	394	402	281	403	408	414	415
22	346	341	338	351	320	401	403	163	401	407	415	410
23	348	318	330	344	303	397	406	211	404	408	414	420
24	347	300	338	307	295	394	409	235	402	407	415	423
25	348	276	346	298	322	393	408	299	395	405	418	419
26	350	332	335	320	318	397	406	315	393	404	419	420
27	351	329	353	324	293	398	400	340	400	411	418	425
28	354	340	352	345	251	399	403	359	403	407	417	426
29	356	347	353	356	275	401	405	376	392	411	418	430
30	353	349	354	359	---	403	406	379	369	401	410	432
31	355	---	354	361	---	404	---	384	---	408	400	---
MEAN	344	346	341	343	325	379	402	364	385	401	405	423

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

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

08067000 TRINITY RIVER AT LIBERTY, TX

LOCATION.--Lat 30°03'27", long 94°49'05", Liberty County, Hydrologic Unit 12030203, near center of channel at upstream side of upstream bridge on U.S. Highway 90 in Liberty, 345 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 40.3.

DRAINAGE AREA.--17,468 mi^2.

PERIOD OF RECORD.--October 1938 to September 1940 (gage heights, discharge measurements, and some records of daily discharge), October 1940 to current year (high-water records only). Gage-height records collected in this vicinity since 1903 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.22 ft below National Geodetic Vertical Datum of 1929; unadjusted for land-surface subsidence. Prior to Mar. 13, 1973, nonrecording gage at site 105 ft downstream at same datum.

REMARKS.--Records poor. Discharge below 10,000 ft^3/s not published. Published discharges are estimated using records for Trinity River near Romayor (station 08066500), intervening area computation, and discharge measurements. Flow is regulated by Livingston Reservoir (station 08066190) 88.9 mi upstream. Many diversions above station for municipal supplies, industrial uses, and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 114,000 ft^3/s May 12, 1942 (gage height, 29.38 ft); minimum not determined (affected by tides); minimum gage height observed, 2.32 ft Nov. 24, 1970.
Maximum stage since at least 1903, that of May 12, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8-11, 1922, reached a stage of 28.6 ft, present datum, from observation by the National Weather Service at nonrecording gage on railroad bridge upstream.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 16,100 ft^3/s Mar. 21; maximum gage height, 19.74 ft Mar. 21 at 1900 hours; minimum discharge not determined (affected by tides); minimum gage height not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---		---	---	10000	---				
2			---		---	---	10400	---				
3			---		---	---	11300	---				
4			---		---	---	11600	---				
5			10700		---	---	11400	---				
6			12200		---	13100	10200	---				
7			12200		---	14200	---	---				
8			11800		---	14000	---	---				
9			10700		---	13600	---	---				
10			10100		---	13300	---	---				
11			---		---	12200	---	---				
12			---		---	11300	---	---				
13			---		---	11300	---	---				
14			---		11300	11400	---	---				
15			---		11700	11200	---	---				
16			---		11000	11300	---	---				
17			---		10300	11700	---	---				
18			---		---	12800	---	---				
19			---		---	13500	---	---				
20			---		---	15200	---	---				
21			---		---	16100	---	---				
22			---		---	15100	---	---				
23			---		---	13400	---	10000				
24			---		---	12300	---	15000				
25			---		---	11400	---	12000				
26			---		---	11000	---	---				
27			---		---	10700	---	---				
28			---		---	10400	---	---				
29			---		---	10200	---	---				
30			---		---	10100	---	---				
31			---		---	10000	---	---				
TOTAL			---		---	---	---	---				
MEAN			---		---	---	---	---				
MAX			---		---	---	---	---				
MIN			---		---	---	---	---				
AC-FT			---		---	---	---	---				

CAL YR 1983: TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1984: TOTAL - MEAN - MAX - MIN - AC-FT -

NOTE.--No gage-height record Apr. 30 to May 29 and June 11 to July 12.

08067070 CIWA CANAL NEAR DAYTON, TX

LOCATION.--Lat 29°57'40", long 94°48'36", Liberty County, Hydrologic Unit 12030203, at flume on left bank of Coastal Industrial Water Authority canal, 1,000 ft west of the Trinity River, 2 mi east of Farm Road 1409, and 7.4 mi southeast of Dayton.

PERIOD OF RECORD.--April 1981 to current year.

GAGE.--Water-stage recorder. National Geodetic Vertical Datum of gage not determind.

REMARKS.--Records good. No diversion between pump plant and gage. Water is pumped from Trinity River for industrial use in the Baytown area.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 424 ft^3/s June 21, 1981; minimum daily, 52 ft^3/s Aug. 18, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 396 ft^3/s June 5, 19, 20; minimum daily, 189 ft^3/s Dec. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	256	243	227	307	246	221	256	293	373	377	325	303
2	256	234	215	256	250	227	243	276	373	373	279	296
3	256	234	200	240	237	237	250	293	373	350	290	219
4	223	246	212	243	262	234	259	321	381	339	283	209
5	259	250	209	246	266	237	269	347	396	343	283	216
6	266	243	197	243	266	243	279	358	373	339	266	290
7	262	230	191	209	266	227	286	365	344	314	272	283
8	246	194	215	230	262	246	296	358	279	321	269	276
9	253	212	206	218	272	250	293	331	266	319	253	283
10	259	221	189	240	237	253	307	350	266	321	266	283
11	262	218	221	237	221	253	290	347	272	332	266	296
12	256	230	218	246	215	253	283	365	307	325	269	296
13	253	224	221	269	227	256	272	358	300	332	276	300
14	234	243	239	276	237	243	300	343	314	343	269	300
15	243	269	237	276	256	243	300	369	321	336	269	293
16	230	259	243	256	246	253	339	343	321	354	272	300
17	240	262	240	234	237	221	332	328	336	369	269	300
18	253	272	243	230	237	191	343	328	381	365	276	280
19	266	269	230	212	230	209	365	310	396	358	279	266
20	251	272	221	243	243	230	358	266	396	328	270	250
21	259	259	227	246	243	240	354	240	380	332	283	209
22	250	240	240	286	243	262	350	266	373	336	296	246
23	243	237	227	279	230	240	365	262	369	330	290	237
24	250	234	240	246	237	221	365	290	365	332	290	266
25	253	224	237	262	234	224	350	307	377	339	290	269
26	256	230	240	240	224	230	326	303	373	328	290	279
27	256	221	256	240	221	224	300	310	381	325	286	279
28	253	234	272	221	227	230	283	321	381	310	307	262
29	253	253	290	243	221	250	286	332	392	303	300	259
30	262	237	328	240	---	256	279	339	381	303	300	259
31	250	---	332	240	---	259	---	365	---	307	300	---
TOTAL	7809	7194	7263	7654	6993	7363	9178	9984	10540	10383	8733	8104
MEAN	252	240	234	247	241	238	306	322	351	335	282	270
MAX	266	272	332	307	272	262	365	369	396	377	325	303
MIN	223	194	189	209	215	191	243	240	266	303	253	209
AC-FT	15490	14270	14410	15180	13870	14600	18200	19800	20910	20590	17320	16070

CAL YR 1983 TOTAL 94660 MEAN 259 MAX 369 MIN 52 AC-FT 187800
WTR YR 1984 TOTAL 101198 MEAN 276 MAX 396 MIN 189 AC-FT 200700

08067500 CEDAR BAYOU NEAR CROSBY, TX

LOCATION.--Lat 29°58'21", long 94°59'08", Liberty County, Hydrologic Unit 12040203, on left bank at downstream side of bridge on U.S. Highway 90 and 6.6 mi northeast of Crosby.

DRAINAGE AREA.--64.9 mi^2.

PERIOD OF RECORD.--March to August 1946, March 1963 to February 1964, May to August 1971 (discharge measurements only), October 1971 to current year.
Water-quality records.--Chemical, biochemical, and pesticide analyses: May 1971 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 31.31 ft National Geodetic Vertical Datum of 1929. Telemeter located at station.

REMARKS.--Records fair. Low flow is sustained by drainage from irrigated lands. Diversion for irrigation upstream from station. A recording rain gage is operated at this station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1972-84), 80.9 ft^3/s (58,610 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,760 ft^3/s June 5, 1981 (gage height, 23.92 ft); maximum gage height, 24.91 ft June 13, 1973; no flow Mar. 8, 15-18, 1979, and June 14-16, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft^3/s Dec. 11 at 0300 hours (gage height, 16.31 ft); no other peak above base of 1,200 ft^3/s; no flow June 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	1.8	167.0	7.2	15.0	17.0	5.9	9.60	2.70	.62	4.8	5.3
2	6.1	1.8	58.0	7.3	13.0	15.0	16.0	.35	1.90	4.50	2.5	22.0
3	5.6	1.7	503.0	6.5	15.0	13.0	100.0	.09	1.50	.45	17.0	53.0
4	5.2	1.9	577.0	6.4	14.0	12.0	31.0	6.50	.71	.97	15.0	30.0
5	4.6	1.9	185.0	7.6	12.0	26.0	11.0	.15	2.00	1.00	4.4	18.0
6	4.3	2.7	90.0	6.8	9.1	31.0	4.1	.05	115.00	.30	5.6	13.0
7	3.8	6.2	46.0	6.3	8.1	17.0	2.6	.61	387.00	.38	13.0	8.9
8	3.4	6.1	33.0	5.6	7.1	13.0	6.4	31.00	51.00	.18	13.0	7.5
9	3.2	4.3	26.0	261.0	14.0	5.5	3.6	18.00	16.00	2.80	5.4	6.7
10	3.1	3.3	231.0	367.0	24.0	6.2	2.9	3.20	4.20	4.40	4.9	5.9
11	2.8	2.8	928.0	129.0	19.0	5.6	2.8	4.50	1.40	1.50	22.0	5.6
12	2.7	2.4	311.0	68.0	34.0	11.0	2.9	1.10	.10	1.30	44.0	4.5
13	2.5	2.1	137.0	51.0	38.0	24.0	2.3	.36	.06	2.10	42.0	4.6
14	2.2	1.8	73.0	37.0	21.0	14.0	2.4	.38	.00	1.40	35.0	8.8
15	1.8	1.8	46.0	34.0	16.0	6.2	5.1	.07	.00	1.10	26.0	8.1
16	1.8	1.3	42.0	31.0	16.0	4.7	3.8	.02	.00	.12	18.0	6.0
17	2.2	1.1	58.0	23.0	13.0	3.8	6.6	.02	.53	.62	18.0	4.4
18	162.0	1.1	41.0	19.0	12.0	3.5	4.4	.02	.19	11.00	34.0	3.7
19	111.0	1.4	28.0	18.0	11.0	7.7	5.8	4.50	9.70	6.50	31.0	3.6
20	60.0	7.7	21.0	14.0	258.0	7.3	6.4	89.00	1.10	4.70	28.0	3.1
21	35.0	4.5	39.0	12.0	395.0	11.0	6.7	46.00	1.10	7.50	40.0	3.0
22	32.0	3.1	56.0	10.0	128.0	4.6	13.0	68.00	.85	8.10	30.0	2.7
23	18.0	3.9	32.0	287.0	67.0	3.8	9.5	17.00	.05	3.90	32.0	2.2
24	9.7	3.9	21.0	455.0	48.0	123.0	6.7	9.60	.48	.70	18.0	1.6
25	6.4	3.4	12.0	201.0	26.0	50.0	19.0	2.10	.60	1.50	26.0	1.5
26	4.9	2.4	9.3	98.0	64.0	26.0	13.0	.94	.86	3.90	39.0	2.1
27	3.4	3.6	9.2	62.0	98.0	18.0	14.0	1.70	.45	1.30	45.0	2.6
28	2.6	3.6	10.0	55.0	49.0	11.0	7.3	1.50	.67	18.00	28.0	2.9
29	2.2	3.4	10.0	34.0	29.0	7.1	11.0	1.40	.46	25.00	15.0	4.3
30	2.0	52.0	8.7	23.0	---	6.0	4.2	.27	.07	19.00	9.0	6.6
31	1.8	---	7.6	19.0	---	5.2	---	.44	---	9.30	6.9	---
TOTAL	512.8	139.0	3815.8	2361.7	1473.3	509.2	330.4	318.47	600.68	144.14	672.5	252.2
MEAN	16.5	4.63	123	76.2	50.8	16.4	11.0	10.3	20.0	4.65	21.7	8.41
MAX	162	52	928	455	395	123	100	89	387	25	45	53
MIN	1.8	1.1	7.6	5.6	7.1	3.5	2.3	.02	.00	.12	2.5	1.5
AC-FT	1020	276	7570	4680	2920	1010	655	632	1190	286	1330	500
(††)	0.67	3.30	4.50	2.68	2.89	1.39	0.54	2.96	1.61	2.93	2.71	2.37

CAL YR 1983 TOTAL 39939.74 MEAN 109 MAX 2870 MIN .24 AC-FT 79220 †† 52.32
WTR YR 1984 TOTAL 11130.19 MEAN 30.4 MAX 928 MIN .00 AC-FT 22080 †† 28.55

†† Rainfall, in inches.

Because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

Low-flow partial-record stations

Measurements of streamflow at low-flow partial-record stations that are not published in the gaging-station section are given in the following table. Most of the measurements of low flow were made during periods when streamflow was sustained primarily by groundwater discharge. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will indicate the low-flow potential of the stream. The years listed in the column headed "Period of record" identifies the water years in which measurements were made at the same or at practically the same site.

Discharge measurements made at low-flow partial-record station during water year 1984

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
Arkansas River basin						
07227700	Chicken Creek near Amarillo, Tex.	Lat 35°28'29", long 101°45'35", Potter County, about 1.5 mi northeast of LX Ranch headquarters and about 18 mi northeast of Amarillo.	(a)	1953-84	2- 7-84 8-16-84	1.39 .63
Red River basin						
07299750	Wanderers Creek at Odell, Tex.	Lat 34°20'50", long 99°25'15", Wilbarger County, at county road bridge and 0.25 mi northwest of Odell Post Office.	199	1949-50, 1952-84	2- 6-84 6-13-84	3.23 1.66
07299890	Lelia Lake Creek below Bell Creek near Hedley, Tex.	Lat 34°56'08", long 100°41'46", Donley County, 150 ft downstream from county road crossing, 1.0 mi downstream from mouth of Bell Creek, and about 5 mi north of Hedley.	74	1964-84	2- 6-84 9- 7-84	3.57 1.26
07303300	Elm Creek near Shamrock, Tex.	Lat 35°07'21", long 100°17'07", Collingsworth County, at county road bridge, 1,500 ft downstream from Fort Worth and Denver (Burlington) Railway Company bridge, and about 6 mi southwest of Shamrock.	(a)	1947-84	2- 3-84 9- 5-84	1.82 .93
07307700	Roaring Springs near Roaring Springs, Tex.	Lat 33°51'12", long 100°51'53", Motley County, 3.5 mi south of Roaring Springs.	(a)	1937, 1943-84	1- 9-84	1.34
Neches River basin						
08041550	Village Creek at State Highway 327 near Silsbee, Tex.	Lat 30°20'48", long 94°14'20", Hardin County, at bridge on State Highway 327, about 1.6 mi upstream from mouth of Mill Creek, and 2.7 mi west of Silsbee.	-	1979-84	9-19-84	74
08041720	Pine Island Bayou at State Highway 105 near Sour Lake, Tex.	Lat 30°08'08", long 94°16'44", Hardin-Jefferson County line, at bridge on State Highway 105, about 2.0 mi upstream from mouth of Little Pine Island Bayou, and 7.9 mi east of Sour Lake.	-	1979-84	1- 6-84 9-20-84	74 .74

a Not applicable.

Crest-stage partial-record stations

The following table contains annual maximum stage and (or) discharge at partial-record stations operated primarily for the purpose of defining the flooding characteristics of the streams. At stations where discharge is given, or is footnoted "to be determined", a stage-discharge relation has been, or will be, defined by discharge measurements obtained by current meter or by indirect procedures. Water-stage recorders are located at these flood-hydrograph stations to facilitate complete hydrograph definition. At stations where only the maximum stage is given (discharge column is dashed), data are generally collected for use in stage-frequency studies of flood-profile definition. Gages at these stations usually consist of a device that will register the peak stage occurring between inspections of the gage. The years used in the column "Period of record" identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 1984

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Elevation (feet)	Discharge (ft^3/s)
		Red River basin					
07299570	Red River near Quanah, Tex.	Lat 34°24'47", long 99°44'03", Hardeman County, on right bank at downstream side of bridge on State Highway 6, 8 mi north of Quanah, 30 mi upstream from Salt Fork Red River, and at mile 1,030.	8,321	1959-82†, 1984	10-20-83	11.31	22,100
07308200	Pease River near Vernon, Tex.	Lat 34°10'44", long 99°16'40", Wilbarger County, near left bank on downstream side of bridge on U.S. Highway 283, 1.9 mi north of Vernon, and 10 mi upstream from mouth.	3,488	1959-82†, 1983-84	10-21-83	20.15	40,500
		Trinity River basin					
08051130	Elm Fork Trinity River near Pilot Point, Tex.	Lat 33°20'56", long 97°01'59", Denton County, attached to trees on right bank, 0.8 mi downstream from Isle du Bois Creek, 1.2 mi upstream from abandoned county road bridge, 2.5 mi upstream from Bray Branch, and 5.3 mi southwest of Pilot Point (discontinued).	-	1981-84	-	(a)	-
08051160	Elm Fork Trinity River at abandoned county bridge above Aubrey, Tex.	Lat 33°19'58", long 97°01'49", Denton County, on downstream side of right concrete pier of abandoned county bridge, 1.3 mi upstream from Bray Branch, 2.0 mi downstream from Isle du Boise Creek, and 3.2 mi northwest of Aubrey (discontinued).	-	1981-84	-	(b)	-
08051190	Elm Fork Trinity River above Aubrey, Tex.	Lat 33°19'12", long 97°01'34", Denton County, attached to trees on left bank, 0.1 mi downstream from Bray Branch, 1.4 mi downstream from abandoned county road bridge, 1.6 mi upstream from bridge on Farm Road 428, and 2.6 mi northwest of Aubrey.	-	1981-84	3-12-84	539.62	-
08057120	McKamey Creek at Preston Road, Dallas, Tex. (formerly Spanky Branch at McCallum Lane, Dallas)	Lat 32°57'58", long 96°48'11", Dallas County, 0.2 mi upstream from bridge on Preston Road and 0.5 mi upstream from mouth (reactivated April 1984).	6.77	1962-79, 1984	5- 1-84	[c]559.66	1,520
08057418	Fivemile Creek at Kiest Boulevard, Dallas, Tex.	Lat 32°42'19", long 96°51'32", Dallas County, at bridge on Kiest Boulevard, Dallas, and 10.9 mi upstream from mouth (reactivated April 1984).	8.08	1974-79, 1984	6- 6-84	[c]515.58	1,540
08057440	Whites Branch at Interstate Highway 635, Dallas, Tex.	Lat 32°39'26", long 96°44'25", Dallas County, 200 ft downstream from bridge on Interstate Highway 635 in southeast Dallas and 0.2 mi upstream from mouth (reactivated April 1984).	2.53	1974-79, 1984	-	(d)	-

† Operated as a continuous-record station.
a No peak above index elevation of 552.91 ft.
b No peak above index elevation of 534.02 ft was recorded when gage was not vandalized, and peaks from high-water marks could not be determined.
c Peak during period April to September 1984.
d No peak above index elevation of 427.70 ft during period April to September 1984.

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table:

Discharge measurements made at miscellaneous sites during water year 1984

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
Trinity River basin						
West Fork Trinity River	Head of Trinity River	Lat 33°12'07", long 97°48'09", Wise County, at bridge on U.S. Highway 380, 1.5 mi upstream from Village Creek, 1.8 mi upstream from Ramsey Creek, 2.6 mi west of the city hall in Bridgeport, and 2.9 mi downstream from Bridgeport Dam on West Fork Trinity River.	-	-	5- 7-84 5- 9-84 5-10-84 5-11-84 5-17-84 7-26-84 7-27-84 7-30-84 7-31-84 9-27-84	77.0 235 402 451 442 86.2 237 398 434 .54
West Fork Trinity	Head of Trinity River	Lat 33°03'06", long 97°33'27", Wise County, at county road bridge, 1.6 mi upstream from Hog Branch, and 1.9 mi south of intersection of State Highway 114 and Farm Road 730 in Boyd.	-	-	4-26-84	75.7
West Fork Trinity River	Trinity River	Lat 32°52'21", long 97°27'44", Tarrant County, 0.1 mi downstream from Eagle Mountain Dam on West Fork Trinity River, 1.1 mi upstream from bridge on Tenmile Bridge Road, and 10.9 mi northwest of the Tarrant County Courthouse in Fort Worth.	-	-	7- 2-84 7- 2-84 7- 3-84 7- 3-84	90.9 224 411 545
West Fork Trinity River	Trinity River	Lat 32°51'44", long 97°28'00", Tarrant County, 1.2 mi downstream from Eagle Mountain Dam on West Fork Trinity River at Tenmile Bridge Road bridge and 10.6 mi northwest of the Tarrant County Courthouse in Fort Worth.	-	-	5-17-84	81.2
Elm Fork Trinity River	Trinity River	Lat 32°54'48", long 96°56'16", Dallas County, at bridge on Valley View Lane, 1.8 mi upstream from Farmers Branch, 2.4 mi downstream from Hutton Branch, and 2.5 mi west of intersection of Valley View Lane and Denton Driver in Farmers Branch.	-	-	3-22-84 3-23-84 4-16-84	68.9 1,700 16.0
Elm Fork Trinity River	Trinity River	Lat 32°53'40", long 96°55'40", Dallas County, at bridge on Royal Lane, 0.4 mi downstream from Farmers Branch, 2.2 mi downstream from bridge on Valley View Lane, 2.7 mi southwest of intersection of Valley View Lane and Denton Drive in Farmers Branch, and 4.6 mi downstream from Hutton Branch.	-	-	3-22-84 3-26-84	31.4 173
Trinity River	Gulf of Mexico	Lat 30°37'47", long 95°00'40", Polk County, 1,000 ft below Livingston Dam, 5.0 mi west of Goodrich.	-	-	5-21-84	1,850

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
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)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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