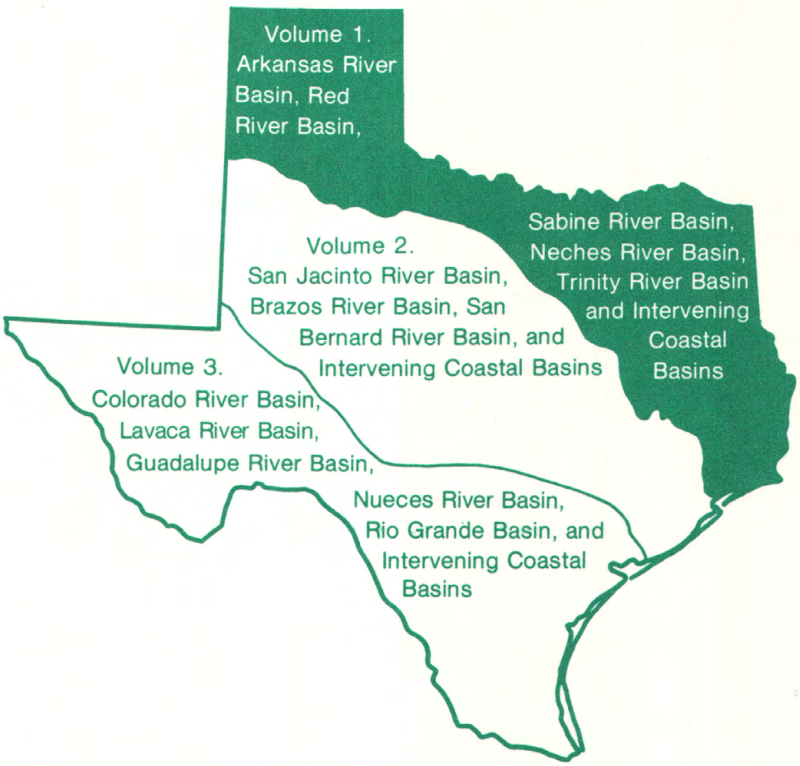
Water Resources Data Texas

Water Year 1985

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-85-1
Prepared in cooperation with the State of Texas
and with other agencies

CALENDAR FOR WATER YEAR 1985

1984

OCTOBER

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1985

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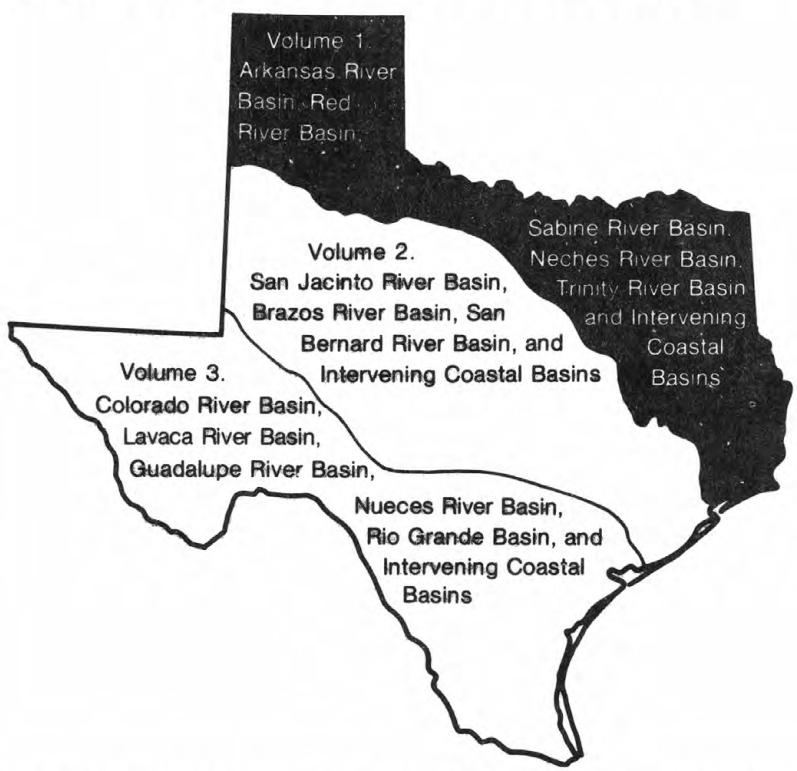
29	30					

Water Resources Data
Texas
Water Year 1985

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-85-1
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

1986

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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FOR WHICH RECORDS ARE PUBLISHED

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

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

WATER RESOURCES DATA - TEXAS, 1985

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

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with Federal, State, and City agencies, obtains a large amount of data pertaining to the water resources of Texas each water year. Such data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in three volumes of this report series entitled "Water Resources Data - Texas."

This report series includes records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs. Volume 1 contains records for water discharge at 139 gaging stations; stage only at 5 gaging station; stage and contents at 40 lakes and reservoirs; and water quality at 72 gaging stations. Also included are data for 13 partial-record stations. Additional water data were collected at 2 miscellaneous sites not involved in the systematic data-collection program. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating City, State, and Federal agencies in Texas.

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

Prior to introduction of this series and for several water years concurrent with it, water resources data for Texas were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 7 and 8." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225.

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

Additional information, including the current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (512) 482-5571.

COOPERATION

Federal agencies that assisted the Geological Survey in the collection of data in this report in the form of funds or services in 1985 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 Water Development Board or through direct joint-funding agreements with the Geological Survey are:

Texas Water Development Board, C. E. Nemir, Executive Administrator; the cities of Abilene, Alice, Arlington, Austin, Cleburne, Clyde, Corpus Christi, Dallas, El Paso, Gainesville, Garland, Georgetown, Graham, Houston, Lubbock, Nacogdoches, Runaway Bay, 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 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; Texas Parks and Wildlife, Titus County Fresh Water Supply District No. 1; Trinity River Authority; 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 precipitation, runoff, and streamflow 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.

The major weather development in Texas during the 1985 water year was the ending of a severe, year-long drought. Intense rainstorms throughout most of the State in October, followed by substantial rainfall in November and December virtually ended the drought that had persisted over most of the State for the past year. By the end of December, streamflow was normal throughout the State. Unusual weather features for the year included an uncommonly warm winter, record-breaking snowfall across South Texas in January, and the absence of tropical storms in the State during the summer of 1985. The year was moderately wet with precipitation more than normal in almost all parts of the State.

Conservation storage in 71 selected reservoirs throughout the State, with a combined conservation capacity of 31,987,890 acre-feet, increased from 66 percent at the end of September 1984, to 75 percent at the end of September 1985. Records from these 71 reservoirs indicate that contents increased in 59, decreased in 11, and remained the same in 1.

Dissolved-solids concentrations in most streams in the State are inversely related to streamflow. During years when precipitation and runoff are deficient, streamflow commonly is much more mineralized than during 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 is shown in figure 1.

Streamflow

At the beginning of the 1985 water year, streamflow was deficient throughout most of the area as a result of a prolonged drought that had persisted through most of the 1984 water year. The only exception was the lower Sabine and Neches Rivers, where normal streamflow conditions existed. As a result of intense rains throughout most of the area in October, streamflow increased to normal or above normal and these conditions continued until June when lack of moisture during April and May caused streamflow to again decrease to below normal on streams in southeast Texas. All streamflow increased to normal in July and this condition continued through the remainder of the water year, except during September when streamflow in the upper Canadian and Red Rivers decreased to below normal.

Streamflow at the hydrologic index station Neches River near Rockland was excessive (within the highest 25 percent of record) during October through November and February through March. Streamflow at this station was deficient (within the lowest 25 percent of record) during June and was normal during the remainder of the year. A comparison of streamflow for the 1985 water year with streamflow for the period of record at five selected stations (fig. 1) for which data are included in volume 1 is presented in the following table:

Station no.	and name	Discharge during 1985 water year (cubic feet per second) Max.	Min.	Avg.	Discharge during period of record (cubic feet per second) Max.	Min.	Avg.
07227500	Canadian River near Amarillo, Tex.	12,100	0.01	83.1	135,000	0 (1925,1939-85)	320
07308500	Red River near Burkburnett, Tex.	42,000	3.0	956	166,000	0	868 (1961-85)
08022040	Sabine River at Beckville, Tex.	7,880	8.1	1,981	123,000	2.4	2,195 (1961-85)
08033500	Neches River near Rockland, Tex. 1/	10,000	62	1,929	49,800	1.6	1,946 (1961-85)
08057000	Trinity River at Dallas, Tex.	12,400	244	1,701	184,000	1.2	1,522 (1904-85)

1/ Hydrologic index station.

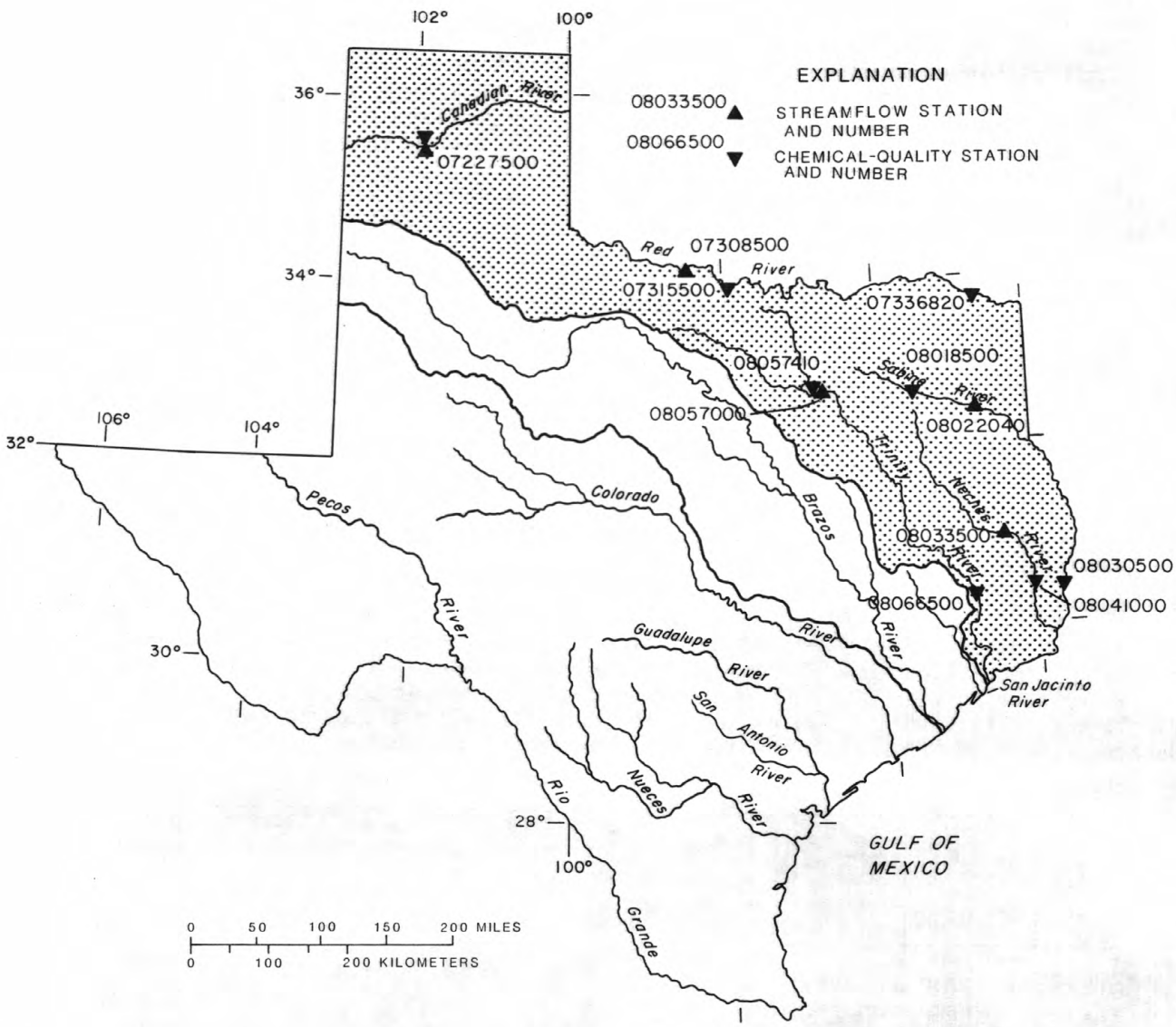

Figure 1.--Area of Texas covered by volume 1 (shaded) and location of selected streamflow and water-quality stations in volume 1.

Streamflow was variable at the other three hydrologic index stations in the State. Streamflow in the North Bosque River near Clifton was normal for the entire 1985 water year. The North Concho River near Carlsbad had excessive streamflow during December through March, deficient streamflow during May and June, and near-normal streamflow during the remainder of the year. Streamflow in the Guadalupe River near Spring Branch was excessive during January, March, April, June, and July, and near normal during the remainder of the year. Monthly mean discharges for the four hydrologic index stations in the State are plotted against the median of the long-term monthly means in figure 2.

Conservation storage in a selected group of 31 reservoirs in this area (volume 1) of the State, with a total combined conservation capacity of 19,114,840 acre-feet, increased from 78 percent at the end of September 1984, to 83 percent at the end of September 1985. Records from the 31 reservoirs indicate that contents increased in 26, decreased in 4, and remained the same in 1 during the 1985 water year.

Water Quality

Records of discharge-weighted-average concentrations of dissolved solids for the 1985 water year are compared with those for the 1981-85 water years for selected long-term daily or continuous-record stations in the Arkansas, Red, Sabine, Neches, and Trinity River basins in the following table:

Station no. and name		Mean discharge (cubic feet per second)		Discharge-weighted-average concentration of dissolved solids (milligrams per liter)	
		1985	1981-85	1985	1981-85
Arkansas River basin					
07227500	Canadian River near Amarillo, Tex.	83	183	1,110	646
Red River basin					
07315500	Red River near Terral, Okla.	3,719	2,303	1,070	1,170
07336820	Red River near DeKalb, Tex.	22,300	14,040	382	374
Sabine River basin					
08018500	Sabine River near Mineola, Tex.	939	607	125	134
08030500	Sabine River near Ruliff, Tex.	7,069	6,585	72	70
Neches River basin					
08041000	Neches River at Evadale, Tex.	5,020	4,986	91	83
Trinity River basin					
08057410	Trinity River below Dallas, Tex.	2,104	2,554	301	255
08066500	Trinity River at Romayor, Tex.	8,094	6,843	199	189

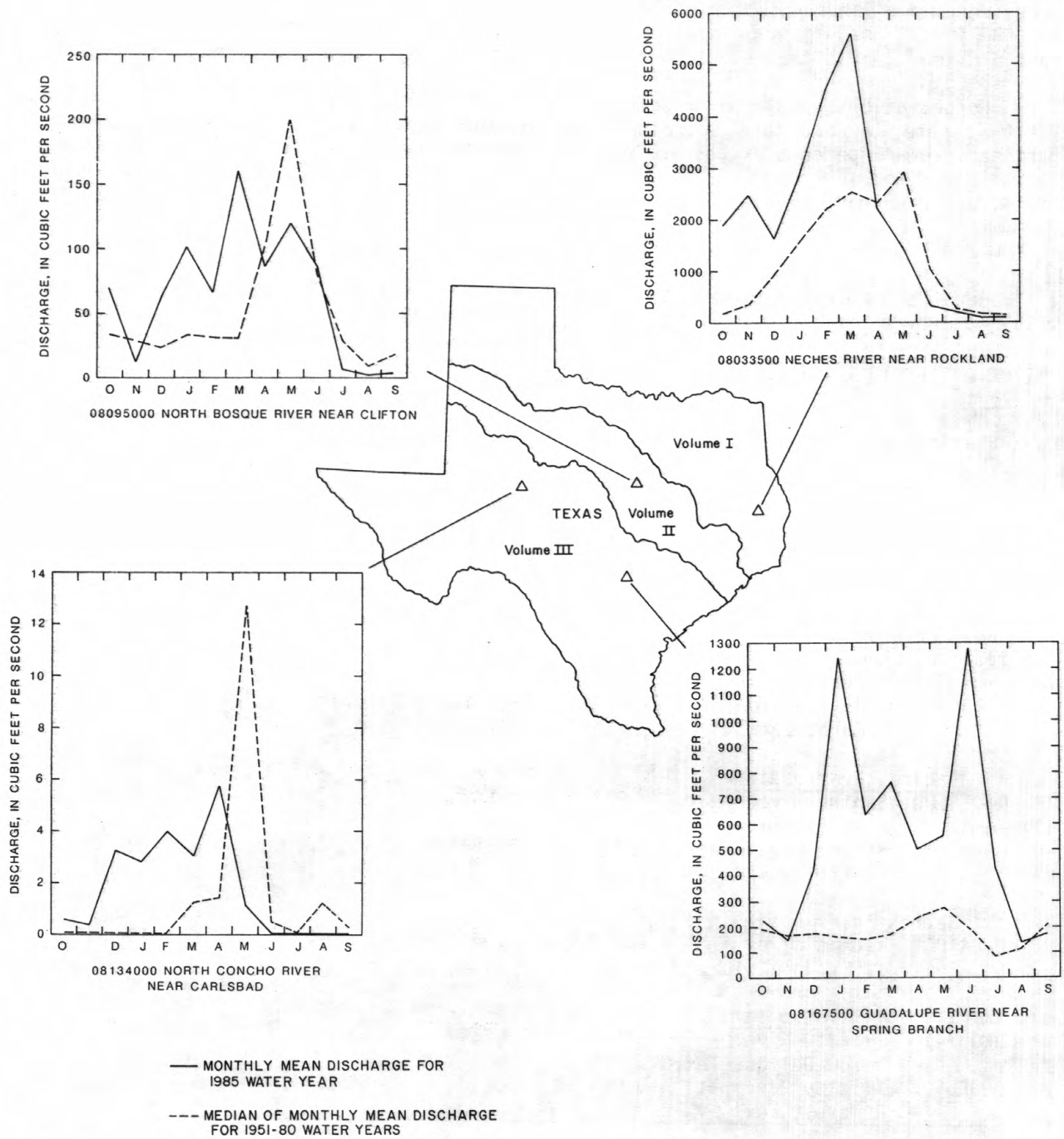

Figure 2.--Comparison of monthly mean discharge at four long-term hydrologic index gaging stations during the 1985 water year with median of the monthly mean discharge for 1951-80 water years.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

EXPLANATION OF THE RECORDS

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

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indef

Downstream Order Numbering

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 08057000, which appears just to the left of the station name, includes the two-digit Part number "08" plus the six-digit downstream-order number "057000." The Part number designates the major river basin; for example, Part "08" is the Western Gulf of Mexico basin.

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Data Collection and Computation

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

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

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

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

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the 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.

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data presentation

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

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

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

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

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

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

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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

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

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error. Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given.

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

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Texas District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

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

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications.

A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin. A careful distinction needs to be made between "continuing records" , as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory.

Procedures for on site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Texas Office of the Central Regional Office.

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

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

of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

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

Water Temperature

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

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Virginia Office of the Mid-Atlantic District.

Sediment

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

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

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI,

Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

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

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the District office (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

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

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

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

Cubic-foot-per-second day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 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 green pigments in plants.

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

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

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

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

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

Cubic feet per second per square mile [$(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

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

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

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

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

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

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

$$\bar{d} = - \sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_1}{n}$$

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate .+($CaCO_2$).

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

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

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

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

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

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

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

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

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

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

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of 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 per milliliter (cells/mL) of sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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

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

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

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

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

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily 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 are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the 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.

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature-influential factors, field 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 method,* 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-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3 Chapter A10. 1984. 59 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-A13. *Computations of continuous records of streamflow,* by E. J. Kennedy: USGS-TWRI Book 3, Chapter A13, 1983. 53 p.

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

3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 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-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 p.
5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 p.
8-A2. *Installation and service manual for U.S. Geological Survey manometers,* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 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.

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 mi², of which 1,100 mi² probably is 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 are 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 above National Geodetic Vertical Datum of 1929. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Estimated daily discharges: Oct. 4-10 and Oct. 17 to Nov. 1. Records fair. Flow is regulated by Conchas Lake, 45 mi upstream (station 07223500) and by Ute Reservoir, 2 mi upstream (station 07226800). There are diversions for the irrigation of about 90,000 acres upstream from this station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1909, 1912-13, 1927-38), 392 ft³/s, 284,000 acre-ft/yr, prior to completion of Conchas dam; 24 years (water years 1939-62) prior to completion of Ute Dam, 257 ft³/s (186,200 acre-ft/yr); 22 years (water years 1963-85 regulated, 36.4 ft³/s (26,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge, 219,000 ft³/s Sept. 22, 1941, gage height, 29.3 ft from floodmarks, from rating curve extended above 75,000 ft³/s; no flow at times prior to completion of Ute Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft³/s Sept. 30, 1904, gage height, about 36.5 ft, at site and datum used in 1909, from rating curve extended above 14,000 ft³/s, from Ninth Biennial Report of New Mexico State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 254 ft³/s Nov. 29 at 1330 hours (gage height, 3.16 ft); minimum, 1.0 ft³/s Mar. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.7	2.6	1.9	2.2	1.5	1.7	4.1	5.6	3.9	5.9	2.6
2	1.8	1.7	2.2	1.9	2.2	1.5	1.7	4.1	5.7	4.0	5.0	2.7
3	2.2	1.7	2.2	1.8	2.0	1.4	1.8	4.1	5.8	4.2	5.1	2.7
4	2.0	1.7	2.3	1.8	1.8	1.4	1.7	4.1	6.5	4.2	4.5	2.6
5	1.9	1.6	2.2	1.8	1.8	1.4	1.7	4.1	4.9	4.3	4.5	2.6
6	1.8	1.6	2.1	1.8	1.7	1.5	1.8	4.2	3.6	4.4	4.3	2.4
7	1.7	1.6	2.1	1.8	1.7	1.5	1.8	4.2	3.5	4.3	4.2	2.5
8	1.7	1.6	2.1	1.8	1.6	1.5	1.8	4.2	3.4	4.4	4.0	2.3
9	1.6	1.6	2.0	1.9	1.6	1.8	1.8	4.2	3.4	4.3	3.9	2.3
10	1.6	1.6	1.9	1.8	1.7	1.7	1.8	4.1	3.4	4.4	3.8	2.4
11	1.7	1.6	1.9	2.0	1.7	1.6	1.8	4.2	3.2	4.6	4.0	3.4
12	1.7	1.7	1.8	2.4	1.6	1.6	1.8	4.3	3.5	4.5	4.0	2.4
13	1.6	1.7	2.0	1.9	1.6	1.5	1.9	4.3	3.5	4.6	3.7	2.4
14	1.7	1.6	2.1	1.8	1.6	1.5	1.8	4.3	3.5	4.6	3.6	2.6
15	2.5	1.6	2.0	1.8	1.6	1.5	1.9	4.3	3.6	4.8	3.7	2.7
16	3.1	1.6	1.9	1.8	1.6	1.6	1.9	4.3	3.6	4.9	3.5	2.9
17	2.6	1.6	1.9	1.9	1.5	1.6	1.8	4.5	3.5	4.8	3.2	2.6
18	2.1	1.6	1.8	1.8	1.5	1.6	1.9	4.5	3.7	4.6	3.3	2.7
19	1.9	1.6	1.8	1.9	1.6	1.9	1.9	4.5	3.7	4.5	3.2	3.3
20	1.9	1.6	1.9	1.8	1.6	2.4	1.8	4.5	3.5	4.7	3.3	3.3
21	1.8	1.6	1.8	1.8	1.6	1.8	1.8	4.8	3.5	4.8	3.3	3.1
22	1.8	1.6	1.8	1.8	1.8	1.7	1.9	6.4	3.7	5.0	3.1	2.8
23	1.8	1.6	1.8	1.8	1.6	1.6	2.0	5.5	3.7	5.2	3.1	2.8
24	1.8	2.2	1.8	1.8	1.6	1.7	2.1	5.5	3.7	5.4	3.2	2.8
25	1.8	1.7	1.8	1.8	1.6	1.7	2.2	5.5	4.6	5.5	3.1	2.7
26	1.8	1.5	1.8	1.8	1.6	1.6	2.3	5.5	14	5.3	3.0	2.7
27	1.8	1.6	1.8	1.9	1.5	1.5	2.3	5.5	4.2	5.2	3.0	2.7
28	1.7	1.5	1.8	1.9	1.5	1.4	3.3	5.6	3.8	5.1	2.8	2.6
29	1.7	47	1.8	1.8	---	1.7	4.3	5.6	3.7	5.7	2.8	2.8
30	1.7	3.5	1.8	1.8	---	1.7	4.2	5.6	3.8	5.0	2.8	2.7
31	1.7	---	1.8	2.1	---	1.8	---	5.6	---	9.8	2.6	---
TOTAL	58.3	96.4	60.6	57.7	47.0	50.2	62.5	146.2	129.8	151.0	113.5	81.1
MEAN	1.88	3.21	1.95	1.86	1.68	1.62	2.08	4.72	4.33	4.87	3.66	2.70
MAX	3.1	47	2.6	2.4	2.2	2.4	4.3	6.4	14	9.8	5.9	3.4
MIN	1.6	1.5	1.8	1.8	1.5	1.4	1.7	4.1	3.2	3.9	2.6	2.3
AC-FT	116	191	120	114	93	100	124	290	257	300	225	161

CAL YR 1984 TOTAL 728.4 MEAN 1.99 MAX 47 MIN 1.2 AC-FT 1440
WTR YR 1985 TOTAL 1054.3 MEAN 2.89 MAX 47 MIN 1.4 AC-FT 2090

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 110800008, 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 mi².

WATER-DISCHARGE RECORD

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

GAGE.--Water-stage recorder. Elevation of gage is 3,665 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 16, 1981, at site 320 ft upstream at datum 0.56 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records fair. Low flows supplemented by surface and ground water return from irrigation in the vicinity of Tucumcari.

AVERAGE DISCHARGE.--26 years, 44.1 ft³/s (31,950 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/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 ft³/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 ft³/s, date unknown, gage height, 12.9 ft occurred at former site and datum, and was measured by slope-area method in May 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 22	0300	*3,020	*5.60				

Minimum discharge, 0.01 ft³/s June 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	103	3.0	4.0	2.8	2.7	5.1	139	.36	.18	70	4.0
2	60	40	2.5	3.0	3.9	2.6	4.5	91	.18	.17	2.8	3.6
3	209	21	4.3	3.3	5.8	1.7	3.6	65	.13	.21	2.1	4.6
4	335	12	3.0	5.8	6.4	.93	2.3	47	186	.14	.18	276
5	76	14	2.3	3.0	17	.83	1.5	33	569	.12	.80	40
6	51	14	4.0	2.5	27	.90	1.3	28	264	.11	3.0	27
7	31	11	3.0	2.3	27	.99	1.3	29	95	.11	1.9	19
8	18	9.0	2.5	2.3	11	1.0	1.3	28	32	.08	.42	11
9	13	7.1	2.1	3.3	14	32	1.3	28	11	.07	.15	7.2
10	14	5.7	1.7	2.5	5.5	18	1.5	25	7.9	.06	.10	9.9
11	12	5.1	1.4	2.2	4.4	6.0	1.4	21	19	.05	4.4	23
12	11	4.8	1.1	2.9	6.6	6.3	1.1	22	18	.11	6.4	86
13	9.8	4.3	1.0	3.8	4.7	7.2	.90	26	4.1	.08	18	56
14	19	4.3	1.1	11	3.2	5.1	1.2	26	1.8	.06	10	53
15	57	3.3	3.3	20	2.8	4.5	1.2	31	1.1	.04	7.6	45
16	418	3.3	36	8.9	2.6	5.7	.82	34	.78	.46	50	246
17	102	5.9	73	5.4	2.4	6.4	.52	112	.41	9.1	18	163
18	60	9.8	17	5.2	2.5	12	.84	198	.29	1.5	18	119
19	33	19	10	4.4	2.7	36	12	142	.27	1.7	1.9	199
20	21	8.0	13	3.9	2.9	793	9.1	115	.07	3.3	1.4	426
21	26	6.2	34	1.9	4.0	346	6.2	159	.03	3.3	8.6	111
22	25	5.2	10	2.8	12	167	7.3	1110	.02	3.0	9.2	51
23	22	5.2	8.0	5.6	9.6	71	9.1	399	.02	9.6	8.0	36
24	110	218	5.4	8.2	15	32	9.3	175	.01	8.7	43	23
25	166	122	4.0	5.4	8.5	19	9.3	52	232	55	41	19
26	118	76	5.4	4.1	5.2	11	11	19	47	19	27	12
27	80	28	4.0	6.0	3.8	7.2	12	7.1	2.6	12	41	9.6
28	45	11	4.0	6.2	3.1	4.5	87	5.1	1.2	9.3	22	7.2
29	30	5.8	3.3	3.9	---	3.6	190	3.2	.42	13	14	10
30	24	3.6	2.8	2.6	---	5.1	184	1.3	.24	30	10	18
31	317	---	2.5	2.2	---	5.5	---	.52	---	10	4.7	---
TOTAL	2579.8	785.6	268.7	148.6	216.4	1615.75	577.98	3171.22	1494.93	190.55	445.65	2115.1
MEAN	83.2	26.2	8.67	4.79	7.73	52.1	19.3	102	49.8	6.15	14.4	70.5
MAX	418	218	73	20	27	793	190	1110	569	55	70	426
MIN	9.8	3.3	1.0	1.9	2.4	.83	.52	.52	.01	.04	.10	3.6
AC-FT	5120	1560	533	295	429	3200	1150	6290	2970	378	884	4200

CAL YR 1984 TOTAL 15375.26 MEAN 42.0 MAX 2620 MIN .03 AC-FT 30500
WTR YR 1985 TOTAL 13610.28 MEAN 37.3 MAX 1110 MIN .01 AC-FT 27000

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 15...	1600	2.9	1750	8.4	14.5	7.6	95	340	130	68	42
MAR 06...	1210	1.1	760	8.4	15.0	9.3	105	420	240	78	55
AUG 21...	1130	7.4	1100	8.5	26.0	7.3	103	240	54	55	25

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
NOV 15...	290	7	4.2	560	130	.60	8.8	1200	9	.07	81
MAR 06...	490	11	4.5	770	360	.60	8.0	1900	27	.08	34
AUG 21...	170	5	5.2	320	53	.60	9.7	750	304	--	98

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 mi².

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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 14...	1115	14	8000	8.1	12.0	80	10.3	107	K10	K60	580
JAN 29...	1100	16	8000	8.4	6.0	28	10.9	100	K0	K0	680
MAR 05...	1045	9.0	8900	8.3	14.0	16	9.8	110	<1	130	720
SEP 11...	1100	10	4080	8.5	21.0	180	--	--	240	450	570

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)
NOV 14...	290	120	67	1300	24	8.2	500	2000	.50	12	4130
JAN 29...	400	140	80	1500	26	7.4	280	2200	.50	11	4610
MAR 05...	430	140	89	1700	28	8.6	590	2600	.50	12	5290
SEP 11...	360	63	100	820	15	7.7	410	1100	.50	9.3	2570

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
NOV 14...	4200	.33	.050	.50	.100	<.010	<.010	80	3.0	98
JAN 29...	4400	.36	.080	.40	.020	.010	<.010	72	3.1	71
MAR 05...	5300	.42	.040	.40	<.010	.010	<.010	23	.56	86
SEP 11...	2600	<.10	.050	.70	.170	.020	<.010	425	11	79

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 14...	1115	1	<100	<10	2	<1	3	4	30	7
MAR 05...	1045	<1	300	<10	1	1	1	2	30	3
SEP 11...	1100	3	400	<10	2	<1	<1	3	60	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 14...	160	30	.2	2	3	<1	<1	2800	31	10
MAR 05...	210	90	<.1	<1	1	1	1	3000	23	10
SEP 11...	120	10	.2	1	3	<1	<1	940	28	40

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 mi², of which 4,069 mi² 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 above 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.--No estimated daily discharges. 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.--48 years (water years 1925, 1939-85), 320 ft³/s (231,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 135,000 ft³/s July 25, 1941 (gage height, 15.7 ft), from rating curve extended above 100,000 ft³/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.--Peak discharges greater than base discharge of 14,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 12	0600	*12,100	*6.72				

Minimum daily discharge, 0.01 ft³/s July 9, 10, 13, and 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	53	90	33	51	44	45	87	15	19	84	1.0
2	3.9	45	72	30	42	37	39	53	8.4	8.0	99	1.1
3	2.6	109	66	28	53	30	34	68	5.5	36	47	1.2
4	9.8	103	63	37	44	24	30	63	11	12	19	1.3
5	196	76	63	39	34	22	27	53	78	2.6	15	1.4
6	106	59	57	34	26	20	26	36	190	.69	22	1.5
7	81	53	49	32	26	18	24	26	291	.14	15	1.6
8	73	47	45	31	31	18	23	26	213	.04	14	1.7
9	65	37	44	33	47	18	21	27	156	.01	11	1.6
10	963	27	37	28	65	28	23	31	138	.01	9.0	1.8
11	222	25	33	26	68	34	25	22	152	.07	3.1	18
12	86	23	31	24	57	34	29	26	89	.06	1.8	4240
13	42	23	34	26	49	30	24	26	50	.01	.92	521
14	27	23	42	29	48	28	24	18	28	.01	1.1	180
15	33	22	53	27	44	30	19	11	19	.15	3.4	419
16	22	20	84	43	37	32	14	8.3	18	.17	309	147
17	490	21	170	42	34	32	13	13	13	.29	112	70
18	59	31	106	43	32	30	8.6	7.9	13	.02	34	57
19	57	40	81	42	31	30	8.6	7.9	8.6	.06	25	1640
20	65	42	78	34	32	129	7.6	19	4.2	.04	15	590
21	70	40	70	27	30	248	7.1	51	3.4	.03	13	629
22	68	32	61	25	25	497	7.1	521	3.2	.03	9.2	500
23	65	22	57	30	34	252	6.2	864	2.3	.11	9.7	424
24	53	21	59	35	49	174	5.3	774	2.0	2.9	56	268
25	76	40	54	40	49	159	3.9	282	2.5	28	24	201
26	87	51	50	39	49	149	3.0	230	2.0	15	21	152
27	59	47	47	52	49	111	75	147	19	22	11	119
28	42	68	49	62	49	85	200	107	116	32	7.7	88
29	76	87	44	84	---	66	100	66	63	15	4.6	609
30	70	96	41	73	---	55	63	41	30	9.6	2.2	346
31	57	---	37	61	---	51	---	22	---	22	1.2	---
TOTAL	3330.5	1383	1867	1189	1185	2515	935.4	3734.1	1744.1	226.04	999.92	11232.2
MEAN	107	46.1	60.2	38.4	42.3	81.1	31.2	120	58.1	7.29	32.3	374
MAX	963	109	170	84	68	497	200	864	291	36	309	4240
MIN	2.6	20	31	24	25	18	3.0	7.9	2.0	.01	.92	1.0
AC-FT	6610	2740	3700	2360	2350	4990	1860	7410	3460	448	1980	22280

CAL YR 1984 TOTAL 19947.13 MEAN 54.5 MAX 1450 MIN .54 AC-FT 39570
WTR YR 1985 TOTAL 30341.26 MEAN 83.1 MAX 4240 MIN .01 AC-FT 60180

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 microsiemens July 11, 1983; minimum daily, 346 microsiemens 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, 5,530 microsiemens Sept. 10; minimum daily, 553 microsiemens Sept. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 21...	1415	40	3300	7.9	8.0	350	73	14.5	137	2.2	510
JAN 24...	1300	30	4450	8.0	4.0	150	140	16.9	146	.7	620
MAR 14...	1300	29	3920	8.2	14.5	120	70	14.1	157	1.0	570
MAY 23...	1630	1680	1590	8.5	22.5	8	3200	9.0	118	12	140
JUL 25...	1430	55	700	7.8	28.0	50	1400	7.4	107	>19	160
AUG 23...	1330	12	3810	8.1	31.0	17	47	7.8	121	6.7	460

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...	320	130	44	500	10	5.0	190	380	760	.50	12
JAN 24...	420	150	60	750	14	5.4	200	540	1100	.50	15
MAR 14...	380	130	59	670	13	6.7	190	510	950	.90	14
MAY 23...	15	32	14	280	11	3.3	123	190	320	.60	7.6
JUL 25...	56	41	13	80	3	7.5	100	110	83	.60	9.0
AUG 23...	300	110	45	650	14	6.9	160	470	860	.60	9.8

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 21...	1900	542	74	--	<.010	.30	.220	.78	1.0	.670	4.1
JAN 24...	2700	202	26	--	<.010	<.10	.320	.48	.80	.220	8.1
MAR 14...	2500	97	11	.18	.020	.20	.580	.42	1.0	.410	2.6
MAY 23...	920	4870	228	.55	.050	.60	.090	1.9	2.0	<.010	35
JUL 25...	400	2480	340	1.6	.190	1.8	.180	3.0	3.2	.120	53
AUG 23...	2200	4410	472	.19	.010	.20	.130	4.5	4.6	.040	31

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 14...	1300	2	<100	<1	10	<1	30
JUL 25...	1430	5	110	<1	<10	4	31

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 14...	<1	30	<.1	<1	<1	20
JUL 25...	2	4	.2	1	<1	38

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	3330.5	1660	984	8850	310	2800	210	1930	270
NOV.	1984	1383	2790	1680	6270	570	2120	380	1420	450
DEC.	1984	1867	3320	2020	10200	700	3530	460	2330	540
JAN.	1985	1189	4120	2520	8100	910	2910	590	1890	670
FEB.	1985	1185	3870	2360	7560	840	2700	550	1760	630
MAR.	1985	2515	2350	1410	9590	480	3240	320	2170	380
APR.	1985	935.4	4150	2540	6420	910	2310	590	1500	670
MAY	1985	3734.1	1560	930	9370	300	3030	210	2070	250
JUNE	1985	1744.1	2180	1300	6140	430	2010	290	1360	350
JULY	1985	226.04	1230	727	444	230	138	160	96	200
AUG.	1985	999.92	1370	809	2180	250	680	180	473	220
SEPT	1985	11232.2	909	532	16100	160	4860	110	3440	150
TOTAL		30341.26	**	**	91200	**	30300	**	20400	**
WTD.AVG.		83	1860	1110	**	370	**	250	**	300

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	2500	2500	4070	4990	3640	3680	3020	2760	2320	1200	2350
2	1980	2820	2690	4240	5410	3860	3770	4220	3180	2550	1350	2500
3	2750	2010	2850	4410	4250	4520	3850	2860	3780	1610	1190	2450
4	3440	1640	3070	4180	4310	4400	3910	3320	3510	2140	1370	2680
5	1750	1850	3110	4280	4260	4440	4210	3290	3030	2530	1610	3470
6	1520	2030	3660	4300	4220	4470	4260	3190	2000	3130	1400	3840
7	1850	2260	4320	4100	4020	4510	4430	3490	1310	3430	1690	4260
8	1910	2530	3880	4380	3720	4580	4470	3520	1750	3800	2040	4700
9	1990	2970	3600	4250	3220	4600	4550	3380	2580	4190	2400	5180
10	1210	3310	3870	4440	2800	4500	4490	3020	2740	4860	2760	5530
11	859	3570	4090	3980	2620	3620	4430	2860	2610	3760	3030	2740
12	1230	3780	4280	4310	3090	3980	4300	3310	2700	3920	3290	802
13	1920	3850	4440	4500	3480	3950	4120	3760	2760	4210	3410	1040
14	2490	3990	4110	4650	3990	3920	3740	4220	2880	4430	3220	1210
15	2680	4040	3840	4240	4480	3940	4070	4670	2960	3500	2840	765
16	2790	4170	2110	3910	4600	3940	4310	5120	3040	3440	1200	962
17	1720	4260	2050	4030	4680	4260	4700	4940	3140	1400	1120	1480
18	2440	3900	2620	3610	4740	4650	4950	5210	3230	825	970	1650
19	2480	2980	2950	3730	4640	4790	4920	5260	3300	706	1370	553
20	2010	2460	3310	4040	4570	3820	4860	4500	3380	625	2150	730
21	1760	3250	3680	4430	4460	2220	4810	3220	3650	950	3000	950
22	1560	3570	4000	4820	4550	1050	4800	1530	4050	1430	3810	1140
23	1920	3900	4120	4770	4020	1170	4780	940	3960	1840	3550	1320
24	2260	3970	3870	4680	3340	1560	4790	820	3910	1650	947	1510
25	2040	3500	3640	4310	3300	1710	4940	1060	3840	700	1230	1640
26	1900	2820	3430	4590	3270	1850	5260	1290	3900	760	1510	1770
27	2160	3680	3780	4210	3240	2070	4800	1480	2210	1000	1650	1850
28	2980	3040	4150	3850	3420	2450	4050	1600	1220	690	1570	2150
29	2530	2730	4360	3020	---	2750	3880	1740	1960	810	1700	780
30	2460	2420	4090	3690	---	3150	3640	1870	2380	718	1830	950
31	2190	---	3880	4570	---	3390	---	2330	---	890	1940	---
MEAN	2090	3130	3560	4210	3990	3480	4390	3070	2920	2220	2010	2100

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	8.0	---	---	---	---	16.0	---	17.0	30.0	---	20.0
2	15.0	---	---	---	.0	17.0	---	11.0	17.0	---	28.0	19.0
3	17.0	---	---	1.0	1.0	18.0	---	17.0	18.0	31.0	23.0	19.0
4	19.0	---	5.0	9.0	---	14.0	12.0	16.0	18.0	---	---	20.0
5	---	---	5.0	8.0	---	---	7.0	16.0	---	19.0	---	19.0
6	---	14.0	5.0	8.0	.0	---	8.0	17.0	---	20.0	---	---
7	---	---	11.0	8.0	4.0	9.0	10.0	17.0	20.0	20.0	---	---
8	---	18.0	12.0	---	4.0	10.0	10.0	---	22.0	20.0	---	---
9	22.0	16.0	14.0	---	8.0	10.0	9.0	---	---	20.0	---	---
10	19.0	14.0	13.0	5.0	5.0	11.0	---	20.0	---	21.0	---	32.0
11	22.0	15.0	---	.0	8.0	12.0	---	13.0	---	19.0	---	25.0
12	23.0	16.0	---	.0	11.0	8.0	13.0	---	---	---	---	23.0
13	23.0	---	---	1.0	---	---	14.0	---	---	---	26.0	27.0
14	23.0	---	---	5.0	---	---	11.0	---	---	---	25.0	24.0
15	14.0	13.0	4.0	7.0	4.0	8.0	13.0	---	---	---	32.0	24.0
16	---	11.0	9.0	---	3.0	6.0	14.0	---	---	33.0	28.0	27.0
17	---	10.0	---	---	---	6.0	14.0	26.0	---	34.0	30.0	---
18	---	10.0	5.0	.0	6.0	6.0	16.0	29.0	30.0	32.0	33.0	---
19	15.0	---	---	1.0	5.0	8.0	---	---	30.0	35.0	32.0	23.0
20	13.0	12.0	---	.0	7.0	8.0	---	---	29.0	32.0	---	18.0
21	13.0	---	7.0	1.0	9.0	7.0	---	27.0	32.0	---	---	20.0
22	13.0	---	4.0	.0	---	---	---	18.0	33.0	---	33.0	17.0
23	14.0	7.0	---	.0	---	---	16.0	21.0	33.0	---	32.0	21.0
24	---	8.0	---	.0	---	---	20.0	24.0	32.0	---	29.0	20.0
25	---	7.0	1.0	---	---	---	18.0	26.0	---	---	20.0	---
26	11.0	7.0	5.0	---	11.0	18.0	20.0	26.0	---	22.0	33.0	---
27	11.0	3.0	---	---	13.0	19.0	17.0	28.0	31.0	---	21.0	13.0
28	12.0	4.0	15.0	---	---	19.0	14.0	---	33.0	---	20.0	16.0
29	13.0	6.0	16.0	10.0	---	15.0	17.0	---	19.0	32.0	---	---
30	12.0	---	15.0	---	---	8.0	---	17.0	29.0	32.0	---	---
31	12.0	---	3.0	---	---	14.0	---	16.0	---	---	18.0	---
MEAN	16.0	10.5	8.5	3.5	6.0	11.5	14.0	20.5	26.0	26.5	27.0	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.

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, 325,400 acre-ft Oct. 12 at 2400 hours (elevation, 2,896.77 ft); minimum, 266,900 acre-ft Sept. 10,11 (elevation, 2,890.10 ft).

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

2,890.0	266,100	2,896.0	318,400
2,892.0	282,900	2,898.0	337,000
2,894.0	300,400		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324800	324500	320000	318800	315100	311700	313500	308800	303500	296200	282800	271800
2	324300	324900	319800	318800	314700	311700	313500	308700	302900	295900	282600	271200
3	324600	324300	319800	318800	314500	312100	313500	308700	302700	295400	282200	270500
4	324500	324200	319800	318700	314300	312000	312700	308600	303400	294800	283000	270200
5	324200	324100	320000	318400	314000	311700	313300	308000	303300	294400	282500	269800
6	324000	324200	319700	318400	313900	311700	313000	307500	303400	294000	282000	269200
7	324000	323900	319500	318200	313600	311600	312800	307600	303500	293500	281700	268600
8	324100	323800	319600	318200	313300	311300	312400	307300	303600	293000	281300	268000
9	323800	323000	319400	318000	313300	311400	312400	307400	303300	292400	280500	267500
10	324100	323000	319200	318000	313500	311400	312200	307200	303400	292100	280400	266900
11	325100	322700	319000	317700	313400	311600	313300	306400	303300	291700	279900	266900
12	325400	322400	318900	317500	313400	311800	312200	305800	303200	291100	279300	267800
13	325100	322600	317800	317200	313400	311300	312300	305500	302800	290500	278800	270200
14	325000	322300	318400	317300	313400	311400	312000	304900	301900	289900	278300	270800
15	325000	322100	318600	316800	313300	311000	311900	304500	302200	289300	278200	270900
16	324800	321900	319000	316700	312900	310900	311900	304400	301900	289200	278300	271200
17	325100	321800	319000	316500	312700	310800	311400	303800	301600	289000	278200	270800
18	324500	321800	319100	316400	312700	310700	311500	303600	301200	288400	278200	270500
19	324500	321800	319500	316200	312700	310900	310800	303100	301000	287800	277700	271500
20	324300	321700	319800	316200	312900	312500	310500	302900	300400	287500	277400	272300
21	324500	321500	319500	316100	313200	312700	310500	302700	299600	286800	277000	273200
22	324300	321300	319500	315900	312900	313900	310000	302600	299600	286600	276500	274000
23	324300	321200	319500	315700	313200	314300	309800	303000	299500	286000	276000	274900
24	324500	321100	319000	315400	312900	314600	309300	304200	298900	285600	275600	274900
25	324900	320700	319100	315400	312500	315000	308700	305200	298900	285200	275400	274700
26	325000	320900	319300	315300	312300	314500	307900	305000	298600	285200	274700	274700
27	324300	320800	319500	315500	313400	315200	308200	305000	298200	285200	274500	274400
28	324500	320500	319400	315400	313400	315000	308200	304800	297900	284600	274000	273900
29	324500	320500	319400	315400	---	314900	309000	304700	297500	284300	273600	275000
30	324300	320400	319200	315200	---	314700	309000	304400	296800	283900	273000	275000
31	324500	---	319100	315300	---	314000	---	304000	---	283000	272400	---
MAX	325400	324900	320000	318800	315100	315200	313500	308800	303600	296200	283000	275000
MIN	323800	320400	317800	315200	312300	310700	307900	302600	296800	283000	272400	266900
(†)	2896.67	2896.22	2896.08	2895.66	2895.34	2895.52	2894.97	2894.41	2893.60	2892.01	2890.76	2891.07
(‡)	-600	-4100	-1300	-3800	-1900	+600	-5000	-5000	-7200	-13800	-10600	+2600
(††)	5330	4684	4361	4936	5252	4071	6570	7319	6405	8878	8218	7258

CAL YR 1984 MAX 379900 MIN 266900 (‡) -50100 (††) 73282
WTR YR 1985 MAX 325400 MIN 266900 (‡) -60900 (††) 75728

(†) Elevation, in feet, at end of month.
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal and industrial uses by the Canadian River Authority.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 11-13, 20-22, and 27. Records good except those for periods of estimated daily discharges, which are poor. No known diversions upstream from station.

AVERAGE DISCHARGE.--11 years, 1.80 ft^3/s (1,300 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.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 7	0130	*207	*6.50				

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.07	.10	.09	.04	.00	1.0	.03	.00	.00	.00
2	.00	.00	.04	.06	.11	.05	.03	.47	.02	.00	.00	.00
3	.00	.00	.04	.08	.14	.17	.05	.13	.00	.00	.00	.00
4	.00	.00	.04	.12	.05	.03	.09	.02	.16	.00	.00	.00
5	.00	.00	.04	.15	.04	.03	.00	.05	1.5	.00	.00	.00
6	.00	.00	.03	.17	.04	.01	.00	.03	.84	.00	.00	.00
7	.00	.00	.05	.09	.03	.13	.00	32	.13	.00	.00	.00
8	.00	.00	.12	.07	.03	.04	.00	1.5	.18	.00	.00	.00
9	.00	.00	.20	.07	.05	.14	.00	.95	.06	.00	.00	.00
10	.25	.00	.08	.07	.07	.28	.02	.52	.19	.00	.00	.00
11	.00	.00	.14	.07	.05	.32	.04	.13	.32	.00	.00	.00
12	.00	.00	.13	.06	.03	.04	4.0	.00	.02	.00	.00	.02
13	.00	.00	.11	.06	.03	.02	17	.00	.02	.00	.00	.00
14	.00	.00	.08	.07	.03	.01	2.0	.00	.08	.00	.00	.00
15	.00	.00	.63	.09	.06	.02	.93	.00	.09	.00	.00	.00
16	.00	.00	.22	.09	.02	.03	.51	.00	.10	.00	.00	.00
17	.00	.00	.15	.07	.03	.03	.14	.00	.05	.00	.00	.00
18	.00	.03	.15	.07	.02	.07	.05	.00	.02	.00	.00	.00
19	.00	.01	.15	.06	.02	.16	.01	.00	.03	.00	.00	.00
20	.00	.01	.15	.05	.04	4.8	.00	.00	.03	.00	.00	.00
21	.00	.01	.15	.05	.05	3.5	.01	.00	.33	.00	.00	.00
22	.00	.01	.10	.06	1.4	1.2	.00	.00	.21	.00	.00	.00
23	.00	.01	.10	.07	.36	.45	.00	.00	.13	.00	.00	.00
24	.00	.01	.10	.07	.14	.17	.00	.00	.10	.02	.00	.00
25	.00	.02	.10	.07	.11	.09	.00	.01	.38	.00	.00	.00
26	.00	.02	.10	.05	.10	.26	.00	.02	2.3	.00	.00	.00
27	.00	.02	.15	.04	.07	.17	.00	.02	2.1	.00	.00	.00
28	.00	.02	.22	.04	.04	.22	.97	.06	.01	.00	.00	.00
29	.00	.03	.14	.04	---	.02	20	.06	.01	.00	.00	1.3
30	.00	.04	.10	.02	---	.00	3.4	.02	.01	.00	.00	.00
31	.00	---	.10	.05	---	.00	---	.01	---	.00	.00	---
TOTAL	.25	.24	3.98	2.23	3.25	12.50	49.25	37.00	9.45	.02	.00	1.32
MEAN	.008	.008	.13	.072	.12	.40	1.64	1.19	.32	.001	.000	.044
MAX	.25	.04	.63	.17	1.4	4.8	20	32	2.3	.02	.00	1.3
MIN	.00	.00	.03	.02	.02	.00	.00	.00	.00	.00	.00	.00
AC-FT	.5	.5	7.9	4.4	6.4	25	98	73	19	.04	.00	2.6

CAL YR 1984 TOTAL 70.13 MEAN .19 MAX 25 MIN .00 AC-FT 139
WTR YR 1985 TOTAL 119.49 MEAN .33 MAX 32 MIN .00 AC-FT 237

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 at 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^2, of which 4,688 mi^2 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 above 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.--Estimated daily discharge: Feb. 26 to Mar. 11. Records good except those for period of estimated daily discharge, which are fair. Extreme low flow is maintained by springs that enter the river about 600 ft upstream from the gage. There is some regulation and diversions from Lake Meredith (07227900) 75 mi upstream. Gage-height telemeter located 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); 21 years (water years 1965-85) regulated, 87.1 ft^3/s (63,100 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, and 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, 2,970 ft^3/s Apr. 29 at 2115 hours (gage height, 6.34 ft); minimum, 0.18 ft^3/s Sept. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	37	48	72	90	103	95	340	55	20	7.7	3.1
2	1.0	37	47	74	75	103	93	171	56	19	3.9	2.1
3	1.4	38	46	75	70	100	93	115	57	18	2.2	1.9
4	3.2	39	48	76	68	92	88	110	79	17	1.5	1.1
5	4.4	38	50	73	69	86	82	102	146	15	2.3	.50
6	5.4	37	50	72	72	84	79	111	285	13	2.3	.34
7	5.5	37	50	67	75	81	77	188	362	12	2.1	.27
8	5.1	38	50	67	89	76	74	294	217	10	1.3	.24
9	35	39	50	74	105	72	96	371	142	8.6	1.1	.22
10	58	37	48	72	83	127	97	555	105	7.7	8.8	.67
11	35	36	48	67	83	143	98	237	100	7.0	8.7	1.2
12	29	37	48	72	81	146	95	187	85	5.9	6.4	1.5
13	27	38	54	63	81	166	107	152	72	4.4	5.5	1.9
14	27	40	67	67	80	146	164	127	62	2.8	37	6.2
15	26	39	158	68	79	129	189	109	73	2.4	26	6.8
16	38	39	277	70	79	120	175	100	63	3.3	21	6.6
17	36	46	173	68	78	133	142	96	48	2.6	21	6.5
18	34	58	136	68	78	113	121	96	41	1.5	20	5.9
19	32	61	103	66	72	108	111	92	39	.80	23	6.5
20	32	55	111	66	72	408	103	103	35	.51	23	12
21	32	54	114	63	77	958	98	117	31	.34	20	23
22	32	51	100	68	92	613	93	108	30	.34	16	23
23	32	49	97	72	158	321	91	103	28	.29	13	21
24	34	49	84	69	270	190	91	93	30	1.1	12	19
25	39	54	72	67	228	139	91	85	34	3.6	10	17
26	41	50	76	68	169	130	118	78	39	7.1	10	16
27	40	48	84	76	120	121	152	72	43	6.2	8.9	15
28	39	49	94	84	106	115	167	70	35	4.6	7.6	15
29	39	50	76	93	---	103	857	67	29	2.3	6.4	21
30	37	48	72	85	---	108	1100	59	24	.47	5.5	24
31	37	---	72	72	---	104	---	56	---	1.7	4.6	---
TOTAL	837.70	1328	2603	2214	2799	5438	5037	4564	2445	199.55	338.8	259.54
MEAN	27.0	44.3	84.0	71.4	100	175	168	147	81.5	6.44	10.9	8.65
MAX	58	61	277	93	270	958	1100	555	362	20	37	24
MIN	.70	36	46	63	68	72	74	56	24	.29	1.1	.22
AC-FT	1660	2630	5160	4390	5550	10790	9990	9050	4850	396	672	515

CAL YR 1984 TOTAL 17078.73 MEAN 46.7 MAX 547 MIN .00 AC-FT 33880
WTR YR 1985 TOTAL 28063.59 MEAN 76.9 MAX 1100 MIN .22 AC-FT 55660

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV 20...	1045	53	3140	8.1	5.0	16	16.4	139	.8	190
JAN 21...	0900	57	3430	7.8	.5	3.5	16.0	121	1.3	K43
MAR 11...	0840	136	2830	8.0	13.0	15	11.9	126	1.7	310
MAY 20...	0810	106	3860	8.1	16.5	5.7	9.5	109	1.1	600
JUL 22...	1000	.51	1950	8.0	24.0	1.8	12.5	165	3.6	180
AUG 20...	0820	24	2580	7.9	22.0	3.0	9.1	116	1.4	190

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 20...	230	560	320	130	57	430	8	7.8	240	200
JAN 21...	K75	650	370	160	60	480	8	7.7	280	250
MAR 11...	230	520	280	120	52	450	9	7.0	240	190
MAY 20...	440	710	480	170	68	550	9	8.0	225	300
JUL 22...	740	290	87	62	34	290	8	5.6	208	88
AUG 20...	840	350	150	75	40	390	9	5.6	201	110

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 20...	780	2.7	21	1840	1800	.28	.020	.30	.32	.060
JAN 21...	840	2.7	28	2040	2000	1.1	.030	1.1	1.0	.230
MAR 11...	710	2.4	20	1690	1700	--	<.010	.10	.11	.050
MAY 20...	970	2.3	19	2350	2200	.38	.020	.40	.39	.090
JUL 22...	450	1.5	27	1070	1100	--	<.010	<.10	<.10	.030
AUG 20...	590	1.3	21	1400	1400	--	<.010	<.10	<.10	.050

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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									
20...	.050	.44	.50	.050	.020	<.010	50	7.2	79
JAN									
21...	.240	.57	.80	.120	.090	.090	58	8.9	26
MAR									
11...	.050	.95	1.0	.130	.060	.050	154	57	26
MAY									
20...	.140	.91	1.0	.080	.050	.050	182	52	25
JUL									
22...	.050	.87	.90	.110	.010	<.010	28	.04	62
AUG									
20...	.040	.45	.50	.080	.030	.030	29	1.9	36

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										
20...	1045	1	400	10	1	<1	1	1	50	6
MAR										
11...	0840	2	100	<10	1	<1	3	<1	60	1
MAY										
20...	0810	2	500	<10	1	<1	<1	1	50	2
AUG										
20...	0820	4	400	<10	1	<1	1	2	50	<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)
NOV										
20...	90	20	.6	6	3	1	<1	2100	20	20
MAR										
11...	90	40	<.1	2	5	<1	<1	1900	12	20
MAY										
20...	110	30	<.1	4	6	<1	<1	2900	21	20
AUG										
20...	80	40	.2	3	1	<1	<1	1200	11	20

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 above 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.--Estimated daily discharges: Feb. 1, 2. Records good except those for period of estimated record, which are poor. Small diversions upstream from station for irrigation and recreation.

AVERAGE DISCHARGE.--29 years (water years 1938-42, 1962-85), 15.0 ft^3/s (0.43 in/yr), 10,870 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 flood-marks. 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.--Peak discharge greater than base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 27	0500	*292	*5.69				

Minimum discharge, 0.09 ft^3/s Oct. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.81	.63	2.1	2.0	2.5	3.5	50	1.7	2.1	.74	.98
2	.14	.71	.69	1.9	2.0	2.4	3.5	29	1.5	2.2	.80	.82
3	.10	.79	.69	1.9	2.3	2.4	3.6	17	1.6	2.4	.71	.70
4	.17	.82	.69	1.9	2.2	2.3	3.4	12	3.5	3.0	.64	.54
5	.16	.82	.69	2.0	2.3	2.2	3.2	8.8	5.6	3.3	.62	.38
6	.14	.97	.74	2.0	2.3	2.3	3.1	7.3	4.7	3.5	.64	.24
7	.15	.68	.88	2.0	2.4	2.3	2.8	11	3.8	3.7	.58	.18
8	.22	.66	.91	1.9	2.4	2.2	2.8	16	3.0	3.7	.57	.15
9	.31	.65	.95	2.1	2.5	2.3	2.9	12	2.5	3.5	.50	.14
10	.50	.62	.82	2.1	2.5	2.4	2.9	8.6	2.3	3.7	.78	.26
11	.45	.59	.87	2.0	2.5	2.3	2.8	7.0	2.7	2.7	.88	.33
12	.58	.64	.88	2.0	2.5	2.2	2.6	5.4	2.2	2.6	.79	.42
13	.69	.60	.88	2.0	2.5	2.2	2.5	4.9	1.8	3.0	.84	.55
14	.81	.57	.92	2.0	2.5	2.3	2.4	4.4	1.6	2.6	1.1	.52
15	.81	.57	2.0	2.1	2.5	2.3	2.4	4.1	1.7	1.9	1.1	.54
16	.95	.63	3.5	2.0	2.6	2.1	2.3	3.9	1.5	2.1	1.1	.55
17	.75	.58	3.6	2.1	2.5	2.2	2.1	3.6	1.5	2.0	1.3	.47
18	.75	.62	3.5	2.1	2.5	2.2	2.1	3.7	1.3	1.8	1.4	.32
19	.58	.58	3.0	2.1	2.5	2.1	1.9	3.5	1.3	1.4	1.4	.38
20	.58	.51	2.7	2.0	2.5	3.9	1.7	3.5	1.4	1.3	1.6	.47
21	.53	.44	2.7	2.0	2.5	5.5	1.7	3.5	1.6	1.2	1.3	.43
22	.53	.48	2.3	2.0	2.6	5.0	1.7	3.5	1.6	1.4	1.4	.50
23	.48	.47	2.3	2.1	2.8	4.3	1.7	3.4	2.1	1.4	1.4	.52
24	.63	.44	2.3	2.2	3.4	4.1	1.7	3.1	2.3	1.3	1.5	.43
25	.63	.44	2.1	2.3	3.0	3.9	1.6	2.9	2.2	1.3	1.4	.45
26	.70	.44	2.0	2.3	2.7	3.7	2.0	2.8	2.7	1.2	1.4	.40
27	.59	.48	2.2	2.3	2.5	3.6	121	2.6	2.6	1.2	1.4	.35
28	.55	.53	2.3	2.3	2.5	3.5	23	2.7	2.5	1.1	1.2	.30
29	.69	.61	2.2	2.3	---	3.4	18	2.6	2.2	1.1	1.3	.38
30	.71	.63	2.1	2.4	---	3.4	15	2.2	2.0	.91	1.5	.41
31	.81	---	2.2	2.3	---	3.5	---	1.8	---	.80	1.3	---
TOTAL	15.87	18.38	54.24	64.8	70.0	91.0	241.9	246.8	69.0	65.41	33.19	13.11
MEAN	.51	.61	1.75	2.09	2.50	2.94	8.06	7.96	2.30	2.11	1.07	.44
MAX	.95	.97	3.6	2.4	3.4	5.5	121	50	5.6	3.7	1.6	.98
MIN	.10	.44	.63	1.9	2.0	2.1	1.6	1.8	1.3	.80	.50	.14
CFSM	.001	.001	.004	.004	.005	.006	.02	.02	.005	.004	.002	.001
IN.	.00	.00	.00	.01	.01	.01	.02	.02	.01	.01	.00	.00
AC-FT	31	36	108	129	139	180	480	490	137	130	66	26

CAL YR 1984 TOTAL 639.08 MEAN 1.75 MAX 133 MIN .10 CFSM .004 IN .05 AC-FT 1270
WTR YR 1985 TOTAL 983.70 MEAN 2.70 MAX 121 MIN .10 CFSM .006 IN .08 AC-FT 1950

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 mi², of which 3,281 mi² 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records fair. There are several small diversions upstream from station.

AVERAGE DISCHARGE.--18 years, 26.2 ft³/s (18,980 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,000 ft³/s Aug. 28, 1968 (gage height, 13.0 ft, from floodmark); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Aug. 19	2100	*5,690	9.77				

Minimum discharge, 0.01 ft³/s Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1.5	1.5	1.5	1.8	2.1	2.5	7.9	.70	.90	.56	.07
2	2.9	1.3	1.3	1.4	2.3	1.9	2.6	4.6	1.6	.90	.46	.06
3	3.0	1.3	1.2	1.5	2.9	2.2	2.5	3.0	1.6	.90	.42	.05
4	161	1.1	1.2	1.3	3.1	1.4	2.5	2.0	69	.88	.38	.04
5	48	.95	2.9	1.2	17	1.4	2.2	1.4	388	.89	1.0	.03
6	8.0	1.0	1.4	1.2	2.4	1.4	2.1	1.1	56	.81	1.3	.03
7	3.9	.97	1.3	1.1	2.0	1.6	2.1	1.1	8.9	.78	.81	.04
8	3.0	.90	1.2	1.1	2.5	1.7	2.0	.99	3.5	.79	.58	.03
9	2.7	.78	1.1	1.1	1.7	3.3	2.1	.90	1.6	.73	.36	.03
10	11	.60	.96	.99	1.1	3.0	2.1	.89	2.2	.73	.67	.03
11	5.5	.80	1.0	.99	1.1	2.3	2.1	.69	21	.73	.65	.02
12	2.3	.90	1.0	1.1	1.1	2.0	2.9	.60	2.4	.81	.34	84
13	2.7	.87	8.4	1.6	1.0	1.9	5.0	.49	1.1	.75	251	2.8
14	1.8	.88	5.3	1.7	.96	1.8	3.1	.31	.74	.81	8.5	.66
15	1.7	.81	38	1.2	.94	2.0	2.5	.30	.48	.80	3.0	.47
16	130	.81	14	1.2	.98	7.4	2.1	2.0	.42	.81	24	.34
17	23	6.8	4.9	1.1	.92	3.5	2.0	1.6	.34	1.1	4.1	.22
18	5.4	3.3	9.7	1.1	1.2	2.8	1.8	.79	57	1.2	2.5	.17
19	2.5	3.0	8.4	.97	1.3	16	1.7	5.5	5.9	1.0	457	16
20	2.5	2.5	11	.90	1.4	278	1.7	7.0	2.0	.97	264	155
21	18	2.1	1.5	1.1	19	131	1.6	36	1.1	.89	29	40
22	2.8	1.9	1.7	1.4	28	19	1.5	232	10	.90	2.5	6.1
23	2.0	1.7	1.9	1.5	5.6	8.5	1.5	25	2.9	.90	1.6	2.5
24	5.6	11	1.6	1.6	2.7	6.5	1.4	7.8	1.4	140	.80	2.1
25	5.2	15	1.4	1.3	2.3	5.2	2.1	4.3	1.0	160	.51	1.6
26	3.6	4.4	1.6	6.4	1.8	4.2	3.5	2.5	1.2	187	.39	1.4
27	2.4	2.0	1.9	9.7	1.8	2.9	5.0	1.6	3.0	49	.29	1.2
28	1.6	1.8	3.7	1.3	1.9	2.5	107	1.2	2.1	4.5	.23	1.5
29	1.6	1.7	5.7	1.4	---	2.4	307	.71	1.2	1.7	.22	209
30	1.5	1.5	1.5	2.8	---	2.1	31	.44	.90	.95	.15	26
31	1.5	---	1.8	1.7	---	2.4	---	.23	---	.69	.09	---
TOTAL	469.8	74.17	140.06	54.45	110.80	524.4	509.2	354.94	649.28	563.82	1057.41	551.49
MEAN	15.2	2.47	4.52	1.76	3.96	16.9	17.0	11.4	21.6	18.2	34.1	18.4
MAX	161	15	38	9.7	28	278	307	232	388	187	457	209
MIN	1.5	.60	.96	.90	.92	1.4	1.4	.23	.34	.69	.09	.02
AC-FT	932	147	278	108	220	1040	1010	704	1290	1120	2100	1090

CAL YR 1984	TOTAL	11048.33	MEAN 30.2	MAX 6560	MIN .00	AC-FT	21910	
WTR YR 1985	TOTAL	5059.82	MEAN 13.9	MAX 457	MIN .02	AC-FT	10040	

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 microsiemens July 30, 1978; minimum daily, 417 microsiemens 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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
20...	1600	2.5	11200	8.0	12.5	70	12.7	134	1.0	K180	210	1700
JAN												
24...	1000	1.7	23700	7.6	1.0	.50	15.4	131	K.3	K4	K6	2400
MAR												
14...	0930	1.8	21100	7.9	7.5	1.4	13.7	136	1.5	140	K12	2200
MAY												
23...	1030	20	1730	8.3	18.0	3700	11.0	129	6.6	110000	72000	320
JUL												
25...	1130	87	1500	8.0	26.0	14000	7.6	105	16	--	--	210
AUG												
23...	0930	1.6	8200	8.0	24.0	45	9.4	128	.9	460	500	1600

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											
20...	1600	500	110	1900	21	31	140	1700	2900	1.1	27
JAN											
24...	2200	700	150	4800	45	65	140	2200	7400	.70	28
MAR											
14...	2100	640	150	4100	39	61	130	2200	6500	.80	25
MAY											
23...	210	93	20	270	7	5.0	105	400	280	.80	10
JUL											
25...	130	60	14	210	7	6.7	76	380	160	.60	10
AUG											
23...	1400	480	88	1300	15	20	130	1500	2000	.90	22

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, AMMONIA + 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											
20...	7540	7300	.20	.210	.20	.050	.050	<.010	75	.51	98
JAN											
24...	15900	15000	<.10	.340	<.20	<.010	<.010	<.010	4	.02	83
MAR											
14...	14600	14000	<.10	.290	.20	--	<.010	<.010	44	.21	76
MAY											
23...	1150	1100	.97	.110	7.5	<.010	<.010	<.010	13900	751	99
JUL											
25...	930	890	1.0	.080	13	18.0	<.010	<.010	31900	7490	98
AUG											
23...	5690	5500	.16	.160	.40	.050	<.010	.020	77	.33	96

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 20...	1600	3	800	10	1	<1	1	2	70	3
MAR 14...	0930	2	<100	<10	<1	<1	<1	<1	70	<1
MAY 23...	1030	4	200	<.5	<1	<1	<3	3	31	2
AUG 23...	0930	4	100	<10	1	<1	9	1	40	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 20...	110	250	.1	6	3	2	1	11000	61	20
MAR 14...	130	280	.9	<1	<1	2	<1	14000	75	30
MAY 23...	42	6	<.1	<10	3	<1	<1	2200	16	16
AUG 23...	120	180	<.1	7	3	2	<1	9000	38	20

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.

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. Water is used for municipal, industrial, and recreational purposes by the cities of Floydada, Silverton, and Tulia. Figures herein represent total content. Data regarding the dam and resevoir 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, 21,860 acre-ft July 28, 1985 (elevation, 3,060.90 ft); minimum, 598 acre-ft Oct. 1, 2, 1974 (elevation, 2,980.61 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,860 acre-ft July 28 at 2000 hours (elevation, 3,060.90 ft); minimum, 11,320 acre-ft Apr. 24 at 2400 hours (elevation, 3,036.29 ft).

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

3,036.0	11,220	3,048.0	15,880	3,060.0	21,420
3,040.0	12,670	3,052.0	17,660	3,064.0	23,400
3,044.0	14,220	3,056.0	19,510		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12390	12190	11990	11870	11840	11560	11420	11640	11460	18740	21790	21310
2	12390	12190	11990	11870	11840	11560	11410	11630	11440	18720	21780	21300
3	12380	12180	11990	11860	11840	11560	11410	11620	11420	18710	21760	21300
4	12380	12180	11980	11860	11840	11550	11400	11610	12780	18690	21750	21300
5	12370	12160	11970	11860	11840	11530	11400	11600	17110	18670	21730	21280
6	12370	12140	11990	11860	11830	11530	11390	11590	18190	18650	21720	21270
7	12360	12140	11950	11860	11830	11520	11390	11580	18380	18630	21690	21260
8	12350	12130	11960	11860	11830	11520	11380	11580	18400	18610	21670	21250
9	12340	12110	11950	11860	11830	11510	11380	11570	18410	18590	21650	21240
10	12340	12100	11940	11860	11830	11510	11370	11560	18400	18580	21630	21230
11	12330	12100	11930	11850	11830	11500	11380	11540	18420	18570	21610	21220
12	12320	12090	11930	11850	11830	11500	11400	11520	18420	18560	21580	21210
13	12320	12080	11930	11850	11830	11490	11400	11500	18420	18540	21550	21200
14	12310	12070	11930	11850	11830	11490	11390	11480	18380	18530	21520	21190
15	12290	12070	11930	11850	11830	11480	11390	11470	18350	18520	21500	21190
16	12290	12060	11950	11850	11830	11480	11380	11470	18340	18510	21480	21180
17	12280	12060	11940	11850	11830	11470	11370	11470	18310	18490	21520	21160
18	12280	12060	11940	11850	11830	11470	11370	11460	18430	18470	21490	21150
19	12280	12050	11940	11850	11830	11480	11360	11450	18410	18450	21470	21140
20	12240	12040	11930	11850	11830	11480	11350	11430	18410	18420	21460	21180
21	12250	12040	11930	11850	11580	11490	11340	11420	18420	18390	21450	21360
22	12240	12040	11920	11840	11580	11480	11340	11400	18470	18360	21420	21480
23	12230	12030	11920	11840	11590	11480	11330	11390	18460	18340	21400	21590
24	12230	12030	11910	11840	11580	11480	11320	11580	18450	18310	21380	21590
25	12230	12030	11910	11840	11580	11470	11340	11570	18430	18620	21370	21580
26	12230	12010	11900	11840	11570	11470	11360	11550	18540	21420	21360	21560
27	12230	12010	11900	11840	11570	11460	11400	11540	18750	21800	21350	21550
28	12230	12000	11900	11840	11560	11450	11430	11530	18760	21860	21350	21540
29	12220	12000	11890	11840	---	11440	11570	11510	18770	21850	21340	21530
30	12210	12000	11880	11840	---	11430	11600	11500	18750	21820	21330	21530
31	12210	---	11880	11840	---	11430	---	11480	---	21810	21320	---
MAX	12390	12190	11990	11870	11840	11560	11600	11640	18770	21860	21790	21590
MIN	12210	12000	11880	11840	11560	11430	11320	11390	11420	18310	21320	21140
(†)	3038.77	3038.19	3037.86	3037.75	3036.97	3036.59	3037.08	3036.74	3054.38	3060.79	3059.80	3060.22
(‡)	-190	-210	-120	-40	-280	-130	+170	-120	+7270	+3060	-490	+210
(††)	96.7	107	109	110	103	110	161	193	142	266	207	106

CAL YR 1984 MAX 14800 MIN 11880 (‡) -2620 (††) -
WTR YR 1985 MAX 21860 MIN 11320 (‡) +9130 (††) 1711

(†) Elevation, in feet, at end of month.
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use by cities of Floydada, Silverton, and Tulia.

07298200 TULE CREEK NEAR SILVERTON, TX

LOCATION.--Lat 34°32'36", long 101°25'46", Briscoe County, Hydrologic Unit 11120104, at 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 mi², of which 960 mi² 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 above State Department of Highways and Public Transportation datum.

REMARKS.--No estimated daily discharges. Records poor. Since June 1974, flow 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 ft³/s (6,690 acre-ft/yr); 12 years (water years 1974-85) regulated, 2.81 ft³/s (2,036 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/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, 5,150 ft³/s July 26 at 1030 hours (gage height, 9.03 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.20	1.1	.00	.00	.55	.00	.00	.00	.00
2	.00	.00	.00	.20	1.1	.00	.00	.20	.00	.00	.00	.00
3	.00	.00	.00	.20	1.1	.00	.00	.00	.00	.00	.00	.00
4	3.4	.00	.00	.20	.90	.00	.00	.00	188	.00	.00	.00
5	.00	.00	.00	.20	.90	.00	.00	.00	453	.00	.00	.00
6	.00	.00	.00	.20	.74	.00	.00	.00	21	.00	37	.00
7	.00	.00	.00	.15	.74	.00	.00	.00	1.4	.00	.41	.00
8	.00	.00	.00	.15	.71	.00	.00	.00	.20	.00	.00	.00
9	.00	.00	.00	.15	.55	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.15	.40	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.15	.20	.00	.15	.00	7.3	.00	.00	.00
12	.00	.00	.00	.15	.20	.00	.63	.00	.90	.00	.00	.00
13	.00	.00	2.4	.10	.15	.00	.20	.00	.20	.00	.00	.00
14	.00	.00	.09	.10	.15	.00	.00	.00	.00	.00	.00	.00
15	.41	.00	9.1	.10	.10	.00	.00	.00	.00	.00	.00	.00
16	1.3	.00	5.6	.10	.08	.00	.00	1.2	.00	.00	2.0	.00
17	.00	5.6	.10	.10	.05	.00	.00	2.3	.00	.00	.50	.00
18	.00	.09	.05	.05	.02	.00	.00	.05	37	.00	.00	.00
19	.00	.00	.05	.05	.00	3.1	.00	.00	.02	.00	.00	50
20	.00	.00	.83	.05	.00	7.3	.00	.00	.00	.00	.00	125
21	.07	.00	.20	.02	.44	.20	.00	.00	2.6	.00	.00	10
22	.00	.00	.20	.02	1.3	.00	.00	5.5	6.9	.00	.00	.50
23	.00	.00	.20	.02	.97	.00	.00	1.3	.00	.00	.00	.00
24	1.7	8.3	.15	.02	.00	.00	.00	.00	.00	12	.00	.00
25	.63	.21	.15	.02	.00	.00	.82	.00	.00	122	.00	.00
26	.00	.00	.15	.02	.00	.00	1.4	.00	59	999	.00	.00
27	.00	.00	.10	9.3	.00	.00	16	.00	25	72	.00	.00
28	.00	.00	.23	1.3	.00	.00	12	.00	1.6	.58	.00	.00
29	.00	.00	.44	1.3	---	.00	39	.00	.02	.00	.00	.00
30	.00	.00	.15	1.3	---	.00	1.4	.00	.00	.00	.00	.00
31	.00	---	.71	1.3	---	.00	---	.00	---	.00	.00	---
TOTAL	7.51	14.20	20.90	17.37	11.90	10.60	71.60	11.10	804.14	1205.58	39.91	185.50
MEAN	.24	.47	.67	.56	.43	.34	2.39	.36	26.8	38.9	1.29	6.18
MAX	3.4	8.3	9.1	9.3	1.3	7.3	39	5.5	453	999	37	125
MIN	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	15	28	41	34	24	21	142	22	1600	2390	79	368

CAL YR 1984 TOTAL 179.14 MEAN .49 MAX 25 MIN .00 AC-FT 355
WTR YR 1985 TOTAL 2400.31 MEAN 6.58 MAX 999 MIN .00 AC-FT 4760

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 mi^2, of which 4,769 mi^2 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 above National Geodetic Vertical Datum of 1929 (from Texas State Department of Highways and Public Transportation bench mark).

REMARKS.--Estimated daily discharges: Jan. 6-21, Feb. 24 to Mar. 27, and Sept. 13-30. Records fair except for those periods of estimated daily discharge, which are poor. There are many small diversions upstream from station. Flow is affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity 20,010 acre-ft. These structures control runoff from 95.2 mi^2.

AVERAGE DISCHARGE.--20 years (water years 1966-85), 105 ft^3/s (76,070 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,400 ft^3/s May 28, 1978 (gage height, 13.47 ft, from floodmark), from rating curve extended above 33,000 ft^3/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 discharges greater than base discharge of 7,000 ft^3/s and maxmimum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 29	1930	8,230	9.72	June 5	1830	*17,400	*10.46

Minimum daily discharge, 0.02 ft^3/s Aug. 10, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	6.8	2.1	88	10	4.7	31	274	1.7	147	17	2.7
2	.96	2.7	1.3	14	9.2	4.7	26	179	1.5	113	8.2	3.2
3	1.2	3.8	1.0	17	13	4.7	21	123	1.6	101	1.9	2.7
4	1.5	3.2	3.6	21	24	4.7	14	86	153	100	.32	3.2
5	1.8	.96	28	16	30	4.7	8.2	56	11700	87	.40	1.8
6	.75	1.5	14	14	26	3.8	8.4	35	4600	72	.62	2.7
7	.75	2.7	5.5	14	21	3.8	7.6	21	1600	68	.32	3.2
8	1.5	2.7	5.4	11	23	3.2	8.6	26	775	55	.26	3.2
9	1.2	3.8	5.4	11	22	3.2	8.7	28	646	58	.20	1.8
10	.75	1.2	2.6	9.7	17	3.2	11	31	543	51	.02	1.5
11	.96	2.2	3.8	9.7	9.9	3.2	11	28	568	55	.08	.62
12	5.6	2.7	3.5	9.7	8.7	3.8	15	26	462	57	.02	.20
13	3.8	3.2	46	8.2	8.7	3.8	24	30	440	48	33	184
14	2.7	5.6	133	8.1	8.0	3.8	19	28	386	45	242	156
15	1.8	3.2	987	6.8	6.6	3.8	27	31	376	51	337	124
16	2.2	2.2	536	6.8	6.5	3.8	30	34	346	50	213	80
17	.75	337	150	6.8	5.7	3.8	21	38	284	48	84	30
18	2.7	250	42	5.7	6.4	3.8	14	38	1250	45	54	4.6
19	.50	45	33	5.6	6.7	4.6	12	44	1320	35	42	.75
20	.96	8.2	31	4.7	13	42	12	87	991	29	42	9.7
21	2.2	4.6	38	5.6	37	51	12	66	620	37	451	51
22	1.8	3.2	7.0	5.5	39	17	34	53	731	38	386	92
23	1.8	3.1	5.4	5.7	55	6.8	18	49	721	36	168	30
24	2.2	42	2.0	6.4	64	5.6	12	93	606	39	250	28
25	3.8	174	.53	6.2	39	4.6	10	77	484	183	84	26
26	5.6	40	.90	5.5	16	321	16	699	1030	1350	72	21
27	26	4.6	4.6	29	8.2	365	2220	229	1720	1960	30	17
28	5.6	2.6	16	41	9.7	36	791	92	709	667	3.2	17
29	3.8	2.6	12	29	---	36	2080	72	379	337	3.2	14
30	6.8	2.2	2.2	16	---	42	1200	33	250	125	2.7	206
31	4.6	---	83	2.3	---	36	---	3.9	---	36	2.7	---
TOTAL	97.33	967.56	2205.83	440.0	543.3	1038.1	6722.5	2709.9	33694.8	6123	2529.14	1117.87
MEAN	3.14	32.3	71.2	14.2	19.4	33.5	224	87.4	1123	198	81.6	37.3
MAX	26	337	987	88	64	365	2220	699	11700	1960	451	206
MIN	.50	.96	.53	2.3	5.7	3.2	7.6	3.9	1.5	29	.02	.20
AC-FT	193	1920	4380	873	1080	2060	13330	5380	66830	12140	5020	2220

CAL YR 1984 TOTAL 17772.28 MEAN 48.6 MAX 1680 MIN .08 AC-FT 35250
WTR YR 1985 TOTAL 58189.33 MEAN 159 MAX 11700 MIN .02 AC-FT 115400

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 microsiemens June 18, July 8, and Aug. 9, 1970; minimum daily, 3,000 microsiemens 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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 27...	0945	7.0	59400	7.8	4.0	33	11.1	116	1.0	K1300	1600	4500
JAN 21...	1545	5.6	66700	7.8	7.0	5.5	11.2	131	1.7	<4	820	4400
MAR 11...	1445	3.2	71000	8.0	23.0	7.2	7.4	124	1.3	K4	K12	5200
MAY 21...	1130	68	22800	8.0	21.0	520	10.0	131	2.5	K3700	5600	2000
JUL 23...	0800	42	70300	7.8	22.0	5.4	6.4	105	1.2	K28	370	5100
AUG 20...	1515	58	35400	8.0	34.0	1.0	7.4	127	1.8	K590	K820	3200

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 27...	4400	1300	300	14000	95	36	120	3900	22000	.60	9.6
JAN 21...	4200	1300	270	16000	110	38	120	3900	25000	.60	11
MAR 11...	5100	1500	350	18000	110	41	90	4700	29000	.70	9.7
MAY 21...	2000	600	130	4300	43	14	72	1700	6900	.50	9.4
JUL 23...	5000	1500	330	15000	95	38	72	4300	25000	.60	9.2
AUG 20...	3100	980	180	7800	63	27	77	2400	13000	.70	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 27...	43000	42000	.14	.850	.70	.040	<.010	<.010	109	2.1	75
JAN 21...	48200	47000	<.10	1.10	.80	.010	<.010	.010	110	1.7	95
MAR 11...	52900	54000	<.10	.900	.90	.020	.010	<.010	25	.22	62
MAY 21...	14400	14000	.55	.300	2.6	.670	<.010	<.010	1580	290	78
JUL 23...	50900	46000	<.10	.800	.50	.020	<.010	<.010	35	4.0	81
AUG 20...	24300	24000	.24	.300	1.0	.320	<.010	<.010	1300	204	91

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 27...	0945	2	<100	20	1	<1	2	1	220	1
MAR 11...	1445	2	<100	20	1	<1	1	1	230	<1
MAY 21...	1130	2	400	<10	2	<1	3	2	80	3
AUG 20...	1515	3	400	<10	1	<1	2	4	120	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 27...	160	190	.2	8	3	1	1	22000	270	40
MAR 11...	210	130	.2	5	1	<1	<1	25000	350	40
MAY 21...	90	50	.2	<1	3	2	1	11000	100	20
AUG 20...	140	40	.2	5	1	1	<1	17000	200	20

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

LOCATION.--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.

DRAINAGE AREA.--8,321 mi^2, of which 4,769 mi^2 is probably noncontributing.

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

EXTREMES.--Maximum discharge, 21,700 ft^3/s June 6 (gage height, 11.15 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 1984 TO SEPTEMBER 1985

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. SIEVE DIAM. % FINER THAN .062 MM
JUN						
05...	1615	14200	--	31800	1220000	74
18...	0920	100	19.0	996	269	92

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 at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. There are several diversions upstream from station for farm and ranch use and for a gypsum plant. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1963-85), 14.1 ft³/s (0.63 in/yr), 10,220 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.--The highest stage known occurred in June 1891, and the highest stage since 1891 occurred in September 1929, stages unknown. 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 greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 5	1700	*838	13.98				

Minimum discharge, 1.9 ft³/s Sept. 9, 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	4.7	3.4	49	4.8	5.2	7.8	5.0	3.3	4.1	3.6	2.9
2	3.3	4.4	3.4	14	4.8	5.2	6.1	6.0	3.1	4.1	3.6	2.9
3	3.4	4.2	3.2	8.3	4.8	5.4	5.4	5.5	3.0	4.2	3.6	3.0
4	3.5	4.1	3.2	7.0	5.0	5.3	5.3	4.8	4.8	4.1	2.4	2.9
5	3.6	4.0	3.3	6.1	5.0	5.0	5.0	4.6	539	4.1	2.8	2.9
6	3.5	3.8	3.4	5.5	5.0	4.8	5.0	4.6	547	4.3	2.9	2.8
7	3.4	3.8	3.4	4.9	5.0	5.0	4.8	4.6	269	4.1	2.9	2.6
8	3.8	3.9	3.4	4.8	5.4	5.0	4.8	4.6	75	4.0	2.9	2.8
9	6.0	4.0	3.4	4.8	5.5	4.8	5.2	4.6	20	3.8	2.8	2.3
10	5.0	3.9	3.4	4.4	4.8	4.8	5.0	4.6	14	3.5	2.8	2.1
11	4.5	3.6	3.4	4.4	4.6	4.8	5.2	4.6	12	3.9	3.2	2.5
12	4.3	3.6	3.5	4.4	4.7	4.8	5.2	4.4	11	4.0	2.9	3.3
13	4.1	3.6	4.0	4.4	4.6	4.8	6.2	4.4	9.3	3.8	2.8	3.1
14	4.0	3.6	4.1	4.1	4.7	4.6	5.7	4.1	8.4	3.6	3.0	3.0
15	3.8	3.6	5.8	4.3	5.0	4.4	5.5	4.2	10	3.6	3.5	3.0
16	3.6	3.6	8.1	4.4	4.9	3.8	5.5	4.4	14	3.7	3.6	3.0
17	3.4	5.0	16	4.4	4.9	4.2	5.7	4.6	13	3.7	3.6	3.0
18	3.4	6.0	9.5	4.3	5.1	4.7	5.5	4.4	19	3.4	3.3	2.9
19	3.4	4.8	6.1	4.6	5.2	5.4	5.5	6.3	16	3.2	3.4	2.8
20	3.4	4.4	4.6	4.5	5.6	9.0	5.0	9.5	20	3.3	3.4	3.1
21	3.2	4.2	4.2	4.5	6.3	14	5.0	7.9	8.2	3.5	3.5	3.2
22	3.3	3.8	3.9	4.5	6.6	11	10	5.5	8.6	3.4	3.3	2.7
23	3.4	3.8	3.6	4.6	8.9	7.3	13	4.5	11	3.6	3.1	2.6
24	3.5	4.0	3.3	4.5	8.7	6.0	7.0	4.3	6.8	3.6	3.3	2.8
25	3.7	4.4	3.1	4.3	7.3	5.5	5.7	4.3	4.9	5.8	3.2	2.9
26	3.8	4.2	3.0	4.3	5.8	5.4	5.5	4.2	7.1	5.1	3.0	3.0
27	4.0	3.8	3.0	4.9	5.3	5.5	23	4.3	5.3	4.5	2.9	3.1
28	4.0	3.6	3.2	4.8	5.2	5.2	25	4.6	5.0	4.3	2.9	3.3
29	3.9	3.5	3.1	4.8	---	5.5	9.0	4.3	4.4	4.0	3.0	4.7
30	4.0	3.4	2.8	4.7	---	12	6.0	3.8	4.2	3.7	4.7	178
31	5.6	---	39	4.8	---	19	---	3.6	---	3.4	3.4	---
TOTAL	119.0	121.3	170.8	203.3	153.5	197.4	218.6	151.1	1676.4	121.4	99.3	263.2
MEAN	3.84	4.04	5.51	6.56	5.48	6.37	7.29	4.87	55.9	3.92	3.20	8.77
MAX	6.0	6.0	39	49	8.9	19	25	9.5	547	5.8	4.7	178
MIN	3.2	3.4	2.8	4.1	4.6	3.8	4.8	3.6	3.0	3.2	2.4	2.1
CFSM	.01	.01	.02	.02	.02	.02	.02	.02	.18	.01	.01	.03
IN.	.01	.01	.02	.02	.02	.02	.03	.02	.21	.01	.01	.03
AC-FT	236	241	339	403	304	392	434	300	3330	241	197	522

CAL YR 1984 TOTAL 2737.3 MEAN 7.48 MAX 770 MIN 2.1 CFSM .03 IN .34 AC-FT 5430
WTR YR 1985 TOTAL 3495.3 MEAN 9.58 MAX 547 MIN 2.1 CFSM .03 IN .43 AC-FT 6930

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.

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, 26,010 acre-ft June 11 at 1100 hours (elevation, 2,642.38 ft); minimum, 22,700 acre-ft Nov. 17 (elevation, 2,639.32 ft).

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

2,639.0	22,370	2,641.0	24,480
2,640.0	23,410	2,642.0	25,580
		2,643.0	26,720

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23230	22910	22810	23260	23310	24210	24910	25500	25140	25880	25170	24680
2	23260	22910	22800	23240	23290	24230	24910	25500	25110	25870	25130	24650
3	23130	22910	22800	23260	23300	24230	24920	25490	25060	25830	25100	24610
4	23130	22880	22800	23270	23320	24210	24880	25480	25220	25790	25070	24560
5	23100	22880	22800	23290	23320	24220	24880	25470	25800	25740	25020	24500
6	23140	22860	22800	23290	23320	24230	24880	25470	25960	25710	24980	24460
7	23200	22840	22820	23290	23320	24240	24870	25440	25980	25660	24940	24430
8	23230	22840	22840	23300	23360	24240	24850	25430	25980	25640	24890	24390
9	23070	22810	22820	23260	23380	24260	24850	25430	25980	25580	24810	24370
10	23000	22750	22820	23260	23380	24300	24850	25400	25970	25530	24790	24360
11	23000	22770	22830	23250	23380	24280	24880	25350	25980	25470	24770	24320
12	23010	22770	22810	23250	23390	24260	24930	25330	25960	25440	24700	24300
13	22990	22780	22830	23250	23400	24240	24930	25220	25930	25370	24760	24330
14	22960	22750	22850	23250	23400	24240	24920	25220	25890	25360	24810	24300
15	22950	22720	23090	23250	23420	24230	24920	25210	25920	25280	24850	24290
16	23030	22720	23090	23260	23400	24230	24910	25180	25910	25250	25000	24280
17	23010	22770	23100	23260	23400	24260	24920	25150	25850	25230	24960	24270
18	22980	22800	23130	23270	23400	24260	24900	25140	25910	25160	25120	24210
19	22970	22800	23150	23240	23420	24410	24870	25120	25900	25110	25140	24260
20	22970	22780	23180	23230	23420	24760	24810	25120	25880	25050	25120	24760
21	22970	22790	23160	23240	23700	24830	24800	25100	25890	25030	25120	25000
22	22950	22790	23170	23230	24070	24870	24780	25090	25920	24980	25070	25050
23	22940	22800	23190	23240	24120	24890	24770	25070	25910	24920	25020	25010
24	22940	22840	23160	23260	24150	24910	24730	25050	25880	25000	25020	25020
25	22950	22870	23170	23230	24180	24920	24760	25060	25900	25210	24980	24990
26	22960	22820	23190	23270	24160	24920	24910	25310	25940	25250	24950	24980
27	22960	22820	23220	23320	24180	24950	24920	25330	25970	25330	24910	24980
28	22940	22850	23250	23320	24200	24940	24980	25330	25990	25320	24850	24920
29	22950	22830	23260	23340	---	24910	25430	25310	25930	25310	24820	24920
30	22930	22830	23260	23310	---	24910	25470	25250	25920	25250	24760	24930
31	22960	---	23270	23310	---	24910	---	25170	---	25210	24740	---
MAX	23260	22910	23270	23340	24200	24950	25470	25500	25990	25880	25170	25050
MIN	22930	22720	22800	23230	23290	24210	24730	25050	25060	24920	24700	24210
(†)	2639.57	2639.44	2639.87	2639.90	2640.74	2641.39	2641.90	2641.63	2642.30	2641.66	2641.24	2641.41
(‡)	-280	-130	+440	+40	+890	+710	+560	-300	+750	-710	-470	+190
(††)	307	272	257	253	243	260	296	367	340	492	492	378

CAL YR 1984 MAX 28120 MIN 22720 (‡) -4550 (††) 4757
WTR YR 1985 MAX 25990 MIN 22720 (‡) +1690 (††) 3957

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

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily 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/yr), 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); 19 years (water years 1967-85) regulated, 43.4 ft^3/s (31,440 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, 3,430 ft^3/s Apr. 29 at 1500 hours (gage height, 6.51 ft); minimum daily, 0.40 ft^3/s June 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	7.2	9.8	25	9.0	14	40	140	.44	14	4.8	5.9
2	3.5	6.6	8.8	15	9.9	12	33	148	.40	13	4.4	6.4
3	3.3	7.5	9.0	16	9.0	9.6	31	155	1.3	12	4.0	6.6
4	3.5	6.1	9.4	21	11	9.8	32	73	305	12	3.9	6.3
5	3.0	5.7	9.4	21	15	5.2	29	54	1360	11	4.6	6.0
6	3.1	6.0	9.1	16	15	4.1	26	33	1040	9.9	4.1	6.0
7	2.9	7.0	9.4	17	23	3.8	24	24	185	9.9	3.6	6.6
8	3.5	7.6	10	21	38	3.6	25	20	108	9.9	3.6	6.4
9	4.3	7.0	9.8	20	103	3.4	24	19	69	9.9	3.3	6.6
10	4.2	5.2	9.9	14	69	3.6	24	21	51	9.0	4.2	6.5
11	4.4	6.4	9.9	13	43	3.5	25	18	103	9.0	4.2	6.4
12	4.7	6.9	9.8	11	38	3.0	26	13	71	9.0	3.7	6.8
13	4.6	7.2	15	14	35	3.0	57	11	42	9.0	20	7.4
14	5.1	7.4	19	15	27	2.6	71	7.0	36	9.0	15	7.4
15	4.3	7.2	163	20	23	2.5	43	4.8	35	8.2	9.0	7.7
16	6.4	7.1	142	35	27	3.0	36	3.9	31	8.2	9.0	8.2
17	4.9	21	50	21	21	4.2	32	4.5	25	8.2	6.8	7.5
18	5.1	15	38	20	21	4.4	27	6.2	21	7.5	5.6	7.2
19	4.4	11	44	20	20	6.6	23	6.8	38	7.5	6.8	9.5
20	4.6	9.6	45	17	21	667	21	6.8	23	6.8	7.5	319
21	4.2	9.4	42	14	56	361	22	99	13	7.5	7.5	76
22	4.8	9.5	26	20	368	45	37	18	87	7.5	7.5	23
23	4.7	9.3	19	15	97	23	31	6.4	43	7.5	9.5	7.5
24	4.4	14	16	18	56	24	28	4.0	20	7.5	14	7.0
25	5.2	20	14	31	20	19	26	2.5	12	13	9.0	6.3
26	6.3	13	18	21	12	19	60	1.8	155	13	7.9	7.4
27	6.8	10	24	51	9.5	66	411	1.2	140	11	7.6	8.2
28	5.7	9.3	27	61	11	44	103	.97	51	7.5	7.4	31
29	5.8	9.9	29	43	---	32	400	.96	29	6.3	6.9	203
30	6.9	9.2	24	23	---	55	120	.64	17	5.3	6.8	27
31	6.7	---	27	3.1	---	59	---	.47	---	4.9	6.4	---
TOTAL	144.7	278.3	896.3	672.1	1207.4	1515.9	1887	904.94	4112.14	284.0	218.6	846.8
MEAN	4.67	9.28	28.9	21.7	43.1	48.9	62.9	29.2	137	9.16	7.05	28.2
MAX	6.9	21	163	61	368	667	411	155	1360	14	20	319
MIN	2.9	5.2	8.8	3.1	9.0	2.5	21	.47	.40	4.9	3.3	5.9
AC-FT	287	552	1780	1330	2390	3010	3740	1790	8160	563	434	1680

CAL YR 1984 TOTAL 6627.70 MEAN 18.1 MAX 1380 MIN 1.2 AC-FT 13150
WTR YR 1985 TOTAL 12968.18 MEAN 35.5 MAX 1360 MIN .40 AC-FT 25720

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 microsiemens July 15, 1984; minimum daily, 330 microsiemens July 30, 1982.
WATER TEMPERATURES (1967-84): 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, 4,200 microsiemens Mar. 15; minimum daily, 1,190 microsiemens June 5.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 21; 0.0°C Jan. 12, Feb. 1, 2, 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 26...	1610	12	3650	8.0	12.0	5	3.8	11.0	113	1.3	K50	92
JAN 21...	1300	14	3430	7.6	25.0	5	3.5	.4	5	.4	K4	K10
MAR 11...	1215	3.8	3080	7.9	17.0	35	21	11.1	127	.6	72	K44
APR 30...	1900	127	1790	--	24.0	--	--	--	--	--	--	--
MAY 21...	0815	78	1050	7.7	13.0	13	1600	12.2	127	11	24000	21000
JUL 22...	1300	11	3070	7.8	33.0	5	2.0	8.5	131	.7	310	720
AUG 20...	1215	9.0	3170	8.2	29.5	3	14	8.8	127	1.1	480	260

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 26...	1800	1700	570	97	230	2	4.2	160	1600	370	.60	20
JAN 21...	1500	1300	450	96	230	3	3.6	180	1400	340	.60	20
MAR 11...	1300	1200	400	85	260	3	4.7	140	1200	350	.70	19
APR 30...	670	530	190	47	140	2	6.5	139	600	190	.50	16
MAY 21...	410	360	120	26	80	2	5.1	46	360	100	.30	5.7
JUL 22...	1500	1400	460	80	150	2	4.2	130	1300	210	.60	21
AUG 20...	1800	1700	590	83	160	2	4.0	134	1500	240	.60	19

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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 26...	3000	13	--	1.3	.010	1.3	.210	.09	.30	<.010	1.4
JAN 21...	2600	17	13	1.6	.010	1.6	.320	.68	1.0	<.010	1.1
MAR 11...	2400	34	2	--	<.010	.80	.150	.45	.60	.020	1.8
APR 30...	1300	--	--	--	--	--	--	--	--	--	--
MAY 21...	720	2120	200	.38	.020	.40	.230	1.2	1.4	.850	36
JUL 22...	2300	5	3	1.9	.020	1.9	.260	.34	.60	.020	1.5
AUG 20...	2700	14	9	1.4	.010	1.4	.150	.25	.40	<.010	5.9

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	144.7	3340	2760	1080	290	113	1500	581	1700
NOV.	1984	278.3	3560	3000	2260	300	228	1600	1210	1800
DEC.	1984	896.3	3080	2490	6020	270	656	1300	3260	1500
JAN.	1985	672.1	3190	2600	4720	280	506	1400	2550	1600
FEB.	1985	1207.4	2800	2210	7200	250	815	1200	3910	1400
MAR.	1985	1515.9	2400	1820	7460	220	900	1000	4100	1100
APR.	1985	1887	2330	1790	9140	210	1080	980	5000	1100
MAY	1985	904.94	2620	2030	4960	240	580	1100	2710	1200
JUNE	1985	4112.14	1770	1290	14300	170	1860	720	7950	800
JULY	1985	284.0	3080	2490	1910	270	208	1300	1030	1500
AUG.	1985	218.6	3250	2660	1570	280	167	1400	846	1600
SEPT	1985	846.8	2900	2300	5260	260	590	1200	2860	1400
TOTAL		12968.18	**	**	65900	**	7700	**	36000	**
WTD.AVG.		36	2430	1880	**	220	**	1000	**	1200

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

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3180	3500	3450	3300	3930	3150	2900	2200	3300	3230	3010	3180
2	3220	3540	3470	3260	3990	3110	3040	2440	3330	3200	3040	3130
3	3180	3450	3430	3490	3870	3260	3030	2580	2720	3160	3050	3060
4	3210	3430	3450	3200	3580	3420	3000	2730	2340	3150	3070	3130
5	3200	3370	3470	3010	3390	3040	3120	2850	1190	3170	3000	3100
6	3230	3490	3430	3200	3520	3270	3150	2930	1250	3140	3090	3080
7	3250	3450	3500	3260	3350	3540	3190	3040	1960	3120	3210	3110
8	3230	3480	3490	3330	3130	3860	3220	2990	2250	3100	3320	3150
9	3240	3500	3470	3280	2650	4190	3240	3100	2420	3110	3390	3120
10	3260	3520	3460	3130	2700	3650	3230	3110	2630	3120	3450	3090
11	3270	3490	3450	3220	2760	3680	3210	3270	2300	3110	3460	3140
12	3340	3520	3470	3310	3080	3720	3200	3300	2410	3100	3500	3130
13	3410	3530	3310	3260	3120	4130	3160	3320	2540	3090	3120	3100
14	3380	3490	3250	3220	3190	4170	2930	3350	2660	3070	3300	3120
15	3250	3520	2730	3450	3240	4200	3060	3280	2730	3080	3450	3130
16	3230	3570	2770	3110	3270	4010	3120	3290	2840	3090	3600	3140
17	3460	3820	2990	3270	3280	3690	3210	3230	2970	3110	3470	3120
18	3410	3840	3310	3290	3290	3510	3300	3250	3050	3120	3330	3130
19	3360	3620	3220	3280	3320	3400	3270	3270	2890	3140	3230	3110
20	3330	3590	3160	3320	3240	2190	3220	3280	3000	3150	3200	2640
21	3300	3610	3010	3360	3100	2040	3250	2170	3420	3080	3280	3070
22	3440	3560	3070	3230	2340	2450	3180	2690	2760	3070	3340	3130
23	3400	3520	3220	3290	2510	2880	3250	3160	2990	3110	3230	3530
24	3370	3500	3370	3440	2770	2790	3270	3350	3330	3130	3170	3510
25	3380	3510	3490	3180	2890	2910	3330	3370	3510	2940	3300	3520
26	3450	3590	3530	3310	3310	3080	3150	3400	2730	2860	3180	3440
27	3430	3600	3220	3030	3460	2620	1850	3410	2810	2900	3150	3520
28	3390	3520	3170	2920	3570	2880	2400	3430	2990	2930	3160	3360
29	3420	3530	3160	2980	---	2920	1250	3440	3140	2940	3160	2780
30	3450	3470	3270	3140	---	2960	1800	3360	3210	2960	3170	3670
31	3480	---	3330	3620	---	2940	---	3280	---	2990	3270	---
MEAN	3330	3540	3290	3250	3210	3280	2980	3090	2720	3080	3250	3180

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	---	---	---	.0	17.0	18.0	23.5	---		---	32.0
2	18.0	---	---	5.0	.0	13.5	23.0	25.0	---		---	29.0
3	15.0	10.0	8.5	7.0	---	---	25.0	---	25.0		---	18.0
4	14.0	7.0	---	9.0	---	15.0	25.0	25.5	---		---	29.0
5	15.0	6.0	2.0	11.0	.0	14.5	19.0	---	18.0		---	19.0
6	15.0	9.0	8.0	---	---	---	---	---	---		---	20.0
7	---	9.0	11.5	---	3.0	---	---	28.5	---		---	---
8	16.0	10.0	3.0	3.0	6.0	---	20.5	30.0	31.0		---	31.0
9	21.0	10.0	---	12.0	14.0	14.0	23.0	24.0	---		---	21.0
10	15.0	9.0	14.0	7.0	---	---	27.0	25.0	---		---	21.0
11	15.0	17.0	12.0	---	9.0	19.0	---	22.0	---		---	25.0
12	---	18.0	8.5	.0	11.0	8.0	26.0	---	---		---	20.0
13	15.0	18.0	5.0	---	---	14.0	26.5	---	---		---	23.0
14	15.0	19.0	---	7.0	14.0	---	---	22.0	---		---	18.0
15	15.0	15.0	3.0	10.0	14.0	---	28.0	29.0	---		22.0	---
16	14.0	5.0	---	6.5	15.0	---	---	22.0	---		34.0	20.0
17	6.0	6.0	11.0	10.0	---	---	---	19.0	---		22.0	19.0
18	8.0	6.0	---	12.5	15.0	20.0	24.0	---	---		27.0	20.0
19	5.0	5.0	6.0	8.0	17.0	19.0	23.0	---	---		29.0	22.0
20	11.0	6.0	---	---	13.0	10.0	24.5	25.0	---		34.0	---
21	12.0	6.0	6.0	3.0	20.0	10.5	---	23.5	---		36.0	20.0
22	9.0	---	3.0	3.0	---	---	---	---	---		23.0	21.0
23	10.0	8.0	---	11.0	---	18.0	25.0	26.0	---		32.0	12.0
24	8.0	8.0	3.0	15.0	---	---	25.0	27.0	---		35.0	12.0
25	7.0	7.0	---	---	17.0	---	23.0	---	---		28.0	12.0
26	11.0	9.0	6.5	---	10.0	---	---	---	---		---	12.0
27	12.0	8.0	12.0	---	14.0	20.0	12.0	---	---		21.0	25.0
28	7.0	13.0	18.0	4.0	12.0	21.0	---	---	---		19.0	15.0
29	8.0	14.0	17.0	11.0	---	---	23.0	31.0	---		19.0	---
30	---	11.5	---	---	---	6.0	24.0	---	---		29.0	15.0
31	13.0	---	3.5	---	---	18.0	---	26.0	---		19.0	---
MEAN	12.5	10.0	8.0	8.0	10.5	15.0	23.0	25.0	24.5		27.0	20.5

07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'32", long 99°30'28", in SW 1/4 SE 1/4 sec.34. T.5 N, R.22 W., Greer County, Hydrologic Unit 11120201, near left bank at downstream side of pier of bridge on State Highway 34, 0.5 mi south of Mangum, 13.0 mi downstream from Fish Creek, and at mile 35.5.

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft above 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.--Estimated daily discharges: Jan. 1, 11-13, 31, and Feb. 1-8. Records poor.

AVERAGE DISCHARGE.--48 years (water years 1938-85), 84.0 ft^3/s (60,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 $^3/s$ 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 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.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 25	1200	*4,420	*8.95				

Minimum discharge, no flow at times.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	31	30	61	159	302	5.6	32	2.0	.00
2	.00	.00	.00	23	23	49	147	204	5.3	23	1.2	.00
3	.00	.00	.00	25	17	45	125	127	5.3	16	.92	.00
4	.00	.00	.00	26	19	31	108	83	6.3	13	.82	.00
5	.00	.00	.00	27	22	27	95	59	1820	10	.72	.00
6	.00	.00	.00	20	20	25	87	43	1800	8.0	.72	.00
7	.00	.00	.00	21	28	24	79	32	955	6.0	.06	.00
8	.00	.00	.00	20	40	24	74	28	395	4.4	.00	.00
9	.00	.00	.00	18	55	24	70	25	140	3.2	.00	.00
10	.00	.00	.00	15	79	25	70	23	95	2.6	.00	.00
11	.00	.00	.02	10	66	24	67	22	91	2.4	.00	.00
12	.00	.00	.04	9.4	47	21	62	17	116	2.2	.00	.00
13	.00	.00	.72	10	35	20	116	15	109	2.2	155	.00
14	.00	.00	3.2	12	26	20	98	14	70	2.0	63	.00
15	.00	.00	77	20	24	18	91	11	149	.00	65	.00
16	.00	.00	415	22	23	18	91	8.3	207	.00	5.0	.00
17	.00	.00	227	16	20	19	69	7.3	63	.00	1.3	.00
18	.00	.00	136	15	19	19	53	6.8	191	.00	1.3	.00
19	.00	.00	70	13	19	22	41	6.5	257	.00	5.6	.00
20	.00	.00	33	9.4	20	277	34	7.9	29	.00	1.2	.00
21	.00	.00	35	11	31	773	30	512	30	.00	.72	7.2
22	.00	.00	33	12	93	358	33	314	27	.00	.35	51
23	.00	.00	33	13	366	313	31	155	76	.00	.03	8.0
24	.00	.00	26	16	298	262	30	58	156	.00	.03	2.0
25	.00	.00	23	20	243	229	27	34	93	915	.00	.19
26	.00	.00	19	16	163	199	57	22	49	343	.00	.00
27	.00	.00	21	23	112	252	527	15	234	171	.00	.00
28	.00	.00	20	33	79	184	406	11	414	47	.00	.00
29	.00	.00	22	44	---	183	311	8.9	150	17	.00	24
30	.00	.00	20	46	---	169	1080	7.5	49	7.5	.00	82
31	.00	---	35	40	---	155	---	7.0	---	3.4	.00	---
TOTAL	.00	.00	1248.98	636.8	2017	3870	4268	2186.2	7787.5	1630.90	304.97	174.39
MEAN	.00	.00	40.3	20.5	72.0	125	142	70.5	260	52.6	9.84	5.81
MAX	.00	.00	415	46	366	773	1080	512	1820	915	155	82
MIN	.00	.00	.00	9.4	17	18	27	6.5	5.3	.00	.00	.00
AC-FT	.00	.00	2480	1260	4000	7680	8470	4340	15450	3230	605	346

CAL YR 1984 TOTAL 7726.50 MEAN 21.1 MAX 801 MIN .00 AC-FT 15330
WTR YR 1985 TOTAL 24124.74 MEAN 66.1 MAX 1820 MIN .00 AC-FT 47850

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of estimated daily discharges, Feb. 1-10, which are 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 11 floodwater-retarding structures with a combined detention capacity of 18,290 acre-ft. These structures control runoff from 165 mi^2. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--21 years, 30.7 ft^3/s (22,240 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, 2,960 ft^3/s Feb. 22 at 0230 hours (gage height, 3.84 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	7.7	15	30	48	19	.00	.00	.00	.00
2	.00	.00	.00	7.7	17	24	24	15	.00	.00	.00	.00
3	.00	.00	.00	4.9	20	34	21	9.9	.00	.00	.00	.00
4	.00	.00	.00	54	30	16	15	6.3	.12	.00	.00	.00
5	.00	.00	.00	154	25	3.1	5.9	3.3	154	.00	.00	.00
6	.00	.00	.00	57	20	3.4	2.1	2.0	225	.00	.00	.00
7	.00	.00	.00	28	20	3.5	1.6	80	30	.00	.00	.00
8	.00	.00	.00	27	25	6.3	1.6	50	5.2	.00	.00	.00
9	.00	.00	.00	35	30	5.6	1.8	23	.08	.00	.00	.00
10	.00	.00	.00	18	35	9.2	1.9	14	.09	.00	.00	.00
11	.00	.00	.00	6.8	38	4.9	3.1	5.9	4.5	.00	.00	.00
12	.00	.00	.00	3.5	82	.65	3.1	.41	.35	.00	.00	.00
13	.00	.00	.00	2.5	31	.35	97	.01	.03	.00	.00	.00
14	.00	.00	.00	2.6	11	.23	37	.00	.00	.00	.00	.00
15	.00	.00	439	32	9.8	.16	7.5	.00	.04	.00	.00	.00
16	.00	.00	66	132	8.2	.49	2.3	.00	.00	.00	.00	.00
17	.00	.00	2.1	47	6.2	1.2	.57	.00	.00	.00	.00	.00
18	.00	.00	.12	28	8.6	1.2	.07	.00	.00	.00	.00	.00
19	.00	.00	.34	29	12	80	.03	.00	.00	.00	.00	.00
20	.00	.00	7.7	12	20	759	.00	.00	.00	.00	.00	24
21	.00	.00	12	5.5	205	671	.00	.00	.00	.00	.00	4.3
22	.00	.00	1.2	1.9	698	472	.00	.00	.00	.00	.00	2.4
23	.00	.00	1.0	3.0	589	255	.00	.00	.00	.00	.00	.07
24	.00	.03	1.0	8.0	262	89	.00	.00	.00	.00	.00	.00
25	.00	.00	.01	126	67	43	1.3	.00	.00	.00	.00	.00
26	.00	.00	.67	96	31	33	356	.00	.36	.00	.00	.00
27	.00	.00	25	265	23	24	53	.00	5.3	.00	.00	.00
28	.00	.00	22	227	28	14	26	.00	.00	.00	.00	.07
29	.00	.00	22	155	---	9.2	387	.00	.00	.00	.00	.64
30	.00	.00	25	110	---	49	76	.00	.00	.00	.00	.21
31	.00	---	60	17	---	75	---	.00	---	.00	.00	---
TOTAL	.00	.03	685.14	1703.1	2366.8	2717.48	1172.87	228.82	425.07	.00	.00	31.69
MEAN	.000	.001	22.1	54.9	84.5	87.7	39.1	7.38	14.2	.000	.000	1.06
MAX	.00	.03	439	265	698	759	387	80	225	.00	.00	24
MIN	.00	.00	.00	1.9	6.2	.16	.00	.00	.00	.00	.00	.00
AC-FT	.00	.06	1360	3380	4690	5390	2330	454	843	.00	.00	63

CAL YR 1984 TOTAL 4308.98 MEAN 11.8 MAX 439 MIN .00 AC-FT 8550
WTR YR 1985 TOTAL 9331.00 MEAN 25.6 MAX 759 MIN .00 AC-FT 18510

07301410 SWEETWATER CREEK NEAR KELTON, TX

LOCATION.--Lat 35°28'23", long 100°07'14", Wheeler County, Hydrologic Unit 11120302, near center of stream at 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 above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 31 to Jan. 3, Jan. 12-14, June 7-12, Aug. 14, 15, and Aug. 22 to Sept. 12. Records good except those for periods of estimated daily discharges, which are poor. There are small diversions upstream from station for ranch use.

AVERAGE DISCHARGE.--23 years (water years 1963-85), 12.9 ft^3/s (0.67 in/yr), 9,350 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.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 26	0800	*725	*13.28	No other peak greater than base discharge.			

Minimum discharge, 0.05 ft^3/s Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.66	1.5	7.4	8.3	20	16	53	8.7	5.7	1.6	.53
2	.09	.67	1.5	8.0	9.4	19	15	37	10	5.6	1.6	.47
3	.08	.73	1.5	7.6	9.4	20	15	29	9.0	5.2	1.5	.47
4	.16	.73	1.6	7.6	12	16	14	25	12	4.7	1.5	.41
5	.14	.73	1.7	7.3	12	14	14	22	36	4.3	1.4	.34
6	.08	.73	1.8	7.2	11	13	13	22	168	4.0	1.4	.37
7	.09	.73	1.8	7.0	9.5	13	13	33	66	3.7	1.2	.32
8	.10	.73	1.9	7.0	12	12	12	29	40	3.4	1.1	.32
9	.13	.74	2.3	7.4	11	12	12	22	20	3.4	1.0	.28
10	.10	.75	2.6	7.0	11	13	12	20	17	3.3	.95	.24
11	.12	.79	3.0	6.6	9.6	13	12	18	15	3.1	.95	.24
12	.12	.82	3.7	6.0	9.7	11	12	17	15	3.0	.87	.19
13	.12	.86	5.0	6.0	9.1	11	17	16	13	2.9	.94	.23
14	.12	.85	7.3	7.0	8.8	10	18	15	13	2.7	4.0	.34
15	.13	.86	15	7.5	8.5	10	17	15	12	2.9	6.3	.41
16	.21	.81	39	7.5	8.8	11	15	14	11	2.7	3.7	.37
17	.24	1.1	15	7.3	8.5	11	13	14	9.9	2.6	2.5	.26
18	.26	1.4	12	7.3	8.3	11	13	14	9.4	2.5	2.0	.17
19	.31	1.4	9.9	7.5	8.3	11	12	13	8.9	2.5	1.8	.46
20	.36	1.2	10	7.2	8.8	54	12	13	8.4	2.4	1.7	14
21	.46	1.2	13	6.9	15	67	12	13	7.7	2.4	1.5	26
22	.52	1.2	9.7	8.1	191	38	11	12	10	2.3	1.2	5.5
23	.53	1.3	8.9	8.2	82	27	10	12	8.7	2.3	1.1	3.0
24	.54	1.4	8.7	7.9	82	22	9.8	12	8.1	2.1	.97	2.9
25	.60	1.6	7.7	7.9	48	20	9.6	11	7.3	2.0	.95	2.7
26	.60	1.7	8.1	7.6	33	19	315	11	9.1	1.9	.94	2.3
27	.61	1.5	8.4	9.7	25	18	60	11	9.5	2.0	.80	2.2
28	.61	1.4	8.9	9.6	22	17	40	10	7.7	1.9	.80	2.1
29	.61	1.5	8.4	8.9	---	16	171	10	6.7	1.8	.70	4.6
30	.65	1.5	7.8	8.4	---	18	92	9.4	6.0	1.7	.60	4.8
31	.64	---	7.6	7.4	---	18	---	8.8	---	1.7	.60	---
TOTAL	9.45	31.59	235.3	234.0	692.0	585	1007.4	561.2	583.1	92.7	48.17	76.52
MEAN	.30	1.05	7.59	7.55	24.7	18.9	33.6	18.1	19.4	2.99	1.55	2.55
MAX	.65	1.7	39	9.7	191	67	315	53	168	5.7	6.3	26
MIN	.08	.66	1.5	6.0	8.3	10	9.6	8.8	6.0	1.7	.60	.17
CFSM	.001	.004	.03	.03	.09	.07	.13	.07	.07	.01	.006	.01
IN.	.00	.00	.03	.03	.10	.08	.14	.08	.08	.01	.01	.01
AC-FT	19	63	467	464	1370	1160	2000	1110	1160	184	96	152

CAL YR 1984 TOTAL 1859.86 MEAN 5.08 MAX 39 MIN .00 CFSM .02 IN .26 AC-FT 3690
WTR YR 1985 TOTAL 4156.43 MEAN 11.4 MAX 315 MIN .08 CFSM .04 IN .58 AC-FT 8240

07301410 SWEETWATER CREEK NEAR KELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 11...	1410	.11	1180	22.0	470	280	130	35	84
NOV 26...	1205	1.7	1040	10.5	420	220	120	29	71
FEB 19...	1320	8.3	813	11.0	320	94	94	21	54
MAR 25...	0830	20	905	11.5	370	100	110	23	61
MAY 06...	1635	22	978	25.0	400	140	120	25	64
JUN 17...	1600	10	1070	29.0	440	190	130	28	65

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 11...	2	2.6	190	340	74	.50	28	810
NOV 26...	2	3.8	200	300	48	.50	21	710
FEB 19...	1	2.4	228	150	41	.60	12	510
MAR 25...	1	2.8	269	160	44	.80	25	590
MAY 06...	1	3.2	268	210	44	.70	26	650
JUN 17...	1	2.7	255	250	48	.70	30	710

07307800 PEASE RIVER NEAR CHILDRESS, TX

LOCATION.--Lat 34°13'39", long 100°04'24", Cottle County, Hydrologic Unit 11130105, near right bank at 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 mi^2, of which 559 mi^2 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 above National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are 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 mi^2 in the Kent Creek drainage basin.

AVERAGE DISCHARGE.--20 years (water years 1961-62, 1967-85), 59.1 ft^3/s (0.37 in/yr), 42,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft^3/s June 9, 1960 (gage height, 13.59 ft), from rating curve extended above 4,000 ft^3/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 greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 5	2400	*14,300	*14.01	Sept. 28	2000	5,030	11.37
July 26	1930	5,850	11.65				

Minimum discharge, 0.10 ft^3/s Aug. 21-23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	8.2	8.9	51	12	12	14	45	11	16	48	.87
2	3.8	7.6	7.8	26	12	12	14	30	11	15	36	.91
3	3.7	7.8	7.4	21	14	13	13	21	10	14	29	1.1
4	4.3	8.1	8.4	19	16	9.7	12	16	128	13	21	1.2
5	4.4	7.7	12	17	17	8.8	11	13	9950	12	17	.93
6	3.5	7.4	12	16	17	8.9	11	11	7890	11	14	.77
7	3.5	7.7	10	15	15	9.4	10	7.4	2160	10	12	.65
8	4.1	8.2	9.4	14	15	10	10	6.4	679	9.7	10	.51
9	5.6	7.7	9.4	14	14	9.6	10	6.4	418	8.9	7.6	.44
10	5.1	6.9	8.4	14	13	10	10	6.9	315	8.3	6.0	1.3
11	4.6	6.9	9.4	14	13	9.5	11	6.0	223	8.1	5.0	.50
12	11	8.3	9.4	14	12	8.4	11	3.5	173	7.6	3.4	.52
13	12	8.6	11	14	12	8.6	17	5.4	140	6.8	3.5	6.5
14	8.1	9.3	18	14	12	8.8	19	4.4	101	6.2	5.4	32
15	4.9	8.6	145	14	12	8.9	14	4.0	99	6.9	6.9	13
16	3.9	8.2	142	15	11	12	12	4.0	92	7.7	7.8	8.5
17	3.0	19	69	14	11	12	12	6.0	72	6.9	4.5	4.5
18	3.9	27	41	14	12	11	11	6.4	59	6.3	7.9	2.6
19	3.5	16	30	13	12	13	11	15	67	6.3	14	1.6
20	3.5	12	26	11	17	41	11	92	58	6.5	1.5	5.2
21	5.6	11	26	13	24	48	12	16	43	6.4	.34	457
22	6.4	10	24	13	24	48	17	13	56	6.3	.11	136
23	6.0	9.5	24	13	24	31	12	12	40	6.3	.58	48
24	5.3	11	22	13	20	24	11	12	32	7.7	3.2	19
25	7.2	20	21	13	15	18	11	10	29	136	.86	9.2
26	9.3	14	21	12	12	17	12	8.9	42	1260	.38	3.6
27	12	10	21	15	12	20	62	15	24	737	.53	.96
28	8.7	8.9	20	15	12	17	254	19	21	392	.36	657
29	7.4	8.9	20	14	---	20	101	17	27	214	.43	1280
30	8.2	8.9	19	13	---	21	210	12	20	93	.56	432
31	8.4	---	53	14	---	17	---	11	---	65	.68	---
TOTAL	184.8	313.4	865.5	492	412	517.6	946	455.7	22990	3110.9	268.53	3126.36
MEAN	5.96	10.4	27.9	15.9	14.7	16.7	31.5	14.7	766	100	8.66	104
MAX	12	27	145	51	24	48	254	92	9950	1260	48	1280
MIN	3.0	6.9	7.4	11	11	8.4	10	3.5	10	6.2	.11	.44
CFSM	.003	.005	.01	.007	.007	.008	.01	.007	.35	.05	.004	.05
IN.	.00	.01	.01	.01	.01	.01	.02	.01	.39	.05	.00	.05
AC-FT	367	622	1720	976	817	1030	1880	904	45600	6170	533	6200

CAL YR 1984 TOTAL 5825.88 MEAN 15.9 MAX 555 MIN .53 CFSM .007 IN .10 AC-FT 11560
WTR YR 1985 TOTAL 33602.79 MEAN 92.3 MAX 9950 MIN .11 CFSM .04 IN .57 AC-FT 66810

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 above 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.--Estimated daily discharges: Jan. 1-9 and Aug. 30 to Sept 4. Records fair. There are many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 868 ft³/s (628,,900 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.--Peak discharges greater than base discharge of 9,000 ft³s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 1	0700	15,000	6.48	Mar. 4	1800	12,900	6.23
Feb. 23	1115	14,000	6.39	June 7	0915	*42,000	*10.50

Minimum discharge, 3.0 ft³/s Oct. 8, 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	96	78	13800	391	439	3320	5980	465	629	512	75
2	5.3	236	69	4710	507	379	5060	2270	418	424	363	70
3	4.5	335	56	1210	891	370	2380	1790	395	331	284	67
4	4.3	114	59	828	927	5450	949	1170	394	288	235	60
5	4.7	42	81	631	964	4510	678	922	2840	251	195	60
6	4.2	19	81	465	1530	897	564	778	30400	218	171	59
7	3.7	16	73	306	1670	814	488	672	38100	200	151	54
8	3.4	14	67	241	1760	646	452	550	17500	185	135	51
9	3.3	12	70	277	422	536	402	494	8640	167	118	46
10	4.3	8.0	69	338	380	471	370	450	5660	146	101	42
11	5.0	6.6	69	306	319	428	364	415	3450	134	91	40
12	8.5	6.0	69	274	248	394	357	441	2420	124	85	39
13	7.1	6.3	103	262	219	412	373	412	1910	117	84	38
14	65	6.3	143	220	214	594	384	318	1560	105	99	43
15	746	5.6	180	230	205	668	422	316	1220	99	88	39
16	283	5.1	1010	297	190	457	484	316	926	96	90	115
17	47	45	1520	297	185	439	404	273	681	92	111	265
18	16	647	1600	287	184	432	344	233	608	91	89	180
19	6.5	1420	962	273	181	423	345	214	609	101	152	118
20	47	587	695	208	223	2720	329	304	1230	98	242	93
21	532	306	553	185	420	3050	292	331	2160	94	174	85
22	739	233	332	228	632	4500	390	1220	826	93	128	81
23	233	182	282	282	10800	3450	464	3000	650	95	97	197
24	72	122	243	267	3200	3850	742	1440	547	89	117	578
25	79	140	208	262	772	1880	1160	881	489	92	151	466
26	73	133	194	251	729	1090	738	692	407	83	180	444
27	90	100	192	255	565	824	491	582	379	87	162	301
28	151	96	199	275	486	748	2220	509	377	985	163	225
29	115	84	200	303	---	836	7280	783	578	2880	117	876
30	52	73	179	310	---	952	4570	720	1060	1430	90	7500
31	31	---	4770	275	---	5140	---	539	---	809	81	---
TOTAL	3442.3	5095.9	14406	28353	29214	47799	36816	29015	126899	10633	4856	12307
MEAN	111	170	465	915	1043	1542	1227	936	4230	343	157	410
MAX	746	1420	4770	13800	10800	5450	7280	5980	38100	2880	512	7500
MIN	3.3	5.1	56	185	181	370	292	214	377	83	81	38
AC-FT	6830	10110	28570	56240	57950	94810	73020	57550	251700	21090	9630	24410

CAL YR 1984 TOTAL 104775.21 MEAN 286 MAX 4770 MIN .81 AC-FT 207800
WTR YR 1985 TOTAL 348836.20 MEAN 956 MAX 38100 MIN 3.3 AC-FT 691900

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER-QUALITY RECORDS

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

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
NOV											
28...	1430	9560	8.2	11.0	29	13.1	128	3.2	K71	K50	1400
JAN											
22...	1115	11000	7.8	2.0	23	.7	5	.7	K40	K75	1500
MAR											
12...	0915	7170	8.1	12.0	59	13.6	135	3.7	K70	K50	1400
MAY											
22...	1400	8080	8.0	23.5	1000	9.4	119	3.5	K6700	14000	1300
JUL											
23...	1345	8960	8.0	31.0	39	8.1	118	3.9	120	K100	1500
AUG											
21...	0845	9400	7.9	25.0	110	8.5	111	3.4	K670	K1110	1200

DATE	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)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV											
28...	1300	390	110	1600	19	9.3	180	1100	2600	.40	6.7
JAN											
22...	1300	420	110	1900	22	9.2	240	1200	3000	.30	12
MAR											
12...	1200	380	110	1100	13	8.7	170	880	1900	.40	8.9
MAY											
22...	1200	350	100	1300	16	7.5	130	1100	2200	.50	7.5
JUL											
23...	1400	400	130	1500	17	12	121	1200	2400	.50	7.1
AUG											
21...	1100	350	84	1600	21	12	92	1100	2500	.50	8.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
28...	6020	5900	.34	.130	.90	.140	.040	.040	49	79
JAN										
22...	7040	6800	1.0	.380	1.1	.140	.080	.080	214	75
MAR										
12...	4600	4500	<.10	.140	1.7	.230	.010	<.010	406	34
MAY										
22...	5100	5100	.28	.170	1.0	2.20	.010	<.010	3410	99
JUL										
23...	6060	5700	<.10	.210	.90	.110	<.010	<.010	--	--
AUG										
21...	5900	5700	.45	.130	1.1	.540	<.010	<.010	--	--

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 28...	1430	2	<100	<10	1	<1	2	1	50	<1
MAR 12...	0915	4	600	<10	--	--	--	--	110	--
MAY 22...	1400	2	400	<10	1	<1	2	1	50	<1
AUG 21...	0845	2	400	<10	<1	<1	1	3	50	1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 28...	70	30	1.4	4	3	2	1	5600	58	20
MAR 12...	60	20	<.1	3	--	--	--	3800	34	20
MAY 22...	70	10	.2	3	3	2	<1	4200	39	20
AUG 21...	70	10	<.1	4	2	2	<1	4700	50	20

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX

LOCATION.--Lat 33°47'52", long 99°50'11", Knox County, Hydrologic Unit 11130204, in gage house on top and near center of dam on Bluff Creek, 3.0 mi northeast of Truscott, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--26.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1985.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--The reservoir is formed by a rolled-filled earthen structure with a 2-foot thick blanket of soil cement normal to the upstream slope. The dam is 16,080 ft long with a maximum height of 107 ft above streambed. Uncontrolled spillway is a saddle type sodded spillway on right end of dam 1,000 ft wide. Elevation-spillway discharge points furnished by U.S. Army Corps of Engineers show a discharge of 13,200 and 35,400 ft^3/s at elevations of 1,502.00 and 1,508.00 ft, respectively. Lake is operated and maintained by U.S. Army Corps of Engineers for the purpose of storage and evaporation of water pumped from South and Middle Wichita Rivers as part of Red River Chloride Control project.

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,512.5	-
Crest of spillway	1,499.0	107,000

COOPERATION.--The area and capacity tables 1-A and 1-C are furnished by U.S. Army Corps of Engineers, Tulsa District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,840 acre-ft June 7, 1985 (elevation, 1,432.45 ft); minimum, 1,190 acre-ft Oct. 18, 19, 1984 (elevation, 1,429.47 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,840 June 7 (elevation, 1,432.45 ft); minimum, 1,190 acre-ft Oct. 18, 19 (elevation, 1,429.47 ft).

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

1,428.0	942	1,431.0	1,490
1,429.0	1,100	1,432.0	1,720
1,430.0	1,290	1,433.0	1,980

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1220	1250	1460	1450	1470	1570	1580	1460	1730	1600	1470
2	1220	1220	1250	1460	1440	1470	1570	1570	1460	1720	1600	1470
3	1220	1220	1250	1470	1450	1480	1580	1570	1450	1720	1590	1460
4	1220	1220	1250	1470	1450	1470	1570	1570	1480	1720	1580	1450
5	1220	1220	1250	1470	1450	1470	1560	1560	1800	1710	1580	1440
6	1210	1220	1250	1470	1450	1470	1560	1560	1830	1700	1580	1440
7	1210	1220	1250	1470	1450	1470	1550	1560	1840	1700	1570	1430
8	1210	1220	1250	1470	1450	1470	1550	1550	1840	1690	1560	1430
9	1210	1210	1250	1470	1450	1470	1550	1550	1830	1690	1550	1420
10	1210	1210	1250	1460	1450	1470	1550	1550	1830	1680	1550	1420
11	1210	1210	1250	1460	1450	1470	1550	1540	1820	1680	1550	1420
12	1210	1210	1250	1460	1450	1460	1550	1540	1820	1670	1550	1410
13	1210	1210	1260	1460	1450	1460	1550	1530	1810	1660	1540	1420
14	1210	1210	1250	1460	1440	1460	1540	1520	1810	1660	1540	1420
15	1210	1200	1280	1460	1450	1460	1540	1520	1800	1660	1530	1410
16	1200	1200	1290	1460	1450	1460	1540	1510	1800	1660	1520	1410
17	1200	1230	1290	1460	1450	1460	1540	1510	1790	1660	1520	1400
18	1190	1240	1290	1460	1450	1460	1530	1510	1780	1650	1520	1400
19	1190	1240	1290	1460	1460	1480	1520	1500	1780	1640	1510	1400
20	1200	1240	1300	1450	1460	1500	1520	1500	1770	1640	1510	1400
21	1220	1240	1300	1450	1460	1500	1540	1500	1760	1640	1500	1410
22	1220	1240	1300	1450	1470	1500	1580	1500	1780	1640	1490	1410
23	1220	1240	1300	1460	1470	1500	1570	1500	1770	1630	1510	1400
24	1220	1240	1300	1460	1470	1500	1570	1490	1760	1630	1520	1400
25	1220	1250	1300	1460	1470	1500	1570	1490	1760	1640	1520	1400
26	1230	1260	1300	1450	1470	1500	1570	1490	1760	1630	1510	1390
27	1230	1260	1300	1450	1470	1500	1570	1490	1750	1630	1500	1390
28	1230	1260	1310	1450	1470	1500	1580	1480	1750	1630	1490	1400
29	1230	1250	1310	1460	---	1540	1580	1480	1740	1620	1490	1430
30	1230	1250	1310	1450	---	1570	1580	1470	1730	1610	1480	1420
31	1230	---	1440	1450	---	1570	---	1470	---	1610	1480	---
MAX	1230	1260	1440	1470	1470	1570	1580	1580	1840	1730	1600	1470
MIN	1190	1200	1250	1450	1440	1460	1520	1470	1450	1610	1480	1390
(†)	1429.67	1429.82	1430.77	1430.78	1430.88	1431.34	1431.38	1430.87	1432.03	1431.50	1430.97	1430.67
(‡)	+10	+20	+190	+10	+20	+100	+10	-110	+260	-120	-130	-60

CAL YR 1984 MAX - MIN - (‡) -
WTR YR 1985 MAX 1840 MIN 1190 (‡) +200

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

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1984 to September 1985.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1984 to September 1985.
WATER TEMPERATURES: October 1984 to September 1985.

INSTRUMENTATION.--Beginning October 1, 1984 specific condustance and water temperature are recorded continuously at this station.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,400 microsiemens Dec. 25, 26, 28; minimum daily, 1,400 microsiemens Jan. 8.
WATER TEMPERATURES: Maximum daily, 32.0°C Sept. 2; minimum daily, 0.5°C Jan. 31, Feb. 2, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	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)
OCT 15...	1430	1640	23.0	710	620	210	45	99
FEB 20...	1410	1700	9.0	670	590	190	47	120
MAY 13...	1625	1870	21.5	760	670	210	56	130
JUN 17...	1625	1790	28.0	710	630	200	52	120
JUL 31...	1655	1970	31.0	750	670	200	62	140
SEP 03...	1445	2030	31.0	830	750	220	69	150

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)
OCT 15...	2	8.2	87	540	180	.30	6.5	1100
FEB 20...	2	8.2	82	560	200	.30	4.6	1200
MAY 13...	2	8.4	88	620	240	.30	2.0	1300
JUN 17...	2	8.8	86	570	220	.30	3.0	1200
JUL 31...	2	8.6	82	700	230	.40	4.9	1400
SEP 03...	2	9.7	84	720	250	.40	5.5	1500

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	1640	1710	1640	1690	1700	1600	1660	2100	2000	2010
2	---	---	1640	1710	1710	1710	1700	1600	1650	1900	1900	1900
3	1640	1570	1640	1720	1650	1720	1800	1600	1780	1800	1700	1710
4	1640	1570	1630	1720	1650	1700	1800	1700	1770	1650	1540	1600
5	1710	1570	1640	1720	1660	1720	1800	1700	1770	1650	1540	1620
6	1640	1570	1630	1730	1730	1730	1900	1700	1810	1650	1540	1600
7	1640	1570	1630	1730	1660	1730	1900	1800	1860	1650	1540	1600
8	1640	1640	1640	1740	1670	1720	1900	1800	1830	1500	1400	1480
9	1640	1570	1630	1740	1670	1730	1900	1800	1850	1510	1490	1500
10	1640	1640	1640	1740	1680	1740	2000	1800	1890	1510	1500	1500
11	1640	1570	1640	1820	1750	1750	2000	1900	1950	1510	1500	1510
12	1640	1640	1640	1750	1680	1750	2000	1900	1930	1510	1500	1510
13	1640	1640	1640	1760	1690	1760	2000	1900	1950	1510	1500	1510
14	1640	1570	1640	1760	1690	1750	2100	1900	2050	1510	1500	1510
15	1640	1640	1640	1760	1690	1760	2100	2000	2030	1530	1500	1510
16	1710	1640	1660	1840	1770	1770	2100	1900	2000	1510	1500	1510
17	1710	1650	1670	1770	1700	1770	2100	2000	2040	1520	1500	1510
18	1720	1650	1650	1780	1710	1760	2200	2100	2140	1520	1510	1510
19	1720	1660	1670	1780	1710	1780	2200	2100	2100	1520	1510	1510
20	1730	1660	1670	1780	1710	1770	2200	2100	2120	1530	1520	1520
21	1730	1660	1680	1790	1720	1790	2200	2100	2150	1540	1520	1530
22	1730	1670	1680	1790	1720	1790	2300	2200	2230	1530	1520	1530
23	1670	1670	1670	1800	1730	1780	2300	2200	2210	1530	1520	1520
24	1740	1680	1690	1800	1730	1790	2300	2100	2200	1530	1520	1520
25	1750	1680	1690	1800	1730	1770	2400	2200	2300	1530	1520	1530
26	1680	1620	1680	1810	1740	1760	2400	2300	2310	1540	1530	1530
27	1690	1620	1680	1810	1500	1670	2300	2200	2300	1540	1530	1530
28	1690	1620	1680	1600	1500	1550	2400	2200	2300	1540	1530	1540
29	1700	1630	1700	1700	1500	1640	2200	2200	2200	1540	1530	1540
30	1700	1630	1690	1700	1600	1650	2200	2000	2100	1550	1530	1540
31	1700	1640	1690	---	---	---	2200	2100	2120	1590	1540	1550
MONTH	1750	1570	1660	1840	1500	1730	2400	1600	2020	2100	1400	1560

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1590	1560	1570	1610	1600	1610	1700	1690	1700	1790	1770	1780
2	1600	1560	1580	1620	1610	1610	1720	1690	1700	1800	1780	1790
3	1600	1570	1580	1620	1610	1610	1720	1700	1710	1820	1780	1810
4	1580	1570	1580	1630	1610	1620	1720	1710	1710	1830	1800	1810
5	1580	1560	1570	1640	1630	1630	1720	1710	1710	1840	1810	1820
6	1560	1540	1550	1640	1630	1630	1720	1710	1710	1840	1820	1830
7	1560	1500	1540	1640	1630	1630	1720	1710	1710	1830	1820	1830
8	1530	1510	1520	1650	1630	1640	1720	1710	1720	1840	1820	1830
9	1510	1490	1500	1650	1630	1640	1730	1710	1720	1840	1820	1830
10	1510	1490	1500	1650	1640	1650	1730	1720	1730	1840	1830	1840
11	1520	1500	1510	1660	1640	1650	1740	1720	1730	1850	1830	1840
12	1540	1510	1520	1650	1650	1650	1750	1730	1740	1870	1840	1850
13	1550	1540	1540	1660	1650	1660	1760	1740	1750	1870	1790	1830
14	1550	1540	1550	1670	1660	1660	1760	1740	1750	1800	1790	1800
15	1560	1550	1550	1670	1660	1660	1770	1750	1760	1830	1790	1800
16	1570	1550	1560	1670	1660	1660	1770	1750	1760	1820	1810	1820
17	1570	1560	1570	1670	1660	1670	1780	1750	1760	1820	1810	1810
18	1570	1560	1560	1680	1660	1670	1790	1770	1780	1830	1810	1820
19	1570	1560	1570	1670	1660	1670	1790	1770	1780	1840	1820	1820
20	1700	1560	1580	1670	1650	1660	1800	1780	1790	1840	1810	1830
21	1590	1580	1590	1670	1650	1660	1790	1780	1790	1840	1830	1830
22	1600	1580	1590	1680	1660	1670	1780	1770	1770	1850	1830	1840
23	1600	1580	1580	1680	1660	1680	1780	1760	1770	1850	1830	1840
24	1600	1580	1590	1680	1670	1680	1790	1760	1780	1880	1840	1860
25	1600	1590	1600	1690	1680	1680	1780	1770	1780	1880	1860	1870
26	1600	1590	1600	1690	1680	1690	1790	1770	1780	1890	1860	1880
27	1610	1600	1600	1700	1680	1690	1790	1770	1780	1890	1870	1880
28	1610	1600	1610	1710	1690	1700	1780	1770	1770	1900	1870	1890
29	---	---	---	1720	1700	1710	1800	1770	1780	1930	1890	1910
30	---	---	---	1710	1690	1700	1790	1780	1780	1910	1900	1910
31	---	---	---	1700	1690	1700	---	---	---	1920	1900	1910
MONTH	1700	1490	1560	1720	1600	1660	1800	1690	1750	1930	1770	1840

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1920	1900	1910	1720	1700	1710	1820	1780	1800	1850	1830	1840
2	1950	1910	1930	1720	1700	1710	1800	1780	1800	1870	1830	1850
3	1950	1920	1930	1720	1700	1710	1810	1790	1800	1860	1830	1840
4	1940	1910	1930	1740	1700	1720	1810	1790	1800	1870	1840	1850
5	1920	1870	1890	1730	1710	1720	1810	1790	1800	1860	1830	1840
6	1870	1810	1850	1730	1710	1720	1800	1790	1800	1860	1830	1850
7	1820	1790	1800	1740	1720	1730	1800	1780	1790	1870	1830	1850
8	1820	1780	1800	1750	1730	1740	1810	1780	1800	1860	1830	1840
9	1800	1770	1790	1760	1730	1740	1810	1790	1800	1860	1830	1840
10	1800	1780	1790	1740	1730	1740	1810	1790	1800	1860	1840	1840
11	1790	1780	1790	1750	1730	1740	1810	1790	1800	1840	1830	1840
12	1790	1770	1780	1760	1740	1750	1820	1800	1810	1850	1830	1840
13	1800	1770	1780	1760	1740	1750	1830	1800	1810	1840	1820	1830
14	1810	1780	1790	1760	1740	1750	1810	1810	1810	1830	1810	1820
15	1810	1790	1800	1770	1750	1760	1820	1800	1810	1820	1810	1820
16	1830	1800	1810	1760	1740	1750	1830	1810	1820	1820	1800	1810
17	1820	1680	1780	1770	1740	1760	1840	1810	1820	1820	1800	1810
18	1690	1680	1680	1780	1750	1760	1830	1810	1820	1820	1810	1820
19	1700	1680	1690	1770	1750	1760	1840	1810	1830	1820	1800	1810
20	1700	1680	1690	1780	1760	1760	1840	1820	1830	1820	1800	1810
21	1700	1670	1680	1780	1750	1770	1840	1820	1830	1810	1790	1800
22	1700	1680	1690	1770	1750	1760	1850	1820	1830	1810	1780	1790
23	1710	1690	1700	1760	1750	1750	1850	1830	1840	1810	1780	1790
24	1710	1690	1700	1760	1750	1750	1830	1820	1820	1780	1770	1780
25	1710	1690	1700	1770	1750	1760	1830	1810	1820	1790	1770	1780
26	1710	1700	1700	1760	1750	1760	1830	1810	1820	1790	1770	1780
27	1710	1690	1690	1780	1750	1760	1830	1810	1820	1780	1770	1780
28	1720	1680	1700	1780	1760	1770	1840	1820	1830	1780	1770	1770
29	1710	1700	1710	1780	1750	1760	1830	1810	1820	1770	1740	1750
30	1710	1700	1700	1780	1760	1770	1840	1820	1830	1750	1730	1740
31	---	---	---	1800	1760	1770	1850	1830	1840	---	---	---
MONTH	1950	1670	1770	1800	1700	1750	1850	1780	1810	1870	1730	1810

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

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

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.0	1.5	12.0	10.5	11.0	15.0	14.0	14.5	21.5	20.0	20.5
2	2.0	.5	1.5	11.5	10.5	11.0	17.5	13.5	14.5	21.0	20.0	20.5
3	2.5	1.5	2.0	15.0	11.5	13.0	20.0	15.0	17.0	25.0	20.5	22.5
4	2.5	2.0	2.0	13.0	11.5	12.5	20.0	16.5	18.0	24.5	22.0	23.0
5	2.5	2.0	2.0	13.0	11.0	12.0	17.5	15.5	16.5	24.0	22.0	23.0
6	2.5	2.0	2.0	12.0	11.5	11.5	17.0	15.5	16.0	24.5	21.5	23.0
7	4.0	2.0	2.5	13.5	11.5	12.5	16.0	15.0	15.5	23.5	22.5	23.0
8	3.5	2.5	3.0	15.5	12.5	13.5	16.5	15.0	16.0	24.0	22.5	23.0
9	6.5	.5	3.5	14.5	13.0	13.5	17.0	15.5	16.0	24.5	22.5	23.5
10	6.5	4.5	5.5	16.0	13.5	15.0	17.5	16.0	16.5	23.5	23.0	23.5
11	6.0	3.5	4.5	16.5	14.5	15.5	20.0	16.0	17.5	23.5	22.5	23.0
12	8.0	4.0	5.5	14.5	14.0	14.0	20.5	17.5	18.5	27.0	22.5	24.0
13	6.5	4.5	5.5	14.5	13.5	14.0	19.0	17.5	18.0	24.0	21.5	23.0
14	7.5	4.5	6.0	15.0	13.0	13.5	20.0	18.0	19.0	22.0	20.5	21.5
15	8.5	5.0	6.5	13.5	12.5	13.0	20.5	19.0	19.5	24.5	20.5	22.0
16	8.5	6.5	7.0	13.5	12.5	13.0	21.5	19.0	20.0	22.0	21.0	21.5
17	7.0	6.0	6.0	14.5	12.5	13.5	22.5	19.5	20.5	21.5	21.0	21.0
18	7.0	6.0	6.5	15.5	13.0	14.0	22.5	20.5	21.0	24.0	20.5	22.0
19	10.5	6.5	8.0	14.0	13.5	13.5	22.5	19.5	21.0	23.5	21.5	22.5
20	9.0	8.0	8.5	14.0	13.0	13.0	23.5	20.5	21.5	22.5	20.5	21.5
21	12.5	8.5	10.5	13.0	12.5	12.5	22.0	20.0	21.0	22.0	20.5	21.0
22	13.0	10.5	11.5	15.0	12.0	13.0	21.5	20.0	20.5	22.5	20.5	21.5
23	12.5	11.0	12.0	17.0	13.0	14.5	21.0	19.5	20.5	23.0	21.0	22.0
24	12.0	10.5	11.0	15.0	13.5	14.5	22.5	19.5	21.0	25.5	22.5	24.0
25	12.5	10.5	11.5	17.0	13.0	15.0	20.5	19.0	20.0	27.0	23.5	25.0
26	12.0	10.5	11.0	16.0	14.5	15.0	22.0	19.5	20.5	27.5	23.5	25.5
27	12.0	10.0	11.0	18.0	15.5	16.5	21.0	19.5	20.0	25.5	24.0	25.0
28	11.0	10.5	10.5	18.0	16.5	17.5	20.0	19.5	19.5	27.5	24.0	26.0
29	---	---	---	17.0	16.0	17.0	23.5	19.0	21.0	30.5	26.0	27.5
30	---	---	---	15.5	14.0	15.0	21.5	20.5	21.0	28.0	25.5	26.5
31	---	---	---	15.5	13.0	14.0	---	---	---	26.0	24.5	25.5
MONTH	13.0	.5	6.5	18.0	10.5	14.0	23.5	13.5	18.5	30.5	20.0	23.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	24.5	26.0	26.5	25.0	25.5	31.5	28.0	29.5	30.0	27.5	28.5
2	29.5	25.0	26.5	26.0	25.0	25.5	31.5	28.0	29.5	32.0	27.0	29.0
3	28.0	25.0	26.5	27.5	25.0	26.0	31.5	29.0	30.0	31.0	26.5	28.5
4	26.0	24.5	25.5	30.0	26.0	27.5	31.5	28.5	29.5	30.0	27.0	28.5
5	24.5	23.5	24.0	28.5	26.5	27.5	31.0	28.5	29.5	29.5	25.5	27.0
6	24.5	23.0	23.5	28.0	26.0	27.0	31.5	28.0	29.5	29.0	26.0	27.0
7	29.5	24.0	26.0	28.5	26.0	27.5	30.0	28.0	29.0	30.5	26.0	27.5
8	30.5	26.5	29.0	29.5	27.0	28.0	31.5	28.0	29.5	29.5	26.5	27.5
9	30.0	27.0	28.0	30.0	27.5	28.5	30.0	28.0	29.0	29.5	26.5	27.5
10	30.5	28.5	29.0	29.0	28.0	28.0	29.0	27.5	28.0	29.5	26.5	27.5
11	28.5	26.0	26.5	29.0	27.0	28.0	30.0	27.0	28.5	27.5	26.0	27.0
12	26.0	25.0	25.5	31.5	28.0	29.5	29.5	27.0	28.0	28.5	25.5	26.5
13	26.5	24.5	25.5	30.5	28.5	29.5	30.0	27.5	28.5	27.5	25.5	26.5
14	27.0	24.0	25.0	29.5	27.5	28.5	28.5	27.0	27.5	26.0	25.0	25.5
15	26.0	25.0	25.5	30.0	27.5	28.5	29.0	27.0	28.0	25.5	24.5	25.0
16	29.0	25.0	26.5	30.0	27.5	28.5	30.0	27.0	28.5	26.0	24.0	24.5
17	28.0	25.5	26.0	31.5	27.5	29.5	31.0	28.0	29.0	27.0	24.0	25.0
18	25.5	25.0	25.0	31.5	29.0	30.0	31.0	28.0	29.0	25.5	24.0	25.0
19	27.5	24.5	26.0	30.5	28.5	29.5	31.5	28.0	29.5	26.0	24.0	25.0
20	26.5	25.5	26.0	30.5	28.5	29.0	31.0	28.5	29.5	25.5	24.0	24.5
21	27.0	24.0	25.5	30.5	28.0	29.0	31.0	28.0	29.0	24.5	23.5	23.5
22	27.5	25.0	25.5	30.5	28.5	29.0	30.5	27.0	28.5	26.0	23.0	24.0
23	28.5	25.5	27.0	29.0	27.5	28.0	30.5	27.5	28.5	24.5	22.0	23.0
24	27.5	26.0	27.0	29.0	27.0	28.0	28.5	27.0	27.5	22.5	21.0	22.0
25	26.5	25.0	26.0	29.5	27.0	28.0	29.0	26.5	27.5	23.0	20.5	21.5
26	27.0	25.5	26.0	28.5	27.5	27.5	29.0	26.5	27.5	24.0	20.0	21.5
27	26.0	25.0	25.5	31.5	27.0	28.5	28.5	26.0	27.0	21.5	20.0	20.5
28	29.0	24.5	26.0	31.5	29.0	30.0	28.5	26.0	27.0	21.0	19.5	20.5
29	28.0	25.5	27.0	31.0	28.5	29.5	28.5	26.5	27.5	20.5	18.0	19.0
30	27.0	25.0	26.0	30.5	28.5	29.0	30.0	26.5	28.0	18.5	16.5	17.5
31	---	---	---	30.5	27.5	28.5	31.0	27.0	28.5	---	---	---
MONTH	30.5	23.0	26.0	31.5	25.0	28.5	31.5	26.0	28.5	32.0	16.5	25.0

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 at 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 above National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Mar. 27 to Apr. 2 and Aug. 5 to Sept. 4. Records good. There is one small diversion for irrigation above station.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 58.8 ft³/s (0.85 in/yr), 42,600 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 greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 5	1500	*2,560	14.47	No other peak greater than base discharge.			

Minimum discharge, 6.0 ft³/s Sept. 4-7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	52	19	180	13	21	30	26	10	13	12	7.3
2	8.9	29	19	60	12	20	26	21	10	13	9.0	6.6
3	8.9	19	17	44	16	20	24	20	54	13	9.1	6.6
4	9.5	18	17	37	20	24	22	19	77	12	7.7	6.6
5	10	16	20	34	27	26	19	17	1880	12	8.1	6.0
6	9.7	16	20	32	24	21	19	16	1870	12	8.1	6.6
7	9.4	15	20	31	22	18	18	15	1200	11	8.9	6.2
8	8.9	16	18	30	22	17	18	15	171	10	8.9	6.6
9	8.9	16	18	30	20	17	17	15	73	10	8.9	6.6
10	9.6	15	18	29	19	17	17	16	52	10	8.1	6.6
11	11	15	17	29	18	16	18	18	43	10	8.1	7.0
12	13	15	17	22	18	15	18	16	37	10	8.1	8.5
13	17	16	18	30	18	20	19	15	32	7.8	8.1	10
14	21	16	19	28	18	17	19	24	30	8.1	8.1	18
15	17	16	53	27	18	15	19	11	27	10	8.1	30
16	16	16	138	27	18	15	19	7.6	26	10	7.3	23
17	12	42	61	26	16	15	19	7.3	24	11	7.3	21
18	11	50	40	26	16	15	18	8.2	21	13	7.3	17
19	11	34	31	24	17	17	17	9.2	20	12	8.1	15
20	72	26	28	20	20	158	17	31	19	10	8.1	16
21	36	22	27	21	32	56	27	29	17	8.1	7.3	28
22	29	19	23	24	32	43	70	16	24	8.8	7.3	30
23	22	18	21	24	58	35	39	12	24	10	17	22
24	18	30	20	23	47	25	25	9.5	20	15	32	19
25	17	50	19	23	40	20	20	7.9	17	39	10	16
26	17	32	19	21	28	17	18	6.6	23	169	7.3	13
27	22	25	20	22	24	16	48	6.4	24	50	6.6	13
28	20	20	21	22	21	18	37	76	23	35	6.6	15
29	18	19	21	21	---	22	43	31	18	25	6.6	421
30	16	19	20	20	---	47	34	17	15	16	7.3	164
31	16	---	470	15	---	31	---	11	---	14	7.3	---
TOTAL	524.9	712	1289	1002	654	834	754	549.7	5881	607.8	282.7	972.2
MEAN	16.9	23.7	41.6	32.3	23.4	26.9	25.1	17.7	196	19.6	9.12	32.4
MAX	72	52	470	180	58	158	70	76	1880	169	32	421
MIN	8.9	15	17	15	12	15	17	6.4	10	7.8	6.6	6.0
CFSM	.02	.03	.04	.03	.03	.03	.03	.02	.21	.02	.01	.04
IN.	.02	.03	.05	.04	.03	.03	.03	.02	.23	.02	.01	.04
AC-FT	1040	1410	2560	1990	1300	1650	1500	1090	11660	1210	561	1930

CAL YR 1984 TOTAL 8325.2 MEAN 22.7 MAX 470 MIN 6.3 CFSM .02 IN .33 AC-FT 16510
WTR YR 1985 TOTAL 14063.3 MEAN 38.5 MAX 1880 MIN 6.0 CFSM .04 IN .56 AC-FT 27890

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 microsiemens Oct. 9, 1982; minimum daily, 400 microsiemens June 7, 8, 1985.
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, 24,300 microsiemens Aug. 10; minimum daily, 400 microsiemens June 7, 8.
WATER TEMPERATURES: Maximum daily, 35.5°C Aug. 7, 8; minimum daily, 0.0°C on several days January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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 15...	1300	16	19700	19.0	2900	2800	900	160	4000	34
NOV 27...	1410	21	14400	8.5	2100	2000	640	130	2600	25
FEB 20...	1555	22	17800	14.0	2600	2400	760	160	3200	29
APR 02...	1610	27	14800	21.5	--	--	--	--	--	--
MAY 14...	1240	28	19800	21.0	--	--	--	--	--	--
JUN 18...	1135	21	11700	24.0	1800	1700	510	120	2100	23
AUG 01...	1210	12	9110	30.0	1400	1300	390	94	1200	15
SEP 04...	1100	6.8	23000	27.5	3500	3500	1000	250	4500	34

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 15...	19	72	2600	6000	.40	1.5	14000	30	1.3	93
NOV 27...	12	110	2000	4200	.40	3.8	9700	74	4.2	99
FEB 20...	15	126	2400	5200	.40	1.0	12000	24	1.4	92
APR 02...	--	--	--	--	--	--	--	59	4.3	91
MAY 14...	--	--	--	--	--	--	--	69	5.2	95
JUN 18...	14	112	1800	3200	.30	5.8	7800	48	2.7	89
AUG 01...	13	62	1000	2000	.40	3.3	4700	8	.26	76
SEP 04...	20	57	3200	7000	.50	1.9	16000	18	.33	91

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	524.9	16000	10700	15200	4700	6620	2100	3020	*
NOV.	1984	712	15000	9990	19200	4300	8260	2000	3870	*
DEC.	1984	1289	10800	7110	24800	3000	10400	1500	5120	*
JAN.	1985	1002	13100	8680	23500	3700	10100	1800	4760	*
FEB.	1985	654	15800	10600	18600	4600	8080	2100	3720	*
MAR.	1985	834	12500	8290	18700	3500	7920	1700	3830	*
APR.	1985	754	14200	9430	19200	4000	8240	1900	3880	*
MAY	1985	549.7	17700	11900	17700	5200	7790	2300	3470	*
JUNE	1985	5881	2450	1580	25100	630	10100	350	5490	420
JULY	1985	607.8	15000	10100	16500	4400	7210	2000	3280	*
AUG.	1985	282.7	15700	10500	8050	4600	3520	2100	1590	*
SEPT	1985	972.2	12400	8320	21800	3600	9510	1700	4330	*
TOTAL		14063.3	**	**	228000	**	97700	**	46400	**
WTD.AVG.		39	9060	6020	**	2600	**	1200	**	1400

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	11800	---	4000	12500	16400	16100	16200	6500	3100	4920
2	---	---	12600	---	8300	12300	17200	16400	16800	9000	6700	8080
3	---	---	13000	---	10500	13200	17700	17200	17500	8800	8200	8600
4	---	---	13900	---	---	14400	17800	17400	17700	10300	8400	9260
5	---	---	14500	---	---	15700	17700	17500	17600	12000	10000	10800
6	---	---	15600	---	17200	16800	17700	17500	17600	13400	12100	12800
7	---	---	16300	---	---	17900	17700	17600	17600	14400	13500	13900
8	---	---	17400	---	---	18500	17800	17600	17700	14800	14500	14700
9	---	---	18500	---	---	18900	17900	17700	17800	14900	14600	14800
10	---	---	19300	18900	18600	18700	18100	17900	18000	15500	14900	15100
11	---	---	19500	19000	18800	18900	18100	17900	18000	16000	14300	15500
12	---	---	20000	19100	18800	19000	18000	17900	18000	16500	15200	16100
13	---	---	19600	19000	18900	18900	18000	17500	17700	16800	16300	16600
14	---	---	19400	18900	18700	18800	17700	17300	17600	16700	15900	16400
15	---	---	19700	19000	18700	18900	17700	5600	13900	17000	16000	16800
16	---	---	19900	19100	18900	19000	12600	9000	10100	17100	16200	16600
17	---	---	20200	19000	7700	13600	9100	6900	7720	17000	16500	16700
18	---	---	20400	14100	10500	12300	11700	7300	9720	17200	17000	17100
19	---	---	20700	14200	11200	12700	15000	11900	13700	17400	17100	17200
20	20500	4200	11600	16100	14400	15300	15300	14800	15100	17800	17500	17600
21	14700	7500	11100	16600	16200	16400	14800	14000	14200	18500	17700	18200
22	13400	8300	11000	17200	16700	16900	14300	14000	14200	18300	17100	17600
23	14300	13200	13700	17200	16600	16900	14100	13100	13700	18100	17200	17700
24	15800	13800	14600	16800	9000	15100	13000	12500	12700	18200	17200	17600
25	17200	15900	16600	14700	7700	12200	12700	12500	12600	17600	17200	17400
26	17900	16400	17400	12700	10500	11800	12800	12500	12700	17600	17400	17500
27	18200	17000	17600	14700	12900	13800	12800	12600	12700	17700	17400	17600
28	---	---	18300	15800	14700	15300	13700	12800	13300	17600	17400	17500
29	---	---	18900	16600	15800	16100	14700	13800	14300	17600	16800	17400
30	---	---	19500	16800	16400	16600	15300	14800	15100	17800	17400	17600
31	---	---	20100	---	---	---	15000	2200	5730	18800	17300	18200
MONTH	20500	4200	16900	19100	4000	15900	18100	2200	14800	18800	3100	15300

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	19400	18800	19100			16300	---	---	12800	18900	18100	18500
2	20300	19000	19400			16500	14500	14300	14400	18200	17700	17900
3	19600	18800	19200			16400	15000	14100	14500	18500	17700	18100
4	19500	18400	18900			15900	16300	15000	15700	19000	18200	18600
5	18600	17600	17900			15400	15400	13900	14800	18200	17000	17800
6	17200	16700	16900			16600	13900	12700	13300	16900	15800	16500
7	17400	17000	17100			16800	12700	12400	12500	15800	15300	15500
8	17500	16700	17100			17100	12700	12400	12600	15300	14800	15100
9	17200	16800	17100			17000	13300	12600	13000	15600	15000	15300
10	17500	17100	17300			17400	13800	13200	13500	16300	15500	15900
11	17700	17500	17600			17500	14600	13800	14200	17200	15400	16500
12	17700	17500	17600			17300	15500	14700	15100	18700	17000	18000
13	17700	17500	17600			16600	16200	15400	15800	19200	18300	18800
14	17900	17600	17700			16900	16700	16000	16300	20200	19000	19500
15	18100	17900	18000			17500	17100	16400	16800	21000	20100	20500
16	18200	18000	18100			17800	17600	16900	17200	21600	20500	21000
17	18400	18100	18300			18000	18100	17300	17600	21000	19900	20400
18	18500	18300	18400			18100	18600	17700	18200	19900	19200	19600
19	18500	18300	18400			17800	18900	18100	18500	19600	18900	19200
20	18500	---	17800			8950	19200	18400	18800	19300	6900	14000
21	---	---	16000			7280	19200	11900	18000	15400	6300	12500
22	---	---	15800			8300	11700	2500	5490	16700	14400	15700
23	---	---	11200			9600	16800	7600	14300	17900	14500	16500
24	---	---	10700			10400	19000	16800	18100	18700	17900	18300
25	---	---	11500			11000	19100	18600	18800	19100	18300	18700
26	---	---	13100			11600	18600	18000	18400	19400	18600	19000
27	---	---	14300			11900	18100	4900	11900	19000	18100	18600
28	---	---	16000			11700	12300	7000	9950	22100	17500	20400
29	---	---	---			10900	17200	9900	13600	22100	19600	21000
30	---	---	---			9240	18200	17400	18000	21500	14600	18100
31	---	---	---			11000	---	---	---	14400	11700	12800
MONTH	20300	16700	16700			14300	19200	2500	15100	22100	6300	17700

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11700	10800	11200	18100	17600	17800	9500	8600	9080	22900	22200	22500
2	11100	10600	10800	18200	17400	17900	10300	9600	9940	22800	22400	22600
3	10800	8900	10000	18600	18200	18400	11000	10300	10600	23100	22500	22800
4	16000	4900	13300	18500	18300	18400	11600	11000	11200	23400	22600	22900
5	7200	1000	1730	18600	18100	18400	12200	11600	11900	23600	22300	22800
6	3200	500	1130	19100	18400	18800	12700	10600	12300	23300	20800	22500
7	1000	400	604	19500	18700	19100	13200	10600	12500	23200	22100	22600
8	3000	400	1520	19800	19100	19500	13500	13000	13300	23900	20900	23100
9	4600	3100	3900	20300	19400	19900	14000	13400	13700	24200	23000	23500
10	5800	4600	5220	20300	19900	20100	14800	14100	14400	24300	23300	23700
11	6600	5800	6220	20700	19700	20200	15600	14800	15200	24200	23300	23700
12	7600	6600	7150	20900	20100	20500	16500	15600	16100	24100	23400	23700
13	8500	7700	8140	20900	20300	20600	17400	16500	16900	24100	23300	23600
14	9300	8400	8850	21300	20500	20900	17700	16900	17400	23500	22800	23200
15	9900	9300	9630	21600	20900	21200	18600	13300	16700	23200	21700	22400
16	10600	9700	10200	21400	13600	19000	19300	18500	18900	23900	22100	22800
17	11200	10500	10900	21800	16800	20800	19900	19100	19500	24000	23400	23800
18	12300	11000	11600	22200	21100	21800	20200	19700	20000	23700	22800	23300
19	13300	12300	12800	22100	21700	21900	20800	20100	20400	23000	21100	21900
20	14100	13300	13700	21700	21100	21400	21000	20300	20600	21200	19500	20500
21	14900	14000	14500	21700	21000	21400	21400	20700	21000	19700	14200	18500
22	14800	10400	12800	22300	21600	21900	21900	19500	21300	20300	17500	19400
23	15500	11700	14500	22300	21700	22000	22300	15900	21100	20500	19800	20200
24	15600	15300	15400	22100	18700	20900	15900	3400	8700	19800	18700	19300
25	15500	14900	15200	22000	14600	19900	17800	5100	12800	19700	18400	19000
26	16000	15000	15600	20200	8000	13100	21100	17500	19700	18600	17800	18200
27	15900	14100	15100	8300	5800	6700	21900	19900	21100	18000	17200	17500
28	16400	15800	16000	6500	5600	5970	22300	19900	21800	17500	16700	17200
29	17200	16400	16900	6900	6500	6720	22700	22000	22300	16600	2700	7920
30	17700	17000	17300	7700	6700	7270	22800	22200	22500	3500	2800	3210
31	---	---	---	8600	7700	8120	23000	22300	22600	---	---	---
MONTH	17700	400	10400	22300	5600	17800	23000	3400	16600	24300	2700	20600

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	13.0	16.5	18.5	13.5	16.5	11.0	7.0	9.5	4.5	1.0	3.0
2	23.0	15.0	19.0	14.5	10.5	12.5	10.0	6.5	8.5	2.5	.0	1.0
3	23.0	17.5	20.0	16.5	11.5	14.0	8.0	4.5	6.5	4.0	.5	2.0
4	23.5	18.5	20.5	16.0	12.5	14.0	7.0	4.0	5.5	6.0	2.0	4.0
5	25.0	18.5	21.5	15.5	10.5	13.0	5.5	3.5	4.5	7.0	3.5	5.0
6	25.5	19.5	22.0	14.0	10.5	12.5	6.5	2.5	4.5	8.5	4.0	6.5
7	25.5	19.0	22.0	16.5	11.5	14.0	8.5	3.0	6.0	8.5	4.5	6.5
8	24.0	18.5	20.5	18.0	13.5	16.0	10.0	5.5	8.0	9.0	5.5	7.0
9	24.0	17.5	20.5	18.0	14.5	16.0	13.0	8.5	10.5	10.5	6.0	8.0
10	23.5	18.5	20.5	14.0	11.0	12.5	12.0	8.0	10.5	6.0	2.5	4.5
11	20.5	18.5	19.5	13.5	9.0	11.5	12.0	8.5	10.5	3.5	.0	2.0
12	23.0	18.5	20.5	13.5	9.5	12.0	14.5	10.5	12.5	.5	.0	.0
13	21.5	19.0	20.0	14.0	11.5	13.0	12.0	7.5	10.0	3.0	.0	1.0
14	23.0	17.5	20.0	16.5	13.0	14.5	7.5	4.5	5.5	5.5	.0	3.0
15	20.5	16.5	18.5	15.0	12.0	14.0	4.5	4.0	4.0	6.0	1.0	3.5
16	17.5	14.5	16.5	12.0	10.0	11.0	7.0	3.5	5.0	8.5	4.5	6.5
17	17.5	12.5	14.5	11.0	9.5	10.5	8.5	5.0	7.0	8.0	3.5	6.0
18	21.0	14.5	17.0	10.0	9.0	9.5	7.5	5.0	5.5	9.5	4.5	7.0
19	18.0	13.0	15.5	8.5	7.5	8.0	7.5	5.0	6.5	9.5	2.0	6.0
20	16.0	12.5	14.5	7.5	7.0	7.0	9.5	7.5	8.5	2.5	.0	1.0
21	14.5	12.5	13.0	9.0	6.0	7.5	11.0	9.0	10.0	2.5	.0	.5
22	13.0	11.5	12.0	9.5	6.0	8.0	9.0	6.5	7.5	3.5	.0	1.5
23	15.0	11.0	13.0	11.0	7.0	9.0	9.5	5.0	7.5	5.5	.0	3.0
24	13.0	12.0	12.0	9.5	8.0	9.0	8.5	4.0	6.5	7.0	2.5	4.5
25	15.5	11.0	13.5	11.5	8.0	9.5	4.0	2.0	3.0	9.0	4.0	6.5
26	15.5	14.5	15.0	12.5	10.0	11.0	5.5	3.0	4.5	7.0	2.0	5.5
27	19.0	14.5	16.5	9.5	6.0	8.0	11.0	6.0	8.5	6.0	4.0	5.5
28	18.0	14.0	16.0	9.0	4.5	7.0	16.5	11.5	14.0	7.5	2.5	5.0
29	16.5	12.5	15.0	11.0	6.5	9.0	17.5	14.0	15.5	9.5	2.0	6.0
30	18.0	14.0	16.5	11.0	7.0	9.0	13.5	9.0	11.0	7.5	.5	5.5
31	20.0	15.5	18.0	---	---	---	9.0	4.5	6.0	1.0	.0	.0
MONTH	25.5	11.0	17.5	18.5	4.5	11.5	17.5	2.0	8.0	10.5	.0	4.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0				---	---	---	26.0	19.0	22.5
2	.5	.0	.0				---	---	---	27.5	18.5	23.0
3	1.5	.0	.5				24.5	14.5	19.5	28.0	18.5	23.5
4	.5	.0	.0				24.0	16.0	20.0	28.5	19.5	23.5
5	1.0	.0	.5				22.0	13.0	17.5	29.0	19.5	24.0
6	1.0	.0	.5				23.5	13.0	18.0	29.5	21.0	24.5
7	4.0	.0	1.5				19.5	14.0	16.5	30.5	21.0	25.5
8	8.0	.5	4.5				21.0	13.5	17.0	29.0	22.0	25.0
9	12.5	5.0	9.0				23.0	15.0	18.5	28.5	21.5	24.5
10	10.0	5.5	8.0				20.5	15.5	17.5	25.5	21.5	23.5
11	8.0	2.5	5.5				26.0	15.0	20.5	27.0	20.5	23.5
12	9.5	2.0	6.0				25.5	18.5	21.5	29.0	18.5	24.0
13	10.0	4.0	7.0				26.5	18.0	22.0	27.0	17.0	22.5
14	11.0	5.0	8.0				25.5	16.5	21.5	24.0	15.0	19.5
15	11.5	5.0	8.5				27.5	17.5	22.5	28.0	17.0	22.5
16	13.0	5.5	9.5				27.0	18.0	22.5	29.0	20.0	23.5
17	9.5	5.5	8.0				27.5	17.5	22.5	22.5	20.0	21.5
18	11.0	7.0	9.0				26.5	19.0	22.5	27.0	18.5	21.5
19	14.5	9.0	11.5				27.0	18.5	22.5	27.0	19.0	22.5
20	13.0	11.5	12.5				28.0	19.5	23.0	22.5	18.0	20.5
21	---	---	---				27.0	18.5	21.5	25.0	18.0	21.5
22	---	---	---				23.0	15.5	19.5	25.5	20.5	22.5
23	---	---	---				24.0	16.5	20.0	29.5	20.0	24.5
24	---	---	---				26.5	16.5	21.0	30.0	20.5	25.5
25	---	---	---				23.0	17.0	20.0	31.0	21.5	26.5
26	---	---	---				25.5	17.5	21.5	32.0	21.5	27.0
27	---	---	---				21.0	17.0	18.5	33.5	23.5	28.0
28	---	---	---				20.5	16.5	18.5	32.5	26.0	29.0
29	---	---	---				26.0	18.0	22.0	32.5	24.5	28.5
30	---	---	---				26.0	19.0	22.5	29.0	23.5	27.0
31	---	---	---				---	---	---	27.5	23.0	25.0
MONTH	14.5	.0	5.5				28.0	13.0	20.5	33.5	15.0	24.0

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.0	22.5	26.5	31.5	23.0	27.0	34.5	25.5	30.0	32.5	25.0	28.5
2	32.5	23.0	27.5	31.0	24.5	27.5	34.5	27.0	30.5	33.5	24.5	28.5
3	30.5	24.0	27.0	32.0	24.5	28.0	34.5	27.5	30.5	33.5	24.5	28.5
4	28.5	21.0	25.5	33.0	24.5	28.5	34.0	26.5	29.5	32.5	24.5	27.5
5	21.0	19.0	19.5	33.5	24.5	29.0	34.0	26.0	29.5	33.0	23.5	27.0
6	23.0	19.5	21.0	33.5	25.5	29.0	34.5	26.0	30.0	33.0	24.5	27.5
7	27.0	22.0	24.0	32.5	24.0	28.0	35.5	25.0	30.0	33.0	24.5	28.0
8	30.5	25.5	27.5	33.0	24.5	28.5	35.5	26.5	30.0	33.0	25.0	28.0
9	31.0	26.0	28.5	34.0	25.0	29.0	34.0	26.0	29.0	32.5	25.0	28.0
10	31.5	26.0	28.5	32.5	26.5	29.0	34.5	26.0	29.5	33.0	25.0	27.5
11	28.0	24.0	26.0	34.0	25.0	29.5	34.5	26.5	29.5	31.5	24.5	27.0
12	27.0	22.0	24.5	34.5	25.5	29.5	33.0	25.0	28.5	30.5	24.0	26.5
13	28.0	21.5	24.5	33.5	25.5	28.5	35.0	26.0	29.0	28.0	23.5	25.5
14	30.0	21.0	25.5	33.5	24.5	28.5	30.5	25.5	27.0	25.5	22.5	23.5
15	28.5	24.0	26.0	34.0	25.5	28.5	31.5	24.0	27.5	25.0	22.0	23.5
16	32.0	24.5	28.0	33.0	25.5	28.5	33.5	25.0	29.0	26.5	22.0	24.0
17	31.5	24.5	27.5	34.5	26.0	30.0	34.0	26.0	29.5	29.0	22.5	25.5
18	28.0	22.5	25.5	34.0	26.5	30.0	33.0	26.5	29.5	28.5	23.5	25.5
19	30.0	21.5	26.0	33.0	26.5	29.5	34.5	26.0	29.5	27.5	23.5	25.5
20	30.0	22.5	26.0	33.0	26.0	29.0	34.5	26.0	29.5	27.0	22.5	24.5
21	31.0	22.5	26.5	34.0	25.0	28.5	34.0	26.5	29.0	22.0	19.5	21.0
22	29.0	23.5	26.0	33.0	26.0	28.5	34.0	25.5	28.5	27.0	19.5	23.0
23	31.0	24.5	27.5	29.5	25.5	27.5	35.0	25.0	29.0	24.0	19.0	22.0
24	30.5	24.5	27.5	32.0	25.5	28.0	31.0	23.5	27.0	23.5	17.0	20.5
25	29.5	24.0	27.0	31.0	25.0	28.0	32.0	24.5	27.5	23.5	17.5	20.5
26	28.5	25.0	26.5	29.0	26.5	28.0	32.0	24.0	27.5	23.0	16.0	19.5
27	28.0	21.5	25.0	32.5	25.5	28.5	32.0	24.0	27.0	24.0	16.0	19.5
28	30.5	21.5	26.0	33.5	27.5	30.0	32.5	24.5	27.5	24.5	19.0	21.5
29	30.5	23.0	26.5	33.0	26.5	29.5	33.0	24.0	28.0	21.0	14.5	17.0
30	31.0	22.5	26.5	33.0	26.5	29.5	33.5	24.5	28.0	16.0	12.0	14.0
31	---	---	---	33.5	26.0	29.5	33.5	24.0	28.0	---	---	---
MONTH	32.5	19.0	26.0	34.5	23.0	28.5	35.5	23.5	29.0	33.5	12.0	24.5

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX

LOCATION.--Lat 33°37'20", long 100°12'31", King County, Hydrologic Unit 11130205, on right bank 1.0 mi downstream from ranch road crossing, 2.9 mi upstream from Willow Creek, 6.6 mi east of Guthrie, and 91.5 mi upstream from confluence with North Wichita River.

DRAINAGE AREA.--223 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,590.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. There are minor diversions upstream due to limited operation of diversion pumps.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 19 ft³/s Sept. 13 (gage height 6.01 ft); minimum, no flow for several periods during year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage of 20.8 ft since at least 1950 occurred in May 1954, at station 07311780 located about 1.0 mi upstream.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Sept. 13	2030	*19	*6.01				

Minimum discharge, no flow on several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.9	3.5	2.7	3.0	6.1	4.8	4.8	2.6	5.2	4.5	4.8
2	.00	2.6	4.0	1.3	2.6	5.7	4.8	4.8	2.6	5.1	4.7	4.8
3	1.2	3.0	4.1	1.4	2.6	5.6	4.8	4.1	3.5	5.0	4.8	4.8
4	3.8	3.0	4.1	2.5	3.0	5.6	4.8	4.1	3.0	5.2	4.8	4.1
5	1.6	3.0	4.1	3.4	2.6	5.6	4.9	4.1	3.5	5.2	4.7	4.1
6	.73	3.0	.68	2.4	2.6	5.6	4.9	4.1	3.5	5.1	4.5	4.1
7	3.4	1.4	.00	1.8	2.2	5.2	4.8	4.7	5.2	4.8	4.8	4.1
8	3.3	2.1	3.0	1.1	2.6	5.2	4.8	4.8	4.1	4.8	4.8	4.1
9	2.7	1.5	3.5	.23	2.2	5.2	4.8	4.8	3.5	4.8	4.7	4.1
10	1.5	.00	2.1	2.3	2.2	5.2	4.1	4.8	3.5	4.4	4.6	4.2
11	.00	1.9	.47	2.2	2.1	4.9	4.1	4.8	4.8	4.7	4.9	4.1
12	2.7	2.5	.68	4.8	.00	4.8	4.1	4.8	4.8	4.1	4.8	4.1
13	2.4	3.0	4.4	.00	1.5	5.1	3.5	3.6	4.8	4.1	4.9	6.5
14	2.8	1.6	1.8	.77	2.9	5.2	3.5	1.5	4.8	4.1	4.8	5.8
15	2.8	.00	1.3	2.6	2.3	5.2	3.5	.00	5.2	4.1	4.8	4.5
16	3.0	2.2	3.1	.18	1.9	5.2	4.1	1.3	5.6	4.1	4.8	5.1
17	1.7	3.0	1.3	3.1	1.9	4.8	4.1	3.0	5.4	4.1	4.8	5.1
18	.00	3.5	.00	3.4	2.6	4.9	4.1	3.1	5.6	4.3	5.2	4.8
19	1.2	3.0	4.7	3.4	1.8	5.3	4.1	2.9	5.6	4.1	5.1	4.8
20	1.8	1.8	3.7	3.2	4.1	6.3	4.1	2.8	5.6	3.5	4.8	4.8
21	4.1	.00	2.7	2.6	2.8	5.0	4.1	3.5	5.6	3.6	4.8	4.7
22	1.7	1.9	2.2	1.9	3.3	4.8	4.1	3.0	5.6	4.1	4.8	5.0
23	1.0	2.8	1.5	2.2	3.6	4.8	4.1	3.5	5.6	4.0	4.9	4.0
24	3.5	2.6	.87	1.3	2.6	4.8	4.1	3.5	5.6	3.5	4.8	3.5
25	2.5	3.0	.36	3.0	2.8	4.8	4.1	3.0	5.5	3.5	4.8	3.5
26	3.0	1.5	2.1	3.0	3.5	4.8	4.1	3.9	6.2	5.9	4.8	3.5
27	2.4	1.0	1.8	2.0	3.6	4.8	4.7	4.1	5.9	5.8	4.8	3.5
28	3.0	1.0	2.2	.88	6.1	4.8	4.8	3.5	5.4	3.8	4.8	3.5
29	1.4	6.0	3.7	.00	---	5.0	4.8	3.5	5.5	3.9	4.8	3.5
30	.00	3.5	1.9	1.7	---	5.3	4.8	2.6	5.3	3.5	4.8	3.5
31	1.0	---	3.0	3.0	---	4.8	---	2.6	---	4.2	4.8	---
TOTAL	62.93	67.30	72.86	64.36	75.00	160.4	130.4	109.60	143.4	136.6	148.7	131.0
MEAN	2.03	2.24	2.35	2.08	2.68	5.17	4.35	3.54	4.78	4.41	4.80	4.37
MAX	4.1	6.0	4.7	4.8	6.1	6.3	4.9	4.8	6.2	5.9	5.2	6.5
MIN	.00	.00	.00	.00	.00	4.8	3.5	.00	2.6	3.5	4.5	3.5
AC-FT	125	133	145	128	149	318	259	217	284	271	295	260

CAL YR 1984 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1985 TOTAL 1302.55 MEAN 3.57 MAX 6.5 MIN .00 AC-FT 2580

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1984 to September 1985.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1984 to September 1985.
WATER TEMPERATURES: October 1984 to September 1985.

INSTRUMENTATION.--Beginning October 1984, specific conductance and water temperature are 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, 35,800 microsiemens Oct. 9, 1982; minimum daily, 400 microsiemens June 7, 8, 1985.
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, 36,900 microsiemens Aug. 9; minimum daily,22,800 microsiemens Dec. 19.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 2, 7, 8; minimum daily, 1.0°C Feb. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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										
15...	1700	3.1	34500	21.5	3800	3700	1100	260	7300	53
JAN										
08...	0830	1.5	30800	9.0	3500	3300	1000	240	6300	48
FEB										
20...	0815	3.7	34300	13.0	3900	3700	1100	270	7300	53
MAY										
13...	1020	4.5	34200	23.0	3600	3500	1000	270	7200	54
JUN										
17...	1150	5.5	33800	28.0	3400	3300	980	240	6300	49
JUL										
31...	1155	3.8	34000	29.0	3800	3700	1100	260	7100	52
SEP										
03...	1110	4.7	38000	26.0	4400	4300	1300	290	7900	54

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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
15...	30	100	2900	12000	.50	6.2	24000	--	--
JAN									
08...	25	141	2700	10000	.60	8.5	20000	.90	.90
FEB									
20...	39	133	3100	12000	.40	7.2	24000	--	--
MAY									
13...	33	97	3300	12000	--	--	--	--	--
JUN									
17...	31	103	2500	10000	.50	7.0	20000	--	--
JUL									
31...	29	96	3400	12000	.50	6.1	24000	--	--
SEP									
03...	33	98	3400	12000	.60	7.0	25000	--	--

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	62.93	33400	22200	3780	11200	1900	3000	503	*
NOV.	1984	67.30	32500	21600	3920	10900	1990	2900	522	*
DEC.	1984	72.86	30600	20200	3980	10400	2040	2700	528	*
JAN.	1985	64.36	30600	20300	3520	10400	1810	2700	467	*
FEB.	1985	75.00	32500	21600	4370	10900	2210	2900	581	*
MAR.	1985	160.4	33200	22100	9580	11200	4830	2900	1270	*
APR.	1985	130.4	34500	23100	8120	11500	4060	3100	1080	*
MAY	1985	109.60	33600	22400	6620	11200	3320	3000	881	*
JUNE	1985	143.4	31900	21100	8190	10700	4160	2800	1090	*
JULY	1985	136.6	34600	23100	8520	11500	4250	3100	1140	*
AUG.	1985	148.7	35800	23900	9610	11900	4760	3200	1280	*
SEPT	1985	131.0	34000	22700	8010	11400	4020	3000	1070	*
TOTAL		1302.55	**	**	78200	**	39400	**	10400	**
WTD.AVG.		3.6	33400	22200	**	11000	**	3000	**	**

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	34600	33900	34100	32300	31600	32000	32900	30300	32500	29200	28200	28800
2	---	---	---	33900	32200	33500	33000	30800	32600	28600	28300	28400
3	34200	33800	34100	32900	32100	32300	32900	31900	32700	28500	26000	27800
4	35200	34100	34500	32800	32300	32500	32800	30200	32200	28000	27600	27800
5	35200	34700	34900	32900	32600	32800	32800	30400	32200	27900	25600	26800
6	35200	34600	35000	33100	32700	32900	32800	32000	32600	27500	26800	27200
7	35500	34300	34600	33200	33000	33100	---	---	---	27900	27500	27800
8	35500	34600	35200	33600	33100	33300	33100	32800	33000	28900	27900	28500
9	34600	34300	34400	33600	33300	33400	33000	30200	32500	29200	28800	29000
10	34300	34100	34200	---	---	---	32600	32400	32500	29800	29200	29500
11	---	---	---	33800	33400	33500	32700	32400	32500	30800	29900	30600
12	34600	33600	34000	34700	33800	34100	32700	31700	32500	32400	30800	31600
13	34800	33800	34400	33900	33500	33800	33500	31900	32700	---	---	---
14	33700	33000	33200	33600	33500	33600	34200	33600	34000	31500	31300	31400
15	33100	32800	33000	---	---	---	34100	33300	33900	31600	31200	31400
16	32900	32500	32700	33900	33600	33700	33100	29600	31800	31600	31400	31500
17	32700	32400	32600	33900	32300	33300	32900	24700	28900	31700	31500	31600
18	---	---	---	32500	31700	32000	---	---	---	32500	31700	32000
19	33300	33000	33200	32300	30500	31500	24900	22800	24300	32400	31800	32200
20	34000	33200	33400	30500	29900	30100	25500	23200	24800	32100	31400	31800
21	34600	33900	34100	---	---	---	27100	25500	26200	31800	31400	31600
22	33900	32900	33200	30900	30000	30300	28300	27000	27800	32800	31800	32400
23	33200	32700	33000	32300	30900	31700	28700	26300	28400	32500	32200	32400
24	32700	32300	32500	31800	30100	31200	29200	28500	29000	32400	31900	32200
25	32200	31800	32000	31200	30500	30900	29400	26500	28900	32000	31200	31500
26	32000	31300	31700	31800	30900	31500	30000	29400	29900	31300	31000	31200
27	32000	31400	31700	32600	31800	32200	30700	29000	30300	31500	30100	31100
28	32000	31500	31800	32800	31500	32200	31400	30800	31200	31900	31400	31800
29	31800	31300	31400	33300	32600	33000	31000	30300	30700	---	---	---
30	---	---	---	32600	31800	32400	30700	28300	30500	32800	29600	32000
31	31600	31300	31400	---	---	---	30300	27500	29000	33200	32000	32800
MONTH	35500	31300	33300	34700	29900	32500	34200	22800	30700	33200	25600	30500

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	32100	31900	32000	32700	30000	32400	34200	33600	33800	34600	34300	34500
2	32500	31400	32300	32800	32400	32500	33500	32800	33400	34600	34100	34400
3	32600	31600	32500	33200	28000	32800	33700	33300	33500	35000	34400	34700
4	32600	32200	32400	33100	32900	33000	33900	33500	33700	35200	34700	34900
5	32200	31800	32000	33000	32600	32800	34000	33700	33800	35300	34900	35100
6	31900	31500	31700	34000	33000	33700	34500	33900	34200	35500	35100	35300
7	31600	31300	31400	33900	33600	33700	34700	34100	34400	35700	35200	35400
8	31800	31300	31500	33900	33600	33700	35000	34600	34800	35800	35300	35500
9	32200	31800	32000	34100	33700	33900	35300	34900	35100	35800	35500	35700
10	32000	31800	31900	34200	33900	34100	35500	35200	35400	36000	35600	35800
11	32500	31800	32100	34000	33600	33800	35700	35300	35500	36300	35700	35900
12	---	---	---	33600	33300	33500	35500	35100	35300	36300	35700	36000
13	33300	32600	32800	33700	32600	33300	35400	34800	35100	35900	31400	34600
14	33500	32600	33100	33700	33500	33600	34800	34400	34600	36400	34800	35700
15	33700	33400	33600	33700	33600	33700	35200	34400	34800	---	---	---
16	33300	32800	33100	33700	33400	33600	35400	34500	35000	36500	35900	36300
17	33100	32700	33000	33500	33300	33400	35500	34500	35000	36100	34900	35400
18	32800	32700	32700	33600	33300	33400	35500	34900	35200	36300	35800	25900
19	33000	32800	32900	33300	27400	32200	35500	34900	35300	35700	34500	35600
20	33200	32100	32800	31700	30700	31400	35600	35100	35400	35700	35000	35500
21	32800	32300	32700	32800	32100	32500	35600	31800	34800	35300	34100	35100
22	33100	31800	32700	32700	32100	32400	34500	30700	33600	35200	34500	34900
23	32500	31400	32100	32800	32500	32700	35000	33500	34300	35100	33400	34700
24	32600	32300	32400	32500	32300	32400	35000	34400	34800	35300	34300	35000
25	32500	31700	32200	33200	32400	32700	34400	33700	34100	35400	33900	35000
26	32800	32200	32500	33400	33100	33200	34600	33900	34300	35100	23400	25900
27	33100	32800	32900	33500	33400	33400	34500	33700	34100	31600	24000	29500
28	33000	32100	32800	34200	33700	33900	34900	34100	34500	31600	28600	30300
29	---	---	---	34800	32700	34200	35100	34500	34800	29900	26500	28700
30	---	---	---	34800	34300	34700	35100	34500	34700	26100	24400	24800
31	---	---	---	34600	34300	34500	---	---	---	25100	24200	24500
MONTH	33700	31300	32400	34800	27400	33300	35700	30700	34600	36500	23400	33400

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27200	25000	25900	34200	33400	33900	35200	33400	34300	36100	35200	35500
2	29300	27200	28200	33300	32800	33000	35800	34700	35200	36000	35100	35400
3	31100	29400	30300	33400	32600	32900	36300	35200	35700	36000	35100	35500
4	31700	31100	31300	34100	32900	33400	36700	35600	36000	36100	35200	35500
5	31300	25200	28400	34600	33400	33900	36700	35700	36100	36200	35100	35500
6	31200	26900	28600	34900	33900	34300	36600	35600	36100	36200	35400	35700
7	30800	28800	29800	35000	34100	34500	36700	35700	36100	36600	35400	35800
8	29300	25400	26900	35200	34200	34600	36800	35800	36100	36200	35300	35600
9	25300	24600	24900	35600	34500	35000	36900	35700	36200	36000	35200	35500
10	26900	25100	26000	35400	34800	35000	36800	35900	36300	36000	35100	35400
11	28200	26600	27300	35900	34700	35200	36600	35800	36200	36100	35300	35600
12	29900	28300	29100	36000	35000	35400	36500	35600	36000	36100	34600	35600
13	31100	29800	30500	36100	35100	35500	36600	35700	36000	35400	34300	35100
14	32100	31100	31700	36300	35300	35700	36100	35700	35900	35800	31000	34400
15	32400	31800	32100	36200	35400	35700	36300	35700	35900	33500	29500	31500
16	33400	32300	32800	36300	35400	35700	36700	35800	36100	33500	32900	33200
17	33400	32900	33200	36400	35500	35900	36800	35900	36200	33600	32900	33200
18	33300	30800	32900	36600	35600	36100	36400	35700	36000	34100	33600	33700
19	33100	32700	33000	36500	35800	36100	36500	35600	35900	34300	33800	34100
20	34000	32800	33400	36300	35700	35900	36200	35500	35800	34100	33700	34000
21	34500	33600	34000	36100	35500	35800	36300	35400	35700	33800	30900	32700
22	34600	33700	34100	36100	35500	35700	36300	35400	35700	33000	31300	31800
23	34900	34000	34400	36100	35500	35800	36400	35400	35700	33100	29800	32000
24	34900	34100	34500	36400	35600	35900	35900	34900	35400	31900	31300	31600
25	35000	34400	34600	36000	34800	35400	36100	35100	35500	31800	31100	31400
26	34400	33000	33900	36300	25000	34400	35900	35200	35400	33900	31800	32300
27	34900	34100	34400	35900	30800	33900	35800	35000	35400	33000	32300	32600
28	35000	34100	34500	33500	30500	31900	36100	34400	35500	33300	32900	33100
29	34900	34300	34600	34000	31900	33200	36000	35100	35500	33400	29900	32300
30	34600	34100	34400	32300	31200	31700	35900	35000	35400	32400	30100	31600
31	---	---	---	33800	32000	32800	35900	35100	35400	---	---	---
MONTH	35000	24600	31300	36600	25000	34700	36900	33400	35800	36600	29500	33900

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	1.5	2.5	17.5	12.0	14.5	19.0	14.0	16.0	25.0	20.0	22.5
2	5.5	1.0	3.0	15.5	14.5	15.0	21.0	14.0	17.0	26.5	20.0	23.0
3	7.0	3.0	4.5	19.0	14.5	16.5	23.0	15.5	19.0	26.5	20.0	23.0
4	7.0	5.0	6.0	18.0	14.0	15.5	23.0	17.5	19.5	26.5	20.5	23.0
5	8.5	6.5	7.5	17.0	12.0	14.0	22.0	15.5	18.5	26.5	21.0	23.5
6	8.0	7.0	7.5	15.0	12.5	13.5	22.5	15.5	19.0	28.0	22.0	24.5
7	10.5	6.5	8.0	17.0	13.5	15.0	20.0	16.5	18.0	29.0	22.5	25.5
8	12.0	7.5	9.5	21.0	15.0	17.5	21.0	16.0	18.0	28.5	23.0	25.5
9	14.5	9.0	11.5	19.0	17.0	17.5	22.0	16.5	19.0	26.5	23.0	24.0
10	13.5	9.5	11.0	20.0	16.5	18.0	20.0	17.0	18.5	25.5	22.5	24.0
11	12.0	8.0	9.5	20.5	17.0	18.5	24.0	17.0	20.0	27.0	22.0	24.0
12	---	---	---	17.0	14.5	16.0	24.0	19.0	21.0	27.0	20.0	23.5
13	10.5	7.5	9.0	16.5	14.0	15.0	25.5	19.5	22.0	25.5	20.5	23.0
14	11.5	8.5	10.0	18.5	13.5	15.5	24.5	19.0	21.5	24.5	18.5	21.5
15	12.5	9.5	11.0	14.5	13.0	14.0	26.0	18.5	22.0	---	---	---
16	13.5	10.0	11.5	14.0	12.5	13.0	25.0	19.0	21.5	24.5	22.5	23.5
17	14.0	10.0	11.5	18.5	12.0	14.5	25.0	19.0	22.0	24.0	22.0	23.0
18	12.5	11.5	12.0	19.0	13.0	15.5	24.0	20.0	21.5	24.0	20.5	22.0
19	14.5	12.0	13.0	15.5	14.0	15.0	25.5	20.0	22.0	24.5	20.5	21.5
20	14.0	13.0	13.5	16.0	13.0	14.0	26.0	20.0	22.5	24.0	21.0	22.0
21	18.5	14.0	15.5	14.5	12.5	13.5	25.5	19.5	21.5	24.5	20.0	21.5
22	19.5	16.5	17.5	18.0	12.0	14.5	24.5	19.5	21.5	23.0	20.5	21.5
23	17.5	14.0	16.0	20.0	13.5	16.5	23.5	18.5	21.0	25.5	20.0	22.0
24	17.5	12.5	14.0	21.0	14.5	17.0	24.0	18.5	21.0	26.0	20.5	22.5
25	17.0	12.0	13.5	21.5	15.0	18.0	22.5	18.5	20.0	27.0	21.5	23.5
26	14.5	12.5	13.0	20.0	17.5	18.5	25.0	19.0	21.5	26.5	21.0	24.0
27	15.0	11.0	12.5	18.5	17.5	18.0	21.5	19.0	20.5	30.5	24.5	26.5
28	13.5	12.0	13.0	22.0	17.5	19.0	20.0	18.0	19.0	30.0	26.0	27.5
29	---	---	---	21.0	15.5	18.5	25.0	18.0	21.0	30.0	24.5	27.0
30	---	---	---	16.5	13.0	15.0	25.0	19.5	22.0	29.0	24.5	26.5
31	---	---	---	19.0	12.0	15.0	---	---	---	27.0	24.0	25.0
MONTH	19.5	1.0	10.5	22.0	12.0	16.0	26.0	14.0	20.5	30.5	18.5	23.5

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	23.0	25.5	30.0	23.0	26.0	32.5	25.5	28.5	31.0	24.5	26.5
2	30.5	23.5	26.0	30.0	24.5	27.0	33.0	26.5	29.0	31.0	24.0	27.0
3	29.5	24.5	26.5	31.0	24.5	27.5	32.5	26.5	29.0	30.5	24.0	26.5
4	27.0	23.5	25.5	32.0	24.5	27.5	32.5	26.0	29.0	30.5	24.0	26.5
5	23.5	21.5	22.0	32.0	24.5	28.0	32.5	26.0	28.5	30.5	23.5	26.0
6	25.5	20.5	23.0	32.0	25.5	28.0	32.5	26.0	28.5	30.5	24.0	26.5
7	29.5	22.5	25.5	31.5	24.5	27.5	33.0	25.5	28.5	31.0	24.5	27.0
8	31.5	25.5	28.0	31.5	24.5	27.5	33.0	26.5	29.0	31.5	24.5	27.0
9	31.5	26.0	28.5	32.0	24.5	28.0	32.0	25.5	28.5	31.0	24.5	27.0
10	31.0	26.0	28.0	30.0	25.5	27.5	32.5	26.0	28.5	31.0	24.0	27.0
11	29.0	25.0	27.0	32.0	24.5	28.0	30.5	26.0	28.0	29.5	24.5	26.0
12	28.0	23.5	25.0	32.0	25.0	28.0	31.0	24.5	27.0	29.0	24.0	26.0
13	27.0	22.0	24.5	31.5	25.0	28.0	31.5	25.5	27.5	27.0	24.0	25.0
14	29.0	22.0	25.0	32.0	25.0	28.0	29.0	25.5	26.5	24.5	23.5	24.0
15	28.0	24.0	26.0	31.5	25.5	27.5	28.5	25.0	26.0	24.5	22.0	23.0
16	30.0	24.0	26.5	32.5	25.5	28.5	31.0	24.0	27.0	24.5	22.0	22.5
17	30.5	24.5	27.0	32.0	26.0	28.5	32.0	24.5	27.5	25.5	21.5	23.0
18	26.5	24.0	25.5	32.0	25.5	28.5	31.0	25.5	28.0	27.0	22.5	24.0
19	28.5	22.0	25.0	32.0	25.5	28.0	32.5	25.0	28.0	25.5	22.5	24.0
20	29.0	22.5	25.5	31.5	25.5	27.5	31.0	25.5	28.0	24.0	21.5	23.0
21	30.0	23.5	26.5	30.5	25.0	27.0	32.0	26.0	28.0	22.5	20.0	21.0
22	32.0	24.5	27.5	30.5	25.0	27.0	32.0	25.0	27.5	25.0	19.5	21.5
23	31.5	26.0	28.0	28.0	24.5	26.0	32.5	25.0	27.5	23.0	19.0	21.0
24	30.0	25.0	27.5	30.5	24.5	27.0	32.0	25.0	27.5	23.0	18.5	20.0
25	28.5	24.5	26.0	31.0	24.0	27.0	31.5	25.0	27.5	23.0	18.0	19.5
26	28.5	24.5	26.0	29.5	25.5	27.0	30.5	25.0	27.0	22.5	18.0	19.5
27	28.5	22.5	25.5	32.5	25.0	28.5	30.5	23.5	26.5	23.0	17.0	19.0
28	29.5	22.0	25.5	32.0	26.0	28.5	31.0	24.0	26.5	22.5	19.0	20.5
29	29.0	22.5	25.5	32.5	26.0	28.5	31.0	24.0	26.5	20.5	16.0	18.0
30	29.0	22.5	25.5	32.0	25.5	28.5	31.0	23.5	26.5	19.5	14.0	15.5
31	---	---	---	32.5	25.5	28.0	31.0	23.5	26.5	---	---	---
MONTH	32.0	20.5	26.0	32.5	23.0	27.5	33.0	23.5	27.5	31.5	14.0	23.5

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 above National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 1-8, 20-21 and Jan. 31 to Feb. 7. Records good. Low flow diversion to evaporation lake at station 07311782. There were minor daily diversions above station during the current year.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 37.4 ft³/s (0.87 in/yr), 27.100 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 greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 31	1500	1,240	10.87	Apr. 22	0430	1,720	12.55
Mar. 30	0600	1,410	11.47	June 5	1500	*2,260	*14.19

Minimum discharge, no flow for several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	11	10	108	6.0	8.8	34	8.8	3.4	3.5	7.9	.00
2	3.2	4.2	12	42	6.0	8.4	28	8.1	3.2	3.5	6.4	.00
3	2.7	3.3	11	29	18	125	23	7.5	2.6	3.6	5.5	.00
4	6.1	2.8	13	23	15	71	21	7.0	17	3.4	4.6	.00
5	3.6	5.9	13	20	13	11	19	6.5	1730	3.1	3.7	.00
6	2.5	5.0	11	17	11	8.9	17	6.3	375	2.9	3.3	.00
7	1.9	4.2	12	17	10	8.6	16	6.0	42	2.7	2.8	.00
8	2.7	4.0	11	17	9.9	8.0	15	5.6	25	2.5	2.5	.00
9	3.4	3.8	11	17	9.5	7.6	15	5.6	15	2.5	.81	.00
10	2.0	3.4	10	14	9.2	7.7	15	5.8	12	2.6	6.8	.00
11	3.1	3.0	9.0	13	8.4	7.6	15	6.1	11	2.5	8.7	.00
12	4.4	3.4	10	11	8.3	6.1	15	5.0	9.9	2.2	3.3	.00
13	3.3	3.2	16	15	7.7	47	15	4.9	9.2	2.0	.87	16
14	6.0	2.7	13	14	7.3	16	15	3.8	8.8	1.8	.77	53
15	3.3	3.0	74	15	6.8	11	14	3.9	8.3	1.5	.08	3.8
16	4.6	3.6	83	13	5.8	12	14	4.8	7.9	1.3	1.8	1.5
17	3.9	174	48	11	5.8	12	13	5.5	6.7	1.5	9.1	2.9
18	3.6	60	32	12	7.2	11	13	4.8	6.2	1.0	5.7	2.1
19	3.1	19	29	11	7.3	23	12	4.2	7.3	.75	3.8	1.5
20	23	16	23	8.6	9.8	208	12	4.2	6.9	.67	2.1	2.1
21	32	14	19	8.0	12	36	179	4.0	9.7	.84	.73	40
22	15	12	20	13	18	27	741	5.4	9.2	.81	.11	12
23	8.3	11	18	13	56	20	42	4.9	9.9	.79	.00	6.0
24	9.6	41	17	12	15	17	20	3.7	7.9	.83	28	7.7
25	7.6	68	15	7.5	12	15	13	3.5	7.9	.54	4.8	5.0
26	12	20	18	14	10	14	11	6.4	19	47	2.0	3.8
27	12	17	15	11	9.0	14	30	3.9	4.6	114	.33	3.5
28	6.9	14	13	11	8.3	13	13	4.7	4.0	50	01	3.2
29	6.3	13	13	12	---	75	13	6.9	3.2	20	.00	148
30	5.7	11	13	10	---	667	10	4.6	3.5	12	.00	14
31	5.2	---	665	6.0	---	67	---	3.7	---	8.9	.00	---
TOTAL	211.1	556.5	1277.0	545.1	322.3	1583.7	1413	166.1	2386.3	301.23	116.51	326.10
MEAN	6.81	18.6	41.2	17.6	11.5	51.1	47.1	5.36	79.5	9.72	3.76	10.9
MAX	32	174	665	108	56	667	741	8.8	1730	114	28	148
MIN	1.9	2.7	9.0	6.0	5.8	6.1	10	3.5	2.6	.54	.00	.00
CFSM	.01	.03	.07	.03	.02	.09	.08	.009	.14	.02	.006	.02
IN.	.01	.04	.08	.03	.02	.10	.09	.01	.15	.02	.01	.02
AC-FT	419	1100	2530	1080	639	3140	2800	329	4730	597	231	647

CAL YR 1984 TOTAL 4718.84 MEAN 12.9 MAX 665 MIN .00 CFSM .02 IN .30 AC-FT 9360
WTR YR 1985 TOTAL 9204.94 MEAN 25.2 MAX 1730 MIN .00 CFSM .04 IN .59 AC-FT 18260

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 microsiemens May 13, 1971; minimum daily, 901 microsiemens 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, 34,100 microsiemens May 31; minimum daily, 1,000 microsiemens June 5.
WATER TEMPERATURES: Maximum daily, 33.5°C Aug. 1, 2; minimum daily, 0.0°C on several days during January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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 15...	1510	3.2	29200	21.5	3500	3500	1000	250	5700
NOV 27...	1045	16	16800	5.5	2500	2400	720	170	3100
APR 22...	1110	824	1870	17.0	590	510	180	34	180
JUN 18...	1340	7.0	20300	28.0	3500	3300	940	270	3700
JUL 31...	1500	8.9	12400	34.0	2300	2200	730	110	2100

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 15...	43	25	58	2900	9800	.30	3.3	20000
NOV 27...	28	17	75	2000	5300	.20	4.4	11000
APR 22...	3	7.1	81	560	250	.20	8.9	1300
JUN 18...	28	23	129	2700	6500	.30	5.7	14000
JUL 31...	20	26	69	1800	3700	.40	5.7	8500

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	211.1	19900	13600	7760	6400	3640	2300	1330	*
NOV.	1984	556.5	15400	10500	15800	4800	7240	1900	2910	*
DEC.	1984	1277.0	11500	7830	27000	3500	12200	1500	5170	*
JAN.	1985	545.1	16000	10900	16100	5000	7330	2000	3000	*
FEB.	1985	322.3	22000	15000	13100	7000	6130	2600	2230	*
MAR.	1985	1583.7	8890	6070	26000	2700	11600	1200	5170	1500
APR.	1985	1413	7280	4970	19000	2200	8420	1000	3820	1300
MAY	1985	166.1	23600	16100	7210	7600	3390	2700	1220	*
JUNE	1985	2386.3	4560	3110	20100	1400	8810	650	4160	810
JULY	1985	301.23	11600	7920	6440	3600	2900	1500	1250	*
AUG.	1985	116.51	13700	9380	2950	4300	1340	1800	560	*
SEPT	1985	326.10	6440	4400	3870	1900	1720	890	784	1100
TOTAL		9204.94	**	**	165000	**	74700	**	31600	**
WTD.AVG.		25	9730	6650	**	3000	**	1300	**	1600

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24400	22500	23700	28200	19600	25900	24200	23600	23900	11500	3600	6570
2	24500	24100	24300	28000	27200	27600	25000	24200	24900	15600	12300	14500
3	24100	23300	23800	28000	27600	27800	25200	24800	25000	17200	13700	15600
4	23300	21200	22100	28400	27800	28100	25200	23200	24200	16000	9700	12800
5	21900	21000	21400	28700	28200	28500	25000	23200	24000	11400	10500	10900
6	22700	21100	22200	29300	28500	28800	26000	25000	25500	12500	11400	11900
7	28800	22500	23000	29700	29300	29500	26000	25200	25600	13800	12400	13100
8	24700	23600	24000	29900	29300	29700	26200	25800	26000	15400	13700	14600
9	25500	23300	24800	30300	29700	30000	26800	26200	26500	---	---	15700
10	26200	25300	25600	30800	29500	30500	27000	26600	26800	---	---	17400
11	26500	25500	26200	31000	27800	30400	26800	26400	26600	---	---	16000
12	27800	26500	27200	31200	28000	30600	27200	26200	26600	---	---	16800
13	27500	24800	25200	31200	30800	31100	26800	23200	24700	---	---	18300
14	29800	27800	28900	31000	30600	30800	26800	25200	26000	---	---	18700
15	28000	26400	27100	31900	28300	31200	25800	3000	13600	---	---	19100
16	29800	25800	27500	31900	28900	31500	9000	4000	6710	---	---	19500
17	31500	30000	30900	31700	1900	13200	20400	9200	16500	---	---	20400
18	32700	31300	32100	5900	3700	4930	19800	18600	19500	---	---	21000
19	33100	32100	33000	10700	5700	8380	19600	16600	18300	---	---	21500
20	33100	8300	24000	21800	11100	16300	16400	14600	15200	---	---	23100
21	18500	2100	6850	25600	22200	24200	17000	14800	16000	---	---	23700
22	5000	4100	4430	26000	25600	25800	17600	17200	17400	---	---	24600
23	14600	5200	9280	25800	25200	25600	18400	17000	17600	---	---	24000
24	19800	14000	16100	25600	2200	19300	21200	18600	19800	---	---	23900
25	25800	20200	23600	16500	5500	7310	22000	20800	21400	---	---	23700
26	26400	11000	23200	13100	9700	11100	21000	20600	20800	---	---	24500
27	25700	9800	21500	21600	12700	17300	20800	20400	20600	24200	23800	23900
28	27100	25700	26500	23800	21800	22900	21600	20400	21100	24800	23800	24300
29	27900	26700	27500	24200	23600	24000	22600	21600	22100	25400	23800	24700
30	28300	27100	27900	24400	23600	24000	23000	21600	22800	26200	24600	25100
31	28500	28100	28300	---	---	---	21200	1800	5280	28800	26200	27500
MONTH	33100	2100	23600	31900	1900	23900	27200	1800	21000	28800	3600	19300

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	28100	23700	22900	23200	7200	6700	6930			16200
2	---	---	28600	24000	23700	23900	7600	5800	7000			17900
3	---	---	27500	24000	1800	19100	8900	5700	8200			19000
4	---	---	27300	14700	2600	8680	10900	9000	10000			19900
5	---	---	25300	13200	4800	8240	13400	10800	12300			20100
6	---	---	24600	18600	9700	14600	15100	13400	14200			20600
7	---	---	25600	20600	18900	19900	16900	14800	15800			22200
8	---	---	25500	22200	20600	21400	---	---	16800			22700
9	---	---	25700	23000	20800	22400	---	---	17800			23300
10	---	---	26000	23200	20800	22800	---	---	18500			23400
11	---	---	26400	24500	23100	23700	---	---	19000			23000
12	---	---	26300	---	---	24800	---	---	19700			23400
13	---	---	26000	17700	1400	6900	---	---	20500			24400
14	---	---	25800	15500	4800	8900	---	---	20700			23600
15	---	---	26000	---	---	21300	---	---	22000			25000
16	---	---	26100	---	---	18600	---	---	22600			25700
17	---	---	26500	---	---	19500	---	---	23000			23600
18	---	---	26800	---	---	23700	---	---	23600			23800
19	---	---	27000	---	---	24400	---	---	24200			24000
20	---	---	26900	7700	2100	5050	---	---	24800			25900
21	24800	22400	23600	9900	2700	6470	11500	2700	9730			25200
22	25000	6000	23900	16500	10200	13600	3000	1600	2100			26100
23	17200	3000	10100	17700	16700	17300	---	---	10800			26300
24	14600	8000	10600	18500	17600	18000	---	---	11700			26700
25	21400	15000	18700	19800	18300	19000	---	---	12000			28000
26	23200	21600	22600	20000	19200	19700	---	---	12200			30200
27	23600	23000	23200	---	---	20000	---	---	8840			28900
28	23600	23100	23300	---	---	21100	---	---	7630			23500
29	---	---	---	---	---	12600	---	---	10900			23300
30	---	---	---	6300	1800	3510	---	---	13800			31600
31	---	---	---	14800	6600	11100	---	---	---			34100
MONTH	25000	3000	24400	24500	1400	16900	16900	1600	14900			24200

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	32700			23700	13400	12200	12900			---
2	---	---	33000			23900	14700	13600	14000			---
3	---	---	33400			24500	15800	14600	15200			---
4	---	---	31700			24800	17200	15900	16400			---
5	4900	1000	1880			25500	18100	16800	17500			---
6	11800	1400	7970			25600	18700	17900	18300			---
7	---	---	8300			25700	19800	18400	19100			---
8	---	---	7200			26100	20300	19000	19500			---
9	---	---	8160			26800	20300	19100	19800			---
10	---	---	11200			26300	19100	15400	17500			---
11	---	---	12400			26100	---	---	12200			---
12	---	---	13900			26000	---	---	10700			---
13	---	---	15500			26100	---	---	15000			9650
14	---	---	16800			26000	---	---	16700			3740
15	---	---	17900			25900	---	---	19300			7370
16	---	---	18200			25800	---	---	20500			5990
17	19800	18300	19500			25700	---	---	18100			5800
18	20000	19400	19700			25900	---	---	23600			6280
19	20600	19500	20000			25600	---	---	28500			10500
20	21500	20400	20900			25700	---	---	31600			13500
21	23000	21600	22300			26100	---	---	31000			8510
22	---	---	18500			25700	---	---	25000			4970
23	---	---	20500			25000	---	---	---			11500
24	24600	24200	24400			24300	---	---	5530			20100
25	24600	2400	23100			24700	3100	3000	3540			29600
26	---	---	17500			15500	---	---	4620			30700
27	19100	8100	16600			6150	---	---	6300			31900
28	22100	19200	20900			8000	---	---	8510			32300
29	23500	21300	22300			9200	---	---	---			3200
30	24700	22600	23600			9880	---	---	---			4170
31	---	---	---			12200	---	---	---			
MONTH	24700	1000	18700			22500	20300	3000	16700			13300

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	12.0	16.5	19.5	12.5	16.5	12.5	5.5	9.0	4.0	.5	2.5
2	24.5	14.0	18.5	17.0	8.0	12.0	11.0	6.0	8.0	3.0	.0	1.0
3	23.5	16.0	19.5	18.0	10.5	13.5	8.0	2.5	5.5	4.5	.0	2.0
4	24.5	18.0	20.5	18.0	11.5	14.0	6.5	2.5	5.0	6.5	.0	3.5
5	25.5	18.0	21.0	17.0	8.0	12.5	6.0	2.5	4.0	6.5	2.0	4.5
6	26.0	19.0	22.0	15.5	8.5	12.0	8.5	1.5	4.5	7.0	3.5	5.0
7	28.0	17.0	22.0	19.0	10.5	14.0	10.5	2.0	6.0	6.5	4.5	5.5
8	22.0	17.0	19.5	21.0	12.5	16.5	12.0	5.0	8.5	7.0	5.0	6.0
9	24.5	16.0	19.5	20.5	13.0	16.0	15.5	7.5	11.0	8.0	6.0	7.0
10	23.0	16.5	19.5	15.5	9.0	11.5	14.5	6.5	10.0	7.5	4.5	5.5
11	20.5	17.0	19.0	15.0	6.0	10.0	13.5	7.5	10.5	5.0	2.5	4.0
12	26.5	18.0	21.0	16.0	7.0	11.5	16.0	10.5	12.5	2.5	1.0	1.5
13	22.0	18.5	20.0	15.0	9.0	12.0	12.5	6.5	9.5	2.0	1.0	1.5
14	26.0	16.5	20.5	18.5	12.0	15.0	6.5	3.5	4.5	4.0	1.5	2.5
15	22.5	14.5	18.0	15.5	10.0	13.0	5.0	3.0	4.0	4.5	1.5	3.0
16	19.0	13.5	16.0	11.5	7.0	9.5	8.0	3.0	5.5	6.0	4.0	5.0
17	18.5	10.5	14.0	10.0	8.5	9.0	9.5	4.5	6.5	6.0	4.5	5.5
18	23.5	14.0	17.5	9.0	7.5	8.5	6.5	4.5	5.0	7.0	5.0	6.0
19	19.0	10.5	15.0	7.0	6.0	6.5	8.0	5.0	6.5	7.0	5.5	6.5
20	17.5	13.5	15.5	6.5	5.5	6.0	10.0	7.5	8.5	5.0	2.0	3.0
21	14.5	11.5	12.5	9.0	4.0	6.5	12.0	8.0	10.0	2.0	1.0	1.5
22	12.0	10.5	11.0	9.5	3.5	7.0	8.5	4.5	6.5	3.0	.5	1.5
23	15.0	10.0	12.5	13.0	5.5	9.0	10.5	3.5	7.0	3.5	2.5	3.0
24	13.0	11.0	11.5	9.0	6.5	8.0	8.5	2.5	6.0	5.0	3.0	4.0
25	16.5	10.5	13.5	12.0	7.0	9.5	3.5	.5	2.5	6.5	4.5	5.5
26	16.0	14.0	15.0	13.5	8.5	10.5	6.5	2.5	4.5	7.0	2.5	5.5
27	21.0	13.5	17.0	9.5	4.5	6.5	12.5	6.5	9.5	6.5	3.5	5.5
28	20.0	13.0	16.0	10.5	2.5	6.5	19.0	13.0	15.5	8.0	2.5	5.0
29	16.0	11.0	14.0	13.0	5.5	9.0	18.5	13.5	16.0	11.0	2.0	6.5
30	19.0	13.5	16.5	13.0	5.5	9.0	13.0	8.0	9.5	8.5	.5	5.5
31	22.5	15.5	18.5	---	---	---	8.0	4.5	5.5	.5	.0	.0
MONTH	28.0	10.0	17.0	21.0	2.5	10.5	19.0	.5	7.5	11.0	.0	4.0

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

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	24.5	26.0	27.5	23.0	25.0	33.5	25.0	29.0	---	---	---
2	28.0	25.0	26.5	26.5	25.5	26.0	33.5	26.5	29.5	---	---	---
3	27.0	25.5	26.5	28.5	25.0	26.5	32.5	26.5	29.0	---	---	---
4	26.0	19.0	24.5	29.0	25.0	27.0	32.0	25.0	28.0	---	---	---
5	20.5	18.5	19.5	28.5	25.5	27.0	31.5	25.0	28.0	---	---	---
6	26.5	20.0	23.0	---	---	27.5	30.0	25.0	27.5	---	---	---
7	---	---	24.0	---	---	26.5	30.0	24.0	27.5	---	---	---
8	---	---	25.5	---	---	24.0	27.5	25.0	26.0	---	---	---
9	---	---	26.5	---	---	25.0	28.0	22.5	24.5	---	---	---
10	---	---	26.5	---	---	25.0	29.5	24.5	26.0	---	---	---
11	---	---	23.0	---	---	24.0	29.5	25.0	27.0	---	---	---
12	---	---	20.0	---	---	24.0	26.0	23.5	25.0	---	---	---
13	---	---	21.0	---	---	25.0	27.5	24.0	25.5	29.0	20.0	23.5
14	---	---	22.0	---	---	25.0	25.5	24.0	24.5	24.5	20.0	22.0
15	---	---	24.0	---	---	24.0	25.5	23.0	24.5	25.0	19.0	22.0
16	---	---	24.5	---	---	24.0	28.0	23.0	25.0	28.5	20.5	24.0
17	29.5	24.0	25.5	---	---	23.0	31.0	25.0	28.0	31.0	20.5	26.0
18	26.0	22.5	24.5	---	---	23.0	31.5	25.5	28.5	31.0	22.5	27.0
19	27.5	21.0	24.5	---	---	24.0	30.0	25.0	27.5	29.5	22.0	25.5
20	26.5	21.5	24.0	---	---	24.0	28.0	25.5	26.5	29.0	15.5	22.0
21	28.5	22.5	25.5	---	---	24.0	28.0	25.0	25.5	20.0	14.5	18.0
22	29.5	23.5	26.0	---	---	23.0	27.0	23.5	25.0	29.0	17.5	23.0
23	29.0	25.5	27.0	---	---	22.0	---	---	---	20.5	13.0	17.5
24	28.0	24.5	26.5	---	---	24.0	28.0	23.0	25.5	25.0	14.0	21.5
25	26.5	24.0	25.5	---	---	25.0	29.0	24.5	26.5	22.5	15.0	19.0
26	27.5	22.0	25.0	27.5	24.0	25.5	26.5	24.0	25.0	21.5	10.0	17.0
27	28.0	20.5	24.0	28.5	24.0	26.5	25.0	23.5	24.5	27.5	8.5	19.0
28	32.0	20.5	26.0	32.0	26.5	29.0	26.0	23.0	24.5	27.5	19.0	22.0
29	31.0	21.5	25.5	30.0	27.0	28.5	---	---	---	20.0	12.0	15.5
30	31.0	21.5	25.5	29.5	27.0	28.5	---	---	---	13.0	9.0	10.5
31	---	---	---	32.5	27.0	28.5	---	---	---	---	---	---
MONTH	32.0	18.5	24.5	32.5	23.0	25.5	33.5	22.5	26.5	31.0	8.5	21.0

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 U.S. Army 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 U.S. Army 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, 274,200 acre-ft June 15 at 0700 hours (elevation, 1,144.39 ft); minimum, 175,500 acre-ft Oct. 10-13 (elevation, 1,136.95 ft).

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

1,136.0	166,200	1,142.0	238,200
1,138.0	186,700	1,144.0	268,000
1,140.0	210,900	1,146.0	300,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175700	183300	190900	215700	206200	222000	238800	243800	243800	268600	246600	222400
2	175900	183400	190800	218800	206200	222200	239100	243500	242600	268200	246000	221500
3	175800	183700	190400	219600	206200	224900	240100	243500	241900	267400	245300	220800
4	175800	183500	191000	220100	206400	226800	239500	243400	240800	266800	244500	219600
5	175900	183500	190900	220400	206400	227700	239200	243200	250700	265900	243800	218800
6	175900	183400	190900	220700	206500	227500	238800	242900	260100	265300	242800	218000
7	175900	183500	190900	220800	206800	228100	238800	242800	268000	264500	241900	216900
8	175800	183800	191000	220800	206900	228400	238800	242500	272600	263600	241100	216300
9	175700	183600	191100	221500	208100	228400	238800	242200	273600	262800	240100	215500
10	175600	183200	191100	219700	207400	228900	238800	241400	273700	262200	239500	214500
11	175600	183000	191600	218400	207300	228500	238800	241500	273200	261600	238700	213600
12	175600	183000	191700	217500	207300	228500	238900	240800	273200	260500	237500	213000
13	175900	182700	192200	216700	207400	228600	239200	240600	272900	259500	236500	211800
14	176600	183100	192500	215600	207600	228600	238700	239800	272800	258400	235800	211400
15	176200	182700	195200	214500	207700	228800	238500	239700	273100	257500	235100	210900
16	176300	182400	197100	214000	207700	228900	238100	239400	272900	256600	234400	210400
17	176100	184900	198100	213100	207600	228900	238100	239400	272600	256000	233400	209600
18	176000	187600	198300	212900	207600	229200	237900	239200	272100	255100	232400	209100
19	175900	188400	198800	212600	207800	229600	238100	242200	272100	254500	231200	209100
20	177100	188500	199100	212300	209300	231500	237700	246100	271300	253700	230600	209100
21	178600	188800	199400	212200	209900	232400	237800	246400	271200	252700	230000	208700
22	179600	188800	199500	212200	216000	232700	240400	246400	271000	251900	229500	209000
23	179900	189000	199900	211400	220900	232800	242100	246400	271000	251000	229300	208300
24	180500	189400	199600	210600	221100	233400	242100	246400	270900	250300	228100	207700
25	180800	190200	199500	209500	221300	234000	242100	246400	270500	249700	227800	207200
26	181400	190800	199800	208600	221100	234100	242500	246300	270400	249200	227000	206700
27	182200	190700	200100	207700	221100	233800	242900	246000	270200	248600	226300	205800
28	182400	190900	200500	206700	221800	233800	243200	245700	270200	248500	225500	205800
29	182600	190900	201000	206700	---	235100	243800	245500	269700	248200	224500	206000
30	182700	190800	201400	206700	---	236900	244000	246000	269300	247600	224000	206800
31	183000	---	210500	206200	---	238400	---	244500	---	247000	223300	---
MAX	183000	190900	210500	221500	221800	238400	244000	246400	273700	268600	246600	222400
MIN	175600	182400	190400	206200	206200	222000	237700	239200	240800	247000	223300	205800
(†)	1137.66	1138.36	1139.97	1139.63	1140.82	1142.01	1142.40	1142.44	1144.08	1142.61	1140.93	1139.68
(‡)	+7100	+7800	+19700	-4300	+15600	+16600	+5600	+500	+24800	-22300	-23700	-16500

CAL YR 1984 MAX 283600 MIN 173100 (‡) -66400
WTR YR 1985 MAX 273700 MIN 175600 (‡) +30900

(†) 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 at 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 mi², 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Aug. 20 to Sept. 15 and Sept. 15-30. 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.--26 years, 137 ft³/s (99,260 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,290 ft³/s Mar. 24, 1976 (gage height, 10.47 ft); minimum daily, 0.15 ft³/s June 22, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 548 ft³/s Jan. 11 at 1930 hours (gage height, 4.05 ft); minimum daily, 0.40 ft³/s Oct. 5-10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.89	.99	3.1	3.2	1.7	1.5	1.6	265	136	126	252
2	.67	.84	1.1	1.3	3.1	1.5	1.4	1.6	266	139	126	253
3	.46	.77	1.0	1.0	2.1	7.1	1.4	1.6	267	204	125	250
4	.46	.93	1.1	.94	1.1	5.2	1.4	1.7	269	264	185	250
5	.40	.94	1.1	.94	.98	1.6	1.6	1.8	120	267	276	250
6	.40	.94	.94	.84	.94	1.7	1.5	1.9	9.5	267	271	250
7	.40	.90	.88	.84	.85	1.7	1.7	4.7	1.6	264	273	250
8	.40	.94	.85	.84	.78	1.8	1.5	118	1.4	264	271	250
9	.40	.94	.90	75	.68	1.7	1.4	118	1.5	262	269	250
10	.40	1.1	.94	433	.82	1.6	1.4	118	1.5	264	267	250
11	.46	1.1	.93	542	.83	1.6	1.5	115	1.6	264	267	250
12	.46	1.2	.86	540	.87	1.5	1.5	117	1.7	264	271	250
13	.53	1.1	1.3	538	.91	1.6	54	83	1.5	264	264	250
14	.53	1.1	1.2	541	.89	1.6	116	1.6	1.6	262	353	250
15	.53	1.3	6.1	540	.84	1.5	115	1.6	1.7	259	406	250
16	.46	1.2	2.3	540	.88	1.5	112	1.7	1.8	257	408	180
17	.53	4.0	1.1	537	.85	1.5	3.0	1.7	2.0	254	407	130
18	.53	1.9	1.1	179	.90	1.5	1.4	1.7	2.2	254	410	130
19	.61	1.2	.84	4.0	.96	1.8	1.3	27	2.3	254	316	130
20	1.4	1.1	.84	4.7	3.1	3.7	1.3	122	2.1	252	165	130
21	1.0	1.0	.84	2.9	3.2	1.6	1.4	47	2.2	252	112	130
22	.95	1.0	.82	103	11	1.3	1.6	2.0	2.3	250	110	130
23	.74	1.0	.84	434	15	1.3	2.1	4.2	2.3	254	111	130
24	.69	1.1	.88	534	2.5	1.3	2.6	6.2	2.2	254	111	130
25	.94	1.3	.84	535	1.8	1.4	1.9	6.0	2.4	254	109	130
26	.96	1.0	.84	532	1.9	1.3	1.3	6.1	2.7	254	200	130
27	1.7	1.0	.84	532	1.8	1.2	1.5	6.3	2.8	192	259	130
28	.71	.94	.84	533	1.7	1.1	1.4	6.3	36	130	257	130
29	.67	.99	.84	190	---	1.5	1.6	6.1	129	126	256	130
30	.75	1.0	1.1	3.6	---	1.6	1.6	77	124	126	255	130
31	.75	---	31	3.4	---	1.3	---	213	---	128	253	---
TOTAL	20.56	34.72	66.05	7886.40	64.48	58.3	438.8	1221.4	1526.9	7135	7489	5755
MEAN	.66	1.16	2.13	254	2.30	1.88	14.6	39.4	50.9	230	242	192
MAX	1.7	4.0	31	542	15	7.1	116	213	269	267	410	253
MIN	.40	.77	.82	.84	.68	1.1	1.3	1.6	1.4	126	109	130
AC-FT	41	69	131	15640	128	116	870	2420	3030	14150	14850	11420

CAL YR 1984 TOTAL 42626.81 MEAN 116 MAX 492 MIN .40 AC-FT 84550
WTR YR 1985 TOTAL 31696.61 MEAN 86.8 MAX 542 MIN .40 AC-FT 62870

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 microsiemens May 13, 14, 1980; minimum daily, 561 microsiemens 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, 6,480 microsiemens Oct. 5; minimum daily, 1,710 microsiemens Dec. 31.
WATER TEMPERATURES: Maximum daily, 27.0°C on many days during July, August and September; minimum daily, 1.0°C Feb. 1, 2, 3, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
JAN 02...	0800	2.0	1780	3.0	290	160	73	26	260
APR 01...	0930	1.6	6140	14.0	1000	940	290	79	950
JUN 30...	0800	128	6020	24.0	1100	990	310	76	900
AUG 30...	0800	258	6240	26.0	1000	940	280	80	970
SEP 30...	0800	130	6420	19.0	1300	1200	390	81	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)
JAN 02...	7	6.2	126	200	380	.30	9.3	1000
APR 01...	13	7.7	107	830	1600	.30	5.5	3800
JUN 30...	12	8.2	103	810	1500	.30	6.5	3700
AUG 30...	14	7.9	91	900	1500	.30	6.5	3800
SEP 30...	14	8.2	92	900	1800	.40	6.8	4300

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	20.56	5450	3360	187	1400	76	740	41	970
NOV.	1984	34.72	5730	3550	332	1400	136	780	73	1000
DEC.	1984	66.05	3790	2330	415	920	165	520	92	700
JAN.	1985	7886.40	6280	3900	83100	1600	34400	850	18100	1100
FEB.	1985	64.48	5890	3650	635	1500	260	800	139	1000
MAR.	1985	58.3	4730	2910	459	1200	185	640	101	850
APR.	1985	438.8	6200	3850	4560	1600	1880	840	993	1100
MAY	1985	1221.4	6220	3860	12700	1600	5260	840	2770	1100
JUNE	1985	1526.9	6160	3820	15800	1600	6500	830	3430	1100
JULY	1985	7135	5960	3690	71100	1500	29200	810	15500	1000
AUG.	1985	7489	6190	3850	77800	1600	32100	840	16900	1100
SEPT	1985	5755	6360	3950	61400	1600	25500	860	13300	1100
TOTAL		31696.61	**	**	329000	**	136000	**	71500	**
WTD.AVG.		87	6180	3840	**	1600	**	840	**	1100

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5840	5790	6010	1830	5970	4800	5880	6180	6250	5970	6100	6290
2	5720	5850	6010	1820	5980	3550	5940	6190	6250	5970	6090	6310
3	6300	5840	6000	4240	6010	1730	5890	6200	6250	5970	6120	6320
4	6410	5890	5990	5210	5980	1790	5850	6200	6260	5980	6140	6310
5	6480	5930	5910	5670	5970	4440	6110	6210	5720	5960	6140	6360
6	5860	5890	5940	5670	6000	5530	6030	6210	5720	5960	6140	6360
7	5820	6010	5950	5650	5940	5840	6040	6210	5720	5940	6130	6350
8	5870	5830	6000	5670	5960	5910	6020	6210	6120	5950	6130	6360
9	6040	5860	6030	5650	5850	5900	6090	6220	6120	5940	6150	6350
10	6030	6050	6040	6330	5850	5900	5940	6220	6120	5940	6180	6350
11	5910	5990	6010	6370	5860	5900	5990	6230	6240	5930	6180	6350
12	6030	6020	5920	6350	6010	6080	6140	6230	6190	5940	6180	6350
13	5890	6190	5700	6330	5900	5900	6230	6230	6010	5960	6180	6360
14	5910	6060	5630	6330	5910	5890	6230	6220	6010	5960	6200	6360
15	5890	6070	5120	6350	5990	5970	6230	6210	6210	5970	6190	6360
16	5710	6080	5170	6340	6050	5890	6220	6130	6230	5960	6180	6360
17	5750	5270	5180	6340	6050	5890	5960	6150	6210	5960	6190	6360
18	5920	5240	5470	5910	5980	5890	6210	6170	6220	5950	6190	6370
19	5810	5260	5600	6040	5960	6150	5890	6140	6110	5950	6190	6380
20	3680	5410	5780	6330	6200	3570	5530	6170	6100	5970	6190	6370
21	3880	5620	5690	6310	4700	4870	5530	6150	6120	5970	6210	6390
22	3950	5700	5830	6340	5920	5700	5530	6190	6040	5960	6240	6400
23	5410	5640	5850	6340	5910	5900	5920	6220	6050	5950	6250	6390
24	5400	5640	5840	6330	5910	5910	6090	6220	6040	5960	6250	6390
25	5580	5670	5850	6300	5920	5920	6140	6200	6030	5980	6260	6400
26	5660	5780	5840	5820	5790	5980	5890	6200	5960	5970	6260	6410
27	5530	5770	6000	6330	6020	6090	5910	6200	6000	5970	6270	6420
28	5530	5800	5830	6340	6080	5860	5910	6200	6020	5970	6250	6420
29	5510	5830	5860	6340	---	6050	5910	6050	6010	5970	6260	6420
30	5680	5820	4940	5870	---	5990	5920	6240	6020	5990	6280	6420
31	5670	---	1710	4970	---	5980	---	6250	---	6000	6320	---
MEAN	5630	5790	5640	5730	5920	5380	5970	6200	6080	5960	6190	6370

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	19.0	10.0	5.0	1.0	11.0	12.0	16.0	---	25.0	27.0	27.0
2	14.0	12.0	9.0	3.0	1.0	11.0	13.0	16.0	25.0	25.0	27.0	27.0
3	14.0	13.0	7.0	5.0	1.0	12.0	14.0	16.0	25.0	25.0	27.0	27.0
4	20.0	13.0	9.0	7.0	1.0	11.0	16.0	17.0	25.0	25.0	27.0	27.0
5	19.0	13.0	7.0	7.0	6.0	9.0	14.0	17.0	24.0	25.0	27.0	27.0
6	19.0	13.0	5.0	7.0	6.0	12.0	15.0	16.0	24.0	25.0	27.0	27.0
7	18.0	15.0	7.0	7.0	5.0	13.0	15.0	16.0	24.0	25.0	27.0	27.0
8	18.0	15.0	9.0	9.0	7.0	15.0	15.0	16.0	25.0	25.0	27.0	27.0
9	19.0	16.0	10.0	9.0	7.0	17.0	15.0	16.0	25.0	25.0	27.0	27.0
10	19.0	11.0	15.0	8.0	6.0	17.0	15.0	16.0	25.0	25.0	27.0	27.0
11	19.0	11.0	15.0	8.0	5.0	17.0	16.0	16.0	24.0	26.0	27.0	27.0
12	19.0	11.0	15.0	4.0	5.0	13.0	18.0	16.0	24.0	27.0	27.0	27.0
13	19.0	13.0	13.0	4.0	---	12.0	18.0	16.0	20.0	27.0	27.0	27.0
14	19.0	15.0	9.0	5.0	10.0	11.0	17.0	17.0	20.0	27.0	27.0	27.0
15	15.0	14.0	10.0	5.0	7.0	12.0	17.0	17.0	24.0	27.0	27.0	27.0
16	16.0	11.0	10.0	7.0	9.0	12.0	17.0	19.0	24.0	27.0	27.0	27.0
17	13.0	11.0	10.0	6.0	9.0	12.0	17.0	19.0	24.0	27.0	27.0	25.0
18	18.0	11.0	9.0	7.0	11.0	12.0	20.0	20.0	24.0	27.0	27.0	25.0
19	13.0	11.0	12.0	7.0	11.0	13.0	18.0	20.0	24.0	27.0	27.0	25.0
20	13.0	11.0	12.0	4.0	12.0	13.0	17.0	20.0	24.0	27.0	27.0	25.0
21	13.0	11.0	13.0	4.0	12.0	13.0	17.0	20.0	23.0	27.0	27.0	25.0
22	13.0	11.0	13.0	5.0	12.0	12.0	17.0	21.0	23.0	27.0	27.0	23.0
23	13.0	11.0	13.0	7.0	12.0	13.0	16.0	21.0	23.0	27.0	27.0	24.0
24	14.0	11.0	8.0	5.0	11.0	13.0	16.0	21.0	23.0	27.0	27.0	23.0
25	13.0	11.0	8.0	6.0	10.0	14.0	16.0	21.0	24.0	27.0	27.0	23.0
26	17.0	13.0	8.0	5.0	12.0	15.0	16.0	21.0	24.0	27.0	27.0	22.0
27	16.0	7.0	12.0	5.0	9.0	17.0	16.0	21.0	22.0	27.0	26.0	23.0
28	14.0	7.0	17.0	6.0	11.0	16.0	16.0	21.0	24.0	27.0	26.0	23.0
29	14.0	9.0	17.0	5.0	---	18.0	15.0	21.0	24.0	27.0	26.0	19.0
30	17.0	9.0	11.0	9.0	---	14.0	15.0	21.0	24.0	27.0	26.0	19.0
31	19.0	---	6.0	2.0	---	12.0	---	25.0	---	27.0	26.0	---
MEAN	16.0	12.0	10.5	6.0	7.5	13.5	16.0	18.5	23.5	26.5	27.0	25.0

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 above National Geodetic Vertical Datum of 1929 (Wichita County Water Improvement District bench mark).

REMARKS.--No estimated daily discharge. Records good. Water diverted from Lake Diversion is used for mining, industrial, recreation, and irrigation. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 82.4 ft^3/s (59,700 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, 237 ft^3/s Aug. 15; maximum gage height, 7.17 ft Aug. 14; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	.00	.00	.00	.00	.00	.00	56	47	93	218	215
2	171	.00	.00	.00	.00	.00	.00	48	48	94	217	214
3	162	.00	.00	.00	.00	.00	.00	41	49	93	217	214
4	155	.00	.00	.00	.00	.00	.00	41	58	95	217	215
5	135	.00	.00	.00	.00	.00	.00	41	23	94	216	215
6	96	.00	.00	.00	.00	.00	.00	41	.00	95	217	214
7	60	.00	.00	.00	.00	.00	.00	41	.00	94	222	214
8	27	.00	.00	.00	.00	.00	.00	42	.00	96	222	214
9	8.3	.00	.00	.00	.00	.00	.00	48	.00	125	223	214
10	.25	.00	.00	.00	.00	.00	.00	57	.00	159	223	214
11	.07	.00	.00	.00	.00	.00	.00	56	.00	175	224	217
12	.00	.00	.00	.00	.00	.00	.00	55	.00	184	224	217
13	.00	.00	.00	.00	.00	.00	31	47	.00	200	226	201
14	.00	.00	.00	.00	.00	.00	65	36	22	208	235	182
15	.00	.00	.00	.00	.00	.00	62	38	49	209	237	183
16	.00	.00	.00	.00	.00	.00	48	38	50	212	233	156
17	.00	.00	.00	.00	.00	.00	71	38	50	213	234	138
18	.00	.00	.00	.00	.00	.00	71	38	50	212	234	138
19	.00	.00	.00	.00	.00	.00	72	56	50	209	228	120
20	.00	.00	.00	.00	.00	.00	73	43	50	204	211	104
21	.00	.00	.00	.00	.00	.00	73	11	49	203	211	104
22	.00	.00	.00	.00	.00	.00	66	8.7	50	213	208	104
23	.00	.00	.00	.00	.00	.00	56	9.1	49	224	206	103
24	.00	.00	.00	.00	.00	.00	57	8.6	65	224	206	105
25	.00	.00	.00	.00	.00	.00	59	.00	86	226	205	103
26	.00	.00	.00	.00	.00	.00	58	.00	93	222	201	102
27	.00	.00	.00	.00	.00	.00	58	.00	95	224	201	102
28	.00	.00	.00	.00	.00	.00	58	30	94	224	200	102
29	.00	.00	.00	.00	---	.00	59	43	93	223	200	99
30	.00	.00	.00	.00	---	.00	56	45	92	222	204	97
31	.00	---	.00	.00	---	.00	---	46	---	218	214	---
TOTAL	993.62	.00	.00	.00	.00	.00	1093.00	1102.40	1312.00	5487	6734	4820
MEAN	32.1	.000	.000	.000	.000	.000	36.4	35.6	43.7	177	217	161
MAX	179	.00	.00	.00	.00	.00	73	57	95	226	237	217
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	93	200	97
AC-FT	1970	.00	.00	.00	.00	.00	2170	2190	2600	10880	13360	9560

CAL YR 1984	TOTAL	42370.38	MEAN	116	MAX 321	MIN .00	AC-FT	84040	
WTR YR 1985	TOTAL	21542.02	MEAN	59.0	MAX 237	MIN .00	AC-FT	42730	

07312200 BEAVER CREEK NEAR ELECTRA, TX

LOCATION.--Lat 33°54'21", long 98°54'17", Wichita County, Hydrologic Unit 11130207, near right bank at 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 above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation reference point).

REMARKS.--Estimated daily discharges: Dec. 15-23, Dec. 30 to Feb. 24, Mar. 4-6, 14-15, 18, 21-24, Mar. 30 to Apr. 10, June 26 to July 1, July 13-30, and Sept. 29-30. Records fair. Some regulation by Santa Rosa Lake, capacity 11,570 acre-ft, about 30 mi upstream. There are several small diversions above station.

AVERAGE DISCHARGE.--25 years, 57.3 ft³/s (1.19 in/yr), 41,500 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 greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 16	0600	1,270	18.50	Mar. 4	1700	1,440	21.55
Jan. 1	0100	*5,700	*29.32	June 6	0730	1,000	18.89
Feb. 23	1400	4,260	28.75				

Minimum discharge, no flow July 21 (part of day due to pumping).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	47	2.4	4200	.10	19	123	34	2.8	12	6.3	4.4
2	2.0	164	2.2	1140	3.3	12	96	33	3.9	10	6.2	4.2
3	2.0	30	2.1	204	6.4	18	140	28	3.5	4.0	5.7	4.2
4	2.1	8.7	2.1	68	6.1	1170	144	25	3.7	1.4	2.5	4.4
5	2.1	4.4	2.4	34	6.1	853	114	20	371	.72	5.1	4.1
6	2.1	3.3	2.5	17	6.1	194	84	23	881	.69	6.3	4.0
7	2.1	3.1	2.6	9.1	6.1	90	71	19	464	1.4	6.5	5.5
8	2.1	3.3	2.8	17	6.1	116	54	17	194	1.4	6.4	3.3
9	1.9	3.1	2.8	8.9	6.4	96	47	16	188	1.8	5.6	2.3
10	1.8	3.0	2.5	6.7	7.0	81	46	16	278	1.3	4.9	23
11	1.8	2.8	2.2	5.5	7.0	68	43	16	396	1.4	3.1	26
12	2.1	3.3	2.1	4.6	7.3	56	37	15	446	1.6	2.7	.22
13	54	3.0	17	2.6	7.3	35	42	16	349	.85	1.6	.56
14	203	2.6	57	1.6	5.8	35	54	15	207	.71	2.5	.68
15	24	2.1	253	.58	4.4	33	43	14	137	.64	2.4	3.4
16	16	2.0	965	.71	3.7	22	36	11	94	.52	2.8	4.5
17	4.9	78	194	.85	3.1	26	32	11	70	.36	4.0	4.4
18	3.7	445	21	.58	3.1	19	28	9.0	54	.28	6.4	4.5
19	3.4	306	9.3	.36	3.1	18	26	8.9	39	.22	8.3	5.1
20	293	24	7.3	.35	6.6	375	24	188	33	.14	9.5	6.5
21	302	6.8	6.4	.36	103	338	23	152	30	.04	17	6.1
22	102	4.9	7.3	.36	231	138	82	34	28	7.0	17	8.5
23	22	3.5	5.0	.28	3500	87	103	16	27	2.0	8.2	13
24	9.6	3.3	3.5	.25	1840	72	39	12	20	1.3	26	4.9
25	32	3.3	3.3	.22	159	56	23	14	19	2.5	43	3.0
26	14	6.0	3.1	.19	62	44	21	13	15	2.1	13	3.2
27	91	6.4	2.8	.16	28	38	23	14	14	1.4	5.7	2.8
28	32	3.9	2.6	.14	17	37	40	13	13	15	4.8	1.6
29	10	3.1	3.0	.14	---	27	56	9.0	12	13	4.8	96
30	4.8	2.6	2.8	.08	---	150	43	3.6	12	6.1	4.7	398
31	3.3	---	2290	.04	---	335	---	2.2	---	7.3	4.6	---
TOTAL	1248.8	1182.5	3882.1	5724.65	6045.10	4658	1737	817.7	4404.9	99.17	247.6	652.36
MEAN	40.3	39.4	125	185	216	150	57.9	26.4	147	3.20	7.99	21.7
MAX	302	445	2290	4200	3500	1170	144	188	881	15	43	398
MIN	1.8	2.0	2.1	.04	.10	12	21	2.2	2.8	.04	1.6	.22
CFSM	.06	.06	.19	.28	.33	.23	.09	.04	.23	.005	.01	.03
IN.	.07	.07	.22	.33	.34	.27	.10	.05	.25	.01	.01	.04
AC-FT	2480	2350	7700	11350	11990	9240	3450	1620	8740	197	491	1290

CAL YR 1984 TOTAL 8718.32 MEAN 23.8 MAX 2290 MIN .29 CFSM .04 IN .50 AC-FT 17290
WTR YR 1985 TOTAL 30699.88 MEAN 84.1 MAX 4200 MIN .04 CFSM .13 IN 1.75 AC-FT 60890

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 at 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 mi², of which 2,086 mi² 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 above 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.--Estimated daily discharges: June 1-3. Records good. Flow from 2,086 mi² is regulated by Lake Kemp (capacity 603,000 acre-ft) 71 mi upstream. Since completion of Lake Kemp dam in 1923, no outflow 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 current water year, Wichita County Water Improvement District No. 2 diverted 42,730 acre-ft from Lake Diversion for mining, industrial use, recreation, and irrigation.

AVERAGE DISCHARGE.--48 years (water years 1901, 1939-85), 262 ft³/s (189,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/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 ft³/s June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,770 ft³/s June 6 at 1500 hours (gage height, 18.02 ft); minimum, 33 ft³/s Dec. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	75	68	3260	49	195	288	436	64	89	101	90
2	91	93	51	3260	52	175	167	172	65	88	101	90
3	88	146	44	3100	49	169	137	111	65	87	106	91
4	83	97	43	869	47	975	154	91	63	84	103	88
5	80	66	44	236	47	1380	167	79	2230	83	105	86
6	80	55	41	164	46	1090	151	74	5480	84	98	84
7	118	50	39	129	46	338	136	79	4360	82	100	87
8	328	48	38	110	46	203	125	74	2950	84	97	88
9	501	45	37	96	48	195	114	70	962	79	98	93
10	551	43	36	84	47	182	107	68	477	78	106	93
11	575	39	35	80	44	157	105	63	409	82	99	88
12	582	41	34	73	42	141	101	61	414	90	97	103
13	577	40	69	70	42	150	108	88	425	88	94	99
14	657	39	124	67	41	129	106	87	338	88	97	93
15	791	39	203	64	39	117	104	65	236	88	143	92
16	585	37	1060	62	39	115	135	60	188	97	125	90
17	534	120	1030	59	39	110	120	58	161	96	108	87
18	499	499	312	55	38	106	106	56	152	94	106	84
19	482	578	118	54	39	106	81	55	141	92	107	83
20	562	231	76	52	49	1140	78	162	136	96	106	81
21	913	97	65	50	744	1170	99	432	123	93	105	81
22	899	74	56	50	712	613	1080	182	114	101	100	88
23	590	78	50	50	2930	265	879	90	111	100	103	111
24	373	79	46	49	3860	177	282	69	106	119	96	93
25	346	86	41	48	4080	149	154	63	103	112	94	87
26	213	87	37	47	2650	135	113	60	101	125	108	85
27	373	85	36	48	336	125	102	59	110	116	102	82
28	216	83	35	48	203	120	133	57	99	110	93	82
29	126	80	34	47	---	121	2340	55	97	125	89	85
30	84	77	66	46	---	118	2200	68	94	118	94	83
31	65	---	1470	45	---	140	---	60	---	104	90	---
TOTAL	12052	3207	5438	12472	16404	10306	9972	3204	20374	2972	3171	2667
MEAN	389	107	175	402	586	332	332	103	679	95.9	102	88.9
MAX	913	578	1470	3260	4080	1380	2340	436	5480	125	143	111
MIN	65	37	34	45	38	106	78	55	63	78	89	81
AC-FT	23910	6360	10790	24740	32540	20440	19780	6360	40410	5890	6290	5290

CAL YR 1984 TOTAL 45225 MEAN 124 MAX 1470 MIN 34 AC-FT 89700
WTR YR 1985 TOTAL 102239 MEAN 280 MAX 5480 MIN 34 AC-FT 202800

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 microsiemens Mar. 2, 1984; minimum daily, 245 microsiemens 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 and Feb. 2, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 8,130 microsiemens Feb. 19 minimum daily, 399 microsiemens June 5.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 1, 8; minimum daily, 0.0°C Feb. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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	83	5650	7.9	8.0	13.9	124	3.2	1000	890
JAN										
22...	1315	50	7270	7.7	4.0	16.4	132	1.2	1500	1200
MAR										
12...	1130	142	3820	7.7	15.0	11.1	116	2.2	800	610
MAY										
21...	1815	350	1870	7.6	22.5	6.8	83	3.2	310	240
JUL										
24...	0700	123	5590	7.8	26.5	7.7	103	2.9	1100	900
29...	0815	59	5250	--	27.0	--	--	--	980	780
AUG										
19...	0950	105	5800	--	28.0	--	--	--	1200	1100
21...	1110	106	5590	7.8	28.0	7.9	108	3.2	1100	960

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...	270	86	800	11	7.2	140	700	1500	.30
JAN									
22...	360	140	1000	12	5.6	260	710	1900	.20
MAR									
12...	190	80	560	9	5.5	190	320	990	.30
MAY									
21...	76	29	230	6	5.6	74	100	480	.20
JUL									
24...	270	93	740	10	7.0	154	630	1400	.30
29...	210	110	700	10	6.5	195	540	1500	.30
AUG									
19...	350	88	830	11	7.7	121	690	1500	.40
21...	290	87	830	11	7.3	123	670	1400	.40

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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...	8.3	3500	--	<.010	<.10	.110	.49	.60	.100
JAN									
22...	8.3	4300	--	<.010	.10	.250	.15	.40	.060
MAR									
12...	9.1	2300	.28	.020	.30	.140	1.1	1.2	.190
MAY									
21...	5.9	970	.36	.040	.40	.050	1.3	1.3	.690
JUL									
24...	8.7	3200	--	<.010	<.10	.120	.58	.70	.150
29...	7.1	3200	--	--	--	--	--	--	--
AUG									
19...	7.5	3500	--	--	--	--	--	--	--
21...	7.8	3400	--	.010	<.10	.080	.82	.90	.130

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	12052	5990	3670	119000	1600	52900	660	21600	1100
NOV.	1984	3207	3910	2310	20000	1000	8770	420	3660	710
DEC.	1984	5438	2140	1230	18100	530	7840	230	3330	380
JAN.	1985	12472	1240	699	23500	300	10100	130	4360	220
FEB.	1985	16404	1220	686	30400	290	13100	130	5630	210
MAR.	1985	10306	2280	1270	35300	540	15100	240	6560	390
APR.	1985	9972	2070	1160	31300	500	13400	220	5810	360
MAY	1985	3204	3750	2180	18900	950	8210	400	3460	670
JUNE	1985	20374	1220	665	36600	280	15500	120	6850	210
JULY	1985	2972	5330	3180	25500	1400	11200	580	4640	980
AUG.	1985	3171	5490	3290	28200	1400	12400	600	5130	1000
SEPT	1985	2667	6090	3710	26700	1600	11800	670	4840	1100
TOTAL		102239	**	**	414000	**	180000	**	75900	**
WTD.AVG.		280	2570	1500	**	650	**	270	**	460

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6770	5450	5690	532	6160	3660	2300	1590	5240	5020	5450	5980
2	6970	6140	5810	513	7550	4140	2950	2080	5350	5280	5430	6000
3	7070	3050	6110	507	7400	4930	3530	2840	5430	5290	5540	6260
4	7020	3380	6410	1300	7390	2090	3560	3720	6120	5310	5560	5960
5	7050	4340	6730	2370	7170	1140	2820	4020	399	5410	5600	6040
6	7070	5650	6980	3000	7280	1260	2600	4930	463	5520	5570	6120
7	7220	6400	7350	3420	7340	1830	2930	5070	737	5450	5710	6060
8	7170	6910	7420	4050	7480	2700	3350	5330	1000	5390	5650	6150
9	7100	7250	7460	4520	7400	3340	3760	5380	2430	5400	5620	6110
10	7080	7480	7510	4680	7480	3500	4050	5500	2660	5360	5390	6170
11	7060	7550	7520	5220	7620	3570	4690	5780	2230	5520	5500	6100
12	6910	7610	7580	5100	7680	3920	4790	5950	1690	5280	5600	6220
13	7010	7690	5490	5000	7750	4060	4770	5470	1350	5290	5680	6140
14	6880	7700	3070	5260	7880	4350	5220	4240	1500	5340	5620	5880
15	4990	7680	2980	5450	7800	4780	6330	5780	1920	5250	5260	6060
16	6620	7770	1050	5580	7810	5030	5090	5460	2380	5110	4210	6150
17	6820	6210	1110	5710	7990	5250	5230	5670	2660	5100	4740	6250
18	6970	2390	1570	6110	8050	5460	5810	5800	2980	5430	5270	6370
19	7060	1560	1930	5750	8130	5720	5900	5890	3330	5420	5550	6340
20	6600	1580	2990	5470	7690	989	6280	4410	3630	5330	5540	6300
21	5060	2210	3390	6070	2240	1230	6300	1700	4080	5110	5550	6280
22	4280	3130	4150	6630	2170	1610	1770	3030	4160	5180	5700	6240
23	5310	4320	4800	6060	614	2430	1460	3080	4300	5380	5850	5050
24	6040	5100	5470	5950	584	2700	2730	3710	4480	5480	5820	5960
25	4830	5370	5890	6350	551	3470	3230	4680	4540	5300	5680	5990
26	4540	5310	6040	6280	938	3890	3860	5360	4670	5110	5860	6000
27	2220	5530	6180	5760	2180	4160	4630	5700	4600	4940	5380	6060
28	3460	5600	6480	6400	3000	4430	4060	5720	4750	5160	5100	6310
29	3530	5290	6660	5830	---	4500	534	5660	4970	5250	5530	6110
30	4060	5540	7030	5650	---	4700	1170	5900	5340	5980	5930	6290
31	5350	---	723	5100	---	4960	---	4990	---	5760	5970	---
MEAN	6000	5370	5150	4700	5830	3540	3860	4660	3310	5330	5510	6100

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	10.0	12.0	5.0	1.0	15.0	15.0	23.0	27.0	29.0	33.0	27.0
2	22.0	12.0	9.0	4.0	.0	12.0	18.0	24.0	---	27.0	32.0	---
3	23.0	---	8.0	5.0	1.0	13.0	21.0	25.0	26.0	28.0	31.0	30.0
4	21.0	15.0	5.0	6.0	3.0	14.0	21.0	25.0	29.0	28.0	32.0	31.0
5	24.0	13.0	6.0	7.0	5.0	14.0	19.0	21.0	21.0	31.0	31.0	30.0
6	23.0	15.0	7.0	7.0	6.0	12.0	16.0	26.0	23.0	29.0	31.0	28.0
7	24.0	19.0	10.0	8.0	7.0	14.0	15.0	27.0	22.0	30.0	32.0	28.0
8	20.0	20.0	7.0	8.0	9.0	18.0	15.0	27.0	28.0	31.0	33.0	28.0
9	---	19.0	14.0	10.0	10.0	15.0	15.0	27.0	29.0	31.0	31.0	30.0
10	---	14.0	14.0	5.0	8.0	16.0	16.0	24.0	30.0	29.0	31.0	29.0
11	20.0	14.0	14.0	3.0	8.0	20.0	22.0	26.0	28.0	32.0	---	29.0
12	20.0	11.0	14.0	2.0	10.0	14.0	19.0	25.0	27.0	29.0	31.0	29.0
13	21.0	12.0	10.0	3.0	10.0	14.0	22.0	26.0	26.0	29.0	31.0	28.0
14	21.0	15.0	7.0	6.0	11.0	15.0	23.0	24.0	27.0	29.0	28.0	24.0
15	19.0	14.0	5.0	7.0	11.0	13.0	25.0	26.0	29.0	31.0	29.0	23.0
16	19.0	9.0	7.0	7.0	11.0	13.0	25.0	27.0	29.0	30.0	29.0	25.0
17	15.0	10.0	9.0	9.0	8.0	16.0	23.0	26.0	31.0	30.0	30.0	27.0
18	19.0	9.0	6.0	10.0	---	17.0	24.0	25.0	26.0	32.0	30.0	27.0
19	18.0	8.0	8.0	---	14.0	15.0	24.0	21.0	27.0	32.0	32.0	27.0
20	18.0	8.0	10.0	15.0	13.0	14.0	24.0	23.0	27.0	30.0	31.0	26.0
21	15.0	8.0	12.0	3.0	15.0	12.0	21.0	22.0	27.0	31.0	31.0	---
22	15.0	9.0	10.0	5.0	17.0	15.0	21.0	23.0	28.0	31.0	31.0	27.0
23	14.0	11.0	---	6.0	15.0	16.0	22.0	26.0	30.0	28.0	31.0	22.0
24	14.0	9.0	5.0	8.0	14.0	15.0	23.0	28.0	30.0	30.0	29.0	21.0
25	15.0	12.0	5.0	10.0	14.0	20.0	24.0	29.0	30.0	29.0	29.0	22.0
26	15.0	13.0	7.0	4.0	12.0	18.0	23.0	29.0	30.0	30.0	29.0	22.0
27	18.0	9.0	14.0	7.0	13.0	22.0	23.0	29.0	25.0	28.0	29.0	22.0
28	17.0	10.0	18.0	7.0	12.0	22.0	24.0	32.0	28.0	32.0	29.0	22.0
29	15.0	12.0	19.0	11.0	---	20.0	22.0	32.0	28.0	32.0	30.0	17.0
30	17.0	11.0	9.0	7.0	---	12.0	23.0	29.0	27.0	32.0	30.0	17.0
31	20.0	---	6.0	2.0	---	12.0	---	26.0	---	32.0	29.0	---
MEAN	18.5	12.0	9.5	6.5	9.5	15.5	21.0	26.0	27.5	30.0	30.5	25.5

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. For statement regarding regulations and diversions, see station 07312500. Records furnished by the city of Wichita Falls show that 15,820 acre-ft was returned to river above this station as sewage effluent and filter plant washwater. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 279 ft³/s (202,100 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, 5,670 ft³/s June 9 at 0100 hours (gage height, 21.95 ft); minimum, 40 ft³/s Feb. 1, result of freezeup.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	263	162	3360	65	495	271	2850	200	228	166	134
2	176	472	148	3370	114	422	398	1660	215	224	150	137
3	173	220	122	3170	99	378	291	1190	201	218	155	134
4	172	261	112	2860	96	1040	247	768	192	213	149	155
5	173	193	115	837	95	1430	262	475	798	211	151	188
6	162	145	101	375	92	1560	270	355	4040	203	152	200
7	152	126	78	295	98	1090	242	310	5300	208	139	200
8	203	116	71	251	97	479	215	298	5590	198	134	216
9	404	110	67	224	105	380	192	256	5540	192	138	208
10	510	144	64	197	109	362	177	232	4230	188	143	217
11	550	117	64	170	90	343	164	218	1740	178	163	216
12	625	112	62	171	79	308	132	214	990	181	147	214
13	588	112	79	164	99	290	150	229	771	187	146	243
14	611	112	428	159	99	369	242	274	688	184	145	302
15	677	110	302	153	97	248	181	206	584	184	164	222
16	686	105	1250	150	90	241	176	202	444	191	213	187
17	552	139	1370	143	87	239	225	188	401	215	205	183
18	517	996	959	139	84	187	205	184	362	215	187	179
19	505	747	401	134	85	201	200	178	328	179	169	162
20	547	609	256	130	99	1830	202	249	260	161	172	149
21	739	332	211	121	580	2640	220	498	284	163	185	139
22	909	210	187	112	1020	1560	1200	557	268	163	179	137
23	830	168	155	116	1680	918	2080	356	255	175	166	202
24	568	168	137	118	3010	565	1040	261	250	190	159	197
25	639	196	124	117	3440	429	565	214	239	214	186	164
26	501	179	114	114	3740	379	443	195	228	210	193	151
27	2010	189	111	113	2930	342	370	184	354	233	214	148
28	1720	157	112	115	674	296	333	185	341	227	221	150
29	381	143	108	94	---	260	1490	180	207	214	174	154
30	248	166	107	102	---	358	3250	172	233	204	155	193
31	202	---	1080	105	---	279	---	195	---	191	134	---
TOTAL	16916	7117	8657	17679	18953	19918	15433	13533	35533	6142	5154	5481
MEAN	546	237	279	570	677	643	514	437	1184	198	166	183
MAX	2010	996	1370	3370	3740	2640	3250	2850	5590	233	221	302
MIN	152	105	62	94	65	187	132	172	192	161	134	134
AC-FT	33550	14120	17170	35070	37590	39510	30610	26840	70480	12180	10220	10870

CAL YR 1984 TOTAL 72306 MEAN 198 MAX 2010 MIN 58 AC-FT 143400
WTR YR 1985 TOTAL 170516 MEAN 467 MAX 5590 MIN 62 AC-FT 338200

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, 121,240 acre-ft June 6, 7 (elevation, 1,047.3 ft); minimum, 46,000 acre-ft Oct. 8-12 (elevation, 1,033.0 ft).

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

1,032.0	42,500	1,038.0	66,500	1,044.0	99,700
1,034.0	49,700	1,040.0	76,500	1,046.0	112,500
1,036.0	57,700	1,042.0	87,700	1,048.0	126,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50870	50480	50870	55650	58560	77600	84280	113800	108000	106600	103500	97870
2	50870	50480	50480	55650	58560	77600	84280	111200	108000	106600	102200	97870
3	50870	50480	50480	60280	58560	77600	84280	109900	108000	106000	102200	97260
4	50480	50480	50480	60280	58560	77600	83710	109900	107300	107300	102200	97260
5	50480	50480	50480	60280	58560	77600	84280	109900	108600	106600	101600	97260
6	50090	50480	50480	60280	58560	77600	84280	108600	121200	106000	101600	96650
7	50090	50480	50480	60280	58130	77600	83140	108600	121200	106000	101000	96650
8	46000	50480	50480	60280	58130	77600	83710	108600	116500	106000	101000	96650
9	46000	50090	50480	59850	58130	77600	83140	108000	113800	106000	101600	96650
10	46000	50090	50480	59850	58130	77600	83140	107300	118500	106000	101000	96040
11	46000	49700	50480	59850	58130	77600	83140	108000	109900	106000	100300	96040
12	46000	49700	50480	59850	58130	77600	83140	107300	109200	105400	100300	96040
13	49330	49700	50480	59850	58130	77600	83140	108000	109200	104700	99700	96040
14	49330	49700	50480	59850	58130	78150	83140	108000	108600	104700	99700	95430
15	49330	49700	50480	59850	58130	78150	83140	107300	108600	104700	100300	95430
16	49330	49700	51260	59850	58130	78150	82570	107300	108600	104700	100300	95430
17	49330	50090	52040	59420	58130	78150	82570	107300	108600	104700	100300	94820
18	49330	50480	52040	59420	57700	78150	82570	107300	107300	104100	100300	94820
19	49330	51260	52040	59420	57700	78150	83140	107300	107300	104100	99700	94820
20	49330	51260	52040	59420	57700	79800	83140	107300	108000	104100	99700	94820
21	49330	51260	52040	58990	59420	82000	82570	112500	107300	103500	99090	94820
22	49330	51260	52040	58990	62450	82570	94210	111200	107300	103500	99090	94820
23	49700	51260	52040	58990	67460	82570	104100	110600	107300	103500	99090	94210
24	49700	51260	51650	58990	75460	82570	105400	109900	107300	103500	99090	93600
25	49700	51260	51650	58560	77600	82570	105400	109900	107300	103500	99090	93600
26	49700	51260	51650	58560	77600	82570	105400	109200	107300	103500	97870	93010
27	50090	51260	51650	58560	77050	83140	105400	109200	107300	103500	97870	93010
28	50480	51260	51650	58560	77050	83710	105400	108600	107300	103500	98480	93010
29	50480	51260	51650	58560	---	83140	113800	108000	107300	103500	98480	93010
30	50480	51260	51650	58560	---	83140	115200	108000	107300	103500	98480	92420
31	50480	---	53210	58560	---	83710	---	108000	---	103500	97870	---
MAX	50870	51260	53210	60280	77600	83710	115200	113800	121200	107300	103500	97870
MIN	46000	49700	50480	55650	57700	77600	82570	107300	107300	103500	97870	92420
(†)	1034.2	1034.4	1034.9	1036.2	1040.1	1041.3	1046.4	1045.3	1045.2	1044.6	1043.7	1042.8
(‡)	-1170	+780	+1950	+5350	+18490	+6660	+31490	-7200	-700	-3800	-5630	-5450
(††)	64.4	110	168	149	140	42.8	22.8	24.6	33.3	32.6	105	126

CAL YR 1984 MAX 78150 MIN 46000 (‡) -24940 (††) 1361
WTR YR 1985 MAX 121200 MIN 46000 (‡) +40770 (††) 1008

(†) Elevation, in feet, at end of month.
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use.

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 mi^2, of which 275 mi^2 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 above National Geodetic Vertical Datum of 1929. Aug. 17, 1954, to Jan. 6, 1956, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharge. 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 1,008 acre-ft was diverted from Lake Kickapoo for municipal use during the current 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 ft^3/s (79,700 acre-ft/yr); 29 years (water years 1946-55, 1967-85) regulated, 45.0 ft^3/s (32,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft^3/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, 8,410 ft^3/s June 7 at 1800 hours (gage height, 25.50 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	6.2	1.8	1010	.18	6.2	1040	1720	4.6	17	.00	4.3
2	.06	82	1.3	839	.19	5.4	76	1430	2.5	12	.00	2.1
3	.01	24	1.2	80	.19	10	17	893	1.2	10	.00	1.0
4	.00	6.5	1.2	14	.19	102	10	529	.72	6.9	.00	.29
5	.00	4.7	1.4	8.6	.19	132	6.1	295	371	5.2	.00	.15
6	.00	3.1	1.5	6.4	.19	20	3.6	193	2120	3.2	.00	.04
7	.00	1.5	3.6	4.0	.56	10	2.3	130	6940	1.8	.00	.05
8	.00	.95	3.3	2.9	1.2	4.9	1.7	91	7510	1.4	.00	.06
9	.00	.70	1.8	2.2	1.9	2.8	1.3	50	4950	.50	.00	.10
10	.00	.44	1.4	1.6	2.7	1.9	.88	26	2430	.50	.00	.21
11	4.3	.33	1.2	1.2	1.2	1.4	.60	15	1320	.50	.00	.21
12	.53	.32	1.2	.85	.57	1.2	.57	40	622	.41	.00	.13
13	.20	.25	7.1	.61	.34	23	.41	19	330	.12	.00	.20
14	.14	.20	121	.50	.23	82	.31	72	274	.13	.00	.39
15	.14	.13	83	.41	.14	18	.22	76	229	.03	.00	.39
16	1.8	.13	554	.33	.08	7.3	.13	5.7	202	.00	.00	16
17	1.8	3.7	595	.33	.08	3.9	.09	1.9	174	.00	.00	10
18	3.2	213	76	.25	.08	2.4	.08	.85	135	.00	.00	2.4
19	2.0	159	15	.19	.08	1.8	.07	.41	97	.00	.00	.49
20	1.5	16	7.7	.19	.80	548	.21	62	80	.00	.08	.11
21	6.1	5.2	5.9	.19	109	958	114	427	68	.02	.29	.01
22	5.8	2.5	4.2	.19	120	553	2110	672	52	.05	.61	.03
23	20	1.6	3.9	.19	351	67	3500	736	39	.05	.58	.01
24	12	1.5	3.0	.19	753	17	2320	561	29	.13	.42	.00
25	101	5.5	2.0	.19	257	9.4	833	327	19	.25	.40	.00
26	146	27	1.9	.19	26	5.5	58	213	13	.03	.53	.03
27	649	15	1.6	.19	12	3.6	31	141	35	.03	1.0	.13
28	994	11	1.4	.19	5.9	2.7	20	82	146	.01	43	.00
29	482	4.9	1.0	.19	---	8.8	390	45	78	.00	27	.39
30	13	2.6	.99	.13	---	680	1120	29	38	.00	9.7	.21
31	7.2	---	298	.13	---	1390	---	23	---	.00	5.6	---
TOTAL	2452.11	599.95	1803.59	1975.53	1644.99	4679.2	11657.57	8905.86	28310.02	60.26	89.21	39.43
MEAN	79.1	20.0	58.2	63.7	58.7	151	389	287	944	1.94	2.88	1.31
MAX	994	213	595	1010	753	1390	3500	1720	7510	17	43	16
MIN	.00	.13	.99	.13	.08	1.2	.07	.41	.72	.00	.00	.00
AC-FT	4860	1190	3580	3920	3260	9280	23120	17660	56150	120	177	78

CAL YR 1984 TOTAL 5317.75 MEAN 14.5 MAX 994 MIN .00 AC-FT 10550
WTR YR 1985 TOTAL 62217.72 MEAN 170 MAX 7510 MIN .00 AC-FT 123400

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.

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, 279,200 acre-ft June 10, 1985 (gage height, 927.43 ft); minimum since first appreciable storage, 4,640 acre-ft Aug. 31 to Sept. 4, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 279,200 acre-ft June 10 (gage height, 927.43 ft); minimum, 142,000 acre-ft Oct. 19 (gage height, 917.45 ft).

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

916.0	127,100	922.0	197,000	926.0	255,700
918.0	148,000	924.0	225,200	928.0	288,900
920.0	171,300				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144200	165400	166100	200200	196200	206800	248800	266600	260500	257500	246600	235300
2	144200	166300	165300	203100	196100	207600	251100	267700	259900	257100	246100	234700
3	144100	166500	165300	202500	196900	207700	251800	268400	259500	257300	245700	234500
4	144400	165800	165200	202000	196900	207300	252400	267700	259500	257000	245200	233900
5	144500	166000	165500	201800	196900	207700	250500	265700	266100	256000	244000	233300
6	144200	166100	166000	201500	196900	208100	249000	264400	271000	255900	244300	232700
7	144100	165900	165800	201300	196700	208300	249400	263400	273300	255400	244000	232600
8	144100	166500	166000	200900	197600	207700	249100	262900	275500	255200	243400	232300
9	144200	165500	165800	200400	198000	208000	249600	262600	278500	255100	242900	232100
10	143700	164800	166100	200300	196600	208700	249600	261900	278200	254400	242300	231400
11	143800	164700	166300	199900	196900	207300	249400	261800	274800	254300	241800	230900
12	144200	164800	165800	199200	197300	207600	249100	262400	274000	253800	241200	230500
13	144000	165100	167100	198500	196600	207700	249400	260700	270200	253300	240400	232700
14	143600	165100	168300	198200	196500	207900	249400	261000	267700	252500	241400	232100
15	143400	163900	169100	198000	197300	208100	249400	261100	265900	252200	241500	232000
16	142900	164100	171800	197700	196600	208000	249000	260500	264600	252100	241200	232100
17	143300	165200	174300	197400	196600	208000	249400	259900	263100	251400	241100	231700
18	142900	165200	174600	197100	197000	208300	248800	259700	262300	251300	240100	231400
19	143500	165500	174700	196700	197000	208700	249600	261500	262100	250700	239800	230900
20	143800	165800	175100	196300	198900	213700	249000	260800	261300	249900	240100	229900
21	143800	165700	175600	196500	199200	220300	251100	260800	260500	249900	239700	230500
22	144500	166000	176100	196600	199600	224800	256200	261600	259900	249700	239200	231400
23	144200	165800	176300	196900	201500	226500	260200	262800	259400	249100	237700	229600
24	145600	166500	176400	197000	204600	226200	265600	263300	258900	249300	237200	229900
25	146400	166500	176400	196200	206500	227100	268700	263400	258700	249100	236600	228700
26	148300	166000	176600	196900	205700	226800	268200	262800	258100	248600	236600	229000
27	155200	166300	176300	196600	206500	227400	266600	261600	258100	248500	236900	229200
28	160800	166900	176300	196600	207000	227300	265600	262100	258700	248500	236600	228700
29	164700	165700	176300	197100	---	227800	265400	261800	258700	248200	236300	227300
30	165800	166300	177300	196700	---	238000	265700	261100	258300	247700	235700	227000
31	165900	---	194200	196300	---	244800	---	260200	---	246900	235600	---
MAX	165900	166900	194200	203100	207000	244800	268700	268400	278500	257500	246600	235300
MIN	142900	163900	165200	196200	196100	206800	248800	259700	258100	246900	235600	227000
(†)	919.55	919.58	921.79	921.95	922.73	925.30	926.62	926.28	926.16	925.44	924.70	924.12
(‡)	+21600	+400	+27900	+2100	+10700	+37800	+20900	-5500	-1900	-11400	-11300	-8600
(††)	1279	1385	2919	1500	1492	1400	1575	1957	2107	3001	3371	2475

CAL YR 1984 MAX 194200 MIN 142900 (‡) +1400 (††) 18342
WTR YR 1985 MAX 278500 MIN 142900 (‡) +82700 (††) 24461

(†) 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.

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 above 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.--No estimated daily discharge. Records fair. Flow largely regulated by Lake Arrowhead 39 mi upstream (capacity 262,100 acre-ft). The city of Wichita Falls diverted 1,008 acre-ft from Lake Kickapoo and 24,461 acre-ft from Lake Arrowhead for municipal uses, and returned 15,820 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 522 acre-ft from pool at gage for municipal use. Record of diversions 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); 19 years (water years 1967-85) regulated, 43.5 ft^3/s (31,520 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, 3,570 ft^3/s June 12 at 1800 hours (gage height, 23.40 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	65	1.6	1570	.45	19	106	607	19	4.4	.00	.00
2	.00	44	1.6	1290	.16	15	82	715	18	3.8	.00	.00
3	.00	12	1.3	310	.16	13	47	814	27	3.2	.00	.00
4	.00	11	.45	69	.27	45	20	961	30	2.0	.00	.00
5	.00	6.6	.45	34	.27	71	14	1040	314	1.3	.00	.00
6	.00	4.4	.16	21	.27	60	10	882	1490	1.3	.00	.00
7	.00	2.4	.00	16	.27	32	8.2	537	2520	.45	.00	.00
8	.00	2.0	.00	12	2.0	20	7.3	299	2820	.22	.00	.00
9	.00	1.6	.00	9.0	8.0	14	5.4	216	2720	.02	.00	.00
10	.00	.16	.00	7.3	6.8	11	5.2	198	2790	.00	.00	.00
11	.00	.00	.00	6.1	5.2	8.1	5.0	208	3160	.00	3.5	.00
12	.00	.00	.00	4.8	2.4	7.5	5.0	106	3510	.00	9.9	.00
13	.00	.00	8.5	4.0	.00	19	4.8	87	3260	.00	11	.00
14	.00	.00	112	3.8	.00	50	4.4	119	2810	.00	7.1	.00
15	.00	.00	84	3.2	.00	56	4.6	36	2240	.00	.32	.00
16	.00	.00	463	3.2	.00	41	4.8	29	1530	.00	.00	.00
17	.00	2.7	476	2.4	.00	25	.00	19	701	.00	.00	.00
18	.00	37	227	2.4	.00	17	.00	9.7	288	.00	.00	.00
19	.00	38	63	2.8	.00	12	.00	7.6	135	.00	.00	.00
20	.00	29	26	2.0	.00	581	.00	202	114	.00	.00	.00
21	.00	18	17	.45	146	1820	21	293	146	.00	.00	.00
22	.00	13	11	.45	202	1400	996	85	117	.00	.00	.00
23	.00	8.2	7.0	.45	486	357	1420	38	41	.00	.00	.00
24	.00	4.0	5.2	.45	606	125	1280	102	38	.00	5.1	.00
25	.00	3.8	4.0	.75	368	58	571	191	27	.00	8.1	.00
26	11	3.2	2.8	.27	99	20	803	234	25	.00	7.1	.00
27	560	3.2	2.0	.45	38	5.6	1090	253	43	.00	.28	.00
28	806	2.8	1.6	.45	23	.00	1160	160	15	.00	.00	.00
29	692	2.0	.45	.27	---	2.5	804	129	8.2	.00	.00	.00
30	98	2.0	.16	.45	---	671	574	84	5.4	.00	.00	.00
31	26	---	115	.75	---	340	---	57	---	.00	.00	---
TOTAL	2193.00	316.06	1631.27	3378.19	1994.25	5915.70	9052.70	8718.3	30961.6	16.69	52.40	.00
MEAN	70.7	10.5	52.6	109	71.2	191	302	281	1032	.54	1.69	.000
MAX	806	65	476	1570	606	1820	1420	1040	3510	4.4	11	.00
MIN	.00	.00	.00	.27	.00	.00	.00	7.6	5.4	.00	.00	.00
AC-FT	4350	627	3240	6700	3960	11730	17960	17290	61410	33	104	.00

CAL YR 1984 TOTAL 4465.59 MEAN 12.2 MAX 806 MIN .00 AC-FT 8860
WTR YR 1985 TOTAL 64230.16 MEAN 176 MAX 3510 MIN .00 AC-FT 127400

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 September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
JAN 23...	1020	2.9	2780	.5	670	390	170	60	330
MAR 05...	1525	84	246	14.0	75	1	21	5.5	20
APR 24...	1020	1390	131	20.0	42	0	12	2.9	10
MAY 28...	1250	160	560	26.5	140	19	36	11	57
JUL 08...	1140	.20	410	29.5	110	5	28	8.6	39

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)
JAN 23...	6	4.7	280	85	710	.30	14	1500
MAR 05...	1	5.6	74	12	24	.10	8.7	140
APR 24...	.7	4.7	46	13	8.0	.10	8.3	87
MAY 28...	2	8.3	116	10	99	.30	2.6	290
JUL 08...	2	1.4	100	11	60	.30	6.7	210

07315200 EAST FORK LITTLE WICHITA RIVER NEAR HENRIETTA, TX

LOCATION.--Lat 33°48'46", long 98°05'05", Clay County, Hydrologic Unit 11130209, at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, Jan. 16-22, which are poor. There are no known diversions upstream from station.

AVERAGE DISCHARGE.--21 years (water years 1965-85), 26.9 ft^3/s (2.05 in/yr), 19,490 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.--Peak discharges greater than base discharge (revised) of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 28	0030	963	19.01	Feb. 23	2300	523	15.10
Dec. 14	1200	727	17.10	Mar. 21	2000	3,070	24.07
Dec. 17	1330	1,250	20.41	Mar. 30	2100	*4,960	*25.51
Jan. 1	1130	3,680	24.60	June 7	0630	4,040	24.88

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	53	.29	2640	2.8	10	666	4.3	.98	6.8	.44	.00
2	.00	113	.23	1280	2.8	9.6	63	4.1	1.3	4.1	.40	.00
3	.00	61	.21	180	2.8	9.6	49	3.6	1.8	2.9	.35	.00
4	.00	15	.22	44	2.8	27	40	3.2	2.1	1.9	.26	.00
5	.00	7.3	.27	27	3.3	113	29	2.9	226	1.4	.22	.00
6	.00	4.2	.24	19	4.3	55	21	2.5	1650	1.9	.17	.00
7	.00	3.0	.28	14	4.8	21	16	2.2	3230	1.5	.14	.00
8	.00	2.5	.26	11	6.1	12	13	2.1	1340	1.1	.12	.00
9	.00	1.8	.24	9.2	7.1	9.2	12	2.0	128	.87	.10	.00
10	.00	.95	.23	7.9	6.2	8.2	11	1.8	32	.68	.07	.00
11	.00	.59	.19	6.8	4.8	7.1	10	2.4	23	.62	.06	.00
12	.00	.47	.12	5.8	4.1	6.1	9.6	3.6	22	.55	.03	.00
13	.00	.43	225	5.1	3.7	5.8	12	6.1	11	.47	.03	.00
14	.00	.48	710	4.5	3.3	5.4	14	6.9	7.4	.38	.04	.01
15	.00	.46	643	4.1	2.9	4.9	12	6.8	5.9	.33	.05	.00
16	.00	.46	966	3.7	2.8	6.3	10	6.3	4.8	.32	.04	.00
17	.00	1.3	1170	3.5	2.6	6.2	8.7	6.0	3.9	.26	.03	.00
18	.00	33	438	3.3	2.4	5.1	7.0	5.7	3.2	.25	.03	.00
19	.00	21	36	3.2	2.3	4.6	5.9	4.4	2.9	.28	.02	.00
20	24	10	18	3.1	4.2	455	5.1	155	2.8	.26	.02	.00
21	104	6.0	13	3.0	18	1750	5.5	96	2.5	.30	.02	.00
22	34	3.8	10	3.9	10	1700	198	23	1.9	.35	.02	.00
23	6.4	2.9	8.2	3.0	344	447	147	11	1.8	.45	.01	.00
24	5.5	2.4	6.6	2.9	505	70	56	6.8	1.5	.56	.01	.00
25	237	1.8	5.0	2.7	226	39	18	4.4	1.2	.58	.01	.00
26	319	1.3	4.2	2.6	39	27	9.4	3.3	1.0	.63	.01	.00
27	729	.91	3.5	2.8	19	21	6.8	2.5	3.2	.61	.01	.00
28	911	.61	3.3	2.9	12	17	6.0	1.9	88	.56	.01	.00
29	493	.45	3.0	2.9	---	23	5.4	1.6	79	.52	.00	.07
30	28	.33	2.7	2.8	---	2020	4.9	1.1	16	.44	.00	.02
31	9.6	---	692	2.8	---	2260	---	.80	---	.43	.00	---
TOTAL	2900.50	350.44	4960.28	4307.5	1249.1	9155.1	1471.3	384.30	6895.18	32.30	2.72	.10
MEAN	93.6	11.7	160	139	44.6	295	49.0	12.4	230	1.04	.088	.003
MAX	911	113	1170	2640	505	2260	666	155	3230	6.8	.44	.07
MIN	.00	.33	.12	2.6	2.3	4.6	4.9	.80	.98	.25	.00	.00
CFSM	.53	.07	.90	.78	.25	1.66	.28	.07	1.29	.006	.000	.000
IN.	.61	.07	1.04	.90	.26	1.91	.31	.08	1.44	.01	.00	.00
AC-FT	5750	695	9840	8540	2480	18160	2920	762	13680	64	5.4	.2

CAL YR 1984 TOTAL 8285.02 MEAN 22.6 MAX 1170 MIN .00 CFSM .13 IN 1.73 AC-FT 16430
WTR YR 1985 TOTAL 31708.82 MEAN 86.9 MAX 3230 MIN .00 CFSM .49 IN 6.63 AC-FT 62890

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 September 1985 (discontinued).
Sediment records: October 1965 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 29...	1145	549	138	17.0	40	4	11	3.1	13
DEC 11...	1340	.20	649	9.0	180	2	48	15	68
MAR 05...	1435	142	1170	13.5	260	110	71	21	130
APR 17...	1140	8.8	2280	19.0	530	230	140	45	260
MAY 28...	1130	2.0	1350	24.0	300	73	76	26	170
JUN 07...	1325	3480	260	23.5	45	0	13	3.0	26
JUL 08...	1050	1.1	1190	25.0	280	56	71	24	140

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 29...	.9	4.4	36	14	18	.10	9.5	95
DEC 11...	2	5.4	180	48	72	.20	14	380
MAR 05...	4	6.6	159	46	250	.30	9.3	630
APR 17...	5	4.8	308	90	530	.40	12	1300
MAY 28...	4	6.3	224	56	270	.40	12	750
JUN 07...	2	9.7	65	15	26	<.10	7.2	140
JUL 08...	4	6.8	220	54	230	.30	13	670

07315500 RED RIVER NEAR TERRAL, OK

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

DRAINAGE AREA.--28,723 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 above National Geodetic Vertical Datum of 1929. Prior to Jan. 12, 1939, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. There are many small diversions upstream for irrigation, oilfield, and municipal uses.

AVERAGE DISCHARGE.--47 years (water years 1939-85), 2,161 ft³/s (1,566,000 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.--Peak discharges greater than base discharge of 21,000 ft³/s and maximum (*).

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 2	0500	36,400	18.35	Mar. 21	2300	28,400	17.14
Feb. 24	1600	43,800	18.62	June 8	0800	*62,600	*20.94

Minimum discharge, 159 ft³/s Oct. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	685	322	27600	782	6020	16600	13500	948	3430	1890	399
2	200	1140	322	31900	1840	5350	12300	12600	742	2890	1490	346
3	190	1150	303	18600	1810	4910	8010	8690	637	1770	1120	321
4	185	970	298	11400	1470	7410	6410	7440	593	1410	900	308
5	183	719	276	7210	1140	17100	5740	6980	3900	1190	758	294
6	189	494	277	5170	703	11900	5190	6020	19000	1050	683	306
7	189	370	275	4540	620	11800	4490	5060	42500	921	654	317
8	174	308	277	4280	675	7290	4500	4270	59500	808	574	314
9	164	266	258	4120	769	5630	4260	3760	32600	749	497	307
10	189	232	246	4020	921	5020	3720	3340	22300	694	459	313
11	311	222	237	4030	834	4660	2930	2730	19700	647	422	301
12	402	221	228	3940	756	4280	2280	2320	18100	595	406	299
13	443	209	706	3950	686	4120	1510	2140	15700	556	382	319
14	491	204	3430	3950	627	4220	1030	2190	13900	529	418	359
15	487	201	3430	3790	595	5640	1200	2130	11000	506	875	367
16	535	188	6000	3090	577	6610	1390	1530	9500	496	546	402
17	769	196	10400	1740	546	4540	1550	927	8260	499	554	338
18	712	389	9240	1080	523	3860	1370	802	5680	477	597	352
19	517	1500	5360	930	509	3650	1060	719	3590	477	544	501
20	669	2720	3240	717	526	12200	986	827	7700	463	463	479
21	1050	2040	2770	609	2950	26300	930	1490	7150	492	430	375
22	1220	1130	2260	651	8550	23600	2290	1800	6110	459	634	334
23	1170	743	1740	595	19200	18100	6010	3380	3300	454	610	328
24	1250	567	1690	639	41300	11100	7890	4470	2480	447	529	295
25	1460	478	1370	656	28800	7850	6820	3250	2370	458	450	418
26	1610	428	1000	599	16800	6540	5270	2070	2740	478	440	1030
27	5030	420	905	619	10600	5580	4170	1670	3200	595	514	968
28	11400	377	849	606	7920	5390	3720	1430	3530	539	628	908
29	6380	377	795	587	---	6880	6570	1180	3730	582	679	826
30	2710	335	776	595	---	13400	16300	1040	3100	2780	586	1040
31	849	---	3480	547	---	12600	---	1160	---	2500	486	---
TOTAL	41354	19279	62760	152760	153029	273550	146496	110915	333560	29941	20218	13464
MEAN	1334	643	2025	4928	5465	8824	4883	3578	11120	966	652	449
MAX	11400	2720	10400	31900	41300	26300	16600	13500	59500	3430	1890	1040
MIN	164	188	228	547	509	3650	930	719	593	447	382	294
AC-FT	82030	38240	124500	303000	303500	542600	290600	220000	661600	59390	40100	26710

CAL YR 1984 TOTAL 289023 MEAN 790 MAX 11400 MIN 119 AC-FT 573300
WTR YR 1985 TOTAL 1357326 MEAN 3719 MAX 59500 MIN 164 AC-FT 2692000

07315500 RED RIVER NEAR TERRAL, OK--Continued

WATER-QUALITY RECORDS

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

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,000 microsiemens June 15, 1984; minimum daily, 255 microsiemens Jan. 1, 1985.
WATER TEMPERATURES: Maximum daily, 35.0°C Aug. 13, 16, 17, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,320 microsiemens Sept. 26; minimum daily, 255 microsiemens Jan. 1.
WATER TEMPERATURES: Maximum daily, 34.0°C on several days during July and August; minimum daily, 0.0°C Jan. 20, Feb. 2, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
29...	1445	5790	403	18.0	110	32	35	6.6	40
NOV									
30...	1705	348	5040	11.0	860	700	230	70	790
FEB									
25...	1500	25800	640	13.0	150	53	47	9.0	68
MAR									
25...	1215	7900	1790	14.0	340	220	92	26	230
APR									
23...	1120	7540	1260	--	230	130	59	19	170
MAY									
28...	1020	1450	2700	25.0	540	400	150	40	360

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
29...	2	4.2	83	29	65	.20	6.8	240
NOV								
30...	12	7.5	160	560	1300	.30	9.4	3100
FEB								
25...	2	4.7	102	51	110	.20	9.2	360
MAR								
25...	6	5.2	121	190	390	.40	7.6	1000
APR								
23...	5	7.1	96	130	260	.20	6.3	710
MAY								
28...	7	7.4	145	300	600	.40	6.5	1600

07315500 RED RIVER NEAR TERRAL, OK--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (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.	1984	41354	2110	1280	143000	490	54300	270	30400	410
NOV.	1984	19279	2320	1390	72300	510	26500	300	15700	470
DEC.	1984	62760	2150	1300	220000	490	82400	280	47100	420
JAN.	1985	152760	718	425	175000	150	61300	95	39300	150
FEB.	1985	153029	1240	745	308000	270	112500	160	67100	250
MAR.	1985	273550	1270	752	555000	270	195800	170	124200	270
APR.	1985	146496	1940	1160	458000	420	164700	260	100900	400
MAY	1985	110915	2280	1360	408000	490	148000	300	89400	460
JUNE	1985	333560	1900	1130	1020E3	410	368900	250	224100	390
JULY	1985	29941	5250	3220	260000	1300	101800	670	53900	970
AUG.	1985	20218	5240	3210	175000	1300	68500	660	36300	960
SEPT	1985	13464	6070	3760	137000	1500	54900	760	27600	1100
TOTAL		1357326	**	**	3932000	**	1440000	**	856000	**
WTD.AVG.		3719	1790	1070	**	390	**	230	**	360

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5550	1580	5260	255	2550	1330	1700	1420	5620	4680	6100	5040
2	4600	1140	5300	558	1420	1580	1060	2360	7000	4500	5840	4560
3	4650	2390	5330	617	1940	1820	1550	2860	6740	5360	5550	4420
4	4930	1880	5520	705	3110	1540	1820	2450	5990	5250	5500	4800
5	5350	1780	5370	811	3570	1380	1400	2090	3270	4960	5440	5190
6	5530	2350	5480	939	5010	975	1450	1890	1120	5080	5220	5320
7	5600	3280	5610	1070	5100	904	1730	1920	1500	5210	5160	5440
8	5780	3040	5540	898	5680	1200	1650	1930	1930	5220	5250	5240
9	5920	3000	5680	700	5520	1030	1640	2040	1150	5340	5340	4640
10	6100	3300	5810	395	6020	1010	1850	2360	1200	5660	5420	4510
11	6530	3670	5510	559	5940	1200	2110	2400	1420	5630	5580	4370
12	6760	4010	5390	570	5710	1380	2300	2510	1400	5290	5500	4440
13	6790	4280	4420	610	6210	1480	2770	2500	1420	5390	5550	4390
14	6710	4490	1070	670	6410	1480	3720	2650	1470	5350	5230	4140
15	6390	4330	1000	580	6360	1420	3860	2820	1720	5230	2620	4050
16	6510	4590	767	728	6790	1190	3700	3530	1950	5010	3940	4150
17	6920	4690	664	910	7280	1160	3370	3770	2140	4910	4230	4280
18	4230	3930	713	1030	7160	1310	3820	4470	2750	5050	4620	4080
19	5520	2840	928	1520	6870	1430	3960	4590	3840	4920	4310	3880
20	5390	1440	2270	2370	6130	847	4150	4160	2240	4940	4820	7490
21	3610	1310	3610	3930	2040	798	3970	3650	2670	4530	4620	6920
22	3670	1170	3460	3500	1160	619	1520	3370	4230	5090	5760	6590
23	4610	1470	3830	2230	1040	1170	1590	2150	4940	5180	5820	6530
24	2820	2080	4060	2560	548	1340	1620	1270	4410	5320	5860	6330
25	2070	2670	4600	2860	634	2140	1520	1360	4120	5290	5330	6480
26	2410	3370	4830	3060	834	2810	2920	2130	3960	5160	5210	9320
27	1750	3870	5130	3220	1140	2600	2370	2200	3580	4550	5520	8330
28	558	4100	5490	3440	1330	2330	2000	2750	3720	4390	4980	7540
29	402	4850	6030	3630	---	1700	1790	2920	3140	4360	4770	7470
30	630	5060	6170	3490	---	1010	2570	3060	3360	5700	5400	6300
31	1550	---	4200	3700	---	1590	---	4200	---	7290	6020	---
MEAN	4510	3070	4160	1680	4050	1410	2380	2700	3130	5160	5180	5540

07315500 RED RIVER NEAR TERRAL, OK--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	17.0	11.0	4.0	---	12.0	14.0	22.0	30.0	28.0	32.0	32.0
2	22.0	16.0	11.0	2.0	.0	11.0	15.0	23.0	30.0	27.0	33.0	32.0
3	22.0	17.0	9.0	3.0	1.0	15.0	18.0	24.0	30.0	29.0	33.0	32.0
4	20.0	18.0	6.0	2.0	.0	16.0	19.0	23.0	28.0	30.0	32.0	32.0
5	25.0	17.0	5.0	4.0	1.0	13.0	18.0	23.0	22.0	31.0	32.0	26.0
6	27.0	---	6.0	6.0	1.0	11.0	18.0	24.0	22.0	31.0	33.0	25.0
7	27.0	18.0	8.0	7.0	4.0	12.0	17.0	25.0	23.0	31.0	32.0	26.0
8	26.0	20.0	11.0	8.0	5.0	14.0	17.0	25.0	22.0	31.0	---	26.0
9	25.0	21.0	13.0	8.0	10.0	13.0	17.0	25.0	29.0	32.0	34.0	27.0
10	24.0	15.0	13.0	5.0	7.0	15.0	16.0	24.0	28.0	34.0	34.0	27.0
11	22.0	15.0	---	3.0	6.0	17.0	20.0	26.0	28.0	34.0	33.0	27.0
12	24.0	15.0	15.0	2.0	8.0	13.0	21.0	27.0	25.0	33.0	31.0	28.0
13	24.0	16.0	12.0	3.0	9.0	12.0	21.0	25.0	25.0	31.0	31.0	26.0
14	22.0	19.0	8.0	4.0	9.0	13.0	23.0	23.0	26.0	32.0	27.0	24.0
15	21.0	17.0	11.0	5.0	10.0	13.0	24.0	25.0	27.0	32.0	30.0	23.0
16	19.0	---	9.0	6.0	10.0	12.0	24.0	26.0	29.0	30.0	33.0	22.0
17	17.0	11.0	9.0	7.0	10.0	14.0	24.0	27.0	29.0	31.0	---	28.0
18	22.0	9.0	7.0	9.0	---	14.0	24.0	25.0	27.0	33.0	34.0	24.0
19	19.0	8.0	7.0	10.0	---	14.0	23.0	---	28.0	33.0	34.0	25.0
20	17.0	8.0	9.0	.0	12.0	13.0	24.0	25.0	26.0	32.0	34.0	24.0
21	15.0	9.0	10.0	2.0	14.0	13.0	24.0	23.0	27.0	30.0	32.0	23.0
22	13.0	9.0	9.0	3.0	15.0	12.0	---	25.0	27.0	32.0	32.0	26.0
23	15.0	10.0	10.0	5.0	15.0	15.0	21.0	24.0	28.0	30.0	31.0	20.0
24	13.0	9.0	8.0	6.0	13.0	16.0	22.0	26.0	29.0	30.0	32.0	19.0
25	15.0	13.0	5.0	8.0	14.0	17.0	22.0	27.0	29.0	31.0	30.0	19.0
26	15.0	12.0	6.0	5.0	12.0	16.0	22.0	28.0	29.0	32.0	30.0	17.0
27	17.0	9.0	11.0	5.0	11.0	19.0	23.0	27.0	25.0	---	30.0	17.0
28	17.0	10.0	17.0	6.0	11.0	19.0	23.0	29.0	27.0	34.0	30.0	18.0
29	17.0	11.0	18.0	9.0	---	18.0	23.0	31.0	28.0	33.0	31.0	18.0
30	18.0	11.0	11.0	5.0	---	14.0	21.0	30.0	28.0	31.0	32.0	18.0
31	21.0	---	8.0	---	---	11.0	---	27.0	---	30.0	33.0	---
MEAN	20.0	13.5	10.0	5.0	8.5	14.0	20.5	25.5	27.0	31.5	32.0	24.5

07315950 MOSS LAKE NEAR GAINESVILLE, TX

LOCATION.--Lat 33°46'26", long 97°12'50", Cooke County, Hydrolgic 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.

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 morning-glory type (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 filled in May 1968, 17,740 acre-ft Sept. 26, 1980 (elevation, 709.67 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 32,060 acre-ft June 6 at 0800 hours (elevation, 721.99 ft); minimum, 19,790 acre-ft Oct. 4-6 (elevation, 711.78 ft).

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

711.0	19,010	716.0	24,360	720.0	29,340
713.0	21,040	718.0	26,770	722.0	32,070
714.0	22,110				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19850	20340	20240	22770	23050	23240	23800	23230	23030	22830	22450	21810
2	19830	20370	20220	22850	23050	23210	23640	23210	23000	22810	22440	21790
3	19820	20380	20220	22940	23050	23210	23520	23200	22980	22790	22440	21770
4	19800	20380	20210	23010	23050	23300	23430	23170	22960	22790	22440	21750
5	19790	20370	20230	23030	23050	23290	23340	23140	24810	22790	22440	21720
6	19820	20370	20230	23060	23050	23260	23280	23120	30180	22790	22440	21690
7	19820	20340	20220	23060	23050	23210	23230	23100	26600	22790	22420	21670
8	19820	20340	20220	23070	23050	23190	23210	23100	24720	22790	22390	21650
9	19800	20350	20240	23080	23050	23170	23190	23080	24030	22790	22350	21630
10	19800	20310	20240	23050	23050	23140	23180	23070	23680	22800	22330	21600
11	19840	20290	20240	23000	23050	23130	23170	23090	23580	22810	22300	21580
12	19860	20280	20240	23000	23020	23120	23170	23070	23450	22830	22280	21550
13	19860	20270	20350	23000	23020	23210	23240	23350	23350	22790	22240	21520
14	19860	20240	20380	23010	23010	23650	23260	23270	23280	22740	22220	21520
15	19840	20240	20470	23010	23010	23660	23230	23210	23260	22680	22190	21510
16	19840	20220	20690	23010	23010	23620	23200	23410	23210	22650	22170	21500
17	19840	20290	20750	23030	23010	23570	23190	23360	23210	22610	22130	21450
18	19830	20310	20780	23030	23010	23510	23160	23280	23210	22570	22110	21430
19	19820	20310	20810	23030	23010	23440	23130	23220	23190	22550	22090	21400
20	19930	20290	20860	23030	23060	26650	23140	23230	23160	22530	22080	21390
21	19920	20290	20910	23030	23080	24730	23120	23650	23120	22510	22060	21360
22	19920	20280	20910	23030	23120	24080	23300	23560	23080	22480	22020	21340
23	19940	20280	20920	23030	23660	23770	23310	23430	23080	22470	22010	21330
24	19980	20270	20910	23030	23520	23620	23270	23350	23060	22460	21990	21300
25	20020	20270	20910	23030	23420	23510	23220	23270	23050	22460	21970	21250
26	20070	20280	20910	23030	23340	23420	23200	23210	23000	22460	21950	21220
27	20150	20270	20940	23030	23290	23340	23180	23180	22960	22460	21920	21200
28	20140	20240	20960	23030	23270	23290	23180	23130	22910	22460	21900	21170
29	20130	20260	21040	23030	---	23280	23270	23100	22880	22470	21890	21240
30	20130	20260	21040	23050	---	23890	23290	23070	22850	22470	21850	21210
31	20130	---	22540	23050	---	23890	---	23050	---	22460	21830	---
MAX	20150	20380	22540	23080	23660	26650	23800	23650	30180	22830	22450	21810
MIN	19790	20220	20210	22770	23010	23120	23120	23050	22850	22460	21830	21170
(†)	712.12	712.24	714.39	714.85	715.05	715.59	715.07	715.85	714.67	714.32	713.74	713.16
(‡)	+280	+130	+2280	+510	+220	+620	-600	-240	-200	-390	-630	-620

CAL YR 1984 MAX 22540 MIN 19790 (‡) +1750
WTR YR 1985 MAX 30180 MIN 19790 (‡) +1360

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

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW 1/4 sec.36, T.9 S., R.1 E., Love County, Okla., Hydrologic Unit 11130201, near center of span on 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 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 above National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS. --Estimated daily discharges: Oct. 1, 2, 24, Nov. 7 to Dec. 7, 21, Jan. 2, 9-17, 27, Feb. 1-6, June 13-16, and July 10. Records poor. Flow slightly regualted by Lake Kemp (station 07312000); since 1943 by Lake Altus (in Oklahoma); since 1946 by Lake Kickapoo (station 07314000); since 1967, by Lake Arrowhead (station 07314800) and Moss Lake (station 07315950), all in Texas.

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

AVERAGE DISCHARGE.--49 years, 2,786 ft^3/s (2,018,000 acre-ft/yr).

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 24,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 3	1100	52,300	20.15	Mar. 31	0330	45,800	19.46
Feb. 25	1800	54,300	20.44	June 7	1930	*77,400	*24.56
Mar. 22	1030	54,600	20.47				

Minimum daily discharge, 205 ft^3/s Oct. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	3890	1310	17200	2000	8410	18700	20100	2780	3200	1510	1250
2	350	3050	1290	46200	3600	7580	16300	16300	2780	3100	1980	1280
3	325	4150	1260	47900	3500	7130	11800	15200	2630	3000	1680	1280
4	307	3690	1240	20200	3480	6960	10000	11200	2450	2500	1440	1230
5	268	2740	1260	10100	2560	10600	9310	8800	3100	2000	1220	1220
6	246	2260	1290	7180	2030	16500	8450	8380	48700	1600	1090	1220
7	242	2000	1260	6170	2020	13000	7880	7520	73700	1300	1030	1230
8	226	1740	1230	5000	1800	12300	7150	6620	72200	1100	1020	1240
9	220	1550	1200	4600	1670	9260	6880	5800	69700	970	997	1250
10	218	1410	1170	4400	1850	7770	6680	5200	46000	980	973	1280
11	208	1260	1130	4200	2100	6900	6160	4880	21300	970	923	1290
12	205	1210	1120	4100	2080	6340	5370	4560	16800	898	889	1290
13	206	1100	1180	3900	1930	6120	4870	4390	15400	849	876	1360
14	313	1110	1910	3800	1730	6170	4580	4260	13400	816	868	1550
15	407	1060	7830	3800	1610	5970	3880	3810	11800	810	891	1560
16	466	932	9360	3700	1540	6070	3500	3790	9380	778	943	1500
17	538	1030	13000	3500	1500	7630	3430	3870	7300	791	1200	1520
18	575	1160	18000	3160	1470	6820	3410	3230	7190	794	1140	1540
19	594	1630	13800	2440	1450	5600	3420	2880	5990	747	1060	1560
20	838	2540	8800	2010	1450	8840	3270	2790	4240	739	1060	1530
21	1710	3340	7000	1890	1450	37200	3050	4120	4800	723	1060	1550
22	2960	3680	5400	1730	2600	51700	5050	4360	5950	729	1040	1690
23	2030	3130	4500	1600	7580	31700	12600	4420	5250	729	1040	1760
24	1760	2290	4000	1600	28600	18600	17100	3910	3970	746	1060	1690
25	1650	1870	3500	1560	48900	11500	14500	4920	3060	770	1140	1650
26	5470	1660	3000	1520	27700	9090	12600	5230	2600	729	1170	1630
27	5560	1520	2500	1600	13500	8050	8880	4210	2550	702	1160	1590
28	7520	1440	2200	1690	9850	7570	6500	3560	2810	688	1160	1860
29	18200	1410	2000	1670	---	8110	5700	3290	3040	686	1170	2350
30	11800	1360	1900	1660	---	30600	8850	3090	3210	695	1200	2380
31	7010	---	4000	1620	---	36500	---	2890	---	700	1230	---
TOTAL	72812	61212	128640	221700	181550	416590	239870	187580	474080	35839	35220	45330
MEAN	2349	2040	4150	7152	6484	13440	7996	6051	15800	1156	1136	1511
MAX	18200	4150	18000	47900	48900	51700	18700	20100	73700	3200	1980	2380
MIN	205	932	1120	1520	1450	5600	3050	2790	2450	686	868	1220
AC-FT	144400	121400	255200	439700	360100	826300	475800	372100	940300	71090	69860	89910

CAL YR 1984 TOTAL 507811 MEAN 1387 MAX 18200 MIN 130 AC-FT 1007000
WTR YR 1985 TOTAL 2100423 MEAN 5755 MAX 73700 MIN 205 AC-FT 4166000

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER-QUALITY RECORDS

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

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,100 microsiemens July 16, 1972, and June 19, 1984; minimum daily, 176 microsiemens Nov. 4, 1958.
WATER TEMPERATURES: Maximum daily, 35.0°C on several days during summer months; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,830 microsiemens Sept. 27; minimum daily, 330 microsiemens June 7.
WATER TEMPERATURES: Maximum daily, 35.0°C Aug. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 23...	0910	2270	1500	8.0	13.5	460	9.7	94	2.2	2900	15000	250
DEC 04...	0915	1250	4200	8.5	7.0	60	11.6	98	2.7	60	80	710
FEB 26...	1030	31900	510	7.8	12.5	730	7.9	75	2.7	4500	2000	120
APR 02...	1000	17100	800	8.0	14.0	500	8.8	87	2.5	4200	5900	180
JUN 26...	1400	2710	3800	8.1	29.5	220	7.2	98	1.8	785	82	640
AUG 06...	1215	1110	5700	7.8	30.0	220	6.7	92	.7	131	92	1000

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 23...	200	69	19	220	6	5.2	48	180	340	.30	4.5
DEC 04...	540	190	58	570	10	7.4	176	420	990	.30	9.7
FEB 26...	46	34	8.5	54	2	3.5	74	38	83	.20	9.5
APR 02...	95	49	13	110	4	4.2	82	87	180	.10	7.6
JUN 26...	440	180	46	570	10	8.2	200	420	950	.40	11
AUG 06...	880	300	61	840	12	11	125	690	1500	.60	9.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	870	870	.55	.060	1.5	.330	.080	<.010	394	2410	99
DEC 04...	2420	2400	.63	.080	2.4	.320	.260	.250	46	155	97
FEB 26...	281	280	.37	.120	3.9	.790	.080	.080	3630	313000	57
APR 02...	499	500	.30	.080	2.4	.640	.060	.050	--	--	--
JUN 26...	2360	2300	.47	.090	.70	.230	.100	.110	--	--	--
AUG 06...	3690	3500	--	--	--	--	--	--	--	--	--

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 23...	0910	1	110	<.0	<1	<1	<3	1	22	4
FEB 26...	1030	1	88	<.5	<1	<1	<3	4	190	4
APR 02...	1000	<1	120	<.5	<1	<1	<3	6	49	5
AUG 06...	1215	6	400	<10	1	<1	<1	2	30	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 23...	18	8	<.1	<10	3	<1	<1	930	<6	10
FEB 26...	7	9	<.1	<10	5	<1	<1	310	<6	3
APR 02...	12	5	<.1	<10	2	<1	<1	480	<6	8
AUG 06..	40	10	<.1	4	2	2	<1	3000	38	20

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (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.	1984	72812	1490	879	173000	360	70300	180	35300	290
NOV.	1984	61212	1630	949	157000	380	63100	200	32300	330
DEC.	1984	128640	1680	988	343000	400	139000	200	70300	330
JAN.	1985	221700	1170	682	408000	270	164200	140	84100	240
FEB.	1985	181550	1590	936	459000	380	186200	190	93900	310
MAR.	1985	416590	932	536	603000	210	240800	110	125300	200
APR.	1985	239870	1330	767	497000	310	199200	160	102900	270
MAY	1985	187580	2050	1190	604000	480	243300	250	124400	420
JUNE	1985	474080	1230	715	915000	290	367600	150	188900	250
JULY	1985	35839	4080	2440	236000	1000	96800	490	47900	770
AUG.	1985	35220	5050	3060	291000	1300	120000	620	58500	920
SEPT	1985	45330	4850	2930	359000	1200	147900	590	72300	890
TOTAL		2100423	**	**	5044000	**	2038000	**	1036000	**
WTD.AVG.		5755	1520	889	**	360	**	180	**	300

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5960	436	3070	1500	4160	985	752	2440	2600	2960	4440	5240
2	5820	633	3440	654	3760	1080	830	1940	2800	2690	5520	4970
3	5690	779	3720	539	3980	1180	918	1730	3100	2980	6690	4530
4	5930	711	4160	441	4120	1410	1000	2010	4810	3690	6720	5230
5	5190	762	4380	463	4320	1250	1350	2750	3300	4030	6110	5640
6	5030	1540	4610	758	4430	875	1450	2290	1600	4720	5620	5570
7	4970	1730	4550	886	4210	933	1470	1960	330	5380	5370	5160
8	5180	1700	4570	1050	4050	949	1450	1790	507	4500	5090	4610
9	4710	1680	4610	1330	3830	972	1590	1780	794	4370	5070	4440
10	4810	1840	4630	1500	3420	1000	1690	1870	1280	4380	4980	4460
11	4960	2090	4750	1540	3220	1030	1680	1930	1160	4430	4920	4780
12	5110	2530	4780	1760	3450	1050	1690	2080	1270	4550	4830	5100
13	5030	2960	4270	1870	3700	1090	1600	1880	1440	4660	4810	5000
14	5260	2920	3910	1950	4110	1270	1830	2020	1400	4710	4830	4320
15	5910	2940	1070	1500	4320	1430	1950	2280	1430	4900	4780	4170
16	6220	3140	660	1490	4390	1470	2170	2230	1440	4850	5030	3990
17	6530	3270	642	1670	4570	1640	2750	2320	1690	4710	5230	3790
18	6360	3330	567	1850	4850	1500	3100	2390	1820	4620	4420	4150
19	5990	2860	562	2060	4820	1220	3180	2790	1880	4710	3750	3920
20	5860	2680	616	2280	4920	727	3030	2940	1970	4690	3170	4010
21	5050	2250	763	2810	4980	607	2880	2120	3160	4610	3800	3980
22	1680	1370	1170	3610	3400	547	1350	2060	2350	4550	4540	4070
23	2000	1350	2150	3970	2290	512	1070	2020	3050	4440	4350	4230
24	3020	1290	2850	4180	905	690	954	2480	3180	4490	4330	3630
25	3130	1260	2970	4200	558	914	927	953	3790	4330	4470	5470
26	1120	1280	3270	4430	556	1250	880	540	4000	4160	4580	6530
27	902	1550	3310	4390	669	1890	961	1820	4300	4140	5010	6830
28	790	1820	3480	4080	885	2410	1340	1900	3610	4560	5640	6030
29	760	2250	3520	4500	---	2250	1800	1950	3580	4860	5730	5510
30	485	2770	3740	4650	---	945	1310	2020	3410	4900	5360	5610
31	368	---	2840	4530	---	578	---	2580	---	4830	5160	---
MEAN	4190	1920	3020	2340	3460	1150	1630	2060	2370	4400	4980	4830

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	18.0	11.0		---	14.0	15.0	24.0	28.0	29.0	32.0	28.0
2	21.0	19.0	10.0		---	13.0	16.0	24.0	26.0	29.0	35.0	31.0
3	22.0	15.0	10.0		---	14.0	17.0	23.0	30.0	29.0	29.0	32.0
4	---	10.0	7.0		---	15.0	19.0	23.0	29.0	26.0	29.0	30.0
5	24.0	17.0	7.0		3.0	---	17.0	22.0	22.0	31.0	31.0	30.0
6	23.0	16.0	6.0		2.0	---	18.0	22.0	23.0	28.0	31.0	28.0
7	21.5	17.0	8.0		---	---	16.0	25.0	24.0	28.0	31.0	26.0
8	24.0	20.0	7.0		---	---	20.0	26.0	26.0	31.0	33.0	28.0
9	26.0	20.0	9.0		7.0	---	18.0	26.0	27.0	31.0	32.0	31.0
10	26.0	16.0	13.0		9.0	---	16.0	26.0	28.0	33.0	---	31.0
11	23.0	13.0	13.0		6.0	---	19.0	23.0	27.0	33.0	29.0	29.0
12	24.0	12.0	15.0		7.0	15.0	20.0	23.0	27.0	33.0	31.0	29.0
13	23.0	15.0	16.0		8.0	13.0	19.0	24.0	28.0	32.0	31.0	28.0
14	21.0	18.0	11.0		9.0	14.0	20.0	23.0	26.0	29.0	29.0	24.0
15	22.0	17.0	12.0		9.0	15.0	24.0	24.0	25.0	31.0	30.0	24.0
16	21.0	16.0	11.0		7.0	12.0	24.0	28.0	27.0	32.0	31.0	26.0
17	20.0	12.0	11.0		8.0	---	24.0	---	30.0	32.0	30.0	26.0
18	23.0	10.0	9.0		9.0	13.0	24.0	23.0	28.0	32.0	31.0	26.0
19	21.0	9.0	9.0		---	14.0	22.0	21.0	30.0	30.0	---	27.0
20	18.0	8.0	10.0		13.0	14.0	21.0	22.0	28.0	29.0	32.0	28.0
21	16.0	8.0	15.0		14.0	12.0	23.0	21.0	26.0	29.0	32.0	24.0
22	14.0	8.0	9.0		17.0	13.0	18.0	22.0	26.0	---	32.0	24.0
23	15.0	7.0	9.0		16.0	14.0	21.0	24.0	26.0	29.0	32.0	23.0
24	14.0	8.0	9.0		14.0	14.0	20.0	26.0	29.0	28.0	28.0	22.0
25	14.0	10.0	6.0		14.0	17.0	20.0	27.0	30.0	30.0	26.0	21.0
26	15.0	12.0	---		12.0	17.0	21.0	25.0	30.0	31.0	30.0	20.0
27	17.0	10.0	16.0		13.0	19.0	22.0	23.0	27.0	32.0	29.0	20.0
28	18.0	10.0	16.0		14.0	21.0	22.0	27.0	28.0	29.0	30.0	20.0
29	18.0	11.0	---		---	---	23.0	30.0	26.0	34.0	30.0	18.0
30	19.0	12.0	---		---	---	23.0	31.0	26.0	33.0	31.0	17.0
31	20.0	---	---		---	12.0	---	---	---	---	21.0	---
MEAN	20.0	13.0	10.5		10.0	14.5	20.0	24.5	27.0	30.5	30.5	25.5

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE 1/4 sec.33, T.8 S., R.7 E., Bryan County, Okla., 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. Monthend contents only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 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-foot-diameter conduits and the uncontrolled outlet is a concrete, ogee-type weir spillway. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power-pool was first filled March 15, 1945. Capacity, based on 1969 survey, 5,312,000 acre-ft at elevation 640.0 ft, crest of spillway, 2,643,000 acre-ft at elevation 617.0 ft, maximum power pool; 1,031,000 acre-ft at elevation 590.0 ft, minimum power pool, in Denison pool. Dead storage, 11,000 acre-ft at elevation 610.0 ft in Cumberland pool. When contents are below 2,105,000 acre-ft, the reservoir is divided into two pools by protective levees around the Cumberland oilfield on the Washita River arm with bottom outlet channel for the upper pool (known as Cumberland pool) at an elevation of 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 a survey in 1969, has been 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 U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,991,300 acre-ft June 5, 1957 (elevation, 643.18 ft); Minimum contents since power pool was first filled, 1,565,100 acre-ft Sept. 16, 1964; minimum elevation, 599.96 ft Mar. 1, 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,429,000 acre-ft June 11 (elevation, 625.00 ft)1 minimum, 2,146,000 acre-ft Oct. 2, 3 (elevation, 610.58 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,429,000 acre-ft June 11 (elevation, 625.00 ft); minimum 2,146,000 acre-ft Oct. 2, 3 (elevation, 610.58 ft).

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

610	2,105,300	617	2,643,000	627	3,649,100
614	2,398,800	622	3,116,900	632	4,239,700

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2147000	2418000	2477000	2717000	2558000	2868000	3137000	2893000	2644000	2741000	2519000	2368000
2	2146000	2428000	2477000	2771000	2548000	2844000	3190000	2920000	2641000	2726000	2514000	2364000
3	2146000	2443000	2482000	2838000	2545000	2822000	3200000	2953000	2644000	2726000	2513000	2363000
4	2147000	2453000	2475000	2871000	2542000	2806000	3166000	2954000	2649000	2716000	2513000	2360000
5	2147000	2456000	2475000	2879000	2540000	2787000	3124000	2944000	2684000	2704000	2509000	2356000
6	2153000	2456000	2475000	2886000	2542000	2787000	3070000	2931000	2908000	2696000	2503000	2354000
7	2156000	2458000	2468000	2847000	2541000	2784000	3014000	2911000	3058000	2688000	2497000	2351000
8	2157000	2460000	2470000	2800000	2540000	2780000	2953000	2890000	3220000	2678000	2492000	2348000
9	2157000	2464000	2472000	2764000	2548000	2771000	2889000	2861000	3343000	2669000	2485000	2343000
10	2157000	2460000	2472000	2721000	2563000	2754000	2827000	2839000	3414000	2657000	2481000	2341000
11	2160000	2457000	2474000	2708000	2550000	2740000	2783000	2819000	3409000	2645000	2475000	2338000
12	2161000	2454000	2477000	2700000	2550000	2721000	2757000	2796000	3367000	2630000	2467000	2335000
13	2164000	2449000	2490000	2691000	2554000	2721000	2756000	2787000	3316000	2622000	2461000	2339000
14	2164000	2448000	2511000	2683000	2561000	2718000	2752000	2773000	3266000	2613000	2456000	2338000
15	2162000	2443000	2558000	2670000	2542000	2711000	2742000	2761000	3223000	2603000	2452000	2338000
16	2169000	2439000	2602000	2665000	2543000	2708000	2731000	2751000	3168000	2590000	2445000	2337000
17	2165000	2447000	2636000	2651000	2546000	2704000	2719000	2742000	3115000	2583000	2439000	2335000
18	2167000	2454000	2667000	2637000	2543000	2701000	2706000	2728000	3053000	2575000	2434000	2334000
19	2160000	2456000	2687000	2640000	2547000	2694000	2690000	2706000	2994000	2567000	2429000	2332000
20	2184000	2463000	2695000	2623000	2546000	2747000	2679000	2706000	2937000	2565000	2423000	2330000
21	2191000	2465000	2697000	2608000	2547000	2833000	2660000	2719000	2901000	2570000	2416000	2330000
22	2201000	2469000	2688000	2594000	2557000	2916000	2749000	2708000	2876000	2565000	2410000	2327000
23	2206000	2472000	2679000	2580000	2643000	2981000	2776000	2701000	2847000	2561000	2403000	2329000
24	2219000	2477000	2673000	2577000	2698000	3012000	2810000	2698000	2825000	2557000	2400000	2326000
25	2229000	2477000	2661000	2574000	2790000	3014000	2834000	2691000	2810000	2554000	2394000	2321000
26	2245000	2482000	2657000	2577000	2863000	2992000	2842000	2686000	2798000	2548000	2386000	2321000
27	2270000	2489000	2652000	2589000	2880000	2967000	2830000	2681000	2787000	2545000	2380000	2320000
28	2293000	2485000	2648000	2586000	2879000	2937000	2828000	2674000	2774000	2542000	2378000	2319000
29	2328000	2477000	2652000	2583000		---	2917000	2830000	2665000	2764000	2536000	2375000	2332000
30	2358000	2480000	2658000	2588000		---	3002000	2854000	2657000	2753000	2529000	2372000	2329000
31	2384000	---	2694000	2575000		---	3076000	---	2650000	---	2525000	2370000	---
MAX	2384000	2489000	2697000	2886000	2880000	3076000	3200000	2954000	3414000	2741000	2519000	2368000
MIN	2146000	2418000	2468000	2574000	2540000	2694000	2660000	2650000	2641000	2525000	2370000	2319000
(†)	613.81	615.04	617.57	616.21	619.57	621.59	619.30	617.08	618.21	615.60	613.62	613.09
(‡)	+234,000	+96,000	+214,000	-119,000	+304,000	+197,000	-222,000	-204,000	+103,000	-228,000	-155,000	-41,000

CAL YR 1984 MAX 2697000 MIN 2146000 ‡ 109,000
WTR YR 1985 MAX 3414000 MIN 2146000 ‡ 179,000

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

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, Hydrologic Unit 11140101, on right bank 1,800 ft downstream from Denison Dam powerhouse, 0.4 mi upstream from Shawnee Creek (spillway flow return), 4.5 mi north of Denison, and at mile 725.5.

DRAINAGE AREA.--39,720 mi^2, of which 5,936 mi^2 is probably noncontributing. At site used prior to October 1961, drainage area was 39,777 mi^2, of which 5,936 mi^2 probably was noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, Tex.", and October 1934 to September 1961, published as "near Colbert, Okla.". Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. 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.--Estimated daily discharges: Dec. 11 to Jan. 16, Feb. 8-12, June 10-13, July 6, 15, Aug. 16, 17, and Sept. 10, 11, and 25. Records good except those for estimated daily discharges, which are fair. Flow regulated since October 1943 by Lake Texoma (station 07331500).

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

AVERAGE DISCHARGE.--20 years (water years 1924-43) prior to completion of Denison Dam, 5,684 ft^3/s (4,118,000 acre-ft/yr); 41 years (water years 1945-85) regulated, 4,450 ft^3/s (3,224,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft^3/s May 21, 1935 (gage height, 31.8 ft at site and datum then in use; maximum gage height, 32.0 ft Apr. 25, 1942 (at site and datum used in 1943); minimum daily discharge, 12 ft^3/s Jan. 10, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 26, 1908, reached a stage of 45.5 ft, at site and datum used July 29, 1942, to Sept. 30, 1961, from record of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,200 ft^3/s June 11 at 2300 hours (gage height, 17.55 ft); minimum daily, 71 ft^3/s Oct. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	90	234	12000	9490	25900	18800	12700	5610	10600	3170	1170
2	79	100	95	20500	7440	26000	15300	12600	3620	10600	3180	1180
3	79	114	2290	28500	2840	26100	23500	16600	83	10700	2000	1170
4	79	108	2080	32900	5550	26100	35400	20900	72	9550	1980	1180
5	79	1260	2250	30100	3610	26000	38400	20900	2520	9490	3150	1180
6	83	1040	2420	13900	3170	26100	38500	20800	9010	5820	3510	1160
7	82	1270	1120	33000	3200	26100	38400	20800	7520	5570	2860	1160
8	79	1160	113	33200	2800	24400	38400	20800	18700	7140	2870	1180
9	79	1220	101	33300	143	20400	38600	20800	29900	7140	3590	1190
10	79	2250	599	27800	476	20500	35100	19000	35400	7110	2360	775
11	79	1400	475	14500	6240	18900	28600	17100	42700	7130	2290	853
12	79	1820	481	10500	3270	15500	17100	17100	45900	7140	3290	801
13	79	1860	1140	10500	2820	14700	10600	17100	45600	5210	3320	794
14	78	1860	1140	10500	3590	13000	10600	13000	43000	4910	3300	795
15	77	3210	880	10500	5650	11800	10600	10600	39700	901	3280	104
16	73	1870	1540	10600	2250	10600	10600	10600	39700	5940	3620	777
17	71	2640	6750	10600	1240	10600	10600	8990	39700	4760	2880	787
18	1590	1370	10500	10600	3570	10600	10600	9560	39600	4770	2900	789
19	106	2290	10400	7240	870	10700	10700	12900	39700	4790	3270	787
20	106	712	10400	7000	2800	11200	10700	8920	37000	2110	3590	784
21	98	2030	10400	9440	2770	15300	10700	10100	27500	2030	3320	104
22	90	2020	10400	9490	4330	21400	11100	12600	22200	3170	3310	80
23	87	1990	10500	9500	7580	26600	10600	9030	22200	3180	3300	97
24	80	180	10500	4700	9540	26500	10600	7830	18300	3180	2380	87
25	85	101	7790	3030	10200	26400	14000	7740	12500	3180	1970	1620
26	97	1100	7420	1160	14900	29300	17200	7730	10700	3190	3580	80
27	89	2960	5890	112	22600	31700	18000	7760	10600	1980	1870	72
28	94	2960	5870	2500	26000	31800	18000	7750	10700	1980	1810	74
29	86	1240	5870	3400	---	31800	14500	7770	10700	3160	1860	85
30	86	1750	1330	3400	---	27100	13100	7750	10600	3170	1810	84
31	86	---	6170	5880	---	21500	---	5400	---	3170	1170	---
TOTAL	4116	43975	137148	420352	168939	664600	588900	403230	681035	162771	86790	20999
MEAN	133	1466	4424	13560	6034	21440	19630	13010	22700	5251	2800	700
MAX	1590	3210	10500	33300	26000	31800	38600	20900	45900	10700	3620	1620
MIN	71	90	95	112	143	10600	10600	5400	72	901	1170	72
AC-FT	8160	87220	272000	833800	335100	1318000	1168000	799800	1351000	322900	172100	41650

CAL YR 1984 TOTAL 852318 MEAN 2329 MAX 10500 MIN 59 AC-FT 1691000
WTR YR 1985 TOTAL 3382855 MEAN 9268 MAX 45900 MIN 71 AC-FT 6710000

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1944 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to current year.
WATER TEMPERATURES: October 1945 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,520 microsiemens Aug. 14, 1944; minimum daily, 656 microsiemens Oct. 16, 1945.
WATER TEMPERATURES (1945-69): Maximum daily, 31.0°C July 17, 1969; minimum daily, 3.0°C Feb. 2-4, 7, 1966.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,070 microsiemens Oct. 15; minimum daily, 910 microsiemens June 26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 22...	1435	93	2000	8.3	19.0	2.5	7.5	82	.8	K18	160	400
DEC 03...	1200	2170	1950	8.5	13.0	3.0	11.0	105	.8	150	31	440
FEB 25...	1615	11300	1540	8.0	6.0	2.4	12.3	100	.5	38	45	320
APR 01...	1415	19900	1200	8.2	14.0	5.1	9.6	94	.5	K10	K17	270
JUN 26...	0955	11100	910	7.8	25.0	4.4	3.9	48	1.5	73	K6	230
AUG 06...	0930	3490	1080	7.0	24.0	13	2.9	35	1.0	46	43	260

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 22...	290	100	37	260	6	5.7	110	280	410	.30	6.3
DEC 03...	330	110	40	270	6	5.7	110	270	430	.30	3.0
FEB 25...	220	81	28	190	5	4.7	97	200	300	.30	5.0
APR 01...	180	71	23	130	4	4.3	95	160	220	.20	6.1
JUN 26...	110	59	19	100	3	4.4	113	110	170	.20	4.4
AUG 06...	130	72	19	130	4	4.8	125	110	210	.30	5.4

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...	1150	1200	.19	.040	.40	.040	.020	<.010	10	2.5	87
DEC 03...	1190	1200	<.10	.060	.60	.030	.040	.010	3	18	83
FEB 25...	892	870	.23	.120	.60	.030	.030	.040	47	1430	21
APR 01...	704	670	.33	.120	1.0	.070	.040	.040	--	--	--
JUN 26...	559	530	.18	.070	.60	.040	.020	.020	--	--	--
AUG 06...	631	630	--	--	--	--	--	--	--	--	--

07331600 RED RIVER AT DENISON DAM NEAR DENISOM, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 22...	1435	<1	180	.0	<1	1	2	1	9	2
FEB 25...	1615	<1	150	2.6	<1	6	<3	3	56	13
APR 01...	1415	<1	140	<.5	<1	<1	<3	2	12	2
AUG 06...	0930	4	130	<.5	<1	<1	<3	1	7	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 22...	25	11	<.1	2	3	<1	<1	1400	6	23
FEB 25...	15	5	.2	<10	15	<1	<1	980	<6	23
APR 01...	18	5	<.1	<10	3	<1	<1	800	<6	29
AUG 06...	11	550	<.1	<10	3	<1	<1	700	<6	18

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (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.	1984	4116	2030	1190	13200	410	4520	280	3100	410
NOV.	1984	43975	2050	1200	143000	410	48900	280	33500	420
DEC.	1984	137148	2030	1190	442000	410	151300	280	103600	410
JAN.	1985	420352	1880	1100	1248E3	370	425500	260	291700	400
FEB.	1985	168939	1570	900	410000	300	139000	210	95500	350
MAR.	1985	664600	1370	778	1396E3	260	470500	180	323600	320
APR.	1985	588900	1100	618	982000	210	329100	140	226700	270
MAY	1985	403230	954	531	579000	180	193200	120	133200	240
JUNE	1985	681035	916	510	937000	170	312700	120	215600	230
JULY	1985	162771	1010	564	248000	190	82900	130	57100	250
AUG.	1985	86790	1110	625	146000	210	49100	140	33800	270
SEPT	1985	20999	1180	664	37600	220	12600	150	8700	290
TOTAL		3382855	**	**	6582000	**	2219000	**	1526000	**
WTD.AVG.		9268	1270	721	**	240	**	170	**	300

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2020	2030	2050	2010	1660	1520	1190	993	937	940	1060	1170
2	2020	2020	2050	2000	1640	1500	1180	971	938	955	1060	1170
3	2010	2020	2040	2000	1640	1500	1190	973	940	965	1060	1170
4	2010	2020	2040	1980	1630	1490	1190	975	943	975	1040	1170
5	2020	2040	2040	1980	1610	1490	1190	977	935	985	985	1170
6	2020	2040	2040	1980	1600	1470	1150	979	927	995	964	1170
7	2020	2040	2040	1950	1600	1470	1130	975	928	1000	1080	1170
8	2010	2040	2040	1950	1600	1470	1100	973	924	1010	1090	1170
9	2010	2040	2040	1940	1600	1460	1090	970	920	1030	1090	1170
10	2010	2040	2040	1910	1600	1460	1090	965	917	1020	1100	1180
11	2010	2040	2040	1860	1600	1450	1100	956	917	1020	1100	1180
12	2010	2040	2040	1860	1600	1450	1090	953	916	1040	1110	1180
13	2040	2040	2040	1840	1590	1440	1080	945	916	1040	1120	1180
14	2040	2040	2050	1800	1580	1390	1080	935	915	1040	1150	1180
15	2070	2050	2050	1760	1590	1360	1070	930	916	1040	1130	1190
16	2060	2050	2050	1740	1580	1330	1060	923	916	1040	1130	1190
17	2030	2050	2040	1730	1580	1300	1050	913	916	1050	1130	1190
18	2030	2050	2040	1730	1550	1280	1070	915	914	1040	1130	1190
19	2030	2040	2040	1750	1550	1310	1080	918	915	1030	1140	1190
20	2030	2040	2040	1750	1530	1370	1070	922	913	1030	1140	1190
21	2030	2050	2030	1750	1570	1320	1060	925	913	1030	1140	1200
22	2030	2050	2030	1700	1540	1290	1050	928	912	1030	1170	1200
23	2030	2060	2030	1670	1530	1270	1040	930	912	1040	1170	1200
24	2040	2060	2030	1660	1530	1260	1020	938	911	1040	1170	1200
25	2030	2060	2040	1650	1520	1250	1020	945	911	1040	1170	1190
26	2030	2060	2040	1650	1550	1260	1010	947	910	1040	1150	1190
27	2030	2050	2030	1650	1560	1300	1010	947	915	1040	1160	1190
28	2030	2060	2030	1610	1520	1280	1010	948	918	1040	1160	1190
29	2030	2060	2030	1580	---	1240	1000	932	925	1050	1160	1200
30	2030	2060	2030	1610	---	1220	1000	940	930	1050	1160	1200
31	2030	---	2010	1640	---	1200	---	938	---	1050	1170	---
MEAN	2030	2040	2040	1800	1580	1370	1080	948	921	1020	1120	1180

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	---	---	5.0	7.0	14.0	18.0		---	27.0	
2	22.0	18.0	---	10.0	---	---	14.0	20.0		---	---	
3	22.0	---	12.0	10.0	---	---	14.0	19.0		---	27.0	
4	21.0	---	13.0	10.0	5.0	8.0	15.0	---		---	---	
5	22.0	---	12.0	---	4.0	8.0	15.0	---		27.0	---	
6	---	18.0	12.0	---	4.0	8.0	---	19.0		---	27.0	
7	---	18.0	12.0	10.0	4.0	8.0	---	---		---	27.0	
8	---	---	---	---	4.0	8.0	15.0	---		25.0	27.0	
9	21.0	---	---	10.0	---	---	16.0	---		25.0	27.0	
10	21.0	---	12.0	10.0	---	---	16.0	---		26.0	---	
11	21.0	---	12.0	---	4.0	10.0	16.0	---		26.0	---	
12	21.0	---	12.0	---	4.0	10.0	16.0	---		26.0	26.0	
13	---	17.0	12.0	---	4.0	10.0	---	---		---	25.0	
14	---	17.0	---	---	4.0	11.0	---	---		---	26.0	
15	21.0	---	---	8.0	---	10.0	16.0	---		26.0	25.0	
16	21.0	17.0	---	8.0	---	---	16.0	20.0		26.0	---	
17	20.0	---	12.0	8.0	---	---	16.0	21.0		26.0	---	
18	20.0	---	12.0	---	---	12.0	---	---		24.0	---	
19	20.0	15.0	12.0	---	---	12.0	17.0	---		23.0	25.0	
20	---	15.0	10.0	---	5.0	12.0	---	---		---	25.0	
21	19.0	15.0	11.0	8.0	5.0	12.0	---	---		---	25.0	
22	20.0	---	---	6.0	6.0	12.0	16.0	21.0		27.0	25.0	
23	20.0	15.0	---	6.0	---	---	16.0	---		---	25.0	
24	19.0	---	11.0	6.0	---	---	17.0	---		26.0	---	
25	19.0	---	---	---	6.0	13.0	18.0	---		---	---	
26	---	15.0	12.0	---	6.0	13.0	17.0	---		24.0	25.0	
27	---	15.0	11.0	---	6.0	13.0	---	---		---	25.0	
28	---	14.0	11.0	6.0	6.0	14.0	---	21.0		---	25.0	
29	---	15.0	---	6.0	---	13.0	11.0	22.0		---	25.0	
30	19.0	14.0	---	8.0	---	---	18.0	20.0		---	25.0	
31	19.0	---	11.0	---	---	---	---	22.0		---	---	
MEAN	20.5	16.0	11.5	8.0	5.0	10.5	15.5	20.5		25.5	25.5	

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 Sept. 30, 1985 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 564.38 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Estimated daily discharge: Jan. 31 to Feb. 5 and Mar. 16-19. Records good. No known diversion or regulation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 56.4 ft^3/s (10.64 in/yr), 40,860 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.--Peak discharge greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 17	2400	*9,150	*20.18	Apr. 22	1630	4,810	13.96
Feb. 23	0030	6,020	15.86	May 21	0800	5,210	14.61

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	973	11	170	17	73	29	44	9.0	1.5	.11	.00
2	.00	133	9.5	97	13	59	22	22	8.4	1.3	.07	.00
3	.00	26	8.4	91	13	55	19	16	7.9	3.5	.05	.00
4	.00	15	8.4	82	12	103	16	13	7.4	2.6	.04	.00
5	.00	9.7	19	68	15	60	13	12	9.1	2.0	.03	.00
6	.00	7.9	29	59	58	50	11	9.9	311	1.5	.02	.00
7	.00	7.1	14	50	103	48	9.8	9.1	54	1.1	.02	.00
8	.00	6.5	11	45	97	47	9.2	8.6	18	1.0	.01	.00
9	.00	6.6	9.6	45	88	46	9.1	8.4	11	.82	.00	.00
10	.00	5.4	8.6	44	78	45	9.2	8.1	8.7	.67	.00	.00
11	.00	4.4	8.0	36	54	44	9.3	8.1	14	.57	.00	.00
12	.00	4.3	8.0	28	38	43	8.9	8.1	13	.49	.00	.00
13	.00	4.3	167	27	35	46	27	627	7.9	.39	.00	.00
14	.00	4.3	73	32	29	470	19	163	7.1	.33	.00	.00
15	.00	4.2	103	29	27	70	10	27	6.4	.27	.00	.00
16	.00	3.7	265	70	26	46	8.6	15	5.8	.25	.00	.00
17	.00	4.0	1680	62	23	37	7.6	13	5.2	.22	.00	.00
18	.00	110	2000	44	24	32	7.2	11	5.6	.25	.00	.00
19	.31	32	163	35	24	31	6.8	9.6	7.1	.21	.00	.00
20	1.7	15	143	25	27	874	6.8	103	5.3	.64	.00	.00
21	1.5	10	124	25	25	834	7.0	2300	4.6	2.8	.00	.00
22	.67	8.8	75	24	256	107	1990	142	4.2	3.1	.00	.00
23	1.3	8.3	56	22	2890	65	401	58	4.0	1.6	.00	.00
24	182	8.0	49	24	148	50	59	38	3.7	1.4	.00	.00
25	878	8.9	37	23	84	41	39	27	3.4	.61	.00	.00
26	39	41	34	19	69	35	31	22	3.0	3.1	.00	.00
27	41	85	35	32	57	99	29	20	2.5	4.7	.00	.00
28	27	31	42	35	54	42	44	19	2.1	1.4	.00	.00
29	6.6	20	63	27	---	28	52	15	1.9	.55	.00	.00
30	4.4	15	697	27	---	376	231	13	1.8	.31	.00	.00
31	8.2	---	978	22	---	52	---	9.9	---	.17	.00	---
TOTAL	1191.68	1612.4	6928.5	1419	4384	4008	3141.5	3799.8	553.1	39.35	.35	.00
MEAN	38.4	53.7	224	45.8	157	129	105	123	18.4	1.27	.011	.000
MAX	878	973	2000	170	2890	874	1990	2300	311	4.7	.11	.00
MIN	.00	3.7	8.0	19	12	28	6.8	8.1	1.8	.17	.00	.00
CFSM	.53	.75	3.11	.64	2.18	1.79	1.46	1.71	.26	.02	.000	.000
IN.	.62	.83	3.58	.73	2.27	2.07	1.62	1.96	.29	.02	.00	.00
AC-FT	2360	3200	13740	2810	8700	7950	6230	7540	1100	78	.7	.00

CAL YR 1984 TOTAL 14708.17 MEAN 40.2 MAX 2000 MIN .00 CFSM .56 IN 7.60 AC-FT 29170
WTR YR 1985 TOTAL 27077.68 MEAN 74.2 MAX 2890 MIN .00 CFSM 1.03 IN 13.99 AC-FT 53710

07335390 PAT MAYSE LAKE NEAR CHICOTA, TX

LOCATION.--Lat 33°51'10", long 93°32'38", Lamar County, Hydrologic Unit 11140101, at 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.

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 a spillway 100 ft wide located near the right abutment of dam. The dams 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, 148,900 acre-ft Mar. 23 (elevation, 454.87 ft); minimum, 114,200 acre-ft Oct. 4 (elevation; 449.25 ft).

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

449.0	112,800	453.0	136,800
451.0	124,500	455.0	149,800

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114600	125700	131000	139600	128900	134000	139900	132600	132800	128200	123900	118900
2	114500	128000	130500	139800	128800	133700	139000	132900	132200	128100	123500	118700
3	114400	129300	130000	139100	128400	133600	138100	132300	131700	129100	123400	118500
4	114200	129200	129700	138300	128800	133600	137200	131500	131300	128900	123200	118300
5	114700	128900	129900	137600	128900	133700	136400	130700	133000	128600	123100	117900
6	115200	128700	129800	136900	129500	133400	135500	130200	140400	128300	122900	118000
7	114900	128400	129600	136100	130500	133100	134800	129900	145400	128100	122900	117900
8	114900	128300	129400	135300	131600	132800	134200	129600	144800	127800	122700	117800
9	114700	128100	129300	135000	132700	132300	133600	129200	143500	127500	122600	117600
10	114700	127700	129100	134200	132900	132100	133100	129000	142000	127200	122500	117500
11	114900	127400	128900	133400	132900	131600	132700	128800	140800	127000	122300	117300
12	115000	127200	128700	133100	132600	131300	132300	128700	139400	126700	122100	117400
13	115000	127000	130500	132600	132300	131300	131900	132300	138300	126500	121900	117300
14	115200	126900	132900	132200	131600	133200	131600	134400	137300	126200	121800	117300
15	115200	126700	133700	131700	131600	134900	131200	134800	136500	126000	121600	117200
16	115400	126300	134600	131800	131300	134600	130800	134200	135700	125800	121600	117100
17	115300	126700	137800	131900	131000	134200	130500	133400	135000	125600	121300	117000
18	115400	128500	141200	131800	130700	133700	130100	132900	134300	125500	121200	116800
19	115300	129700	144000	130900	130700	133300	129800	132400	133700	125300	121100	116700
20	115800	129800	143600	130900	130700	137500	129600	132500	133000	125200	120800	116500
21	115800	129600	143100	130600	130600	145800	129200	133500	132400	125200	120700	116400
22	115800	129400	142300	130400	130600	148800	131200	134700	132000	125100	120500	116200
23	115800	129100	141300	130100	133200	148200	132800	134500	131500	124900	120300	116000
24	116900	128800	140100	129900	135600	146900	133700	134000	131000	125000	120200	115800
25	119700	128800	139100	129400	135900	145400	133300	133500	130700	124900	119900	115700
26	122400	129800	138200	129200	135300	144200	132900	132900	130200	124800	119800	115500
27	122800	131000	137400	129400	134800	142900	133600	133800	129700	124700	119500	115300
28	122900	131800	136800	129300	134400	141700	132500	134500	129200	124500	119400	115200
29	122800	131600	136400	129100	---	140600	131700	134200	128900	124300	119300	116000
30	122800	131300	137200	128900	---	140400	131100	133900	128600	124200	119200	115700
31	123100	---	138600	129000	---	140600	---	133100	---	124000	119000	---
MAX	123100	131800	144000	139800	135900	148800	139900	134800	145400	129100	123900	118900
MIN	114200	125700	128700	128900	128400	131300	129200	128700	128600	124000	119000	115200
(†)	450.76	452.11	453.29	451.74	452.62	453.60	452.08	452.41	451.68	450.92	450.08	449.51
(‡)	+8300	+8200	+7300	-9600	+5400	+6200	-9500	+2000	-4500	-4600	-5000	-3300

CAL YR 1984 MAX 155500 MIN 112600 (‡) +24400
WTR YR 1985 MAX 148800 MIN 114200 (‡) +900

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

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 at 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.--Estimated daily discharges: Apr. 27 to May 13. Records good. Flow represents uncontrolled outflow from Pat Mayse Lake (station 07335390). Streamflow downstream from the dam is affected by local runoff and backwater from the Red River.

AVERAGE DISCHARGE.--18 years, 134 ft^3/s (97,080 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, 862 ft^3/s Mar. 23 at 0500 hours (gage height, 14.87 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	11	166	555	98	298	635	188	239	84	5.6	.00
2	.00	48	153	616	94	281	582	238	219	76	3.9	.00
3	.00	101	138	585	89	270	528	200	199	101	2.6	.00
4	.00	107	125	535	88	268	478	195	180	101	2.1	.00
5	.00	101	127	491	96	269	428	165	177	93	1.2	.00
6	.00	94	123	450	105	264	381	144	473	85	.71	.00
7	.00	88	120	407	128	251	341	132	797	77	.54	.00
8	.00	83	114	371	161	238	309	121	845	72	.31	.00
9	.00	80	111	334	200	221	279	110	834	65	.17	.00
10	.00	71	104	313	233	207	254	103	788	59	.10	.00
11	.00	63	99	278	239	198	235	97	707	54	.03	.00
12	.00	58	97	252	229	177	217	94	621	49	.01	.00
13	.00	55	113	233	218	169	201	132	548	43	.00	.00
14	.00	51	184	216	204	216	188	274	485	39	.00	.00
15	.00	48	262	197	188	297	175	321	433	35	.00	.00
16	.00	42	298	191	178	323	161	306	390	31	.00	.00
17	.00	39	365	193	166	307	149	274	350	28	.00	.00
18	.00	69	581	192	156	284	139	243	314	25	.00	.00
19	.00	104	801	181	151	262	129	222	285	22	.00	.00
20	.00	123	830	161	149	344	118	209	257	21	.00	.00
21	.00	118	823	153	149	706	112	236	230	20	.00	.00
22	.00	112	785	144	148	857	131	292	209	19	.00	.00
23	.00	104	732	135	192	861	200	317	190	18	.00	.00
24	.00	98	670	128	302	856	263	298	173	17	.00	.00
25	.00	96	593	119	380	848	262	273	158	17	.00	.00
26	.01	100	536	109	364	840	245	252	143	16	.00	.00
27	.32	141	484	109	336	823	260	254	127	14	.00	.00
28	.62	185	447	109	312	768	241	292	111	11	.00	.00
29	.49	189	413	105	---	696	205	310	102	11	.00	.00
30	.44	178	430	103	---	655	174	291	93	8.6	.00	.00
31	.77	---	500	100	---	650	---	265	---	7.1	.00	---
TOTAL	2.65	2757	11324	8065	5353	13704	8020	6848	10677	1318.7	17.27	.00
MEAN	.085	91.9	365	260	191	442	267	221	356	42.5	.56	.000
MAX	.77	189	830	616	380	861	635	321	845	101	5.6	.00
MIN	.00	11	97	100	88	169	112	94	93	7.1	.00	.00
AC-FT	5.3	5470	22460	16000	10620	27180	15910	13580	21180	2620	34	.00

CAL YR 1984 TOTAL 59522.78 MEAN 163 MAX 888 MIN .00 AC-FT 118100
WTR YR 1985 TOTAL 68086.62 MEAN 187 MAX 861 MIN .00 AC-FT 135000

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW 1/4 sec.11,T.8 S., R.17 E., Choctaw County, Okla., Hydrologic Unit 11140101, on right downstream bank of bridge on U.S. Highway 271 at Arthur City, 10.6 mi downstream from Muddy Boggy River, 26.0 mi upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,531 mi^2, of which 5,936 mi^2 probably is noncontributing.

PERIOD OF RECORD.--January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft above National Geodetic Vertical Datum of 1929. From 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.--Estimated daily discharges: Feb. 6-13 and May 16-27. Records good except those for estimated daily discharges, which are fair. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 mi above station.

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

AVERAGE DISCHARGE.--13 years (water years 1906-11, 1937-43) prior to regulation by Denison Dam, 9,266 ft^3/s (6,713,000 acre-ft/yr); 41 years (water years 1945-85) after completion of Denison Dam, 7,954 ft^3/s (5,763,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft^3/s May 28, 1908 (gage height, 43.2 ft), from rating curve extended above 41,000 ft^3/s on basis of records for later years; minimum, 130 ft^3/s Dec. 11, 12, 1956 (gage height, 4.49 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,400 ft^3/s May 1 at 0700 hours (gage height, 19.19 ft); minimum daily, 346 ft^3/s Oct. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602	24700	3760	18600	6150	33200	35400	52300	8310	10500	3740	2210
2	475	30800	3420	24400	9790	30000	39900	40400	6400	10400	3750	1970
3	399	23300	2930	27800	10500	27300	35900	34400	6180	11200	3720	1770
4	346	18200	1960	31800	7170	27000	39900	31400	4840	11900	3710	1730
5	395	13400	2600	34200	5870	29300	51000	34000	2950	12000	3100	1700
6	443	10400	4690	29900	8060	29800	51900	31900	17800	10500	2770	1670
7	444	6980	5050	22600	7400	29200	47200	27000	44500	8570	3340	1660
8	424	3960	4590	30300	6850	28600	43200	23600	33300	7460	3620	1680
9	504	3300	3750	29200	6250	26200	40100	22500	30900	6890	3620	1650
10	532	2690	2400	29000	5600	22600	39000	21900	39000	7520	3620	1650
11	641	2670	1790	25600	9500	22100	37300	21300	44700	7480	3840	1640
12	450	3050	1630	18700	12100	21500	31800	18400	48600	7450	3250	1590
13	398	3060	2450	14100	12400	18400	26000	18500	48600	7400	2840	1340
14	404	2580	7190	13200	8460	19300	15500	24200	44400	7100	3240	1290
15	406	2870	13000	12900	6320	22100	13000	24900	42400	5850	3600	1270
16	409	2930	13800	12900	6150	19600	12200	22800	38900	5630	3590	1290
17	490	3610	16300	13400	7160	15300	11800	22000	39500	6200	3590	1270
18	521	5470	24200	13400	5470	13200	11500	20000	39500	6140	3560	723
19	2180	11400	25400	13000	4030	12500	11300	19300	40100	5400	3380	1050
20	3210	12900	23600	11100	5570	18700	11300	22900	39600	5340	3230	1190
21	7060	11300	20500	9500	4540	35100	11200	22200	38900	5370	3380	1200
22	9720	9180	18800	10500	5340	35900	12800	21800	32200	3860	3690	1190
23	11700	6200	17100	11000	11700	33700	31000	23100	24900	3390	3600	1180
24	12000	4420	15500	11000	32600	35200	43300	20900	23300	4140	3500	653
25	16200	3930	14000	9440	33900	35300	43600	17000	21800	4340	3500	807
26	20100	3190	11700	6050	29100	35200	39200	14600	16000	4170	3020	1130
27	17700	4090	10200	5570	27900	35300	41000	12700	11800	4050	2540	1320
28	14600	5430	8950	4570	32500	36500	40400	11600	11000	3990	3170	1460
29	12700	6120	8280	4320	---	34400	37500	10700	10700	3270	2870	767
30	10900	5410	9070	5960	---	34600	46000	9860	10600	2960	2320	590
31	8870	---	14100	6090	---	37500	---	9030	---	3510	2250	---
TOTAL	155223	247540	312710	510100	328380	854600	951200	707190	821680	203980	102950	40640
MEAN	5007	8251	10090	16450	11730	27570	31710	22810	27390	6580	3321	1355
MAX	20100	30800	25400	34200	33900	37500	51900	52300	48600	12000	3840	2210
MIN	346	2580	1630	4320	4030	12500	11200	9030	2950	2960	2250	590
AC-FT	307900	491000	620300	1012000	651300	1695000	1887000	1403000	1630000	404600	204200	80610

CAL YR 1984	TOTAL	1851799	MEAN	5060	MAX	30800	MIN	260	AC-FT	3673000
WTR YR 1985	TOTAL	5236193	MEAN	14350	MAX	52300	MIN	346	AC-FT	10386000

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. At times, flood peaks may be affected by storage in Lake Texoma (station 07331500) located approximately 169 mi upstream, and low flows may be affected by releases for generation of electric power. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--17 years (water years 1969-85), 11,950 ft³/s (8,658,000 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, 66,100 ft³/s Apr. 6 at 2200 hours (gage height, 24.04 ft); minimum daily, 816 ft³/s Oct. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	33000	16300	23600	10200	48500	50800	54400	17400	13000	4000	3050
2	1390	58000	13200	33800	9690	49100	48100	58900	14500	12800	4430	2970
3	1030	63700	11600	44900	11300	45100	49900	50400	12400	13200	4500	2880
4	842	52600	10800	52300	12200	42700	45500	48200	10600	14300	4460	2620
5	816	43400	9030	55400	11300	42500	51200	47700	8110	16400	4450	2410
6	896	37300	7520	54900	9580	45100	62800	49200	9000	16900	4300	2290
7	1250	33900	8790	44500	11300	46100	63200	49000	30300	15300	3770	2220
8	1410	29700	9810	35200	12300	44500	56300	45800	52100	13400	3660	2150
9	1150	26100	9550	41000	12700	40500	52400	41800	41900	11100	4160	2130
10	1190	24700	8700	40000	13300	35500	49300	40000	37700	9190	4310	2130
11	3640	23900	7570	38600	13200	32300	48200	39100	45200	9330	4290	2110
12	4540	23300	7410	31800	13900	29300	45900	38200	51600	9180	4330	2110
13	4790	23000	7420	24100	16500	26800	37500	35200	55700	9080	4390	2260
14	3280	23200	10500	19800	18900	27200	29700	32500	55400	9010	3790	2540
15	3580	22500	12500	18600	16400	28400	20800	34500	51900	8860	3610	2020
16	3690	22200	13600	17800	11100	30400	16900	33900	49400	7960	4070	1820
17	5730	20000	18900	17200	8700	28100	15600	24400	45800	7280	4240	1750
18	6610	16900	40200	17800	8640	22200	14900	18600	51000	7530	4240	1730
19	6590	19000	54800	17600	8300	18600	14500	15400	54000	7740	4250	1630
20	8230	26700	57300	17400	6300	19600	14000	13000	53900	7040	4190	1340
21	12900	32200	53300	14900	7460	38000	13400	14400	53200	6730	3960	1460
22	19600	31500	46900	12300	8950	57100	14000	20600	52700	6700	3930	1550
23	26800	29000	42700	12100	12200	59500	19600	28000	45700	5920	4230	1570
24	30800	22300	40500	12800	29000	55500	35500	29800	37700	5000	4430	1550
25	40700	16200	37900	12800	46800	53300	45800	23300	32600	4880	4180	1520
26	44300	14600	32800	11900	46200	52600	46200	16300	27400	5420	4120	1240
27	45000	16400	25600	9120	42100	52800	49900	14200	20800	5330	4030	1250
28	41100	16500	19400	8430	42400	51500	55900	18700	16000	5110	3530	1420
29	37100	16900	16000	7910	---	51200	49700	20200	13900	4990	3250	1690
30	34600	17600	14300	7750	---	50200	46200	20500	13300	4690	3790	1920
31	32700	---	15900	8690	---	50100	---	20000	---	4080	3360	---
TOTAL	428024	836300	680800	765000	470920	1274300	1163700	996200	1061210	277450	126250	59330
MEAN	13810	27880	21960	24680	16820	41110	38790	32140	35370	8950	4073	1978
MAX	45000	63700	57300	55400	46800	59500	63200	58900	55700	16900	4500	3050
MIN	816	14600	7410	7750	6300	18600	13400	13000	8110	4080	3250	1240
AC-FT	849000	1659000	1350000	1517000	934100	2528000	2308000	1976000	2105000	550300	250400	117700

CAL YR 1984 TOTAL 4084568 MEAN 11160 MAX 63700 MIN 721 AC-FT 8102000
WTR YR 1985 TOTAL 8139484 MEAN 22300 MAX 63700 MIN 816 AC-FT 16140000

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: October 1970 to September 1981.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,140 microsiemens July 13, 1980; minimum daily, 114 microsiemens Oct. 31, 1984.
WATER TEMPERATURES: Maximum daily, 34.0°C on several days during July and August 1969-70; minimum daily, 0.0°C Jan. 11, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,490 microsiemens Jan. 23; minimum daily, 114 microsiemens Oct. 31.
WATER TEMPERATURES: Maximum daily, 29.0°C on several days during July and August; minimum daily, 1.0°C on several days during February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 06...	1720	36700	111	8.0	16.0	350	78	7.7	78	1.5	49
JAN 29...	1615	7890	1020	7.8	5.0	80	34	12.6	100	1.2	240
MAR 12...	1600	29000	1060	7.9	13.5	350	75	9.8	95	.6	250
APR 23...	1650	19200	798	7.7	20.0	100	64	8.6	96	1.6	200
MAY 02...	1900	58900	357	7.9	21.5	230	99	6.8	77	1.6	120
SEP 03...	1435	2940	1030	8.3	26.5	40	6.7	7.9	100	2.6	240

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 06...	6	16	2.1	4.1	.3	2.4	43	12	4.3	<.10	6.8
JAN 29...	130	63	19	110	3	3.5	110	120	180	.20	6.7
MAR 12...	160	65	21	130	4	4.1	87	150	220	.20	5.7
APR 23...	97	53	16	82	3	3.7	102	89	140	.20	6.3
MAY 02...	54	35	7.4	23	1	3.3	64	41	45	.20	8.7
SEP 03...	81	64	19	110	3	4.6	157	100	170	.30	3.4

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	73	210	7	.08	.020	.10	.080	.72	.80	.150	9.7
JAN 29...	570	73	10	--	<.010	.30	.060	.84	.90	.110	5.7
MAR 12...	650	220	13	.29	.010	.30	.050	.75	.80	.210	6.0
APR 23...	450	243	15	.46	.040	.50	.090	.81	.90	.260	4.3
MAY 02...	200	668	40	.24	.060	.30	.170	1.2	1.4	.130	8.9
SEP 03...	570	20	6	--	<.010	<.10	.030	.67	.70	.050	9.2

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 29...	1615	<1	130	<10	<10	<1	43
SEP 03...	1435	2	150	<1	<10	2	13

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 29...	<1	25	<.1	<1	<1	10
SEP 03...	<1	13	<.1	<1	<1	18

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (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.	1984	428024	176	96	111000	23	26900	17	19700	51
NOV.	1984	836300	255	141	317000	34	77500	25	56800	74
DEC.	1984	680800	648	372	685000	99	182600	71	131400	170
JAN.	1985	765000	1000	593	1224E3	170	344700	120	245400	250
FEB.	1985	470920	629	361	459000	96	121800	69	87700	170
MAR.	1985	1274300	823	479	1648E3	130	448600	93	321500	210
APR.	1985	1163700	696	401	1259E3	110	336000	77	241700	190
MAY	1985	996200	539	304	819000	78	210700	57	152700	150
JUNE	1985	1061210	721	416	1192E3	110	319700	80	229800	190
JULY	1985	277450	879	513	384000	140	105000	100	75200	230
AUG.	1985	126250	1030	607	207000	170	58000	120	41300	260
SEPT	1985	59330	1020	605	96900	170	27100	120	19300	260
TOTAL		8139484	**	**	8402000	**	2259000	**	1622000	**
WTD.AVG.		22300	662	382	**	100	**	74	**	170

07336820 RED RIVER NEAR DE KALB, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	129	356	1060	678	684	877	564	495	928	928	1080
2	665	167	500	548	718	828	728	411	629	945	973	1060
3	619	193	646	531	1220	865	656	371	600	933	985	1050
4	544	171	455	1160	1270	905	536	394	575	875	1000	998
5	623	182	480	960	1220	930	600	385	734	804	989	968
6	690	155	514	930	928	950	690	456	761	770	1000	1000
7	693	128	630	889	856	902	809	516	408	750	1020	1030
8	686	127	756	800	930	899	864	519	309	747	1030	1060
9	620	129	800	910	775	928	890	558	285	748	1020	1050
10	726	136	934	925	650	1020	907	576	277	820	1050	1060
11	747	157	863	940	601	1050	934	579	533	886	1040	1070
12	324	203	861	1000	600	1070	940	578	708	974	1030	1060
13	286	270	552	1060	320	1180	845	576	771	980	1020	1050
14	327	282	364	1110	265	1090	825	638	804	990	1030	925
15	319	257	350	1010	415	1020	803	671	906	964	1040	930
16	323	295	371	1210	561	1010	588	590	890	964	1060	924
17	233	351	340	1250	710	920	463	610	863	879	1050	1000
18	225	390	287	1220	868	805	639	595	810	860	1030	963
19	302	380	496	1270	1050	875	916	746	811	835	1040	1000
20	233	335	453	1310	1100	921	910	781	816	875	1030	1010
21	200	320	551	1400	703	650	920	790	848	902	1040	1030
22	190	375	625	1460	650	509	899	801	853	992	1090	1020
23	178	422	690	1490	600	437	850	617	820	995	980	1010
24	164	469	760	1440	540	550	804	500	776	914	1020	1020
25	139	495	800	1430	486	671	451	532	778	879	1030	1060
26	132	508	820	1350	450	715	386	550	841	901	1020	1030
27	121	480	878	1280	506	750	342	580	903	928	1080	1040
28	123	461	1070	1100	538	790	388	567	895	905	1110	1090
29	124	344	1260	750	---	840	462	583	892	917	997	1060
30	135	275	1350	596	---	870	519	505	910	913	1050	1040
31	114	---	1190	559	---	900	---	464	---	945	1100	---
MEAN	382	286	677	1060	722	856	715	568	717	894	1030	1020

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

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

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 southbound 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 mi², of which 5,936 mi² is probably 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 National Weather Service.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.87 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1939, nonrecording gage, and Dec. 12, 1939, to July 19, 1979, water-stage recorder, at site 500 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation since Oct. 31, 1943, by Lake Texoma, Texas (station 07331500), 241 mi upstream, capacity, 5,392,900 acre-ft, since Sept. 28, 1967, by Pat Mayse Lake, Texas (station 07335390), capacity, 352,700 acre-ft, and since Jan. 18, 1974, by Hugo Lake, Oklahoma, capacity, 966,700 acre-ft.

AVERAGE DISCHARGE.--49 years, 11,820 ft³/s, 8,564,000 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, 58,300 ft³/s Apr. 7 (gage height, 17.19 ft); minimum daily, 1,350 ft³/s Oct. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	29900	13200	14900	8900	44700	47700	44400	21300	15000	4190	3660
2	1650	35400	12200	22800	10400	49200	46900	51500	18400	14600	3850	3250
3	1970	53200	10100	33500	10300	48500	44700	53600	15000	14400	4020	3030
4	1740	55400	8350	41600	10600	46200	45000	47100	12700	14500	4290	2990
5	1510	47200	7920	45500	12900	44900	42700	45900	10600	15300	4350	2890
6	1410	39600	7510	46500	13400	45400	47800	45500	8180	17300	4320	2670
7	1470	34200	6220	45500	12600	47700	55900	46800	8350	17900	4290	2490
8	1470	30800	6470	35900	13200	48200	55900	46900	36000	16700	3960	2430
9	1730	27400	7140	33500	14300	47600	50600	43800	47100	14800	3600	2440
10	1820	23900	7090	36900	14700	43500	47400	40800	37900	12500	3770	2410
11	1580	21900	6460	36000	14900	38700	45300	39400	36500	10300	4120	2340
12	1730	20800	5660	34100	14600	34200	44500	38600	42400	9760	4190	2320
13	3370	19900	5350	28000	14900	31500	41600	37000	46800	9580	4180	2350
14	4110	19400	5260	22100	16800	30200	35200	34200	48700	9350	4260	2400
15	4350	19300	6370	18200	19000	31800	29100	31900	47400	9180	4050	2520
16	3950	18500	9910	16800	17300	32900	22000	33500	44700	9020	3620	2590
17	3870	18000	17900	16700	13200	33200	18100	31900	42800	8280	3700	2260
18	3940	16500	23900	16600	10300	30200	16600	25000	42700	7330	4050	2100
19	5330	13700	37500	16600	9560	25000	15700	20000	46100	7180	4150	2040
20	6100	15000	46000	16100	9540	22700	15100	16800	47200	7450	4210	2010
21	7480	22600	46700	15300	7960	27900	14600	17700	46500	7090	4150	1890
22	11900	25800	42100	13800	8350	48100	14500	21500	46200	6630	4040	1730
23	18000	24700	38000	11900	14300	56500	20900	26900	45200	6440	3880	1770
24	22900	21900	35600	11400	28300	56300	27800	31400	39700	6080	3930	1820
25	27500	16900	33400	12100	44600	52800	37900	30500	34500	5060	4160	1850
26	35900	12900	30000	12400	50400	49800	40900	24200	31000	4680	4220	1850
27	38500	13900	27600	12000	46000	49100	40900	17900	27000	5010	4060	1810
28	38900	14800	22600	10000	42800	48500	46800	15700	22100	5230	4010	1620
29	36600	14300	18300	8900	---	47100	49600	19800	18100	4990	3820	1640
30	33700	13500	15600	8610	---	46300	45000	21900	15800	4830	3390	1770
31	31600	---	13900	8300	---	46900	---	22100	---	4670	3420	---
TOTAL	357430	741300	574310	702510	504110	1305600	1106700	1024200	986930	301140	124250	68940
MEAN	11530	24710	18530	22660	18000	42120	36890	33040	32900	9714	4008	2298
MAX	38900	55400	46700	46500	50400	56500	55900	53600	48700	17900	4350	3660
MIN	1350	12900	5260	8300	7960	22700	14500	15700	8180	4670	3390	1620
AC-FT	709000	1470000	1139000	1393000	999900	2590000	2195000	2032000	1958000	597300	246400	136700

CAL YR 1984	TOTAL	3663120	MEAN	10010	MAX	55400	MIN	1280	AC-FT	7266000
WTR YR 1985	TOTAL	7797420	MEAN	21360	MAX	56500	MIN	1350	AC-FT	15466000

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
10...	0730	1970	720	7.8	22.0	19	7.1	82	--	--	190	9
DEC												
26...	1700	30300	719	8.0	11.5	70	9.6	88	600	410	150	8
FEB												
20...	1230	7950	875	7.9	9.0	40	10.4	90	K660	230	180	78
20...	1332	--	860	7.8	9.5	--	10.4	--	--	--	--	--
20...	1333	--	860	7.8	9.5	--	10.8	--	--	--	--	--
20...	1334	--	--	--	--	--	--	--	--	--	--	--
20...	1335	--	860	7.8	9.5	--	10.8	--	--	--	--	--
20...	1336	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1338	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1339	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1340	--	--	--	--	--	--	--	--	--	--	--
20...	1341	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1342	--	860	7.8	9.0	--	11.0	--	--	--	--	--
20...	1343	--	--	--	--	--	--	--	--	--	--	--
20...	1344	--	860	7.8	9.0	--	10.4	--	--	--	--	--
20...	1345	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1346	--	--	--	--	--	--	--	--	--	--	--
20...	1347	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1348	--	860	7.8	9.0	--	11.0	--	--	--	--	--
20...	1349	--	--	--	--	--	--	--	--	--	--	--
20...	1350	--	860	7.8	9.0	--	11.0	--	--	--	--	--
20...	1351	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1352	--	--	--	--	--	--	--	--	--	--	--
20...	1353	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1354	--	860	7.8	9.0	--	11.6	--	--	--	--	--
20...	1355	--	--	--	--	--	--	--	--	--	--	--
20...	1356	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1357	--	860	7.8	9.0	--	11.4	--	--	--	--	--
20...	1358	--	--	--	--	--	--	--	--	--	--	--
20...	1359	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1400	--	860	7.8	9.0	--	10.8	--	--	--	--	--
20...	1401	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	1030	21000	970	8.1	18.0	85	7.8	83	K35	K60	220	94
JUL												
15...	1200	8800	970	7.9	31.0	11	6.6	90	K16	K520	230	94
AUG												
05...	1045	4300	930	8.4	30.0	1.5	7.3	98	K20	220	230	76

07337000 RED RIVER AT INDEX, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT												
10...	54	14	73	2	3.8	184	57	84	.20	5.9	421	400
DEC												
26...	41	11	76	3	2.7	140	84	120	.20	6.2	395	430
FEB												
20...	50	14	84	3	3.1	105	93	130	.20	5.7	464	440
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	59	17	96	3	4.4	124	100	160	.30	6.1	579	520
JUL												
15...	63	18	110	3	4.4	138	100	160	.20	.1	594	540
AUG												
05...	60	19	99	3	4.4	153	96	150	.30	.7	584	520

07337000 RED RIVER AT INDEX, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (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												
10...	<.10	<.10	.050	.050	.85	.90	.120	.030	.030	43	229	76
DEC												
26...	--	--	--	--	--	.40	.040	--	--	364	29800	95
FEB												
20...	--	.28	--	.090	--	.50	.020	<.010	.030	200	4290	58
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	128	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	181	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	162	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	154	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	151	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	153	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	148	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	122	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	119	--	--
APR												
16...	--	.40	--	.080	--	3.0	.040	.020	.030	678	38400	71
JUL												
15...	--	<.10	--	.020	--	.50	.020	<.010	<.010	54	1280	64
AUG												
05...	--	<.10	--	.030	--	1.1	.030	<.010	.020	26	302	53

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										
10...	0730	2	130	<.5	<1	9	<3	10	120	7
FEB										
20...	1230	<1	100	<.5	3	5	<3	5	53	<1
APR										
16...	1030	<1	150	.5	<1	<1	<3	9	43	3
AUG										
05...	1045	<1	160	.7	<1	<1	<3	10	24	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)
OCT										
10...	4	17	<.1	<10	5	<1	<1	470	<6	79
FEB										
20...	33	13	.2	<10	3	1	<1	480	<6	10
APR										
16...	7	11	.1	<10	7	<1	<1	590	<6	150
AUG										
05...	11	33	<.1	<10	5	<1	<1	650	<6	9

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 U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 4-6, Nov. 11 to Dec. 18, Dec. 24 to Jan. 29, and Mar. 1-19. Records good except those for periods of estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1980-85), 127 ft^3/s (9.12 in/yr), 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft^3/s May 13, 1982 (gage height, 28.66 ft); minimum, 0.09 ft^3/s Apr. 21, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 20, 1971, reached a stage of 27.80 ft, from records published by the U.S. Army 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)	Date	Time	Discharge (ft /s)	Gage height (ft)
Dec. 19	Unknown	*9,780	*25.38	May 21	1100	6,750	23.45
Apr. 22	2145	6,460	23.15				

Minimum daily discharge, 0.09 ft^3/s Apr. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	355	6.0	800	8.0	20	69	689	7.9	1.1	.91	1.6
2	1.9	665	5.0	300	6.9	16	29	106	5.6	.97	.91	1.4
3	1.8	131	4.0	100	4.5	13	19	58	4.1	2.1	.91	1.4
4	1.8	45	3.5	50	5.1	11	9.8	48	3.5	2.1	.91	1.5
5	2.1	22	350	30	22	90	5.5	38	19	1.8	.91	2.0
6	218	11	100	14	146	30	3.6	32	783	1.7	.96	1.8
7	91	8.2	50	8.0	332	20	1.6	28	78	2.0	.91	1.8
8	34	5.5	20	4.0	232	10	1.4	24	32	1.5	.96	2.0
9	17	3.7	8.0	3.0	135	6.0	.99	21	22	1.3	.86	1.8
10	8.5	2.5	5.0	2.5	82	4.5	.58	20	15	1.7	.82	2.0
11	12	2.2	4.0	2.3	56	5.0	.52	20	13	1.5	.77	1.7
12	30	2.0	7.0	2.1	34	6.0	.41	20	9.3	1.7	.96	1.7
13	37	1.6	20	2.0	24	8.0	.66	27	4.1	1.5	.96	2.4
14	32	1.4	700	1.8	20	70	1.0	1260	107	1.1	1.0	2.0
15	26	1.2	400	1.8	15	1600	.45	1290	105	1.4	1.2	1.8
16	17	1.0	230	300	11	100	.50	86	20	1.6	1.4	2.1
17	12	1.0	100	250	8.4	30	.54	51	6.6	1.5	1.6	2.0
18	746	20	1600	90	7.6	20	.36	39	3.0	1.3	2.1	1.8
19	185	270	3600	40	7.9	70	.26	33	2.1	1.2	1.3	2.0
20	112	100	239	20	6.7	987	.33	101	1.7	1.1	1.3	2.2
21	50	30	132	8.0	5.4	2090	.83	3590	2.1	8.0	1.5	1.8
22	35	10	109	5.0	13	384	2080	2000	1.6	26	1.3	1.6
23	23	6.0	80	3.0	900	76	4070	211	1.5	3.6	1.4	2.0
24	801	5.0	50	2.5	1350	37	1400	43	1.4	1.5	1.4	2.0
25	295	3.5	30	2.0	137	25	86	27	1.3	.91	1.5	1.7
26	80	600	20	1.6	54	18	58	20	1.2	.82	1.4	1.8
27	136	90	12	1.4	36	477	50	37	1.1	.82	1.3	1.7
28	157	20	9.0	2.3	25	623	69	64	1.2	.73	1.5	1.6
29	67	12	7.0	13	---	51	1030	33	1.2	.86	1.6	2.7
30	42	8.0	20	11	---	298	1610	21	1.2	.86	1.6	2.0
31	28	---	300	9.8	---	721	---	12	---	.86	1.7	---
TOTAL	3300.9	2433.8	8220.5	2081.1	3684.5	7916.5	10599.33	10049	1255.7	75.13	37.85	55.9
MEAN	106	81.1	265	67.1	132	255	353	324	41.9	2.42	1.22	1.86
MAX	801	665	3600	800	1350	2090	4070	3590	783	26	2.1	2.7
MIN	1.8	1.0	3.5	1.4	4.5	4.5	.26	12	1.1	.73	.77	1.4
CFSM	.56	.43	1.40	.36	.70	1.35	1.87	1.71	.22	.01	.006	.01
IN.	.65	.48	1.62	.41	.73	1.56	2.09	1.98	.25	.01	.01	.01
AC-FT	6550	4830	16310	4130	7310	15700	21020	19930	2490	149	75	111

CAL YR 1984 TOTAL 40986.30 MEAN 112 MAX 5120 MIN .45 CFSM .59 IN 8.07 AC-FT 81300
WTR YR 1985 TOTAL 49710.21 MEAN 136 MAX 4070 MIN .26 CFSM .72 IN 9.78 AC-FT 98600

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX

LOCATION (revised).--Lat 33°21'23 , long 95°35'41, Delta County, Hydrologic Unit 11140301, on levee on left bank 110 ft downstream from 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 above National Geodetic Vertical Datum of 1929. Prior to Feb. 15, 1985, at site 360 ft to right and 90 ft upstream at same datum. 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 1,060 ft to right of present gage. Gage-height telemeter located at station.

REMARKS.--No estimated daily discharges. Records good. There are numerous small diversions upstream from station. Low flow is sustained by sewage effluent released upstream.

AVERAGE DISCHARGE.--43 years (water years 1943-85), 405 ft^3/s (10.44 in/yr), 293,400 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.--Peak discharges greater than base discharge of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 19	0800	a13,400	21.27	Mar. 21	1130	a*13,500	*21.28

a Result of levee break upstream.

Minimum daily discharge, no flow Aug. 5 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	142	98	939	23	79	1200	4460	67	17	.24	.00
2	.28	1070	57	1670	23	64	421	4830	50	15	.14	.00
3	.37	1360	33	981	22	52	254	2390	43	14	.08	.00
4	.48	511	21	289	22	49	214	294	39	14	.05	.00
5	.31	141	128	186	22	88	199	100	39	11	.00	.00
6	2.2	70	636	127	23	168	155	56	961	9.9	.00	.00
7	516	35	339	85	662	94	128	39	1640	9.0	.00	.00
8	403	19	132	62	859	49	121	30	571	8.1	.00	.00
9	59	14	73	48	625	31	114	27	177	7.5	.00	.00
10	13	11	44	40	391	19	120	25	96	6.9	.00	.00
11	4.5	9.5	29	34	253	19	104	24	73	6.1	.00	.00
12	20	8.4	21	29	164	20	37	23	63	5.3	.00	.00
13	14	7.3	115	25	100	27	12	23	54	4.9	.00	.00
14	47	6.4	1460	23	62	1670	11	167	49	4.3	.00	.00
15	24	6.0	1770	21	40	3230	12	1110	45	3.4	.00	.00
16	11	5.4	1270	31	28	3620	14	1470	42	2.7	.00	.00
17	6.6	5.0	1600	533	22	1030	13	577	39	1.9	.00	.00
18	3.2	5.3	6350	514	18	206	12	171	36	1.5	.00	.00
19	419	172	11900	226	15	107	12	86	185	2.4	.00	.00
20	736	412	7040	116	14	1280	14	58	139	2.1	.00	.00
21	1230	127	3880	62	14	10800	20	1610	60	3.4	.00	.00
22	1480	49	1150	35	15	7790	542	3900	45	14	.00	.00
23	786	24	361	25	1420	6520	2130	6060	37	21	.00	.00
24	803	16	188	20	2300	1490	5210	4390	32	13	.00	.00
25	2560	13	115	19	2380	377	6300	1000	28	7.2	.00	.00
26	4120	12	77	18	1220	236	3530	223	25	3.5	.00	.00
27	3600	478	54	17	244	244	618	622	23	1.8	.00	.00
28	1760	1290	43	18	117	918	447	1540	21	1.2	.00	.00
29	500	874	37	20	---	877	615	652	20	.68	.00	.00
30	205	200	35	24	---	373	1900	187	18	.55	.00	.00
31	109	---	167	23	---	1030	---	104	---	.34	.00	---
TOTAL	19433.11	7093.3	39223	6260	11098	42557	24479	36248	4717	213.67	.51	.00
MEAN	627	236	1265	202	396	1373	816	1169	157	6.89	.016	.000
MAX	4120	1360	11900	1670	2380	10800	6300	6060	1640	21	.24	.00
MIN	.17	5.0	21	17	14	19	11	23	18	.34	.00	.00
CFSM	1.19	.45	2.40	.38	.75	2.61	1.55	2.22	.30	.01	.000	.000
IN.	1.37	.50	2.77	.44	.78	3.00	1.73	2.56	.33	.02	.00	.00
AC-FT	38550	14070	77800	12420	22010	84410	48550	71900	9360	424	1.0	.00

CAL YR 1984 TOTAL 137299.92 MEAN 375 MAX 11900 MIN .06 CFSM .71 IN 9.69 AC-FT 272300
WTR YR 1985 TOTAL 191322.59 MEAN 524 MAX 11900 MIN .00 CFSM .99 IN 13.51 AC-FT 379500

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 microsiemens Aug. 14, 1973; minimum daily, 82 microsiemens 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, 728 microsiemens Oct. 4; minimum daily, 98 microsiemens Mar. 21.
WATER TEMPERATURES: Maximum daily, 28.0°C on several days during July and August; minimum daily, 1.0°C on several days during January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 05...	1540	123	233	7.6	15.0	250	64	7.4	74	2.8	97
JAN 28...	1530	18	410	7.5	4.5	80	34	11.4	89	1.4	140
MAR 14...	1545	2260	255	7.7	18.0	1200	420	7.8	83	4.9	83
APR 25...	1445	6640	195	7.5	21.0	130	82	6.2	71	2.1	73
JUN 06...	1320	1020	119	7.2	23.0	160	250	5.6	66	4.9	43

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 05...	3	34	3.0	13	.6	3.9	94	19	12	.20	13
JAN 28...	12	49	4.7	26	1	2.9	130	39	17	.20	9.3
MAR 14...	8	28	3.2	17	.8	3.2	75	29	9.0	.30	8.4
APR 25...	3	25	2.5	8.1	.4	3.9	70	19	4.2	.20	10
JUN 06...	12	14	1.9	7.1	.5	3.9	31	11	13	.20	6.4

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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 05...	150	118	12	.17	.030	.20	.080	1.1	1.2	.380	11
JAN 28...	230	35	10	.68	.020	.70	.080	1.5	1.6	.270	7.4
MAR 14...	140	740	44	2.3	.040	2.3	.210	3.8	4.0	.530	--
APR 25...	120	130	6	1.7	.160	1.9	.120	1.3	1.4	.300	7.0
JUN 06...	76	300	24	.17	.130	.30	.340	.66	1.0	.580	20

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 28...	1530	3	67	<1	<10	3	66
APR 25...	1445	4	56	<1	<10	7	140

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 28...	1	25	<.1	<1	<1	16
APR 25...	<1	5	<.1	<1	<1	13

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	19433.11	150	85	4450	5.6	293	13	700	61
NOV.	1984	7093.3	238	135	2590	9.7	186	21	394	91
DEC.	1984	39223	159	90	9540	6.0	639	14	1490	64
JAN.	1985	6260	285	163	2750	12	207	24	409	110
FEB.	1985	11098	280	160	4790	12	362	24	712	100
MAR.	1985	42557	191	108	12500	7.7	881	17	1910	74
APR.	1985	24479	229	130	8620	9.4	624	20	1310	87
MAY	1985	36248	197	112	10900	7.8	760	17	1680	77
JUNE	1985	4717	211	120	1530	8.5	108	18	233	82
JULY	1985	213.67	380	218	126	18	10	31	18	130
AUG.	1985	0.51	631	365	0.5	36	0.05	47	0.06	180
SEPT	1985	0.00	*	*	0.00	*	0.00	*	0.00	*
TOTAL		191322.59	**	**	57800	**	4070	**	8850	**
WTD.AVG.		524	197	112	**	7.9	**	17	**	77

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	684	269	274	301	483	324	273	211	352	336	628	
2	710	209	285	232	507	345	301	216	385	346	631	
3	725	200	294	275	530	376	316	223	413	353	635	
4	728	220	305	281	540	418	335	248	439	354	639	
5	727	239	290	296	553	505	360	288	454	364	---	
6	715	251	254	317	663	530	387	317	208	374	---	
7	114	261	222	344	481	546	419	345	162	383	---	
8	146	272	221	376	305	540	439	370	182	391	---	
9	176	281	243	397	276	532	463	396	198	396	---	
10	193	292	259	413	294	533	476	423	215	398	---	
11	195	307	280	427	311	546	497	452	237	403	---	
12	198	319	309	450	327	554	514	470	260	410	---	
13	296	329	275	456	342	567	531	490	280	417	---	
14	257	354	210	469	352	403	549	402	297	420	---	
15	186	362	212	483	373	209	564	285	315	420	---	
16	265	365	228	475	391	204	566	230	329	423	---	
17	358	363	212	289	405	222	590	268	341	424	---	
18	332	376	135	274	423	270	597	276	348	426	---	
19	250	306	112	307	440	304	604	290	250	420	---	
20	136	279	147	320	452	250	613	313	224	430	---	
21	134	309	175	328	460	98	628	291	211	432	---	
22	125	313	202	340	483	163	450	148	226	376	---	
23	199	309	269	353	300	193	223	127	244	282	---	
24	221	317	296	363	225	190	178	188	259	345	---	
25	120	328	320	374	242	250	186	196	274	542	---	
26	127	396	341	386	239	291	198	218	287	614	---	
27	155	347	358	399	276	325	209	238	299	624	---	
28	165	219	381	409	298	250	292	150	309	617	---	
29	208	234	399	415	---	270	281	180	319	619	---	
30	228	275	412	439	---	315	300	242	329	623	---	
31	252	---	400	449	---	336	---	299	---	633	---	
MEAN	301	297	268	369	392	350	411	284	288	439	633	

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0	20.0	9.0	13.0	1.0	13.0	16.0	21.0	26.0	25.0	28.0	
2	13.0	18.0	11.0	8.0	1.0	13.0	15.0	21.0	26.0	26.0	28.0	
3	15.0	16.0	9.0	6.0	1.0	14.0	16.0	21.0	26.0	25.0	28.0	
4	17.0	16.0	8.0	5.0	1.0	15.0	17.0	20.0	26.0	25.0	28.0	
5	19.0	15.0	7.0	4.0	1.0	13.0	19.0	20.0	26.0	25.0	---	
6	20.0	14.0	5.0	5.0	1.0	13.0	17.0	20.0	23.0	26.0	---	
7	20.0	14.0	5.0	5.0	1.0	13.0	17.0	21.0	24.0	25.0	---	
8	20.0	16.0	5.0	5.0	2.0	15.0	17.0	21.0	24.0	26.0	---	
9	20.0	18.0	7.0	6.0	3.0	16.0	16.0	20.0	25.0	26.0	---	
10	20.0	17.0	8.0	6.0	6.0	16.0	16.0	21.0	26.0	27.0	---	
11	20.0	13.0	8.0	5.0	6.0	17.0	17.0	22.0	26.0	26.0	---	
12	20.0	12.0	11.0	3.0	6.0	17.0	17.0	22.0	24.0	27.0	---	
13	21.0	11.0	13.0	3.0	6.0	17.0	18.0	23.0	22.0	27.0	---	
14	21.0	13.0	16.0	3.0	6.0	13.0	17.0	21.0	22.0	27.0	---	
15	20.0	15.0	15.0	3.0	6.0	13.0	17.0	20.0	24.0	27.0	---	
16	21.0	14.0	15.0	5.0	6.0	13.0	18.0	20.0	25.0	27.0	---	
17	18.0	12.0	14.0	5.0	8.0	14.0	18.0	20.0	27.0	26.0	---	
18	20.0	12.0	14.0	6.0	9.0	13.0	20.0	20.0	26.0	27.0	---	
19	19.0	11.0	13.0	6.0	10.0	14.0	21.0	20.0	24.0	27.0	---	
20	20.0	10.0	13.0	4.0	11.0	15.0	21.0	20.0	24.0	28.0	---	
21	19.0	9.0	14.0	2.0	13.0	13.0	21.0	20.0	24.0	27.0	---	
22	17.0	8.0	13.0	1.0	15.0	14.0	22.0	19.0	25.0	25.0	---	
23	16.0	7.0	12.0	2.0	16.0	15.0	18.0	20.0	25.0	26.0	---	
24	16.0	6.0	12.0	3.0	14.0	16.0	18.0	21.0	25.0	26.0	---	
25	14.0	8.0	11.0	4.0	12.0	16.0	19.0	22.0	26.0	27.0	---	
26	16.0	10.0	11.0	3.0	13.0	17.0	21.0	22.0	27.0	27.0	---	
27	18.0	11.0	10.0	5.0	12.0	19.0	21.0	24.0	26.0	28.0	---	
28	20.0	11.0	13.0	4.0	12.0	20.0	22.0	21.0	24.0	28.0	---	
29	20.0	10.0	14.0	4.0	---	21.0	22.0	23.0	23.0	28.0	---	
30	18.0	9.0	15.0	6.0	---	21.0	21.0	24.0	24.0	28.0	---	
31	19.0	---	15.0	4.0	---	17.0	---	25.0	---	28.0	---	
MEAN	18.5	12.5	11.0	4.5	7.0	15.5	18.5	21.0	25.0	26.5	28.0	

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 above National Geodetic Vertical Datum of 1929 (levels by U.S. Army 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.--Estimated daily discharges: Jan. 13 to Feb. 3, Feb. 6-12, June 2-6, and Aug. 8 to Sept. 29. Records good except those for estimated daily discharges, which are fair. In 1928-29, the channel was recitfied for a distance of 28 mi upstream and 18 mi downstream from this station. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--36 years, 237 ft³/s (11.66 in/yr), 171,700 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 U.S. Army Corps of Engineers and local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 18	0330	*19,100	*18.54				

Minimum daily discharge, no flow on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1580	23	1180	63	77	158	427	19	.56	.33	.00
2	.00	461	16	361	72	99	85	131	15	.48	.22	.00
3	.00	129	10	380	69	74	61	66	12	2.6	.18	.00
4	.00	60	6.9	280	76	349	48	44	9.0	4.1	.11	.00
5	.00	34	29	204	122	214	37	33	7.2	4.3	.04	.00
6	.01	20	100	163	197	76	28	27	2440	2.8	.00	.00
7	26	14	40	134	382	55	24	21	241	1.6	.01	.00
8	6.6	11	21	114	424	47	20	19	59	1.1	.00	.00
9	1.1	7.8	16	102	788	43	18	16	30	.66	.00	.00
10	.46	4.6	13	119	548	40	17	14	19	.47	.00	.00
11	.28	3.0	9.9	106	234	38	18	14	16	.31	.00	.00
12	.80	2.5	7.7	72	117	30	21	14	16	.25	.00	.00
13	1.3	2.0	1280	73	73	57	19	2330	12	.15	.00	.00
14	3.4	1.6	431	78	56	4220	32	2390	8.8	.06	.00	.00
15	1.2	1.4	207	86	46	369	27	226	7.2	.04	.00	.00
16	.94	1.2	1180	583	41	133	17	68	7.8	10	.00	.00
17	2.6	.81	568	625	37	81	13	40	6.7	18	.00	.00
18	15	495	6930	250	35	57	12	26	8.1	4.6	.00	.00
19	14	239	911	155	35	46	11	20	11	1.5	.00	.00
20	233	77	880	66	43	6090	9.9	399	14	.88	.00	.00
21	95	33	799	62	40	6260	11	6480	7.6	77	.00	.00
22	24	19	524	66	40	609	5770	898	5.4	34	.00	.00
23	54	13	237	68	3450	235	1630	199	9.7	70	.00	.00
24	2380	9.6	176	63	773	128	211	83	6.8	13	.00	.00
25	1920	11	137	78	196	82	79	51	3.9	4.0	.00	.00
26	232	761	104	78	108	62	56	34	2.5	7.7	.00	.00
27	128	1010	95	72	72	2620	938	1670	2.0	23	.00	.00
28	170	160	106	68	56	303	744	454	1.2	6.6	.00	.00
29	63	68	115	169	---	125	3170	93	.94	2.9	.00	.00
30	28	38	1380	276	---	2900	1500	48	.71	1.3	.00	.62
31	16	---	2260	95	---	619	---	29	---	.65	.00	---
TOTAL	5416.69	5267.51	18612.5	6226	8193	26138	14784.9	16364	2999.55	294.61	.89	.62
MEAN	175	176	600	201	293	843	493	528	100	9.50	.029	.021
MAX	2380	1580	6930	1180	3450	6260	5770	6480	2440	77	.33	.62
MIN	.00	.81	6.9	62	35	30	9.9	14	.71	.04	.00	.00
CFSM	.63	.64	2.17	.73	1.06	3.05	1.79	1.91	.36	.03	.000	.000
IN.	.73	.71	2.51	.84	1.10	3.52	1.99	2.21	.40	.04	.00	.00
AC-FT	10740	10450	36920	12350	16250	51840	29330	32460	5950	584	1.8	1.2

CAL YR 1984	TOTAL	79899.07	MEAN 218	MAX 10800	MIN .00	CFSM .79	IN 10.77	AC-FT 158500				
WTR YR 1985	TOTAL	104298.27	MEAN 286	MAX 6930	MIN .00	CFSM 1.04	IN 14.06	AC-FT 206900				

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 microsiemens Oct. 24, 1983; minimum daily, 191 microsiemens 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, 2,230 microsiemens Oct. 6; minimum daily, 250 microsiemens Oct. 24, Dec. 31.
WATER TEMPERATURES: Maximum daily, 35.0°C July 24; minimum daily, 0.0°C Jan. 12, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 02...	0930	.01	2180	7.7	17.0	590	540	190	28
JAN 31...	0900	92	631	--	.5	240	93	83	6.8
JUL 24...	1256	13	433	--	32.0	130	55	44	4.0

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 02...	270	5	5.5	49	750	260	.60	4.2	1500
JAN 31...	46	1	1.9	143	140	25	.30	4.0	390
JUL 24...	37	1	3.0	72	95	25	.70	11	260

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	5416.69	323	194	2830	14	209	70	1020	110
NOV.	1984	5267.51	366	219	3110	16	225	79	1120	120
DEC.	1984	18612.5	339	203	10200	14	714	72	3630	110
JAN.	1985	6226	483	292	4910	24	398	110	1800	160
FEB.	1985	8193	461	278	6150	22	485	100	2240	150
MAR.	1985	26138	359	215	15200	15	1070	77	5420	120
APR.	1985	14784.9	343	205	8180	14	575	73	2920	110
MAY	1985	16364	340	203	8980	14	622	72	3200	110
JUNE	1985	2999.55	431	259	2100	20	161	94	761	140
JULY	1985	294.61	594	365	290	36	28	140	110	190
AUG.	1985	0.89	801	495	1.2	51	0.1	190	0.5	250
SEPT	1985	0.62	2210	1510	2.5	290	0.5	690	1.2	560
TOTAL		104298.27	**	**	61900	**	4490	**	22200	**
WTD.AVG.		286	367	220	**	16	**	79	**	120

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	260	557	311	680	685	481	409	567	1220	775	---
2	---	312	620	419	665	677	609	521	630	1240	791	---
3	---	402	670	462	710	695	643	597	691	1290	821	---
4	---	475	710	508	775	550	669	644	732	1310	835	---
5	---	526	651	537	710	560	675	655	766	1280	867	---
6	2230	582	540	560	681	596	689	660	409	1360	---	---
7	1950	605	619	578	439	644	708	673	363	1380	918	---
8	1870	632	646	621	379	667	730	685	441	1370	---	---
9	1400	666	672	646	338	655	754	731	501	1370	---	---
10	1350	689	681	608	381	669	777	807	503	1380	---	---
11	1310	697	672	592	475	681	798	802	566	1390	---	---
12	1300	706	670	631	530	700	806	827	609	1410	---	---
13	1290	735	325	653	600	634	817	330	629	1430	---	---
14	1280	760	385	577	648	360	805	304	682	1450	---	---
15	1290	796	492	574	690	418	799	369	712	1460	---	---
16	1280	806	338	475	700	529	784	466	739	1300	---	---
17	1350	851	396	444	706	607	900	550	791	1020	---	---
18	1040	552	271	354	743	677	908	583	832	1040	---	---
19	1070	386	368	484	727	705	892	594	867	1170	---	---
20	450	446	433	546	722	371	925	475	889	1250	---	---
21	570	514	467	674	695	291	945	295	883	500	---	---
22	581	550	461	670	703	404	275	364	913	430	---	---
23	626	600	508	693	445	509	332	473	972	400	---	---
24	250	650	563	727	388	585	437	551	992	459	---	---
25	282	672	602	714	487	656	527	594	1010	481	---	---
26	350	450	645	700	567	696	592	591	1040	528	---	---
27	456	318	684	724	626	319	450	350	1090	450	---	---
28	521	401	698	694	676	408	367	421	1120	525	---	---
29	611	460	683	518	---	528	325	525	1160	658	---	---
30	637	528	337	527	---	320	392	547	1210	686	---	2210
31	649	---	250	631	---	350	---	555	---	729	---	---
MEAN	1000	568	536	576	603	553	660	547	777	1030	835	2210

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21.0	9.0	9.0	---	---	15.0	20.0	28.0	24.0	27.0	---
2	---	15.0	---	4.0	---	14.0	21.0	18.0	25.0	25.0	28.0	---
3	---	13.0	---	2.0	---	15.0	16.0	19.0	29.0	23.0	26.0	---
4	---	15.0	---	1.0	---	15.0	17.0	24.0	26.0	25.0	28.0	---
5	---	12.0	4.0	6.0	1.0	---	---	20.0	26.0	25.0	27.0	---
6	25.0	15.0	8.0	3.0	2.0	13.0	16.0	22.0	21.0	26.0	---	---
7	20.0	13.0	3.0	5.0	4.0	12.0	16.0	23.0	22.0	26.0	34.0	---
8	20.0	16.0	4.0	5.0	1.0	17.0	15.0	23.0	25.0	25.0	---	---
9	21.0	19.0	8.0	5.0	4.0	18.0	14.0	21.0	28.0	26.0	---	---
10	21.0	16.0	10.0	5.0	9.0	17.0	16.0	22.0	28.0	27.0	---	---
11	20.0	13.0	10.0	3.0	7.0	18.0	16.0	25.0	26.0	25.0	---	---
12	21.0	9.0	13.0	.0	3.0	17.0	16.0	23.0	23.0	27.0	---	---
13	21.0	10.0	15.0	1.0	5.0	14.0	19.0	24.0	21.0	27.0	---	---
14	21.0	12.0	13.0	1.0	6.0	14.0	16.0	18.0	26.0	32.0	---	---
15	19.0	13.0	12.0	1.0	7.0	14.0	18.0	18.0	25.0	27.0	---	---
16	23.0	12.0	13.0	5.0	7.0	13.0	20.0	21.0	29.0	27.0	---	---
17	17.0	11.0	14.0	3.0	10.0	13.0	23.0	21.0	29.0	---	---	---
18	21.0	9.0	11.0	4.0	12.0	13.0	21.0	21.0	27.0	27.0	---	---
19	16.0	8.0	10.0	5.0	11.0	15.0	21.0	20.0	25.0	26.0	---	---
20	---	7.0	11.0	2.0	11.0	14.0	---	23.0	25.0	31.0	---	---
21	17.0	7.0	15.0	3.0	14.0	13.0	21.0	18.0	26.0	26.0	---	---
22	15.0	---	10.0	1.0	15.0	14.0	19.0	19.0	24.0	24.0	---	---
23	16.0	---	9.0	1.0	10.0	14.0	17.0	21.0	27.0	26.0	---	---
24	13.0	9.0	14.0	2.0	12.0	---	18.0	22.0	27.0	35.0	---	---
25	13.0	8.0	7.0	4.0	10.0	16.0	19.0	24.0	26.0	29.0	---	---
26	15.0	12.0	---	4.0	11.0	16.0	21.0	27.0	32.0	28.0	---	---
27	19.0	11.0	9.0	4.0	9.0	16.0	22.0	---	25.0	29.0	---	---
28	20.0	5.0	14.0	3.0	11.0	21.0	22.0	28.0	21.0	---	---	---
29	18.0	5.0	17.0	4.0	---	22.0	20.0	25.0	23.0	27.0	---	---
30	23.0	13.0	15.0	6.0	---	20.0	21.0	---	25.0	33.0	---	13.0
31	20.0	---	14.0	.0	---	11.0	---	---	---	27.0	---	---
MEAN	19.0	12.0	11.0	3.5	8.0	15.5	18.5	22.0	25.5	27.0	28.5	13.0

07343200 SULPHUR RIVER NEAR TALCO, TX

LOCATION.--Lat 33°23'10", long 95°07'56", Franklin County, Hydrologic Unit 11140302, at 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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 7-31, Jan. 10-27, and June 24 to July 17. Records fair. The River Crest Steam Electric Generating Plant diverts water for cooling purposes upstream from this station. Flow is also affected at times by discharge from the 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 mi² in the Auds and Depot Creek drainage basins. Gage height telemeter located at station.

AVERAGE DISCHARGE.--29 years, 1,413 ft³/s (14.06 in/yr), 1,024,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,000 ft³/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 greater than base discharge of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 26	0700	16,100	23.91	Mar. 22	0330	16,100	23.90
Dec. 19	0630	*21,100	*24.36				

Minimum daily discharge, 0.01 ft³/s Sept. 2-12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	433	409	2430	135	452	2130	5210	345	11	4.9	.02
2	4.6	3850	244	2140	105	399	1130	4500	228	38	3.1	.01
3	3.6	4470	169	1790	113	342	498	4300	137	7.1	2.2	.01
4	3.5	2560	127	1340	108	276	302	3290	89	295	1.8	.01
5	3.5	1030	207	573	119	456	201	734	65	297	1.5	.01
6	8.6	420	885	382	218	370	148	304	469	97	1.1	.01
7	147	306	1040	281	1330	308	122	223	3480	50	.78	.01
8	523	252	602	216	2670	232	101	145	2360	32	.55	.01
9	518	243	353	175	3020	167	78	102	939	24	.39	.01
10	236	208	257	150	2230	132	67	77	392	17	.25	.01
11	156	139	186	141	1150	113	61	57	224	13	.16	.01
12	90	85	144	127	641	96	57	49	148	9.9	.10	.01
13	98	59	411	99	413	79	56	46	108	8.2	.09	.04
14	130	47	2410	84	288	2290	55	2250	84	7.1	.08	.03
15	157	40	2300	85	212	8170	63	2160	67	6.6	.08	.07
16	172	33	3290	154	166	5130	62	1170	54	5.8	.08	.08
17	129	28	5700	892	137	3940	45	1350	46	9.3	.07	.08
18	88	25	11100	1020	121	1820	38	717	94	124	.07	.08
19	281	448	19400	725	106	452	36	276	89	94	.05	.08
20	672	347	13900	413	99	1290	35	207	123	46	.05	.07
21	1950	471	12800	244	103	11900	33	2310	221	30	.05	.05
22	2160	278	9240	167	104	15000	459	9890	118	60	.04	.04
23	1740	157	4030	132	1840	11900	7710	6160	77	146	.04	.04
24	1560	105	1190	114	13200	8060	6870	5190	59	145	.04	.04
25	4980	81	584	105	9110	3160	4040	4890	47	104	.03	.04
26	14500	98	431	95	5050	710	4790	2150	35	60	.03	.04
27	9250	1430	350	86	2560	1010	4570	650	30	39	.03	.03
28	6990	1830	281	105	715	2120	3150	4190	24	47	.02	.03
29	4320	1510	208	195	---	1000	1750	4420	17	33	.02	.04
30	2130	1070	309	181	---	1280	4250	1880	13	16	.02	.05
31	598	---	926	165	---	4440	---	575	---	8.5	.02	---
TOTAL	53604.4	22053	93483	14806	46063	87094	42907	69472	10182	1880.5	17.74	1.06
MEAN	1729	735	3016	478	1645	2809	1430	2241	339	60.7	.57	.035
MAX	14500	4470	19400	2430	13200	15000	7710	9890	3480	297	4.9	.08
MIN	3.5	25	127	84	99	79	33	46	13	5.8	.02	.01
CFSM	1.27	.54	2.21	.35	1.21	2.06	1.05	1.64	.25	.04	.000	.000
IN.	1.46	.60	2.55	.40	1.26	2.37	1.17	1.89	.28	.05	.00	.00
AC-FT	106300	43740	185400	29370	91370	172800	85110	137800	20200	3730	35	2.1

CAL YR 1984 TOTAL 452742.10 MEAN 1237 MAX 21100 MIN 1.7 CFSM .91 IN 12.34 AC-FT 898000
WTR YR 1985 TOTAL 441563.70 MEAN 1210 MAX 19400 MIN .01 CFSM .89 IN 12.03 AC-FT 875800

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 microsiemens Feb. 17, 1976; minimum daily, 100 microsiemens 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, 1,000 microsiemens Sept. 17; minimum daily, 135 microsiemens Oct. 22, 27.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 21; minimum daily, 1.0°C Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 07...	1550	281	256	7.8	15.0	250	58	7.9	79	2.2	110
JAN 30...	1550	172	680	7.9	5.0	30	20	12.0	95	1.1	260
MAR 13...	1510	79	650	8.1	18.5	70	31	11.0	118	3.8	250
APR 24...	1820	5720	228	7.8	20.0	100	200	7.2	80	3.8	88
JUN 05...	1425	64	432	7.6	29.5	45	31	5.4	71	2.2	160
SEP 04...	0940	.01	850	7.3	26.0	25	37	2.2	27	1.5	270

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 07...	12	39	2.9	11	.5	3.8	98	24	7.5	.20	9.5
JAN 30...	76	91	6.8	48	1	2.7	180	120	35	.30	6.5
MAR 13...	61	88	7.6	46	1	3.5	190	110	30	.40	3.5
APR 24...	9	31	2.5	12	.6	3.4	79	26	7.1	.30	7.7
JUN 05...	24	56	4.3	25	.9	4.2	134	51	16	.30	8.9
SEP 04...	44	93	9.6	78	2	4.0	228	130	57	.40	4.1

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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 07...	160	108	8	.18	.020	.20	.060	.94	1.0	.230	--
JAN 30...	420	52	16	--	<.010	.80	.030	.97	1.0	.060	5.0
MAR 13...	400	54	4	--	<.010	<.10	.030	1.1	1.1	.090	--
APR 24...	140	372	28	1.5	.110	1.6	.170	1.4	1.6	.270	8.4
JUN 05...	250	59	12	.18	.020	.20	.090	.61	.70	.150	7.1
SEP 04...	510	72	8	--	<.010	<.10	.080	.92	1.0	.040	8.7

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 30...	1550	<1	70	<1	<10	<1	13
SEP 04...	0940	2	140	2	<10	1	9

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 30...	<1	54	<.1	1	<1	6
SEP 04...	<1	800	<.1	<1	<1	13

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	53604.4	181	105	15100	5.0	725	19	2700	67
NOV.	1984	22053	275	160	9520	9.2	547	31	1820	100
DEC.	1984	93483	215	124	31400	6.4	1600	23	5740	80
JAN.	1985	14806	368	216	8620	15	587	44	1770	130
FEB.	1985	46063	276	161	20000	9.5	1180	31	3870	100
MAR.	1985	87094	239	139	32700	7.6	1790	26	6130	88
APR.	1985	42907	271	158	18300	9.1	1060	30	3510	99
MAY	1985	69472	252	147	27500	8.0	1500	27	5140	93
JUNE	1985	10182	293	170	4680	10	276	33	904	110
JULY	1985	1880.5	560	332	1680	28	144	76	384	190
AUG.	1985	17.74	538	318	15	26	1.3	71	3.4	190
SEPT	1985	1.06	872	526	1.5	60	0.2	140	0.4	280
TOTAL		441563.70	**	**	170000	**	9410	**	32000	**
WTD.AVG.		1210	245	142	**	7.9	**	27	**	90

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	396	270	320	294	680	341	287	272	300	514	487	828
2	401	250	357	297	690	363	293	239	330	531	506	821
3	403	221	342	254	670	448	326	234	368	528	525	818
4	406	219	361	321	675	491	378	246	401	508	535	775
5	411	246	355	345	660	596	411	305	427	578	557	796
6	400	261	273	371	610	528	448	343	352	523	572	767
7	219	265	261	404	425	481	476	380	276	404	591	780
8	169	263	262	430	346	523	525	422	231	396	584	829
9	353	258	278	460	297	551	550	467	264	408	618	783
10	273	268	300	483	305	582	583	480	280	429	615	869
11	242	284	326	516	320	612	599	499	318	451	612	869
12	277	319	351	544	353	643	615	530	335	476	668	830
13	286	344	327	587	364	665	607	566	358	498	682	884
14	273	371	273	623	392	328	647	367	389	503	694	785
15	295	387	294	635	431	252	683	321	426	523	684	876
16	406	406	268	583	461	227	702	270	439	548	715	916
17	376	418	250	526	492	230	732	254	461	564	718	1000
18	371	439	230	388	539	291	744	295	358	454	694	981
19	300	502	172	370	569	334	786	332	380	734	748	924
20	270	426	170	352	606	310	810	318	457	799	744	876
21	165	441	183	400	639	224	806	346	430	785	752	852
22	135	325	209	411	657	172	700	253	400	764	775	818
23	161	348	242	406	414	180	271	225	410	569	779	815
24	214	355	270	458	220	221	241	199	406	640	697	825
25	242	388	306	493	211	259	209	215	396	615	726	835
26	156	383	323	511	247	318	216	236	419	508	801	807
27	135	369	337	549	265	459	231	298	442	521	805	822
28	169	332	363	609	305	318	277	229	450	502	819	863
29	206	257	409	641	---	382	326	226	467	438	820	802
30	262	275	425	669	---	299	298	238	482	452	825	831
31	263	---	393	675	---	247	---	273	---	476	834	---
MEAN	279	330	298	471	459	383	493	319	382	537	683	843

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	20.0	---	12.0	---	13.0	17.0	22.0	---	28.0	31.0	25.0
2	17.0	18.0	11.0	10.0	---	13.0	18.0	22.0	---	28.0	31.0	25.0
3	18.0	16.0	10.0	7.0	---	14.0	19.0	21.0	29.0	27.0	30.0	28.0
4	18.0	16.0	9.0	6.0	---	15.0	20.0	20.0	30.0	26.0	28.0	30.0
5	20.0	15.0	7.0	5.0	---	16.0	20.0	21.0	29.0	29.0	30.0	30.0
6	20.0	15.0	5.0	5.0	---	14.0	19.0	24.0	26.0	29.0	29.0	30.0
7	19.0	15.0	6.0	5.0	1.0	15.0	18.0	25.0	25.0	26.0	30.0	29.0
8	21.0	16.0	6.0	6.0	3.0	16.0	20.0	25.0	25.0	29.0	30.0	26.0
9	21.0	18.0	7.0	6.0	4.0	16.0	20.0	25.0	27.0	30.0	31.0	27.0
10	21.0	17.0	9.0	6.0	6.0	16.0	20.0	25.0	29.0	30.0	---	28.0
11	21.0	16.0	9.0	5.0	7.0	19.0	20.0	24.0	28.0	30.0	30.0	28.0
12	21.0	15.0	11.0	4.0	6.0	18.0	20.0	24.0	28.0	30.0	30.0	25.0
13	21.0	14.0	14.0	4.0	7.0	18.0	19.0	24.0	28.0	30.0	30.0	26.0
14	21.0	15.0	16.0	5.0	8.0	14.0	18.0	21.0	28.0	28.0	30.0	23.0
15	21.0	16.0	15.0	5.0	8.0	15.0	22.0	22.0	28.0	28.0	30.0	21.0
16	22.0	15.0	14.0	5.0	7.0	13.0	23.0	22.0	27.0	30.0	31.0	23.0
17	21.0	13.0	14.0	6.0	9.0	14.0	23.0	21.0	30.0	30.0	28.0	25.0
18	21.0	13.0	14.0	5.0	11.0	15.0	24.0	21.0	25.0	30.0	27.0	25.0
19	20.0	12.0	13.0	---	11.0	16.0	24.0	22.0	28.0	31.0	30.0	26.0
20	19.0	10.0	13.0	4.0	13.0	15.0	23.0	22.0	28.0	29.0	30.0	26.0
21	18.0	10.0	14.0	3.0	14.0	13.0	24.0	21.0	23.0	28.0	32.0	25.0
22	17.0	8.0	12.0	3.0	15.0	14.0	---	21.0	27.0	28.0	30.0	23.0
23	16.0	9.0	12.0	3.0	16.0	---	19.0	21.0	28.0	29.0	31.0	25.0
24	15.0	9.0	13.0	4.0	14.0	18.0	20.0	22.0	28.0	30.0	27.0	23.0
25	14.0	9.0	11.0	5.0	14.0	18.0	20.0	23.0	27.0	30.0	30.0	22.0
26	17.0	11.0	11.0	3.0	14.0	18.0	20.0	23.0	30.0	30.0	29.0	21.0
27	17.0	12.0	11.0	4.0	13.0	19.0	21.0	23.0	29.0	30.0	29.0	21.0
28	23.0	10.0	13.0	5.0	13.0	21.0	23.0	22.0	28.0	29.0	29.0	18.0
29	19.0	11.0	13.0	5.0	---	21.0	22.0	24.0	26.0	30.0	30.0	18.0
30	20.0	10.0	14.0	5.0	---	19.0	22.0	26.0	26.0	31.0	30.0	18.0
31	20.0	---	16.0	---	---	15.0	---	28.0	---	31.0	25.0	---
MEAN	19.0	13.5	11.5	5.0	9.5	16.0	20.5	23.0	27.5	29.0	29.5	24.5

07343500 WHITE OAK CREEK NEAR TALCO, TX

LOCATION.--Lat 33°19'20", long 95°05'33", Titus County, Hydrologic Unit 11140300, near center of main channel at 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.--No estimated daily dischages. Records good. There are 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 located at station.

AVERAGE DISCHARGE.--35 years (water years 1951-85), 442 ft^3/s (12.15 in/yr), 320,200 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.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 19	2100	*19,000	*18.90	No other peak greater than base discharge.			

Minimum discharge, 0.03 ft^3/s Aug. 31.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1250	224	411	74	1040	532	727	766	13	5.5	.07
2	2.9	1090	128	508	73	429	473	744	751	11	6.7	.07
3	4.0	1180	82	574	73	304	382	704	296	10	6.6	.07
4	3.8	1170	61	592	73	264	220	569	121	9.3	5.5	.07
5	3.2	955	78	434	82	226	136	391	87	9.1	4.5	.06
6	4.8	867	240	213	183	211	104	177	91	9.0	3.7	.08
7	74	603	407	142	530	201	86	111	109	12	3.1	.10
8	84	249	390	112	858	161	73	86	130	33	2.9	.14
9	158	125	343	94	992	126	60	72	96	22	3.9	.13
10	215	89	207	84	915	104	51	63	79	15	4.2	.13
11	170	72	119	76	703	92	46	56	64	11	3.5	.10
12	74	62	85	71	393	84	42	52	49	8.5	2.6	.12
13	38	57	127	67	229	77	40	48	40	7.0	2.0	.14
14	100	50	715	61	164	340	39	50	35	6.0	1.5	.14
15	138	44	978	55	124	713	38	78	31	6.2	1.1	.15
16	141	39	1040	83	98	773	36	145	28	5.8	.77	.16
17	92	36	1170	379	82	673	36	113	25	6.2	.57	.20
18	85	35	4450	515	72	626	38	73	24	38	.46	2.9
19	360	35	13700	498	65	338	35	47	183	34	.38	6.1
20	703	35	13300	407	62	440	31	42	502	15	.39	5.6
21	1190	34	6050	241	60	1510	28	467	541	10	.35	4.3
22	1350	36	3710	138	143	2630	180	1440	277	19	.30	3.6
23	1510	38	2420	95	1110	4380	2000	1950	90	58	.24	3.2
24	1770	34	1400	75	4020	4010	2660	2300	75	50	.22	2.8
25	2950	31	597	68	7400	2460	3800	2660	128	41	.19	2.6
26	4650	49	277	64	5080	1330	4350	2380	76	27	.16	2.1
27	6700	829	197	64	3320	467	3050	1700	41	17	.13	1.6
28	5890	1060	160	68	2050	350	2190	901	28	11	.11	1.2
29	4930	927	130	72	---	388	1400	654	21	8.4	.08	1.1
30	3690	490	153	74	---	356	681	587	16	6.9	.07	1.5
31	2210	---	328	75	---	505	---	601	---	5.7	.07	---
TOTAL	39293.8	11571	53266	6410	29028	25608	22837	19988	4800	535.1	61.79	40.53
MEAN	1268	386	1718	207	1037	826	761	645	160	17.3	1.99	1.35
MAX	6700	1250	13700	592	7400	4380	4350	2660	766	58	6.7	6.1
MIN	2.9	31	61	55	60	77	28	42	16	5.7	.07	.06
CFSM	2.57	.78	3.48	.42	2.10	1.67	1.54	1.31	.32	.04	.004	.003
IN.	2.96	.87	4.01	.48	2.19	1.93	1.72	1.51	.36	.04	.00	.00
AC-FT	77940	22950	105700	12710	57580	50790	45300	39650	9520	1060	123	80

CAL YR 1984 TOTAL 160298.73 MEAN 438 MAX 13700 MIN .00 CFSM .89 IN 12.07 AC-FT 318000
WTR YR 1985 TOTAL 213439.22 MEAN 585 MAX 13700 MIN .06 CFSM 1.18 IN 16.07 AC-FT 423400

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, 723 micromhos Oct. 2; minimum daily, 45 micromhos Oct. 27.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 2, 11; minimum daily, 2.0°C Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 07...	1145	651	110	7.2	14.5	250	37	7.1	70	2.1	39
JAN 30...	1145	773	340	7.1	5.0	80	25	10.6	84	.8	84
MAR 13...	1045	43	335	7.1	17.0	70	45	9.1	95	1.4	87
APR 24...	1250	2640	79	6.7	19.5	130	36	5.4	59	3.1	24
JUN 05...	0935	87	170	7.0	28.0	150	85	4.1	53	1.3	49
SEP 04...	0615	.08	480	7.1	28.0	45	25	4.0	52	1.9	110

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 07...	5	9.9	3.5	6.4	.5	5.1	34	16	7.3	.10	9.7
JAN 30...	50	20	8.2	30	1	4.6	34	70	33	.10	11
MAR 13...	45	21	8.5	29	1	5.5	43	65	28	.20	9.8
APR 24...	11	6.0	2.2	5.7	.5	4.1	13	19	7.0	.10	5.5
JUN 05...	13	12	4.7	14	.9	5.8	36	28	11	.20	9.2
SEP 04...	8	26	10	50	2	9.4	98	56	44	.30	5.4

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, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 07...	78	16	3	.18	.020	.20	.100	1.1	1.2	.330	12
JAN 30...	200	15	1	.78	.020	.80	.080	.72	.80	.210	--
MAR 13...	190	58	5	.68	.020	.70	.070	.83	.90	.280	--
APR 24...	58	37	8	.27	.030	.30	.120	1.5	1.6	.270	8.0
JUN 05...	110	63	4	.46	.040	.50	.160	.84	1.0	.400	11
SEP 04...	260	40	10	--	<.010	<.10	.040	.86	.90	.060	12

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 30...	1145	<1	59	<1	<10	3	94
APR 24...	1250	<1	46	1	<10	5	430
SEP 04...	0615	1	100	2	<10	2	73

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 30...	<1	120	.2	<1	<1	14
APR 24...	<1	28	<.1	<1	<1	13
SEP 04...	2	810	<.1	<1	<1	20

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	39293.8	61	36	3780	3.5	376	10	1090	17
NOV.	1984	11571	120	70	2190	8.1	253	20	618	33
DEC.	1984	53266	77	45	6480	4.7	682	13	1850	22
JAN.	1985	6410	204	119	2060	17	288	32	562	53
FEB.	1985	29028	106	62	4840	7.3	570	17	1360	29
MAR.	1985	25608	118	69	4780	8.3	572	19	1340	32
APR.	1985	22837	106	62	3820	7.3	449	17	1070	29
MAY	1985	19988	114	67	3610	7.8	421	19	1020	31
JUNE	1985	4800	164	96	1240	12	161	26	343	44
JULY	1985	535.1	314	181	262	32	46	47	68	75
AUG.	1985	61.79	445	255	43	52	8.7	64	11	98
SEPT	1985	40.53	553	315	34	74	8.1	75	8.2	110
TOTAL		213439.22	**	**	33100	**	3830	**	9340	**
WTD.AVG.		585	98	57	**	6.7	**	16	**	27

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	702	112	200	185	340	123	195	166	100	265	452	456
2	723	115	217	205	344	154	170	165	115	284	451	450
3	712	103	223	136	351	220	161	153	158	294	446	460
4	670	105	239	135	360	223	181	157	169	298	445	465
5	662	98	246	150	350	262	204	164	185	315	444	462
6	680	102	180	166	310	271	229	183	201	322	442	471
7	165	118	184	198	270	265	253	206	196	326	441	466
8	162	137	165	220	180	289	279	222	200	361	442	474
9	123	155	148	237	146	286	291	237	215	409	439	470
10	97	166	156	254	133	281	302	247	229	431	440	465
11	115	178	168	266	143	294	313	253	280	463	441	467
12	148	188	185	276	167	308	328	266	308	493	442	460
13	160	195	165	291	196	325	339	276	311	509	445	467
14	199	198	102	319	216	181	347	278	292	508	448	468
15	149	205	123	331	241	169	367	300	286	495	446	469
16	133	210	124	338	258	162	383	298	284	485	448	468
17	122	211	122	275	277	140	403	266	285	479	449	469
18	141	217	59	222	301	147	418	312	283	433	450	474
19	132	224	54	200	320	164	428	348	293	369	446	507
20	70	231	65	184	339	126	435	334	165	276	453	528
21	63	237	67	190	357	100	444	123	148	230	452	551
22	65	241	70	197	307	85	375	78	167	198	457	577
23	67	256	79	212	117	70	67	86	187	183	456	601
24	66	320	99	230	83	74	83	82	207	180	454	593
25	53	371	141	249	74	85	89	80	166	227	455	603
26	50	278	166	262	78	116	79	87	149	278	458	602
27	45	119	178	288	80	156	82	106	179	298	457	603
28	50	87	188	317	91	241	95	121	200	363	458	607
29	54	128	196	331	---	187	126	129	216	420	464	597
30	70	180	216	335	---	203	162	135	229	434	463	595
31	88	---	179	333	---	192	---	110	---	453	462	---
MEAN	217	183	152	243	230	190	254	193	213	357	450	512

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	20.0	---	13.0	---	13.0	17.0	21.0	---	28.0	32.0	26.0
2	18.0	18.0	11.0	10.0	---	13.0	18.0	21.0	---	28.0	33.0	26.0
3	19.0	17.0	10.0	8.0	---	14.0	18.0	22.0	28.0	29.0	30.0	28.0
4	19.0	16.0	8.0	6.0	---	15.0	19.0	20.0	28.0	26.0	28.0	30.0
5	20.0	15.0	7.0	5.0	---	14.0	19.0	20.0	28.0	28.0	31.0	30.0
6	20.0	15.0	6.0	6.0	---	14.0	18.0	22.0	26.0	30.0	29.0	30.0
7	19.0	15.0	6.0	7.0	2.0	15.0	17.0	23.0	26.0	27.0	32.0	27.0
8	21.0	16.0	6.0	7.0	3.0	17.0	18.0	23.0	26.0	29.0	32.0	27.0
9	20.0	18.0	9.0	7.0	4.0	16.0	18.0	24.0	28.0	30.0	32.0	28.0
10	20.0	18.0	9.0	5.0	7.0	16.0	18.0	24.0	28.0	31.0	---	30.0
11	20.0	15.0	9.0	6.0	7.0	19.0	19.0	22.0	28.0	31.0	33.0	28.0
12	21.0	14.0	12.0	4.0	7.0	18.0	19.0	23.0	27.0	32.0	31.0	27.0
13	21.0	13.0	15.0	4.0	7.0	18.0	18.0	23.0	26.0	31.0	30.0	27.0
14	21.0	14.0	15.0	5.0	8.0	16.0	18.0	23.0	27.0	28.0	31.0	24.0
15	21.0	15.0	16.0	5.0	8.0	14.0	21.0	24.0	27.0	28.0	30.0	23.0
16	21.0	15.0	16.0	5.0	7.0	14.0	22.0	22.0	29.0	32.0	31.0	26.0
17	20.0	14.0	15.0	6.0	9.0	15.0	22.0	22.0	29.0	31.0	30.0	26.0
18	21.0	12.0	15.0	6.0	12.0	16.0	24.0	21.0	28.0	30.0	30.0	27.0
19	20.0	12.0	14.0	---	11.0	16.0	23.0	22.0	27.0	30.0	30.0	27.0
20	19.0	10.0	14.0	5.0	12.0	15.0	23.0	22.0	25.0	29.0	30.0	26.0
21	18.0	10.0	15.0	4.0	14.0	15.0	23.0	20.0	25.0	28.0	32.0	25.0
22	17.0	8.0	13.0	4.0	16.0	15.0	---	20.0	24.0	29.0	31.0	24.0
23	16.0	9.0	12.0	4.0	16.0	---	19.0	22.0	27.0	28.0	31.0	25.0
24	14.0	8.0	13.0	5.0	14.0	18.0	20.0	23.0	28.0	29.0	28.0	24.0
25	15.0	8.0	12.0	5.0	15.0	18.0	22.0	23.0	28.0	29.0	30.0	23.0
26	17.0	11.0	12.0	4.0	15.0	18.0	20.0	24.0	28.0	30.0	30.0	22.0
27	18.0	12.0	11.0	4.0	14.0	19.0	22.0	23.0	29.0	29.0	29.0	22.0
28	24.0	10.0	14.0	5.0	13.0	20.0	23.0	23.0	27.0	28.0	29.0	20.0
29	19.0	10.0	14.0	5.0	---	21.0	22.0	24.0	26.0	31.0	30.0	19.0
30	---	10.0	15.0	6.0	---	18.0	22.0	25.0	25.0	32.0	31.0	19.0
31	20.0	---	16.0	---	---	15.0	---	27.0	---	32.0	26.0	---
MEAN	19.0	13.5	12.0	5.5	10.0	16.0	20.0	22.5	27.0	29.5	30.5	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.

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 U.S. Army 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 U.S. Army 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 CURRENT YEAR.--Maximum daily contents, 568,400 acre-ft Apr. 1 at 1600 hours (elevation, 233.14 ft); minimum daily, 201,900 acre-ft Dec. 17 at 0800 hours (elevation, 222.52 ft).

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

222.0	189,300	226.0	298,500	230.0	437,200
224.0	240,200	228.0	364,100	232.0	518,400
				234.0	607,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232400	455600	292300	425000	230200	366500	567500	378800	413000	322900	310100	279700
2	231600	488300	284800	415600	224700	401500	568400	385200	425800	323200	308500	277900
3	231000	515900	274600	405900	217900	427700	566100	388800	433800	324800	307800	278200
4	230200	535700	265800	395000	215100	446200	563900	392400	441100	325800	307500	277600
5	230200	546600	262600	383800	215100	456000	561600	392400	443800	325800	307500	276100
6	231800	545700	252100	374600	215400	461600	557200	391000	442700	325800	307200	275200
7	234500	544400	244000	364400	216600	464000	552800	388800	436100	326700	306600	273700
8	233200	542600	234800	353100	219700	463200	543500	382700	425400	326400	305300	273100
9	232900	541800	227800	345000	225500	458000	530000	377100	416000	326400	304400	272600
10	234000	535700	222600	333300	231600	452500	518900	368600	417100	325400	303200	271400
11	237500	528300	218400	319000	234800	445000	505300	357900	411500	324800	301900	270200
12	244900	516700	212600	306000	236400	436500	493700	340300	403000	323200	301000	269000
13	247400	503700	208500	292000	239600	430700	483000	332300	392800	322200	300000	268200
14	250100	489900	205600	277000	242100	426100	469600	325800	381000	321200	299100	267000
15	251000	474800	202800	261500	243500	421600	456000	319600	369300	320600	298200	266700
16	252700	456800	202100	256300	245100	419700	444200	317700	357500	319300	297300	265500
17	251500	441100	202300	252100	244600	418200	432200	317100	350700	317700	296000	265000
18	261200	433400	210100	251300	241300	417100	420100	318000	351700	316700	294500	263200
19	269300	413000	214100	251500	236400	416000	408500	319000	349700	316100	293300	262400
20	283900	396800	215900	255200	229700	419700	395700	322500	346000	315800	292300	261200
21	294500	382400	219200	258300	223400	425400	386000	334300	343300	315800	291400	260300
22	306300	369300	232600	260600	220800	431100	392400	339900	341300	315500	291100	258600
23	320900	356500	268400	264400	234200	438800	393200	346600	339600	315500	290200	257500
24	335900	341600	334600	266100	247900	443400	389500	351400	337300	315100	289000	256100
25	347700	328700	342300	265500	261500	450500	380200	355500	335900	314800	287500	255800
26	362000	323200	408500	263200	274000	474400	374600	361000	334000	314500	286300	254900
27	369700	320600	424200	260900	290500	504100	369000	368600	331000	313900	285100	253200
28	377400	312300	433400	254100	325100	529600	364800	376700	328400	313500	284800	251800
29	384500	305300	439600	247100	---	546100	362700	384500	327100	313200	283600	255200
30	395300	298500	438800	241600	---	565200	370400	393900	325100	312300	283300	252100
31	420800	---	440000	234800	---	565700	---	403400	---	311600	281800	---
MAX	420800	546600	440000	425000	325100	565700	568400	403400	443800	326700	310100	279700
MIN	230200	298500	202100	234800	215100	366500	362700	317100	325100	311600	281800	251800
(†)	229.57	226.00	230.07	223.80	226.84	233.08	228.18	229.10	226.84	226.42	225.45	224.43
(‡)	+187100	-122300	+141500	-205200	+90300	+240600	-195300	+33000	-78300	-13500	-29800	-29700

CAL YR 1984 MAX 546600 MIN 159900 (‡) +278100
WTR YR 1985 MAX 568400 MIN 202100 (‡) +18400

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

07344210 SULPHUR RIVER NEAR TEXARKANA, TX

LOCATION.--Lat 33°18'20", long 94°09'03", Bowie County, Hydrologic Unit 11140302, at 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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, July 14, 15, and daily discharges below 50 ft³/s, which are poor. Daily discharges determined from flow through gates, computed from relation between discharge, head, and gate openings, and adjusted to discharge measurements. Flow is regulated by Wright Patman Lake (station 07344200).

AVERAGE DISCHARGE.--6 years, 2,401 ft³/s (1,740,000 acre-ft/yr).

EXTEMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/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 ft³/s Apr. 4, 1945; maximum stage, 47.23 ft Apr. 14, 1945; no flow on various occasions.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,970 ft³/s May 9-12; maximum gage height, 31.34 ft May 9 at 1700 hours; minimum daily discharge, 104 ft³/s Aug. 26-29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	5580	8220	7550	3650	4130	8770	8480	1470	362	118	112
2	113	3680	8220	7550	3650	4130	8770	8480	769	181	118	112
3	113	3050	8220	7550	3650	4130	8770	8480	476	128	117	112
4	113	4340	8220	7550	3070	4130	8770	8480	913	128	117	112
5	113	5880	8220	7550	1890	4130	8770	8480	1590	128	116	112
6	113	7570	8220	7550	1550	4130	8770	8480	2610	128	115	112
7	113	8220	7020	7550	1550	4130	8770	8480	3410	128	115	112
8	113	8220	6300	7550	1550	4130	8770	8660	5130	128	114	112
9	113	8220	6300	7550	1550	4130	8770	8970	6040	128	114	112
10	113	8220	5590	7550	1550	4130	8770	8970	6040	128	113	112
11	113	8220	4540	7550	2230	4130	8770	8970	6040	128	113	112
12	113	8220	4150	7550	2640	4130	8770	8970	6040	128	112	112
13	113	8220	3490	7550	2640	4130	8770	7470	6040	128	111	112
14	113	8220	2770	7550	3140	4130	8770	4620	6040	128	111	112
15	113	8220	2560	7550	4130	4130	8770	3280	6040	128	110	112
16	113	8220	2560	6550	4130	4130	8770	1900	6040	127	110	112
17	113	8220	2560	4490	4130	4130	8770	1220	4480	127	109	112
18	113	8220	2560	3040	4130	4130	8770	1110	3080	126	109	112
19	113	8220	3160	1960	4130	4130	8770	1110	2260	126	108	112
20	113	8220	5000	1240	4130	5000	8770	744	1720	125	107	112
21	113	8220	5690	688	4130	6040	8770	525	1500	125	107	112
22	113	8220	5690	313	4130	7290	7440	525	1130	124	106	112
23	113	8220	5690	156	4130	8770	6570	865	1130	123	106	112
24	167	8220	6740	392	4130	8770	7760	1640	1130	123	105	112
25	454	8220	7550	882	4130	8770	8480	2010	1130	122	105	112
26	947	8220	7550	1440	4130	8770	8480	1430	1130	122	104	112
27	1600	8220	7550	2250	4130	8770	8480	738	1130	121	104	112
28	2700	8220	7550	3370	4130	8770	8480	933	766	121	104	112
29	3740	8220	7550	3650	---	8770	8480	1680	527	120	104	112
30	4890	8220	7550	3650	---	8770	8480	2060	527	119	109	112
31	5810	---	7550	3650	---	8770	---	2060	---	119	112	---
TOTAL	22907	227380	184540	150971	92130	175730	256820	139820	86328	4177	3423	3360
MEAN	739	7579	5953	4870	3290	5669	8561	4510	2878	135	110	112
MAX	5810	8220	8220	7550	4130	8770	8770	8970	6040	362	118	112
MIN	113	3050	2560	156	1550	4130	6570	525	476	119	104	112
AC-FT	45440	451000	366000	299500	182700	348600	509400	277300	171200	8290	6790	6660

CAL YR 1984 TOTAL 769689 MEAN 2103 MAX 8220 MIN 113 AC-FT 1527000
WTR YR 1985 TOTAL 1347586 MEAN 3692 MAX 8970 MIN 104 AC-FT 2673000

07344210 SULPHUR RIVER NEAR TEXARKANA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
DEC 11...	1100	--	210	7.6	9.0	65	6.7	11.8	102	1.3	71
APR 23...	1000	--	199	7.6	21.0	40	4.5	8.4	96	2.1	73
AUG 26...	1828	104	210	8.9	31.0	45	5.0	7.8	106	7.1	80

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)
DEC 11...	10	24	2.7	9.2	.5	3.8	61	18	13	.10	11
APR 23...	10	25	2.6	9.2	.5	2.8	63	21	8.1	.20	.7
AUG 26...	0	27	3.0	12	.6	3.7	82	16	9.4	.20	7.2

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)
DEC 11...	120	5	4	.19	.010	.20	.040	.76	.80	.130	9.0
APR 23...	110	7	2	--	<.010	<.10	.170	.83	1.0	.070	5.6
AUG 26...	130	1	1	.08	.020	.10	.050	1.9	1.9	.150	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)
DEC 11...	1100	1	48	1	30	4	260
APR 23...	1000	<1	45	<1	<10	8	110
AUG 26...	1828	7	55	<1	<10	1	<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)
DEC 11...	4	4	<.1	<1	<1	22
APR 23...	2	12	<.1	<1	<1	5
AUG 26...	1	8	<.1	<1	<1	18

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 7-13, 16-20, and May 31 to June 5. Records good. Flow is slightly affected by Lake Franklin located 1.4 mi upstream on Glade Branch. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1975-85), 20.1 ft^3/s (10.04 in/yr), 14,560 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 1984-85.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1445	*2,110	*11.92	May 21	1345	1,160	11.26

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	56	11	23	7.4	42	32	96	4.9	.73	.20	.00
2	.00	129	8.4	15	8.5	36	22	34	4.2	.52	.08	.00
3	.00	25	6.7	13	7.9	30	17	19	3.4	.53	.04	.00
4	.00	10	6.5	10	13	33	13	12	2.8	.58	.01	.00
5	.00	6.3	44	8.7	47	24	9.2	9.5	2.3	.65	.00	.00
6	.07	4.7	43	8.4	69	16	7.1	7.5	14	.49	.00	.00
7	9.1	4.4	20	7.7	76	14	6.4	6.0	6.7	.46	.00	.00
8	2.7	4.1	13	7.2	48	12	6.2	4.7	3.7	.51	.00	.00
9	1.4	4.6	10	7.4	39	11	6.1	3.9	2.6	.67	.00	.00
10	1.4	3.5	8.5	12	32	11	5.8	3.3	2.1	.52	.00	.00
11	2.3	2.9	9.1	8.4	27	14	5.8	2.7	2.0	.67	.00	.00
12	13	2.9	9.3	6.7	15	8.4	5.7	2.3	1.4	.51	.00	.00
13	4.0	3.1	203	6.8	12	8.3	5.7	4.4	1.0	.66	.00	.00
14	3.8	3.6	134	7.0	9.2	88	6.2	43	1.0	.64	.00	.00
15	5.0	3.4	65	6.6	8.1	44	5.9	19	1.0	.60	.00	.00
16	2.0	3.0	171	34	8.2	26	5.2	6.5	.97	.70	.00	.00
17	.97	3.1	70	46	6.9	20	5.5	3.9	.94	2.5	.00	.00
18	1.2	6.2	544	25	6.9	15	5.9	2.9	327	2.2	.00	.00
19	2.6	5.1	108	16	6.6	12	5.7	2.2	64	.52	.00	.00
20	29	3.6	52	9.0	7.4	226	5.7	74	15	.70	.00	.00
21	30	3.1	41	6.9	7.6	374	7.1	592	6.3	5.0	.00	.00
22	3.9	2.8	29	7.2	203	70	195	151	3.7	37	.00	.00
23	8.6	2.9	21	7.8	911	39	363	38	2.6	12	.00	.00
24	61	2.9	18	8.3	244	27	41	23	2.1	3.6	.00	.00
25	400	7.2	13	7.9	56	19	21	14	1.6	1.0	.00	.00
26	83	147	11	6.8	39	15	15	9.6	1.2	.40	.00	.00
27	25	386	11	8.5	28	65	14	35	.88	.32	.00	.00
28	292	54	12	11	23	42	89	46	.69	.30	.00	.00
29	81	28	12	9.2	---	27	75	20	.58	.28	.00	.58
30	85	16	15	8.7	---	62	55	12	.60	.22	.00	1.5
31	22	---	20	7.9	---	70	---	6.3	---	.26	.00	---
TOTAL	1170.04	934.4	1739.5	368.1	1966.7	1500.7	1057.2	1303.7	481.26	75.74	.33	2.08
MEAN	37.7	31.1	56.1	11.9	70.2	48.4	35.2	42.1	16.0	2.44	.011	.069
MAX	400	386	544	46	911	374	363	592	327	37	.20	1.5
MIN	.00	2.8	6.5	6.6	6.6	8.3	5.2	2.2	.58	.22	.00	.00
CFSM	1.39	1.14	2.06	.44	2.58	1.78	1.29	1.55	.59	.09	.000	.003
IN.	1.60	1.28	2.38	.50	2.69	2.05	1.45	1.78	.66	.10	.00	.00
AC-FT	2320	1850	3450	730	3900	2980	2100	2590	955	150	.7	4.1

CAL YR 1984 TOTAL 6285.24 MEAN 17.2 MAX 787 MIN .00 CFSM .63 IN 8.60 AC-FT 12470
WTR YR 1985 TOTAL 10599.75 MEAN 29.0 MAX 911 MIN .00 CFSM 1.07 IN 14.50 AC-FT 21020

07344484 LAKE CYPRESS SPRINGS NEAR MOUNT VERNON, TX

LOCATION.--Lat 33°03'22", long 95°08'22", Franklin County, Hydrologic Unit 11140305, in brick meter house located at 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 mi².

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 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 herin 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, provided 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, 81,140 acre-ft Feb. 24 at 0200 hours (elevation, 380.31 ft); minimum, 67,590 acre-ft Oct. 3-6 (elevation, 376.42 ft).

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

376.0	66,240	378.0	72,850	380.0	79,980
377.0	69,490	379.0	76,340	381.0	83,770

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67690	74400	74790	74190	73400	76450	74680	74820	73850	73020	72240	70450
2	67660	74400	74580	74090	73400	76020	74580	74650	73780	72880	72170	70390
3	67590	74370	74260	73950	73360	75630	74330	74470	73710	72850	72170	70320
4	67590	74330	74120	73880	73430	75520	74190	74330	73710	72710	72100	70220
5	67590	74300	74230	73850	73540	75240	74090	74230	73540	72640	72070	70150
6	68140	74260	74230	73780	73710	74960	73880	74160	73670	72610	71960	70050
7	68240	74160	74160	73710	73920	74860	73740	74060	73610	72580	71960	70050
8	68240	74060	74060	73640	73990	74680	73710	73990	73430	72580	71930	69950
9	68270	73990	73990	73610	74060	74400	73570	73920	73360	72540	71830	69950
10	68240	73740	73880	73570	74160	74370	73500	73880	73300	72340	71760	69920
11	68600	73710	73780	73470	74060	74300	73430	73850	73260	72340	71690	69820
12	68930	73570	73780	73430	74020	74120	73400	73810	73120	72340	71630	69820
13	69030	73470	74400	73430	73950	74060	73400	73780	73020	72240	71490	69750
14	69160	73360	74680	73400	73850	74370	73360	73740	72920	72130	71460	69750
15	69160	73360	74750	73360	73810	74330	73300	73740	72880	72100	71390	69690
16	69220	73230	75210	73670	73740	74230	73260	73710	72780	72510	71320	69690
17	69160	73160	75490	73710	73670	74160	73190	73710	72810	72510	71220	69690
18	69420	73190	76620	73710	73670	74090	73190	73710	74330	72470	71220	69590
19	69420	73160	76590	73540	73610	73950	73050	73710	74510	72410	71120	69560
20	70550	73090	76270	73570	73570	74930	73050	73710	74370	72470	71090	69490
21	70650	72990	75980	73570	73610	75810	73020	75630	74120	72610	70990	69390
22	70790	72990	75700	73430	75280	75770	74750	76550	74090	72680	70990	69360
23	70920	72950	75350	73430	81100	75490	75520	75030	73920	72680	70820	69320
24	71690	72880	75070	73430	80200	75240	75310	74720	73850	72640	70920	69220
25	72990	73020	74820	73360	79130	75000	75070	74580	73670	72510	70890	69130
26	73780	74930	74750	73330	78180	74750	74820	74440	73540	72510	70820	69060
27	74160	75770	74510	73400	77380	74930	74680	74300	73400	72410	70720	68960
28	74370	75590	74400	73400	76870	74860	74750	74190	73260	72340	70590	68860
29	74400	75310	74330	73430	---	74720	74820	74090	73120	72340	70590	69060
30	74400	75030	74300	73330	---	74930	75170	73990	73090	72340	70550	68990
31	74400	---	74300	73360	---	74930	---	73920	---	72240	70490	---
MAX	74400	75770	76620	74190	81100	76450	75520	76550	74510	73020	72240	70450
MIN	67590	72880	73780	73330	73360	73950	73020	73710	72780	72100	70490	68860
(†)	378.45	378.63	378.42	378.15	379.15	378.60	378.67	378.31	378.07	377.82	377.30	376.85
(‡)	+6710	+630	-730	-940	+3510	-1940	+240	-1220	-860	-850	-1750	-1500

CAL YR 1984 MAX 76620 MIN 67560 (‡) +3180
WTR YR 1985 MAX 81100 MIN 67590 (‡) +1300

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

07344486 BRUSHY CREEK AT SCROGGINS, TX

LOCATION.--Lat 32°58'32", long 95°11'03", Franklin County, Hydrologic Unit 11140305, at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years (water years 1979-85), 15.9 ft /s (9.23 in/yr), 11,520 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 17, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 21	1100	*1,030	*12.93	No other peak greater than base discharge.			

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	15	13	32	6.8	30	24	64	8.4	.87	.05	.02
2	.39	42	11	16	7.4	25	19	30	7.0	.75	.02	.01
3	.51	19	9.0	15	8.6	21	17	20	6.0	.75	.00	.00
4	.44	13	7.9	13	11	24	14	16	5.2	.84	.00	.00
5	.72	9.8	49	11	28	19	12	14	4.3	.81	.00	.00
6	1.1	7.6	43	11	35	14	9.8	11	6.2	.65	.00	.00
7	23	6.3	19	10	33	13	8.7	10	8.6	.55	.00	.00
8	4.5	5.7	15	9.3	19	13	7.4	8.8	5.9	.46	.00	.00
9	1.3	5.8	13	8.9	16	12	6.7	8.0	4.4	.45	.00	.00
10	.85	4.8	12	13	14	12	6.6	6.9	3.4	.46	.00	.00
11	.92	4.0	11	11	12	12	6.9	6.8	3.5	.45	.00	.01
12	6.6	3.7	11	8.9	9.3	10	7.0	7.0	4.3	.70	.00	.04
13	14	3.7	34	8.4	8.4	8.8	6.7	10	3.1	.73	.00	.07
14	4.0	3.7	59	8.6	7.7	68	7.9	34	2.4	.69	.00	.08
15	8.7	3.7	26	8.3	7.1	33	7.2	17	2.2	.46	.00	.19
16	3.2	3.6	73	32	6.7	19	5.8	9.9	2.1	.44	.00	.17
17	1.8	3.4	46	42	6.5	15	4.9	7.5	1.8	3.0	.00	.16
18	1.3	8.3	133	19	6.4	12	4.4	5.9	46	1.0	.00	.13
19	1.2	10	51	14	6.3	11	4.1	6.5	124	.52	.00	.11
20	21	6.2	30	11	7.4	56	3.9	128	16	.63	.00	.09
21	100	4.9	23	8.5	7.3	108	4.2	424	7.1	2.5	.00	.08
22	17	4.3	18	8.8	57	47	56	150	4.7	17	.00	.10
23	30	4.8	15	9.8	310	24	224	40	3.9	5.5	.00	.10
24	23	4.7	14	10	139	18	42	27	3.2	1.7	.00	.08
25	102	13	12	9.7	49	15	22	20	2.5	.76	.00	.07
26	79	41	11	8.0	30	13	18	16	2.1	.42	.01	.08
27	26	179	10	9.4	22	99	19	19	1.7	.33	.00	.12
28	130	38	12	13	19	41	219	32	1.4	.30	.00	.11
29	65	20	12	9.7	---	23	135	19	1.2	.26	.00	.24
30	29	15	11	8.4	---	30	45	14	.96	.30	.00	2.3
31	17	---	24	8.3	---	55	---	11	---	.15	.01	---
TOTAL	714.00	504.0	827.9	406.0	889.9	900.8	968.2	1193.3	293.56	44.43	.09	4.36
MEAN	23.0	16.8	26.7	13.1	31.8	29.1	32.3	38.5	9.79	1.43	.003	.15
MAX	130	179	133	42	310	108	224	424	124	17	.05	2.3
MIN	.39	3.4	7.9	8.0	6.3	8.8	3.9	5.9	.96	.15	.00	.00
CFSM	.98	.72	1.14	.56	1.36	1.24	1.38	1.65	.42	.06	.000	.006
IN.	1.14	.80	1.32	.65	1.41	1.43	1.54	1.90	.47	.07	.00	.01
AC-FT	1420	1000	1640	805	1770	1790	1920	2370	582	88	.2	8.6

CAL YR 1984 TOTAL 3421.54 MEAN 9.35 MAX 179 MIN .00 CFSM .40 IN 5.44 AC-FT 6790
WTR YR 1985 TOTAL 6746.54 MEAN 18.5 MAX 424 MIN .00 CFSM .79 IN 10.72 AC-FT 13380

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 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 mi² above this station is controlled by Lake Cypress Springs on Big Cypress Creek and from 36.0 mi² above this station is controlled by Montecello Reservoir on Blundell Creek, a tributary to Big Cypress Creek. A stage telemeter is located at station. Figures given herin represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-ft)
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, 217,600 acre-ft Feb. 24, 1985 (elevation, 337.95 ft); minimum, 516 acre-ft Aug. 8-17, 1977 (elevation, 290.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 217,600 acre-ft Feb. 24 at 0300 hours (elevation, 337.95 ft); minimum, 175,800 acre-ft Oct. 4, 5 (elevation, 333.32 ft).

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

333.0	173,000	337.0	208,600
335.0	190,400	338.0	218,100

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176200	199600	206200	207000	208700	210500	210200	211600	212600	211000	207100	196900
2	176000	200000	206500	206900	208800	211000	210000	211200	212700	210400	207000	196500
3	175900	200300	206500	206700	208700	211300	209600	210700	212700	210300	206500	196300
4	175800	200800	206500	206600	208600	211400	209100	210200	212800	210100	206200	196000
5	175800	201000	207800	206600	208500	211100	208600	210000	212800	209900	206000	195700
6	177300	201200	207800	206700	209100	210700	208200	210000	213000	209500	205700	195300
7	177900	201200	207700	206800	209400	210500	208100	209900	212800	209300	205500	195100
8	177900	201200	207500	206900	209100	210200	208100	210000	212900	209000	205100	194800
9	178200	201500	207500	207100	209100	210000	208100	210000	212900	208600	204800	194500
10	178200	201400	207300	207200	209000	209700	208200	210000	212800	208400	204400	194200
11	178800	201400	207200	207100	208500	209500	208200	210000	212700	208100	203900	194100
12	179900	201300	207100	207100	208300	209200	208300	210100	212500	207800	203300	193700
13	180000	201300	207900	207200	208300	209500	208300	210900	212300	207500	202800	193400
14	180600	201300	208100	207200	208300	210000	208300	210900	212100	207100	202400	193400
15	180600	201200	208100	207200	208400	209900	208300	211200	211700	206900	201900	193200
16	180700	201200	208700	208300	208600	209700	208300	211200	211300	207700	201500	193000
17	180600	201100	209500	208400	208800	209300	208300	211300	210900	207600	201200	192900
18	181200	201700	211200	208300	209000	208800	208300	211300	213100	207500	200700	192700
19	181100	201400	209300	208000	209200	208400	208300	211200	212700	207400	200400	192500
20	185600	201400	208100	208000	209000	209500	208300	211200	212500	207300	200200	192400
21	186800	201300	207500	208000	208900	210200	208300	212300	212600	207900	200000	192300
22	187100	201200	207200	208000	210800	209400	211200	214000	212600	208100	199600	192100
23	187700	201200	207400	208100	217300	209500	211700	213800	212700	207900	199300	191800
24	188800	201200	207300	208100	211900	209300	212000	213000	212600	207800	199400	191600
25	190900	201500	207100	208200	210200	209400	210100	213200	212400	207600	199000	191500
26	191400	203300	207100	208100	209800	208900	209900	213100	212200	207400	198800	191000
27	191700	204700	207100	208300	208800	209600	209200	213000	212000	207900	198300	190800
28	191900	205100	207100	208100	209800	209900	208700	213300	211700	207800	198000	190700
29	191900	205700	207100	207900	---	209700	210000	213100	211700	207800	197800	191400
30	194100	205900	207100	208300	---	210800	211000	212900	211300	207400	198500	191000
31	198000	---	207600	208400	---	210300	---	212800	---	207200	197200	---
MAX	198000	205900	211200	208400	217300	211400	212000	214000	213100	211000	207100	196900
MIN	175800	199600	206200	206600	208300	208400	208100	209900	210900	206900	197200	190700
(†)	335.84	336.71	336.89	336.98	337.12	337.18	337.25	337.44	337.28	336.85	335.76	335.07
(‡)	+21600	+7900	+1700	+800	+1400	+500	+700	+1800	-1500	-4100	-10000	-6200

CAL YR 1984 MAX 211200 MIN 175800 (‡) +18700
WTR YR 1985 MAX 217300 MIN 175800 (‡) +14600

(†) 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 U.S. Army Corps of Engineers.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 247.49 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1954, water-stage recorder at site 1,900 ft downstream at present datum.

REMARKS.--No estimated daily discharges. 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 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; 13 years (water years 1973-85) regulated, 241 ft^3/s (174,600 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, 13,500 ft^3/s Feb. 24 at 1300 hours (gage height, 18.76 ft); minimum, 1.6 ft^3/s Sept. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	128	50	296	37	586	759	1030	126	7.1	4.3	7.4
2	3.7	469	39	477	32	352	633	1040	38	5.5	4.2	11
3	3.7	831	29	409	82	354	441	987	32	4.9	3.7	4.5
4	3.4	534	22	230	156	441	394	750	27	7.2	3.3	2.8
5	3.0	90	32	121	140	474	372	380	25	7.8	3.3	2.2
6	3.1	45	198	46	267	457	349	178	27	6.7	3.6	1.8
7	6.8	35	326	37	481	415	293	75	23	4.8	3.3	2.2
8	25	27	246	32	549	379	135	28	21	4.0	3.2	3.8
9	14	24	211	34	536	356	41	21	15	3.8	3.1	3.3
10	7.0	22	192	39	466	361	33	18	13	3.8	3.4	2.9
11	5.3	19	180	49	424	356	32	16	11	3.3	3.3	2.7
12	7.5	17	177	40	379	308	32	16	9.3	3.3	3.0	2.5
13	27	14	180	32	223	196	31	17	9.0	3.6	6.5	2.7
14	23	14	206	29	56	268	32	29	9.4	3.7	9.3	3.7
15	21	14	300	27	43	532	29	39	8.3	3.7	4.5	6.4
16	27	15	430	46	37	658	27	32	7.4	3.8	3.0	5.3
17	15	15	584	269	34	510	26	19	7.8	3.6	2.4	4.3
18	15	15	838	459	32	411	25	15	20	4.4	2.4	3.2
19	26	25	1750	286	29	370	24	14	331	5.2	2.4	2.5
20	170	26	2290	188	29	447	23	31	803	5.7	2.1	2.1
21	507	19	1580	101	129	697	21	1220	475	5.8	2.6	2.2
22	896	16	1120	36	429	943	81	7060	48	7.3	2.3	2.9
23	651	16	901	31	1430	1340	762	2820	24	8.6	3.8	3.1
24	336	14	510	32	11300	719	1100	1310	19	7.3	3.6	3.0
25	429	17	227	32	5430	472	1420	1100	12	7.2	3.0	2.5
26	614	43	179	30	2110	386	1060	665	8.9	6.4	3.0	2.1
27	501	290	165	28	1320	462	885	358	9.1	5.1	3.4	1.6
28	248	387	169	78	1110	594	1000	253	8.3	5.3	2.7	1.9
29	554	223	173	148	---	548	897	347	7.3	7.2	2.2	3.9
30	646	81	177	151	---	506	652	333	7.9	6.2	2.1	5.1
31	374	---	192	91	---	641	---	197	---	5.0	2.8	---
TOTAL	6166.1	3485	13673	3904	27290	15539	11609	20398	2182.7	167.3	105.8	105.6
MEAN	199	116	441	126	975	501	387	658	72.8	5.40	3.41	3.52
MAX	896	831	2290	477	11300	1340	1420	7060	803	8.6	9.3	11
MIN	3.0	14	22	27	29	196	21	14	7.3	3.3	2.1	1.6
AC-FT	12230	6910	27120	7740	54130	30820	23030	40460	4330	332	210	209

CAL YR 1984 TOTAL 27518.8 MEAN 75.2 MAX 2290 MIN 1.8 AC-FT 54580
WTR YR 1985 TOTAL 104625.5 MEAN 287 MAX 11300 MIN 1.6 AC-FT 207500

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 microsiemens Sept. 1, 1971; minimum daily, 69 microsiemens 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, 683 microsiemens Oct. 4; minimum daily, 75 microsiemens Feb. 24.
WATER TEMPERATURES: Maximum daily, 30.0°C Aug. 9; minimum daily, 1.0°C Feb. 1, 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 08...	0930	24	277	7.2	15.0	70	14	7.4	74	2.1	77
JAN 31...	0920	100	260	--	6.0	30	7.8	--	--	1.1	67
MAR 14...	0900	9.0	225	7.1	15.0	60	22	8.6	85	1.9	59
APR 24...	1700	1180	183	6.7	20.0	80	8.7	5.1	57	2.6	51
JUN 03...	1800	32	295	7.0	26.0	50	10	5.8	72	5.1	65
AUG 29...	1335	2.3	600	7.2	25.0	50	20	2.3	28	8.0	87

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 08...	40	19	7.2	22	1	6.0	37	46	31	.20	13
JAN 31...	34	15	7.2	23	1	4.5	33	40	30	.20	5.7
MAR 14...	31	13	6.5	19	1	4.7	28	32	27	.20	4.8
APR 24...	25	12	5.0	13	.8	5.0	26	36	17	.20	6.0
JUN 03...	18	15	6.8	23	1	6.5	48	34	31	.20	8.7
AUG 29...	0	21	8.3	78	4	17	107	33	92	.30	7.2

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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											
08...	170	41	5	--	<.010	1.5	.190	.81	1.0	.400	8.5
JAN											
31...	150	27	21	.48	.020	.50	.200	.80	1.0	.120	--
MAR											
14...	120	40	4	.47	.030	.50	.120	.68	.80	.160	8.3
APR											
24...	110	23	1	.27	.030	.30	.160	1.0	1.2	.250	11
JUN											
03...	150	37	5	2.0	.270	2.3	2.70	1.0	3.7	.450	6.7
AUG											
29...	320	22	5	3.4	.230	3.6	2.00	2.0	4.0	1.50	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)
JAN							
31...	0920	<1	62	<1	<10	1	48
APR							
24...	1700	<1	63	<1	<10	3	320
AUG							
29...	1335	4	50	<1	<10	2	38

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						
31...	<1	98	<.1	<1	<1	--
APR						
24...	1	44	<.1	<1	<1	5
AUG						
29...	1	450	<.1	<1	1	11

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	6166.1	155	88	1470	18	295	24	394	40
NOV.	1984	3485	197	111	1040	23	218	29	273	48
DEC.	1984	13673	204	115	4240	24	882	30	1120	50
JAN.	1985	3904	256	142	1500	31	328	36	384	59
FEB.	1985	27290	152	86	6330	17	1280	23	1690	38
MAR.	1985	15539	221	124	5210	26	1090	33	1370	54
APR.	1985	11609	216	121	3800	25	798	32	996	53
MAY	1985	20398	176	100	5490	20	1110	27	1470	45
JUNE	1985	2182.7	243	135	798	29	173	35	205	57
JULY	1985	167.3	382	207	94	51	23	49	22	77
AUG.	1985	105.8	496	262	75	72	20	57	16	84
SEPT	1985	105.6	488	258	74	70	20	56	16	82
TOTAL		104625.5	**	**	30100	**	6240	**	7960	**
WTD.AVG.		287	189	107	**	22	**	28	**	47

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	630	223	262	231	304	231	222	177	260	396	452	614
2	637	156	281	240	351	247	223	205	277	392	448	651
3	665	128	317	229	315	246	232	211	321	380	451	402
4	683	160	314	232	255	234	234	215	327	373	454	395
5	681	247	319	242	323	238	237	221	308	364	455	388
6	664	281	274	275	265	236	236	225	334	366	467	372
7	600	285	237	310	231	232	240	227	330	372	486	367
8	516	297	233	345	213	235	262	254	322	360	501	382
9	414	305	231	383	219	234	286	285	327	357	512	409
10	410	313	233	340	225	232	323	298	343	352	519	437
11	393	331	235	370	234	233	344	314	366	350	521	446
12	371	342	245	362	235	235	353	335	392	340	519	444
13	350	354	240	354	248	250	359	364	394	342	513	440
14	368	358	241	375	297	227	380	349	393	350	606	439
15	333	399	294	380	348	234	384	332	403	360	583	459
16	299	409	242	345	355	219	390	471	420	367	472	444
17	278	412	236	283	383	227	399	543	445	390	439	527
18	307	404	188	217	391	232	389	451	282	394	414	591
19	228	320	157	226	400	229	380	405	227	396	410	598
20	205	300	144	229	406	206	388	363	197	400	414	588
21	114	378	203	242	335	205	384	109	241	398	409	575
22	90	373	214	277	174	199	374	149	297	396	411	543
23	122	379	218	299	125	175	140	165	320	392	415	514
24	210	412	231	320	75	218	193	179	343	415	429	481
25	166	390	235	355	193	226	198	206	363	402	450	452
26	144	336	238	393	205	227	210	214	368	392	448	440
27	154	225	241	384	216	231	220	220	370	390	523	438
28	207	213	253	313	218	234	200	222	385	384	576	433
29	168	226	251	262	---	226	209	220	391	386	608	425
30	146	251	250	256	---	225	236	214	401	390	627	414
31	182	---	258	258	---	206	---	226	---	394	626	---
MEAN	346	307	242	301	269	227	288	270	338	379	489	470

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	21.0	10.0	12.0	1.0	12.0	14.0	20.0	25.0	23.0	26.0	27.0
2	15.0	18.0	12.0	9.0	1.0	12.0	15.0	20.0	28.0	24.0	27.0	25.0
3	16.0	16.0	10.0	9.0	---	13.0	16.0	20.0	28.0	24.0	27.0	25.0
4	18.0	16.0	9.0	8.0	2.0	15.0	17.0	---	26.0	23.0	27.0	26.0
5	20.0	16.0	8.0	7.0	2.0	12.0	18.0	18.0	25.0	24.0	27.0	26.0
6	20.0	15.0	7.0	---	2.0	11.0	16.0	20.0	25.0	25.0	27.0	26.0
7	20.0	15.0	7.0	8.0	4.0	12.0	17.0	21.0	25.0	26.0	26.0	25.0
8	21.0	17.0	7.0	8.0	3.0	14.0	18.0	21.0	25.0	25.0	26.0	25.0
9	21.0	20.0	10.0	8.0	6.0	15.0	15.0	20.0	25.0	25.0	30.0	25.0
10	21.0	18.0	---	8.0	---	15.0	15.0	20.0	26.0	28.0	26.0	25.0
11	21.0	14.0	13.0	7.0	7.0	18.0	16.0	21.0	25.0	25.0	26.0	24.0
12	22.0	13.0	---	4.0	5.0	17.0	17.0	22.0	24.0	28.0	29.0	24.0
13	20.0	13.0	15.0	3.0	6.0	15.0	17.0	22.0	22.0	26.0	28.0	24.0
14	21.0	14.0	15.0	6.0	7.0	15.0	18.0	20.0	21.0	26.0	26.0	23.0
15	21.0	15.0	15.0	10.0	8.0	13.0	18.0	19.0	22.0	25.0	26.0	21.0
16	22.0	15.0	15.0	6.0	7.0	14.0	18.0	20.0	24.0	25.0	25.0	20.0
17	20.0	12.0	16.0	7.0	8.0	12.0	18.0	20.0	25.0	25.0	26.0	21.0
18	21.0	13.0	16.0	8.0	10.0	14.0	19.0	20.0	23.0	25.0	29.0	22.0
19	21.0	11.0	15.0	7.0	12.0	14.0	20.0	18.0	23.0	25.0	26.0	22.0
20	20.0	10.0	15.0	5.0	11.0	16.0	21.0	20.0	23.0	25.0	27.0	22.0
21	19.0	10.0	16.0	3.0	13.0	14.0	20.0	19.0	24.0	26.0	26.0	21.0
22	17.0	7.0	13.0	2.0	15.0	14.0	21.0	20.0	24.0	25.0	26.0	23.0
23	17.0	6.0	12.0	2.0	---	15.0	19.0	21.0	25.0	27.0	26.0	22.0
24	15.0	6.0	14.0	---	---	15.0	20.0	21.0	25.0	28.0	26.0	19.0
25	15.0	9.0	12.0	---	10.0	18.0	20.0	21.0	25.0	26.0	25.0	19.0
26	16.0	12.0	13.0	6.0	---	17.0	21.0	22.0	25.0	26.0	23.0	17.0
27	18.0	12.0	13.0	4.0	12.0	17.0	21.0	23.0	25.0	27.0	23.0	15.0
28	20.0	10.0	15.0	7.0	10.0	18.0	22.0	22.0	24.0	27.0	23.0	16.0
29	20.0	10.0	15.0	6.0	---	20.0	22.0	23.0	22.0	27.0	24.0	18.0
30	19.0	11.0	16.0	8.0	---	20.0	20.0	24.0	23.0	26.0	25.0	16.0
31	22.0	---	16.0	5.0	---	15.0	---	24.0	---	26.0	25.0	---
MEAN	19.0	13.0	13.0	6.5	7.0	15.0	18.5	20.5	24.5	25.5	26.0	22.0

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.

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 it 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 provided 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, 25,800 acre-ft May 22 (elevation, 268.86 ft); minimum, 19,760 acre-ft Sept. 27-29 (elevation, 264.62 ft).

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

264.0	18,980	266.0	21,540	268.0	24,470
265.0	20,230	267.0	22,970	269.0	26,020

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20530	23500	24470	24460	24220	24860	24690	25290	24230	23390	22450	20650
2	20540	23530	24560	24470	24200	24780	24520	25000	24230	23360	22350	20630
3	20520	23500	24610	24460	24220	24730	24340	24800	24230	23420	22320	20570
4	20450	23440	24640	24430	24280	24610	24170	24630	24200	23390	22280	20490
5	20450	23320	24760	24400	24370	24500	24040	24460	24170	23330	22210	20410
6	20630	23170	24730	24220	24430	24470	23870	24250	24130	23300	22140	20360
7	20700	23050	24690	24340	24470	24440	23720	24070	24170	23260	22040	20360
8	20790	23050	24700	24260	24500	24380	23530	23980	24140	23230	21960	20330
9	20870	23000	24750	24260	24490	24220	23410	23950	24110	23210	21880	20320
10	20880	23020	24690	24250	24530	23990	23410	23920	24140	23210	21830	20300
11	21000	23020	24630	24170	24560	23720	23440	23890	24080	23260	21790	20270
12	21850	22990	24560	24130	24560	23470	23440	23900	23990	23110	21760	20260
13	22140	22940	24550	24100	24470	23330	23500	23920	23930	22990	21690	20230
14	22380	22910	24520	24100	24400	23410	23540	23900	23860	22960	21620	20230
15	22540	22910	24490	24020	24340	23410	23560	23920	23810	22910	21540	20230
16	22630	22870	24660	24080	24320	23410	23560	23920	23810	22870	21480	20190
17	22640	22910	24700	24250	24310	23440	23540	23890	23810	22820	21430	20140
18	22700	23050	24870	24290	24290	23440	23540	23920	23990	22730	21510	20130
19	22760	23060	24900	24320	24280	23440	23510	23930	24070	22660	21320	20110
20	23090	23060	24860	24260	24260	24020	23540	24190	24020	22690	21270	20080
21	23270	23030	24800	24260	24310	24290	23540	25790	23960	22730	21210	20060
22	23380	23060	24700	24260	24490	24410	24410	25450	23950	23030	21110	20040
23	23510	23110	24640	24220	24980	24490	24970	25090	23890	23030	21060	19980
24	23540	23150	24640	24170	25660	24590	25000	24830	23830	23000	21020	19890
25	23590	23300	24580	24140	25450	24630	24900	24610	23750	22970	20950	19870
26	23590	23620	24500	24130	25180	24730	24870	24380	23690	22910	20870	19810
27	23540	24130	24470	24170	25000	25180	24780	24190	23660	22940	20820	19760
28	23600	24250	24400	24200	24900	25000	25380	24160	23590	22870	20750	19760
29	23560	24400	24380	24190	---	24860	25210	24170	23510	22780	20700	19930
30	23510	24380	24400	24160	---	24860	25450	24200	23480	22690	20660	19930
31	23380	---	24470	24200	---	24830	---	24220	---	22570	20650	---
MAX	23600	24400	24900	24470	25660	25180	25450	25790	24230	23420	22450	20650
MIN	20450	22870	24380	24020	24200	23330	23410	23890	23480	22570	20650	19760
(†)	267.27	267.94	268.00	267.82	268.28	268.23	268.63	267.83	267.34	266.73	265.32	264.76
(‡)	+2840	+1000	+90	-270	+700	-70	+620	-1230	-740	-910	-1920	-720

CAL YR 1984 MAX 25510 MIN 20450 (‡) +490
WTR YR 1985 MAX 25790 MIN 19760 (‡) -610

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

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 mi^2.

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:

	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 U.S. Army 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, 210,100 acre-ft Oct. 6, 1984 (elevation, 225.98 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 328,400 acre-ft Mar. 26 at 0800 hours (elevation, 232.17 ft); minimum daily, 210,100 acre-ft Oct. 6 (elevation, 225.98 ft).

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

225.0	194,300	232.0	324,800
228.0	245,600	233.0	346,500
230.0	283,700		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212100	23°500	252100	271800	263500	324800	282500	319900	313000	287100	280700	264300
2	211800	240100	256300	270800	263300	326300	276200	322400	309400	286500	279500	263900
3	211300	241200	255800	270400	262800	318000	274500	324300	306500	286300	279300	263300
4	210800	242700	253500	267700	262900	318800	272300	325600	303000	286100	279200	262600
5	210300	243800	255200	267300	264500	316500	271200	326300	298900	285900	278800	262400
6	213800	244900	256500	266200	265000	313800	269100	326500	296500	285500	278600	262200
7	213100	245200	256500	263700	265000	311700	266600	325400	294500	285100	278600	262200
8	212500	245400	255200	262400	265600	310000	264500	322400	292900	284500	278000	261800
9	212800	245400	256000	261200	266400	307800	262800	318600	291900	284300	277600	261600
10	213000	245000	256700	260700	270400	305700	262600	315000	290700	283700	277200	261600
11	216400	244000	257300	258200	271000	303800	262200	311900	290300	283300	276600	260700
12	217400	243600	257800	257100	270000	300600	262000	308400	288700	282700	276000	260700
13	217600	243200	259500	258400	270200	299300	262200	306100	287100	282100	275600	261400
14	217100	242900	261800	256000	270200	304900	262000	303800	285900	281500	275100	261600
15	216700	243200	262400	255200	270200	293300	261600	301000	285500	280900	274300	260900
16	217200	243000	262200	258000	269400	300200	261200	299300	285100	280100	273900	260100
17	218600	242700	265000	259900	268700	290700	260900	297300	284900	279300	273500	259400
18	219000	245800	265600	259400	268300	288500	260700	295100	287500	278800	272500	258800
19	218300	244500	266800	261800	267500	285700	260100	292500	287300	278400	271400	258400
20	219300	244000	268500	262200	266400	286700	260100	292500	286900	278000	270800	258600
21	221200	243600	274100	262600	265800	286700	261800	297100	287500	279300	270200	258400
22	221900	243600	276600	262800	265200	285100	267300	300200	288700	281500	270000	258600
23	222600	243200	276000	262800	272300	284300	271600	312100	289200	282300	269800	258200
24	224300	242900	279300	262800	277400	283500	273700	323100	289400	281700	269600	257100
25	226600	243200	278200	262900	300600	282900	288500	326900	289000	281300	268700	257700
26	228500	247100	278000	262000	316500	281700	292100	326500	289000	280900	267700	256300
27	230100	249500	277200	262900	321400	285300	296100	325600	289000	281300	267100	255200
28	232100	250600	275800	262600	324300	285700	303800	323900	288500	281700	266600	254700
29	231500	249600	274700	262200	---	289200	307800	321600	287700	282100	266200	255800
30	232600	251100	274500	263300	---	287700	314200	318800	287500	281900	265800	256000
31	235500	---	274300	263500	---	284100	---	316100	---	281500	265200	---
MAX	235500	251100	279300	271800	324300	326300	314200	326900	313000	287100	280700	264300
MIN	210300	238500	252100	255200	262800	281700	260100	292500	284900	278000	265200	254700
(†)	227.44	228.30	229.52	228.96	231.98	230.02	231.50	231.59	230.19	229.89	229.05	228.56
(‡)	+23000	+15600	+23200	-10800	+60800	-40200	+30100	+1900	-28600	-6000	-16000	-9200

CAL YR 1984 MAX 279300 MIN 210300 (‡) +21500
WTR YR 1985 MAX 326900 MIN 210300 (‡) +43500

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

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 U.S. Army Corps of Engineers, New Orleans District.

GAGE.--Water-stage recorder. Datum of gage is 180.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army 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.--Estimated daily discharges: Dec. 21-26. 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); 8 years (water years-1959, 1980-85) regulated, 615 ft^3/s (445,600 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, 1,900 ft^3/s Mar. 1 at 1745 hours (gage height, 17.50 ft); minimum daily, 13 ft^3/s Jan. 17,20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	41	62	1200	259	1890	1750	745	1820	42	65	67
2	39	46	62	1190	259	1890	1750	950	1830	42	65	67
3	39	39	61	1180	260	1890	1740	972	1830	42	65	67
4	39	37	61	1180	261	1890	1740	977	1820	42	65	67
5	39	36	61	1180	267	1880	1740	974	1820	42	65	67
6	39	36	61	1180	270	1870	1740	972	1550	42	65	66
7	41	37	61	1180	268	1870	1730	1290	997	42	64	67
8	38	37	61	1170	264	1860	1540	1680	683	42	65	66
9	39	37	61	1170	263	1860	935	1740	615	42	66	66
10	39	36	61	969	263	1860	446	1750	601	78	66	52
11	43	36	62	687	414	1850	194	1750	595	112	66	32
12	44	37	62	631	572	1840	183	1750	588	110	64	32
13	42	37	67	619	580	1840	182	1760	421	109	64	32
14	41	36	67	517	580	1840	179	1770	159	108	64	32
15	41	37	67	289	580	1820	143	1520	110	106	67	32
16	42	43	68	168	580	1820	105	1170	107	86	67	31
17	42	60	67	13	579	1810	104	1080	86	65	67	31
18	42	65	72	14	580	1800	104	1070	44	65	67	31
19	42	62	71	14	580	1790	104	1060	41	65	67	30
20	44	62	134	13	580	1810	104	863	40	65	67	30
21	33	62	379	134	580	1810	111	610	40	64	67	30
22	32	62	610	255	580	1790	130	570	41	72	67	30
23	32	62	695	258	609	1780	177	536	41	65	67	30
24	32	62	888	259	636	1770	140	769	41	64	67	30
25	32	62	1170	258	751	1770	116	1380	41	64	67	29
26	32	62	1170	258	1300	1770	135	1710	42	65	66	28
27	32	62	1190	259	1780	1800	176	1770	42	73	66	28
28	32	62	1190	260	1860	1800	225	1810	42	73	66	28
29	32	62	1190	260	---	1780	225	1820	42	72	66	28
30	32	62	1190	260	---	1770	364	1820	42	65	66	27
31	32	---	1200	259	---	1760	---	1820	---	65	66	---
TOTAL	1167	1477	12221	17284	16355	56580	18312	40458	16171	2089	2042	1253
MEAN	37.6	49.2	394	558	584	1825	610	1305	539	67.4	65.9	41.8
MAX	44	65	1200	1200	1860	1890	1750	1820	1830	112	67	67
MIN	32	36	61	13	259	1760	104	536	40	42	64	27
AC-FT	2310	2930	24240	34280	32440	112200	36320	80250	32080	4140	4050	2490

CAL YR 1984 TOTAL 50467 MEAN 138 MAX 1200 MIN 32 AC-FT 100100
WTR YR 1985 TOTAL 185409 MEAN 508 MAX 1890 MIN 13 AC-FT 367800

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemial and biochemical analyses: January 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
DEC 13...	1600	63	152	7.0	12.0	5	.80	13.0	123	.8	29
APR 25...	1100	114	175	7.1	19.5	25	4.4	8.9	99	.9	40
AUG 27...	1514	66	173	7.1	30.5	20	1.0	7.3	98	1.6	40

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)
DEC 13...	21	5.3	3.8	15	1	4.1	8	26	18	.20	5.3
APR 25...	24	8.9	4.2	14	1	4.3	16	32	16	.30	4.7
AUG 27...	14	8.9	4.2	14	1	4.7	26	24	16	.20	5.7

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, 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)
DEC 13...	83	3	2	<.010	<.10	.030	.37	.40	.020	4.8
APR 25...	94	13	2	<.010	.10	.070	.63	.70	.020	3.9
AUG 27...	94	1	<1	<.010	<.10	.090	.71	.80	.010	7.7

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 13...	1600	<1	62	<1	20	1	29
APR 25...	1100	<1	70	<1	<10	2	190
AUG 27...	1514	1	62	<1	10	<1	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 13...	1	34	2.3	<1	<1	13
APR 25...	<1	23	<.1	<1	<1	<3
AUG 27...	<1	440	<.1	<1	<1	8

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 only) and November 1956 to August 1968 (daily gage heights and discharge measurements only) published by U.S. Army 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 above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: Sept. 9-30. Records good except those for estimated daily discharges or those below 1.0 ft^3/s, which are poor. No known regulation or diversion in vicinity of gage. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--17 years (water years 1969-85), 317 ft^3/s (11.79 in/yr), 229,700 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 U.S. Army Corps of Engineers.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	0800	*2,420	*14.75				

Minimum daily discharge, no flow Oct. 2, 5, 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	465	510	370	263	1900	703	1290	278	38	21	.10
2	.01	510	571	360	267	1360	662	1350	191	32	17	.06
3	.02	488	612	332	269	1010	616	1080	145	28	14	.07
4	.01	450	668	313	272	809	563	974	120	24	12	.08
5	.01	434	690	311	307	695	510	870	103	23	10	.08
6	.03	478	650	311	339	618	464	784	90	20	7.8	.08
7	3.3	509	566	309	348	556	425	737	79	17	6.0	.08
8	3.0	488	475	303	359	515	382	684	69	15	4.4	.07
9	1.9	448	397	292	380	488	323	597	59	14	3.9	.07
10	42	407	339	293	406	463	270	494	53	12	3.3	.07
11	15	369	297	282	440	437	231	391	68	17	2.7	.07
12	56	319	268	262	457	413	198	280	76	14	2.0	.07
13	177	258	256	247	458	385	175	216	62	14	1.8	.07
14	198	200	267	243	449	358	159	198	61	11	1.5	.07
15	154	162	274	241	431	341	146	206	75	8.5	1.3	.07
16	193	145	279	261	405	329	133	195	91	6.9	1.0	.07
17	233	131	283	343	375	324	122	175	93	5.9	.84	.07
18	204	165	320	381	338	347	116	171	108	5.2	.74	.06
19	145	226	373	382	307	370	113	167	177	5.1	.81	.06
20	145	210	399	392	281	405	109	164	166	4.7	.63	.06
21	312	176	414	415	261	470	115	235	117	4.3	.37	.06
22	331	168	441	423	246	486	349	507	111	56	.28	.06
23	305	169	489	420	290	471	650	724	127	80	.19	.05
24	320	164	533	411	475	479	721	732	143	56	.14	.05
25	370	164	570	391	533	505	673	854	156	57	.17	.05
26	389	176	576	357	671	521	1070	907	150	44	.15	.05
27	391	327	543	319	1750	590	1350	899	120	36	.08	.04
28	411	506	485	302	2360	672	1370	799	87	43	.10	.04
29	450	509	427	281	---	683	1370	671	61	41	.12	.04
30	473	466	376	263	---	684	1200	540	46	33	.13	.07
31	468	---	344	257	---	721	---	405	---	26	.12	---
TOTAL	5790.29	9687	13692	10067	13737	18405	15288	18296	3282	791.6	114.57	1.94
MEAN	187	323	442	325	491	594	510	590	109	25.5	3.70	.065
MAX	473	510	690	423	2360	1900	1370	1350	278	80	21	.10
MIN	.01	131	256	241	246	324	109	164	46	4.3	.08	.04
CFSM	.51	.89	1.21	.89	1.35	1.63	1.40	1.62	.30	.07	.01	.000
IN.	.59	.99	1.40	1.03	1.40	1.88	1.56	1.86	.33	.08	.01	.00
AC-FT	11490	19210	27160	19970	27250	36510	30320	36290	6510	1570	227	3.8

CAL YR 1984	TOTAL	71251.70	MEAN 195	MAX 825	MIN .00	CFSM .53	IN 7.26	AC-FT 141300
WTR YR 1985	TOTAL	109152.40	MEAN 299	MAX 2360	MIN .01	CFSM .82	IN 11.12	AC-FT 216500

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. 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.--22 years (water years 1964-85), 259 ft³/s (9.18 in/yr), 187,600 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.--Peak discharges greater than base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 26	2400	*2,760	*12.09	May 25	0100	2,270	11.68

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	45	134	145	105	1190	896	964	204	12	4.7	.00
2	.00	103	128	153	104	967	864	1020	139	9.6	4.3	.00
3	.00	113	118	146	106	810	790	1190	105	8.9	6.3	.00
4	.00	101	107	151	108	694	717	1140	82	8.3	5.4	.00
5	.00	100	93	150	133	590	620	1020	65	7.3	4.0	.00
6	.00	93	85	148	169	503	513	889	55	6.0	2.8	.00
7	.00	82	83	144	181	429	428	742	49	5.8	1.9	.00
8	.00	74	76	132	190	366	351	589	46	6.8	1.4	.00
9	.00	61	74	118	203	318	266	456	48	5.9	1.1	.00
10	.00	46	75	112	213	279	190	307	49	5.0	.76	.00
11	.00	33	74	110	224	245	145	175	44	4.3	.56	.00
12	.00	26	75	105	224	215	124	119	36	3.9	.39	.00
13	.00	22	75	105	216	192	115	102	30	3.1	.24	.00
14	.00	19	75	106	204	205	106	134	26	2.4	.17	.00
15	.00	17	75	103	188	235	99	185	23	1.9	.12	.00
16	.00	13	85	118	170	227	92	177	19	1.8	.09	.00
17	.00	11	114	206	153	239	86	182	15	1.9	.07	.00
18	.00	14	136	210	140	267	79	181	19	1.5	.05	.00
19	1.7	28	162	184	129	285	71	151	28	1.2	.02	.00
20	10	39	176	185	122	359	64	117	65	1.0	.01	.00
21	8.2	34	186	187	117	599	66	227	98	.92	.00	.00
22	5.7	33	192	182	115	680	113	546	143	2.6	.00	.00
23	12	30	195	172	273	677	562	681	161	8.5	.00	.00
24	20	24	191	155	693	712	548	1700	134	27	.00	.00
25	40	22	181	133	667	793	445	2040	83	33	.00	.00
26	49	34	167	117	1670	744	613	1430	50	20	.00	.00
27	53	128	150	112	2420	658	1060	1060	34	11	.00	.00
28	52	178	131	116	1620	642	1150	831	25	8.4	.00	.00
29	46	155	115	116	---	635	1230	638	18	7.2	.00	.00
30	37	135	103	110	---	655	1070	473	14	5.1	.00	.00
31	28	---	103	108	---	806	---	323	---	3.9	.00	---
TOTAL	362.60	1813	3734	4339	10857	16216	13473	19789	1907	226.22	34.38	.00
MEAN	11.7	60.4	120	140	388	523	449	638	63.6	7.30	1.11	.000
MAX	53	178	195	210	2420	1190	1230	2040	204	33	6.3	.00
MIN	.00	11	74	103	104	192	64	102	14	.92	.00	.00
CFSM	.03	.16	.31	.37	1.01	1.37	1.17	1.67	.17	.02	.003	.000
IN.	.04	.18	.36	.42	1.05	1.58	1.31	1.92	.19	.02	.00	.00
AC-FT	719	3600	7410	8610	21530	32160	26720	39250	3780	449	68	.00

CAL YR 1984 TOTAL 30983.72 MEAN 84.7 MAX 687 MIN .00 CFSM .22 IN 3.01 AC-FT 61460
WTR YR 1985 TOTAL 72751.20 MEAN 199 MAX 2420 MIN .00 CFSM .52 IN 7.07 AC-FT 144300

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 above National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1947, nonrecording gage at upstream side of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. No known diversion above station, but some sewage effluent is discharged to tributaries above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--39 years (water years 1947-85), 507 ft^3/s (10.20 in/yr), 367,300 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, 2,280 ft^3/s Mar. 4 at 1300 hours (gage height, 11.62 ft); no flow Oct. 4-5 and Sept. 22-25, 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	107	459	329	281	927	951	1640	1230	39	16	.09
2	.03	342	413	348	273	1080	889	2010	1000	31	11	.08
3	.01	338	342	340	266	1710	834	2000	783	26	9.3	.07
4	.00	254	296	321	264	2230	809	1750	572	23	7.7	.07
5	.00	215	270	309	298	2010	836	1520	379	20	6.3	.07
6	.01	196	251	293	354	1640	882	1340	221	18	4.8	.08
7	19	174	238	273	393	1380	901	1250	146	16	3.4	.08
8	26	151	229	257	407	1180	880	1230	110	14	2.5	.07
9	11	136	215	248	413	1040	825	1200	87	12	2.2	.07
10	8.4	126	196	261	413	918	748	1130	78	10	1.8	.07
11	7.0	113	175	267	447	800	649	1030	83	9.8	1.7	.07
12	46	101	164	264	475	683	545	896	71	8.6	1.6	.06
13	96	91	160	256	459	580	450	754	64	7.7	1.5	.06
14	122	78	220	241	445	508	346	609	59	7.5	1.3	.06
15	121	67	245	221	434	453	260	432	52	7.3	1.2	.05
16	68	60	272	238	419	409	212	281	45	6.3	.99	.05
17	42	56	312	426	403	384	187	223	39	5.2	.83	.04
18	27	83	341	452	380	372	169	220	72	3.8	.73	.03
19	20	147	380	424	355	367	154	230	106	3.0	.67	.02
20	28	162	395	408	329	401	141	239	77	2.9	.60	.01
21	175	153	405	392	304	543	158	306	76	2.9	.53	.01
22	313	133	403	372	283	577	397	392	79	8.2	.43	.00
23	372	115	375	348	345	587	1030	372	76	22	.36	.00
24	411	99	351	330	722	626	1350	369	89	12	.31	.00
25	358	94	329	317	834	690	1360	403	114	10	.30	.00
26	263	103	311	304	790	754	1210	461	134	9.2	.27	.01
27	200	329	299	297	779	892	1120	537	135	34	.23	.01
28	165	488	293	313	837	1000	1180	779	110	38	.17	.00
29	142	491	285	303	---	1010	1440	1290	76	36	.14	.02
30	122	480	271	288	---	1010	1400	1540	52	32	.12	.07
31	104	---	265	283	---	995	---	1460	---	23	.10	---
TOTAL	3266.51	5482	9160	9723	12402	27756	22313	27893	6215	498.4	79.08	1.32
MEAN	105	183	295	314	443	895	744	900	207	16.1	2.55	.044
MAX	411	491	459	452	837	2230	1440	2010	1230	39	16	.09
MIN	.00	56	160	221	264	367	141	220	39	2.9	.10	.00
CFSM	.16	.27	.44	.47	.66	1.33	1.10	1.33	.31	.02	.004	.000
IN.	.18	.30	.50	.54	.68	1.53	1.23	1.54	.34	.03	.00	.00
AC-FT	6480	10870	18170	19290	24600	55050	44260	55330	12330	989	157	2.6

CAL YR 1984 TOTAL 71910.52 MEAN 196 MAX 1330 MIN .00 CFSM .29 IN 3.96 AC-FT 142600
WTR YR 1985 TOTAL 124789.31 MEAN 342 MAX 2230 MIN .00 CFSM .51 IN 6.88 AC-FT 247500

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 microsiemens Nov. 9, 1969; minimum daily, 39 microsiemens 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 on several days during winter months of 1983, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 329 microsiemens May 17; minimum daily, 47 microsiemens Oct. 7.
WATER TEMPERATURES: Maximum daily, 29.5°C July 15, Aug. 1, 4, 7; minimum daily, 0.0°C Feb. 3, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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 07...	1731	169	230	6.5	14.5	70	--	8.4	83	1.3	31
DEC 12...	1800	160	178	6.4	11.5	50	19	11.0	102	1.0	31
MAR 13...	1700	558	182	6.8	15.0	70	6.8	5.8	58	1.2	37
APR 25...	1200	1220	74	6.1	20.0	150	20	5.5	62	1.9	17
JUL 17...	1335	5.3	188	6.5	29.5	140	17	3.4	45	2.4	38
AUG 28...	1256	.15	200	6.6	28.0	65	3.4	3.8	49	1.6	39

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 07...	21	7.9	2.8	30	2	4.6	10	22	50	<.10	18
DEC 12...	24	7.5	3.0	18	1	3.6	7	22	31	<.10	20
MAR 13...	23	8.9	3.6	18	1	3.8	14	28	27	<.10	17
APR 25...	10	4.1	1.6	6.4	.7	2.5	7	15	8.7	.10	11
JUL 17...	13	9.2	3.6	18	1	4.8	25	20	26	.10	18
AUG 28...	4	9.0	3.9	21	2	4.3	35	17	29	.10	15

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 07...	140	--	--	--	<.010	<.10	.060	.84	.90	.120	9.7
DEC 12...	110	10	9	--	<.010	<.10	.020	.48	.50	.060	7.6
MAR 13...	110	13	1	--	<.010	<.10	.090	.61	.70	.090	13
APR 25...	55	18	<1	--	.020	<.10	.120	.78	.90	.100	8.9
JUL 17...	110	136	3	.19	.010	.20	.080	.72	.80	.140	11
AUG 28...	120	2	2	--	<.010	<.10	.040	.56	.60	.030	9.3

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 12...	1800	<1	85	<1	<10	1	230
APR 25...	1200	<1	53	<1	<10	2	990
AUG 28...	1256	<1	83	<1	<10	1	290

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 12...	4	140	<.1	<1	<1	23
APR 25...	4	90	--	<1	<1	12
AUG 28...	<1	1000	<.1	<1	<1	9

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	3266.51	111	70	616	17	154	13	116	20
NOV.	1984	5482	137	85	1260	22	328	16	230	24
DEC.	1984	9160	164	101	2490	27	679	18	439	27
JAN.	1985	9723	187	114	2980	32	846	19	508	30
FEB.	1985	12402	161	99	3310	27	903	17	584	27
MAR.	1985	27756	132	82	6150	21	1590	15	1130	23
APR.	1985	22313	112	70	4220	18	1060	13	795	20
MAY	1985	27893	117	73	5520	19	1410	14	1020	21
JUNE	1985	6215	124	77	1300	20	334	14	240	22
JULY	1985	498.4	164	101	135	27	37	18	24	27
AUG.	1985	79.08	179	109	23	30	6.5	19	4.0	29
SEPT	1985	1.32	195	118	0.4	34	0.1	20	0.07	31
TOTAL		124789.31	**	**	28000	**	7340	**	5100	**
WTD.AVG.		342	134	83	**	22	**	15	**	23

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	158	155	157	191	181	187	136	105	120	222	175	186
2	158	155	157	179	117	132	144	137	142	179	167	172
3	158	153	156	137	116	126	144	142	143	179	164	172
4	---	---	---	136	125	131	148	145	147	185	177	180
5	---	---	---	148	126	136	147	141	144	202	186	196
6	161	152	158	146	144	145	150	138	143	207	201	203
7	290	47	126	231	148	202	142	139	140	206	202	205
8	304	92	158	213	183	196	160	142	150	210	200	204
9	112	92	102	193	178	181	168	161	166	206	201	203
10	122	105	110	186	181	183	167	165	166	211	200	203
11	121	101	106	196	163	174	170	166	168	201	197	199
12	124	100	107	166	153	158	---	---	178	199	195	197
13	122	84	96	165	151	153	180	177	179	202	192	198
14	97	79	88	156	151	153	216	161	179	203	190	195
15	107	80	91	169	154	158	162	160	161	220	204	213
16	105	95	101	184	160	163	167	150	157	221	190	212
17	105	100	103	183	162	165	152	146	150	197	153	160
18	108	104	106	181	147	162	167	143	151	160	149	154
19	114	108	111	146	131	138	163	142	153	161	148	155
20	116	109	114	163	133	139	180	162	164	193	159	171
21	114	78	89	136	121	127	195	161	169	205	195	202
22	91	77	85	151	124	140	181	171	175	198	190	193
23	95	89	93	144	134	138	187	181	185	190	187	189
24	107	88	98	135	134	134	186	182	184	188	180	183
25	113	100	107	137	134	136	184	181	183	182	180	181
26	117	108	114	160	137	148	182	179	180	190	182	186
27	127	115	120	169	106	137	181	178	180	194	190	192
28	154	127	141	115	104	110	187	181	185	194	188	190
29	178	154	166	104	99	100	199	187	192	205	189	198
30	195	179	190	105	101	102	198	195	196	199	192	196
31	194	185	190	---	---	---	200	191	196	194	186	189
MONTH	304	47	122	231	99	148	216	105	165	222	148	190

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	196	188	191	124	119	121	124	121	123	93	87	90
2	195	191	194	119	109	116	125	123	124	91	88	89
3	191	189	191	111	103	105	124	120	122	93	89	91
4	190	186	188	110	104	107	121	119	120	103	93	97
5	186	177	181	113	109	111	120	118	119	115	103	110
6	177	170	174	121	113	117	118	116	117	117	115	116
7	178	168	175	134	121	127	116	114	115	119	115	117
8	168	163	165	148	134	141	118	116	117	132	119	126
9	181	168	175	162	149	156	124	118	120	139	130	136
10	182	178	181	172	163	168	129	124	126	153	137	143
11	178	165	171	175	172	173	137	129	133	166	139	154
12	164	162	163	179	175	177	143	138	141	172	147	159
13	165	162	163	182	178	180	151	144	147	184	151	163
14	169	165	167	185	181	183	160	151	155	221	160	184
15	177	170	174	184	182	183	184	161	172	257	176	229
16	184	178	181	184	181	182	194	185	189	318	194	265
17	188	184	186	183	177	181	199	192	196	329	227	288
18	190	188	189	179	177	178	204	198	200	244	188	206
19	193	190	191	179	174	176	212	204	209	187	167	175
20	196	192	194	174	148	167	218	212	215	167	156	161
21	197	195	196	147	138	141	219	197	215	165	120	151
22	199	196	197	138	132	134	191	106	150	125	121	123
23	198	136	182	134	131	133	98	69	76	133	121	126
24	139	120	126	138	132	136	72	66	69	135	129	132
25	120	115	117	138	128	133	83	67	72	134	121	130
26	120	116	118	127	121	124	99	83	92	120	104	110
27	128	120	124	121	108	114	103	99	102	103	95	98
28	128	123	126	109	107	108	104	93	100	95	81	88
29	---	---	---	111	109	110	92	90	91	81	75	77
30	---	---	---	116	111	113	92	91	91	79	76	77
31	---	---	---	120	115	118	---	---	---	84	79	81
MONTH	199	115	171	185	103	142	219	66	134	329	75	138

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	90	83	86	159	153	156	190	164	170	202	197	200
2	101	91	96	163	158	160	200	171	178	202	198	200
3	115	102	108	166	162	164	199	173	176	201	197	199
4	126	116	121	170	164	167	190	172	175	200	197	199
5	142	126	135	172	168	170	182	173	174	201	196	199
6	152	142	147	175	170	173	199	174	177	200	195	197
7	158	152	156	177	174	175	207	177	181	199	194	196
8	165	159	162	177	174	175	187	178	181	198	193	196
9	182	164	168	177	174	176	192	180	183	199	194	197
10	182	167	170	180	177	178	202	182	185	199	196	197
11	171	166	169	179	174	178	217	184	188	199	194	197
12	176	167	172	182	179	180	191	185	188	199	194	197
13	177	175	176	185	180	182	210	187	190	198	192	196
14	177	176	177	185	182	184	210	189	193	196	193	194
15	177	176	177	187	183	185	214	190	194	194	191	193
16	177	175	176	188	185	187	194	192	192	194	188	192
17	175	173	174	213	154	182	199	191	193	193	188	191
18	174	127	161	164	161	163	217	192	197	193	187	190
19	140	122	130	164	162	163	221	193	197	192	186	189
20	157	135	146	164	163	164	215	194	197	191	187	190
21	158	152	155	164	162	163	208	195	197	189	186	188
22	157	149	152	171	156	162	215	195	199	---	---	---
23	163	157	160	204	165	175	212	195	199	---	---	---
24	261	156	188	198	157	169	200	197	199	---	---	---
25	274	193	245	168	157	161	219	197	200	---	---	---
26	191	152	170	201	161	179	201	198	200	185	182	184
27	149	136	140	183	131	161	202	197	200	185	181	183
28	142	136	139	165	118	133	203	192	199	---	---	---
29	149	141	145	184	146	156	200	196	199	185	174	182
30	154	148	151	174	147	152	202	197	199	181	179	180
31	---	---	---	194	154	165	201	197	200	---	---	---
MONTH	274	83	155	213	118	169	221	164	190	202	174	193

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

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

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.5	2.0	3.0	12.5	12.5	12.5	17.0	15.5	16.0	21.0	20.5	20.5
2	1.5	.5	1.0	13.5	12.5	13.0	17.0	15.5	16.0	21.0	20.5	20.5
3	.5	.0	.0	14.5	13.5	14.0	18.0	16.0	17.0	20.5	20.0	20.5
4	1.0	.0	.5	15.5	14.5	15.0	19.5	17.5	18.5	20.0	19.0	20.0
5	1.5	1.0	1.0	15.0	14.0	14.5	20.0	19.0	19.5	20.5	19.0	20.0
6	2.5	1.5	2.0	14.0	13.0	13.5	19.0	18.0	18.5	21.0	19.5	20.0
7	3.0	2.0	2.5	15.0	13.0	14.0	19.0	17.5	18.5	21.5	20.5	21.0
8	3.5	2.5	3.0	16.5	15.0	15.5	18.5	17.5	18.0	21.5	21.0	21.5
9	5.5	3.5	4.0	17.0	16.0	16.5	18.0	16.5	17.0	21.5	20.5	21.0
10	7.5	5.5	6.5	18.0	16.5	17.0	17.5	16.5	17.0	21.5	20.5	21.0
11	7.5	6.5	7.0	19.0	17.5	18.5	18.5	17.0	17.5	22.0	21.0	21.5
12	6.5	5.5	6.0	19.0	18.5	19.0	18.5	17.5	18.0	23.0	22.0	22.5
13	6.5	5.5	6.0	19.0	17.5	18.0	18.5	17.5	18.0	23.0	22.5	22.5
14	7.0	6.0	6.5	19.0	17.0	18.0	19.0	18.0	18.5	22.5	22.0	22.0
15	7.5	6.5	7.0	17.0	15.5	16.0	19.5	18.0	18.5	22.0	20.5	21.5
16	7.5	6.5	7.0	16.0	15.0	15.5	19.5	18.0	19.0	21.5	20.5	21.0
17	9.0	7.5	8.0	16.0	15.0	15.5	19.5	18.5	19.0	22.0	21.0	21.5
18	10.5	9.0	9.5	16.0	14.5	15.5	20.5	19.0	20.0	21.5	20.5	21.0
19	11.5	10.5	11.0	16.0	14.5	15.5	21.0	20.0	20.5	21.0	20.0	20.5
20	12.0	11.0	11.5	15.5	15.0	15.5	21.0	20.5	21.0	21.0	20.0	20.5
21	13.5	12.0	12.5	15.0	14.5	14.5	21.0	20.5	20.5	21.0	20.5	21.0
22	15.0	13.5	14.0	15.5	14.0	14.5	20.0	19.5	20.0	21.0	20.0	20.5
23	15.5	15.0	15.5	15.5	14.5	15.0	20.0	19.0	19.5	21.5	21.0	21.0
24	15.0	13.0	14.0	16.0	14.0	15.0	20.0	19.0	19.5	21.5	21.0	21.5
25	13.0	12.0	12.5	17.0	15.5	16.0	20.0	19.0	19.5	22.0	21.0	21.5
26	13.5	12.0	13.0	17.5	16.5	17.0	20.5	20.0	20.0	22.5	21.0	22.0
27	13.5	13.0	13.5	18.5	17.5	18.0	21.5	20.5	21.0	22.5	22.0	22.0
28	13.0	12.5	12.5	20.0	18.5	19.0	21.5	20.5	21.0	22.0	21.5	22.0
29	---	---	---	20.5	20.0	20.5	20.5	20.0	20.5	23.5	22.0	22.5
30	---	---	---	20.5	19.0	20.0	20.5	20.0	20.5	24.5	23.0	23.5
31	---	---	---	19.0	17.0	17.5	---	---	---	25.5	24.5	25.0
MONTH	15.5	.0	7.5	20.5	12.5	16.0	21.5	15.5	19.0	25.5	19.0	21.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	25.0	25.5	25.5	24.0	24.5	29.5	27.0	28.0	27.5	26.5	27.0
2	26.5	25.5	26.0	26.0	24.5	25.0	29.0	27.5	28.5	27.5	26.5	27.0
3	26.5	26.0	26.0	25.5	24.5	25.0	29.0	27.5	28.5	27.5	26.5	27.0
4	26.5	26.0	26.0	26.0	24.5	25.0	29.5	27.5	28.5	27.0	26.5	27.0
5	26.5	26.0	26.0	26.5	24.5	25.5	29.0	27.5	28.5	27.5	26.5	27.0
6	26.0	26.0	26.0	26.5	25.0	26.0	29.0	27.5	28.5	27.5	26.5	27.0
7	26.5	25.0	26.0	27.0	25.5	26.0	29.5	28.0	28.5	28.0	27.0	27.5
8	26.5	25.0	26.0	27.0	25.0	26.0	29.0	27.5	28.5	28.0	27.0	27.5
9	27.0	25.5	26.0	28.5	26.0	27.0	29.0	28.0	28.5	28.0	27.0	27.5
10	26.5	25.5	26.0	28.5	26.5	27.5	29.0	28.0	28.5	26.5	26.0	26.5
11	26.0	25.5	26.0	28.5	26.5	27.5	29.0	28.0	28.5	26.5	25.5	26.0
12	26.0	25.0	25.5	29.0	26.5	28.0	29.0	28.0	28.5	26.5	25.5	26.0
13	25.0	23.5	24.0	29.0	27.0	28.0	28.5	27.5	28.0	26.0	25.5	26.0
14	24.0	22.5	23.0	29.0	27.0	28.0	28.5	27.0	28.0	26.0	24.0	25.0
15	24.5	22.5	23.5	29.5	27.5	28.5	28.5	27.5	28.0	24.5	23.5	24.0
16	25.0	23.5	24.5	29.0	27.5	28.5	28.0	26.5	27.5	24.5	23.0	23.5
17	26.5	24.5	25.5	29.0	27.0	28.0	28.5	27.0	27.5	24.0	23.0	23.5
18	26.5	23.5	25.0	28.5	27.0	28.0	29.0	27.5	28.5	24.5	23.5	24.0
19	24.0	23.0	23.5	28.5	27.0	28.0	29.0	28.0	28.5	24.5	23.5	24.0
20	24.5	23.0	23.5	28.5	27.5	27.5	29.0	28.0	28.5	24.5	23.5	24.0
21	24.5	23.5	24.0	28.0	27.0	27.5	29.0	27.5	28.5	24.0	23.0	24.0
22	25.0	24.0	24.5	27.5	25.5	26.0	29.0	27.5	28.0	---	---	---
23	25.5	24.0	25.0	26.5	25.0	25.5	29.0	27.5	28.5	---	---	---
24	26.0	24.5	25.5	27.0	25.0	26.0	29.0	28.0	28.5	---	---	---
25	26.5	25.0	26.0	28.0	26.0	26.5	28.0	27.0	27.5	---	---	---
26	26.5	25.5	26.0	28.0	26.5	27.0	27.5	25.5	26.5	21.5	20.0	20.5
27	26.5	25.5	26.0	27.0	25.5	26.5	27.0	25.0	26.0	20.0	18.5	19.5
28	26.0	25.0	25.5	26.5	25.0	26.0	27.0	25.5	26.5	---	---	---
29	25.0	24.0	24.5	27.0	25.5	26.5	27.0	25.5	26.5	20.5	15.5	19.5
30	25.0	23.5	24.5	28.0	26.0	27.0	27.0	26.0	26.5	19.5	18.0	18.5
31	---	---	---	28.5	26.5	27.5	27.5	26.5	27.0	---	---	---
MONTH	27.0	22.5	25.0	29.5	24.0	27.0	29.5	25.0	28.0	28.0	15.5	25.0

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 September 1985 (discontinued). Records for the period Nov. 1, 1975, to Sept. 30, 1979, published by the U.S. Army Corps of Engineers, New Orleans District, as Cypress Creek (Cypress Bayou) near Karnack, Texas.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--No estimated elevation record. Records fair. This is an elevation-only station used to aid in the operation of Lake O' the Pines and Caddo Lake and is located in the upper end of Caddo Lake 15 mi above the dam.

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, 171.36 ft May 3 at 0500 hours; minimum, 167.50 ft Oct. 6.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167.55	169.54	169.43	169.90	169.37	170.89	170.74	171.28	170.69	168.60	168.46	167.96
2	167.54	169.77	169.39	169.91	169.34	170.96	170.70	171.34	170.62	168.59	168.46	167.95
3	167.53	169.75	169.41	169.86	169.33	170.96	170.64	171.35	170.52	168.56	168.44	167.94
4	167.52	169.63	169.43	169.82	169.34	171.03	170.59	171.28	170.41	168.54	168.41	167.90
5	167.52	169.52	169.43	169.81	169.36	171.10	170.55	171.17	170.29	168.51	168.39	167.91
6	167.69	169.42	169.43	169.79	169.42	171.08	170.52	171.03	170.19	168.50	168.35	167.90
7	167.96	169.36	169.40	169.77	169.45	170.98	170.48	170.89	170.05	168.47	168.36	167.90
8	167.96	169.30	169.35	169.77	169.46	170.87	170.44	170.83	169.84	168.43	168.33	167.88
9	167.99	169.24	169.29	169.79	169.45	170.78	170.39	170.81	169.62	168.41	168.31	167.88
10	168.01	169.17	169.24	169.77	169.49	170.67	170.21	170.79	169.66	168.43	168.30	167.87
11	168.11	169.13	169.19	169.73	169.50	170.57	169.97	170.74	169.54	168.42	168.29	167.85
12	168.32	169.08	169.14	169.64	169.57	170.53	169.77	170.64	169.43	168.41	168.27	167.84
13	168.54	169.03	169.20	169.56	169.60	170.43	169.63	170.60	169.34	168.40	168.26	167.84
14	168.74	168.97	169.23	169.50	169.61	170.39	169.50	170.49	169.19	168.37	168.28	167.81
15	168.80	168.96	169.23	169.42	169.62	170.33	169.37	170.39	169.07	168.36	168.20	167.79
16	168.80	168.94	169.26	169.53	169.61	170.27	169.26	170.25	168.99	168.36	168.19	167.75
17	168.79	168.91	169.26	169.62	169.59	170.22	169.16	170.07	168.93	168.34	168.18	167.74
18	168.76	169.03	169.41	169.59	169.57	170.18	169.09	169.94	169.07	168.31	168.15	167.72
19	168.77	169.11	169.46	169.58	169.54	170.16	169.02	169.83	169.01	168.30	168.14	167.71
20	169.13	169.10	169.45	169.47	169.52	170.34	168.97	169.78	168.97	168.34	168.14	167.68
21	169.45	169.07	169.47	169.40	169.48	170.39	169.03	169.83	168.93	168.34	168.12	167.66
22	169.76	169.02	169.54	169.42	169.47	170.41	169.33	169.75	168.93	168.46	168.09	167.65
23	169.97	168.98	169.58	169.42	169.85	170.40	169.67	169.77	168.89	168.62	168.06	167.60
24	169.97	168.96	169.60	169.41	170.15	170.38	170.21	169.78	168.85	168.59	168.06	167.60
25	169.86	168.97	169.71	169.38	170.15	170.38	170.22	169.85	168.82	168.56	168.05	167.60
26	169.76	169.08	169.77	169.37	170.15	170.37	170.25	170.02	168.79	168.56	168.03	167.58
27	169.63	169.35	169.82	169.39	170.28	170.74	170.36	170.21	168.76	168.58	168.02	167.58
28	169.54	169.47	169.84	169.39	170.62	170.80	170.79	170.35	168.73	168.56	168.01	167.56
29	169.45	169.48	169.84	169.36	---	170.82	170.97	170.46	168.68	168.54	167.99	167.64
30	169.38	169.45	169.83	169.35	---	170.80	171.09	170.60	168.63	168.51	167.97	167.60
31	169.32	---	169.87	169.35	---	170.76	---	170.69	---	168.48	167.95	---
MAX	169.97	169.77	169.87	169.91	170.62	171.10	171.09	171.35	170.69	168.62	168.46	167.96
MIN	167.52	168.91	169.14	169.35	169.33	170.16	168.97	169.75	168.63	168.30	167.95	167.56

CAL YR 1984 MAX 170.22 MIN 167.51
WTR YR 1985 MAX 171.35 MIN 167.52

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 above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bridge plans).

REMARKS.--No estimated daily discharges. Records good. No known diversion. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1966-85), 40.6 ft^3/s (11.49 in/yr), 29,410 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.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 23	1200	*1,780	*10.31	No other peak greater than base discharge.			

Minimum daily discharge, no flow Oct. 1-2, and Aug. 6 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	38	41	97	34	70	48	151	10	2.1	.88	.00
2	.00	111	32	53	34	76	38	231	8.9	2.0	.44	.00
3	.05	88	27	42	39	63	34	98	7.8	16	.18	.00
4	.48	38	23	35	42	72	30	53	7.0	42	.05	.00
5	1.2	26	27	30	71	73	27	39	6.4	13	.01	.00
6	3.2	20	45	28	94	48	22	31	6.1	8.0	.00	.00
7	17	17	34	27	80	42	19	26	6.3	6.2	.00	.00
8	25	15	27	25	63	40	17	22	6.0	4.7	.00	.00
9	15	14	25	26	56	38	16	20	4.8	3.7	.00	.00
10	11	14	24	50	54	36	16	17	51	3.2	.00	.00
11	13	12	22	48	56	35	16	16	146	7.3	.00	.00
12	54	11	22	31	43	32	15	16	86	10	.00	.00
13	70	11	24	27	37	28	14	16	20	5.2	.00	.00
14	36	11	44	27	34	62	24	31	13	3.3	.00	.00
15	44	10	39	26	31	82	22	37	10	2.4	.00	.00
16	36	10	41	56	30	44	15	18	8.3	1.7	.00	.00
17	22	9.5	62	157	29	36	12	14	7.1	1.6	.00	.00
18	19	23	111	101	28	31	11	12	16	1.6	.00	.00
19	17	34	168	56	27	27	9.7	11	75	1.6	.00	.00
20	26	19	136	43	30	73	9.1	14	26	1.3	.00	.00
21	93	14	81	31	31	160	12	190	13	1.4	.00	.00
22	63	12	56	30	30	92	74	267	12	1.6	.00	.00
23	51	11	44	32	131	57	905	138	11	1.9	.00	.00
24	89	11	40	33	476	45	447	49	8.7	5.6	.00	.00
25	79	13	38	31	313	37	174	30	7.3	7.2	.00	.00
26	83	41	31	27	138	32	80	22	6.2	3.3	.00	.00
27	51	174	29	32	85	149	89	18	5.0	2.0	.00	.00
28	36	211	31	63	66	161	79	23	4.3	1.6	.00	.00
29	31	106	30	44	---	76	110	21	3.4	1.9	.00	.00
30	31	56	30	36	---	59	91	17	2.7	1.5	.00	.00
31	31	---	43	34	---	66	---	13	---	1.2	.00	---
TOTAL	1047.93	1180.5	1427	1378	2182	1942	2475.8	1661	595.3	166.1	1.56	.00
MEAN	33.8	39.4	46.0	44.5	77.9	62.6	82.5	53.6	19.8	5.36	.050	.000
MAX	93	211	168	157	476	161	905	267	146	42	.88	.00
MIN	.00	9.5	22	25	27	27	9.1	11	2.7	1.2	.00	.00
CFSM	.70	.82	.96	.93	1.62	1.30	1.72	1.12	.41	.11	.001	.000
IN.	.81	.91	1.11	1.07	1.69	1.51	1.92	1.29	.46	.13	.00	.00
AC-FT	2080	2340	2830	2730	4330	3850	4910	3290	1180	329	3.1	.00

CAL YR 1984 TOTAL 10118.42 MEAN 27.6 MAX 294 MIN .00 CFSM .58 IN 7.84 AC-FT 20070
WTR YR 1985 TOTAL 14057.19 MEAN 38.5 MAX 905 MIN .00 CFSM .80 IN 10.89 AC-FT 27880

SABINE RIVER MAIN STEM

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 mi^2.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 11 to Dec. 16, Jan. 19 to Feb. 7 and Mar. 13 to Apr. 24. Records fair except those for periods of estimated daily discharges, which are poor. The city of Greenville diverts water from City Lakes upstream from gage and from Lake Tawakoni for municipal use. Sewage effluent is returned to a tributary downstream from gage. Extreme low flow is largely sustained by return water from water treatment plant upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 61.7 ft^3/s (10.78 in/yr), 44,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft^3/s May 13, 1982 (gage height, 18.47 ft); no flow in 1964, 1969-70, 1972-73, and 1977-83.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1895, 22 ft in May 1935, from information by local resident and city engineer of Greenville. Flood of July 3, 1913, reached a stage of 20 ft, from information by local resident.

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

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage H'ight (ft)
Dec. 18	1200	4,210	16.23	May 21	2100	3,710	16.11
Apr. 23	0630	*5,010	*16.47				

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	83	15	570	4.1	11	23	76	2.6	.00	.00	.00
2	.00	237	10	53	3.9	9.2	11	23	1.5	.00	.00	.00
3	.00	19	6.0	33	3.7	9.1	8.4	12	1.1	2.0	.00	.00
4	.00	6.4	3.5	24	3.5	32	6.4	7.5	.81	6.0	.00	.00
5	.00	3.1	100	17	9.0	47	5.3	5.5	7.6	.54	.00	.00
6	9.9	1.7	115	14	120	18	4.2	4.4	101	.22	.00	.00
7	3.7	1.2	30	11	75	11	7.6	3.8	20	.09	.00	.00
8	.12	1.2	16	8.9	55	8.6	6.3	3.2	6.8	.06	.00	.00
9	.01	1.1	10	7.6	36	7.2	3.5	2.5	3.5	.04	.00	.00
10	.00	.85	7.5	7.3	29	6.5	2.7	2.2	1.9	.04	.00	.00
11	.21	.80	5.5	6.4	23	5.0	3.0	2.1	1.3	.04	.00	.00
12	.50	.80	4.0	5.0	16	3.1	3.0	1.9	1.1	.04	.00	.00
13	2.8	.75	150	4.2	13	4.8	5.0	81	.74	.04	.00	.00
14	1.5	.75	650	3.9	9.4	1640	4.1	1290	.57	.02	.00	.00
15	.20	.70	200	3.8	7.7	156	3.6	371	.40	.00	.00	.00
16	.26	.70	580	4.6	6.5	22	3.5	24	.28	.00	.00	.00
17	.11	.70	400	89	5.4	12	2.7	11	.24	8.9	.00	.00
18	8.2	15	3330	35	5.1	7.8	2.1	7.8	11	7.0	.00	.00
19	18	40	395	24	4.7	5.7	1.7	5.5	2.1	.98	.00	.00
20	138	12	45	17	6.2	902	1.6	233	.54	.28	.00	.00
21	117	6.5	29	14	5.3	468	1.4	1930	.32	3.8	.00	.00
22	7.1	4.0	22	12	5.4	76	1030	1240	.25	32	.00	.00
23	15	2.8	13	10	684	27	3470	72	.24	4.9	.00	.00
24	94	2.0	9.2	8.5	601	15	138	30	.15	1.2	.00	.00
25	890	2.5	7.4	7.5	49	9.6	21	15	.10	.54	.00	.00
26	93	35	6.3	6.5	22	7.2	18	8.4	.08	.19	.00	.00
27	110	450	5.5	6.0	15	121	13	5.5	.04	.10	.00	.00
28	36	75	5.2	5.5	11	50	86	4.9	.02	.06	.00	.00
29	13	33	4.2	5.0	---	17	736	3.9	.00	.04	.00	3.0
30	5.4	22	64	4.5	---	111	555	4.3	.00	.02	.00	.08
31	2.0	---	281	4.3	---	124	---	3.5	---	.01	.00	---
TOTAL	1566.01	1059.55	6519.3	1022.5	1828.9	3943.8	6177.1	5484.9	166.28	69.15	.00	3.08
MEAN	50.5	35.3	210	33.0	65.3	127	206	177	5.54	2.23	.00	.10
MAX	890	450	3330	570	684	1640	3470	1930	101	32	.00	3.0
MIN	.00	.70	3.5	3.8	3.5	3.1	1.4	1.9	.00	.00	.00	.00
CFSM	.65	.45	2.70	.42	.84	1.63	2.65	2.28	.07	.03	.00	.00
IN.	.75	.51	3.12	.49	.88	1.89	2.96	2.63	.08	.03	.00	.00
AC-FT	3110	2100	12930	2030	3630	7820	12250	10880	330	137	.00	6.1

CAL YR 1984	TOTAL	24569.91	MEAN	67.3	MAX	4000	MIN	.00	CFSM	.80	IN.	11.37	AC-FT	45950
WTR YR 1985	TOTAL	27840.57	MEAN	76.3	MAX	3470	MIN	.00	CFSM	.98	IN.	13.33	AC-FT	55220

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 461.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 26 to June 3. 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.--26 years (water years 1960-85), 79.7 ft^3/s (13.75 in/yr), 57,740 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 greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	2215	6,070	16.39	Apr. 28	0900	13,700	17.21
Dec. 18	0415	*18,600	*17.75	May 14	2045	4,510	16.13
Apr. 23	0100	11,800	17.01	May 21	1700	7,160	16.45

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	139	4.3	913	.83	8.7	14	58	.05	.00	.00	.00
2	.00	398	2.5	63	.81	7.6	7.0	14	.00	.00	.00	.00
3	.00	42	1.5	50	.78	5.6	4.2	4.6	.00	.00	.00	.00
4	.00	17	1.1	41	.79	27	2.4	2.3	.00	.00	.00	.00
5	.00	7.2	98	26	7.9	28	1.4	1.3	.00	.00	.00	.00
6	1.9	3.1	109	17	35	9.6	.92	.57	34	.00	.00	.00
7	23	1.6	26	11	30	4.6	.61	.39	28	.00	.00	.00
8	8.9	.98	13	7.6	16	3.4	.47	.32	1.9	.00	.00	.00
9	11	.81	7.0	5.7	9.1	2.8	.39	.29	.25	.00	.00	.00
10	93	.56	4.3	5.7	6.9	2.5	.34	.27	.08	.00	.00	.00
11	14	.28	2.6	4.6	4.4	2.2	.36	.26	.04	.00	.00	.00
12	14	.17	2.1	2.8	2.1	1.7	.41	.25	.02	.00	.00	.00
13	1.5	.16	136	1.6	1.1	1.4	.76	36	.00	.00	.00	.00
14	53	.17	734	2.0	.83	1220	4.4	1800	.00	.00	.00	.00
15	9.8	.17	222	1.9	.57	160	1.9	1060	.00	.00	.00	.00
16	2.5	.16	615	58	.48	31	.79	28	.00	.00	.00	.00
17	4.1	.16	416	79	.42	17	.48	5.9	.00	.00	.00	.00
18	15	11	9290	26	.39	9.2	.38	1.9	.00	.00	.00	.00
19	232	32	336	12	.38	5.5	.32	.96	.00	.00	.00	.00
20	1290	8.1	84	4.9	.49	800	.29	30	.00	.00	.00	.00
21	1560	2.1	57	3.0	.75	1090	.29	3510	.00	.00	.00	.00
22	53	.96	33	1.7	.69	154	2310	1610	.00	.00	.00	.00
23	104	.57	15	1.4	875	34	5200	60	.00	.00	.00	.00
24	324	.37	9.9	1.4	413	17	129	16	.00	.00	.00	.00
25	1620	.39	5.9	1.5	40	9.3	24	6.4	.00	.00	.00	.00
26	281	23	3.5	1.1	19	5.6	25	3.0	.00	.00	.00	.00
27	323	472	2.8	.95	11	579	34	1.2	.00	.00	.00	.00
28	142	71	3.3	1.6	6.9	65	10300	.75	.00	.00	.00	.00
29	471	19	3.7	1.5	---	22	1990	.40	.00	.00	.00	.00
30	388	9.3	352	1.2	---	39	161	.25	.00	.00	.00	.00
31	42	---	685	.98	---	38	---	.15	---	.00	.00	---
TOTAL	7081.70	1261.31	13275.5	1349.13	1485.61	4400.7	20215.11	8253.46	64.34	.00	.00	.00
MEAN	228	42.0	428	43.5	53.1	142	674	266	2.14	.000	.000	.000
MAX	1620	472	9290	913	875	1220	10300	3510	34	.00	.00	.00
MIN	.00	.16	1.1	.95	.38	1.4	.29	.15	.00	.00	.00	.00
CFSM	2.90	.53	5.44	.55	.68	1.80	8.56	3.38	.03	.000	.000	.000
IN.	3.35	.60	6.27	.64	.70	2.08	9.56	3.90	.03	.00	.00	.00
AC-FT	14050	2500	26330	2680	2950	8730	40100	16370	128	.00	.00	.00

CAL YR 1984 TOTAL 40898.06 MEAN 112 MAX 9290 MIN .00 CFSM 1.42 IN 19.33 AC-FT 81120
WTR YR 1985 TOTAL 57386.86 MEAN 157 MAX 10300 MIN .00 CFSM 2.00 IN 27.13 AC-FT 113800

08017400 LAKE TAWAKONI NEAR WILLS POINT, TX

LOCATION.--Lat 32°48'31", long 95°55'10", Van-Zandt County, 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, 3.8 mi upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.5.

DRAINAGE AREA.--756 mi².

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 29,500 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 Dallas and various other users in the Sabine River basin. The lake was built for water conservation. Figures given herin 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); mimimum since lake first filled in May 1965, 802,700 aver-ft Oct. 21, 1972 (elevation, 433.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,009,000 acre-ft Dec. 20 at 0300 hours (elevation, 439.46 ft); minimum 806,100 acre-ft Oct. 5, 6 (elevation, 433.75 ft).

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

433.0	781,200	437.0	918,200	439.0	991,200
435.0	848,200	438.0	954,300	440.0	1,029,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	810000	909100	909100	979100	938400	948200	961000	969100	958000	929000	911200	875500
2	807700	911900	909800	977600	935500	944600	957600	979100	956200	927900	909800	873700
3	807400	913300	907300	973200	935200	949300	954300	986400	954000	927600	908700	872300
4	806700	914700	908400	969800	936600	947100	952200	986400	952200	926800	907700	870900
5	806100	912900	912200	966100	936600	945300	952200	982000	950300	926800	906600	869200
6	812000	911200	911900	964700	936600	945600	950300	977600	951800	925400	905900	867800
7	814300	911200	911900	962100	937000	945300	949300	973500	951400	924300	904900	866700
8	814300	911200	912200	959100	936200	945600	947500	970200	949600	924000	903500	866000
9	821100	911200	912900	962100	938800	945300	945600	966100	948500	923200	902400	864600
10	821400	910800	912900	957300	939900	944200	945300	963900	947100	922100	901400	863600
11	821800	908700	912900	955800	935900	945300	944600	962100	947100	921800	900000	862200
12	821800	908000	913300	951800	935900	942800	943800	959900	943800	921100	898900	861800
13	822500	906600	917500	950300	935200	946000	945300	958800	941700	919600	897500	861100
14	822500	906600	921400	950000	934400	950300	944200	958800	940600	918500	896100	860400
15	822100	907300	925000	947800	933400	957600	943800	963600	939900	918900	896100	858700
16	823100	905200	931900	951100	934400	957600	942400	964700	939100	917500	894700	858000
17	820800	905600	947100	950000	934100	955400	941700	961300	938100	917100	893700	856600
18	821100	908000	996200	950000	934100	953600	940600	958400	943800	916400	892600	855900
19	822800	906300	1008000	954700	932600	952200	940200	956200	942400	915400	891600	854800
20	837000	905600	1003000	946700	932600	959900	939900	959100	940900	915700	889800	853400
21	851300	904900	997300	944900	934400	972800	938400	977200	939500	919600	888400	853100
22	854800	904200	991200	943800	940900	975400	955100	987900	938800	920000	887000	852000
23	854800	903800	985000	943500	949600	973200	979400	989400	938100	918500	886000	851700
24	860800	902800	982000	943100	952500	970200	987600	983900	937000	917800	884900	848500
25	871600	903500	976500	943100	951800	967200	984200	979400	936200	916800	883200	849200
26	880700	905900	972800	940900	950300	967200	981300	974300	935200	916100	882800	846500
27	886300	908000	969500	943100	948900	967200	983500	970900	934100	915400	881400	844100
28	889800	909100	967600	940600	948900	967600	969500	968000	931900	914700	880000	843400
29	895800	910100	966900	940600	---	965400	962400	965000	930800	913600	879300	849200
30	902100	909400	967600	943500	---	966900	962100	961700	930100	912900	877900	846100
31	903500	---	974300	939900	---	962400	---	959900	---	911900	876900	---
MAX	903500	914700	1008000	979100	952500	975400	987600	989400	958000	929000	911200	875500
MIN	806100	902800	907300	939900	932600	942800	938400	956200	930100	911900	876900	843400
(†)	436.58	436.75	438.54	437.60	437.85	438.22	438.21	438.15	437.33	436.82	435.82	434.94
(‡)	+92500	+5900	+64900	-34400	+9000	+13500	-300	-2200	-29800	-18200	-35000	-30800

CAL YR 1984 MAX 1008000 MIN 806100 (‡) +95300
WTR YR 1985 MAX 1008000 MIN 806100 (‡) +35100

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

08017410 SABINE RIVER NEAR WILLS POINT, TX.

LOCATION.--Lat 32°48'22", long 95°55'09", 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, 3.6 mi upstream from Mc Bee 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 18 to Jan. 27, Aug. 7 to Sept. 30. Records fair except those for periods of estimated daily discharges, which are poor. Flow regulated by Lake Tawakoni (see station 08017400). Several observations of water temperatures were obtained during the year.

AVERAGE DISCHARGE.--15 years, 391 ft^3/s (283,300 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, 6,760 ft^3/s Apr. 30 at 1500 hours (gage height, 16.57 ft); minimum daily, 0.40 ft^3/s, Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	41	12	440	410	472	1510	5510	859	5.7	17	24
2	9.9	43	40	530	276	448	842	4710	756	5.3	18	24
3	9.8	11	24	570	54	399	772	3920	678	8.5	20	20
4	10	20	13	540	62	481	668	2990	602	6.0	19	18
5	10	39	78	510	154	422	720	2820	539	8.8	20	16
6	10	12	71	470	131	372	546	2410	543	14	20	14
7	11	12	12	420	134	349	551	2020	577	4.7	18	12
8	11	12	12	380	87	335	474	1690	538	4.2	18	12
9	12	13	12	350	89	326	397	1400	479	4.5	18	10
10	11	219	13	340	249	304	349	1100	417	5.2	18	10
11	12	19	13	330	504	294	326	978	423	8.4	19	9.5
12	12	12	12	320	122	342	305	916	472	10	19	9.5
13	11	12	13	320	60	300	306	840	284	10	19	9.0
14	11	12	30	330	163	501	336	915	191	10	19	8.5
15	11	12	21	330	150	615	302	936	157	20	20	8.0
16	12	14	40	330	19	789	278	1110	132	15	20	7.5
17	12	13	20	320	20	775	228	1070	98	13	20	7.0
18	12	42	17	300	33	604	199	929	181	13	20	6.5
19	12	62	16	260	19	605	165	809	269	13	21	6.0
20	13	16	16	240	16	689	154	774	206	14	21	5.5
21	13	12	16	220	16	1290	136	1430	146	15	21	5.0
22	13	12	17	190	20	1950	349	2610	116	15	22	2.3
23	13	12	37	170	189	1880	1340	3290	103	15	22	2.0
24	19	12	80	150	576	1270	2920	3050	76	15	22	1.8
25	77	13	100	120	536	1450	2910	2620	50	16	22	1.7
26	11	15	120	120	551	1160	2700	2180	32	16	26	1.6
27	11	129	140	130	540	1330	2450	1750	213	16	26	1.3
28	12	13	170	193	482	1370	4300	1530	174	16	26	.80
29	12	13	250	158	---	1320	5600	1260	18	16	26	.60
30	12	17	270	246	---	1380	5900	1040	7.6	16	25	.40
31	12	---	330	430	---	1170	---	942	---	17	25	---
TOTAL	427.7	884	2015	9757	5662	24992	38033	59549	9336.6	366.3	647	254.50
MEAN	13.8	29.5	65.0	315	202	806	1268	1921	311	11.8	20.9	8.48
MAX	77	219	330	570	576	1950	5900	5510	859	20	26	24
MIN	9.8	11	12	120	16	294	136	774	7.6	4.2	17	.40
AC-FT	848	1750	4000	19350	11230	49570	75440	118100	18520	727	1280	505

CAL YR 1984 TOTAL 48220.91 MEAN 132 MAX 4630 MIN .00 AC-FT 95650
WTR YR 1985 TOTAL 151924.10 MEAN 416 MAX 5900 MIN .40 AC-FT 301300

08018500 SABINE RIVER NEAR MINEOLA, TX

LOCATION.--Lat 32°36'49", long 95°29'08", Wood County, Hydrologic Unit 12010001, on left bank at downstream side of highway embankment 3 ft downstream from left end of 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 above National Geodetic Vertical Datum of 1929. May 12, 1939, 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.--Records good except for estimated daily discharges, Feb. 2-13, Mar. 13 to Apr. 9, which are fair. 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 by 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); 18 years (water years 1968-85) regulated, 862 ft³/s (624,500 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, 8,500 ft³/s May 1 at 1600 hours (gage height, 17.94 ft); minimum daily, 2.0 ft³/s Sept. 27-29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	165	166	2320	300	2410	2320	7960	2260	130	33	10
2	15	338	105	2260	530	1800	2180	8370	2030	57	25	10
3	14	465	77	2190	673	1310	2030	7900	1770	32	20	10
4	14	433	64	2230	658	995	1870	7300	1530	22	17	10
5	14	281	65	2330	466	800	1690	6500	1320	18	17	10
6	14	143	192	2400	381	722	1460	5680	1120	16	15	9.7
7	17	84	327	2410	756	681	1160	4860	906	14	14	9.4
8	20	72	345	2320	783	600	1040	4060	756	14	13	8.9
9	23	56	250	2160	685	526	850	3580	700	14	12	8.3
10	24	41	152	1940	602	483	700	3230	681	16	12	7.6
11	26	33	105	1710	370	455	567	2800	630	17	11	6.7
12	25	33	82	1480	386	424	468	2460	555	14	11	7.9
13	28	125	81	1310	596	421	411	2200	503	12	11	14
14	33	90	110	1210	550	720	388	1990	511	11	11	11
15	49	52	219	1070	278	915	375	1770	442	9.7	11	7.4
16	38	36	570	856	241	954	389	1570	289	9.1	11	5.8
17	27	29	733	834	244	1040	374	1420	207	11	10	4.6
18	22	33	898	921	175	1020	335	1320	225	13	10	4.0
19	19	39	1270	1010	120	951	282	1260	430	14	10	3.7
20	18	35	1670	976	98	1340	241	1280	349	17	10	3.5
21	37	35	2130	834	97	1770	211	1470	336	18	10	3.2
22	122	70	2660	843	115	1780	262	1900	299	20	11	3.0
23	213	65	3420	898	1490	1890	1160	2190	226	28	11	2.8
24	182	47	3970	710	4780	2050	1860	2390	177	22	11	2.5
25	229	40	3920	486	7620	2140	2390	2530	150	28	11	2.5
26	728	127	3710	366	7610	2200	2830	2620	129	45	10	2.4
27	1070	549	3500	347	5180	2330	3130	2750	105	39	10	2.1
28	1240	409	3270	357	3410	2490	3280	2870	81	29	10	2.0
29	930	294	3000	317	---	2540	4090	2830	122	30	10	2.8
30	435	258	2670	350	---	2490	5820	2630	211	25	10	4.3
31	171	---	2450	273	---	2420	---	2450	---	26	10	---
TOTAL	5813	4477	42181	39718	39194	42667	44163	104140	19050	770.8	398	190.1
MEAN	188	149	1361	1281	1400	1376	1472	3359	635	24.9	12.8	6.34
MAX	1240	549	3970	2410	7620	2540	5820	8370	2260	130	33	14
MIN	14	29	64	273	97	421	211	1260	81	9.1	10	2.0
AC-FT	11530	8880	83670	78780	77740	84630	87600	206600	37790	1530	789	377

CAL YR 1984 TOTAL 136140.7 MEAN 372 MAX 4080 MIN 5.0 AC-FT 270000
WTR YR 1985 TOTAL 342761.9 MEAN 939 MAX 8370 MIN 2.0 AC-FT 679900

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 microsiemens June 3, 1971; minimum daily, 70 microsiemens 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, 3,220 microsiemens Oct. 19; minimum daily, 92 microsiemens Oct. 27.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 10; minimum daily, 5.0°C Jan. 22, 23, 31, Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 18...	1150	21	2270	7.1	20.5	5.6	64	1.6	140	96
JAN 07...	1710	2420	220	6.7	7.0	11.0	91	.4	76	9
FEB 26...	1622	7780	130	6.5	14.0	6.6	65	2.0	35	17
APR 10...	0937	1400	240	7.2	16.5	8.1	83	1.4	87	13
JUN 24...	1927	169	265	7.3	27.0	--	--	.3	85	21
AUG 15...	1555	11	720	7.1	29.5	4.5	60	1.1	120	46

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 18...	41	9.5	430	16	7.9	46	89	660	.20
JAN 07...	25	3.3	13	.7	3.9	67	19	15	.20
FEB 26...	10	2.5	10	.8	4.0	18	24	13	.10
APR 10...	28	4.1	16	.8	4.0	74	24	13	.20
JUN 24...	27	4.2	21	1	4.4	64	23	23	.20
AUG 15...	36	7.3	90	4	5.4	74	64	130	.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)
OCT 18...	6.6	1300	.17	.030	.20	.630	.77	1.4	.130
JAN 07...	3.7	120	.39	.010	.40	.050	.45	.50	.050
FEB 26...	5.8	80	.08	.020	.10	.090	1.0	1.1	.110
APR 10...	1.6	140	--	<.010	.40	.040	1.3	1.3	.120
JUN 24...	3.0	140	.39	.010	.40	.060	.64	.70	.100
AUG 15...	5.5	380	--	--	--	--	--	--	--

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	5813	324	176	2760	66	1040	27	422	49
NOV.	1984	4477	368	201	2420	71	859	33	401	60
DEC.	1984	42181	218	119	13600	40	4600	21	2360	37
JAN.	1985	39718	257	140	15100	48	5130	24	2600	44
FEB.	1985	39194	249	136	14400	48	5090	22	2380	41
MAR.	1985	42667	257	140	16200	48	5510	24	2800	44
APR.	1985	44163	209	114	13600	39	4600	20	2390	36
MAY	1985	104140	193	106	29700	36	9990	19	5220	33
JUNE	1985	19050	241	132	6790	45	2310	23	1180	41
JULY	1985	770.8	456	249	517	90	187	40	84	73
AUG.	1985	398	708	384	413	150	156	58	63	110
SEPT	1985	190.1	484	264	136	94	48	43	22	78
TOTAL		342761.9	**	**	116000	**	39500	**	19900	**
WTD.AVG.		939	228	125	**	43	**	22	**	39

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	595	540	406	222	475	218	237	154	216	226	627	697
2	543	260	398	265	535	257	234	145	219	245	520	575
3	666	236	387	246	750	314	245	169	220	279	473	531
4	497	286	370	223	945	332	236	186	223	288	458	526
5	393	309	379	214	1160	336	229	195	225	305	484	524
6	371	438	553	218	1470	357	238	200	227	320	489	516
7	344	428	392	216	574	317	242	206	229	345	499	513
8	358	568	350	217	422	315	235	210	225	358	510	512
9	333	1080	398	224	376	309	239	213	224	375	889	510
10	325	962	548	230	353	315	237	228	221	410	1780	508
11	343	1010	556	231	366	319	245	220	263	437	1480	507
12	630	1120	500	241	421	333	258	219	244	445	1160	496
13	865	585	427	266	259	340	251	217	238	443	832	474
14	1020	411	550	248	283	250	258	214	233	454	836	449
15	1170	407	520	249	344	310	268	222	227	458	720	375
16	1340	432	497	265	392	364	328	260	258	461	669	294
17	2750	458	451	538	370	300	294	262	281	458	646	336
18	2440	473	299	432	358	254	272	240	266	466	625	349
19	3220	458	254	338	391	239	271	227	357	495	623	373
20	2890	611	160	313	457	223	276	218	539	531	656	390
21	1440	631	140	295	723	260	280	212	290	560	705	407
22	796	525	149	257	684	285	280	246	308	438	785	415
23	550	550	163	272	430	270	265	221	301	655	845	422
24	348	556	180	285	152	216	227	175	285	820	760	429
25	540	612	192	294	141	205	180	166	281	966	648	439
26	293	514	200	326	130	212	152	151	275	940	651	443
27	92	135	210	330	131	217	156	143	266	575	652	445
28	114	260	214	291	163	224	178	198	263	448	660	448
29	230	375	217	344	---	241	177	203	280	452	631	462
30	424	474	221	302	---	236	180	208	235	532	735	447
31	417	---	218	273	---	227	---	214	---	548	771	---
MEAN	850	523	339	280	473	277	239	205	264	475	736	460

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

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

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

08018730 BURKE CREEK NEAR YANTIS, TX

LOCATION.--Lat 32°59'26", long 95°37'18", Hopkins County, Hydrologic Unit 12010003, at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. 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.--7 years, 19.8 ft^3/s (8.12 in/yr), 14,350 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.--Peak discharges greater than base dischage of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 18	0600	*4,170	*12.21	May 21	1400	2,250	11.13
Feb. 23	1700	1,970	10.92				

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.7	2.7	53	5.2	23	18	177	11	1.2	1.8	.00
2	.00	26	2.6	15	5.2	21	15	35	7.7	1.1	1.6	.00
3	.00	5.1	2.4	10	6.3	18	13	20	6.0	3.2	5.1	.00
4	.00	3.2	2.4	7.9	8.7	27	12	13	5.0	3.7	6.0	.00
5	.00	2.5	8.0	6.7	10	15	12	11	4.8	3.6	4.1	.00
6	.00	2.1	14	6.0	11	12	10	9.4	11	1.5	2.7	.00
7	.00	1.9	5.3	5.5	11	11	9.5	8.1	15	1.3	2.6	.00
8	.00	1.8	4.1	5.2	15	11	8.9	7.3	8.1	.74	2.4	.00
9	.00	1.7	3.6	5.3	16	11	8.7	7.8	5.1	.64	1.9	.00
10	2.8	1.6	3.4	6.4	14	11	9.7	6.9	4.1	.52	1.6	.00
11	.97	1.5	4.2	6.7	12	11	15	7.1	3.7	.42	1.4	.00
12	.77	1.5	4.3	5.7	9.2	10	15	9.3	3.9	.22	1.2	.00
13	1.1	1.5	3.9	4.3	7.9	8.9	14	16	3.4	.06	1.1	.00
14	1.2	1.6	9.3	5.2	7.2	96	16	30	2.7	.04	1.0	.00
15	1.3	1.7	7.1	5.1	6.7	43	14	15	2.4	.01	.94	.00
16	.99	1.7	49	30	6.6	22	11	9.9	1.9	.17	.62	.00
17	.67	1.8	33	40	6.4	15	9.9	9.6	1.7	.53	.54	.00
18	.57	3.3	1390	15	6.3	12	8.3	7.6	75	.86	.43	.00
19	.63	3.8	137	10	6.6	12	7.0	6.0	56	.46	.32	.00
20	15	2.6	32	6.4	7.7	136	6.2	44	20	.41	.30	.00
21	31	2.0	20	4.3	8.0	302	5.6	894	9.2	.63	.30	.00
22	3.5	2.0	14	4.4	16	98	5.4	288	31	4.3	.17	.00
23	2.9	2.1	9.7	5.3	845	31	245	40	21	7.2	.04	.00
24	27	2.2	8.9	6.3	164	21	74	29	12	6.2	.10	.00
25	203	3.7	7.4	6.3	24	15	34	22	6.3	4.5	.13	.00
26	20	4.4	6.4	5.2	19	13	28	15	4.3	3.6	.06	.00
27	5.0	9.9	6.4	5.9	16	80	28	37	3.8	3.4	.00	.00
28	4.5	6.1	7.3	10	14	33	97	114	2.9	2.8	.00	.00
29	5.9	3.7	8.1	8.2	---	20	83	35	2.2	1.9	.00	.00
30	13	3.0	45	7.5	---	23	97	23	1.4	2.1	.00	.00
31	4.2	---	35	7.5	---	33	---	15	---	1.8	.00	---
TOTAL	346.00	113.7	1886.5	320.3	1285.0	1194.9	930.2	1962.0	342.6	59.11	38.45	.00
MEAN	11.2	3.79	60.9	10.3	45.9	38.5	31.0	63.3	11.4	1.91	1.24	.000
MAX	203	26	1390	53	845	302	245	894	75	7.2	6.0	.00
MIN	.00	1.5	2.4	4.3	5.2	8.9	5.4	6.0	1.4	.01	.00	.00
CFSM	.34	.12	1.84	.31	1.39	1.16	.94	1.91	.34	.06	.04	.000
IN.	.39	.13	2.12	.36	1.44	1.34	1.05	2.20	.39	.07	.04	.00
AC-FT	686	226	3740	635	2550	2370	1850	3890	680	117	76	.00

CAL YR 1984 TOTAL 4754.57 MEAN 13.0 MAX 1390 MIN .00 CFSM .39 IN 5.34 AC-FT 9430
WTR YR 1985 TOTAL 8478.76 MEAN 23.2 MAX 1390 MIN .00 CFSM .70 IN 9.53 AC-FT 16820

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 sq mi².

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 pipe. Deliberate impoundment began June 29, 1979, and closure of the dam was completed in January 1980. The lake was built for 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 mi² upstream from 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 provided by URS/Forest and Cotton, Inc., Consulting Engineers, for the Sabine River Authority. Observed elevations for the period Oct. 31, 1979, to Jan. 31, 1980, were provided by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 651,000 acre-ft May 29, 1985 (elevation, 402.09 ft); minimum observed 46,140 acre-ft Dec. 11-14, 1979 (elevation, 361.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 651,000 acre-ft May 29 at 0800 hours (elevation 402.09 ft); minimum, 320,800 acre-ft Oct. 5 (elevation, 386.75 ft).

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

386.0	308,200	394.0	457,100	400.0	596,300
390.0	378,100	398.0	547,100	403.0	675,800

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321400	370100	374600	445700	451500	508700	547300	610000	650200	645100	635000	620800
2	321100	371900	375000	446700	450900	508700	546600	610200	649900	644800	634500	620000
3	321100	373100	374400	446700	450700	508900	546600	609500	649900	644000	634000	619500
4	320900	373700	375000	446500	451900	510300	547100	609200	649100	643500	633500	619000
5	320800	373500	376400	446500	453400	511000	547100	609200	648500	643500	632900	618500
6	322500	373100	376400	446100	455100	509800	547100	608900	647800	642700	632700	617900
7	323000	373000	376600	446500	456500	509800	546400	608700	648300	642200	631900	617400
8	323000	373000	376800	446300	457100	510300	545900	608400	648500	641900	631900	617200
9	324800	373100	377000	446100	457600	510500	545900	608200	647800	641400	631300	616700
10	324500	373100	377000	447000	459700	510500	545600	607900	647200	640900	631100	616100
11	324000	372600	377200	446700	458400	511000	545600	607900	648300	640900	630300	615900
12	323600	372200	377200	447000	458200	510300	546100	607700	646700	640300	629700	616400
13	327500	371900	378300	446100	459100	512100	546100	610200	645900	639800	629200	616100
14	327900	371900	380300	445700	458800	513500	545900	610500	645100	639300	628700	616100
15	327700	371900	381400	446100	458200	514400	545600	610000	644800	638700	628400	615400
16	328200	371500	385200	445500	458200	515100	545400	609700	644300	639000	627600	614900
17	327500	371500	380900	448600	458200	514800	545200	609500	643800	639000	627100	614300
18	327700	372800	416300	449000	458600	514600	544700	609200	645900	638500	626600	614100
19	327400	372100	427300	449900	458600	518300	544700	610200	645600	638000	626300	613600
20	331800	371700	430100	451900	458600	533600	544700	620800	646200	639000	625800	613300
21	334100	371500	432300	449900	458800	537400	545200	637700	646400	639300	625200	613100
22	335600	371300	433800	449700	462500	538300	560400	646700	646400	639000	624700	612500
23	336300	371100	434400	449700	495400	538800	571100	648500	646700	638200	624200	612000
24	340800	371000	436200	449700	503900	538800	572600	649400	647000	638000	624700	611000
25	349600	371100	435800	449700	505700	538100	573100	649400	647800	637200	623900	611000
26	355800	374100	436200	449200	507500	542800	574100	649100	648000	637400	623400	610200
27	357900	374800	436600	450100	507100	543800	583800	649600	648500	637200	622600	609200
28	361300	374600	437200	449900	508000	544700	598900	650700	647200	636600	622300	608900
29	362800	374800	438000	449700	---	548300	603000	651000	646400	636400	622100	611800
30	365900	375000	439100	451300	---	547100	607100	651000	645900	635800	621800	610200
31	366800	---	443400	451500	---	547800	---	650700	---	635300	621000	---
MAX	366800	375000	443400	451900	508000	548300	607100	651000	650200	645100	635000	620800
MIN	320800	370100	374400	445500	450700	508700	544700	607700	643800	635300	621000	608900
(†)	389.38	389.83	393.34	393.73	396.32	398.03	400.42	402.08	401.90	401.50	400.96	400.54
(‡)	+44900	+8200	+68400	+8100	+56500	+39800	+59300	+43600	-4800	-10600	-14300	-10800

CAL YR 1984 MAX 443400 MIN 284200 (‡) +159300
WTR YR 1985 MAX 651000 MIN 210800 (‡) +288300

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

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 from mouth.

DRAINAGE AREA.--585 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1924 to April 1926, February 1939 to current year. Discharge from 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 above 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.--No estimated daily discharges. Records good except those for periods Oct. 1 to Nov. 7, which are fair. Since May 1962, flow from 31.0 mi 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 (capcity 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 mi^2. 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 ft^3/s (313,000 acre-ft/yr); 6 years (water years 1980-85) regulated, 182 ft^3/s (131,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,600 ft^3/s Mar. 30, 1945 (gage-height, 29.85 ft, from floodmark), from rating curve extended above 49,000 ft^3/s; no flow at times most years.

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, 5,280 ft^3/s Feb. 23 at 2330 hours (gage height, 16.81 ft); minimum daily, no flow Aug. 15-24, Aug. 27 to Sept. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	158	55	93	24	136	201	523	35	4.0	.37	.00
2	.14	287	41	62	25	122	117	309	28	3.5	.34	.00
3	.08	260	32	49	30	98	78	191	22	2.6	1.5	.00
4	.04	192	26	40	27	82	61	88	18	3.1	.97	.00
5	.02	84	75	32	72	76	49	58	15	3.0	.52	3.6
6	.02	29	74	28	156	61	42	44	16	2.6	.32	8.2
7	.31	23	123	26	186	51	35	35	22	2.1	.23	7.3
8	.44	17	68	24	154	46	29	30	16	1.8	.16	7.0
9	.21	14	50	22	96	43	24	25	13	1.7	.13	6.8
10	.37	11	42	26	74	41	21	22	10	1.4	.12	6.7
11	.64	11	37	28	67	39	19	19	9.9	1.2	.12	6.7
12	.48	6.0	33	23	57	38	18	17	9.1	1.1	.05	6.6
13	.56	4.2	47	19	44	33	18	18	7.7	1.0	.02	7.6
14	.68	3.3	104	18	38	120	22	36	7.6	.94	.01	7.2
15	.56	2.4	182	18	34	188	22	52	5.8	.83	.00	7.5
16	.37	3.0	221	36	30	100	18	35	4.8	.91	.00	6.9
17	.41	3.6	325	150	28	65	16	26	4.2	1.2	.00	6.5
18	.64	5.9	471	97	26	51	14	19	58	.87	.00	6.1
19	.48	8.2	582	60	25	43	12	16	352	.74	.00	6.2
20	.31	11	408	44	24	147	11	21	360	.84	.00	6.4
21	6.0	6.2	282	32	24	448	11	1110	140	1.4	.00	6.6
22	14	3.9	181	26	52	849	136	2520	48	1.2	.00	6.6
23	16	3.0	102	25	1740	508	1050	1270	31	.98	.00	6.7
24	19	2.5	70	25	3530	290	890	565	24	.95	.00	6.7
25	53	3.5	55	24	1470	166	382	275	17	.88	.33	6.7
26	200	49	44	22	684	94	189	130	13	.71	.08	6.6
27	200	502	37	20	345	321	96	69	9.9	.78	.00	6.9
28	111	488	35	23	205	571	737	144	8.3	.70	.00	7.1
29	133	241	33	22	---	314	1770	186	6.3	.57	.00	7.5
30	117	95	33	22	---	190	1080	95	4.8	.44	.00	9.8
31	99	---	41	23	---	205	---	52	---	.41	.00	---
TOTAL	974.99	2527.7	3909	1159	9267	5536	7168	8000	1316.4	44.45	5.27	178.50
MEAN	31.5	84.3	126	37.4	331	179	239	258	43.9	1.43	.17	5.95
MAX	200	502	582	150	3530	849	1770	2520	360	4.0	1.5	9.8
MIN	.02	2.4	26	18	24	33	11	16	4.2	.41	.00	.00
AC-FT	1930	5010	7750	2300	18380	10980	14220	15870	2610	88	10	354

CAL YR 1984	TOTAL	22349.97	MEAN	61.1	MAX	600	MIN	.00	AC-FT	44330
WTR YR 1985	TOTAL	40086.31	MEAN	110	MAX	3530	MIN	.00	AC-FT	79510

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 microsiemens Oct. 5, 1972; minimum daily, 37 microsiemens Dec. 11, 1971.
WATER TEMPERATURES (1976-1979, 1981-85); 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, 860 microsiemens Nov. 19; minimum daily, 135 microsiemens May 22.
WATER TEMPERATURES: Maximum daily, 28.0°C on several days during June, July, August and September; minimum daily, 4.0°C Jan. 22, 23, Feb. 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 02...	1640	.18	316	7.4	16.0	85	18	20	8.4
JAN 31...	0700	24	747	--	5.0	140	130	31	14

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 02...	28	1	6.1	67	21	45	.30	2.9	170
JAN 31...	90	3	4.0	5	110	160	.20	21	430

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	974.99	343	191	502	53	140	42	111	74
NOV.	1984	2527.7	340	189	1290	54	365	42	285	73
DEC.	1984	3909	379	210	2220	61	642	46	487	81
JAN.	1985	1159	629	346	1080	120	364	72	226	130
FEB.	1985	9267	273	152	3810	42	1060	34	845	59
MAR.	1985	5536	349	194	2900	55	827	43	639	75
APR.	1985	7168	240	134	2590	36	691	30	583	53
MAY	1985	8000	206	115	2490	30	647	26	562	46
JUNE	1985	1316.4	307	171	607	48	171	38	134	66
JULY	1985	44.45	565	311	37	100	12	66	7.9	110
AUG.	1985	5.27	592	326	4.6	110	1.5	69	1.0	120
SEPT	1985	178.50	331	184	89	52	25	41	20	72
TOTAL		40086.31	**	**	17600	**	4950	**	3900	**
WTD.AVG.		110	293	163	**	46	**	36	**	63

08019000 LAKE FORK CREEK NEAR QUITMAN, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333	294	416	559	725	375	328	234	336	498	628	---
2	335	290	451	496	717	410	377	257	345	500	631	---
3	336	296	508	561	710	468	388	300	354	522	569	---
4	338	325	507	675	720	495	417	336	383	551	577	---
5	350	360	441	648	675	510	434	344	410	558	590	627
6	347	377	442	649	614	525	433	375	434	566	604	526
7	360	397	400	670	539	538	453	396	642	577	620	419
8	346	427	439	685	485	545	475	417	595	593	627	422
9	347	429	458	692	510	554	500	450	530	599	636	421
10	324	452	480	653	553	566	530	475	519	604	621	419
11	312	446	508	718	557	577	570	500	521	614	623	325
12	320	463	539	721	571	593	610	542	533	618	614	323
13	345	498	555	720	590	615	638	546	561	621	613	300
14	347	499	459	735	601	544	634	630	594	622	612	284
15	363	555	438	788	627	484	608	575	615	628	---	305
16	383	598	385	704	680	467	650	598	650	633	---	316
17	390	599	316	651	677	499	675	457	665	578	---	314
18	414	650	310	529	698	512	665	531	587	590	---	306
19	417	860	300	537	704	520	661	544	235	548	---	303
20	413	857	310	544	700	440	670	525	220	546	---	295
21	421	851	351	570	713	275	674	230	277	555	---	290
22	439	850	385	600	650	246	495	135	290	568	---	284
23	452	818	414	622	241	289	183	150	305	586	---	286
24	425	824	449	658	175	307	235	182	323	591	---	282
25	395	786	450	696	247	352	250	216	385	567	577	286
26	334	710	505	685	273	375	280	261	417	565	587	278
27	301	309	540	682	306	321	325	282	433	573	---	279
28	307	325	565	747	352	296	210	295	443	593	---	278
29	346	350	602	745	---	305	183	239	465	607	---	278
30	369	388	622	766	---	335	205	272	482	619	---	277
31	370	---	665	747	---	329	---	306	---	620	---	---
MEAN	364	529	458	660	558	441	459	374	452	581	608	336

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

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

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 provided by Wisenbaker, Fix, and Assocaites, 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 10,730 acre-ft Feb. 23 at 1900 hours (elevation, 421.97 ft); minimum, 6,190 acre-ft Oct. 4-6 (elevation, 416.44 ft).

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

416.0	5,890	419.0	8,110	422.0	10,760
417.0	6,590	420.0	8,940	423.0	11,720
418.0	7,330				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6210	7290	8430	8250	8170	8550	8530	8680	8210	8020	7750	7240
2	6200	7350	8410	8260	8120	8520	8460	8530	8190	7990	7720	7210
3	6200	7370	8390	8280	8130	8470	8420	8430	8170	7970	7710	7200
4	6190	7370	8360	8310	8160	8460	8370	8350	8170	7950	7690	7180
5	6190	7370	8340	8340	8250	8430	8320	8300	8160	7940	7670	7160
6	6290	7390	8330	8370	8330	8400	8290	8260	8180	7930	7650	7120
7	6330	7370	8300	8390	8380	8390	8260	8250	8170	7930	7630	7140
8	6330	7370	8250	8390	8370	8370	8230	8210	8170	7910	7610	7120
9	6320	7370	8190	8390	8350	8340	8210	8190	8150	7890	7600	7100
10	6320	7370	8150	8390	8330	8340	8200	8170	8130	7870	7570	7090
11	6320	7340	8120	8350	8300	8340	8190	8170	8120	7860	7560	7070
12	6360	7330	8110	8300	8270	8200	8170	8170	8080	7850	7530	7060
13	6370	7330	8220	8270	8290	8220	8170	8170	8050	7820	7500	7050
14	6420	7350	8320	8250	8260	8350	8210	8220	8030	7810	7490	7050
15	6420	7340	8350	8250	8240	8360	8200	8210	8030	7790	7460	7050
16	6420	7320	8400	8390	8250	8320	8180	8190	8010	7860	7450	7040
17	6410	7300	8480	8390	8250	8280	8170	8170	7990	7860	7430	7030
18	6410	7340	8740	8360	8250	8260	8170	8130	8580	7830	7420	7030
19	6410	7330	8730	8320	8230	8250	8140	8130	8550	7820	7400	7010
20	6600	7330	8600	8270	8250	8660	8140	8540	8420	7850	7380	7000
21	6600	7330	8490	8370	8250	8950	8210	9950	8310	7890	7360	6970
22	6620	7330	8410	8390	8530	8770	8730	9180	8260	7890	7340	6970
23	6640	7330	8350	8250	10620	8630	8950	8780	8230	7890	7310	6940
24	6720	7330	8360	8190	9640	8530	8670	8560	8200	7860	7340	6920
25	6890	7330	8390	8150	9120	8450	8520	8420	8170	7850	7340	6910
26	6990	7920	8380	8130	8850	8390	8430	8340	8140	7840	7320	6900
27	7010	8390	8380	8130	8680	8680	8420	8430	8100	7820	7310	6880
28	7140	8420	8350	8130	8590	8610	9310	8440	8060	7820	7300	6860
29	7180	8430	8330	8100	---	8540	8980	8370	8050	7800	7280	6860
30	7220	8430	8300	8170	---	8550	8790	8300	8030	7780	7270	6890
31	7220	---	8250	8170	---	8580	---	8250	---	7760	7260	---
MAX	7220	8430	8740	8390	10620	8950	9310	9950	8580	8020	7750	7240
MIN	6190	7290	8110	8100	8120	8200	8140	8130	7990	7760	7260	6860
(†)	417.86	419.40	419.18	419.07	419.59	419.58	419.82	419.18	418.90	418.56	417.91	417.42
(‡)	+1000	+1210	-180	-80	+420	-10	+210	-540	-220	-270	-500	-370

CAL YR 1984 MAX 8740 MIN 6190 (‡) +1250
WTR YR 1985 MAX 10620 MIN 6190 (‡) +670

(†) 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 mi².

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 above 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.--No estimated daily discharges. Records good. Since June 1962, flow is affected somewhat by the flood-detention pool at Lake Winnsboro (station 08019300).

AVERAGE DISCHARGE.--46 years, 179ft³/s (129,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s Mar. 31, 1945 (gage height, 24.1 ft, from floodmark, present site and datum), from rating curve extended above 13,000 ft³/s; minimum 3.5 ft³/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.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 26	0130	*4,240	*16.52	May 24	1300	2,090	14.02
Apr. 25	2400	1,540	12.99				

Minimum daily discharge, 7.5 ft³/s Sept. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	196	505	116	88	869	662	1160	271	47	47	10
2	18	222	610	121	91	653	474	1200	250	37	35	8.6
3	18	247	399	127	92	518	391	893	182	35	29	8.1
4	19	244	242	134	94	412	358	670	136	31	25	7.5
5	21	205	178	138	111	334	296	516	110	29	20	7.7
6	22	207	150	132	126	287	221	402	92	25	17	9.1
7	27	214	132	119	139	246	176	296	85	23	15	10
8	33	174	125	102	161	216	145	209	80	20	14	8.9
9	35	126	125	100	204	195	125	149	75	21	14	10
10	34	99	147	100	245	177	112	120	76	18	13	15
11	38	83	170	99	265	154	99	101	78	17	12	22
12	43	72	162	96	244	138	88	87	68	21	11	20
13	50	64	142	93	202	127	81	85	58	18	12	19
14	55	61	135	93	167	147	77	106	52	17	11	19
15	63	56	132	93	150	157	71	119	46	15	11	15
16	71	55	140	102	136	169	66	141	42	11	11	14
17	68	54	167	121	123	203	64	141	39	15	11	14
18	55	66	251	123	112	256	62	133	50	28	9.9	12
19	49	77	421	139	103	277	60	125	114	27	10	12
20	43	82	525	164	96	290	56	108	169	22	9.9	11
21	45	82	647	198	90	404	53	149	261	25	9.8	9.7
22	55	78	712	182	94	365	69	232	629	38	9.7	9.1
23	68	76	665	141	224	348	214	435	668	48	9.4	9.0
24	86	76	489	121	689	524	431	1920	435	46	9.9	9.5
25	124	77	369	109	2400	652	1260	1470	260	55	11	8.1
26	143	84	274	99	3690	562	1380	1000	166	53	12	7.8
27	146	135	214	93	1920	450	958	701	120	41	11	9.9
28	147	159	175	91	1180	371	649	510	95	37	11	10
29	157	187	150	89	---	383	645	351	77	43	10	10
30	179	240	130	87	---	1050	685	253	63	57	9.9	19
31	194	---	118	87	---	977	---	234	---	67	10	---
TOTAL	2124	3798	8801	3609	13236	11911	10028	14016	4847	987	451.5	355.0
MEAN	68.5	127	284	116	473	384	334	452	162	31.8	14.6	11.8
MAX	194	247	712	198	3690	1050	1380	1920	668	67	47	22
MIN	18	54	118	87	88	127	53	85	39	11	9.4	7.5
AC-FT	4210	7530	17460	7160	26250	23630	19890	27800	9610	1960	896	704

CAL YR 1984 TOTAL 33104.4 MEAN 90.4 MAX 712 MIN 3.5 AC-FT 65660
WTR YR 1985 TOTAL 74163.5 MEAN 203 MAX 3690 MIN 7.5 AC-FT 147100

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1985 to September 1985.
WATER TEMPERATURES: April 1985 to September 1985.

INSTRUMENTATION.--Beginning April 1985 specific conductance and water temperature are recorded continuously at this station.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 74 mg/L Feb. 23; minimum daily mean, 1 mg/L on several days during August and September.
SEDIMENT LOADS: Maximum daily, 239 tons Feb. 26; minimum daily, 0.02 tons Sept. 4, 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT 16...	0845	68	170	6.6	20.0	65	6.4	6.7	76	1.1	31	25
DEC 14...	1600	137	203	6.3	14.5	30	.30	8.4	83	1.0	42	39
FEB 14...	1800	161	220	6.4	8.0	20	2.6	11.1	94	1.3	44	40
APR 05...	1552	288	160	6.2	20.0	100	7.1	6.2	69	2.6	37	25
MAY 16...	1800	145	168	--	24.0	--	--	--	--	--	35	24
JUN 25...	1920	245	136	6.3	26.5	100	6.6	--	--	.2	32	22
AUG 14...	1523	11	108	6.5	27.0	80	4.5	5.8	74	.2	23	3

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 16...	7.7	2.8	19	2	3.0	6	20	34	<.10	12	100	22
DEC 14...	9.9	4.1	19	1	3.9	3	37	31	<.10	17	120	3
FEB 14...	10	4.5	19	1	3.4	4	40	29	<.10	12	120	18
APR 05...	8.8	3.7	13	1	3.6	12	29	19	.10	9.5	94	8
MAY 16...	8.4	3.5	17	1	3.2	11	22	29	<.10	14	100	--
JUN 25...	7.9	3.0	11	.9	4.2	10	28	18	<.10	12	90	20
AUG 14...	5.7	2.2	10	.9	2.6	20	6.5	16	<.10	13	68	1

DATE	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)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
OCT 16...	10	<.010	<.10	.010	.39	.40	.050	.010	5.8	6.0	<1
DEC 14...	1	<.010	<.10	.020	.38	.40	.040	<.010	6.7	5.3	25
FEB 14...	10	<.010	<.10	.040	.56	.60	.020	<.010	4.8	5.0	<1
APR 05...	1	<.010	<.10	.040	1.1	1.1	.090	.020	14	14	2
MAY 16...	--	--	--	--	--	--	--	--	--	--	--
JUN 25...	9	<.010	.10	.070	.83	.90	.100	.020	11	11	5
AUG 14...	<1	<.010	.20	.070	.43	.50	.060	.030	4.8	4.8	1

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT 16...	0845	<1	<10	1300	<100	340	1.0
DEC 14...	1600	<1	<10	270	<100	280	.7
FEB 14...	1800	<1	10	650	100	130	--
APR 05...	1552	<1	<10	2500	<100	290	.2
JUN 25...	1920	<1	<10	2600	<100	330	<.1
AUG 14...	1523	1	<10	1700	<100	200	.2

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 16...	0845	<.1	<1	<.10	<1.0	<.01	<.1	<.1	<1.0	<.01	<.1
FEB 14...	1800	<.1	<1	<.10	<1.0	<.01	<.1	<.1	1.0	<.01	.1
JUN 25...	1920	<.1	<1	<.10	<1.0	<.01	<.1	<.1	1.0	<.01	<.1

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 16...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1
FEB 14...	<.01	.3	<.01	<.1	<.01	<.1	<.01	.1	<.01	<.01	<.1
JUN 25...	<.01	.2	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT 16...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01
FEB 14...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01
JUN 25...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01

DATE	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOTAL (UG/L)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
OCT 16...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1	<1
FEB 14...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1	<1
JUN 25...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1	<1

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 16...	<10	<.01	<.1	.01	<.1	<.01	<.01	<.1	<.01	<.1
FEB 14...	<10	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.1
JUN 25...	<10	<.01	<.1	.03	<.1	<.01	<.01	<.1	<.01	<.1

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

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												

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	96	117	103	109
2							---	---	115	106	102	104
3							---	---	135	114	107	110
4							---	---	143	124	114	119
5							---	---	160	130	124	127
6							---	---	162	135	130	132
7							---	---	158	138	135	136
8							---	---	157	142	138	140
9							---	---	161	146	142	144
10							---	---	157	151	146	149
11							156	155	155	154	150	152
12							159	155	157	157	154	155
13							162	158	160	160	156	158
14							163	160	162	159	150	154
15							163	159	161	152	146	148
16							165	162	163	164	148	158
17							172	165	168	161	154	156
18							176	171	174	164	154	159
19							180	176	177	171	165	168
20							178	176	177	170	160	166
21							180	176	178	160	77	132
22							180	130	164	119	84	109
23							130	102	117	134	94	121
24							127	110	121	93	78	82
25							108	98	100	85	77	80
26							98	96	97	97	85	91
27							102	96	99	106	97	102
28							107	103	106	115	106	110
29							112	103	106	125	115	119
30							116	113	115	133	125	129
31							---	---	---	134	131	134
MONTH							180	96	143	171	77	131

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	132	129	130	129	122	126	183	144	153			122
2	135	131	133	133	127	130	188	148	156			125
3	138	135	137	133	131	132	181	133	145			128
4	141	138	140	132	129	131	132	127	130			133
5	142	140	141	130	126	128	127	120	124			131
6	142	140	141	127	123	125	146	113	118			124
7	141	137	139	123	121	122	113	109	111			120
8	140	136	138	122	119	120	109	106	108			127
9	148	136	139	120	118	119	107	105	106			123
10	160	148	154	122	120	121	105	103	104			115
11	162	159	161	124	122	123	103	99	101			104
12	162	159	161	129	124	127	103	98	99			105
13	164	162	163	132	127	128	99	96	98			108
14	165	161	163	132	125	126	---	---	108			110
15	167	161	163	125	123	125	---	---	110			119
16	176	168	172	123	116	120	---	---	115			123
17	182	176	179	115	111	112	---	---	116			125
18	189	169	184	113	106	110	---	---	114			129
19	167	138	148	119	101	111	---	---	111			132
20	162	129	145	113	97	100	---	---	113			134
21	161	129	142	112	94	98	---	---	116			139
22	128	119	122	117	91	101	---	---	117			143
23	119	117	118	137	98	121	---	---	121			141
24	127	119	123	163	139	156	---	---	115			136
25	132	112	124	217	160	185	---	---	113			137
26	119	113	116	230	182	206	---	---	109			139
27	168	119	123	205	158	178	---	---	111			128
28	164	122	125	196	141	165	---	---	112			121
29	131	124	127	175	129	140	---	---	116			124
30	133	124	130	161	124	132	---	---	119			112
31	---	---	---	150	128	140	---	---	117			
MONTH	189	112	143	230	91	131	188	96	116			125

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

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

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												

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	23.0	22.0	22.5
2							---	---	---	22.5	21.5	22.0
3							---	---	---	22.0	21.0	21.5
4							---	---	---	21.5	20.0	21.0
5							---	---	---	21.5	20.0	21.0
6							---	---	---	22.0	20.5	21.0
7							---	---	---	22.5	21.0	22.0
8							---	---	---	23.0	22.0	22.5
9							---	---	---	23.0	22.0	22.5
10							---	---	---	22.5	21.5	22.0
11							18.5	18.0	18.0	23.0	22.0	22.5
12							19.0	18.0	18.5	24.0	23.0	23.5
13							19.0	18.5	19.0	24.0	23.5	23.5
14							19.5	18.5	19.0	23.5	22.5	23.0
15							20.0	18.5	19.5	22.5	21.0	22.0
16							20.5	19.0	20.0	22.5	21.0	22.0
17							21.0	19.0	20.0	23.0	22.0	22.5
18							22.0	20.0	21.0	22.5	21.5	22.0
19							22.0	21.0	21.5	21.5	20.5	21.0
20							22.0	21.5	22.0	22.0	21.0	21.5
21							22.0	21.5	21.5	22.0	21.0	21.5
22							22.0	20.0	21.5	22.0	21.0	21.5
23							21.0	19.0	20.0	22.5	22.0	22.0
24							21.5	20.0	20.5	22.5	21.5	22.0
25							21.0	19.5	20.0	23.0	22.0	22.5
26							21.0	20.5	21.0	24.0	22.5	23.0
27							22.5	21.0	22.0	24.0	23.0	23.5
28							22.5	22.0	22.0	23.5	23.0	23.0
29							22.5	21.5	22.0	25.0	23.5	24.0
30							23.0	22.0	22.5	26.0	25.0	25.5
31							---	---	---	27.0	26.0	26.5
MONTH							23.0	18.0	20.5	27.0	20.0	22.5

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	26.5	27.0	24.5	23.5	24.0	28.0	26.5	27.5	26.5	25.0	26.0
2	27.5	26.5	27.0	25.0	24.0	24.5	28.0	27.0	27.5	26.5	25.5	26.0
3	27.5	26.5	27.0	25.0	24.0	24.5	28.0	27.0	27.5	26.5	25.5	26.0
4	27.5	26.5	27.0	25.0	24.0	24.5	28.0	27.0	27.5	26.5	26.0	26.0
5	27.0	26.5	27.0	25.0	24.0	24.5	28.5	27.5	28.0	27.0	26.0	26.5
6	27.0	26.5	26.5	25.5	24.5	25.0	28.5	27.5	28.0	27.0	26.0	26.5
7	26.5	25.5	26.0	25.5	25.0	25.5	28.0	27.5	28.0	27.0	26.0	26.5
8	27.0	25.5	26.0	26.0	25.0	25.5	28.0	27.0	27.5	27.0	26.0	26.5
9	27.5	26.0	26.5	26.5	25.5	26.0	28.0	26.5	27.5	27.0	26.0	26.5
10	27.0	26.5	27.0	26.5	25.5	26.0	27.5	26.5	27.0	---	---	---
11	27.0	26.5	26.5	26.5	25.5	26.0	27.5	26.0	27.0	---	---	---
12	26.5	25.5	26.0	27.0	25.5	26.0	27.5	26.5	27.0	---	---	---
13	25.5	23.5	24.5	27.0	25.5	26.5	27.5	26.5	27.0	---	---	---
14	24.0	22.5	23.5	27.0	25.5	26.5	27.5	26.5	27.0	---	---	---
15	24.5	23.0	24.0	27.0	26.0	26.5	27.0	26.5	26.5	---	---	---
16	26.0	24.0	25.0	27.0	26.0	26.5	27.0	25.5	26.5	---	---	---
17	27.0	25.0	26.0	27.0	26.0	26.5	27.5	26.0	26.5	---	---	---
18	27.0	24.0	25.0	27.0	26.0	26.5	28.0	26.5	27.0	---	---	---
19	24.5	21.5	23.5	27.0	26.0	26.5	28.0	26.5	27.5	---	---	---
20	24.5	23.5	24.0	26.5	26.0	26.5	27.5	27.0	27.0	---	---	---
21	25.0	21.0	24.0	26.5	26.0	26.0	27.0	26.0	26.5	---	---	---
22	25.0	21.0	24.0	26.0	25.0	25.5	27.5	26.0	27.0	---	---	---
23	26.0	22.0	24.5	25.5	24.5	25.0	27.5	26.0	27.0	---	---	---
24	26.5	23.5	25.5	26.5	25.0	25.5	27.5	26.0	26.5	---	---	---
25	26.5	24.5	26.0	27.0	26.0	26.5	26.0	25.0	25.5	---	---	---
26	26.5	25.5	26.0	27.5	26.5	27.0	25.5	24.0	24.5	---	---	---
27	26.5	25.5	26.0	27.5	26.5	27.0	25.0	24.0	24.5	---	---	---
28	26.0	25.0	25.5	27.0	26.0	26.5	25.0	24.0	24.5	---	---	---
29	25.0	23.5	24.0	27.0	26.0	26.5	25.5	24.0	24.5	---	---	---
30	24.5	23.0	24.0	27.5	26.0	27.0	26.0	24.5	25.0	---	---	---
31	---	---	---	27.5	26.5	27.0	26.5	25.0	25.5	---	---	---
MONTH	27.5	21.0	25.5	27.5	23.5	26.0	28.5	24.0	26.5	27.0	25.0	26.5

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	18	10	.49	196	24	13	505	23	31
2	18	14	.68	222	25	15	610	21	35
3	18	11	.53	247	22	15	399	20	22
4	19	14	.72	244	21	14	242	18	12
5	21	12	.68	205	18	10	178	16	7.7
6	22	15	.89	207	16	8.9	150	12	4.9
7	27	19	1.4	214	14	8.1	132	10	3.6
8	33	15	1.3	174	14	6.6	125	10	3.4
9	35	11	1.0	126	14	4.8	125	10	3.4
10	34	14	1.3	99	14	3.7	147	12	4.8
11	38	11	1.1	83	14	3.1	170	15	6.9
12	43	15	1.7	72	10	1.9	162	10	4.4
13	50	19	2.6	64	7	1.2	142	8	3.1
14	55	15	2.2	61	6	.99	135	10	3.6
15	63	17	2.9	56	5	.76	132	8	2.9
16	71	17	3.3	55	6	.89	140	10	3.8
17	68	17	3.1	54	6	.87	167	12	5.4
18	55	12	1.8	66	6	1.1	251	14	9.5
19	49	10	1.3	77	7	1.5	421	16	18
20	43	10	1.2	82	5	1.1	525	18	26
21	45	10	1.2	82	4	.89	647	18	31
22	55	10	1.5	78	3	.63	712	19	37
23	68	12	2.2	76	4	.82	665	12	22
24	86	14	3.3	76	3	.62	489	8	11
25	124	17	5.7	77	4	.83	369	6	6.0
26	143	15	5.8	84	5	1.1	274	7	5.2
27	146	12	4.7	135	10	3.6	214	7	4.0
28	147	20	7.9	159	15	6.4	175	7	3.3
29	157	15	6.4	187	20	10	150	9	3.6
30	179	25	12	240	25	16	130	8	2.8
31	194	26	14	---	---	---	118	9	2.9

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	116	9	2.8	88	5	1.2	869	10	23
2	121	8	2.6	91	4	.98	653	10	18
3	127	6	2.1	92	5	1.2	518	9	13
4	134	5	1.8	94	6	1.5	412	10	11
5	138	5	1.9	111	8	2.4	334	10	9.0
6	132	3	1.1	126	10	3.4	287	10	7.7
7	119	3	.96	139	11	4.1	246	10	6.6
8	102	6	1.7	161	12	5.2	216	10	5.8
9	100	5	1.4	204	13	7.2	195	10	5.3
10	100	4	1.1	245	14	9.3	177	10	4.8
11	99	5	1.3	265	12	8.6	154	10	4.2
12	96	4	1.0	244	10	6.6	138	11	4.1
13	93	5	1.3	202	7	3.8	127	11	3.8
14	93	5	1.3	167	5	2.3	147	16	6.4
15	93	5	1.3	150	6	2.4	157	17	7.2
16	102	6	1.7	136	4	1.5	169	14	6.4
17	121	9	2.9	123	4	1.3	203	14	7.7
18	123	6	2.0	112	6	1.8	256	14	9.7
19	139	8	3.0	103	6	1.7	277	15	11
20	164	8	3.5	96	7	1.8	290	22	17
21	198	8	4.3	90	10	2.4	404	42	46
22	182	6	2.9	94	10	2.5	365	18	18
23	141	6	2.3	224	74	59	348	13	12
24	121	6	2.0	689	59	105	524	18	25
25	109	4	1.2	2400	27	175	652	15	26
26	99	4	1.1	3690	24	239	562	11	17
27	93	6	1.5	1920	26	135	450	14	17
28	91	5	1.2	1180	27	86	371	12	12
29	89	4	.96	---	---	---	383	18	19
30	87	5	1.2	---	---	---	1050	20	57
31	87	6	1.4	---	---	---	977	14	37

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	662	10	18	1160	12	38	271	14	10
2	474	8	10	1200	12	39	250	14	9.5
3	391	8	8.4	893	9	22	182	14	6.9
4	358	9	8.7	670	7	13	136	14	5.1
5	296	14	11	516	8	11	110	14	4.2
6	221	13	7.8	402	12	13	92	12	3.0
7	176	10	4.8	296	12	9.6	85	12	2.8
8	145	11	4.3	209	13	7.3	80	12	2.6
9	125	11	3.7	149	13	5.2	75	12	2.4
10	112	10	3.0	120	12	3.9	76	11	2.3
11	99	10	2.7	101	10	2.7	78	12	2.5
12	88	9	2.1	87	11	2.6	68	11	2.0
13	81	10	2.2	85	12	2.8	58	11	1.7
14	77	10	2.1	106	16	4.6	52	20	2.8
15	71	11	2.1	119	16	5.1	46	23	2.9
16	66	10	1.8	141	15	5.7	42	20	2.3
17	64	11	1.9	141	16	6.1	39	20	2.1
18	62	12	2.0	133	16	5.7	50	26	3.5
19	60	10	1.6	125	16	5.4	114	40	12
20	56	10	1.5	108	14	4.1	169	52	24
21	53	10	1.4	149	41	19	261	47	33
22	69	17	3.2	232	42	27	629	42	71
23	214	61	36	435	48	77	668	27	49
24	431	49	54	1920	47	233	435	22	26
25	1260	27	92	1470	20	79	260	30	21
26	1380	15	56	1000	13	35	166	28	13
27	958	12	31	701	12	23	120	28	9.1
28	649	10	18	510	11	15	95	26	6.7
29	645	12	21	351	12	11	77	23	4.8
30	685	10	18	253	14	9.6	63	22	3.7
31	---	---	---	234	15	9.5	---	---	---

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	47	22	2.8	47	8	1.0	10	1	.03
2	37	22	2.2	35	8	.76	8.6	3	.07
3	35	20	1.9	29	6	.47	8.1	2	.04
4	31	19	1.6	25	5	.34	7.5	1	.02
5	29	18	1.4	20	6	.32	7.7	1	.02
6	25	20	1.4	17	5	.23	9.1	3	.07
7	23	20	1.2	15	5	.20	10	6	.16
8	20	19	1.0	14	4	.15	8.9	4	.10
9	21	17	.96	14	4	.15	10	8	.22
10	18	18	.87	13	4	.14	15	6	.24
11	17	19	.87	12	4	.13	22	8	.48
12	21	20	1.1	11	4	.12	20	6	.32
13	18	18	.87	12	4	.13	19	5	.26
14	17	18	.83	11	3	.09	19	6	.31
15	15	7	.28	11	3	.09	15	7	.28
16	11	6	.18	11	3	.09	14	2	.08
17	15	7	.28	11	1	.03	14	13	.49
18	28	6	.45	9.9	2	.05	12	5	.16
19	27	8	.58	10	2	.05	12	7	.23
20	22	6	.36	9.9	4	.11	11	4	.12
21	25	10	.68	9.8	3	.08	9.7	6	.16
22	38	12	1.2	9.7	6	.16	9.1	6	.15
23	48	14	1.8	9.4	2	.05	9.0	6	.15
24	46	11	1.4	9.9	2	.05	9.5	2	.05
25	55	10	1.5	11	2	.06	8.1	5	.11
26	53	10	1.4	12	2	.06	7.8	4	.08
27	41	10	1.1	11	1	.03	9.9	6	.16
28	37	10	1.0	11	2	.06	10	5	.14
29	43	11	1.3	10	1	.03	10	6	.16
30	57	11	1.7	9.9	4	.11	19	6	.31
31	67	9	1.6	10	3	.08	---	---	---

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. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 243.85 ft above 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.--Estimated daily discharge: July 18-24. 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 at 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); 25 years (water years 1961-85) regulated, 1,626 ft^3/s (1,178,000 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, 7,380 ft^3/s Mar. 4 at 0230 hours (gage height, 29.23 ft); minimum daily, 17 ft^3/s Sept. 27, 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	1260	1440	3140	679	6280	4100	4440	3620	202	133	24
2	26	1210	1330	2600	658	6810	4120	4740	3480	252	121	23
3	28	1280	1110	2460	664	7230	4010	5060	3280	259	97	22
4	27	1410	784	2420	846	7310	3800	5350	2970	192	90	21
5	25	1410	571	2410	927	6990	3520	5650	2580	139	85	21
6	25	1290	476	2410	1160	6390	3150	6010	2170	108	73	22
7	72	1020	447	2410	1190	5540	2760	6320	1820	94	61	22
8	53	611	510	2420	1290	4390	2370	6520	1530	84	54	21
9	49	415	676	2440	1480	3040	2010	6610	1280	74	48	29
10	57	312	729	2460	1620	1940	1680	6570	1070	65	44	31
11	57	250	663	2460	1660	1340	1400	6430	939	61	43	35
12	96	212	568	2380	1530	1120	1180	6240	865	55	42	47
13	136	184	489	2210	1260	1010	1000	5880	794	50	37	41
14	160	163	456	1990	1020	1020	856	5540	709	46	33	33
15	195	156	770	1740	1040	1210	776	5130	639	45	32	31
16	270	191	755	1640	987	1530	721	4600	609	44	31	31
17	267	191	1020	1730	788	1710	683	3980	552	60	29	31
18	216	187	1410	1690	665	1760	662	3240	504	71	29	31
19	165	197	1700	1610	621	1760	631	2580	598	84	27	32
20	138	232	1970	1550	569	2050	589	2100	652	96	27	30
21	123	243	2190	1500	512	2880	539	2040	883	107	27	28
22	115	226	2390	1450	486	3490	580	2310	1080	118	26	26
23	134	199	2590	1340	760	3640	1330	2370	1250	131	25	23
24	215	190	2770	1250	2570	3560	1990	2720	1140	145	24	22
25	399	219	2890	1230	3560	3510	2530	3510	823	153	24	22
26	536	275	3000	1110	4400	3490	3140	3890	571	137	23	21
27	679	542	3090	921	5170	3500	3570	4000	428	125	23	18
28	1010	1070	3360	786	5710	3550	3760	4030	341	113	25	17
29	1280	1560	3810	738	---	3540	3990	4020	281	112	26	27
30	1460	1590	3980	720	---	3610	4160	3930	233	126	25	28
31	1470	---	3810	687	---	3890	---	3770	---	131	25	---
TOTAL	9508	18295	51754	55902	43822	109090	65607	139580	37691	3479	1409	810
MEAN	307	610	1669	1803	1565	3519	2187	4503	1256	112	45.5	27.0
MAX	1470	1590	3980	3140	5710	7310	4160	6610	3620	259	133	47
MIN	25	156	447	687	486	1010	539	2040	233	44	23	17
AC-FT	18860	36290	102700	110900	86920	216400	130100	276900	74760	6900	2790	1610

CAL YR 1984	TOTAL 237627	MEAN 649	MAX 3980	MIN 14	AC-FT 471300			
WTR YR 1985	TOTAL 536947	MEAN 1471	MAX 7310	MIN 17	AC-FT 1065000			

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 miles southwest of the intersection of Swinging Bridge Road and Farm Road 2206 in Longview, 2.5 miles downstream from Hawkins Creek, 2.6 miles upstream from U.S. Highway 259, and at mile 357.4.

DRAINAGE AREA.--2,943 mi^2.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Daily discharges above 500 ft^3/s are not published. Streamflow is partially regulated by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, by Lake Fork Reservoir (station 0818800), capacity 675,800 acreft, 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 observed gage height, 23.55 ft May 14, 1985, but may have been slightly higher on Mar. 8, 1985; minimum daily discharge, 0.50 ft^3/s Sept. 4, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 23.55 ft May 14 at about 1900 hours, but may have been higher on Mar. 8; minimum daily discharge, 0.50 ft^3/s Sept. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	---	---		---				---	186	159	4.1
2	36	---	---		---				---	174	167	3.2
3	36	---	---		---				---	227	169	1.6
4	28	---	---		---				---	233	152	.50
5	32	---	---		---				---	171	137	.53
6	32	---	---		---				---	139	134	3.6
7	103	---	474		---				---	118	120	29
8	127	---	446		---				---	103	104	35
9	87	475	---		---				---	94	97	16
10	75	358	---		---				---	83	90	35
11	87	278	---		---				---	75	80	35
12	210	231	---		---				---	71	75	52
13	175	203	---		---				---	67	58	62
14	159	187	477		---				---	59	28	58
15	169	178	467		---				---	52	27	41
16	191	181	---		---				---	56	18	36
17	226	197	---		---				---	58	16	30
18	220	260	---		---				497	128	13	28
19	203	228	---		---				---	141	7.4	28
20	191	215	---		---				---	162	7.1	25
21	215	226	---		---				---	150	7.1	30
22	197	221	---		494				---	152	7.1	32
23	191	208	---		---				---	256	5.2	22
24	210	200	---		---				---	204	4.1	21
25	356	205	---		---				---	178	13	13
26	---	260	---		---				---	177	4.1	15
27	---	---	---		---				---	172	4.9	16
28	---	---	---		---				331	165	3.1	12
29	---	---	---		---				282	154	1.9	14
30	---	---	---		---				226	157	1.9	52
31	---	---	---		---				---	165	8.7	---
TOTAL	---	---	---		---				---	4327	1719.6	750.53
MEAN	---	---	---		---				---	140	55.5	25.0
MAX	---	---	---		---				---	256	169	62
MIN	---	---	---		---				---	52	1.9	.50
AC-FT	---	---	---		---				---	8580	3410	1490

SABINE RIVER MAIN STEM

08022040 SABINE RIVER NEAR BECKVILLE, TX

LOCATION.--Lat 32°19'38", long 94°21'12", Panola County, Hydrologic Unit 12010002, at 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 mi².

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 above 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.--No estimated daily discharges. Records good. Eight major reservoirs, with a combined capacity of 1,701,000 acre-ft, largely regulated 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 Conservaiton Service floodwater-retarding structures, see gaging station 08018500.

AVERAGE DISCHARGE.--22 years (water years 1939-60) prior to regulation by Lake Tawakoni, 2,663 ft³/s (1,929,000 acre-ft/yr); 25 years (water years 1961-85) regulated, 2,195 ft³/s (1,590,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/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 ft³/s on basis of partly estimated measurement of 88,900 ft³/s; minimum observed, 2.4 ft³/s Aug. 11, 1964.
Maximum stage since at lease 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, 7,880 ft³/s Mar. 9 at 0430 hours (gage height, 19.97 ft); minimum 8.1 ft³/s Sept. 1-5, 8-9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	1500	2180	4690	1170	5820	4780	5430	4330	337	173	8.8
2	49	1960	2070	5200	1140	6170	4780	5910	4220	277	151	8.5
3	32	2320	1810	5120	1130	6460	4820	5800	4050	241	137	8.2
4	39	1740	1590	4850	1140	6760	4820	5470	3880	301	173	8.3
5	45	1180	1380	4520	1300	7130	4750	5280	3630	357	153	9.2
6	51	1140	1450	4040	1760	7460	4540	5250	3270	265	110	11
7	912	1150	1280	3530	2010	7680	4200	5350	2770	204	95	12
8	1390	1020	1010	3160	1910	7820	3720	5490	2270	167	89	10
9	892	880	880	2960	1780	7830	3190	5640	1890	143	78	16
10	276	709	884	2880	1830	7480	2670	5820	1610	124	65	32
11	154	567	986	2940	2460	6270	2200	6020	1390	115	64	48
12	417	443	1000	2920	3080	4000	1820	6190	1170	106	55	75
13	1490	348	976	2830	2680	2250	1540	6310	1040	102	45	132
14	1180	289	1290	2690	2050	1700	1320	6360	958	91	38	116
15	691	259	1370	2500	1710	1640	1170	6350	879	86	35	83
16	492	254	1240	2370	1540	1630	1030	6260	805	78	37	65
17	339	257	1530	3500	1470	1790	929	6050	732	70	32	47
18	280	335	2120	4130	1350	1980	856	5670	695	71	27	38
19	285	916	3180	3550	1190	2090	808	5150	719	88	25	30
20	266	966	3390	2720	1080	2240	767	4350	714	149	23	28
21	643	606	3150	2360	1020	3690	770	3450	721	170	19	24
22	2230	447	3100	2140	952	4700	1010	3130	793	202	21	22
23	3480	394	3140	1990	1110	4750	1250	3040	967	322	22	21
24	3260	353	3210	1840	3250	4740	2050	2860	1170	603	15	21
25	2150	337	3280	1700	5540	4700	2880	2890	1240	384	13	20
26	1230	421	3350	1610	5630	4550	2980	3250	1120	241	12	18
27	898	1270	3390	1550	5360	4760	3330	3700	888	198	12	18
28	841	2820	3530	1560	5500	5590	3880	4040	732	224	16	24
29	925	2700	3720	1500	---	5620	4610	4260	546	347	16	28
30	1180	2210	3930	1310	---	5160	5110	4350	422	216	12	33
31	1380	---	4150	1200	---	4870	---	4380	---	173	9.8	---
TOTAL	27553	29791	69566	89860	62142	149330	82580	153500	49621	6452	1772.8	1015.0
MEAN	889	993	2244	2899	2219	4817	2753	4952	1654	208	57.2	33.8
MAX	3480	2820	4150	5200	5630	7830	5110	6360	4330	603	173	132
MIN	32	254	880	1200	952	1630	767	2860	422	70	9.8	8.2
AC-FT	54650	59090	138000	178200	123300	296200	163800	304500	98420	12800	3520	2010

CAL YR 1984 TOTAL 428175.0 MEAN 1170 MAX 7970 MIN 13 AC-FT 849300
WTR YR 1985 TOTAL 723182.8 MEAN 1981 MAX 7830 MIN 8.2 AC-FT 1434000

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 microsiemens Jan. 13, 1966; minimum, 53 microsiemens Mar. 31, 1979.
WATER TEMPERATURES (water years 1952-62, 1964-85): 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, 1,860 microsiemens Oct. 4; minimum daily, 155 microsiemens Mar. 2.
WATER TEMPERATURES: Maximum daily, 31.0°C Oct. 1; minimum daily, 3.0°C Feb. 3-5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 17...	1255	321	440	7.2	22.5	100	45	6.1	71	1.7	73
JAN 09...	1430	2950	260	7.0	7.0	80	25	11.6	96	1.0	70
FEB 13...	1530	2670	420	7.1	7.0	80	33	11.4	94	.9	70
APR 03...	1641	4840	224	6.8	18.0	80	26	7.1	76	1.4	57
JUN 27...	1945	832	258	6.8	29.0	80	29	--	--	.2	49
AUG 12...	1932	56	455	6.9	34.5	40	7.3	7.9	115	1.3	57

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 17...	42	22	4.3	47	2	4.5	31	38	83	.30	9.4
JAN 09...	7	21	4.2	26	1	3.8	63	27	31	.20	9.1
FEB 13...	42	18	6.0	46	2	3.3	28	46	70	.10	13
APR 03...	19	16	4.1	22	1	4.0	38	27	28	.20	8.8
JUN 27...	26	14	3.5	29	2	4.3	23	31	42	.20	9.1
AUG 12...	29	15	4.8	59	4	4.7	28	37	87	.40	8.1

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)
OCT 17...	230	50	25	.57	.030	.60	.180	.62	.80	.250	6.8
JAN 09...	160	41	21	.28	.020	.30	.080	.82	.90	.160	--
FEB 13...	220	40	11	.27	.030	.30	.200	.80	1.0	.150	--
APR 03...	130	44	2	.18	.020	.20	.050	1.2	1.2	.160	11
JUN 27...	150	41	10	.39	.010	.40	.070	.63	.70	.190	7.0
AUG 12...	230	12	6	--	<.010	<.10	.040	.56	.60	.090	7.4

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 13...	1530	<1	93	2	<10	2	240
AUG 12...	1932	1	83	<1	<10	3	74

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 13...	<1	110	<.1	1	<1	26
AUG 12...	<1	250	<.1	<1	<1	13

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	27553	364	203	15100	65	4810	33	2470	60
NOV.	1984	29791	368	206	16500	64	5120	34	2760	63
DEC.	1984	69566	284	159	29900	47	8850	27	5130	51
JAN.	1985	89860	281	158	38300	47	11300	27	6580	51
FEB.	1985	62142	326	182	30600	55	9250	31	5180	57
MAR.	1985	149330	213	120	48300	34	13800	21	8450	40
APR.	1985	82580	245	138	30700	40	8910	24	5330	45
MAY	1985	153500	200	113	46700	32	13300	20	8210	38
JUNE	1985	49621	248	139	18700	40	5420	24	3240	46
JULY	1985	6452	390	218	3800	68	1180	36	632	66
AUG.	1985	1772.8	479	266	1280	86	411	43	207	77
SEPT	1985	1015.0	676	372	1020	130	359	57	155	94
TOTAL		723182.8	**	**	281000	**	82700	**	48300	**
WTD.AVG.		1981	256	144	**	42	**	25	**	47

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	308	348	216	395	158	218	196	200	267	396	506
2	1790	249	242	235	400	155	220	172	212	281	390	512
3	1840	243	232	231	410	165	215	186	218	301	360	518
4	1860	311	298	239	406	163	226	172	223	308	440	524
5	1590	384	328	241	402	159	233	168	227	326	660	534
6	1210	352	295	251	381	162	242	176	224	359	658	540
7	813	338	315	276	382	171	248	176	231	348	748	548
8	449	375	320	282	372	184	251	178	242	316	514	547
9	668	377	383	277	327	202	256	177	244	313	419	553
10	727	544	376	270	335	223	266	178	249	339	385	541
11	827	474	398	259	330	241	276	183	255	346	381	570
12	606	463	364	282	457	271	294	193	303	351	406	649
13	300	498	376	284	416	291	320	198	287	361	459	780
14	223	519	391	278	354	304	318	203	291	365	482	860
15	196	581	486	293	350	302	325	210	296	392	490	933
16	296	631	347	295	375	313	344	219	295	404	487	995
17	420	648	384	278	372	335	357	226	297	425	473	820
18	389	686	330	275	392	315	360	227	308	435	460	696
19	381	564	331	242	423	302	359	225	329	430	457	667
20	464	578	285	274	400	301	357	231	349	436	451	628
21	333	406	295	293	417	344	365	251	297	452	450	565
22	233	471	310	305	437	254	353	278	344	478	449	520
23	220	506	296	426	453	224	328	279	309	445	452	486
24	250	508	287	430	378	189	256	246	251	579	459	424
25	275	568	238	387	237	175	255	231	264	585	463	415
26	294	525	224	375	255	223	239	234	329	425	467	404
27	328	448	210	373	188	245	202	182	296	285	472	389
28	386	236	208	348	171	220	208	175	260	328	481	351
29	486	263	207	337	---	215	182	180	262	326	485	345
30	550	359	215	377	---	220	189	183	264	369	494	337
31	421	---	226	385	---	224	---	189	---	418	499	---
MEAN	663	447	308	300	365	234	275	204	272	380	474	572

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.0	20.0	12.0	14.0	---	14.0	17.0	21.0	25.0	25.0	29.0	29.0
2	---	19.0	12.0	13.0	---	14.0	17.0	21.0	25.0	28.0	29.0	29.0
3	---	18.0	11.0	12.0	3.0	14.0	17.0	21.0	26.0	28.0	29.0	29.0
4	---	13.0	10.0	11.0	3.0	14.0	18.0	21.0	26.0	27.0	29.0	28.0
5	20.0	17.0	5.0	10.0	3.0	14.0	19.0	21.0	26.0	27.0	30.0	28.0
6	24.0	17.0	7.0	9.0	5.0	13.0	18.0	21.0	27.0	27.0	29.0	28.0
7	21.0	16.0	---	9.0	4.0	14.0	18.0	21.0	26.0	28.0	30.0	28.0
8	20.0	17.0	7.0	8.0	4.0	15.0	18.0	21.0	26.0	28.0	29.0	30.0
9	22.0	18.0	9.0	8.0	6.0	16.0	19.0	21.0	27.0	28.0	30.0	30.0
10	21.0	17.0	9.0	7.0	6.0	15.0	18.0	21.0	26.0	30.0	30.0	26.0
11	21.0	11.0	9.0	7.0	6.0	17.0	18.0	22.0	27.0	29.0	30.0	26.0
12	22.0	15.0	11.0	5.0	6.0	17.0	18.0	23.0	27.0	28.0	30.0	27.0
13	22.0	15.0	12.0	5.0	6.0	16.0	18.0	23.0	25.0	29.0	30.0	28.0
14	22.0	13.0	14.0	6.0	6.0	17.0	18.0	23.0	25.0	29.0	29.0	26.0
15	21.0	15.0	14.0	7.0	7.0	17.0	18.0	22.0	25.0	29.0	29.0	24.0
16	22.0	16.0	15.0	---	9.0	16.0	19.0	22.0	26.0	29.0	28.0	24.0
17	21.0	14.0	16.0	6.0	8.0	16.0	19.0	22.0	27.0	29.0	28.0	25.0
18	22.0	15.0	15.0	6.0	10.0	---	20.0	23.0	28.0	29.0	29.0	25.0
19	22.0	13.0	17.0	6.0	10.0	16.0	22.0	22.0	26.0	29.0	30.0	25.0
20	22.0	13.0	---	5.0	11.0	16.0	22.0	22.0	26.0	29.0	30.0	25.0
21	22.0	12.0	---	4.0	12.0	16.0	22.0	22.0	26.0	29.0	29.0	25.0
22	19.0	12.0	16.0	4.0	14.0	15.0	21.0	22.0	26.0	28.0	29.0	25.0
23	18.0	10.0	10.0	5.0	15.0	15.0	21.0	22.0	26.0	27.0	30.0	25.0
24	16.0	10.0	15.0	5.0	14.0	15.0	21.0	22.0	27.0	28.0	30.0	25.0
25	17.0	10.0	14.0	5.0	13.0	---	20.0	22.0	27.0	28.0	28.0	23.0
26	18.0	12.0	13.0	6.0	14.0	16.0	22.0	23.0	27.0	29.0	27.0	22.0
27	19.0	12.0	14.0	6.0	14.0	17.0	21.0	23.0	27.0	29.0	27.0	19.0
28	19.0	12.0	14.0	6.0	13.0	18.0	21.0	22.0	26.0	28.0	27.0	23.0
29	20.0	11.0	14.0	6.0	---	19.0	21.0	23.0	---	28.0	27.0	21.0
30	20.0	12.0	15.0	7.0	---	19.0	21.0	24.0	25.0	28.0	28.0	19.0
31	20.0	---	15.0	6.0	---	18.0	---	24.0	---	29.0	28.0	---
MEAN	21.0	14.0	12.5	7.0	8.5	16.0	19.5	22.0	26.0	28.5	29.0	25.5

08022060 MARTIN LAKE NEAR TATUM, TX

LOCATION.--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 spillway. Deliberate impoundment began in April 1974. The uncontrolled 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 represent 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 provided 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, 81,270 acre-ft Feb. 11 at 1800 hours (elevation, 306.74 ft from graph; minimum, 59,670 acre-ft Sept. 30 (elevation, 302.15 ft from graph).

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

302.0	59,040	306.0	77,470
304.0	67,880	308.0	87,970

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60480	71670	74530	77950	77700	78560	79580	78200	76900	72830	68850	63540
2	60400	71820	74530	77400	78100	77900	79470	78200	76800	72680	68660	63320
3	60310	71770	74430	77400	78410	78000	79420	78100	76700	72630	68480	63100
4	60230	71720	74870	77400	78760	78000	79370	78100	76650	72590	68200	62830
5	60230	71670	75110	77400	79170	78000	79270	78050	76550	72440	67970	62610
6	61830	71630	75310	77400	79520	78150	79220	78000	76400	72300	67740	62480
7	62170	71720	75360	77400	79880	78200	79170	78000	76200	72150	67510	62390
8	62260	71820	75410	77400	80190	78260	79020	77950	76050	72010	67320	62350
9	62260	71480	75460	77450	80550	78410	79020	77900	75900	71870	67090	62220
10	62260	71340	75510	77500	80910	78260	79020	77850	75710	71720	66910	62130
11	63050	71340	75660	77450	81220	78260	78960	77800	75560	71530	66680	62000
12	63580	71250	76000	77450	80290	78460	78910	77750	75360	71340	66460	61910
13	64200	71250	76450	77500	79580	78460	78910	77750	75070	71200	66000	61780
14	64430	71250	76650	77500	79630	78460	78910	77850	75020	71010	66090	61650
15	64470	71200	77200	77500	79880	78510	78860	77800	75020	70870	66090	61520
16	64470	71200	78100	78260	79930	78510	78760	77700	74970	70720	66090	61350
17	64470	71580	78910	79370	80090	78510	78760	77550	74970	70630	66050	61220
18	64470	71630	79270	79880	80140	78510	78760	77650	74970	70540	66050	61040
19	64470	71580	79370	80040	80240	79170	78560	77700	74970	70390	65730	60830
20	64920	71530	79520	80290	80340	79980	78510	77800	74970	70300	65550	60610
21	66680	71480	79580	80390	80500	80340	78910	77850	74870	70210	65460	60400
22	67880	71530	79630	80450	81010	80450	78960	77900	74670	70110	65280	60230
23	69500	71530	79630	80550	80650	80600	79020	78000	74480	69970	65140	60010
24	70350	71770	79630	80550	79420	80600	79020	77850	74280	69880	64960	59890
25	70580	71770	79630	80550	78910	80700	78960	77750	74090	69780	64780	59890
26	70720	72870	79680	79880	79070	80700	79470	77600	73840	69590	64650	59890
27	70910	73840	79780	78760	79470	80390	79520	77450	73500	69500	64520	59890
28	70960	74280	79880	78100	79470	79730	80140	77300	73310	69360	64340	59800
29	71060	74380	79980	77850	---	79730	79420	77200	73120	69220	64160	59760
30	71100	74480	80290	77700	---	79780	78050	77050	72870	69080	63980	59670
31	71480	---	79320	77550	---	79780	---	77000	---	68990	63760	---
MAX	71480	74480	80290	80550	81220	80700	80140	78200	76900	72830	68850	63540
MIN	60230	71200	74430	77400	77700	77900	78050	77000	72870	68990	63760	59670
(†)	304.77	305.39	306.36	306.01	306.39	306.45	306.11	305.90	305.06	304.24	303.09	302.15
(‡)	+10910	+3000	+4840	-1770	+1920	+310	-1730	-1050	-4130	-3880	-5230	-4090

CAL YR 1984 MAX 84100 MIN 60230 (‡) +4700
WTR YR 1985 MAX 81220 MIN 59670 (‡) -900

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

08022070 MARTIN CREEK NEAR TATUM, TX

LOCATION.--Lat 32°17'44", long 94°29'29", Panola County, Hydrologic Unit 1201002, 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 mi².

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 above National Geodetic Vertical Datum of 1929. Prior to Mar. 31, 1978, at site 50 ft upstream at same datum.

REMARKS.--No estimated daily discharges. 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.--11 years (water years 1975-85), 83.0 ft³/s (60,130 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft³/s Apr. 30, 1976 (gage height, 13.76 ft); minimum, 0.25 ft³/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, 1,030 ft³/s Feb. 25 at 1500 hours (gage height, 11.91 ft); minimum, 1.8 ft³/s Apr. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	12	14	104	18	42	14	694	6.4	5.3	5.4	4.9
2	3.2	74	12	925	19	281	12	101	6.2	5.4	5.4	5.0
3	3.0	28	11	831	21	726	11	11	5.8	5.4	5.6	5.0
4	3.1	15	11	158	23	477	9.9	6.4	5.7	5.7	5.6	5.1
5	3.2	12	32	26	40	59	8.2	4.8	5.5	5.7	5.6	5.2
6	6.1	10	35	16	43	18	6.6	3.9	5.4	5.5	5.4	5.0
7	135	9.0	19	14	35	15	5.2	3.3	5.5	5.5	5.4	4.6
8	42	8.5	16	12	25	14	4.8	2.9	5.6	5.6	6.5	4.4
9	9.9	8.4	14	12	21	14	4.4	2.8	5.6	5.6	6.0	4.6
10	6.3	8.3	14	13	23	13	4.2	2.5	5.6	5.6	5.5	5.6
11	4.7	7.5	13	13	148	13	4.2	2.3	5.6	6.2	5.3	4.6
12	146	6.9	13	12	950	12	4.5	2.2	5.6	6.4	5.2	4.7
13	51	6.4	19	12	999	12	4.4	2.5	5.6	6.2	5.0	4.9
14	34	6.3	31	12	471	15	4.3	4.6	5.7	5.9	5.0	4.6
15	17	7.2	18	12	53	14	4.2	4.3	5.7	5.8	5.0	4.3
16	8.9	36	37	48	21	13	3.9	3.0	5.7	6.3	5.0	4.2
17	6.9	14	57	124	17	13	3.3	2.6	5.5	5.9	4.9	4.1
18	6.0	23	240	40	16	12	2.9	2.4	8.2	5.8	4.9	4.0
19	5.9	26	80	24	15	11	2.3	2.7	9.1	5.7	5.0	3.8
20	8.6	14	32	18	15	36	2.2	3.1	6.4	5.8	5.0	4.0
21	38	11	22	15	15	68	5.2	7.2	6.0	5.9	5.2	3.9
22	269	9.8	17	15	15	32	18	8.7	6.0	7.3	5.2	3.4
23	132	9.6	15	15	61	19	7.6	5.2	6.7	7.3	5.1	3.7
24	114	9.6	14	15	789	16	6.8	3.7	6.2	6.3	5.0	3.4
25	52	15	13	14	1010	14	4.4	3.1	5.9	5.9	5.0	4.0
26	24	26	12	17	984	12	9.3	2.9	5.8	5.4	4.9	4.3
27	15	116	11	374	340	54	23	2.4	5.6	5.3	4.9	4.2
28	13	46	11	805	40	436	58	2.3	5.4	6.3	4.9	4.5
29	14	21	11	707	---	599	713	2.7	5.5	6.2	4.9	7.3
30	11	16	11	152	---	94	940	3.9	5.4	6.0	4.9	10
31	10	---	21	28	---	22	---	6.4	---	5.6	4.9	---
TOTAL	1195.8	612.5	876	4583	6227	3176	1901.8	910.8	178.9	182.8	161.6	141.3
MEAN	38.6	20.4	28.3	148	222	102	63.4	29.4	5.96	5.90	5.21	4.71
MAX	269	116	240	925	1010	726	940	694	9.1	7.3	6.5	10
MIN	3.0	6.3	11	12	15	11	2.2	2.2	5.4	5.3	4.9	3.4
AC-FT	2370	1210	1740	9090	12350	6300	3770	1810	355	363	321	280

CAL YR 1984 TOTAL 24302.3 MEAN 66.4 MAX 1290 MIN 3.0 AC-FT 48200
WTR YR 1985 TOTAL 20147.5 MEAN 55.2 MAX 1010 MIN 2.2 AC-FT 39960

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, 25.12 ft May 14 at 0100 hours; minimum, 19.80 ft Oct. 7.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.89	21.65	22.03	21.70	21.11	24.57	23.80	24.56	24.58	23.20	21.66	20.66
2	19.85	21.87	21.75	---	21.18	24.60	23.68	24.62	24.60	23.22	21.74	20.40
3	19.87	22.10	21.86	---	21.25	24.89	23.85	24.63	24.63	23.25	21.66	20.97
4	19.87	21.87	21.82	---	21.20	24.43	24.02	24.80	24.57	23.17	21.75	20.65
5	19.85	21.65	21.49	---	21.23	24.38	23.45	24.88	24.50	23.00	21.56	20.58
6	19.88	21.58	21.76	---	21.45	24.38	23.52	24.84	24.40	23.00	21.50	20.62
7	19.85	21.68	21.84	---	21.55	24.42	23.32	24.83	24.24	22.95	21.53	20.50
8	19.94	21.65	21.70	---	21.63	24.29	23.23	24.80	24.22	22.92	21.38	20.53
9	20.22	21.65	21.60	---	21.72	24.21	23.23	24.84	24.30	22.84	21.25	20.50
10	20.07	21.30	21.51	---	22.30	24.23	23.22	24.87	24.26	22.74	21.15	20.55
11	20.08	21.36	21.55	---	23.19	24.17	23.03	24.95	24.17	22.78	21.21	20.37
12	20.15	21.35	21.50	---	23.90	24.03	23.13	24.84	23.85	22.65	21.18	20.40
13	20.10	21.35	21.55	21.16	23.88	23.67	23.21	25.04	23.92	22.66	21.13	20.25
14	20.38	21.45	21.51	21.24	23.78	23.14	23.30	24.92	23.87	22.66	21.09	20.12
15	20.33	21.20	21.75	21.12	23.58	---	23.37	25.00	23.85	22.54	20.66	20.05
16	20.15	21.37	21.57	21.16	23.34	---	23.40	24.92	23.87	23.53	21.08	19.88
17	20.23	21.42	21.62	21.36	22.74	---	23.37	24.83	24.01	22.43	21.15	19.92
18	20.42	21.15	21.65	21.90	22.53	---	23.24	24.80	23.73	22.39	21.10	19.95
19	20.37	21.28	21.80	22.28	22.41	---	23.19	24.79	23.70	22.45	21.05	19.98
20	20.60	21.34	21.98	22.44	22.39	23.08	23.29	24.69	23.78	22.35	20.95	19.92
21	20.95	21.30	21.87	21.94	22.54	23.85	23.10	24.71	23.80	22.26	20.90	19.90
22	21.49	21.27	21.78	21.96	22.48	23.90	23.45	24.60	23.62	22.20	21.00	19.92
23	22.29	21.23	21.86	21.78	22.83	23.67	23.13	24.64	23.64	22.16	21.02	20.35
24	22.80	21.20	21.56	21.64	23.48	23.57	23.10	24.63	23.58	22.15	20.92	20.10
25	22.84	21.26	21.64	21.55	24.05	23.47	23.27	24.60	23.60	22.08	20.82	20.40
26	22.76	21.40	21.62	21.35	24.16	23.60	23.51	24.65	23.45	21.90	20.87	20.32
27	22.31	21.62	21.65	21.38	24.35	23.60	23.45	24.64	23.27	21.95	20.95	20.16
28	21.85	22.13	21.65	---	24.45	23.82	24.08	24.64	23.16	21.97	20.75	20.16
29	21.71	22.20	21.59	21.42	---	23.75	24.38	24.58	23.23	21.95	20.75	20.16
30	21.60	22.04	21.61	21.35	---	23.82	24.43	24.60	23.25	21.85	20.68	20.24
31	21.65	---	21.93	20.99	---	23.85	---	24.51	---	21.78	20.63	---
MAX	22.84	22.20	22.03	---	24.45	---	24.43	25.04	24.63	23.53	21.75	20.97
MIN	19.85	21.15	21.49	---	21.11	---	23.03	24.51	23.16	21.78	20.63	19.88

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, 4,531,000 acre-ft May 14 at 1300 hours (elevation, 172.30 ft); minimum contents, 3,673,000 acre-ft Sept. 29 (elevation, 167.28 ft)

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

167.0	3,628,000	170.0	4,123,000	172.0	4,476,000
168.0	3,788,000	171.0	4,297,000	173.0	4,660,000
169.0	3,953,000				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3732000	3979000	4038000	3970000	3968000	4345000	4262000	4347000	4451000	4267000	4013000	3831000
2	3727000	3996000	4081000	3980000	3960000	4354000	4259000	4387000	4453000	4245000	4004000	3838000
3	3721000	3979000	4047000	3962000	3945000	4342000	4234000	4404000	4444000	4274000	4001000	3801000
4	3714000	4004000	4038000	3951000	3951000	4378000	4234000	4413000	4446000	4245000	3987000	3805000
5	3710000	3979000	4072000	3948000	3963000	4365000	4254000	4422000	4446000	4224000	3970000	3809000
6	3708000	3962000	4038000	3941000	3953000	4349000	4245000	4444000	4440000	4224000	3962000	3805000
7	3721000	3940000	4013000	3946000	3956000	4333000	4248000	4460000	4440000	4213000	3953000	3808000
8	3719000	3945000	3996000	3933000	3950000	4318000	4248000	4496000	4437000	4210000	3930000	3805000
9	3743000	3953000	3996000	3907000	3948000	4311000	4219000	4491000	4431000	4196000	3918000	3813000
10	3753000	3996000	3987000	3950000	4026000	4288000	4210000	4467000	4426000	4187000	3920000	3808000
11	3748000	3967000	3970000	3941000	4067000	4276000	4213000	4440000	4422000	4180000	3918000	3806000
12	3742000	3962000	3958000	3920000	4096000	4262000	4208000	4446000	4426000	4167000	3904000	3790000
13	3751000	3945000	3953000	3908000	4106000	4257000	4203000	4440000	4404000	4149000	3900000	3764000
14	3740000	3928000	3953000	3922000	4118000	4240000	4193000	4520000	4395000	4149000	3904000	3753000
15	3742000	3962000	3928000	3910000	4133000	4205000	4187000	4511000	4390000	4149000	3932000	3738000
16	3780000	3967000	3945000	3953000	4137000	4213000	4186000	4500000	4387000	4154000	3894000	3724000
17	3764000	3953000	3945000	3950000	4147000	4158000	4170000	4494000	4351000	4140000	3887000	3722000
18	3758000	3987000	3958000	3950000	4142000	4137000	4161000	4478000	4387000	4123000	3887000	3721000
19	3800000	3979000	3963000	3968000	4132000	4101000	4158000	4455000	4367000	4123000	3884000	3724000
20	3824000	3979000	3950000	4002000	4123000	4140000	4172000	4458000	4336000	4115000	3884000	3719000
21	3887000	3970000	3962000	3989000	4101000	4177000	4177000	4491000	4320000	4115000	3877000	3714000
22	3912000	3962000	3975000	3973000	4094000	4182000	4158000	4504000	4335000	4115000	3871000	3708000
23	3943000	3953000	3970000	3968000	4161000	4201000	4186000	4516000	4336000	4089000	3859000	3722000
24	3965000	3945000	3972000	3962000	4205000	4210000	4210000	4511000	4333000	4072000	3871000	3703000
25	3977000	3940000	3968000	3965000	4245000	4210000	4193000	4491000	4310000	4055000	3862000	3735000
26	3987000	3979000	3953000	3930000	4273000	4189000	4207000	4472000	4311000	4058000	3857000	3711000
27	3996000	4021000	3941000	3968000	4297000	4208000	4231000	4480000	4318000	4064000	3841000	3690000
28	4004000	4004000	3937000	3933000	4333000	4213000	4262000	4442000	4302000	4055000	3846000	3690000
29	4004000	4013000	3933000	3940000	---	4207000	4280000	4429000	4294000	4048000	3841000	3722000
30	3994000	4038000	3941000	3948000	---	4264000	4297000	4437000	4280000	4035000	3838000	3724000
31	3979000	---	3953000	3979000	---	4250000	---	4446000	---	4021000	3834000	---
MAX	4004000	4038000	4081000	4002000	4333000	4378000	4297000	4520000	4453000	4274000	4013000	3838000
MIN	3708000	3928000	3928000	3907000	3945000	4101000	4158000	4347000	4280000	4021000	3834000	3690000
(†)	169.15	169.50	169.00	169.15	171.20	170.73	171.00	171.83	170.90	169.40	168.28	167.60
(‡)	+236000	+59000	-85000	+26000	+354000	-83000	+47000	+149000	-166000	-259000	-187000	-110000

CAL YR 1984 MAX 4449000 MIN 3708000 (‡) -54000
WTR YR 1985 MAX 4520000 MIN 3690000 (‡) -19000

(†) 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 at National Geodetic Vertical Datum of 1929 (levels by Sabine River Authority).

REMARKS.--No estimated daily discharges. Records fair. Daily discharges are combinations of releases from various outlets at the dam. Discharges are made by releases through the turbines and are computed using scroll case differential pressure relationships. Taintor gate releases, low-flow sluiceway releases, bypass gate releases, and turbine leakages are all based on discharge measurements and operations logs.

AVERAGE DISCHARGE.--14 years, 5,255 ft^3/s (3,807,000 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, 14,600 ft^3/s Mar. 16; minimum daily, 174 ft^3/s May 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	802	6570	2870	6870	2460	9860	7130	204	204	5020	4880	204
2	801	6460	2870	6930	3260	9620	6330	204	204	4820	4960	793
3	805	6460	5220	7010	3010	9620	6730	204	4960	4710	204	773
4	801	6570	6420	6910	2980	10600	6970	204	4800	4080	204	780
5	1620	6610	6840	6920	3010	14200	7040	204	4710	4590	4900	879
6	204	6600	5580	6900	2960	14300	7030	204	4880	204	4830	2120
7	204	6550	6940	7520	2820	14400	7020	204	5060	204	5070	204
8	791	204	6920	7580	2840	14400	6510	204	204	4900	5230	204
9	788	204	6900	7590	2910	14200	6690	3200	204	4770	4740	1620
10	785	204	6860	6930	2730	14300	6740	10800	5570	5100	204	1550
11	783	204	6990	6940	4910	14100	6800	13900	4710	5150	204	1420
12	1820	2850	6910	6780	7100	14300	6800	5470	4720	5040	4810	3220
13	204	2860	7090	6730	7090	14500	6830	193	5100	204	204	6890
14	204	2740	7090	3840	7020	14500	6840	174	4680	204	204	7510
15	807	2750	7080	2520	7060	14300	6100	7160	204	4900	204	5680
16	805	2800	6900	2400	7080	14600	1320	13900	204	4460	204	259
17	802	2770	3130	2560	7040	14500	1330	10500	4630	4710	204	275
18	803	2940	2400	2480	6970	14400	1410	10900	5000	4870	204	224
19	204	2880	2510	2550	6890	14500	1340	13900	4720	4930	1290	254
20	204	2860	2720	2540	6960	11500	204	6810	5340	204	789	1370
21	204	2820	2620	2520	7050	7220	204	204	4940	204	795	204
22	204	2850	2690	4920	7000	6990	204	204	204	4540	816	204
23	204	2900	2660	7140	6890	7000	204	204	204	4750	1360	1160
24	204	2950	5290	7170	7160	6980	204	4050	4820	4900	204	883
25	3900	3040	7150	7260	7080	7000	204	6770	5050	4950	204	711
26	3870	2750	5240	7260	7120	6950	204	6760	4740	4830	204	828
27	3880	2820	7360	7280	9150	6950	204	6730	4760	204	788	1570
28	3840	2730	7370	7290	11700	6480	204	9500	4920	204	723	204
29	6460	2850	7490	4870	---	6670	204	11600	204	4950	784	204
30	6550	2680	7470	1100	---	7110	204	1430	204	4800	1490	803
31	6550	---	7150	2740	---	7090	---	185	---	4890	204	---
TOTAL	50103	100476	172730	170050	160250	343140	109204	146176	100150	112292	51111	43000
MEAN	1616	3349	5572	5485	5723	11070	3640	4715	3338	3622	1649	1433
MAX	6550	6610	7490	7590	11700	14600	7130	13900	5570	5150	5230	7510
MIN	204	204	2400	1100	2460	6480	204	174	204	204	204	204
AC-FT	99380	199300	342600	337300	317900	680600	216600	289900	198600	222700	101400	85290

CAL YR 1984 TOTAL 1385106 MEAN 3784 MAX 15400 MIN 100 AC-FT 2747000
WTR YR 1985 TOTAL 1558682 MEAN 4270 MAX 14600 MIN 174 AC-FT 3092000

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 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	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)
NOV 07...	1256	143	6.7	20.0	9.6	105	.5	28	7
MAR 13...	1415	146	--	13.0	12.4	117	.8	29	10
JUN 12...	1605	169	6.8	27.0	8.4	104	.9	33	16
JUL 23...	1425	173	6.8	28.0	9.4	120	.6	24	5
SEP 10...	1640	175	6.9	26.5	6.5	81	.2	32	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)
NOV 07...	6.4	3.0	15	1	2.8	21	17	20	.10
MAR 13...	6.7	3.1	16	1	2.9	20	18	20	.10
JUN 12...	7.3	3.5	20	2	3.0	17	21	27	.10
JUL 23...	7.3	1.4	21	2	3.8	19	20	26	.10
SEP 10...	7.3	3.4	20	2	3.2	19	21	26	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	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)
NOV 07...	5.1	82	<.010	<.10	<.010	--	.20	.010
MAR 13...	5.7	84	<.010	.10	.020	.28	.30	.010
JUN 12...	4.8	97	<.010	<.10	.030	.37	.40	.010
JUL 23...	3.5	94	<.010	<.10	.020	.28	.30	.190
SEP 10...	4.8	97	<.010	<.10	.030	.37	.40	.010

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 mi^2.

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 above National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1958, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: July 4-17. Records fair except those for estimated daily discharges, which are poor. 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 ft^3/s (3,371,000 acre-ft/yr); 19 years (water years 1967-85) regulated, 4,996 ft^3/s (3,620,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft^3/s Jan. 29, 1974 (gage height, 34.20 ft); minimum daily. 38 ft^3/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, 16,300 ft^3/s Mar. 20 at 1500 hours (gage height, 17.78 ft); minimum daily, 238 ft^3/s Sept. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	654	6520	3240	7230	2920	12300	8260	566	354	4320	4780	238
2	904	7240	3190	7210	3070	12500	7830	512	312	4700	4800	394
3	1000	7100	4030	7120	3050	11600	7600	486	1980	4630	2280	756
4	970	6600	5990	7100	2890	10800	7620	478	4740	4200	345	743
5	1420	6240	7460	7110	2970	14600	7500	449	4710	4500	2840	791
6	892	6160	6450	7030	3020	15300	7430	437	4690	1500	4440	1220
7	299	6180	7300	7070	3000	15200	7410	422	4670	400	4920	1310
8	672	3090	7330	7300	2920	15200	7380	426	2840	3000	5250	267
9	918	406	7240	7240	2930	15200	7320	1360	403	4800	5100	701
10	1550	310	7220	6920	2970	15200	7400	8300	2210	5200	2070	1540
11	2750	271	7210	7010	5790	15100	7410	13500	4640	5300	346	1580
12	2490	1780	7230	7100	8920	15200	7410	10200	4800	5100	3050	1630
13	1340	2640	7290	7020	8490	15300	7430	1330	4650	1500	2000	6200
14	373	2680	7420	6290	7750	15200	7440	470	4630	400	338	6810
15	714	2670	7600	2910	7470	15100	7290	3240	2710	2500	277	6590
16	968	3000	7430	2840	7390	15200	2690	13300	337	4500	268	1580
17	978	3090	5770	3160	7420	15200	2010	12300	3050	4800	253	385
18	1020	3300	2820	3440	7370	15100	2010	9100	4620	5120	246	319
19	999	3660	2970	3190	7310	15100	1970	13100	4730	4770	768	284
20	1420	3240	2940	2970	7290	15100	1400	10500	4690	2640	1050	467
21	3870	3040	2910	2920	7350	10900	629	1510	4760	411	849	1140
22	6530	2980	2890	3300	7320	8790	620	494	975	2420	847	284
23	5600	3350	2900	6820	7790	8040	602	426	340	4190	1190	449
24	3440	3000	3570	7050	12400	7710	675	2080	3950	5010	698	1110
25	3300	3080	6970	7090	11800	7590	580	6320	4700	4740	337	1020
26	4390	2730	5910	7070	11200	7500	723	6590	4530	4840	244	941
27	3970	5280	6660	7210	10000	7740	894	6560	4600	2200	499	1120
28	3620	5190	7090	7550	13800	7830	704	7160	4300	363	740	1170
29	5140	4250	7200	6840	---	7500	685	12400	463	3030	856	345
30	6450	3440	7330	2470	---	7700	602	4030	360	4620	1100	858
31	5810	---	7130	2470	---	8150	---	1040	---	4550	809	---
TOTAL	74451	112517	178690	178050	186600	378950	129524	149086	94744	110254	53590	42242
MEAN	2402	3751	5764	5744	6664	12220	4317	4809	3158	3557	1729	1408
MAX	6530	7240	7600	7550	13800	15300	8260	13500	4800	5300	5250	6810
MIN	299	271	2820	2470	2890	7500	580	422	312	363	244	238
AC-FT	147700	223200	354400	353200	370100	751600	256900	295700	187900	218700	106300	83790

CAL YR 1984 TOTAL 1556604 MEAN 4253 MAX 19800 MIN 225 AC-FT 3088000
WTR YR 1985 TOTAL 1688698 MEAN 4627 MAX 15300 MIN 238 AC-FT 3350000

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, 352 microsiemens Mar. 15, 16, 1973; minimum, 30 microsiemens Dec. 4, 1983.
WATER TEMPERATURES: Maximum, 32.0°C Aug. 20, 1975, and May 28, 1981; minimum, 4.5°C Feb. 1, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 07...	0957	2910	135	6.8	19.5	25	4.3	7.2	78	.7	27
JAN 30...	1135	2090	123	6.4	9.0	40	10	12.3	107	.9	28
MAR 13...	1025	15300	144	--	12.0	10	2.3	7.6	70	.8	30
JUN 12...	1226	1970	168	6.8	27.0	10	1.5	7.3	91	1.0	30
JUL 23...	1030	2670	170	6.7	28.5	10	2.9	8.6	111	.8	32
SEP 10...	1245	740	162	6.9	27.0	10	2.7	6.7	84	.5	30

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 07...	6	6.2	2.9	15	1	2.7	21	16	19	.10	6.2
JAN 30...	12	6.6	2.7	14	1	2.1	16	19	18	<.10	15
MAR 13...	11	6.7	3.2	16	1	2.8	19	18	20	.10	6.1
JUN 12...	14	6.9	3.0	20	2	3.0	16	20	28	.10	5.6
JUL 23...	11	7.2	3.4	20	2	3.1	21	19	29	.10	5.1
SEP 10...	14	6.9	3.2	19	2	3.2	16	21	22	.10	6.4

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, 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 07...	81	8	3	<.010	<.10	.030	.37	.40	.010	5.1
JAN 30...	87	17	14	<.010	.10	.050	.35	.40	.020	5.6
MAR 13...	84	7	1	<.010	.10	.020	.28	.30	.010	4.8
JUN 12...	96	2	1	<.010	<.10	.040	.36	.40	.030	6.4
JUL 23...	99	3	3	<.010	<.10	.030	.27	.30	.010	6.5
SEP 10...	92	2	1	<.010	<.10	.050	.45	.50	.020	6.3

08026000 SABINE RIVER NEAR BURKEVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 07...	0957	<1	39	2	10	1	50
SEP 10...	1245	<1	61	<1	<10	2	58

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 07...	11	29	<.1	<1	<1	4
SEP 10...	1	40	.1	<1	<1	31

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 mi^2.

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 above 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, non-recording 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.--Estimated daily discharges: Jan. 4-30, May 31, June 1,5-11,15-24,30, July 1, Sept. 11-13,17,20,21, and 23-30. 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 ft^3/s (4,960,000 acre-ft/yr); 19 years (water years 1967-85) regulated, 6,037 ft^3/s (4,374,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 115,000 ft^3/s May 19, 1953 (gage height, 28.70 ft); minimum daily, 134 ft^3/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, 21,000 ft^3/s Mar. 21 at 1000 hours (gage height, 18.50 ft); minimum daily, 605 ft^3/s Sept. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	776	7040	5630	7770	3760	19500	9170	1470	1950	1070	5140	1200
2	854	8560	4710	7830	3920	18800	8980	1330	1170	3030	5170	622
3	1100	10700	4380	7730	3950	17100	8590	1220	989	5030	5220	605
4	1140	9620	5870	7700	3800	15300	8360	1140	3140	5400	2940	960
5	1120	8350	9400	7700	3770	14700	8210	1080	5240	5180	1130	1000
6	1450	7670	10400	7700	4060	16600	8030	1010	5200	5070	3080	1020
7	1200	7410	8650	7700	3970	16500	7890	979	5200	2880	5010	1610
8	711	7200	8800	7700	3790	15900	7780	917	5200	1140	5430	1920
9	824	3580	8380	7600	3690	15700	7680	960	3500	3130	5880	1270
10	1100	1550	8170	7500	3700	15600	7600	2440	1200	5140	5520	1760
11	1770	1280	8030	7500	8460	15500	7650	8660	3500	5380	2930	2600
12	2700	1170	7920	7500	13800	15300	7660	10500	5190	5510	985	2640
13	2590	2510	7870	7400	13000	15400	7650	5930	5190	5430	2900	3530
14	1720	3340	7910	7200	11500	15300	7630	1940	5360	2970	2620	6910
15	973	3380	8030	6500	9820	15500	7620	1420	5200	1110	934	7410
16	1050	3620	8070	5000	8830	15300	6770	6440	3500	3160	734	6340
17	1290	4920	8110	4000	8350	15300	3280	12900	1100	5300	698	2620
18	1410	5200	5020	4500	8190	15400	2530	10800	3000	5340	694	1430
19	1580	7600	3830	4000	7960	15300	2430	10700	5000	5500	674	1190
20	2530	7340	3750	4000	7860	16200	2400	13100	5200	5630	925	919
21	6790	6360	3690	4000	7850	20300	2470	8650	5200	3270	1350	902
22	12300	5240	3550	4000	7900	15600	3500	3310	5200	1250	1160	1310
23	11800	4440	3500	6000	7980	12200	2130	2010	2920	3120	1130	716
24	10600	4300	3480	7000	15400	10500	1570	1690	1150	5050	1380	716
25	9280	3920	5490	7400	20400	9390	1590	3870	3370	5320	1230	1180
26	9130	3980	7300	7600	19500	8880	1560	7020	5170	5320	717	1300
27	7650	6980	6110	7800	17600	9280	2730	7160	5210	5260	610	1300
28	6080	10800	7260	7600	16900	11200	2690	7120	5150	2970	668	1400
29	5540	8980	7480	7400	---	10000	1890	8910	5290	1090	983	1600
30	6970	7410	7660	6800	---	9120	1650	10600	2690	3050	1060	1500
31	7470	---	7650	3860	---	9030	---	4520	---	4970	1300	---
TOTAL	121498	174450	206100	203990	249710	445700	159690	159796	116379	123070	70202	59480
MEAN	3919	5815	6648	6580	8918	14380	5323	5155	3879	3970	2265	1983
MAX	12300	10800	10400	7830	20400	20300	9170	13100	5360	5630	5880	7410
MIN	711	1170	3480	3860	3690	8880	1560	917	989	1070	610	605
AC-FT	241000	346000	408800	404600	495300	884000	316700	317000	230800	244100	139200	118000

CAL YR 1984 TOTAL 2028462 MEAN 5542 MAX 33500 MIN 553 AC-FT 4023000
WTR YR 1985 TOTAL 2090065 MEAN 5726 MAX 20400 MIN 605 AC-FT 4146000

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 September 1984.
WATER TEMPERATURES: November 1969 to September 1984.
COLOR: November 1969 to September 1984.

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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							
04...	1630	1170	202	24.0	70	27	23
11...	1530	2070	166	25.0	50	21	19
16...	1830	1290	175	26.5	40	24	20
24...	1255	10600	49	21.5	140	15	4.0
NOV							
02...	1025	8740	151	23.0	50	18	19
07...	1658	7940	152	22.0	50	18	19
15...	1220	3870	155	19.5	50	18	19
21...	1210	6740	114	15.0	70	17	13
29...	1540	8540	112	15.0	140	16	10
DEC							
06...	1335	10600	124	13.0	70	17	15
12...	1600	8000	149	16.0	50	17	18
23...	1530	3560	153	16.5	50	17	19
29...	1220	7540	153	17.5	40	18	19
JAN							
03...	1715	7840	147	12.5	40	18	19
09...	1530	7650	155	13.5	40	18	20
16...	1430	3900	146	12.0	50	17	19
23...	1430	5760	144	9.0	50	18	18
31...	1155	3810	146	11.5	60	20	18
FEB							
07...	1810	4000	140	9.0	60	19	17
13...	1735	12600	117	11.0	120	16	14
21...	1240	7810	146	14.0	40	17	19
28...	1215	17000	92	13.0	120	12	12
MAR							
07...	1240	16400	143	15.0	50	20	19
14...	1225	15200	149	15.0	50	19	21
19...	1830	15300	155	15.5	50	20	22
27...	1325	9150	147	19.5	60	21	20
APR							
02...	1745	8830	148	18.0	50	20	19
10...	1310	7580	153	20.0	50	20	21
19...	1205	2030	176	25.0	70	23	21
24...	1315	1550	99	25.0	100	16	11
MAY							
02...	1750	1320	186	25.0	140	26	19
10...	0830	1120	163	25.0	240	22	17
16...	1240	7100	112	25.5	140	17	13
22...	1418	2900	158	27.0	140	23	19
30...	1200	11200	169	26.5	140	18	24
JUN							
06...	1130	5400	171	27.0	60	22	24
13...	1325	5760	169	28.0	50	20	24
21...	1325	5720	178	28.0	60	21	25
26...	1355	6040	171	29.0	60	21	24
JUL							
05...	1230	5460	174	17.0	60	23	24
12...	1250	6040	176	28.5	60	21	26
17...	1633	6020	169	30.0	50	20	23
24...	1705	5880	168	31.0	50	21	24
31...	1840	5700	171	30.0	50	21	24
AUG							
08...	1235	5840	178	30.0	40	21	26
14...	1655	1810	177	31.0	30	24	24
22...	1215	1020	189	30.0	50	23	25
28...	1905	830	199	30.0	50	23	23
SEP							
05...	1230	917	171	29.0	30	19	20
12...	1435	2640	232	28.0	120	35	24
20...	0955	820	142	27.0	50	19	15
25...	1155	1100	178	27.0	40	20	22

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 above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1957, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. No known diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 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 greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 27	2100	1,380	14.76	Feb. 24	2100	1,470	14.89
Feb. 11	2200	*2,780	*15.73				

Minimum discharge, 27 ft³/s on many days during September.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	61	109	133	122	614	141	78	44	30	31	27
2	39	110	100	132	115	627	108	75	42	30	30	27
3	39	162	95	118	105	297	100	72	41	30	35	27
4	39	93	163	137	102	208	94	67	40	31	40	27
5	39	69	364	114	170	186	91	63	39	34	45	27
6	39	62	397	93	161	160	87	60	38	38	36	27
7	44	57	183	87	122	143	82	59	38	36	32	29
8	45	55	125	82	104	137	79	63	39	36	29	33
9	43	55	111	80	97	134	76	77	39	33	29	35
10	45	56	105	79	125	130	75	68	42	31	30	35
11	106	54	100	78	1440	124	74	59	100	31	29	43
12	66	51	96	76	1440	121	77	56	82	35	39	44
13	54	50	95	74	329	119	81	55	66	33	49	34
14	62	50	133	79	189	117	78	62	49	33	41	36
15	81	51	202	82	160	114	75	75	42	32	36	33
16	67	146	131	83	143	113	71	80	39	43	34	29
17	58	184	155	131	133	109	67	57	38	57	35	28
18	60	155	147	145	127	106	65	52	47	54	31	28
19	123	147	112	99	120	102	64	51	76	47	29	28
20	185	94	101	86	116	237	63	50	96	50	28	28
21	324	72	96	78	113	725	148	59	59	75	43	27
22	354	64	91	74	112	364	108	126	53	53	43	27
23	288	61	86	76	228	161	87	103	60	41	36	27
24	135	59	84	78	1160	126	96	84	47	37	30	27
25	102	60	84	78	1150	112	176	70	42	35	29	27
26	84	128	82	75	770	102	112	57	39	33	33	49
27	74	1100	80	158	298	324	209	52	37	31	29	75
28	72	806	80	706	254	402	175	49	35	30	28	52
29	101	190	80	301	---	185	102	48	33	30	28	45
30	71	127	80	154	---	136	85	47	32	33	28	113
31	64	---	93	133	---	150	---	45	---	36	28	---
TOTAL	2943	4429	3960	3899	9505	6685	2946	2019	1474	1178	1043	1094
MEAN	94.9	148	128	126	339	216	98.2	65.1	49.1	38.0	33.6	36.5
MAX	354	1100	397	706	1440	725	209	126	100	75	49	113
MIN	39	50	80	74	97	102	63	45	32	30	28	27
CFSM	.74	1.16	1.00	.98	2.65	1.69	.77	.51	.38	.30	.26	.29
IN.	.86	1.29	1.15	1.13	2.76	1.94	.86	.59	.43	.34	.30	.32
AC-FT	5840	8780	7850	7730	18850	13260	5840	4000	2920	2340	2070	2170

CAL YR 1984 TOTAL 64589 MEAN 176 MAX 9720 MIN 33 CFSM 1.38 IN 18.77 AC-FT 128100
WTR YR 1985 TOTAL 41175 MEAN 113 MAX 1440 MIN 27 CFSM .88 IN 11.97 AC-FT 81670

08030500 SABINE RIVER NEAR RULIFF, TX
(Radiochemical and national stream-quality accounting network)

LOCATION.--Lat 30°18'13", long 93°44'37", Calcasieu Parish, Louisiana-Newton County, Texas State line, Hydrologic Unit 12010005, at downstream side of bridge on State Highway 12, 2.4 mi north of Ruliff, 4.2 mi upstream from the Kansas City Southern Railway Co. bridge, 4.5 mi downstream from Cypress Creek, and at mile 40.2.

DRAINAGE AREA.--9,329 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1924 to current year.

REVISED RECORDS.--WSP 1282: 1941(M), 1942. WSP 1442: 1925-29, 1937-39, 1943. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.08 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1941, nonrecording gage at Kansas City Southern Railway Co. bridge, 4.2 mi downstream and at datum 2.02 ft lower. Mar. 1, 1941, to Dec. 8, 1948, nonrecording gage at present site and datum.

REMARKS.--No estimated discharge. Records fair. Flow is partly regulated by Toledo Bend Reservoir (station 08025350) 116.3 mi upstream.

AVERAGE DISCHARGE.--42 years (water years 1925-66) prior to completion of Toledo Bend Reservoir, 8,422 ft^3/s (6,102,000 acre-ft/yr); 19 years (water years 1967-85) regulated, 7,438 ft^3/s (5,389,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 121,000 ft^3/s May 22, 1953 (gage height, 19.98 ft); minimum, 270 ft^3/s Sept. 27-30, Oct. 1-3, 17-20, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1835, 22.2 ft in May or June 1884 (adjusted to present site and datum on basis of slope of flood of June 8, 9, 1950); flood of Apr. 26-29, 1913, reached a stage of 19.5 ft, present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,900 ft^3/s Mar. 1 at 0100 hours (gage height, 14.77 ft); minimum daily, 938 ft^3/s Sept. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	8060	13900	8600	11000	27500	11700	4590	8150	4640	3610	1390
2	1530	8270	14200	8430	8590	25800	11200	3490	6450	2640	4560	1620
3	1190	8420	12300	8410	6730	23800	10800	2570	3340	1850	5020	1270
4	1290	9160	9790	8500	5810	22700	10400	2070	1740	3490	5250	938
5	1390	10200	8960	8470	5510	21400	10100	1780	1790	4520	4940	1060
6	1410	10600	10200	8500	5470	19500	9660	1630	3640	5000	3080	1250
7	1460	10500	12400	8470	5720	17900	9270	1510	4600	5060	2190	1310
8	1660	10100	14400	8300	5810	16900	8910	1430	5000	4540	3780	1450
9	1310	9380	15600	8170	5540	16600	8660	1420	5130	2640	4860	2130
10	1070	8260	15500	8080	5220	16400	8470	1360	4700	1900	5460	2000
11	1220	5550	14400	7950	6090	16200	8360	1730	2810	3630	5750	1970
12	1500	3260	12900	7860	8180	16000	8300	4240	2020	4680	5390	2630
13	2320	2310	11700	7730	10800	15800	8230	6500	3640	5150	3430	2980
14	2860	2380	10900	7820	13500	15800	8180	7920	4570	5340	2230	3200
15	2810	3320	10400	7900	16200	15700	8120	7890	4950	4870	3400	4580
16	1990	3720	10400	7780	18100	15700	8100	5200	5130	2790	2550	5860
17	1620	3910	10300	7420	17800	15600	8020	4040	4710	2230	1520	6560
18	1910	4800	10200	6100	15600	15500	7100	6210	2900	4070	1220	5980
19	2040	6320	10200	5610	13200	15300	5100	7940	2520	4980	1140	3620
20	2500	7310	8970	5560	11700	16200	3620	9100	4540	5520	1090	2100
21	3580	8190	7150	5250	10600	17900	3320	10100	5730	5840	1110	1520
22	6580	8660	5940	4800	10000	20200	4290	11100	6010	5500	1570	1230
23	9160	8390	5260	4530	9880	21900	5240	10900	5930	3440	1610	1450
24	11600	7440	4890	4980	11900	21900	5920	8320	5320	2210	1530	1300
25	13900	6470	4660	6200	15000	19700	5760	4960	3200	3620	1570	968
26	15200	5750	4860	7100	18400	17000	5010	3510	2210	4570	1800	1230
27	14900	6320	6040	7950	22500	14700	4570	4890	3730	5020	1400	1470
28	13600	7690	7150	8850	26900	13000	5050	6150	4630	5200	1070	1470
29	11900	9600	8070	9570	---	12000	5730	6750	4940	4810	945	1670
30	9880	11900	8240	10600	---	11900	5510	7110	5050	2870	1120	2100
31	8430	---	8450	11600	---	12000	---	7730	---	1970	1280	---
TOTAL	153870	216240	308330	237090	321750	548500	222700	164140	129080	124590	85475	68306
MEAN	4964	7208	9946	7648	11490	17690	7423	5295	4303	4019	2757	2277
MAX	15200	11900	15600	11600	26900	27500	11700	11100	8150	5840	5750	6560
MIN	1070	2310	4660	4530	5220	11900	3320	1360	1740	1850	945	938
AC-FT	305200	428900	611600	470300	638200	1088000	441700	325600	256000	247100	169500	135500

CAL YR 1984 TOTAL 2655010 MEAN 7254 MAX 45000 MIN 797 AC-FT 5266000
WTR YR 1985 TOTAL 2580071 MEAN 7069 MAX 27500 MIN 938 AC-FT 5118000

08030500 SABINE RIVER NEAR RULIFF, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1945 to September 1946, October 1947 to current year. Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: January 1968 to September 1982. Radiochemical analyses: October 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1945 to September 1946, October 1947 to current year.
WATER TEMPERATURES: October 1947 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 equation developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 779 microsiemens Aug. 31, 1966; minimum, 27 microsiemens Feb. 16, 1984.
WATER TEMPERATURES: Maximum, 36.0°C Aug. 14, 1962; minimum, 1.0°C Jan. 28, 1948.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 276 microsiemens Sept. 15; minimum daily, 41 microsiemens Oct. 26.
WATER TEMPERATURES: Maximum daily, 31.0°C on several days during June and August; minimum daily, 6.0°C Feb. 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
06...	1002	10600	110	6.3	19.0	25	7.6	81	1.2	150	96	22
JAN												
28...	1500	8820	138	6.6	10.0	11	12.2	107	1.2	88	120	27
JUN												
11...	1812	2310	161	6.6	29.5	15	7.3	95	1.4	52	46	28
SEP												
09...	1728	2030	161	6.8	29.0	18	7.2	93	.5	130	190	29

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
06...	6	5.5	2.0	13	1	2.2	16	16	14	.10	7.9
JAN											
28...	10	6.3	2.6	17	1	2.5	17	17	21	<.10	7.4
JUN											
11...	12	6.3	3.0	20	2	2.8	16	20	27	<.10	8.9
SEP											
09...	7	6.8	2.9	20	2	3.1	22	20	23	.10	9.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
06...	83	71	<.10	.030	.50	.040	.020	.020	50	1430	65
JAN											
28...	101	84	.12	.030	.60	.020	.010	<.010	22	524	81
JUN											
11...	97	98	<.10	.060	.50	.060	.020	.010	28	175	81
SEP											
09...	101	99	<.10	.050	.40	.030	.020	.010	25	137	91

08030500 SABINE RIVER NEAR RULIFF, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 06...	1002	<1	54	<.0	<1	1	<3	2	280	1
JAN 28...	1500	<1	42	<.5	<1	<1	<3	2	52	3
JUN 11...	1812	2	53	.8	<1	<1	<3	2	190	7
SEP 09...	1728	<1	44	<.5	<1	<1	<3	2	180	1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 06...	<4	53	<.1	<10	2	<1	<1	75	<6	11
JAN 28...	4	25	<.1	<10	<1	<1	<1	98	<6	13
JUN 11...	<4	30	<.1	<10	2	<1	<1	110	<6	12
SEP 09...	4	29	.1	<10	1	<1	<1	110	<6	11

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)
NOV 06...	1002	<8.6	1.9	<10	1.3	<9.4	1.1	.13	.10

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	153870	81	49	20300	11	4630	9.5	3960	16
NOV.	1984	216240	111	67	39100	15	8950	13	7580	22
DEC.	1984	308330	111	67	55400	15	12700	13	10700	22
JAN.	1985	237090	138	81	51700	19	11900	15	9900	26
FEB.	1985	321750	94	57	49900	13	11400	11	9750	19
MAR.	1985	548500	107	64	95400	15	21800	13	18500	21
APR.	1985	222700	127	75	45100	17	10400	14	8650	24
MAY	1985	164140	148	86	38000	20	8810	16	7220	27
JUNE	1985	129080	157	90	31500	21	7320	17	5960	29
JULY	1985	124590	164	94	31500	22	7320	18	5920	30
AUG.	1985	85475	169	96	22100	22	5160	18	4150	30
SEPT	1985	68306	185	102	18900	24	4440	19	3490	32
TOTAL		2580071	**	**	499000	**	115000	**	95800	**
WTD.AVG.		7069	121	72	**	16	**	14	**	23

08030500 SABINE RIVER NEAR RULIFF, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	128	67	145	110	58	122	65	155	170	167	154
2	180	132	69	142	114	65	129	80	150	173	166	156
3	166	125	74	139	120	77	133	100	148	169	169	168
4	181	119	94	136	123	79	134	130	153	176	169	167
5	217	110	105	140	126	83	142	137	163	164	168	160
6	176	113	102	148	125	91	138	148	161	157	165	170
7	168	120	90	150	123	103	139	156	158	158	165	173
8	177	124	84	152	117	116	140	163	161	174	164	157
9	180	126	92	150	118	121	142	225	159	157	169	160
10	177	129	100	149	125	126	144	200	160	170	176	171
11	162	115	108	147	115	138	145	183	160	165	168	233
12	173	119	117	142	101	140	147	169	161	163	169	184
13	160	129	123	140	55	138	149	157	157	164	168	201
14	126	133	128	141	66	137	151	159	158	173	168	235
15	73	142	132	142	71	139	153	156	159	168	166	276
16	93	150	134	141	78	138	154	154	160	167	165	210
17	108	145	135	131	91	139	153	153	161	160	166	195
18	123	137	135	128	102	142	145	159	162	156	169	182
19	131	108	130	132	115	141	148	156	150	160	171	179
20	117	101	119	128	122	134	150	154	146	158	170	148
21	110	78	115	121	125	120	157	155	161	161	169	128
22	78	83	124	129	129	106	133	152	148	158	189	118
23	45	95	129	136	135	93	93	148	155	148	221	116
24	42	101	131	137	116	85	66	140	160	153	169	171
25	42	115	135	146	96	87	58	130	146	169	165	159
26	41	118	136	146	62	93	60	126	158	166	159	162
27	44	120	135	145	60	103	67	134	154	164	161	162
28	63	100	130	142	58	116	69	145	166	168	157	156
29	75	80	132	134	---	110	64	154	164	167	163	165
30	90	68	134	107	---	109	62	164	165	163	166	161
31	108	---	144	111	---	116	---	161	---	163	172	---
MEAN	123	115	116	138	104	111	123	149	157	164	169	173

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

ONCE-DAILY

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

08031000 COW BAYOU NEAR MAURICEVILLE, TX

LOCATION.--Lat 30°11'10", long 93°54'30", Orange County, Hydrologic Unit 12010005, near center of span on downstream side of bridge on State Highway 12, 0.4 mi upstream from Kansas City Southern Railway Co. bridge, and 2.7 mi southwest of Mauriceville.

DRAINAGE AREA.--83.3 mi^2.

PERIOD OF RECORD.--March 1952 to current year (October 1956 to September 1957, monthly discharge only).
Water-quality records: Sediment records: October 1976 to September 1979.

REVISED RECORD.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.27 ft below National Geodetic Vertical Datum of 1929. Prior to Oct. 23, 1957, nonrecording gage at present site and former datum. Prior to Sept. 7, 1984, at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Mar. 22 to May 22 and May 30 to June 9. Records fair except those for estimated daily discharges, which are poor. No large diversion above station. Base flow is partly sustained by springs. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 103 ft^3/s, 16.79 in/yr, 74,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,600 ft^3/s Sept. 19, 1963, gage height, 18.15 ft, former datum no flow at times. Maximum stage since at least 1940, 18.16 ft, former datum, Oct. 28, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 27	0600	*971	*17.55	No peak greater than base discharge.			

Minimum discharge, 0.04 ft^3/s June 10-17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	48	373	12	214	902	200	10	.20	.80	3.4	1.5
2	1.5	79	473	26	177	800	150	7.0	.15	.73	3.1	1.4
3	1.1	60	348	52	137	718	100	5.0	.12	.76	2.9	1.4
4	.80	48	276	47	108	616	80	3.5	.10	.76	2.8	1.3
5	.62	40	314	33	127	481	60	2.6	.08	.74	2.8	1.3
6	.52	31	279	25	100	350	45	1.9	.07	.71	2.8	1.2
7	.42	22	242	20	84	253	35	1.4	.07	.68	2.8	1.2
8	.35	15	259	15	77	182	26	1.0	.06	.69	2.8	1.2
9	1.2	9.9	260	11	73	127	20	.85	.06	1.4	2.8	2.9
10	3.2	6.9	234	17	91	90	15	.70	.05	1.4	2.7	3.6
11	2.8	4.5	197	20	619	65	16	.60	.04	1.5	2.7	2.2
12	5.4	2.8	158	22	427	47	18	.55	.04	15	3.8	1.6
13	3.7	2.1	121	25	436	36	20	.50	.04	8.8	4.5	1.4
14	205	2.0	94	37	400	50	20	.47	.04	4.5	2.6	1.3
15	190	1.9	74	38	333	80	18	.44	.04	2.9	2.4	1.3
16	116	2.1	68	38	265	99	15	.41	.04	4.4	2.2	1.3
17	244	2.1	73	88	205	93	12	.38	.10	22	2.1	1.2
18	332	69	51	81	149	81	10	.35	.99	15	2.0	1.3
19	539	139	38	84	102	67	9.0	.33	5.8	15	1.9	1.3
20	604	126	30	83	72	402	8.0	.31	11	14	3.4	1.3
21	512	122	24	72	51	663	15	.30	7.0	12	2.9	1.3
22	444	100	21	59	39	750	20	.29	4.6	13	2.6	1.3
23	458	77	17	44	103	650	22	9.0	3.5	13	2.6	1.2
24	495	58	13	31	734	500	25	9.5	2.7	14	2.7	1.2
25	389	44	11	22	805	400	40	8.5	2.5	14	2.2	1.2
26	307	53	8.8	16	930	300	50	4.8	1.9	10	2.3	1.2
27	235	383	7.1	51	968	350	45	2.2	1.6	7.0	2.1	1.2
28	177	290	5.7	188	922	400	35	.74	1.3	6.7	1.9	1.2
29	120	364	4.8	203	---	300	25	.37	1.0	7.7	1.7	2.2
30	80	423	4.2	241	---	200	15	.30	.90	5.5	1.7	8.4
31	59	---	5.8	245	---	220	---	.25	---	3.8	1.6	---
TOTAL	5529.81	2625.3	4084.4	1946	8748	10272	1169.0	74.54	46.09	218.47	80.8	51.6
MEAN	178	87.5	132	62.8	312	331	39.0	2.40	1.54	7.05	2.61	1.72
MAX	604	423	473	245	968	902	200	10	11	22	4.5	8.4
MIN	.35	1.9	4.2	11	39	36	8.0	.25	.04	.68	1.6	1.2
CFSM	2.14	1.05	1.59	.75	3.75	3.97	.47	.03	.02	.09	.03	.02
IN.	2.47	1.17	1.82	.87	3.91	4.59	.52	.03	.02	.10	.04	.02
AC-FT	10970	5210	8100	3860	17350	20370	2320	148	91	433	160	102

CAL YR 1984 TOTAL 34490.88 MEAN 94.2 MAX 801 MIN .16 CFSM 1.13 IN 15.40 AC-FT 68410
WTR YR 1985 TOTAL 34846.01 MEAN 95.5 MAX 968 MIN .04 CFSM 1.15 IN 15.56 AC-FT 69120

08031200 KICKAPOO CREEK NEAR BROWNSBORO, TX

LOCATION.--Lat 32°18'34", long 95°36'19", Henderson County, Hydrologic Unit 12020001, on left bank at bridge on Farm Road 314, 1.0 mi northeast of Brownsboro, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--232 mi^2.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 358.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1963-85), 128 ft^3/s (7.49 in/yr), 92,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft^3/s Apr. 27, 1966 (gage height, 14.79 ft); maximum gage height, 15.34 ft May 11, 1968; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1935, 16.4 ft in 1936 or 1937, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge, 4,160 ft^3/s Feb. 25 at 0400 hours (gage height, 11.93 ft), no other peaks above base of 1,000 ft^3/s; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.0	126	69	41	383	439	531	15	.00	.00	.00
2	.00	12	84	104	41	303	343	754	12	.00	.00	.00
3	.00	17	43	121	45	242	289	626	9.9	.00	.00	.00
4	.00	16	30	126	52	192	252	495	7.7	.00	.00	.00
5	.00	17	28	110	79	156	201	365	6.0	.00	.00	.00
6	.00	16	33	83	132	136	142	235	11	.00	.00	.00
7	.00	13	41	65	177	117	83	108	14	.00	.00	.00
8	.00	11	40	55	207	101	49	49	13	.00	.00	.00
9	.00	8.8	38	50	216	88	31	32	13	.00	.00	.00
10	.00	7.2	37	51	218	72	23	26	14	.00	.00	.00
11	.00	6.0	33	50	222	57	19	22	12	.00	.00	.00
12	.00	5.1	29	48	198	44	17	19	8.3	.00	.00	.00
13	.00	6.3	30	46	165	38	17	19	7.8	.00	.00	.00
14	.00	8.3	35	43	129	50	23	25	3.7	.00	.00	.00
15	.00	7.7	73	40	99	104	36	32	1.6	.00	.00	.00
16	.00	6.5	96	56	76	138	32	35	.52	.00	.00	.00
17	.00	4.5	119	106	62	143	27	46	.17	.00	.00	.00
18	.00	6.7	173	151	55	177	21	33	.10	.00	.00	.00
19	.00	7.1	228	145	51	197	16	21	.31	.00	.00	.00
20	.00	9.9	260	129	50	226	13	18	3.7	.00	.00	.00
21	.00	9.7	263	105	48	337	11	40	1.7	.00	.00	.00
22	.00	11	279	72	49	312	12	97	.73	.00	.00	.00
23	.00	12	289	54	697	391	43	114	2.0	.00	.00	.00
24	.18	11	258	47	2200	427	147	120	1.3	.00	.00	.00
25	2.1	10	189	44	3550	341	172	140	.63	1.0	.00	.00
26	1.2	13	118	42	1640	257	376	147	.20	17	.00	.00
27	.85	80	72	42	767	350	464	97	.03	6.8	.00	.00
28	4.1	225	57	43	504	491	386	48	.00	.93	.00	.00
29	2.8	223	50	42	---	599	378	31	.00	.19	.00	.00
30	2.5	170	47	41	---	717	356	24	.00	.04	.00	.00
31	2.4	---	55	41	---	560	---	19	---	.00	.00	---
TOTAL	16.13	954.8	3253	2221	11770	7746	4418	4368	160.39	25.96	.00	.00
MEAN	.52	31.8	105	71.6	420	250	147	141	5.35	.84	.000	.000
MAX	4.1	225	289	151	3550	717	464	754	15	17	.00	.00
MIN	.00	4.0	28	40	41	38	11	18	.00	.00	.00	.00
CFSM	.002	.14	.45	.31	1.81	1.08	.63	.61	.02	.004	.000	.000
IN.	.00	.15	.52	.36	1.89	1.24	.71	.70	.03	.00	.00	.00
AC-FT	32	1890	6450	4410	23350	15360	8760	8660	318	51	.00	.00

CAL YR 1984	TOTAL	31074.76	MEAN 84.9	MAX 1040	MIN .00	CFSM .37	IN 4.98	AC-FT 61640			
WTR YR 1985	TOTAL	34933.28	MEAN 95.7	MAX 3550	MIN .00	CFSM .41	IN 5.60	AC-FT 69290			

08031290 LAKE ATHENS NEAR ATHENS, TX

LOCATION.--Lat 32°12'15", long 95°43'30", Henderson County, Hydrologic Unit 12020001, at upstream side of dam on Flat Creek, 5 mi downstream from Underwood Lake, 8 mi east of Athens, and 18 mi upstream from Neches River.

DRAINAGE AREA.--21.6 mi^2.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1972, published as Flat Creek Reservoir.

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

REMARKS.--The lake is formed by a rolled earthfill dam 3,000 ft long. Deliberate impoundment began Nov. 1, 1962, and the dam was completed in May 1963. The emergency spillway is an uncontrolled 300-foot-wide channel cut through natural ground at the left end of the dam. The service spillway is an uncontrolled 6- by 6-foot square drop inlet that is connected to a concrete conduit of the same size that extends through the dam. A 4.0- by 5.5-foot inlet box with slide valve that connects to an 18-inch-diameter concrete conduit extends through the dam and serves as the low-flow service outlet. Water is used for municipal supply by the city of Athens. 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	453 +	-
Crest of spillway	446.0	42,600
Crest of drop inlet (top of conservation pool)	440.0	32,790
Normal operating level	440.0	32,790
Lowest gated outlet (invert)	396.5	100

COOPERATION.--The capacity table, furnished by the city of Athens, is based on Geological Survey topographic maps dated 1949-50.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,500 acre-ft May 10, 1968 (elevation, 442.37 ft); minimum since operating level was reached (May 7, 1968), 29,300 acre-ft Nov. 9-13, 1980 (elevation, 437.64 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,080 acre-ft Feb. 23 at 1800 hours to Feb. 24 at 0500 hours (elevation, 440.8; minimum, 29,940 acre-ft Oct. 6 (elevation, 438.08 ft).

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

438.0	29,820	440.0	32,790
439.0	31,290	441.0	34,340

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30000	30950	31520	32580	33070	33610	33390	33520	33210	32580	32280	31200
2	29980	30950	31530	32610	33070	33530	33380	33440	33180	32550	32240	31140
3	29970	30970	31530	32630	33080	33490	33330	33410	33080	32600	32210	31110
4	29950	30970	31520	32640	33120	33470	33150	33330	33040	32570	32190	31080
5	29950	30970	31580	32640	33150	33410	33260	33300	33020	32550	32180	31040
6	30000	30970	31590	32660	33180	33390	33220	33260	33180	32550	32120	31040
7	30220	30970	31590	32660	33190	33360	33210	33260	33100	32490	32060	31030
8	30160	30970	31590	32660	33190	33350	33180	33220	33190	32460	32040	31000
9	30190	30950	31640	32720	33190	33330	33150	33190	33020	32450	32000	30980
10	30220	30910	31640	32720	33240	33320	33130	33180	32990	32420	31940	30950
11	30250	30910	31670	32720	33210	33330	33120	33150	33070	32430	31910	30940
12	30290	30890	31680	32690	33220	33290	33100	33120	32870	32360	31880	30950
13	30290	30860	31800	32700	33220	33330	33130	33190	32840	32340	31830	30940
14	30320	30850	31820	32720	33190	33430	33150	33190	32790	32300	31800	30890
15	30320	30860	31850	32720	33180	33410	33150	33190	32760	32250	31760	30850
16	30320	30850	31950	32930	33190	33410	33120	33180	32730	32270	31730	30850
17	30290	30850	32090	32950	33180	33390	33120	33150	32880	32270	31680	30820
18	30280	31000	32190	32980	33180	33360	33100	33100	32880	32220	31650	30800
19	30260	31000	32240	32950	33180	33260	33080	33100	32850	32210	31620	30780
20	30350	31010	32270	32930	33180	33530	33050	33160	32820	32190	31590	30730
21	30380	31010	32310	32950	33180	33500	33040	33330	32820	32240	31560	30720
22	30410	31000	32310	32950	33240	33490	33100	33330	32820	32420	31520	30700
23	30420	31000	32310	32950	34080	33440	33210	33330	32820	32490	31470	30690
24	30470	30980	32330	32990	33970	33410	33190	33300	32820	32490	31470	30600
25	30580	31050	32330	32990	33880	33390	33180	33260	32820	32480	31440	30570
26	30600	31430	32330	32960	33770	33350	33180	33220	32820	32450	31410	30530
27	30630	31470	32360	32980	33670	33490	33260	33320	32730	32420	31400	30470
28	30760	31500	32400	32990	33630	33490	33330	33270	32640	32420	31350	30440
29	30760	31520	32430	32990	---	33440	33350	33190	32640	32370	31310	30750
30	30780	31520	32460	33020	---	33440	33550	33260	32610	32340	31290	30720
31	30780	---	32570	33010	---	33430	---	33260	---	32310	31250	---
MAX	30780	31520	32570	33020	34080	33610	33550	33520	33210	32600	32280	31200
MIN	29950	30850	31520	32580	33070	33260	33040	33100	32610	32190	31250	30440
(†)	438.65	439.15	439.85	440.14	440.54	440.41	440.49	440.30	439.88	439.68	438.97	438.61
(‡)	+740	+740	+1050	+440	+620	-200	-120	-290	-650	-300	-1,060	-530
(††)	163	137	168	139	121	143	179	180	140	157	241	173

CAL YR 1984 MAX 34010 MIN 29950 ‡ +320 (††) 1693
WTR YR 1985 MAX 34080 MIN 29950 ‡ +680 (††) 1941

(†) Elevation, in feet, at end of month
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for munifipal use by city of Athens.

08031400 LAKE PALESTINE NEAR FRANKSTON, TX

LOCATION.--Lat 32°03'12", long 95°26'12", Anderson-Cherokee County line, Hydrologic Unit 12020001, in outlet tower near right bank, 140 ft upstream from Blackburn Crossing Dam on Neches River, 5 mi east of Frankston, 11 mi upstream from gage (station 08032000), and at mile 354.0.

DRAINAGE AREA.--839 mi².

PERIOD OF RECORD.--February 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1962, non-recording gage read once daily.

REMARKS.--The lake is formed by a rolled earthfill dam with a 500-foot-wide uncontrolled emergency spillway near the left end of dam. Deliberate impoundment began May 1, 1962. The enlargement of lake began Sept. 26, 1969, and was completed on Mar. 3, 1971. The outlet works consist of two 5- by 7-foot gates located in concrete tower near center of dam and connected to an 8.5-foot-diameter concrete conduit through the dam. The low-flow outlet consists of two 3.0-foot iron pipes connected to the tower structure for low-flow releases. Water is used for municipal and industrial purposes in the Palestine area. The diversion point is downstream from gage (station 08032000). There are no large diversions above 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	364.0	-
Design flood	355.3	726,000
Crest of spillway (top of conservation pool)	345.0	412,000
Lowest gated outlet (invert)	298.0	550

COOPERATION.--The capacity table, furnished by the Upper Neches River Municipal Water Authority, is based on Geological Survey topographic maps dated 1946 and 1948-49.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 501,300 acre-ft June 7, 1973 (elevation, 348.29 ft); minimum since first appreciable storage, 11,450 acre-ft Nov. 28, 1970 (elevation, 310.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 453,000 acre-ft Feb. 27 at 0300 hours (elevation, 346.56 ft); minimum, 346,900 acre-ft Oct. 6 (elevation, 342.32 ft).

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

342.0	339,500	344.0	386,700	346.0	437,900
343.0	362,600	345.0	411,800	347.0	464,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349400	366900	371800	404300	415700	444700	432400	432700	414900	398200	390700	372200
2	349000	365700	373400	404000	414400	441400	430300	431600	414400	397700	390500	371800
3	348300	365000	372200	403000	414400	440600	427500	431100	412800	397700	389500	369800
4	347600	366200	373200	402800	415700	437900	426400	430100	412800	396700	388500	368400
5	347400	365700	375400	402800	416000	434500	427500	428200	412800	396700	388000	367400
6	348500	365000	373900	403300	417000	432200	425900	427200	413100	396500	387500	369800
7	350400	364000	373400	403500	417000	430300	424900	426200	413100	395500	386700	369300
8	350600	363300	374400	403800	415500	429500	422800	424900	412600	394500	386200	369300
9	350600	364500	374900	405000	416500	428500	420900	423000	411800	394000	385000	368900
10	351300	365000	375100	407000	423000	426900	420200	420900	410500	394200	385500	369100
11	352000	364800	374700	407000	419400	426900	419100	420400	410800	394000	384300	369100
12	352700	364300	375900	406000	419100	423300	418600	419600	410500	393200	384300	369600
13	353400	362600	378000	405500	419400	426400	419400	418300	409300	392700	383100	368900
14	355000	363300	378500	406500	419100	423300	418600	420200	410500	391700	383100	368400
15	355000	364300	378300	406300	418300	422800	417800	419600	407800	392200	382600	367400
16	356800	363800	382800	410500	418300	422500	417300	419900	407000	391700	381600	366700
17	355400	362800	384500	409500	418300	421700	416500	418600	406800	392200	380200	365700
18	354500	366000	388500	411500	418300	420400	415500	417800	407000	392000	380000	365500
19	355700	366000	390200	419900	418300	419100	414400	416500	406500	391700	379700	365000
20	357100	365500	391000	410800	417000	430300	415500	417000	404300	391500	379000	365000
21	358900	365000	393700	411300	417000	431600	413100	419900	403800	391500	379200	364800
22	359100	365000	394700	411800	416800	431100	415200	420200	404300	391700	376800	363600
23	358900	365000	394500	411800	431100	431100	416800	419600	403800	395500	375900	363800
24	359100	364300	398500	412300	440900	430900	416200	419600	403000	394200	376300	361900
25	361200	365300	396500	414400	449200	429800	415700	418300	402800	394000	376100	362600
26	361000	368900	397000	412800	452800	426700	417000	416200	402300	394200	375400	361400
27	361900	369600	396700	415200	449500	428000	418300	417000	403500	393700	374700	360300
28	363300	369100	397500	413600	447600	431100	423800	416000	401000	393000	374400	360300
29	363300	370800	398000	413400	---	431100	424100	416000	400500	391700	373700	365000
30	363600	371300	399500	416200	---	434500	431100	414900	399300	391700	373400	363800
31	362600	---	403000	416000	---	432700	---	415700	---	391200	373200	---
MAX	363600	371300	403000	419900	452800	444700	432400	432700	414900	398200	390700	372200
MIN	347400	362600	371800	402800	414400	419100	413100	414900	399300	391200	373200	360300
(†)	343.00	343.36	344.65	345.16	346.36	345.80	345.74	345.15	344.50	344.18	343.44	343.05
(‡)	+12700	+8700	+31700	+13000	+31600	-14900	-1600	-15400	-16400	-8100	-18000	-9400

CAL YR 1984 MAX 434000 MIN 347400 (‡) +17000
WTR YR 1985 MAX 452800 MIN 347400 (‡) +13900

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

08032000 NECHES RIVER NEAR NECHES, TX

LOCATION.--Lat 31°53'32", long 95°25'50", Anderson-Cherokee County line, Hydrologic Unit 12020001, on left bank downstream from bridge on U.S. Highway 79, 1.0 mi downstream from Missouri Pacific Railway Co. bridge, 1.4 mi downstream from Walnut Creek, 4.4 mi northeast of Neches, and at mile 333.2.

DRAINAGE AREA.--1,145 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1939 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 264.06 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1945, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 17, 18. Records good. Some regulation by Lake Palestine (station 08031400) 11 mi upstream and by Lake Athens (station 08031290) 50 mi upstream, capacity 454,600 acre-ft. No large diversion above station. Gage-height telemeter located at gage.

AVERAGE DISCHARGE.--22 years (water years 1940-61) unregulated, 804 ft³/s (582,500 acre-ft/yr); 24 years (water years 1962-85) regulated, 610 ft³/s (441,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,500 ft³/s Apr. 2, 1945 (gage height, 22.07 ft); no flow Oct. 3-5, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 (stage 24.3 ft) was the highest since flood in May 1884, which was probably higher.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,970 ft³/s Mar. 1 from 0600 to 1600 hours (gage height, 15.08 ft); minimum daily, 33 ft³/s Oct. 1-5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	97	131	171	437	3950	1370	933	223	72	68	63
2	33	182	113	244	434	3640	1460	1090	212	71	67	63
3	33	250	101	280	345	3240	1490	1230	178	71	66	63
4	33	186	93	244	295	2810	1430	1350	157	73	66	63
5	33	135	104	175	327	2410	1270	1350	133	71	64	63
6	44	109	167	158	420	2190	1130	1280	119	69	64	63
7	49	94	175	141	450	2070	1060	1170	118	69	65	65
8	57	86	156	136	450	1870	984	1070	128	70	66	65
9	46	81	139	123	422	1690	904	970	124	69	65	64
10	45	77	129	135	404	1510	787	873	109	67	64	66
11	47	71	118	192	560	1350	658	757	93	70	64	66
12	51	67	112	250	771	1200	578	613	123	73	64	64
13	61	65	112	201	755	1070	529	526	176	70	64	64
14	57	64	134	137	669	987	504	484	120	68	63	64
15	59	64	164	118	642	955	498	626	86	67	64	64
16	62	65	204	147	610	911	461	622	79	67	65	63
17	53	69	284	343	526	868	428	573	78	72	65	63
18	55	73	317	371	502	835	375	512	80	73	64	63
19	61	101	349	308	492	773	319	459	110	72	64	63
20	79	106	308	359	482	780	266	389	99	72	64	63
21	107	94	266	485	456	1030	247	383	82	71	64	63
22	206	87	234	292	425	1210	235	514	79	72	64	62
23	217	80	201	219	479	1400	221	539	77	94	63	61
24	169	77	180	212	902	1470	279	532	77	146	63	61
25	209	84	168	216	1260	1450	311	505	77	113	63	61
26	365	109	164	237	1780	1390	290	457	76	89	63	62
27	272	188	138	246	2600	1320	295	392	74	79	63	62
28	206	245	136	256	3660	1240	363	332	83	75	63	62
29	202	210	134	286	---	1200	593	317	105	73	63	68
30	152	163	131	246	---	1200	769	292	82	71	63	83
31	115	---	130	281	---	1250	---	248	---	70	63	---
TOTAL	3211	3379	5292	7209	21555	49269	20104	21388	3357	2359	1991	1920
MEAN	104	113	171	233	770	1589	670	690	112	76.1	64.2	64.0
MAX	365	250	349	485	3660	3950	1490	1350	223	146	68	83
MIN	33	64	93	118	295	773	221	248	74	67	63	61
AC-FT	6370	6700	10500	14300	42750	97730	39880	42420	6660	4680	3950	3810

CAL YR 1984 TOTAL 114065 MEAN 312 MAX 2210 MIN 33 AC-FT 226200
WTR YR 1985 TOTAL 141034 MEAN 386 MAX 3950 MIN 33 AC-FT 279700

08032000 NECHES RIVER NEAR NECHES, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1969 to current year. Biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1969 to current year.
WATER TEMPERATURES: December 1983 to current year.

INSTRUMENTATION.--Since December 1969, specific conductance is recorded continuously at this station.
Beginning December 1983 water temperature is recorded continuously at this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1973-85): Maximum daily, 1,190 microsiemens Aug. 29, 1976; minimum daily, 77 microsiemens July 28, 1979.
WATER TEMPERATURES: Maximum daily, 36.0°C July 16, 1985; minimum daily 0.5°C Dec. 22, 1983 and Jan. 20, 22, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 535 microsiemens Sept. 21; minimum daily, 122 microsiemens Nov. 29, 30.
WATER TEMPERATURES: Maximum daily, 36.0°C July 16; minimum daily, 2.5°C Feb. 3-5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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)
JAN 22...	1655	252	213	6.6	4.6	11.8	91	.9	39
MAR 07...	1000	2070	183	6.6	13.2	9.9	94	.9	29
MAY 08...	0900	1070	186	6.6	22.5	7.2	84	.9	33
JUN 05...	1645	126	214	6.7	27.5	6.6	85	6.1	39
JUL 25...	1410	113	171	6.7	28.5	6.4	83	.8	34
AUG 28...	0830	63	188	6.6	26.0	4.5	55	1.1	31

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)
JAN 22...	21	7.9	4.7	23	2	4.5	18	23	37
MAR 07...	22	4.1	4.6	21	2	4.8	7	27	31
MAY 08...	23	5.3	4.8	21	2	5.3	10	29	33
JUN 05...	24	6.8	5.4	24	2	4.7	15	27	37
JUL 25...	23	6.4	4.4	17	1	5.8	11	30	24
AUG 28...	20	4.3	5.0	22	2	5.1	11	27	35

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)
JAN 22...	.10	8.2	120	--	--	--	--	--	--
MAR 07...	.10	2.0	99	<.010	<.10	.040	.56	.60	.030
MAY 08...	.20	2.8	110	<.010	<.10	.100	.70	.80	.040
JUN 05...	.20	5.7	120	<.010	.10	.040	.76	.80	.040
JUL 25...	.10	11	110	<.010	.10	.060	.54	.60	.050
AUG 28...	.20	6.8	110	<.010	<.10	.040	.66	.70	.020

08032000 NECHES RIVER NEAR NECHES, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	3211	263	165	1430	47	407	26	223	45
NOV.	1984	3379	259	162	1480	47	425	25	226	44
DEC.	1984	5292	206	127	1810	33	465	26	367	36
JAN.	1985	7209	208	128	2490	33	637	26	507	36
FEB.	1985	21555	191	117	6840	29	1710	25	1450	33
MAR.	1985	49269	188	115	15300	28	3770	25	3360	33
APR.	1985	20104	189	116	6300	29	1560	25	1380	33
MAY	1985	21388	184	113	6500	28	1590	25	1450	32
JUNE	1985	3357	204	126	1140	32	289	26	236	35
JULY	1985	2359	192	118	752	29	187	26	162	33
AUG.	1985	1991	187	115	618	29	154	25	133	33
SEPT	1985	1920	382	249	1290	87	451	13	66	62
TOTAL		141034	**	**	46000	**	11600	**	9550	**
WTD.AVG.		386	196	121	**	31	**	25	**	34

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	210	205	208	258	240	244	181	148	164	285	228	257
2	207	203	205	321	252	268	204	183	194	224	196	204
3	210	201	204	260	210	221	199	195	197	206	201	203
4	225	202	213	248	218	234	207	196	201	202	201	202
5	235	210	224	274	249	272	209	179	201	209	201	206
6	222	169	200	301	275	286	231	182	210	214	209	211
7	224	163	194	318	299	305	178	137	151	216	209	212
8	200	178	192	330	315	320	140	134	137	216	211	214
9	251	174	201	350	330	339	136	133	134	221	210	213
10	324	244	287	353	336	346	148	136	141	246	215	223
11	360	325	345	336	322	330	191	149	167	237	190	209
12	358	315	344	327	306	315	225	193	210	199	186	188
13	367	182	293	314	286	299	251	226	239	201	187	193
14	392	249	336	357	279	336	342	246	273	228	203	216
15	396	346	382	301	252	272	281	245	257	234	227	231
16	346	305	327	264	256	261	282	228	238	245	219	229
17	---	---	320	498	250	287	288	207	226	326	185	239
18	---	---	315	483	405	438	212	190	202	185	173	179
19	319	297	310	403	308	353	196	186	189	201	184	192
20	330	312	322	307	265	284	210	198	206	201	180	194
21	367	278	318	265	257	261	209	204	207	198	180	189
22	445	281	347	288	264	273	209	205	207	227	197	206
23	286	245	261	314	288	301	208	206	207	221	209	211
24	283	249	261	321	314	319	211	207	210	---	---	220
25	324	249	291	321	319	320	222	211	217	---	---	218
26	281	184	214	320	269	309	213	208	209	---	---	215
27	208	197	203	281	197	232	233	210	222	---	---	212
28	279	210	238	224	125	157	246	232	241	---	---	208
29	293	236	256	124	122	123	244	233	241	207	201	205
30	239	235	237	147	122	131	245	228	238	216	206	212
31	249	236	242	---	---	---	241	227	231	216	195	210
MONTH	445	163	267	498	122	281	342	133	205	326	173	210

08032000 NECHES RIVER NEAR NECHES, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	193	188	190	229	201	216	185	180	183	178	173	174
2	197	187	191	229	173	203	185	181	182	186	173	180
3	280	195	221	179	173	176	182	180	181	184	180	182
4	250	211	228	177	174	175	---	---	185	185	180	182
5	259	224	240	180	176	178	193	186	188	185	182	183
6	223	210	216	192	180	186	189	185	186	188	183	184
7	212	205	209	191	188	189	190	186	188	187	185	186
8	204	192	196	188	186	187	190	186	187	187	183	185
9	195	191	193	187	185	186	192	187	189	185	183	184
10	199	193	195	186	184	185	200	192	195	187	183	185
11	215	173	199	192	186	188	204	195	197	189	186	187
12	227	186	214	197	191	194	207	193	195	190	188	189
13	236	228	234	196	193	195	195	193	193	189	186	187
14	238	230	235	194	187	191	194	189	192	194	183	191
15	228	219	225	197	187	193	195	190	193	194	176	181
16	224	215	219	193	188	190	196	191	193	179	175	177
17	226	218	224	192	187	188	194	192	193	181	175	178
18	217	215	216	192	188	189	200	196	198	184	180	182
19	219	217	218	197	188	191	202	200	201	191	184	187
20	222	218	220	220	189	197	206	202	204	192	190	191
21	226	221	224	208	167	176	206	202	204	192	186	189
22	229	225	227	176	168	173	212	203	206	240	174	193
23	254	228	239	177	172	174	214	197	207	181	174	178
24	284	172	239	183	175	179	197	191	195	183	179	181
25	220	140	172	184	179	181	197	192	194	184	181	182
26	145	140	142	182	180	181	197	195	196	187	182	185
27	152	145	148	183	181	182	197	191	194	189	185	187
28	241	152	161	190	183	186	206	185	194	190	188	189
29	---	---	---	192	186	188	212	180	194	---	---	191
30	---	---	---	186	182	184	186	177	182	---	---	194
31	---	---	---	183	181	182	---	---	---	---	---	196
MONTH	284	140	208	229	167	187	214	177	193	240	173	185

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	198	212	198	203	181	177	179	178	171	174
2	---	---	201	212	199	203	179	175	177	203	175	186
3	---	---	203	205	197	199	177	172	175	203	174	186
4	207	205	206	209	197	200	177	174	176	196	181	189
5	215	205	211	200	195	198	175	172	174	209	191	199
6	221	213	215	199	195	197	176	172	174	288	210	222
7	221	209	214	199	195	197	174	169	172	277	199	221
8	211	200	207	199	195	197	175	169	172	317	216	251
9	211	199	204	198	195	197	172	161	164	345	301	319
10	224	205	212	199	195	197	164	160	162	357	322	344
11	221	208	215	198	193	195	166	160	163	355	333	344
12	210	191	202	196	190	193	171	158	165	391	347	366
13	201	186	189	197	194	196	175	155	162	422	392	404
14	203	189	198	197	193	195	170	153	161	440	422	431
15	220	203	211	197	193	195	188	168	179	452	435	442
16	220	210	213	197	192	194	179	169	175	469	444	460
17	233	209	219	199	190	192	181	161	169	490	470	483
18	233	206	217	192	188	190	245	171	214	508	489	500
19	232	191	210	192	188	190	262	223	240	522	507	516
20	215	172	196	196	190	192	304	248	273	528	516	523
21	209	184	194	195	190	192	318	283	300	535	527	532
22	226	189	203	196	189	193	304	182	280	533	528	531
23	229	197	207	193	181	189	168	131	152	534	526	529
24	205	199	202	199	172	185	259	164	188	530	488	507
25	204	199	201	178	167	174	201	177	187	498	492	495
26	212	199	203	198	177	188	201	181	190	499	494	496
27	207	199	202	196	192	194	187	181	183	493	479	488
28	204	191	199	195	191	193	183	179	181	477	432	454
29	197	188	191	191	188	190	179	175	176	429	364	397
30	207	192	200	189	186	187	177	172	174	361	281	316
31	---	---	---	188	180	184	175	172	174	---	---	---
MONTH	233	172	205	212	167	193	318	131	187	535	171	384

08032000 NECHES RIVER NEAR NECHES, TX--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.5	3.5	5.0	13.0	12.0	12.5	17.5	16.0	17.0	22.5	22.0	22.5
2	3.5	3.0	3.0	13.0	12.5	13.0	18.0	17.0	17.5	23.0	22.0	22.5
3	3.0	2.5	2.5	14.0	13.0	13.5	18.5	17.5	18.0	23.0	22.0	22.5
4	3.0	2.5	2.5	15.0	14.0	14.5	---	---	---	23.0	22.0	22.5
5	3.5	2.5	3.0	14.0	13.0	13.5	20.0	19.0	19.5	23.5	22.0	23.0
6	4.5	3.5	4.0	13.5	12.5	13.0	19.0	18.0	18.5	23.5	22.5	23.0
7	5.5	4.0	5.0	14.5	13.5	14.0	19.5	18.5	19.0	23.5	22.5	23.0
8	6.0	4.5	5.0	15.5	14.5	15.0	19.0	18.0	18.5	23.0	22.5	23.0
9	7.5	5.5	6.5	16.0	15.0	15.5	19.0	17.5	18.0	23.5	22.0	22.5
10	8.5	8.0	8.5	16.5	15.5	16.0	18.5	18.0	18.5	24.0	23.0	23.5
11	8.5	7.0	8.0	17.5	16.5	17.0	18.5	18.0	18.0	24.5	23.5	24.0
12	7.0	6.0	6.5	17.5	17.0	17.0	19.0	18.0	18.5	24.0	23.0	23.5
13	7.5	6.0	6.5	16.5	15.5	16.0	19.0	18.0	18.5	23.5	23.0	23.0
14	8.0	7.0	7.5	16.5	15.5	16.0	20.5	18.5	19.5	23.0	22.0	22.5
15	8.0	7.0	7.5	15.0	14.5	15.0	21.0	19.5	20.5	22.5	21.0	22.0
16	8.5	6.5	7.5	15.0	14.5	15.0	21.5	20.0	21.0	23.5	22.0	22.5
17	9.5	8.0	8.5	16.0	14.5	15.5	22.0	21.0	21.5	24.0	23.5	23.5
18	10.5	9.0	9.5	16.0	15.0	15.5	23.5	22.0	23.0	24.0	23.5	24.0
19	11.0	9.5	10.5	16.0	15.5	16.0	23.5	22.0	22.5	23.5	23.0	23.0
20	11.0	10.0	10.5	17.0	15.5	16.0	22.0	21.0	21.5	24.0	23.0	23.5
21	13.0	11.5	12.0	16.5	16.0	16.0	21.5	20.5	21.0	24.5	23.5	24.0
22	13.5	12.5	13.0	16.5	15.5	16.0	21.0	21.0	21.0	24.0	22.5	23.5
23	14.5	13.5	14.0	17.0	16.0	16.5	22.0	21.0	21.5	24.5	23.5	24.0
24	14.5	12.0	13.0	17.0	16.0	16.5	22.0	20.5	21.5	25.5	24.0	24.5
25	12.0	11.0	11.5	18.0	16.5	17.0	22.0	20.5	21.5	26.0	24.5	25.0
26	12.5	11.0	12.0	18.0	17.0	17.5	22.5	22.0	22.0	26.5	25.5	26.0
27	12.5	12.0	12.0	18.5	18.0	18.0	23.0	22.5	22.5	26.5	25.5	26.0
28	12.0	11.5	12.0	18.5	18.0	18.0	22.5	22.0	22.5	25.5	24.5	25.0
29	---	---	---	18.5	18.5	18.5	22.5	21.5	22.0	---	---	---
30	---	---	---	18.5	17.5	18.5	23.0	22.0	22.5	---	---	---
31	---	---	---	17.5	16.5	16.5	---	---	---	---	---	---
MONTH	14.5	2.5	8.0	18.5	12.0	16.0	23.5	16.0	20.0	26.5	21.0	23.5

08032000 NECHES RIVER NEAR NECHES, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	31.0	18.5	24.5	31.5	28.5	30.0	30.5	27.5	29.0
2	---	---	---	31.0	22.0	26.5	32.0	29.0	30.5	30.5	28.0	29.0
3	---	---	---	30.0	21.5	25.0	32.0	29.0	30.5	30.0	28.0	29.0
4	28.5	28.0	28.0	30.5	20.5	25.0	32.0	29.0	30.5	30.0	28.0	29.0
5	28.0	27.5	27.5	31.5	19.5	25.5	32.0	29.5	30.5	30.0	28.0	29.0
6	27.5	26.5	27.0	32.5	20.0	26.0	32.0	29.0	30.5	30.0	28.0	29.0
7	28.0	26.0	27.0	32.0	21.5	26.5	32.0	29.0	30.5	30.5	28.0	29.0
8	28.5	26.5	27.5	33.5	21.0	27.0	31.5	28.5	30.0	30.5	28.0	29.0
9	29.5	27.5	28.5	33.5	23.0	28.0	32.0	29.0	30.5	30.0	28.0	29.0
10	30.0	28.5	29.0	35.0	23.5	29.0	32.0	29.0	30.5	29.0	27.0	28.0
11	29.5	28.5	29.0	28.0	22.0	24.5	31.5	28.5	30.0	28.0	26.0	27.0
12	28.5	27.0	28.0	32.5	21.0	26.5	32.0	29.0	30.0	28.5	26.0	27.0
13	27.0	25.5	26.5	33.5	21.5	27.0	31.5	29.0	30.0	28.5	26.0	27.5
14	27.5	25.0	26.0	33.5	22.0	28.0	31.5	28.5	30.0	28.0	26.0	27.0
15	28.0	24.5	26.0	35.0	23.0	28.5	30.5	28.5	29.5	26.5	25.5	26.0
16	29.0	22.0	26.5	36.0	22.5	29.0	30.5	27.5	29.0	27.0	25.0	26.0
17	29.5	24.0	27.0	34.0	23.5	28.0	31.0	28.5	29.5	27.0	24.5	25.5
18	26.5	23.0	25.0	35.0	23.5	28.5	32.0	28.5	30.0	27.5	25.0	26.0
19	27.5	25.5	26.5	34.5	24.0	29.0	32.0	29.0	30.5	28.0	25.5	26.5
20	27.5	25.0	26.0	30.0	24.0	26.0	31.0	29.0	30.0	27.0	25.0	26.0
21	28.0	23.5	25.5	30.5	23.0	25.5	31.0	28.0	29.5	27.0	24.5	25.5
22	28.0	23.5	25.5	32.5	23.0	25.5	31.5	28.5	29.5	27.0	24.5	25.5
23	29.0	23.0	26.0	28.0	22.0	26.0	31.5	28.5	30.0	26.5	24.5	25.5
24	29.5	22.5	26.0	28.0	26.5	27.0	30.5	28.5	29.5	25.0	23.0	24.0
25	29.0	22.5	26.0	29.0	27.0	28.0	29.5	27.0	28.0	25.0	22.5	23.5
26	29.5	22.5	26.5	30.5	28.0	29.0	29.0	26.0	27.5	24.0	22.0	23.0
27	30.5	23.0	26.5	31.0	29.0	30.0	28.5	26.0	27.0	22.5	20.5	21.5
28	29.0	19.5	25.5	31.0	29.0	30.0	29.0	26.0	27.5	22.0	20.0	21.0
29	28.0	26.0	27.0	30.5	29.0	29.5	29.0	26.5	28.0	22.0	21.0	21.5
30	27.0	21.5	25.0	31.0	28.5	29.5	30.0	27.0	28.5	21.0	19.0	20.0
31	---	---	---	31.5	28.5	30.0	30.5	27.5	29.0	---	---	---
MONTH	30.5	19.5	26.5	36.0	18.5	27.5	32.0	26.0	29.5	30.5	19.0	26.0

08033000 NECHES RIVER NEAR DIBOLL, TX

LOCATION.--Lat 31°07'58", long 94°48'35", Angelina-Polk County line, Hydrologic Unit 12020002, near center of main span at downstream side of downstream bridge on U.S. Highway 59, 700 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.9 mi downstream from Alabama Creek, 3.8 mi south of Diboll, and at mile 203.5.

DRAINAGE AREA.--2,724 mi².

PERIOD OF RECORD.--October 1923 to September 1925, March 1939 to current year. Monthly discharge only for some periods, published in WSP 1312. Station converted to flood-hydrograph partial-record station Sept. 30, 1985.
Water-quality records: Chemical and biochemical analyses: October 1969 to September 1981.

REVISED RECORDS.--WSP 1242: 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 134.46 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1925, nonrecording gage at site 630 ft upstream; July 10 to Aug. 31, 1925, and Mar. 30, 1939, to Sept. 24, 1943, nonrecording gage at site 500 ft upstream; Sept. 25, 1943, to Aug. 16, 1973, nonrecording gage at site 70 ft upstream; all at present datum. Gage-height telemetry located at station.

REMARKS.--Records fair except those for estimated daily discharges, Nov. 8-20 and Jan. 7-17, which are poor. At times low flow may be affected by regulation from Lake Athens (station 08031290), Lake Palestine (station 08031400), and Lake Jacksonville (combined capacity, 485,100 acre-ft). During the current year, the Upper Neches River Municipal Water Authority diverted 3,192 acre-ft from the Neches River at Rocky Point crossing 120 mi upstream for municipal and industrial uses in the Palestine area.

AVERAGE DISCHARGE.--24 years (water years 1923-25, 1939-61) unregulated, 1,807 ft³/s (1,309,000 acre-ft/yr); 24 years (water years 1962-85) regulated, 1,353 ft³/s (980,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,900 ft³/s May 4, 1944 (gage height, 18.70 ft); no flow Aug. 15-22, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 21 ft in May 1884 (discharge, about 110,000 ft³/s), from rating curve extended above 40,000 ft³/s; flood in 1900 reached a stage of 19.9 ft (discharge, about 80,000 ft³/s); from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,480 ft³/s Nov. 1 from 0200 to 0800 hours (gage height, 14.00 ft); minimum daily, 57 ft³/s Oct. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	6350	1060	911	1070	5220	2990	1230	628	150	169	67
2	73	5710	1120	1030	1050	5620	3010	1160	574	153	152	67
3	70	4370	1100	1350	1010	5360	2930	1210	520	146	137	68
4	66	3770	1010	1690	983	5060	2790	1270	476	137	127	67
5	62	3220	895	2000	965	4610	2600	1240	436	135	118	67
6	57	2700	837	2180	984	4250	2400	1180	397	138	110	68
7	59	2290	867	2200	1050	3990	2260	1150	367	136	104	67
8	62	1980	957	2100	1120	3770	2130	1160	346	124	101	66
9	64	1600	1010	2000	1160	3650	2020	1200	345	117	98	65
10	64	1300	1010	1800	1250	3610	1950	1240	345	117	92	66
11	69	1100	957	1600	3100	3630	1910	1300	307	134	87	70
12	94	950	879	1500	4950	3740	1860	1360	254	139	84	84
13	167	800	804	1400	5290	3890	1800	1400	240	142	84	99
14	247	720	787	1300	5120	3990	1740	2200	238	151	85	98
15	317	660	923	1200	4860	4040	1630	2880	228	171	86	95
16	410	620	1150	1200	4500	4000	1500	2390	215	180	82	96
17	435	580	1550	1500	4170	3890	1370	1940	200	192	79	92
18	404	548	1910	2370	3900	3740	1230	1550	193	179	78	86
19	423	543	2230	3820	3500	3530	1080	1270	196	172	76	80
20	512	641	2340	4270	2990	3580	969	1080	200	192	75	76
21	1410	707	2230	4210	2440	4060	892	992	192	258	74	69
22	1700	692	1940	3790	2040	3980	846	973	185	251	74	68
23	1750	639	1660	3290	2340	3850	829	937	184	212	74	67
24	3020	580	1410	2750	4440	3920	945	905	187	198	79	65
25	3690	536	1220	2160	5380	3890	929	885	193	197	81	64
26	3660	516	1090	1660	5070	3740	1010	862	196	194	78	64
27	3980	538	982	1370	4690	3670	1280	821	188	196	74	63
28	4180	634	891	1220	4480	3640	1570	782	173	198	71	63
29	4220	816	812	1130	---	3380	1740	748	159	196	69	64
30	4800	957	767	1100	---	3100	1480	715	152	189	68	69
31	5970	---	781	1080	---	2990	---	676	---	181	67	---
TOTAL	42113	47067	37179	61181	83902	123390	51690	38706	8514	5275	2833	2200
MEAN	1358	1569	1199	1974	2997	3980	1723	1249	284	170	91.4	73.3
MAX	5970	6350	2340	4270	5380	5620	3010	2880	628	258	169	99
MIN	57	516	767	911	965	2990	829	676	152	117	67	63
AC-FT	83530	93360	73740	121400	166400	244700	102500	76770	16890	10460	5620	4360

CAL YR 1984 TOTAL 388124 MEAN 1060 MAX 6990 MIN 57 AC-FT 769800
WTR YR 1985 TOTAL 504050 MEAN 1381 MAX 6350 MIN 57 AC-FT 999800

08033300 PINEY CREEK NEAR GROVETON, TX

LOCATION.--Lat 31°08'25", long 95°05'11", Trinity County, Hydrologic Unit 12020002, on left bank at downstream side of bridge on State Highway 94, 6.3 mi northeast of Groveton, and 7.3 mi upstream from Caney Creek.

DRAINAGE AREA.--79.0 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 251.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 23, 24 and May 25 to July 15. Records good except those for May 25 to July 15, which are poor. No diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 39.5 ft^3/s (6.79 in/yr), 28,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft^3/s Apr. 20, 1979, gage height, 15.70 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1921, 17 ft in May 1942, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0100	634	11.56	Feb. 24	1700	808	12.17
Oct. 29	2200	*1,270	*12.86	Mar. 2	0200	615	11.47
Jan. 17	1900	1,110	12.71	May 14	0300	690	11.80
Feb. 12	0300	705	11.86				

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	72	12	111	11	521	11	13	1.9	.03	.00	.00
2	.00	62	8.3	185	9.1	582	6.6	10	1.7	.03	.00	.00
3	.00	95	6.2	189	7.8	391	5.0	6.1	1.5	.03	.00	.00
4	.00	50	5.2	172	7.2	107	4.0	4.5	1.3	.03	.00	.00
5	.00	27	5.1	111	14	51	3.3	3.8	1.2	.03	.00	.00
6	.00	16	8.6	52	18	30	3.1	3.3	1.0	.02	.00	.00
7	.00	11	16	29	14	21	2.8	3.2	.83	.02	.00	.00
8	.00	8.6	20	19	12	15	2.4	3.1	.68	.02	.01	.00
9	.00	7.8	13	14	9.5	12	2.2	3.0	.59	.02	.00	.04
10	.00	8.2	8.7	42	81	10	1.9	2.9	.49	.01	.00	.10
11	.00	6.8	6.8	90	627	8.6	1.7	2.9	.41	.01	.00	.14
12	.00	5.3	5.8	50	668	7.7	1.6	2.8	.33	.10	.00	.21
13	.00	4.0	5.8	27	501	6.9	1.5	95	.29	.05	.00	.09
14	.00	3.7	69	17	116	6.2	1.4	671	.23	.04	.00	.02
15	.00	3.4	154	13	45	6.4	1.4	597	.18	.03	.00	.00
16	.00	3.3	188	95	29	6.2	1.4	154	.14	.31	.00	.00
17	.00	3.2	201	795	21	5.6	1.4	27	.11	2.3	.00	.00
18	.00	3.7	144	875	15	4.8	1.4	13	.09	.29	.00	.00
19	.00	12	63	612	12	4.3	1.4	7.9	.07	.50	.00	.00
20	29	15	33	173	10	83	1.4	5.7	.05	.51	.00	.00
21	402	9.2	21	45	9.0	327	1.3	7.7	.03	.59	.00	.00
22	589	6.0	15	29	7.9	264	1.3	12	.03	.96	.00	.00
23	543	4.2	12	22	195	98	1.2	6.7	.03	.44	.00	.00
24	347	3.5	9.4	18	736	32	60	4.8	.03	.33	.00	.00
25	382	3.6	8.0	15	583	18	198	4.2	.03	.18	.00	.00
26	430	3.9	6.8	13	191	11	220	3.7	.04	.09	.00	.00
27	239	19	6.0	11	112	143	269	3.3	.03	.06	.00	.00
28	128	45	5.4	12	204	44	141	3.1	.03	.03	.00	.00
29	643	57	5.2	12	---	17	53	2.6	.03	.02	.00	.00
30	957	24	4.8	14	---	12	20	2.3	.03	.00	.00	.00
31	525	---	5.4	13	---	25	---	2.1	---	.00	.00	---
TOTAL	5214.00	593.4	1072.5	3875	4265.5	2870.7	1021.7	1681.7	13.40	7.08	.01	.60
MEAN	168	19.8	34.6	125	152	92.6	34.1	54.2	.45	.23	.000	.020
MAX	957	95	201	875	736	582	269	671	1.9	2.3	.01	.21
MIN	.00	3.2	4.8	11	7.2	4.3	1.2	2.1	.03	.00	.00	.00
CFSM	2.13	.25	.44	1.58	1.92	1.17	.43	.69	.006	.003	.000	.000
IN.	2.46	.28	.51	1.82	2.01	1.35	.48	.79	.01	.00	.00	.00
AC-FT	10340	1180	2130	7690	8460	5690	2030	3340	27	14	.02	1.2

CAL YR 1984 TOTAL 12301.70 MEAN 33.6 MAX 957 MIN .00 CFSM .43 IN 5.79 AC-FT 24400
WTR YR 1985 TOTAL 20615.59 MEAN 56.5 MAX 957 MIN .00 CFSM .72 IN 9.71 AC-FT 40890

08033500 NECHES RIVER NEAR ROCKLAND, TX

LOCATION.--Lat 31°01'29", long 94°23'55", Tyler County, Hydrologic Unit 12020003, at downstream side of bridge of U.S. Highway 69, 2,200 ft upstream from abandoned ferry crossing, 0.8 mi upstream from Texas and New Orleans Railway Co. bridge, 1.2 mi north of Rockland, 3.2 mi downstream from Billiams Creek, and 32.4 mi upstream from Angelina River.

DRAINAGE AREA.--3,636 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1903 to current year.

REVISED RECORDS.--WSP 878: 1926-27. WSP 1342: 1922(M), 1935. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 88.41 ft above National Geodetic Vertical Datum of 1929. Prior to May 23, 1973, nonrecording gage located 2,200 ft downstream at datum 3.00 ft higher. May 23, 1973, to Sept. 30, 1975, recording gage at present site at datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 7 and July 24 to Aug. 13. Records good. No large diversions above station. For statement regarding regulation by upstream reservoirs, see station 08033000. Gage-height telemeter located at gage.

AVERAGE DISCHARGE.--58 years (water years 1904-61) unregulated, 2,362 ft³/s (1,711,000 acre-ft/yr); 24 years (water years 1962-85) regulated, 1,946 ft³/s (1,410,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,800 ft³/s May 6, 1944 (gage height, 35.04 ft), present site; minimum observed during period of daily records, 1.6 ft³/s Sept. 28-30, Oct. 1, 2, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Historical flood information begins with flood in May 1884 which reached a stage of 38.0 ft, present site, from information by local resident (discharge, about 62,000 ft³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,000 ft³/s Mar. 3 at 1700 hours (gage height, 19.10 ft); minimum daily, 62 ft³/s Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	4550	1160	4180	1660	9340	3910	2060	737	159	190	67
2	89	4650	1240	3940	1580	9590	3600	1850	682	152	180	65
3	79	5350	1310	3270	1510	9840	3310	1610	620	174	165	63
4	73	5750	1430	3110	1460	9660	3100	1480	574	219	150	65
5	67	5950	1710	2990	1560	8860	2960	1430	517	173	135	72
6	66	5900	1890	2760	1640	7850	2810	1380	479	154	125	69
7	65	5530	1660	2670	1620	7000	2660	1320	436	153	115	67
8	76	4770	1510	2630	1580	6310	2490	1310	393	154	108	67
9	126	3790	1510	2570	1570	5740	2330	1360	366	146	104	84
10	140	2950	1460	2460	1700	5230	2180	1360	346	134	98	137
11	187	2370	1380	2220	4660	4590	2080	1350	328	127	93	121
12	136	1850	1270	1980	5470	4050	2010	1370	355	135	89	95
13	108	1350	1170	1770	5980	3780	1960	1390	320	140	86	69
14	151	1030	1080	1690	5960	3660	1920	1440	287	158	86	81
15	254	854	1050	1610	5840	3680	1870	1580	267	165	88	99
16	334	1460	1200	1600	5860	3720	1800	1890	252	166	87	99
17	457	1680	1570	2220	5900	3760	1690	2100	238	255	81	96
18	494	1300	1840	3190	5860	3780	1560	2180	223	217	76	92
19	1330	1430	1990	3430	5680	3750	1420	2070	231	216	77	89
20	2110	1590	2120	3150	5370	4250	1270	1870	214	235	84	84
21	5680	1500	2240	3170	4840	5540	1120	1710	217	234	84	78
22	5620	1380	2320	3410	4120	5990	1030	1650	225	247	79	73
23	5410	1210	2340	3670	4500	6150	1070	1460	210	291	78	69
24	5040	1020	2230	3860	7230	5760	1890	1240	197	265	78	65
25	4270	863	2000	3940	7670	5260	1860	1120	197	227	77	65
26	3990	773	1720	3820	8200	4730	2390	1040	195	222	80	77
27	3960	732	1480	3670	8210	4480	3590	997	195	240	79	69
28	4060	725	1320	3670	8030	4650	2580	941	194	250	78	62
29	4320	812	1190	2570	---	4620	2010	875	183	235	74	72
30	4540	1010	1360	1990	---	4390	2030	827	168	215	71	213
31	4600	---	2910	1780	---	4230	---	781	---	200	69	---
TOTAL	57932	74129	50660	88990	125260	174240	66500	45041	9846	6058	3064	2524
MEAN	1869	2471	1634	2871	4474	5621	2217	1453	328	195	98.8	84.1
MAX	5680	5950	2910	4180	8210	9840	3910	2180	737	291	190	213
MIN	65	725	1050	1600	1460	3660	1030	781	168	127	69	62
AC-FT	114900	147000	100500	176500	248500	345600	131900	89340	19530	12020	6080	5010

CAL YR 1984 TOTAL 588069 MEAN 1607 MAX 7420 MIN 65 AC-FT 1166000
WTR YR 1985 TOTAL 704244 MEAN 1929 MAX 9840 MIN 62 AC-FT 1397000

08033500 NECHES RIVER NEAR ROCKLAND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1945 to September 1947. Chemical and biochemical analyses: December 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 07...	1640	5460	131	6.2	17.0	150	23	8.8	91	1.6	32
JAN 31...	1130	1780	240	6.4	9.0	60	20	11.5	100	1.4	50
MAR 12...	1000	4110	192	6.4	20.5	70	26	7.0	78	1.7	41
JUN 13...	1425	314	242	6.9	28.0	150	42	7.6	97	1.5	45
JUL 24...	1335	263	237	7.0	29.5	160	61	7.2	95	1.8	37
SEP 11...	1435	114	198	6.2	28.0	120	73	6.1	77	1.8	31

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 07...	16	8.1	2.9	12	1	3.7	16	27	15	<.10	13
JAN 31...	30	12	4.8	27	2	2.9	20	43	31	<.10	19
MAR 12...	30	10	4.0	20	1	3.6	11	31	27	<.10	10
JUN 13...	22	9.8	5.1	28	2	4.1	24	28	38	.10	13
JUL 24...	17	8.0	4.1	31	2	4.3	20	31	40	.20	11
SEP 11...	11	6.9	3.3	25	2	4.2	20	23	30	.20	9.6

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 07...	92	30	4	--	<.010	<.10	.080	.82	.90	.080	15
JAN 31...	150	18	16	.19	.010	.20	.070	.93	1.0	.060	8.4
MAR 12...	110	31	4	--	<.010	<.10	.060	.74	.80	.080	11
JUN 13...	140	31	1	.28	.020	.30	.060	.54	.60	.090	6.2
JUL 24...	140	20	6	.18	.020	.20	.070	.73	.80	.110	9.6
SEP 11...	110	60	5	--	.050	<.10	.190	.61	.80	.080	7.2

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 07...	1640	<1	64	1	<10	5	450
SEP 11...	1435	<1	60	<1	<10	3	100

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 07...	4	100	<.1	<1	<1	21
SEP 11...	1	83	.1	<1	<1	14

08033600 BOWLES CREEK NEAR SELMAN CITY, TX
(Reconnaissance partial-record station)

LOCATION.--Lat 32°11'41", long 94°58'36", Rusk County, Hydrologic Unit 12020004, at bridge on State Highway 64 and 1.5 mi west of Selman City.

DRAINAGE AREA.--14.5 mi².

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: November 1967 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 30...	1100	3.5	890	5.6	21.0	66	62	17	5.6
DEC 12...	1300	3.9	942	--	22.0	89	86	23	7.6
JAN 24...	1550	7.1	738	--	10.5	58	55	14	5.5
MAR 06...	0900	7.6	1120	--	11.0	78	63	20	6.9
APR 18...	1510	2.8	3230	--	24.0	240	240	67	18
JUN 05...	1350	.83	958	--	25.5	69	20	17	6.5
JUL 24...	1430	.70	1140	--	28.0	87	87	22	7.8
AUG 27...	0910	5.0	747	--	22.0	90	81	22	8.6

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 30...	130	7	4.2	4	23	240	<.10	20	440
DEC 12...	140	7	4.1	3	21	270	<.10	24	490
JAN 24...	110	7	2.9	3	22	200	.10	23	380
MAR 06...	190	10	3.3	15	28	320	.10	18	600
APR 18...	490	14	7.8	0	15	980	.10	22	1600
JUN 05...	160	9	3.4	49	20	260	.20	19	520
JUL 24...	160	8	5.1	0	34	310	<.10	26	560
AUG 27...	98	5	5.0	9	35	190	.10	24	390

08033900 EAST FORK ANGELINA RIVER NEAR CUSHING, TX

LOCATION.--Lat 31°51'36", long 94°49'23", Rusk County, Hydrologic Unit 12020004, near left bank on downstream side of bridge on Farm Road 225, 0.1 mi downstream from Everett Branch, 0.9 mi upstream from Reagan Branch, 3.5 mi north of Cushing, and 8 mi upstream from Angelina River.

DRAINAGE AREA.--158 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 275.29 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Aug. 30 to Sept. 2. Records good. No known diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 114 ft^3/s, 9.80 in/yr, 82,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft^3/s Apr. 12, 1980, gage height, 13.34 ft, from rating curve extended above 4,600 ft^3/s on basis of area-velocity study; minimum, 0.7 ft^3/s Aug. 14, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 11	2000	*2,610	10.48	Apr. 29	0300	1,750	10.20

Minimum discharge, 5.2 ft^3/s Sept. 3, 4, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	87	103	163	89	288	117	677	41	15	11	5.6
2	12	384	92	150	88	317	102	309	37	15	9.5	5.4
3	12	427	84	122	90	257	94	180	34	15	12	5.2
4	11	219	78	111	91	200	88	122	32	17	22	5.4
5	11	122	98	98	131	166	82	99	30	18	15	6.4
6	12	92	167	88	157	141	75	86	29	16	11	6.6
7	18	78	140	84	139	129	70	77	29	15	9.5	5.9
8	37	71	107	79	113	125	66	72	27	15	8.7	6.2
9	26	68	96	77	99	122	62	76	26	14	8.4	6.3
10	29	133	91	99	201	119	60	67	24	13	8.2	7.0
11	43	112	87	110	1630	114	60	61	24	17	7.6	8.5
12	45	73	85	90	1660	110	61	57	23	23	7.2	11
13	51	65	128	80	728	105	59	55	22	17	7.4	11
14	45	61	329	78	331	105	58	111	20	14	7.6	8.8
15	43	60	338	76	199	134	55	240	20	13	7.9	7.3
16	34	72	251	145	166	127	51	292	19	13	8.3	7.2
17	36	74	283	544	151	109	47	179	19	12	8.4	6.9
18	39	116	224	665	140	100	45	80	19	12	8.2	6.4
19	55	200	161	435	132	92	43	69	28	12	7.9	6.1
20	88	170	134	174	127	202	42	64	28	19	7.2	5.8
21	199	100	121	118	123	587	62	169	23	32	8.9	5.6
22	554	78	110	106	120	586	211	268	22	33	11	5.5
23	806	71	98	102	271	317	199	188	28	24	8.4	5.4
24	703	69	93	100	680	173	118	97	26	19	7.4	5.3
25	705	78	90	96	783	135	127	72	22	16	7.1	5.3
26	483	111	83	89	426	118	117	61	19	14	7.1	5.5
27	178	310	80	90	219	197	345	55	21	12	6.6	6.1
28	115	302	82	129	192	251	766	56	24	13	6.5	6.0
29	109	215	84	117	---	209	1640	57	19	14	6.2	7.9
30	109	124	81	101	---	146	1060	51	16	15	6.0	34
31	90	---	84	95	---	136	---	45	---	12	5.8	---
TOTAL	4710	4142	4082	4611	9276	5917	5982	4092	751	509	274.0	225.6
MEAN	152	138	132	149	331	191	199	132	25.0	16.4	8.84	7.52
MAX	806	427	338	665	1660	587	1640	677	41	33	22	34
MIN	11	60	78	76	88	92	42	45	16	12	5.8	5.2
CFSM	.96	.87	.84	.94	2.10	1.21	1.26	.84	.16	.10	.06	.05
IN.	1.11	.98	.96	1.09	2.18	1.39	1.41	.96	.18	.12	.06	.05
AC-FT	9340	8220	8100	9150	18400	11740	11870	8120	1490	1010	543	447

CAL YR 1984	TOTAL	43708.1	MEAN 119	MAX 3480	MIN 6.2	CFSM .75	IN 10.29	AC-FT	86690	
WTR YR 1985	TOTAL	44571.6	MEAN 122	MAX 1660	MIN 5.2	CFSM .77	IN 10.49	AC-FT	88410	

08034000 LAKE TYLER NEAR WHITEHOUSE, TX

LOCATION.--Lat 32°14'30", long 95°10'33", Smith County, Hydrologic Unit 12020004, at city of Tyler pumphouse, 2.0 mi north of Whitehouse Dam on Prairie Creek, 3.0 mi northwest of Mud Creek, and 3.2 mi northeast of Whitehouse.

DRAINAGE AREA.--107 mi². Prior to May 29, 1968, 45.3 mi².

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 3, 1949, nonrecording gage at dam. May 3, 1949, to July 11, 1951, nonrecording gage at pumphouse. July 12, 1951, to Feb. 1, 1968, water-stage recorder at intake tower in lake 660 ft south of pumphouse. All gages at same datum.

REMARKS.--Originally Lake Tyler was formed by Whitehouse Dam. Deliberate impoundment began Jan. 8, 1949, and the dam was completed May 13, 1949. The construction of Mud Creek Dam began Feb. 11, 1966, and deliberate impoundment began Nov. 22, 1966; final completion of dam was in January 1967. Whitehouse Dam is a rolled earthfill dam with an uncontrolled concrete spillway 200 ft wide near left end of dam. Mud Creek Dam is a rolled earthfill dam with an uncontrolled concrete spillway 300 ft wide near center of dam. On May 29, 1968, the lakes were joined through an interconnecting canal. An 18-inch conduit through the embankment of Mud Creek Dam serves as a low-flow outlet. Water is used for municipal supply for the cities of Tyler, Troop, and Whitehouse. The dam is owned and operated by the city of Tyler. 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	390.0 to 391.5	-
Design flood	386.0	-
Crest of spillways	375.4	80,900
Bottom of interconnecting canal between lakes	355.0	14,480
Lowest gated outlet (invert at Mud Creek Dam)	350.0	7,200

COOPERATION.--The capacity tables, furnished by the city of Tyler, are based on surveys made in 1948-49 and 1966-67.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 87,340 acre-ft Feb. 3, 1975 (elevation, 376.71 ft); maximum elevation, 378.3 ft Apr. 24, 1966, prior to adjoining of lakes; minimum contents since joining of lakes, 63,100 acre-ft Nov. 13, 1978 (elevation, 371.44 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 82,370 acre-ft Apr. 30 at 1800 hours to May 1 at 0500 hours (elevation, 375.70 ft); minimum, 64,840 acre-ft Sept. 29 (elevation, 371.85 ft).

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

371.0	61,270	373.0	69,820	375.0	79,000
372.0	65,470	374.0	74,330	376.0	83,820

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65510	68690	69170	72170	73790	77320	81700	82130	80350	76900	73250	68170
2	65340	68730	69170	72210	73790	77370	81650	81800	80210	76760	73160	67950
3	65260	68690	69170	72210	73830	77370	81510	81510	80110	76570	72980	67650
4	65130	68690	69170	72170	74010	77790	81220	81410	79960	76290	72800	67560
5	65050	68690	69380	72170	74150	77830	81270	81310	79820	76200	72620	67430
6	65640	68600	69430	72170	74280	77880	81220	81220	79770	76010	72390	67430
7	66040	68470	69380	72210	74380	77880	81170	81220	79580	75960	72530	67250
8	66040	68380	69430	72210	74420	77880	81120	81170	79580	75870	72300	67170
9	66120	68510	69430	72390	74560	77880	81020	81170	79580	75590	72170	67120
10	66080	68340	69430	72440	74940	77970	80930	80930	79480	75450	71980	67210
11	66340	68300	69470	72440	74980	78020	80930	80740	79240	75220	71850	67340
12	66340	68300	69560	72440	75080	78070	80880	80740	79100	75030	71620	67300
13	66560	68120	69780	72440	75120	78070	80930	80690	78910	74890	71440	67210
14	66730	68080	69820	72440	75170	78300	80930	80740	78810	74750	71310	67040
15	66640	68300	69820	72440	75220	78300	80980	80690	78580	74610	71170	66860
16	66690	68300	70230	72930	75260	78300	80980	80640	78440	74840	70950	66770
17	66690	68250	70720	73110	75260	78300	80930	80490	78350	74840	70680	66640
18	66600	68600	71260	73200	75360	78300	80780	80350	78530	74800	70590	66560
19	66640	68600	71400	73290	75400	78300	80690	80250	78530	74660	70450	66340
20	67040	68600	71490	73200	75450	79960	80690	80350	78350	74520	70270	66120
21	67300	68510	71530	73200	75500	80590	80490	81070	78300	74380	70050	66040
22	67470	68510	71580	73200	75590	80830	80540	81070	78160	74520	69820	65900
23	67560	68430	71580	73200	76430	80980	80540	80980	78110	74420	69650	65690
24	67730	68380	71620	73250	76710	81020	80540	80930	78070	74380	69600	65560
25	68120	68600	71620	73250	76900	81120	80490	80880	77930	74280	69430	65430
26	68170	69040	71620	73250	76950	81070	80450	80690	77740	74100	69300	65300
27	68250	69170	71620	73470	76990	81700	80640	80690	77600	73880	68950	65090
28	68380	69170	71710	73470	77130	81750	82180	80690	77410	73830	68820	64920
29	68430	69170	71760	73560	---	81700	82280	80690	77270	73650	68650	65300
30	68430	69210	71850	73610	---	81700	82370	80540	77130	73610	68470	65220
31	68430	---	72120	73610	---	81750	---	80450	---	73430	68300	---
MAX	68430	69210	72120	73610	77130	81750	82370	82130	80350	76900	73250	68170
MIN	65050	68080	69170	72170	73790	77320	80450	80250	77130	73430	68300	64920
(†)	372.68	372.86	373.51	373.84	374.60	375.57	375.70	375.30	374.60	373.80	372.65	371.94
(‡)	+2870	+780	+2910	+1490	+3520	+4620	+620	-1920	-3320	-3700	-5130	-3080
(††)	1014	903	871	861	781	899	1074	1271	1781	1767	2082	1599

CAL YR 1984 MAX 81150 MIN 65050 (‡) +280 (††) 14896
WTR YR 1985 MAX 82370 MIN 64920 (‡) -340 (††) 14903

(†) Elevation, in feet, at end of month.
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use by city of Tyler.

08036500 ANGELINA RIVER NEAR ALTO, TX

LOCATION.--Lat 31°40'10", long 94°57'24", Nacogdoches-Cherokee County line, Hydrologic Unit 12020004, near center of rectified channel at downstream side of bridge on State Highway 21, 0.4 mi upstream from Allen Creek, 1.5 mi upstream from Bingham Creek, 7.5 mi east of Alto, and 149.3 mi upstream from mouth.

DRAINAGE AREA.--1,276 mi².

PERIOD OF RECORD.--May to August 1940 (discharge measurements only), September 1940 to March 1949 (fragmentary for 1941-42, 1944-49), February 1959 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 204.30 ft above National Geodetic Vertical Datum of 1929. May 9, 1940, to Mar. 31, 1949, nonrecording gage on bridge at natural channel 1,400 ft to right at same datum. Feb. 18 to Sept. 15, 1959, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Jan. 15-21 and May 19 to June 3. Records good except those for estimated daily discharges, which are poor. No large diversion above station. Flow partly regulated since May 1957 by Lake Striker 35.5 mi upstream and by Lake Tyler 69.9 mi upstream since January 1949 (combined capacity, 110,700 acre-ft). Recording rain gage at station. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--27 years (water years 1943, 1960-85), 767 ft³/s (55,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s Apr. 28, 1966 (gage height, 21.51 ft), but may have been higher during period of no gage-height record in November 1940; minimum, 2.0 ft³/s Aug. 14, 15, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1905, about 22 ft in May 1908, from information by local residents. Flood in 1932 reached a stage of 21.5 ft, and flood in May 1958 reached a stage of 20.3 ft, from floodmarks and information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,730 ft³/s Feb. 16 at 1000 hours (gage height, 14.86 ft); minimum daily discharge, 18 ft³/s Sept. 6-8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	1310	1110	949	670	2130	1430	1160	210	62	38	21
2	28	1630	1260	1030	672	2190	1260	1440	170	64	38	22
3	27	1380	1280	1060	655	2130	1080	1660	140	58	36	21
4	26	1210	1190	1080	633	2040	937	1780	125	56	33	20
5	24	1140	1070	1120	651	1920	831	1800	111	56	31	20
6	24	1130	951	1110	690	1780	742	1710	102	56	31	18
7	24	1070	833	1020	730	1590	642	1530	95	55	34	18
8	24	929	801	890	786	1360	542	1310	88	55	33	18
9	60	744	834	787	847	1150	458	1090	85	54	32	19
10	121	594	838	742	1000	972	396	820	82	53	30	19
11	152	441	758	692	2100	831	359	554	79	58	31	19
12	157	371	638	644	1940	733	336	374	76	78	33	24
13	161	353	614	623	1970	668	321	292	74	75	31	48
14	170	327	796	603	2270	632	308	272	70	67	28	67
15	198	270	754	560	2610	625	293	376	68	60	27	76
16	230	229	912	909	2700	601	276	584	67	56	26	76
17	258	218	1080	800	2530	594	261	752	64	62	26	76
18	242	305	1230	1000	2190	597	247	868	63	58	26	76
19	203	445	1330	1200	1790	586	235	834	63	55	25	75
20	202	428	1380	1400	1380	830	218	730	63	55	26	74
21	395	478	1390	1500	1030	1280	209	900	69	54	27	72
22	876	510	1350	1570	810	1350	217	1200	80	60	25	71
23	652	489	1260	1570	879	1390	221	1200	78	72	24	71
24	908	416	1140	1450	1220	1460	302	1000	76	93	22	69
25	951	369	1010	1230	1250	1570	419	650	74	87	23	69
26	1070	353	912	974	1380	1630	554	400	73	72	24	69
27	1240	517	817	787	1590	1720	659	320	68	64	22	68
28	1430	625	715	674	1820	1720	732	260	64	52	21	68
29	1560	771	624	577	---	1670	805	220	62	46	21	72
30	1570	931	561	600	---	1630	903	220	61	42	21	81
31	1460	---	566	654	---	1570	---	230	---	39	21	---
TOTAL	14474	19983	30004	29805	38793	40949	16193	26536	2600	1874	866	1517
MEAN	467	666	968	961	1385	1321	540	856	86.7	60.5	27.9	50.6
MAX	1570	1630	1390	1570	2700	2190	1430	1800	210	93	38	81
MIN	24	218	561	560	633	586	209	220	61	39	21	18
AC-FT	28710	39640	59510	59120	76950	81220	32120	52630	5160	3720	1720	3010
(††)	3.28	1.11	1.63	2.10	5.00	3.43	2.85	2.15	1.48	5.16	2.02	3.20

CAL YR 1984 TOTAL 208855 MEAN 571 MAX 6050 MIN 17 AC-FT 414300 (††) 24.88
WTR YR 1985 TOTAL 223594 MEAN 613 MAX 2700 MIN 18 AC-FT 443500 (††) 33.41

(††) Rainfall, in inches, at gaging station.

08036700 LAKE NACOGDOCHES NEAR NACOGDOCHES, TX

LOCATION.--Lat 31°35'19", long 94°49'31", Nacogdoches County, Hydrologic Unit 12020004, at upstream side of dam on Bayou Loco near service outlet tower and 10 mi west of Nacogdoches.

DRAINAGE AREA.--87.9 mi².

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

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

REMARKS.--The lake is formed by a rolled earthfill dam. Deliberate impoundment began July 14, 1976. Water is used for industrial and municipal supply by the city of Nacogdoches. The emergency spillway is an uncontrolled 500-foot-wide cut through natural ground located near the right end of dam. There is an uncontrolled drop inlet with a 20.5-foot-diameter top opening that is connected to an 8- by 7-foot conduit that extends through the dam. A separate multi-gated inlet tower is connected to a valve box by a 30-inch conduit through the dam. The valve box directs water to a purification plant. 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	303.0	-
Top of design flood	298.5	102,900
Crest of spillway	286.0	59,570
Crest of drop inlet (top of conservation pool)	279.0	42,320
Lowest gated outlet (invert of 30 in conduit)	238.25	254

COOPERATION.--The capacity table, furnished by the city of Nacogdoches, is based on Geological Survey topographic maps dated 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,550 acre-ft June 3, 1979 (elevation, 283.76 ft); minimum since first appreciable storage, 20,540 acre-ft Nov. 26, 1977 (elevation, 266.62 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,810 acre-ft Feb. 11 at 2100 hours (elevation, about 280.40 ft); minimum, 36,780 acre-ft Sept. 29 (elevation, 276.32 ft).

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

276.0	36,140	279.0	42,320
277.0	38,140	281.0	47,770

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37180	42340	41900	42210	42260	43850	42800	43300	41580	40310	39190	37900
2	37160	42890	41850	42190	42240	43780	42600	43060	41540	40200	39210	37860
3	37160	42870	41830	42170	42170	43580	42520	42870	41470	40160	39170	37760
4	37160	42710	41810	42150	42170	43450	42430	42630	41450	40160	39130	37760
5	37160	42520	42000	42110	42210	43190	42390	42470	41390	40080	39070	37700
6	37180	42360	42070	42070	42210	43020	42280	42360	41370	40080	39010	37640
7	37260	42280	42070	41980	42210	42870	42240	42210	41370	40060	38960	37840
8	37240	42190	42020	41940	42170	42780	42130	42210	41320	40040	38920	37820
9	37240	42110	41980	41900	42150	42690	42040	42210	41300	39970	38840	37800
10	37240	42000	41940	42000	43260	42560	42000	42090	41220	39950	38800	37760
11	37240	41900	41940	41980	45780	42490	42000	42000	41220	39990	38760	37720
12	37280	41790	42000	41960	44990	42430	41940	41940	41200	39990	38700	37700
13	37280	41730	42110	41940	44330	42390	41920	41900	41110	39950	38660	37680
14	37280	41750	42320	41900	43870	42470	41900	42210	41030	39910	38610	37620
15	37280	41680	42540	41900	43540	42600	41870	42280	40980	39850	38570	37560
16	37280	41660	42760	42540	43280	42600	41830	42170	40900	39850	38510	37500
17	37640	41660	42870	42970	43020	42540	41790	42110	40880	39830	38470	37460
18	37940	41640	42760	43190	42840	42430	41750	42040	40880	39790	38410	37400
19	38660	41680	42650	42970	42760	42390	41730	41960	40900	39730	38390	37360
20	37440	41770	42540	42870	42600	43410	41680	41920	40840	39690	38510	37340
21	40410	41790	42430	42760	42490	43980	41810	42240	40790	39690	38490	37280
22	40620	41730	42320	42650	42490	43910	41940	42280	40770	39620	38410	37200
23	40690	41680	42260	42560	43480	43720	42110	42260	40750	39580	38390	37120
24	41220	41680	42170	42450	44220	43410	42090	42170	40710	39540	38350	37060
25	41680	41900	42110	42410	43980	43210	42000	42040	40670	39460	38300	36980
26	41680	42110	42070	42260	43670	43040	42690	41940	40580	39440	38240	36920
27	41900	42070	42020	42320	43500	43190	43040	41850	40580	39400	38180	36880
28	42430	42000	42020	42360	43450	43240	43260	41770	40580	39330	38100	36800
29	42560	41940	42070	42410	---	43040	43450	41750	40410	39330	38040	37040
30	42490	41900	42110	42410	---	43020	43450	41680	40350	39310	37980	37020
31	42410	---	42210	42320	---	42870	---	41660	---	39230	37940	---
MAX	42560	42890	42870	43190	45780	43980	43450	43300	41580	40310	39210	37900
MIN	37160	41640	41810	41900	42150	42390	41680	41660	40350	39230	37940	36800
(†)	279.04	278.80	278.95	279.00	279.52	279.25	279.52	278.69	278.07	277.53	276.90	276.44
(‡)	+5230	-510	+310	+110	+1130	-580	+580	-1790	-1310	-1120	-1290	-920
(††)	282	240	213	188	206	203	228	281	312	345	344	320

CAL YR 1984 MAX 47450 MIN 37160 (‡) +320 †† 3136
WTR YR 1985 MAX 45780 MIN 36800 (‡) -160 †† 3162

(†) Elevation, in feet, at end of month.
(‡) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use by city of Nacogdoches.

08037050 BAYOU LANANA AT NACOGDOCHES, TX

LOCATION.--Lat 31°36'58", long 94°38'28", Nacogdoches County, Hydrologic Unit 12020005, on right bank at downstream side of bridge on Farm Road 1878 in Nacogdoches and 14.5 mi upstream from mouth.

DRAINAGE AREA.--31.3 mi².

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

GAGE.--Water-stage recorder. Prior to July 1974, concrete control. Datum of gage is 264.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 31.1 ft³/s, 13.49 in/yr, 22,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s June 2, 1979 (gage height, 22.18 ft), from rating curve extended above 2,800 ft³/s on basis of indirect measurement of peak flow; no flow at times.
Maximum stage since at least 1956, that of June 2, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 23	2200	1,210	13.82	Apr. 21	1730	*1,620	*15.15

Minimum discharge, 0.10 ft³/s Sept. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	58	24	45	22	173	35	79	8.0	.37	.77	.13
2	.89	199	23	32	22	85	31	40	7.1	.33	6.5	.11
3	.75	54	22	38	23	64	29	32	6.5	.43	.79	.16
4	.66	37	21	33	24	56	27	26	5.6	.40	1.4	.17
5	.62	30	76	27	35	45	26	23	5.1	.38	.51	.18
6	.83	27	42	23	32	40	25	21	4.6	.36	.28	.16
7	20	25	34	20	29	38	23	18	4.2	.34	9.7	.14
8	2.6	23	28	18	26	36	21	108	3.7	.31	2.7	.14
9	2.0	21	26	19	24	34	20	46	3.6	.29	.78	22
10	2.0	20	24	38	58	33	20	26	3.4	.28	.61	17
11	2.0	19	23	28	480	32	20	22	3.0	8.5	.35	15
12	15	18	22	23	83	29	20	18	2.6	.81	.24	5.1
13	9.3	17	72	20	58	28	19	18	2.1	.41	.20	2.7
14	13	17	68	19	48	85	18	248	1.7	.36	.20	2.0
15	3.3	24	35	18	43	97	17	61	1.6	.42	.24	2.0
16	2.1	55	90	153	40	49	17	33	1.5	1.5	.21	2.1
17	1.8	36	51	180	36	40	16	26	1.4	.80	.17	1.3
18	1.8	46	37	55	33	34	16	25	11	.36	.16	.99
19	38	36	32	40	32	31	15	24	3.1	8.2	.16	.79
20	74	30	29	32	31	189	15	23	1.7	7.0	28	.75
21	260	27	27	27	34	148	440	85	2.8	4.0	3.5	.78
22	121	24	24	25	50	68	362	34	3.3	15	1.2	.75
23	235	22	22	24	142	51	55	25	1.9	3.6	.80	.71
24	458	20	22	26	303	44	45	21	1.3	1.7	.48	.69
25	62	23	21	24	77	38	31	19	.99	.69	.36	.77
26	38	24	20	22	58	35	130	16	.80	.81	.26	.76
27	29	49	20	33	66	117	88	18	.65	.93	.18	.66
28	203	36	19	69	65	62	131	17	.59	.95	.27	.68
29	83	30	18	34	---	45	84	13	.44	.98	.16	8.5
30	47	27	18	27	---	45	91	9.9	.37	.77	.14	2.5
31	34	---	39	25	---	42	---	8.8	---	.57	.14	---
TOTAL	1761.65	1074	1029	1197	1974	1913	1887	1183.7	94.64	61.85	61.46	89.72
MEAN	56.8	35.8	33.2	38.6	70.5	61.7	62.9	38.2	3.15	2.00	1.98	2.99
MAX	458	199	90	180	480	189	440	248	11	15	28	22
MIN	.62	17	18	18	22	28	15	8.8	.37	.28	.14	.11
CFSM	1.82	1.14	1.06	1.23	2.25	1.97	2.01	1.22	.10	.06	.06	.10
IN.	2.09	1.28	1.22	1.42	2.35	2.27	2.24	1.41	.11	.07	.07	.11
AC-FT	3490	2130	2040	2370	3920	3790	3740	2350	188	123	122	178

CAL YR 1984 TOTAL 10726.72 MEAN 29.3 MAX 958 MIN .10 CFSM .94 IN 12.75 AC-FT 21280
WTR YR 1985 TOTAL 12327.02 MEAN 33.8 MAX 480 MIN .11 CFSM 1.08 IN 14.65 AC-FT 24450

08038000 ATTOYAC BAYOU NEAR CHIRENO, TX

LOCATION.--Lat 31°30'15", long 94°18'15", Nacogdoches-San Augustine County line, Hydrologic Unit 12020005, near right bank on downstream side of bridge on State Highway 21, 2.2 mi upstream from Amaladeros Creek, 2.8 mi east of Chireno, 5.4 mi downstream from Arenoso Creek, and 41 mi upstream from mouth.

DRAINAGE AREA.--503 mi².

PERIOD OF RECORD.--January 1924 to September 1925, July 1939 to November 1954, and October 1955 to Sept. 30, 1985 (converted to Flood Hydrograph Partial Record station). Monthly discharge only for some periods, published in WSP 1312 and 1732.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 169.58 ft above National Geodetic Vertical Datum of 1929. Jan. 24, 1924, to Aug. 29, 1925, and Sept. 6, 1957, to Oct. 27, 1958, nonrecording gage at same site and datum.

REMARKS.--estimated daily discharges: Nov. 16, 20, 27, Dec. 6, 8, 12, 17-18, 30, Jan. 4, 8, 10, 20, 23-24 and May 29 to June 13. Records good except those for estimated daily discharges, which are fair. Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 15,870 acre-ft. These structures control runoff from 46.7 mi². Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 457 ft³/s (12.34 in/yr), 331,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s Nov. 24, 1940, gage height, 25.97 ft; minimum, 0.8 ft³/s Aug. 26, 27, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1865, 29.9 ft June 29, 1902, from information by local residents. Flood in July 1933 reached a stage of 25.2 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 26	1200	*3,630	*17.63	Feb. 14	1100	2,920	17.16

Minimum discharge, 19 ft³/s Sept. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	1420	389	666	509	1940	882	1820	133	56	53	22
2	56	1340	333	786	441	1780	736	2220	125	45	46	21
3	53	1330	288	804	404	1570	561	2120	113	37	42	20
4	51	1160	267	746	386	1400	451	1830	103	37	41	20
5	50	1040	256	704	403	1330	393	1570	94	53	41	21
6	49	963	324	819	470	1260	354	1360	87	167	38	23
7	53	918	443	775	523	1150	320	1180	83	164	38	24
8	90	856	505	531	515	997	294	878	79	92	37	29
9	96	775	471	413	477	770	270	633	76	68	36	40
10	125	609	403	413	529	559	252	472	73	60	36	53
11	168	451	340	440	1350	471	240	351	70	54	35	112
12	137	397	313	408	1360	433	233	296	79	52	33	97
13	204	370	297	385	1810	406	229	257	99	51	31	85
14	209	308	297	367	2810	386	223	283	77	51	29	71
15	266	273	345	331	2430	417	218	594	65	54	31	54
16	215	284	448	374	1960	518	208	770	59	50	46	47
17	205	342	704	654	1650	597	196	764	56	65	40	39
18	226	309	725	872	1410	644	183	786	54	107	36	35
19	216	351	669	910	1230	646	172	832	65	63	33	33
20	347	370	652	887	982	629	164	862	74	51	33	31
21	586	349	755	1120	675	764	205	770	68	51	31	29
22	816	356	586	1400	504	882	402	660	84	66	35	27
23	910	302	489	1460	636	903	608	622	92	76	33	26
24	1030	263	397	1810	1170	1010	787	586	74	141	31	25
25	1200	244	324	990	1320	1280	1860	542	64	141	31	25
26	3260	255	288	609	1630	1340	2130	388	58	103	28	30
27	2850	297	270	453	2300	1260	1840	268	53	78	26	34
28	2260	365	261	489	2030	1190	1610	216	49	62	24	30
29	1970	403	252	544	---	1110	1450	185	48	53	25	27
30	1830	379	267	583	---	962	1620	161	44	65	24	43
31	1620	---	428	580	---	908	---	144	---	76	23	---
TOTAL	21208	17079	12786	22323	31914	29512	19091	24420	2298	2289	1066	1173
MEAN	684	569	412	720	1140	952	636	788	76.6	73.8	34.4	39.1
MAX	3260	1420	755	1810	2810	1940	2130	2220	133	167	53	112
MIN	49	244	252	331	386	386	164	144	44	37	23	20
CFSM	1.36	1.13	.82	1.43	2.27	1.89	1.26	1.57	.15	.15	.07	.08
IN.	1.57	1.26	.95	1.65	2.36	2.18	1.41	1.81	.17	.17	.08	.09
AC-FT	42070	33880	25360	44280	63300	58540	37870	48440	4560	4540	2110	2330

CAL YR 1984 TOTAL 174603 MEAN 477 MAX 6070 MIN 31 CFSM .95 IN 12.91 AC-FT 346300
WTR YR 1985 TOTAL 185159 MEAN 507 MAX 3260 MIN 20 CFSM 1.01 IN 13.69 AC-FT 367300

08039100 AYISH BAYOU NEAR SAN AUGUSTINE, TX

LOCATION.--Lat 31°23'46", long 94°09'03", San Augustine County, Hydrologic Unit 12020005, near center of span at downstream side of bridge on State Highway 103, 3.0 mi upstream from Turkey Creek, and 9.5 mi south of San Augustine.

DRAINAGE AREA.--89.0 mi².

PERIOD OF RECORD.--February 1959 to September 1985. Station converted to flood-hydrograph partial-record station.

REVISED RECORDS.--WSP 1922: 1959(M).

GAGE.--Water-stage recorder. Datum of gage is 190.22 ft above National Geodetic Vertical Datum of 1929. Prior to June 2, 1959, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Aug. 18 to Sept. 7. Records fair except those for Aug. 18 to Sept. 7, which are poor. No known diversion above station. Recording rain gage at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 83.7 ft³/s, 12.77 in/yr, 60,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s Sept. 14, 1978, gage height, 18.02 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Between October 1957 and February 1959, the maximum discharge was 15,900 ft³/s Sept. 21 or 22, 1958, gage height, 17.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 11	1500	*2,760	*12.83	Mar. 21	0800	1,620	11.97
Feb. 24	1100	1,860	12.19				

Minimum daily discharge, 0.08 ft³/s Sept. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	19	24	239	46	579	255	108	9.5	2.5	4.3	.11
2	3.8	81	21	128	45	599	140	86	8.4	2.4	1.9	.10
3	3.6	112	21	96	43	251	110	50	7.4	2.3	1.3	.10
4	3.5	59	20	99	43	183	95	38	6.6	2.4	1.1	.09
5	3.8	38	32	76	63	137	83	30	6.1	4.6	1.0	.09
6	3.2	29	62	61	77	117	72	26	5.6	3.5	.89	.09
7	3.5	22	50	54	58	103	63	23	5.4	3.2	.81	.08
8	4.2	19	36	48	48	95	57	22	5.2	3.7	.69	.15
9	6.3	18	31	44	44	90	52	50	4.7	4.1	.60	.56
10	6.4	17	29	51	113	84	49	29	4.3	3.0	.52	.67
11	12	15	28	60	1440	78	48	21	3.9	2.7	.43	8.3
12	9.2	12	26	47	1090	73	48	19	3.8	2.5	.35	12
13	6.8	11	26	40	340	69	47	17	11	2.3	.30	5.4
14	6.3	10	29	39	161	67	44	47	7.7	2.2	.25	4.7
15	15	11	33	38	123	76	42	132	5.1	2.1	.21	2.5
16	17	14	33	47	104	68	37	50	4.3	2.1	.17	2.1
17	21	28	71	343	91	62	33	30	3.8	6.2	.15	1.8
18	34	27	54	224	81	58	29	23	3.6	11	.14	1.5
19	42	38	42	112	75	52	27	20	3.7	5.6	.14	1.3
20	72	31	36	81	70	249	25	17	5.0	4.2	.14	1.1
21	166	22	33	60	67	1120	43	48	4.6	3.6	.14	1.0
22	276	17	31	54	64	535	116	136	4.0	3.3	.14	.94
23	123	14	28	53	214	179	56	54	3.8	3.9	.14	.80
24	104	14	25	52	1280	131	42	38	3.6	4.1	.14	.80
25	87	15	25	50	907	107	34	30	3.2	4.8	.13	.87
26	52	19	23	45	405	92	31	23	2.9	5.4	.13	1.3
27	36	29	21	42	254	188	58	19	2.7	3.9	.13	1.4
28	26	47	21	69	295	266	52	16	2.6	3.4	.12	1.8
29	31	34	22	60	---	145	51	14	2.6	3.1	.12	2.5
30	28	28	102	50	---	151	48	13	2.5	10	.12	5.4
31	22	---	140	49	---	489	---	11	---	9.4	.11	---
TOTAL	1228.5	850	1175	2511	7641	6493	1887	1240	147.6	127.5	16.81	59.55
MEAN	39.6	28.3	37.9	81.0	273	209	62.9	40.0	4.92	4.11	.54	1.99
MAX	276	112	140	343	1440	1120	255	136	11	11	4.3	12
MIN	3.2	10	20	38	43	52	25	11	2.5	2.1	.11	.08
CFSM	.45	.32	.43	.91	3.07	2.35	.71	.45	.06	.05	.006	.02
IN.	.51	.36	.49	1.05	3.19	2.71	.79	.52	.06	.05	.01	.02
AC-FT	2440	1690	2330	4980	15160	12880	3740	2460	293	253	33	118
(††)	6.66	2.84	3.30	2.39	5.68	4.23	2.05	4.05	.64	2.88	.13	5.26

CAL YR 1984 TOTAL 30818.40 MEAN 84.2 MAX 2250 MIN 1.3 CFSM .95 IN 12.88 AC-FT 61130 †† -
WTR YR 1985 TOTAL 23376.96 MEAN 64.0 MAX 1440 MIN .08 CFSM .72 IN 9.77 AC-FT 46370 †† 40.11

†† Rainfall, in inches.

08039300 SAM RAYBURN RESERVOIR NEAR JASPER, TX

LOCATION.--Lat 31°03'38", long 94°06'21", Jasper County. Hydrologic Unit 12020005, in the powerhouse-intake structure of Sam Rayburn Dam on the Angelina River, 10 mi northwest of Jasper, and 25.2 mi upstream from mouth.

DRAINAGE AREA.--3,449 mi².

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

GAGE.--Stevens-type AP recording transmitter. Datum of gage is National Geodetic Vertical Datum of 1929 (level by U.S. Army Corps of Engineers). Prior to Apr. 20, 1965, nonrecording gage at same site and datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam 19,430 ft long, including spillway and dikes. The dam was completed and deliberate impoundment began Mar. 29, 1965. The spillway is an uncontrolled broad-crested weir 2,200 ft wide, on right bank 7,000 ft to right of outlet works, and is designed to discharge 125,300 ft³/s at maximum flood design. The flood-control outlet works consists of two 10.0- by 20.0-foot rectangular concrete-lined conduits controlled by two 10.0- by 20.0-foot tractor-type service gates and one 10.0- by 20.0-foot tractor-type emergency gate. Water for turbines is admitted through four 18.0- by 26.0-foot penstocks and controlled by two wheeled-leaf-type headgates. The reservoir is operated for flood control and power generation. The area-capacity tables are based on topographic maps prepared by the U.S. Army Corps of Engineers and detailed sedimentation ranges established in 1961 and dated February 1965. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08038000. Gage-height telemeter at station. 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	190.0	-
Design flood	183.0	5,610,000
Crest of spillway	176.0	4,442,400
Top of flood-control pool	173.0	3,997,600
Top of conservation pool (power pool)	164.0	2,852,600
Top of power head and sediment pool	149.0	1,452,000
Lowest gated outlet (invert)	105.0	21,940

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,881,000 acre-ft Feb. 7, 1974 (elevation, 172.17 ft); minimum since conservation storage was reached in 1968, 1,797,000 acre-ft Nov. 15, 1977 (elevation, 153.35 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 3,265,000 acre-ft Mar. 30 at 1600 hours (elevation, 167.48 ft); minimum daily, 2,119,000 acre-ft Oct. 18 at 2400 hours (elevation, 156.94 ft).

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

156.0	2,032,000	160.0	2,421,000	166.0	3,085,000
158.0	2,221,000	162.0	2,631,000	168.0	3,329,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2204000	2306000	2426000	2594000	2769000	3131000	3242000	3025000	2896000	2707000	2537000	2319000
2	2198000	2327000	2437000	2604000	2769000	3150000	3238000	3022000	2887000	2704000	2526000	2312000
3	2189000	2331000	2428000	2605000	2766000	3164000	3228000	3022000	2882000	2701000	2515000	2301000
4	2179000	2345000	2437000	2603000	2778000	3184000	3213000	3016000	2875000	2696000	2503000	2291000
5	2171000	2348000	2455000	2609000	2783000	3191000	3206000	3019000	2868000	2691000	2491000	2280000
6	2160000	2349000	2451000	2613000	2783000	3198000	3186000	3019000	2868000	2686000	2481000	2274000
7	2164000	2353000	2449000	2618000	2784000	3202000	3175000	3021000	2865000	2677000	2473000	2267000
8	2156000	2359000	2454000	2620000	2783000	3207000	3155000	3021000	2858000	2671000	2467000	2261000
9	2156000	2369000	2458000	2623000	2785000	3208000	3134000	3018000	2853000	2667000	2459000	2259000
10	2150000	2377000	2464000	2637000	2830000	3206000	3116000	3011000	2848000	2663000	2451000	2260000
11	2144000	2377000	2466000	2642000	2856000	3206000	3099000	3001000	2848000	2657000	2446000	2255000
12	2134000	2377000	2469000	2642000	2864000	3201000	3080000	2997000	2848000	2651000	2443000	2250000
13	2137000	2377000	2476000	2642000	2879000	3201000	3067000	2991000	2833000	2644000	2440000	2248000
14	2146000	2377000	2478000	2647000	2891000	3201000	3048000	2995000	2827000	2639000	2436000	2246000
15	2133000	2387000	2483000	2647000	2898000	3190000	3031000	2987000	2821000	2633000	2433000	2242000
16	2133000	2385000	2493000	2669000	2907000	3193000	3011000	2980000	2811000	2631000	2429000	2234000
17	2125000	2386000	2498000	2673000	2917000	3181000	2988000	2974000	2801000	2629000	2424000	2227000
18	2119000	2405000	2503000	2684000	2922000	3172000	2973000	2964000	2812000	2627000	2416000	2221000
19	2137000	2397000	2508000	2693000	2925000	3166000	2965000	2956000	2804000	2625000	2410000	2213000
20	2164000	2397000	2511000	2698000	2923000	3197000	2955000	2948000	2796000	2615000	2405000	2211000
21	2193000	2397000	2519000	2702000	2923000	3207000	2958000	2958000	2793000	2605000	2400000	2208000
22	2203000	2395000	2522000	2703000	2933000	3202000	2958000	2953000	2792000	2596000	2392000	2205000
23	2213000	2396000	2526000	2709000	2980000	3202000	2976000	2949000	2787000	2586000	2386000	2203000
24	2219000	2396000	2541000	2715000	3015000	3200000	2972000	2944000	2777000	2582000	2380000	2200000
25	2229000	2399000	2535000	2725000	3038000	3201000	2966000	2937000	2766000	2580000	2374000	2197000
26	2236000	2410000	2539000	2729000	3054000	3197000	2977000	2930000	2756000	2577000	2367000	2185000
27	2245000	2423000	2540000	2736000	3072000	3214000	2985000	2928000	2762000	2577000	2359000	2179000
28	2263000	2420000	2546000	2743000	3099000	3218000	3000000	2919000	2743000	2577000	2351000	2173000
29	2275000	2420000	2550000	2749000	---	3220000	3008000	2912000	2725000	2570000	2343000	2173000
30	2286000	2426000	2560000	2754000	---	3249000	3015000	2904000	2716000	2559000	2337000	2193000
31	2294000	---	2577000	2769000	---	3242000	---	2904000	---	2548000	2329000	2191000
MAX	2294000	2426000	2577000	2769000	3099000	3249000	3242000	3025000	2896000	2707000	2537000	2319000
MIN	2119000	2306000	2426000	2594000	2766000	3131000	2955000	2904000	2716000	2548000	2329000	2173000
(†)	158.75	160.05	161.50	163.26	166.12	167.30	165.41	164.45	162.78	166.22	159.10	159.69
(‡)	+86000	+132000	+151000	+192000	+330000	+143000	-227000	-111000	-188000	-168000	-219000	-138000

CAL YR 1984 MAX 3140000 MIN 2119000 ‡ -158000
WTR YR 1985 MIX 3249000 MIN 2119000 ‡ -17000

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

08040000 B. A. STEINHAGEN LAKE AT TOWN BLUFF, TX

LOCATION.--Lat 30°47'43", long 94°10'48", Tyler County, Hydrologic Unit 12020003, near right bank 70 ft upstream from outlet structure of Town Bluff Dam on Neches River, 0.4 mi north of Town Bluff, and at mile 113.7.

DRAINAGE AREA.--7,573 mi².

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1967, published as Dam B Reservoir at Town Bluff.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 25, 1954, at site 490 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam with concrete spillway sections. The total length of dam is 6,698 ft, including a concrete spillway and nonoverflow section. Deliberate impoundment of water began Apr. 16, 1951, and the dam was completed in June 1951. The uncontrolled spillway is 6,100 ft long. A 326-foot-long gated service spillway with six 40.0- by 35.0-foot tainter gates is located near right end of dam. The capacity of the spillways at maximum flood design is 218,300 ft³/s. The capacity table is based on a survey made in 1945. Water is used for industrial, municipal and irrigation supplies. 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 (nonoverflow)	95.0	-
Design flood	93.0	306,400
Crest of uncontrolled spillway (top of tainter gates)	85.0	124,700
Top of conservation pool	83.0	94,200
Bottom of tainter gates (sill)	50.0	0

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 128,400 acre-ft May 22, 1953 (elevation, 85.21 ft); no storage Sept. 18 to Oct. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum daily cntents, 103,800 acre-ft Nov. 5 at 1600 hours (elevation, 83.67 ft); minimum daily, 63,120 acre-ft Oct. 2 at 1600 hours (elevation, 80.38 ft).

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

80.0	59,320	82.0	81,280
82.0	81,280	84.0	108,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66550	88230	73470	89150	74160	98430	75080	78850	88360	90740	74960	77660
2	63830	93290	73360	93430	72000	96740	74620	80660	88230	88490	81030	79570
3	66550	98140	72000	93700	71110	90340	72680	78730	90070	85780	81150	79690
4	66130	102600	73130	93020	71670	88890	79570	77900	91000	85520	86800	81280
5	70670	103000	76830	91670	72790	83500	87450	76130	91670	83250	88360	85520
6	77300	101900	77780	89940	72900	77300	92750	77300	87060	82140	91540	85910
7	76600	99710	78730	87970	73250	72230	94250	78610	86160	80910	95630	88360
8	78730	96180	79210	87060	73130	69350	93570	79090	86160	77540	94110	90200
9	77420	90740	79570	86160	73590	67620	92750	83000	85020	78130	93430	94940
10	80910	85140	79690	87190	79330	66440	91940	85140	85650	76950	94110	97020
11	82510	78850	79690	86680	87580	67080	91270	89280	84380	74500	94940	98000
12	85400	74040	79330	85020	91810	69570	90200	89540	85020	75200	95630	99280
13	84510	72230	79090	83500	92210	70440	89410	88360	83750	74040	94520	95900
14	80180	70560	79090	82510	90600	70670	88490	88230	83380	72120	88890	90740
15	79940	69130	78490	81890	86930	71560	87320	86040	82010	70440	82760	85650
16	85910	74620	79450	83380	83880	68800	86040	88490	82630	75660	79690	83000
17	89150	77420	79570	85270	79450	70670	84510	88100	81640	75540	77780	83750
18	93570	77900	80540	89280	78490	69350	87190	87710	78020	74730	76830	83500
19	96320	78020	81520	93840	78130	72230	88360	89150	75660	80910	76240	84260
20	96180	77660	82510	98290	75310	78970	89280	89410	74960	86040	76240	83630
21	99280	77540	83500	102400	77660	87710	87190	84760	75080	88100	73250	79450
22	95350	77070	84000	102200	69020	89540	84000	88100	71000	91540	72790	73930
23	89280	76360	84380	99710	74160	93700	87190	90340	68260	94110	79450	73700
24	87060	75310	85140	98140	90070	95080	94520	87710	69240	90870	79940	75660
25	85020	74040	83880	96740	94940	95210	96600	88360	72570	85400	78490	81280
26	80660	76360	82630	94660	95770	92080	95770	88620	79810	79590	75310	82380
27	77300	77660	80060	94800	94800	89410	94800	88230	83000	73470	74160	82010
28	77300	76360	78610	90200	94660	86930	91000	86550	85020	68150	73820	77420
29	78970	75430	78250	85020	---	83380	85650	84380	87840	69570	75890	76240
30	81770	74270	77540	80910	---	83500	79090	88100	90600	73700	77070	76950
31	84760	---	80910	77180	---	78610	---	89150	---	78250	78130	---
MAX	99280	103000	85140	102400	95770	98430	96600	90340	91670	94110	95630	99280
MIN	63830	69130	72000	77180	69020	66440	72680	76130	68260	68150	72790	73700
(†)	82.28	81.41	81.97	81.66	83.03	81.78	81.82	82.62	82.73	81.75	81.74	81.64
(‡)	+13090	-10490	+6640	-3730	+17480	-16050	+480	+10060	+1450	-12350	-120	-1180

CAL YR 1984 MAX 113700 MIN 60900 (‡) +10910
WTR YR 1985 MAX 103000 MIN 63830 (‡) +5280

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

08040500 NECHES RIVER AT TOWN BLUFF, TX

LOCATION.--Lat 30°47'36", long 94°10'28", Jasper-Tyler County line, Hydrologic Unit 12020003, on left bank 0.3 mi downstream from Town Bluff Dam, 0.5 mi northeast of Town Bluff, 2.5 mi upstream from Walnut Run, 8 mi downstream from Wolf Creek, and at mile 113.4.

DRAIAGE AREA.--7,573 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1951 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 21, 1953, water-stage recorder, and May 21, 1953, to Dec. 3, 1954, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, Apr. 8-17, which are poor. Flow is regulated by B. A. Steinhagen Lake (station 08040000) 0.3 mi upstream and by Sam Rayburn Reservoir (station 08039300) 37.9 mi upstream. Some diversions upstream from station. Elevation telemeter is located at station.

AVERAGE DISCHARGE.--13 years (water years 1952-64) prior to regulation by Sam Rayburn Reservoir, 4,406 ft³/s (3,192,000 acre-ft/yr); 21 years (water years 1965-85) regulated, 4,695 ft³/s (3,402,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,900 ft³/s May 21, 22, 1953 (elevation, 82.85 ft); no flow at times due to regulation of B. A. Steinhagen Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1884 reached a stage about 86.8 ft (discharge, about 120,000 ft³/s), and is the highest since that date, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s Mar. 2 at 1600 hours to Mar. 3 at 2400 hours; maximum elevation, 63.35 ft Mar. 2 at 2300 hours; minimum daily discharge, 1,700 ft³/s Jan. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	3610	1830	1880	3690	11000	9290	5520	3260	3190	3020	2980
2	2620	3640	1810	2440	3010	12600	9250	5510	3250	3250	3020	2980
3	2620	3680	1810	3640	2450	13000	9230	5510	3240	3370	3040	3000
4	2650	4220	1850	4170	1940	12900	9250	5490	3240	3340	3050	3020
5	2620	5700	1950	4190	1930	12800	9360	5490	3240	3340	3070	3030
6	2630	6750	1980	4170	1940	12300	9750	4940	3240	3320	3060	2980
7	2640	6990	1820	4150	1910	11800	11100	4340	3220	3320	3050	2790
8	2640	7320	1760	3670	1900	11300	12400	4320	3210	3310	3080	2770
9	2630	7300	1740	3130	1880	10400	12500	4350	3210	3300	3060	2780
10	2640	6990	1730	3030	1890	9700	12500	4340	3210	3300	3040	2800
11	2650	6150	1720	2980	4110	8950	12500	4860	3220	3290	3040	2800
12	2660	4690	1720	2990	6040	8660	12500	5950	3220	3280	3050	2800
13	2670	2960	1730	3000	6600	8670	12500	6550	3210	3290	3050	2810
14	2670	2210	1980	2700	7710	8660	12500	6560	3200	3280	3170	2790
15	2460	2000	1890	2170	8590	8660	12500	6560	3190	3280	3570	2780
16	2080	1880	1760	1910	9360	8650	12500	6550	3190	3280	3470	2760
17	2070	1880	1760	1700	9920	8640	12400	6550	3190	3370	3040	2760
18	2070	1870	1760	1720	9220	8640	11400	6560	3210	3320	3000	2760
19	2840	1860	1720	1700	8720	8650	7920	6560	3230	3290	2960	2760
20	3970	1870	1840	1730	9800	8920	5590	6570	3210	3360	2960	2750
21	6970	1850	2170	2440	9850	9840	4430	6590	3190	3350	2960	2760
22	10600	1850	2350	3730	9840	9940	3280	5950	3170	3240	2940	2740
23	10100	1850	2370	5050	8960	9790	2870	4980	3140	3090	2940	2720
24	8010	1840	2530	5120	9180	9780	2400	4940	3120	3090	2970	2730
25	6730	1840	2730	5120	9860	9470	3230	4910	3130	3080	2970	2740
26	6650	1840	2740	5120	10100	8970	4880	4910	3140	3050	2980	2770
27	6220	1910	2740	5830	10300	9080	5720	4900	3160	3030	2970	2810
28	5070	1950	2470	7880	10300	9250	5670	4900	3160	3010	2970	2780
29	4130	1870	1880	6780	---	9160	5610	4890	3170	2990	2970	2780
30	3610	1830	1840	5470	---	9420	5570	4430	3180	3000	2970	2800
31	3600	---	1850	4890	---	9370	---	3310	---	3010	2970	---
TOTAL	124160	102200	61830	114500	181000	308970	260600	167790	95950	100020	94410	84530
MEAN	4005	3407	1995	3694	6464	9967	8687	5413	3198	3226	3045	2818
MAX	10600	7320	2740	7880	10300	13000	12500	6590	3260	3370	3570	3030
MIN	2070	1830	1720	1700	1880	8640	2400	3310	3120	2990	2940	2720
AC-FT	246300	202700	122600	227100	359000	612800	516900	332800	190300	198400	187300	167700

CAL YR 1984 TOTAL 1737100 MEAN 4746 MAX 24500 MIN 1720 AC-FT 3446000
WTR YR 1985 TOTAL 1695960 MEAN 4646 MAX 13000 MIN 1700 AC-FT 3364000

08040500 NECHES RIVER AT TOWN BLUFF, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 06...	1630	6770	109	6.2	20.0	70	29	10.2	111	1.6	26
JAN 29...	1625	5990	155	6.4	8.0	80	30	14.1	118	1.7	36
MAR 12...	1345	8660	145	6.7	19.5	70	28	7.4	80	1.4	30
JUN 13...	1042	3220	174	7.3	27.5	70	20	8.9	112	1.7	36
JUL 24...	1025	2780	156	6.8	28.0	40	8.6	8.7	111	1.7	32
SEP 11...	1035	2950	164	6.8	28.0	25	5.0	10.2	129	1.1	34

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 06...	11	6.8	2.1	11	1	3.4	15	25	11	<.10	11
JAN 29...	20	9.3	3.1	16	1	2.5	16	30	20	<.10	14
MAR 12...	17	7.0	3.1	15	1	2.8	13	24	18	<.10	11
JUN 13...	15	8.3	3.8	20	1	2.9	21	25	23	.10	10
JUL 24...	13	7.4	3.4	17	1	3.0	20	22	20	.10	8.8
SEP 11...	11	7.7	3.6	18	1	2.6	23	22	20	.20	8.8

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, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	80	24	3	<.010	<.10	.080	.72	.80	.060	14
JAN 29...	100	25	15	.020	<.10	.050	.65	.70	.060	11
MAR 12...	89	29	1	.010	<.10	.050	.55	.60	.050	11
JUN 13...	110	17	5	<.010	<.10	.050	.65	.70	.050	<.1
JUL 24...	94	9	5	<.010	<.10	.030	.47	.50	.030	6.5
SEP 11...	97	5	5	<.010	<.10	.040	.46	.50	.030	4.9

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 06...	1630	<1	49	<1	20	4	350
SEP 11...	1035	<1	48	<1	<10	2	50

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 06...	5	72	<.1	<1	<1	15
SEP 11...	<1	11	.1	<1	<1	8

08041000 NECHES RIVER AT EVADALE, TX
(National stream-quality accounting network)

LOCATION.--Lat 30°21'20", long 94°05'35", Jasper-Hardin County line, Hydrologic Unit 12020003, near center of channel at downstream side of pier of bridge on U.S. Highway 96 at Evadale, 0.8 mi upstream from Mill Creek, 16 mi upstream from Village Creek, and at mile 55.6.

DRAINAGE AREA.--7,951 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to December 1906, April 1921 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 718: 1929. WSP 1342: 1905-7, 1924. WSP 1732: Drainage area at former site.

GAGE.--Water-stage recorder. Datum of gage is 8.25 ft above National Geodetic Vertical Datum of 1929. July 1, 1904, to Dec. 31, 1906, nonrecording gage on Gulf, Colorado, and Santa Fe Railway Co. bridge at site 1.2 mi downstream at datum 5.50 ft lower; Apr. 1, 1921, to Dec. 7, 1948, nonrecording gages at site 1.2 mi downstream at present datum; Dec. 8, 1948, to Nov. 8, 1963, water-stage recorder at site 1.2 mi downstream at present datum. Telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by B. A. Steinhagen Lake (station 08040000) 58.1 mi upstream, capacity 124,700 acre-ft, and by Sam Rayburn Reservoir (station 08039300), 95.7 mi upstream, capacity 4,442,000 acre-ft. Some diversions upstream for municipal use.

AVERAGE DISCHARGE.--45 years (water years 1905-6, 1922-64) unregulated, 6,308 ft³/s (4,570,000 acre-ft/yr); 21 years (water years 1965-85) regulated, 5,285 ft³/s (3,829,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,100 ft³/s May 11, 1944 (gage height, 23.58 ft, from floodmark), at site then in use; minimum daily, 63 ft³/s Nov. 26-28, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 26.2 ft, at former site, with a discharge of about 125,000 ft³/s, and flood in August 1915 reached a stage of 24.5 ft, at former site, with a discharge of about 102,000 ft³/s. These are the highest floods since at least 1884. Stages furnished by Gulf, Colorado, and Santa Fe Railway Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s Mar. 6 at 0500 hours (gage height, 15.63 ft); minimum daily, 2,060 ft³/s Jan. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	4040	2360	2060	5920	12700	9860	5940	4110	3200	3130	2960
2	2800	3990	2240	2090	4940	12700	9850	5790	3580	3210	3140	2950
3	2780	4020	2150	2360	3920	13300	9770	5710	3430	3240	3150	2970
4	2760	4010	2280	3320	3230	13700	9680	5650	3390	3400	3150	2980
5	2750	4110	3030	3850	2590	14400	9600	5590	3370	3480	3170	3010
6	2770	4790	3450	4050	2400	14500	9580	5560	3360	3510	3180	3020
7	2770	5650	3400	4110	2350	14200	9640	5430	3340	3520	3200	3000
8	2810	6250	3010	4090	2260	13700	10000	4930	3340	3510	3210	2830
9	2800	6720	2570	3920	2170	13200	10900	4610	3310	3490	3220	2740
10	2800	6980	2350	3510	2140	12400	11900	4500	3300	3480	3200	2750
11	2800	7010	2200	3280	3070	11500	12600	4460	3290	3530	3190	2800
12	2810	6640	2120	3150	5030	10600	13000	4580	3310	3530	3180	2790
13	2820	5770	2080	3110	6620	9720	13200	5150	3310	3490	3210	2770
14	2870	4350	2090	3110	7220	9460	13500	5860	3300	3470	3210	2770
15	2870	3120	2310	2990	7640	9340	13300	6250	3280	3470	3250	2760
16	2760	2620	2420	2570	8310	9280	13100	6430	3270	3450	3530	2750
17	2390	2310	2300	2270	8950	9240	13000	6500	3270	3500	3600	2730
18	2220	2240	2260	2080	9660	9140	13000	6500	3300	3580	3370	2720
19	2220	2260	2280	2080	10100	9090	12900	6530	3410	3620	3170	2720
20	2540	2210	2200	2070	9720	9600	11900	6510	3440	3570	3100	2710
21	3950	2160	2160	2120	9800	10400	9250	6600	3410	3590	3110	2710
22	5180	2100	2350	2420	10200	11000	6680	6690	3360	3590	3080	2710
23	7460	2080	2570	3400	11100	11400	4790	6670	3310	3520	3050	2710
24	9400	2080	2650	4280	12100	11400	4280	6010	3260	3350	3020	2720
25	9810	2080	2700	4800	12400	11100	3650	5430	3210	3280	3020	2700
26	9060	2160	2900	4990	12700	10700	3930	5190	3180	3250	3030	2730
27	7670	2710	2970	5130	12700	10400	5320	5060	3180	3210	3030	2760
28	7000	3020	2980	5520	12700	10000	5990	5000	3200	3190	3010	2760
29	6480	2930	2850	6620	---	9880	6210	4960	3190	3170	3000	2770
30	5470	2600	2310	7470	---	9850	6080	4940	3190	3140	3000	2840
31	4470	---	2070	6880	---	9800	---	4810	---	3140	2990	---
TOTAL	130120	113010	77610	113700	201940	347700	286460	173840	100200	105680	97900	84140
MEAN	4197	3767	2504	3668	7212	11220	9549	5608	3340	3409	3158	2805
MAX	9810	7010	3450	7470	12700	14500	13500	6690	4110	3620	3600	3020
MIN	2220	2080	2070	2060	2140	9090	3650	4460	3180	3140	2990	2700
AC-FT	258100	224200	153900	225500	400500	689700	568200	344800	198700	209600	194200	166900

CAL YR 1984 TOTAL 1958220 MEAN 5350 MAX 25900 MIN 2030 AC-FT 3884000
WTR YR 1985 TOTAL 1832300 MEAN 5020 MAX 14500 MIN 2060 AC-FT 3634000

08041000 NECHES RIVER AT EVADALE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1947 to current year. Pesticide analyses: January 1968 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to current year.
WATER TEMPERATURES: October 1947 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, 422 microsiemens Jan. 25, 1957; minimum daily, 23 microsiemens Sept. 19, 1963.
WATER TEMPERATURES: Maximum daily, 34.0°C June 29, 1953; minimum daily, 3.0°C Jan. 30, 31, 1948, Jan. 31, 1949, and Jan. 24, 1963.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 219 microsiemens Dec. 29; minimum daily, 93 microsiemens Nov. 27.
WATER TEMPERATURES: Maximum daily, 32.0°C on many days during August and September; minimum daily, 4.0°C on many days during January, February and March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV												
05...	1546	4150	109	6.4	2.0	34	10.2	73	1.6	44	26	26
JAN												
29...	1154	6620	158	6.6	8.0	40	12.4	104	1.9	270	150	34
MAR												
27...	1220	10400	151	6.7	18.5	17	8.5	90	2.1	28	120	32
JUN												
11...	1410	3280	173	6.9	29.5	29	7.7	101	1.5	46	240	35
JUL												
22...	1415	3610	154	6.4	30.0	23	8.8	117	1.8	60	250	31
SEP												
09...	1408	2730	165	7.2	30.0	17	7.5	99	1.2	36	150	34

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM 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											
05...	11	6.9	2.1	11	1	3.1	15	23	12	<.10	11
JAN											
29...	20	8.8	3.0	18	1	2.6	14	30	21	<.10	15
MAR											
27...	18	8.0	3.0	16	1	2.9	14	23	20	<.10	9.1
JUN											
11...	19	8.1	3.5	19	1	3.0	16	25	27	<.10	10
JUL											
22...	13	7.2	3.2	17	1	2.9	18	22	22	.10	8.8
SEP											
09...	14	7.8	3.6	19	1	3.1	20	24	22	.10	9.4

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											
05...	95	79	<.10	.040	.80	.070	.020	.030	48	538	47
JAN											
29...	137	110	<.10	.030	1.0	.070	.020	.010	147	2630	36
MAR											
27..	108	90	<.10	.030	.70	.050	.020	.010	17	477	97
JUN											
11...	109	110	<.10	.060	.80	.060	.030	.010	59	523	62
JUL											
22...	94	94	<.10	.050	.40	<.010	.020	<.010	26	253	97
SEP											
09...	101	100	<.10	.050	.50	.030	.020	.010	15	111	87

08041000 NECHES RIVER AT EVADALE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 05...	1546	1	46	<.0	2	<1	<3	4	480	11
JAN 29...	1154	<1	51	<.5	<1	1	<3	3	450	1
JUN 11...	1410	1	45	.9	<1	<1	<3	3	220	5
SEP 09...	1408	<1	40	<.5	<1	<1	<3	2	28	1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 05...	5	23	<.1	<10	3	<1	<1	70	<6	33
JAN 29...	10	79	<.1	<10	2	<1	<1	91	<6	16
JUN 11...	5	8	<.1	10	4	<1	<1	96	<6	17
SEP 09...	6	3	.1	<10	1	<1	<1	98	<6	<3

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	130120	128	79	27600	16	5770	17	6100	27
NOV.	1984	113010	118	74	22500	15	4610	16	4980	25
DEC.	1984	77610	156	92	19200	20	4240	20	4240	31
JAN.	1985	113700	175	101	30900	23	7010	22	6820	34
FEB.	1985	201940	142	85	46600	18	9930	19	10300	29
MAR.	1985	347700	143	86	80600	18	17200	19	17800	29
APR.	1985	286460	162	95	73700	21	16300	21	16300	32
MAY	1985	173840	170	99	46300	22	10400	22	10200	33
JUNE	1985	100200	172	100	26900	22	6060	22	5940	34
JULY	1985	105680	163	96	27300	21	6040	21	6020	32
AUG.	1985	97900	166	97	25600	22	5700	21	5660	33
SEPT	1985	84140	167	97	22100	22	4930	21	4880	33
TOTAL		1832300	**	**	449000	**	98200	**	99200	**
WTD.AVG.		5020	153	91	**	20	**	20	**	31

08041000 NECHES RIVER AT EVADALE, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	113	127	189	157	118	165	170	167	165	162	168
2	148	115	128	175	154	119	163	163	167	164	164	167
3	147	118	122	174	152	123	165	161	167	165	166	168
4	146	119	116	183	150	125	168	165	169	163	169	166
5	145	125	110	179	143	121	171	173	173	162	176	167
6	147	118	115	184	135	118	169	176	171	161	172	168
7	147	119	121	181	146	121	166	178	169	160	166	167
8	151	111	120	177	150	126	163	176	170	165	169	165
9	152	114	122	169	162	133	164	174	169	166	164	166
10	146	116	133	164	161	137	161	175	173	165	165	165
11	147	115	170	163	115	130	160	172	170	179	163	158
12	145	113	151	165	129	141	158	175	171	164	162	164
13	142	115	168	173	124	150	160	182	170	165	161	162
14	143	117	160	172	154	146	161	176	178	167	161	165
15	144	124	157	172	161	154	161	171	179	166	162	166
16	142	130	146	177	169	161	162	170	181	165	163	167
17	144	135	142	164	172	169	169	167	179	169	168	167
18	145	137	153	169	148	165	163	168	181	172	173	166
19	143	124	168	166	147	171	166	171	180	158	167	168
20	141	117	153	168	140	161	160	168	181	159	164	169
21	134	124	176	175	143	151	164	168	181	153	161	167
22	127	125	162	177	147	148	163	170	159	155	166	170
23	141	129	178	174	146	152	160	164	180	162	167	172
24	125	133	175	194	136	155	146	168	171	163	166	166
25	117	135	174	199	125	156	151	169	164	164	170	172
26	104	137	191	196	126	153	137	167	165	158	169	166
27	102	93	188	193	121	155	138	167	166	162	166	170
28	104	107	215	177	119	156	159	170	169	163	168	189
29	107	115	219	163	---	154	175	171	167	159	166	162
30	107	122	202	157	---	164	165	169	172	160	168	161
31	109	---	189	161	---	162	---	166	---	162	167	---
MEAN	135	121	156	175	144	145	161	170	172	163	166	167

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	21.0	14.0	7.0	4.0	4.0	14.0	25.0	27.0	30.0	31.0	32.0
2	23.0	21.0	15.0	7.0	4.0	4.0	14.0	25.0	27.0	30.0	31.0	32.0
3	23.0	21.0	15.0	6.0	4.0	4.0	14.0	25.0	27.0	29.0	31.0	32.0
4	23.0	21.0	15.0	6.0	4.0	4.0	14.0	25.0	28.0	28.0	31.0	32.0
5	23.0	21.0	12.0	6.0	4.0	4.0	14.0	25.0	28.0	28.0	31.0	32.0
6	23.0	21.0	12.0	6.0	4.0	10.0	11.0	25.0	29.0	29.0	31.0	32.0
7	23.0	21.0	12.0	6.0	4.0	10.0	16.0	25.0	29.0	28.0	31.0	32.0
8	23.0	21.0	10.0	6.0	4.0	10.0	16.0	25.0	29.0	28.0	32.0	32.0
9	23.0	21.0	10.0	6.0	4.0	10.0	16.0	26.0	29.0	28.0	32.0	31.0
10	23.0	19.0	10.0	6.0	4.0	10.0	16.0	26.0	29.0	28.0	32.0	32.0
11	23.0	19.0	10.0	6.0	4.0	12.0	16.0	26.0	29.0	28.0	32.0	32.0
12	23.0	21.0	10.0	6.0	4.0	12.0	16.0	26.0	29.0	29.0	32.0	32.0
13	23.0	21.0	10.0	4.0	4.0	12.0	16.0	26.0	29.0	29.0	32.0	32.0
14	23.0	21.0	10.0	4.0	4.0	12.0	18.0	26.0	29.0	29.0	32.0	32.0
15	23.0	21.0	10.0	4.0	4.0	11.0	18.0	26.0	29.0	29.0	32.0	30.0
16	23.0	---	10.0	4.0	4.0	11.0	18.0	26.0	29.0	29.0	32.0	30.0
17	23.0	---	10.0	4.0	4.0	11.0	23.0	24.0	29.0	29.0	32.0	29.0
18	23.0	21.0	10.0	4.0	4.0	11.0	22.0	26.0	29.0	29.0	32.0	29.0
19	23.0	19.0	9.0	4.0	4.0	11.0	22.0	26.0	29.0	29.0	32.0	29.0
20	23.0	19.0	9.0	4.0	4.0	11.0	22.0	26.0	30.0	29.0	32.0	29.0
21	23.0	18.0	9.0	4.0	4.0	11.0	21.0	26.0	30.0	30.0	32.0	29.0
22	23.0	18.0	9.0	4.0	4.0	11.0	23.0	26.0	30.0	30.0	32.0	29.0
23	23.0	18.0	8.0	4.0	4.0	12.0	23.0	26.0	30.0	30.0	32.0	29.0
24	21.0	18.0	8.0	4.0	4.0	12.0	23.0	26.0	30.0	30.0	32.0	29.0
25	21.0	18.0	8.0	4.0	4.0	12.0	23.0	26.0	30.0	30.0	32.0	29.0
26	21.0	17.0	8.0	4.0	4.0	12.0	23.0	26.0	30.0	30.0	32.0	29.0
27	21.0	17.0	8.0	4.0	4.0	12.0	23.0	26.0	30.0	30.0	32.0	29.0
28	21.0	15.0	8.0	4.0	4.0	12.0	25.0	26.0	30.0	30.0	32.0	26.0
29	21.0	15.0	8.0	4.0	---	12.0	25.0	27.0	30.0	30.0	32.0	24.0
30	21.0	15.0	8.0	4.0	---	12.0	25.0	27.0	30.0	30.0	32.0	26.0
31	21.0	---	8.0	4.0	---	12.0	---	27.0	---	30.0	32.0	---
MEAN	22.5	19.5	10.0	5.0	4.0	10.0	19.0	26.0	29.0	29.0	32.0	30.0

08041500 VILLAGE CREEK NEAR KOUNTZE, TX

LOCATION.--Lat 30°23'52", long 94°15'48", Hardin County, Hydrologic Unit 12020006, at downstream side of bridge on Farm Road 418, 1.6 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.1 mi upstream from Cypress Creek, 3.4 mi northeast of Kountze, and 4.3 mi downstream from Beech Creek.

DRAINAGE AREA.--860 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to September 1927, October 1927 to November 1929 (discharge measurements only), April 1939 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 25.12 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 30, 1939, nonrecording gage at site 1.6 mi downstream at different datum. Apr. 30, 1939, to Sept. 30, 1966, water-stage recorder at site 2,000 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 5-7 and May 23-29. Records good except those of May 23-29, which are fair. There are small diversions above station. A gage-height telemeter is located at station.

AVERAGE DISCHARGE.--49 years, 841 ft³/s, 13.29 in/yr, 609,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,200 ft³/s Nov. 26, 1940, gage height, 27.6 ft, former site, from floodmark and from rating curve extended above 32,000 ft³/s; minimum not determined, probably occurred during period of no gage-height record Sept. 16 to Oct. 3, 1956; minimum daily, 16 ft³/s Oct. 1, 2, 1956.
Flood of May 27, 1929, reached a stage of about 32 ft at site 2,000 ft downstream at present datum; stage was determined on basis of information by engineers of Gulf, Colorado, and Santa Fe Railway Co. for site 1.6 mi downstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1884, about 34 ft in August 1915 at site 2,000 ft downstream at present datum; stage was determined on basis of information by engineers of Gulf, Colorado, and Santa Fe Railway Co. for site 1.6 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,600 ft³/s Feb. 28 from 0300 to 0600 hours (gage height, 16.71 ft); minimum, 62 ft³/s Sept. 5-8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	632	666	423	1570	5270	1430	1640	194	138	116	74
2	122	704	539	670	1290	4390	1360	1120	184	127	112	70
3	116	940	479	999	964	3730	1170	669	174	121	107	67
4	111	1120	576	1290	775	3450	934	512	165	116	143	65
5	106	1310	1170	1500	779	3390	784	440	157	113	127	63
6	103	1330	1650	1520	879	3220	695	393	151	128	118	62
7	101	1180	2010	1240	923	2500	628	350	147	163	116	62
8	102	916	2040	889	898	1770	568	313	142	143	168	62
9	183	581	1820	700	801	1270	517	293	138	132	156	66
10	208	475	1370	616	695	1040	483	280	135	124	116	71
11	180	454	956	578	1440	946	463	270	131	138	102	90
12	171	414	761	547	2740	880	451	261	133	134	104	145
13	176	361	663	515	3770	820	446	252	152	125	97	170
14	173	327	701	487	4070	786	470	243	167	140	93	168
15	211	307	743	481	3940	863	486	235	177	142	90	164
16	275	337	770	496	3390	962	456	230	170	133	89	137
17	339	376	927	555	2370	1010	416	227	147	128	89	117
18	298	509	1070	647	1450	942	385	221	141	127	93	104
19	274	743	1080	741	997	822	357	213	186	137	93	93
20	386	841	992	776	859	1020	337	203	598	144	90	86
21	909	810	844	704	782	2560	328	203	956	142	88	82
22	1510	594	697	571	749	4420	323	325	912	206	84	76
23	1820	503	573	487	775	4520	323	380	578	222	89	73
24	2110	436	511	448	1520	3950	382	440	386	213	129	70
25	2450	369	476	437	2730	3190	664	460	310	180	128	68
26	2640	353	453	436	4270	2230	980	490	250	149	106	66
27	2130	506	436	474	5780	1430	1020	450	208	131	92	82
28	1310	777	414	885	6330	1220	1240	320	183	118	87	104
29	870	836	393	1380	---	1460	1580	260	169	111	101	135
30	660	787	383	1610	---	1640	1770	224	152	121	92	154
31	619	---	381	1690	---	1630	---	206	---	125	81	---
TOTAL	20793	19828	26544	24792	57536	67331	21446	12123	7693	4371	3296	2846
MEAN	671	661	856	800	2055	2172	715	391	256	141	106	94.9
MAX	2640	1330	2040	1690	6330	5270	1770	1640	956	222	168	170
MIN	101	307	381	423	695	786	323	203	131	111	81	62
CFSM	.78	.77	1.00	.93	2.39	2.53	.83	.46	.30	.16	.12	.11
IN.	.90	.86	1.15	1.07	2.49	2.91	.93	.52	.33	.19	.14	.12
AC-FT	41240	39330	52650	49170	114100	133600	42540	24050	15260	8670	6540	5650

CAL YR 1984 TOTAL 348820 MEAN 953 MAX 12400 MIN 70 CFSM 1.11 IN 15.09 AC-FT 691900
WTR YR 1985 TOTAL 268599 MEAN 736 MAX 6330 MIN 62 CFSM .86 IN 11.62 AC-FT 532800

08041500 VILLAGE CREEK NEAR KOUNTZE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1967 to September 1985 (discontinued). Water temperatures: November 1967 to September 1970.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV									
20...	1500	854	53	14.5	16	9	4.9	1.0	5.0
FEB									
07...	1730	929	77	7.0	16	9	4.4	1.1	9.6
MAR									
19...	1615	812	76	17.0	17	6	4.8	1.2	8.9
MAY									
15...	1100	234	97	23.0	20	7	6.0	1.3	12
JUL									
02...	1555	125	95	28.0	20	10	5.7	1.3	11
24...	1455	212	65	29.0	14	6	3.8	1.0	7.6
SEP									
06...	1200	61	99	27.0	20	7	6.0	1.2	11

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								
20...	.6	1.4	7	10	9.1	<.10	11	47
FEB								
07...	1	1.2	7	7.0	16	<.10	13	56
MAR								
19...	1	1.0	11	5.3	14	<.10	12	54
MAY								
15...	1	1.1	13	5.9	21	<.10	14	69
JUL								
02...	1	1.7	10	10	18	<.10	13	67
24...	.9	1.1	8	8.8	12	<.10	10	49
SEP								
06...	1	1.4	13	8.5	19	<.10	12	67

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX

LOCATION.--Lat 30°06'21", long 94°20'04", Jefferson-Hardin County line, Hydrologic Unit 12020007, on right bank at downstream side of bridge on county road and 5.1 mi southeast of Sour Lake.

DRAINAGE AREA.--336 mi^2.

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.

REMARKS.--Estimated daily discharges: Oct. 27, 28, 31, Nov. 1-7, 10, 22, 26, 27, Dec. 16-20, and May 26-30. Records fair except those for estimated daily discharges, which are poor. Low flow for period March through September is affected by small diversions and return flow from irrigated fields. Gage-height telemeter at station.

AVERAGE DISCHARGE.--18 years, 469 ft^3/s 339,800, acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft^3/s Apr. 22, 1979 (elevation, 34.29 ft); minimum daily, 0.25 ft^3/s Oct. 28, 1982.
Maximum stage since at least 1917, that of Apr. 22, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,140 ft^3/s Mar. 24 at 1400 hours (elevation, 27.05 ft); minimum daily, 0.84 ft^3/s Oct. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	378	166	38	394	2580	342	68	27	25	47	10
2	3.8	567	131	41	377	2630	237	45	27	26	45	6.5
3	2.6	722	105	81	350	2510	185	39	24	28	109	5.1
4	1.8	772	168	179	325	2290	156	38	21	31	82	4.1
5	1.4	755	297	287	368	2040	127	54	22	37	77	6.2
6	1.2	690	332	331	360	1840	101	63	23	40	66	12
7	.97	595	338	342	349	1640	81	65	24	45	38	47
8	.84	459	383	333	316	1380	64	44	21	46	28	59
9	2.0	320	354	296	300	1120	48	50	19	42	26	39
10	89	215	308	297	303	808	38	34	18	38	23	23
11	328	144	268	309	1240	486	31	37	21	33	20	15
12	348	100	223	262	1450	282	27	29	45	26	18	11
13	264	76	175	225	1800	197	31	16	35	27	22	9.2
14	373	63	139	218	2000	197	31	13	34	33	27	17
15	419	54	122	238	2140	342	28	15	26	35	22	27
16	414	56	130	234	2270	477	34	14	23	30	21	28
17	1580	186	290	319	2150	555	31	16	21	35	32	23
18	1790	268	430	410	1920	558	27	16	32	51	30	17
19	1860	409	465	433	1650	520	25	36	156	62	17	12
20	2610	414	430	396	1320	1210	33	31	186	94	21	8.1
21	3020	380	383	334	987	2270	38	31	310	140	49	5.7
22	2800	344	319	265	611	2800	40	31	292	125	25	4.5
23	2510	276	241	198	418	2980	38	91	296	86	21	3.7
24	2240	189	176	148	1300	3080	36	107	273	52	17	3.3
25	2020	141	134	115	1770	2910	30	80	206	39	19	2.9
26	1860	134	104	92	2080	2450	36	52	125	31	14	3.5
27	1570	325	82	122	2220	2040	58	31	70	26	9.6	3.4
28	1140	311	66	296	2230	1730	101	20	45	50	6.1	5.9
29	738	254	53	356	---	1360	104	15	34	41	5.5	13
30	514	209	44	390	---	983	102	32	27	44	4.4	49
31	419	---	41	401	---	594	---	43	---	42	9.4	---
TOTAL	28926.91	9806	6897	7986	32998	46859	2260	1256	2483	1460	951.0	474.1
MEAN	933	327	222	258	1179	1512	75.3	40.5	82.8	47.1	30.7	15.8
MAX	3020	772	465	433	2270	3080	342	107	310	140	109	59
MIN	.84	54	41	38	300	197	25	13	18	25	4.4	2.9
AC-FT	57380	19450	13680	15840	65450	92940	4480	2490	4930	2900	1890	940

CAL YR 1984 TOTAL 131158.26 MEAN 358 MAX 3020 MIN .40 AC-FT 260200
WTR YR 1985 TOTAL 142357.01 MEAN 390 MAX 3080 MIN .84 AC-FT 282400

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX--Continued

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Since August 1981, specific conductance and water temperature are recorded continuously at this station.

REMARKS.--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 (1968-79, 1983): Maximum daily, 11,600 microsiemens Mar. 23, 1968; minimum daily, 34 microsiemens June 12, 1975, July 28, 1979.
WATER TEMPERATURES (1968-76): Maximum daily, 37.0°C Sept. 15, 1972; minimum daily, 2.0°C Jan. 11, 1973.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
03...	1005	2.6	211	--	41	7	13	2.0	25
FEB									
08...	1305	338	151	6.5	32	16	10	1.7	18
MAR									
18...	1600	556	138	17.0	38	12	12	1.9	15
MAY									
13...	1510	14	420	25.5	76	34	24	4.0	53
JUL									
25...	1300	39	164	28.0	40	4	12	2.5	17
SEP									
10...	1210	23	199	26.5	43	7	13	2.5	23

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	2.1	34	17	36	.10	6.7	120
FEB								
08...	1	1.8	16	13	29	<.10	5.7	89
MAR								
18...	1	1.7	26	15	22	<.10	5.2	88
MAY								
13...	3	3.1	43	19	91	.20	8.3	230
JUL								
25...	1	1.6	36	17	18	.10	8.2	98
SEP								
10...	2	4.4	36	30	32	.10	7.7	130

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX--Continued

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

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	---	---	74									
12	126	76	99									
13	126	66	94									
14	88	60	71									
15	218	84	135									
16	218	150	177									
17	148	60	81									
18	96	90	94									
19	112	80	93									
20	80	70	74									
21	78	72	75									
22	78	72	74									
23	92	78	86									
24	96	92	93									
25	106	96	101									
26	108	102	105									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	218	60	95									

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	66	62	64	142	130	135	270	234	255
2	---	---	---	64	58	62	140	132	135	296	234	269
3	---	---	---	66	60	62	154	142	147	308	248	290
4	---	---	---	66	64	65	168	150	157	294	252	278
5	---	---	---	66	64	65	188	170	177	372	260	314
6	---	---	---	---	---	---	182	168	176	440	382	423
7	---	---	---	---	---	---	174	166	168	---	---	---
8	---	---	153	---	---	---	186	162	180	---	---	---
9	158	106	150	---	---	---	192	164	182	---	---	---
10	88	60	80	---	---	---	208	182	190	---	---	---
11	96	76	83	---	---	---	220	204	212	---	---	---
12	---	---	---	---	---	---	214	188	201	---	---	---
13	68	66	68	---	---	---	192	160	182	420	366	395
14	72	62	63	---	---	---	202	160	189	360	326	337
15	74	60	65	---	---	---	190	168	179	350	292	327
16	76	62	67	---	---	---	238	194	213	330	294	314
17	84	66	71	---	---	---	266	226	241	282	258	267
18	88	72	78	---	---	---	280	260	274	288	268	277
19	138	82	87	---	---	---	258	190	227	298	242	271
20	140	90	108	---	---	---	394	192	279	272	228	261
21	130	108	118	---	---	---	914	204	398	262	212	241
22	184	84	141	---	---	---	208	186	195	270	246	257
23	102	70	86	---	---	---	186	176	179	280	126	207
24	86	82	83	---	---	---	206	182	195	582	270	458
25	80	74	77	---	---	---	214	180	193	544	352	409
26	78	74	76	---	---	---	222	208	215	346	312	327
27	76	68	74	---	---	---	244	224	232	310	264	286
28	72	64	69	---	---	---	278	244	264	264	244	253
29	---	---	---	---	---	---	292	262	280	254	246	250
30	---	---	---	---	---	---	302	246	269	252	234	244
31	---	---	---	---	---	---	---	---	---	266	244	255
MONTH	184	60	90	66	58	64	914	130	209	582	126	299

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	288	256	272	208	196	202	232	208	223	310	286	295
2	252	246	247	198	178	190	222	198	215	332	314	323
3	254	246	251	188	180	184	184	122	161	338	318	327
4	254	238	249	190	180	185	200	184	192	328	294	304
5	254	222	238	188	182	185	186	174	177	302	230	270
6	254	230	240	188	180	184	186	178	183	254	222	244
7	250	216	233	194	184	188	194	188	192	284	190	245
8	236	226	231	194	188	190	196	190	192	192	116	138
9	226	212	220	208	192	199	224	192	210	192	142	170
10	226	216	221	218	208	213	268	226	244	232	176	204
11	254	212	224	210	202	207	278	260	269	238	232	235
12	226	194	206	210	204	207	272	248	265	238	224	232
13	264	212	221	214	194	206	248	184	227	280	230	248
14	238	216	231	208	200	203	206	198	203	244	218	231
15	244	236	240	220	204	206	216	198	209	298	250	280
16	242	234	237	218	198	208	302	218	240	240	212	224
17	246	230	239	236	196	208	382	282	330	212	178	194
18	264	206	238	214	198	204	264	224	234	254	212	232
19	258	128	167	238	204	219	224	214	216	270	202	232
20	282	194	230	288	158	241	224	136	204	260	192	230
21	290	200	249	150	130	136	168	140	153	230	196	212
22	196	134	157	174	140	157	210	142	176	270	216	235
23	160	136	148	140	136	137	260	206	223	212	204	208
24	148	136	141	154	138	146	262	212	236	220	206	215
25	166	148	157	168	152	164	232	190	204	260	210	231
26	182	166	175	178	170	174	238	188	209	250	214	225
27	192	184	189	188	142	179	264	194	228	264	250	258
28	204	194	199	210	154	175	338	278	313	248	224	238
29	212	204	208	192	174	185	350	296	321	242	178	214
30	210	198	206	186	180	183	314	266	285	268	194	255
31	---	---	---	200	188	196	292	262	279	---	---	---
MONTH	290	128	215	288	130	189	382	122	226	338	116	238

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

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	21.0	21.0	21.0									
12	22.0	21.0	21.5									
13	22.5	22.0	22.0									
14	22.0	22.0	22.0									
15	22.5	22.0	22.0									
16	23.5	22.5	23.0									
17	23.5	21.5	22.0									
18	22.5	22.0	22.0									
19	22.5	22.0	22.5									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	32.0	27.0	29.0	32.0	25.5	28.5	32.5	27.0	29.5	30.0	28.0	29.0
2	32.0	26.5	29.0	31.5	26.0	28.5	32.5	27.5	29.5	29.5	27.5	28.5
3	31.5	26.5	29.0	29.0	26.0	27.0	31.0	25.5	27.5	28.5	27.5	28.5
4	33.0	27.0	29.5	26.5	24.5	25.0	32.0	27.0	29.0	29.5	27.0	28.0
5	32.0	27.0	29.5	29.5	23.5	25.5	32.0	27.0	29.0	28.0	26.0	27.0
6	31.5	27.0	29.5	31.0	24.5	27.5	32.0	27.0	29.5	29.5	26.0	27.0
7	32.5	26.0	28.5	30.5	24.5	27.5	32.5	27.5	29.5	29.5	27.0	27.5
8	34.0	27.5	30.0	31.5	26.0	28.0	32.5	27.0	29.5	27.5	26.5	27.0
9	33.5	28.0	30.5	31.5	26.5	28.5	32.0	28.0	29.5	27.5	26.5	27.0
10	32.0	27.5	29.5	32.5	27.0	29.5	32.0	27.5	29.5	26.5	26.0	26.5
11	32.0	26.5	29.0	30.5	26.5	28.0	31.5	27.5	29.5	26.0	25.5	25.5
12	31.0	26.0	28.5	31.5	26.0	28.0	31.5	28.0	29.5	27.0	25.0	26.0
13	30.5	24.5	27.5	32.0	26.5	29.0	30.0	27.0	28.0	27.5	26.0	26.5
14	31.0	24.5	27.5	31.0	26.0	28.5	28.0	26.0	27.0	27.0	26.0	26.5
15	32.5	26.0	28.5	31.0	26.5	28.5	27.0	25.0	26.0	26.0	25.0	26.0
16	33.0	27.0	29.5	33.0	26.5	29.0	30.0	25.5	27.0	25.5	24.5	25.0
17	32.5	27.5	29.5	32.5	26.0	29.0	30.5	27.0	28.5	25.5	24.5	25.0
18	30.0	24.0	26.5	31.0	27.0	29.0	30.5	27.5	29.0	26.0	25.0	25.5
19	25.5	22.5	23.5	28.5	26.5	27.5	31.0	28.0	29.5	26.5	24.5	25.5
20	25.0	23.5	24.0	27.0	25.5	26.5	31.0	28.0	29.5	26.5	24.5	25.5
21	25.0	24.0	24.5	28.0	25.5	26.5	29.5	26.0	27.5	27.0	24.5	25.5
22	25.5	24.5	25.0	28.5	26.0	27.0	29.5	27.5	28.5	27.0	24.5	25.5
23	26.0	25.0	25.5	30.0	26.5	28.0	28.5	27.0	28.0	27.0	24.5	25.5
24	27.0	25.5	26.0	30.5	27.0	28.5	31.0	27.5	28.5	26.5	24.5	25.5
25	27.5	26.0	26.5	32.0	27.0	29.5	31.5	27.5	29.0	27.0	23.5	25.5
26	28.0	26.0	27.0	32.0	27.5	29.5	31.5	28.0	29.5	25.5	23.0	24.5
27	29.5	26.0	27.5	31.5	27.5	29.5	30.5	27.5	28.5	23.0	20.5	22.0
28	30.0	26.5	28.5	32.0	26.5	29.0	29.0	26.5	28.0	22.0	20.0	21.0
29	29.5	25.0	27.0	30.0	27.5	28.5	28.5	26.5	27.5	23.0	21.5	22.0
30	30.5	24.5	27.0	31.5	26.5	28.5	30.0	27.5	28.5	22.0	20.0	21.0
31	---	---	---	32.0	27.5	29.5	29.5	27.5	28.5	---	---	---
MONTH	34.0	22.5	28.0	33.0	23.5	28.0	32.5	25.0	28.5	30.0	20.0	25.5

08042000 TAYLOR BAYOU NEAR LABELLE, TX

LOCATION.--Lat 29°52'30", long 94°09'34". Jefferson County, Hydrologic Unit 12040201, near center of stream at downstream side of bridge on county road, 0.7 mi south of LaBelle, 6.0 mi upstream from Hillebrandt Bayou, 7.2 mi upstream from State Highway 73, and 11.2 mi upstream from saltwater gates and barge locks. Distances are measured along rectified channel.

DRAINAGE AREA.--262 mi^2.

PERIOD OF RECORD.--April 1954 to September 1984 (complete records for storms of 1.0 inch or more runoff, except for the period Sept. 10-22, 1961). October 1984 to September 1985 (gage heights only).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.63 ft below National Geodetic Vertical Datum of 1929, originally determined by several comparisons of water surface with auxiliary water-stage recorder 7.2 mi downstream during times of no flow and ideal weather conditions. Prior to October, 1984 auxiliary water-stage recorder 7.2 mi downstream.

REMARKS.--Records fair. Prior to October 1984 records were computed using fall as a factor. Low flow is regulated by drainage from ricefields and operation of saltwater gates and barge locks. An unknown amount of water is diverted above and below gage for rice irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft^3/s Sept. 22, 1963, and Apr. 23, 1979; maximum gage height, 11.78 ft Sept. 20, 1963 (backwater from Hillebrandt Bayou); minimum discharge not determined (affected by tides and pumping); minimum gage height, 2.31 ft July 17, 1954.
Maximum stage since at least 1941, that of Sept. 20, 1963, and Apr. 23, 1979. Flood of Sept. 13, 1961 (Hurricane Carla), reached a stage of 11.51 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1941 reached a stage of 11.3 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.68 ft Feb. 25, time unknown; minimum gage height, 5.38 ft Nov. 11.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.08	6.92			6.23	---	6.30	6.27	5.94	---	---	---
2	6.10	7.50			6.05	---	6.18	6.22	5.96	---	---	---
3	6.10	7.54			5.82	---	5.97	6.12	5.96	---	---	---
4	6.15	7.32			---	---	6.10	6.06	5.96	---	---	---
5	6.20	6.99			---	---	6.13	6.12	5.95	---	---	---
6	6.24	6.41			---	---	6.13	6.17	5.91	---	---	---
7	6.24	6.57			---	---	6.15	6.18	5.86	---	---	---
8	6.30	6.66			---	---	6.12	6.26	5.81	---	---	---
9	6.77	6.70			---	---	6.11	6.26	5.68	---	---	6.50
10	6.80	6.66			---	---	6.12	6.23	5.60	---	---	6.55
11	6.65	6.12			---	---	6.13	6.27	5.62	---	---	6.57
12	6.54	5.92			---	---	6.13	6.27	5.67	---	---	6.53
13	6.47	6.13			---	---	6.14	6.34	5.66	---	---	6.42
14	7.03	6.23			---	---	6.17	6.33	5.73	---	6.15	6.38
15	7.18	6.29			---	---	6.18	6.30	5.74	---	6.31	6.42
16	7.02	6.41			---	---	6.17	6.15	5.76	---	6.27	6.44
17	8.04	6.43			---	---	6.06	6.07	5.74	---	6.26	6.48
18	8.35	6.82			---	---	5.97	5.92	---	---	6.24	6.50
19	8.26	6.89			---	6.59	5.98	5.97	---	---	6.12	6.52
20	8.36	6.72			---	7.80	5.99	6.02	6.41	---	6.11	6.52
21	8.34	---			---	8.17	6.10	6.32	6.45	---	6.23	6.51
22	8.05	---			---	8.13	6.17	6.36	6.45	---	6.26	6.51
23	8.05	---			---	7.48	6.21	6.47	6.43	---	6.30	6.52
24	7.92	---			---	6.70	6.20	6.45	6.32	---	6.35	6.48
25	7.61	---			8.68	6.04	6.13	6.32	6.15	6.06	6.32	6.44
26	7.38	---			---	6.30	6.23	6.21	6.09	6.03	6.32	6.43
27	7.28	7.38			---	6.41	6.28	6.09	6.07	6.03	6.35	6.34
28	7.07	---			---	6.47	6.29	6.07	---	6.13	6.39	6.38
29	6.84	---			---	6.50	6.29	6.00	---	6.35	6.33	6.58
30	6.73	---			---	6.54	6.27	6.00	---	---	6.30	6.59
31	6.93	---			---	6.50	---	5.98	---	---	---	---
MAX	8.36	---			---	---	6.30	6.47	---	---	---	---
MIN	6.08	---			---	---	5.97	5.92	---	---	---	---

08042500 HILLEBRANDT BAYOU NEAR LOVELL LAKE, TX

LOCATION.--Lat 29°55'44", long 94°06'35", Jefferson County, Hydrologic Unit 12040201, near center of stream at downstream side of bridge on county road, 1.3 mi southeast of Lovell Lake, and 4.4 mi upstream (along rectified channel) from Taylor Bayou.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--April 1954 to September 1984 (complete records for storms of 1.0 inch or more runoff, except for the period Sept. 11-18, 1961). October 1984 to September 1985 (gage heights only).

GAGE.--Water-stage recorder. Auxiliary water-stage recorder 3.0 mi downstream. Datum of gage is 4.63 ft below National Geodetic Vertical Datum of 1929, originally determined by comparisons of water surface with Taylor Bayou near La-Belle, auxiliary gage 5.6 mi downstream, during times of no flow and ideal weather conditions. Prior to Aug. 28, 1963, auxiliary water-stage recorder on Taylor Bayou 1.2 mi downstream from Hillebrandt Bayou, nonrecording gages on Taylor Bayou 2.3 and 5.2 mi downstream from Hillebrandt Bayou; Aug. 28, 1963 to September 30, 1984 auxiliary water-stage recorder 3.0 mi downstream.

REMARKS.--Records good. Prior to October 1984 records were computed using fall as a factor. Low flow is regulated by drainage from ricefields and operation of saltwater gages and barge locks. An unknown amount of water is diverted above and below gage for rice irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s Sept. 18, 1963; maximum gage height, 12.34 ft Sept. 19, 1963; minimum discharge not determined (affected by tides and pumping); minimum gage height, 2.33 ft July 17, 1954. Maximum stage since 1941, 12.34 ft Sept. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.16 ft Oct. 20 at 1400 hours; minimum gage height, 5.40 ft Nov. 11.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.08	6.98	6.73	6.52	6.19	6.90	6.30	6.29	6.00	5.86	6.14	6.54
2	6.11	7.28	6.72	6.40	6.03	6.80	6.22	6.22	6.00	5.83	6.15	6.51
3	6.12	7.24	6.67	6.45	5.81	6.10	6.02	6.13	6.00	5.97	6.35	6.33
4	6.18	7.12	6.66	6.44	5.96	6.14	6.17	6.12	6.00	6.18	6.38	6.42
5	6.25	6.93	6.74	6.39	6.08	5.93	6.18	6.17	5.98	6.30	6.36	6.58
6	6.30	6.40	6.65	6.34	6.19	6.25	6.17	6.21	5.93	6.34	6.32	6.56
7	6.27	6.63	6.33	6.33	6.15	6.47	6.15	6.25	5.87	6.35	---	6.48
8	6.33	6.70	6.27	6.27	6.19	6.48	6.10	6.28	5.81	6.34	---	6.37
9	6.85	6.73	6.18	6.30	6.33	6.42	6.13	6.27	5.68	6.30	---	6.45
10	6.85	6.71	6.12	6.40	6.98	6.37	6.15	6.27	5.62	6.25	---	6.55
11	6.67	6.14	6.08	6.35	7.46	6.39	6.15	6.30	5.67	6.23	---	6.57
12	6.56	5.98	6.21	6.25	7.48	6.37	6.16	6.31	5.68	6.25	---	6.52
13	6.50	6.17	6.37	6.26	7.34	6.36	6.18	6.42	5.67	6.28	---	6.40
14	7.07	6.29	6.38	6.40	7.03	6.35	6.20	6.38	5.73	6.29	6.09	6.33
15	7.18	6.34	6.43	6.42	6.74	6.26	6.23	6.30	5.75	6.32	6.26	6.40
16	7.10	6.44	6.45	6.52	6.44	6.57	6.18	6.15	5.81	6.32	6.27	6.43
17	8.14	6.49	6.42	6.54	6.33	6.60	6.06	6.07	5.93	6.37	6.26	6.47
18	8.05	6.86	6.40	6.55	6.23	6.60	6.01	5.95	6.10	6.28	6.21	6.48
19	8.11	6.86	6.38	6.54	6.04	6.60	6.05	6.02	6.25	6.34	6.11	6.49
20	8.16	6.70	6.42	6.51	5.96	8.06	6.03	6.08	6.42	6.36	6.11	6.48
21	8.09	6.47	6.45	6.32	6.20	8.05	6.15	6.32	6.48	6.33	6.23	6.48
22	8.00	6.29	6.45	6.30	6.29	7.48	6.26	6.37	6.48	6.28	6.25	6.50
23	7.96	6.28	6.39	6.27	7.64	6.98	6.27	6.52	6.43	6.18	6.33	6.50
24	7.72	6.26	6.43	6.24	8.15	6.57	6.21	6.44	6.31	6.06	6.35	6.47
25	7.50	6.28	6.41	6.22	8.15	6.05	6.17	6.32	6.16	6.11	6.31	6.49
26	7.40	7.41	6.33	6.17	8.04	6.35	6.27	6.22	6.13	6.07	6.30	6.41
27	7.29	7.54	6.42	6.41	7.55	6.47	6.32	6.12	6.08	6.06	6.35	6.34
28	7.08	7.38	6.46	6.43	6.93	6.53	6.32	6.08	6.00	6.20	6.35	6.37
29	6.86	7.03	6.47	6.38	---	6.56	6.32	6.07	5.86	6.34	6.32	6.60
30	6.73	6.92	6.46	6.38	---	6.62	6.32	6.07	5.88	6.30	6.30	6.55
31	6.95	---	6.56	6.37	---	6.48	---	6.02	---	6.24	6.47	---
MAX	8.16	7.54	6.74	6.55	8.15	8.06	6.32	6.52	6.48	6.37	---	6.60
MIN	6.08	5.98	6.08	6.17	5.81	5.93	6.01	5.95	5.62	5.83	---	6.33

08042800 WEST FORK TRINITY RIVER NEAR JACKSBORO, TX

LOCATION.--Lat 33°17'36", long 98°04'43", Jack County, Hydrologic Unit 12030101, near left bank at downstream side of bridge on State Highway 59, 4 mi downstream from Big Cleveland Creek, 7 mi upstream from Carroll Creek, 7 mi northeast of Jacksboro, and at mile 660.

DRAINAGE AREA.--683 mi^2.

PERIOD OF RECORD.--March 1956 to current year.
Water-quality records: October 1976 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 869.28 ft above National Geodetic Vertical Datum of 1929, determined by State Department of Highways and Public Transportation. Sept. 20, 1960, to May 30, 1961, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharge: July 6-10 and Aug. 7-21. Records good except those for periods of estimated daily discharges, which are fair. At end of year, flow from 70.9 mi^2 upstream from this station was partly controlled by 21 floodwater-retarding structures with a combined detention capacity of 19,780 acre-ft.

AVERAGE DISCHARGE.--29 years (water years 1957-85), 98.7 ft^3/s (1.96 in/yr), 71,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft^3/s Apr. 27, 1957 (gage height, 32.10 ft, from floodmark); no flow at times each year.
Maximum stage since at least 1900, that of Apr. 27, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1941 reached a stage of 30 ft, from information by local residents

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 30	2130	1,280	16.47	Mar. 22	1330	1,460	17.35
Dec. 17	2300	1,670	18.21	Mar. 31	0730	*4,810	*21.85
Jan. 1	2030	4,530	21.63	June 7	2400	2,300	19.54

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	567	2.4	3150	2.3	34	2640	15	2.7	19	1.0	.00
2	.24	272	1.5	3470	2.2	25	1640	9.1	2.8	8.2	.64	.00
3	.12	165	1.1	1970	2.2	18	1220	12	1.4	4.8	.41	.00
4	.07	107	1.4	1400	2.4	17	599	22	1.0	3.7	.24	.00
5	.04	44	3.0	816	2.4	91	108	12	38	2.6	.14	.00
6	.03	25	4.4	205	2.6	222	79	7.7	765	1.7	.08	.00
7	.02	12	3.6	121	2.7	85	63	5.7	1670	1.1	.06	.00
8	.00	6.8	3.2	68	2.6	35	54	4.1	1960	.72	.05	.00
9	.00	4.4	2.6	45	2.6	24	49	2.9	1370	.52	.04	.00
10	.00	3.0	1.8	32	2.9	18	47	2.2	962	.35	.03	.00
11	.00	2.1	1.3	23	3.0	13	46	2.0	576	.32	.03	.00
12	8.4	1.9	1.3	17	2.9	10	44	1.5	99	.25	.03	.00
13	17	1.3	66	14	2.7	19	42	1.9	65	.18	.03	.00
14	11	.94	563	12	2.5	67	42	1.3	55	.13	.02	.16
15	3.7	.80	848	11	2.4	83	40	1.1	51	.09	.02	.00
16	1.5	.66	1210	9.8	2.4	29	26	.97	46	.07	.02	.00
17	1.3	1.4	1430	7.6	2.3	18	16	1.4	31	.06	.02	.00
18	.64	4.3	1470	7.1	2.0	12	11	.97	18	.04	.02	.00
19	3.1	9.9	920	5.8	1.9	8.8	7.8	1.1	12	.01	.02	.00
20	10	99	167	5.2	1.8	615	6.2	14	7.9	.00	.02	.00
21	383	44	51	4.0	1.9	1000	5.6	172	6.1	.00	.02	.00
22	197	19	31	3.6	2.1	1390	13	398	4.9	.00	.02	.00
23	78	11	19	3.8	80	1200	26	133	4.0	117	.00	.00
24	47	6.9	15	3.7	477	792	50	60	4.0	23	.00	.00
25	174	5.9	10	3.5	608	197	50	32	3.1	5.1	.00	.00
26	540	5.2	6.5	3.3	347	100	34	18	2.4	20	.00	.00
27	723	5.1	5.5	3.2	120	74	21	11	107	13	.00	.00
28	868	5.2	4.7	3.2	52	54	14	7.4	234	7.4	.00	.00
29	1080	4.9	4.1	3.1	---	41	19	5.0	221	23	.00	.00
30	1250	3.1	4.3	3.0	---	759	15	3.8	53	6.3	.00	.00
31	1170	---	813	2.7	---	4270	---	3.0	---	2.2	.00	---
TOTAL	6567.65	1438.80	7665.7	11426.6	1736.8	11320.8	7027.6	962.14	8373.3	260.84	2.96	.16
MEAN	212	48.0	247	369	62.0	365	234	31.0	279	8.41	.095	.005
MAX	1250	567	1470	3470	608	4270	2640	398	1960	117	1.0	.16
MIN	.00	.66	1.1	2.7	1.8	8.8	5.6	.97	1.0	.00	.00	.00
CFSM	.31	.07	.36	.54	.09	.53	.34	.05	.41	.01	.000	.000
IN.	.36	.08	.42	.62	.09	.62	.38	.05	.46	.01	.00	.00
AC-FT	13030	2850	15200	22660	3440	22450	13940	1910	16610	517	5.9	.3

CAL YR 1984 TOTAL 15697.96 MEAN 42.9 MAX 1470 MIN .00 CFSM .06 IN .85 AC-FT 31140
WTR YR 1985 TOTAL 56783.35 MEAN 156 MAX 4270 MIN .00 CFSM .23 IN 3.09 AC-FT 112600

08043000 BRIDGEPORT RESERVOIR ABOVE BRIDGEPORT, TX

LOCATION.--Lat 33°13'22", long 97°49'54", Wise County, Hydrologic Unit 12030101, at left end of Bridgeport Dam on West Fork Trinity River, 4.6 mi west of Bridgeport, 13 mi upstream from Big Sandy Creek, and at mile 626.

DRAINAGE AREA.--1,111 mi².

PERIOD OF RECORD.--April 1932 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 Jan. 26, 1944, nonrecording gages at various sites in vicinity of present gage at present datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam 2,040 ft long. The dam was completed in December 1931, and storage began Apr. 1, 1932. The original dam was 1,900 ft long, but was lengthened to the present length (2,040 ft) in 1971-72. The original service spillway was eliminated during construction (1971-72), and a new spillway with approach and discharge channels was built through natural ground 2,800 ft from the left end of dam. The new spillway is 90 ft wide and has eight vertical lift gates that are 11.25- by 22-feet. The controlled outlet works consist of a 48-inch-diameter and an 18-inch-diameter pipe encased in a concrete conduit extending through the dam. In addition, a controlled 60-inch-diameter steel pipe extends through the service spillway wall to the spillway discharge basin. Flow is affected at times by discharge from the flood-detention pools of 25 floodwater-retarding structures with a combined detention capacity of 21,720 acre-ft. These structures control runoff from 80.3 mi² above the reservoir. For elevations of outlet works, see table below. Capacity tables are based on surveys made in 1956 and 1968. 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	874.0	-
Crest of spillway	866.0	902,000
Top of gates	842.0	469,300
Top of conservation pool	836.0	387,000
Crest of spillway	820.0	212,400
Lowest gated outlet (invert, at spillway)	810.0	133,200
Lowest gated outlet (invert)	751.4	0

COOPERATION.--Daily elevation records were provided by Tarrant County Water Control and Improvement District No. 1. Capacity table was provided 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, 424,700 acre-ft May 15, 1982 (elevation, 838.84 ft); minimum contents since first appreciable storage in 1935, 7,170 acre-ft Oct. 12-16, 1956.

EXTREMES (at 0700) FOR CURRENT YEAR.--Maximum contents observed, 333,400 acre-ft June 12-13 (elevation, 831.60 ft); minimum observed, 191,300 acre-ft Oct. 5 (elevation, 817.58 ft).

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

817.0	186,400	823.0	240,300	829.0	302,600
819.0	203,500	825.0	260,100	831.0	325,400
821.0	221,500	827.0	280,800	833.0	349,300

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191900	210200	214000	245600	260500	255900	289600	310300	318200	332700	319500	287500
2	191700	214000	213800	250300	260000	255700	297400	310100	317900	332500	318800	286600
3	191500	214700	213800	258400	259500	255300	301800	310000	317600	332300	318100	285600
4	191500	214900	213600	263600	259000	255600	305100	309900	317400	332100	317300	284600
5	191300	215100	213900	267200	258800	255400	306600	309600	317300	331900	316300	285100
6	191500	215200	213800	269300	258500	255100	306800	309500	318200	331500	314700	284700
7	192600	215000	213800	269600	258100	254900	306700	309400	319800	331300	313400	284200
8	192600	215100	213800	269500	257700	254800	306700	309400	322700	331000	312500	283700
9	192500	215300	213800	269500	257100	254800	306700	309300	326900	330800	311600	283100
10	192400	215100	213800	269200	256900	254700	306700	309200	330100	330800	310700	282500
11	192300	214800	213800	268700	256700	254600	306700	309100	332200	330700	309500	282000
12	192700	214600	213800	268400	256200	254400	306700	309100	333400	330600	308300	281300
13	192800	214500	213900	267800	255900	254100	307400	309000	333400	330200	307300	280800
14	192800	214400	214800	267500	255400	256100	307600	314900	333200	329700	305900	281400
15	192700	214400	215800	267100	255000	256700	307600	314700	333100	329400	305800	281300
16	192600	214300	221400	266800	254500	257100	307700	314400	332900	329000	303700	281100
17	192300	214200	225700	266600	254100	257200	307700	314300	332800	328800	302800	280800
18	192100	214700	228500	266200	253700	257100	307600	314100	332700	326600	301900	280400
19	192100	214600	232200	265800	253400	256900	307500	314000	332600	325500	301100	280100
20	192000	214500	235100	265300	253300	259200	307400	314400	332300	324600	300100	279700
21	192500	214400	236300	264800	253300	267300	307400	316800	332000	323700	299100	279000
22	192700	214400	236300	264300	253500	270400	307500	317500	331600	323300	297900	278500
23	193600	214300	236400	263700	254700	273400	308500	318300	331400	322500	296900	278200
24	193700	214300	236500	263300	254900	276400	308400	318600	331300	322700	295900	277300
25	194600	214400	236600	263000	255300	277900	308300	318700	331000	322000	294800	276700
26	196400	214200	236600	262600	255900	278900	308300	318600	330800	323100	294600	276000
27	198700	214300	236500	262200	256300	279400	308300	318500	332000	322700	292600	275400
28	200900	214100	236500	261800	256000	279600	308500	318300	332200	322200	291600	274900
29	202500	214100	236500	261400	---	279800	308600	318300	332300	321600	290500	275500
30	204500	214100	236900	261100	---	282100	310200	318500	332600	320900	289500	274900
31	207000	---	237300	260800	---	283500	---	318500	---	320200	288500	---
MAX	207000	215300	237300	269600	260500	283500	310200	318700	333400	332700	319500	287500
MIN	191300	210200	213600	245600	253300	254100	289600	309000	317300	320200	288500	274900
(†)	819.39	820.19	822.68	825.07	824.59	827.25	829.68	830.40	831.61	830.55	827.72	826.44
(‡)	+14900	+7100	+23200	+23500	-4800	+27500	+26700	+8300	+14100	-12400	-31700	-13600

CAL YR 1984 MAX 294500 MIN 191300 (‡) -57300
WTR YR 1985 MAX 333400 MIN 191300 (‡) +82000

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

08043100 WEST FORK TRINITY RIVER AT BRIDGEPORT, TEX.

LOCATION.--Lat 33°12'07", long 97°48'09", Wise County, Hydrologic Unit 12030101, on left bank on downstream side of embankment near left end of 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 City Hall in Bridgeport, and 2.9 mi downstream from Bridgeport Dam.

DRAINAGE AREA.--1,113 mi^2.

PERIOD OF RECORD.--September 1984 to September 1985.

GAGE.--Water-stage recorder. Datum of gage is 725.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow is regulated by Bridgeport Reservoir located 2.9 mi upstream and has a capacity of 902,000 acre-ft, 515,000 acre-ft is for temporary storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft^3/s Feb. 19, 1985 (gage height 13.41 ft); no flow Nov. 16, 20-24, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft^3/s Feb. 19 at 2015 hours (gage height 13.41 ft); no flow Nov. 16, 20-24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	3.0	.65	2.1	199	185	3.7	2.5	2.5	2.4	226	356
2	.36	1.5	.65	2.0	200	185	3.6	2.5	2.5	2.4	225	356
3	.26	1.4	.65	102	199	186	3.6	2.5	2.5	2.4	223	356
4	28	1.3	.71	203	198	183	3.6	2.5	2.5	2.4	218	284
5	.40	1.2	.88	201	198	133	3.4	2.5	3.3	2.4	281	156
6	.40	1.2	.79	201	199	129	3.3	2.5	3.1	2.4	332	157
7	.54	1.2	.77	199	198	128	3.3	2.5	2.5	2.4	331	157
8	.21	1.2	.77	198	198	128	3.3	2.5	2.5	2.4	331	157
9	.12	1.2	.98	198	197	128	12	2.5	2.5	2.5	330	156
10	.11	1.1	.97	197	197	128	3.3	2.5	2.5	2.5	330	157
11	.33	1.2	.77	197	198	129	3.2	2.8	3.1	2.5	330	157
12	.48	1.3	.77	194	199	129	3.2	3.0	2.8	2.5	328	156
13	.48	1.3	1.8	192	198	135	3.5	142	2.6	1.3	349	156
14	.44	31	.79	191	197	132	2.9	3.4	2.6	.05	366	105
15	27	.12	2.2	192	197	103	2.7	2.6	2.6	32	368	62
16	.83	.00	3.8	191	197	83	2.6	2.5	2.6	2.4	368	62
17	.49	.13	.60	192	197	82	2.6	2.4	2.6	10	366	62
18	.61	.37	.54	192	198	81	20	2.2	2.6	316	363	61
19	.51	.03	.54	194	289	81	2.7	2.2	2.6	329	363	61
20	1.6	.00	.44	199	12	102	2.6	3.2	2.6	334	363	114
21	1.1	.00	.32	199	2.5	53	2.6	7.3	2.6	337	363	155
22	1.1	.00	.28	199	2.4	24	4.0	2.5	2.6	337	363	154
23	1.7	.00	.24	198	81	24	2.8	2.5	2.6	337	363	157
24	2.2	.00	.23	197	184	24	2.6	2.4	2.5	337	363	157
25	3.4	.01	.18	196	184	24	16	2.4	2.5	282	362	156
26	4.4	.06	.18	198	184	23	2.7	2.4	2.4	228	328	153
27	2.9	.20	12	197	184	23	2.5	2.4	3.5	226	359	153
28	.80	.33	2.0	189	185	23	3.4	2.4	2.5	226	360	154
29	.50	.62	1.8	198	---	14	3.7	2.4	2.5	226	360	157
30	39	.65	1.8	197	---	4.8	2.7	2.4	2.4	226	359	154
31	1.4	---	26	199	---	3.8	---	2.5	---	226	358	---
TOTAL	122.02	51.62	65.10	5604.1	4871.9	2810.6	132.1	222.9	79.2	4041.95	10329	4838
MEAN	3.94	1.72	2.10	181	174	90.7	4.40	7.19	2.64	130	333	161
MAX	39	31	26	203	289	186	20	142	3.5	337	368	356
MIN	.11	.00	.18	2.0	2.4	3.8	2.5	2.2	2.4	.05	218	61
CFSM	.004	.002	.002	.16	.16	.08	.004	.006	.002	.12	.30	.15
IN.	.00	.00	.00	.19	.16	.09	.00	.01	.00	.14	.35	.16
AC-FT	242	102	129	11120	9660	5570	262	442	157	8020	20490	9600

WTR YR 1985 TOTAL 33168.49 MEAN 90.9 MAX 368 MIN .00 CFSM .08 IN 1.11 AC-FT 65790

08044000 BIG SANDY CREEK NEAR BRIDGEPORT, TX

LOCATION.--Lat 33°13'54", long 97°41'40", Wise County, Hydrologic Unit 12030101, at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: June 1-4. Records good. Since May 1, 1956, streamflow 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. Streamflow 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 station.

AVERAGE DISCHARGE.--49 years, 70.4 ft^3/s (52,000 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, 1,080 ft^3/s Mar. 22 at 0030 hours (gage height, 10.44 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	16	.00	568	7.3	15	401	17	8.4	26	.74	.01
2	.00	74	.00	600	7.2	15	131	15	7.5	22	.74	.01
3	.00	30	.00	164	7.2	13	71	13	6.2	20	.66	.00
4	.00	3.1	.00	66	7.2	14	49	11	5.0	17	.66	.00
5	.00	.32	.00	39	8.5	15	38	9.2	5.4	14	.59	.00
6	.00	.00	.00	27	11	13	30	7.0	155	12	.52	.00
7	.00	.00	.00	22	11	10	24	6.0	381	9.6	.46	.00
8	.00	.00	.00	18	9.6	10	21	5.4	522	7.2	.46	.00
9	.00	.00	.00	16	9.3	9.7	19	4.8	202	5.6	.40	.00
10	.00	.00	.00	14	9.2	9.4	18	4.4	146	4.1	.40	.00
11	.00	.00	.00	12	7.6	9.3	18	5.4	210	3.6	.40	.00
12	.00	.00	.00	9.9	6.6	8.5	17	7.6	262	3.3	.40	.00
13	.00	.00	.00	9.4	6.5	12	19	419	248	1.5	.34	.00
14	.00	.00	11	9.6	6.4	127	33	218	227	.74	.34	.00
15	.00	.00	10	9.1	6.3	74	29	42	204	.46	.34	.00
16	.00	.00	143	9.4	6.1	32	20	21	181	.29	.34	.00
17	.00	.00	236	10	6.3	22	15	14	157	.24	.34	.00
18	.00	.00	82	9.6	6.0	17	13	13	133	.15	.34	.00
19	.00	.00	27	8.6	6.0	14	11	13	115	.15	.34	.00
20	.00	.00	14	7.9	6.2	297	11	98	99	.15	.34	.00
21	.00	.00	10	7.4	7.2	773	10	378	85	.87	.34	.00
22	.00	.00	7.5	6.7	10	893	33	495	75	7.6	.28	.00
23	.00	.00	5.7	6.9	29	366	104	192	66	.52	.19	.00
24	.00	.00	4.9	7.7	133	122	82	62	58	.34	.15	.00
25	5.6	.00	4.2	7.5	91	70	33	35	50	.29	.09	.00
26	62	.00	3.5	6.8	35	50	18	24	43	17	.09	.00
27	34	.00	3.1	6.8	20	40	14	18	40	3.6	.06	.00
28	37	.00	3.7	7.0	15	34	20	16	39	1.1	.06	.00
29	4.0	.00	4.1	8.2	---	30	42	15	37	.82	.04	3.2
30	.34	.00	4.1	7.8	---	235	42	12	31	.82	.02	.73
31	2.8	---	276	7.6	---	533	---	9.8	---	.74	.02	---
TOTAL	145.74	123.42	849.80	1709.9	491.7	3882.9	1386	2200.6	3798.5	181.78	10.49	3.95
MEAN	4.70	4.11	27.4	55.2	17.6	125	46.2	71.0	127	5.86	.34	.13
MAX	62	74	276	600	133	893	401	495	522	26	.74	3.2
MIN	.00	.00	.00	6.7	6.0	8.5	10	4.4	5.0	.15	.02	.00
AC-FT	289	245	1690	3390	975	7700	2750	4360	7530	361	21	7.8

CAL YR 1984 TOTAL 2348.28 MEAN 6.42 MAX 320 MIN .00 AC-FT 4660
WTR YR 1985 TOTAL 14784.78 MEAN 40.5 MAX 893 MIN .00 AC-FT 29330

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 to 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 mi².

PERIOD OF RECORD.--January 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 660.57 ft above 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.--Estimated daily discharges: Dec. 4-5 and July 17-21. Records fair. During the current year, sustained flows at this site were the result of releases of water (for downstream supply) from Bridgeport Reservoir (station 08043000) 25 mi upstream from this station (drainage area, 1,111 mi²). In addition, flow from 100 mi² above this station 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 total combined detention capacity of 24,450 acre-ft. These structures control runoff from 91.2 mi² in the Big Sandy and Salt Creeks drainage basins. Several observations of water temperature were made during the year. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--38 years, 228 ft³/s (165,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,400 ft³/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, 2,570 ft³/s May 14 at 1900 hours (gage height, 17.40 ft); minimum daily, 0.77 ft³/s Nov. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	288	.84	935	218	217	453	389	24	28	252	370
2	1.1	206	.96	652	218	214	255	134	22	23	252	370
3	1.1	64	2.0	360	218	214	136	81	20	20	253	369
4	1.1	21	3.0	261	219	214	95	56	18	19	252	366
5	1.4	6.6	4.3	259	221	202	76	43	35	17	250	245
6	6.4	3.2	3.7	244	222	160	62	32	138	15	355	155
7	19	2.5	3.7	236	223	152	52	25	300	13	353	154
8	8.8	1.6	3.3	229	222	150	44	21	404	12	352	151
9	2.6	1.4	3.3	225	221	149	41	18	366	12	351	149
10	1.3	1.2	3.3	224	220	147	39	15	171	10	346	148
11	4.7	.82	3.3	220	219	147	38	17	228	8.6	345	147
12	2.0	.77	3.4	219	219	144	31	38	316	7.7	343	147
13	.99	.84	8.3	215	219	149	64	451	253	7.6	343	145
14	.94	1.1	14	214	219	451	91	1780	235	6.5	372	169
15	.94	9.1	14	211	215	279	57	1780	222	5.7	383	93
16	1.0	8.2	199	212	215	164	41	488	201	100	385	45
17	8.5	2.7	222	212	215	123	30	165	183	200	384	42
18	3.3	4.8	153	211	218	111	25	92	184	300	384	42
19	2.2	5.4	42	211	216	106	34	66	163	400	384	41
20	2.0	3.6	17	211	276	601	29	215	124	468	385	41
21	2.6	2.8	12	213	51	781	23	681	102	476	383	95
22	4.8	1.8	9.4	213	19	784	95	853	85	454	383	140
23	4.5	1.3	7.7	214	232	758	199	529	73	369	382	144
24	21	1.3	6.5	213	180	336	140	226	63	368	380	148
25	54	2.4	5.6	213	311	189	81	129	54	369	382	150
26	249	2.6	5.2	212	248	143	49	87	46	311	375	149
27	118	1.6	4.9	216	225	185	35	60	60	295	345	149
28	85	1.7	4.7	213	217	135	29	48	112	259	377	151
29	30	1.3	10	207	---	107	348	40	59	254	369	173
30	10	.94	25	216	---	159	844	35	38	253	366	190
31	153	---	500	216	---	330	---	29	---	252	368	---
TOTAL	802.37	650.57	1295.40	8107	5916	8001	3536	8623	4299	5333.1	10834	4878
MEAN	25.9	21.7	41.8	262	211	258	118	278	143	172	349	163
MAX	249	288	500	935	311	784	844	1780	404	476	385	370
MIN	.94	.77	.84	207	19	106	23	15	18	5.7	250	41
AC-FT	1590	1290	2570	16080	11730	15870	7010	17100	8530	10580	21490	9680

CAL YR 1984 TOTAL 41309.29 MEAN 113 MAX 642 MIN .77 AC-FT 81940
WTR YR 1985 TOTAL 62275.44 MEAN 171 MAX 1780 MIN .77 AC-FT 123500

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 (lett) 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, month-end 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. 24, 1934. The 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 ot the main dam, contains a concrete spillway with four 25-foot bays, three equipped with vertical lift gates, and the fourth left open. In 1971, a side-channel spillway was constructed. The newest spillway is located 300 ft to the lett of the original service spillway and has six 11.25- by 22-foot-wide roller lift gates. The main section ot 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 herin 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 provided 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); mimimum observed since first appreciable storage in 1935, 57,690 acre-ft Nov. 19, 20, 1956.

EXTREMES (at 0700) FOR CURRENT YEAR.--Maximum contents observed, 177,900 acre-ft June 11 & 19 (elevation, 647.71 ft); minimum observed 115,900 acre-ft Oct. 19 (elevation, 639.60 ft).

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

639.0	111,900	643.0	139,900	647.0	171,700
641.0	125,500	645.0	155,500	648.0	180,400

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0700

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120200	121300	119200	121400	130300	141000	159300	163000	175900	174300	165800	165200
2	119700	123100	119100	122700	130600	141400	160200	164000	175500	173700	165900	165200
3	119400	123600	118800	124300	130600	141600	160700	164200	174900	173400	165800	165200
4	119000	123800	118700	125400	130900	142200	160900	164300	174500	172900	165700	165200
5	118800	123900	118800	125800	131300	142500	161300	164300	173900	172200	165600	165100
6	118600	123800	118400	126200	131600	142700	160900	164200	176500	171800	165400	164800
7	118400	123800	117900	126500	131900	142800	160800	164100	177000	171300	165400	164400
8	118100	123600	117700	127000	132100	143100	160500	164100	177100	170700	165400	164100
9	118000	123500	117400	127400	132300	143300	160300	164100	177200	170100	165300	163700
10	117700	123300	117100	127400	133100	143500	160000	164000	177000	169700	165200	163300
11	117300	122800	116900	127700	133200	143700	159900	163500	177900	169200	165200	163000
12	117400	122500	116700	127700	133200	143800	159500	163700	177500	168600	165200	162700
13	117500	122100	116400	127600	133400	143600	159500	163200	177800	167900	165000	162300
14	117400	121800	116500	127700	133600	145000	160200	164800	177700	167100	164900	165200
15	117100	121700	116300	127700	133800	146000	160000	166200	177700	166500	164800	165200
16	116500	121400	117100	128000	134000	146500	159900	168200	177800	166000	165000	165200
17	116200	121200	117300	128100	134200	146800	159700	170400	177700	165400	165000	164900
18	116100	121400	117800	128400	134400	146900	159300	170500	177700	164800	164900	164700
19	115800	121300	118000	128500	134900	146900	158900	170400	177900	164100	164800	164400
20	116500	121100	118100	128500	135200	148300	158600	171200	177700	163900	164900	164200
21	116600	120900	118100	128500	135400	150100	158100	172700	177400	163900	164800	164000
22	116600	120700	118000	128700	135700	151700	158100	174300	177200	164000	164700	163500
23	116500	120600	117800	128900	137600	153200	159400	175900	176800	164300	164500	163000
24	118600	120300	117600	129000	138900	154700	159500	168300	176500	165800	164500	162600
25	119400	120100	117400	129100	139300	155500	159300	177200	176300	165700	164600	162100
26	120300	120000	117300	129300	139800	155700	159000	177300	176000	166000	164500	161700
27	120700	120000	117100	129400	140200	157500	158700	177100	175900	166000	164600	161300
28	120800	119700	116900	129600	140500	158300	159100	176900	175600	166100	164500	161000
29	121000	119500	117100	129700	---	158600	158900	176800	175300	166000	164600	162000
30	121000	119400	118100	129900	---	158800	160900	176600	174900	166000	164800	162100
31	121000	---	118300	130100	---	158900	---	176300	---	165900	164900	---
MAX	121000	123900	119200	130100	140500	158900	161300	177300	177900	174300	165900	165200
MIN	115800	119400	116300	121400	130300	141000	158100	163000	173900	163900	164500	161000
(†)	640.36	640.12	639.97	641.65	643.08	645.45	645.70	647.53	647.37	646.31	646.19	645.85
(‡)	+500	-1600	-1100	+11800	+10400	+18400	+2000	+15400	-1400	-9000	-1000	-2800

CAL YR 1984 MAX 140300 MIN 115800 (‡) -17200
WTR YR 1985 MAX 177900 MIN 115800 (‡) +41600

(†) 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, Hydrolgoic 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 Farmer's 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.

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 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 U.S. Army Corps of Engineers), and area-capacity curves (prepared by Freese, Nichols, and Endress, Consulting Engineers) were provided 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 24,730 acre-ft Sept. 9-10, 1985 (elevation, 589.95 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).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,330 acre-ft Apr. 30 at 1100 hours (elevation, 591.25 ft, from graph); minimum, 24,730 acre-ft Sept. 9-10 (elevation, 589.95 ft).

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

589.0	22,300	591.0	27,600
590.0	24,860	592.0	30,540

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25760	26140	25900	25950	26250	25870	26640	27950	25100	25650	25680	25100
2	25730	25950	25650	25920	26090	25810	26420	27600	24910	25810	25490	25100
3	25680	25810	25460	25790	26030	26830	26200	27290	24860	25840	25350	25130
4	25700	25790	25590	25700	26060	26360	25920	27070	24860	25840	25180	25130
5	25760	25620	25650	25590	26060	25870	25760	26720	25130	25950	25020	25130
6	25840	25460	25590	25540	25980	25760	25730	26420	25950	25950	25020	25100
7	25920	25430	25570	25430	25950	25700	25590	26120	26230	25950	25050	25070
8	25900	25490	25590	25320	25920	25650	25540	25810	26360	25950	25020	24750
9	25950	25590	25590	25430	25920	25620	25400	25570	26470	25950	24940	24730
10	25950	25570	25590	25290	25980	25590	25290	25430	26500	25950	24940	24750
11	26200	25590	25590	25320	25900	25570	25270	26470	26750	25620	24940	24860
12	26250	25620	25590	25320	25760	25400	25270	26500	26640	25620	24800	24940
13	26690	25650	25920	25380	25680	25730	25400	26770	26500	25590	24800	25070
14	26580	25760	25920	25430	25620	25900	25430	26720	26420	25320	24800	26010
15	26550	25810	26120	25430	25540	25900	25400	26720	26330	25290	24860	25950
16	26470	25790	26250	25590	25510	25900	25290	26690	26230	25290	24880	25760
17	26360	26120	26580	25650	25460	25870	25290	26610	26090	25320	24910	25540
18	26280	26310	26550	25620	25460	25790	25130	26610	26280	25320	24910	25490
19	26120	26250	26440	25730	25430	25810	24990	26550	26230	25350	24910	25320
20	26910	26250	26420	25700	25290	26440	25130	26580	26090	25320	24940	25130
21	26690	26230	26250	25760	25320	26530	24990	27070	25950	25400	24940	25210
22	26550	26230	26120	25790	25730	26420	25760	26940	25920	25540	24990	25210
23	26440	26140	26060	25790	26200	26420	25790	26770	25810	26830	25020	25240
24	26770	26200	25950	25810	26170	26420	25790	26580	25760	26960	25100	25350
25	26770	26250	25790	25950	26010	26360	25810	26420	25620	26640	25270	25400
26	26770	26360	25730	25950	26010	26750	25810	26120	25460	26660	25240	25430
27	26750	26250	25620	26120	25950	27270	26090	25920	25510	26500	25180	25400
28	26580	26200	25590	26120	25920	27320	26230	25760	25510	26360	25160	25380
29	26470	26250	25620	26170	---	27240	27980	25590	25620	26200	25130	25380
30	26280	26090	25570	26280	---	27130	28150	25460	25650	26010	25070	25490
31	25980	---	25950	26280	---	26880	---	25290	---	25840	25070	---
MAX	26910	26360	26580	26280	26250	27320	28150	27950	26750	26960	25680	26010
MIN	25680	25430	25460	25290	25290	25400	24990	25290	24860	25290	24800	24730
(†)	590.41	590.45	590.40	590.52	590.39	590.74	591.19	590.16	590.29	590.36	590.08	590.23
(‡)	+110	+110	-140	+330	-360	+960	+1270	-2860	+360	+190	-770	+420

CAL YR 1984 MAX 29040 MIN 24830 (‡) -1880
WTR YR 1985 MAX 28150 MIN 24730 (‡) -380

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

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 from 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 analyes: October 1980 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 810.00 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Estimated daily discharges: Aug. 13 to Sept. 24. Records good except those for estimated daily discharges, which are fair. 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.

AVERAGE DISCHARGE.--5 years (water years 1981-85) 23.0 ft³/s (16,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,080 ft³/s Nov. 1, 1981 (gage height, 21.58 ft); minimum, no flow Sept. 12-15, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 492 ft³/s Oct. 24 at 1830 hours (gage height, 12.39 ft); minimum daily, 0.11 ft³/s Nov. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	3.2	.80	2.0	2.8	3.2	4.4	3.0	1.5	.92	.58	.42
2	.18	.14	1.0	1.2	2.8	3.2	4.1	1.8	1.5	1.1	.54	.42
3	.16	.13	1.1	1.1	2.8	3.2	3.8	1.4	1.4	1.3	.54	.41
4	.18	.11	1.9	1.1	3.0	3.9	2.2	1.1	1.2	1.5	.57	.40
5	.23	.16	3.4	1.0	3.2	3.2	2.3	.99	1.3	1.6	.53	.40
6	.24	.17	.84	1.0	3.1	3.0	3.0	.97	27	1.8	.55	.40
7	.30	.18	.73	.95	3.0	3.0	3.2	.97	2.9	1.9	.57	.38
8	.36	.19	.80	.89	3.0	3.0	3.2	1.0	1.4	1.9	.60	.38
9	.38	.21	.98	.86	3.0	3.0	2.9	.98	.93	1.9	.55	.38
10	.38	.23	1.1	.86	3.1	3.3	3.0	1.0	.85	1.7	.54	.38
11	.69	.26	1.1	.86	3.2	3.4	3.0	42	1.5	1.8	.57	.37
12	.52	.26	1.5	.86	3.3	3.4	2.9	16	1.0	1.8	.53	.37
13	.72	.28	2.3	.91	3.1	5.5	2.8	34	.92	1.8	.53	2.5
14	.34	.33	1.4	.99	3.2	13	2.8	11	.86	1.7	.52	1.0
15	.31	.36	7.6	1.0	3.2	6.0	2.5	5.2	.86	1.6	.52	.80
16	.32	.32	6.3	1.3	3.2	4.3	2.1	3.9	.91	1.6	.50	.64
17	.34	.44	1.6	1.1	3.2	3.7	2.2	3.3	.93	1.6	.50	.50
18	.34	1.2	2.3	1.2	3.4	3.4	2.0	3.0	1.0	1.5	.50	.45
19	.34	.55	1.1	1.3	3.4	3.3	1.9	3.0	1.0	1.4	.48	.45
20	8.7	.53	1.1	1.1	3.4	23	2.1	2.9	1.0	1.5	.48	.42
21	.25	.58	1.0	1.3	3.7	10	1.7	13	1.1	1.9	.46	.42
22	.22	.57	1.0	1.6	4.2	6.2	4.7	4.4	1.2	2.6	.46	.42
23	.51	.59	1.1	1.9	17	5.0	3.4	3.1	1.1	9.3	.46	.40
24	40	.60	1.4	2.1	2.5	4.3	2.0	2.4	1.0	1.1	.45	.45
25	2.4	.64	1.7	2.2	2.4	4.1	1.4	2.0	1.0	.73	.44	.48
26	2.2	.55	2.4	2.2	2.4	13	1.1	1.8	.99	.73	.44	.57
27	.52	.58	2.9	2.4	2.4	29	1.5	1.8	2.8	.76	.44	.63
28	.24	.62	3.2	2.8	2.5	11	2.7	1.7	.84	.78	.44	.62
29	.21	.70	3.7	2.8	---	6.1	6.9	1.6	.79	.73	.42	1.6
30	.23	.73	4.0	2.8	---	4.8	6.3	1.6	.86	.71	.42	.72
31	.46	---	21	2.8	---	4.2	---	1.4	---	.66	.42	---
TOTAL	62.47	15.41	82.35	46.48	99.5	198.7	88.1	172.31	61.64	51.92	15.55	17.78
MEAN	2.02	.51	2.66	1.50	3.55	6.41	2.94	5.56	2.05	1.67	.50	.59
MAX	40	3.2	21	2.8	17	29	6.9	42	27	9.3	.60	2.5
MIN	.16	.11	.73	.86	2.4	3.0	1.1	.97	.79	.66	.42	.37
AC-FT	124	31	163	92	197	394	175	342	122	103	31	35

CAL YR 1984 TOTAL 404.21 MEAN 1.10 MAX 40 MIN .00 AC-FT 802
WTR YR 1985 TOTAL 912.21 MEAN 2.50 MAX 42 MIN .11 AC-FT 1810

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 U.S. Army 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, 61,450 acre-ft Oct. 10, 1984 (elevation, 686.16 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 102,000 acre-ft May 8 at 2400 hours (elevation, 697.47 ft); minimum daily, 61,450 acre-ft Oct. 10 at 1600 hours (elevation, 686.16 ft).

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

686.0	60,950	692.0	80,890	696.0	95,990
688.0	67,250	694.0	88,250	698.0	104,200
690.0	73,900				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61690	64410	63990	69940	73290	75140	84230	100800	88710	88550	85790	82130
2	61600	64500	63930	70360	73260	75280	84340	101100	88550	88480	85640	82020
3	61540	64540	63870	70800	73090	75550	84450	101300	88400	88360	85570	81870
4	61510	64500	63930	71140	73020	75660	84520	101600	88140	88210	85420	81690
5	61480	64470	63990	71440	73050	75760	84520	101700	88780	88060	85270	81540
6	61540	64440	64020	71710	73050	75830	84600	101800	89390	87950	85120	81400
7	61540	64380	64020	71910	72980	75900	84560	101900	89510	87880	84120	81250
8	61510	64380	64020	72140	72950	76000	84640	102000	89510	87760	84970	81110
9	61480	64340	64020	72380	72920	76100	84670	101500	89470	87650	84640	81000
10	61440	64250	63990	72510	72820	76210	84750	100400	89390	87540	84490	80860
11	61540	64180	63870	72620	72750	76240	84780	100000	89540	87430	84310	80750
12	61540	64150	63680	72750	72680	76280	84900	99640	89510	87320	84200	80570
13	61760	64120	63810	72920	72580	76720	85040	99280	89470	87170	84050	80430
14	61790	64060	63930	73050	72550	77350	85120	99150	89390	87060	83940	80930
15	61720	63990	64250	73190	72510	77810	85160	98300	89320	86910	83800	80860
16	61660	63960	64630	73420	72410	77980	85190	97570	89240	86800	83720	80710
17	61570	64120	64980	73560	72380	78130	85230	96680	89160	86680	83620	80610
18	61540	64180	65560	73620	72310	78230	85310	95870	89810	86540	83510	80540
19	61480	64220	65750	73660	72280	78410	85310	95010	89770	86420	83400	80430
20	62660	64180	66040	73520	72280	80040	85340	94260	89620	86310	83290	80320
21	62810	64180	66230	73490	72240	81000	85380	94690	89510	86240	83180	80250
22	62810	64150	66360	73490	72380	81440	86650	94060	89390	86200	83070	80150
23	62880	64150	66480	73490	74070	81690	86830	93320	89320	86350	82960	80000
24	63220	64150	66580	73460	74410	81910	86910	92490	89200	86500	82850	79860
25	63740	64150	66680	73460	74580	82160	86940	91640	89090	86540	82710	79720
26	63960	64220	66770	73420	74690	82310	86980	90800	88970	86540	82630	79620
27	64090	64120	66930	73420	74830	83030	90270	90190	88970	86460	82560	79510
28	64120	64120	67060	73390	75000	83430	97410	89810	88900	86350	82520	79400
29	64180	64020	67450	73360	---	83720	98710	89430	88740	86200	82450	79580
30	64180	63990	67810	73290	---	83980	100500	89050	88670	86050	82310	79650
31	64250	---	69020	73290	---	84120	---	88820	---	85900	82240	---
MAX	64250	64540	69020	73660	75000	84120	100500	102000	89810	88550	85790	82130
MIN	61440	63960	63680	69940	72240	75140	84230	88820	88140	85900	82240	79400
(†)	687.06	686.98	688.54	689.82	690.32	692.89	697.11	694.15	694.11	693.37	692.37	691.65
(‡)	-2460	-260	+50300	+4270	+1710	+9120	+16380	-11680	-150	-2770	-3660	-2590

CAL YR 1984 MAX 73790 MIN 61440 (‡) -2380
WTR YR 1985 MAX 102000 MIN 61440 (‡) +17860

(†) 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 mi².

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 above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. 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 at station.

AVERAGE DISCHARGE.--5 years (water years 1948-52) prior to regulation by Benbrook Lake, 105 ft³/s (76,070 acre-ft/yr); 33 years (water years 1953-85) regulated, unadjusted, 66.4 ft³/s (48,110 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,900 ft³/s May 17, 1949 (gage height, 28.72 ft), from rating curve extended above 11,000 ft³/s on basis of velocity-area studies and slope-area measurement of 82,900 ft³/s; no flow at times most years. Maximum discharge since construction of Benbrook Dam in 1952, 4,710 ft³/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, 877 ft³/s May 11 at 1815 hours (gage height, 5.77 ft); minimum daily, 1.2 ft³/s Jan. 11-12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	10	2.0	67	32	29	39	73	30	18	19
2	9.2	9.6	10	1.9	67	32	29	39	72	31	19	20
3	9.2	9.0	10	1.9	82	32	27	38	51	23	22	21
4	10	9.0	10	1.6	97	32	28	38	34	20	22	26
5	8.6	9.0	11	1.5	90	34	20	38	37	21	43	32
6	11	9.0	10	1.5	80	34	10	35	35	20	36	32
7	9.1	8.5	10	1.5	80	34	13	33	33	19	25	31
8	7.6	8.3	10	1.5	79	34	12	38	33	27	25	30
9	7.0	8.5	10	1.5	79	33	12	429	33	19	25	25
10	6.2	8.5	36	1.4	79	33	11	620	33	18	26	29
11	7.0	8.5	135	1.2	79	34	9.0	641	37	18	26	50
12	6.9	8.3	122	1.2	71	34	8.9	615	33	16	25	53
13	8.1	8.7	55	1.5	64	37	9.9	387	32	16	23	50
14	7.9	9.0	1.3	1.5	64	39	10	250	31	16	20	80
15	9.0	9.3	3.0	15	64	34	9.8	500	32	18	21	52
16	7.7	9.3	4.7	55	64	34	8.9	492	32	27	15	44
17	7.3	10	2.3	53	62	34	9.3	490	31	33	9.9	20
18	8.5	14	3.1	53	63	34	11	486	38	29	11	19
19	9.7	9.3	2.1	53	64	32	9.8	484	33	15	32	18
20	37	9.5	2.0	53	64	37	9.7	485	33	16	37	18
21	10	8.8	1.9	58	65	33	10	503	32	17	34	18
22	9.7	9.0	1.9	65	53	30	55	486	33	17	32	16
23	10	9.0	1.9	65	53	30	30	481	34	20	33	15
24	17	9.1	1.9	65	45	30	34	485	32	18	48	16
25	10	10	1.9	65	45	30	30	486	34	17	45	13
26	9.6	10	1.9	65	38	30	30	481	32	16	45	5.4
27	10	10	1.9	65	32	30	46	314	34	17	42	5.0
28	9.6	10	1.9	65	32	28	55	226	58	17	38	6.3
29	9.7	10	2.3	65	---	28	43	225	78	17	39	12
30	9.8	10	3.4	65	---	29	41	174	31	16	29	7.1
31	9.5	---	5.7	67	---	28	---	112	---	17	7.6	---
TOTAL	312.9	284.2	484.1	1013.7	1822	1005	661.3	10150	1164	621	873.5	782.8
MEAN	10.1	9.47	15.6	32.7	65.1	32.4	22.0	327	38.8	20.0	28.2	26.1
MAX	37	14	135	67	97	39	55	641	78	33	48	80
MIN	6.2	8.3	1.3	1.2	32	28	8.9	33	31	15	7.6	5.0
AC-FT	621	564	960	2010	3610	1990	1310	20130	2310	1230	1730	1550

CAL YR 1984 TOTAL 3874.6 MEAN 10.6 MAX 135 MIN 1.3 AC-FT 7690
WTR YR 1985 TOTAL 19174.5 MEAN 52.5 MAX 641 MIN 1.2 AC-FT 38030

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 above 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.--Estimated daily discharge: Nov. 28 and June 19-27. 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 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); 33 years (water years 1953-85) regulated, unadjusted, 96.6 ft^3/s (69,990 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, 5,860 ft^3/s Apr. 22 at 1200 hours (gage height, 12.25 ft); no flow part or all of July 15-18, due to pumping from pool at gage.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	243	18	111	42	39	45	94	85	39	16	7.8
2	7.9	44	18	90	42	33	34	68	80	47	16	11
3	8.3	31	17	72	39	30	32	57	68	36	16	12
4	8.3	26	26	72	64	60	32	51	40	27	18	5.2
5	11	21	64	72	57	33	31	51	311	25	14	1.3
6	60	19	32	68	57	30	34	49	404	24	19	14
7	26	18	26	68	54	27	32	40	76	22	18	20
8	15	18	24	68	54	27	32	38	57	29	21	18
9	16	16	23	68	54	31	31	89	51	25	23	18
10	12	14	21	68	54	33	30	639	42	22	22	9.4
11	32	14	90	68	48	30	30	782	76	23	22	1.9
12	45	14	111	68	45	26	30	1330	48	20	24	24
13	104	14	234	72	36	149	116	714	39	19	23	3.7
14	36	14	35	72	36	334	45	212	39	19	23	745
15	19	14	45	72	34	60	34	466	38	6.9	20	75
16	14	13	169	72	34	48	30	500	38	.00	19	52
17	13	158	115	72	35	40	28	467	36	.00	12	29
18	14	86	136	60	35	36	34	467	137	8.6	10	20
19	16	29	57	51	35	34	24	467	42	15	5.1	17
20	744	24	51	42	35	438	24	529	39	12	.13	16
21	44	19	45	39	35	136	23	1070	39	13	21	14
22	31	19	36	38	34	129	939	529	39	45	24	13
23	69	18	35	39	470	57	94	504	39	645	.34	11
24	337	37	35	40	80	42	42	504	39	64	1.8	10
25	94	42	35	42	60	39	36	504	39	36	9.4	11
26	79	33	35	48	40	92	34	504	39	31	6.6	8.3
27	91	27	29	48	31	434	129	367	39	25	13	4.5
28	37	23	27	48	30	80	476	245	40	24	11	3.4
29	45	22	32	42	---	48	307	245	112	20	19	279
30	33	19	72	42	---	105	463	200	44	18	29	26
31	35	---	272	42	---	45	---	143	---	16	17	---
TOTAL	2103.2	1089	1965	1874	1670	2745	3271	11925	2215	1356.50	493.37	1480.5
MEAN	67.8	36.3	63.4	60.5	59.6	88.5	109	385	73.8	43.8	15.9	49.4
MAX	744	243	272	111	470	438	939	1330	404	645	29	745
MIN	6.7	13	17	38	30	26	23	38	36	.00	.13	1.3
AC-FT	4170	2160	3900	3720	3310	5440	6490	23650	4390	2690	979	2940

CAL YR 1984	TOTAL	10351.66	MEAN 28.3	MAX 744	MIN .06	AC-FT	20530	
WTR YR 1985	TOTAL	32187.57	MEAN 88.2	MAX 1330	MIN .00	AC-FT	63840	

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 mi².

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 ft³/s. Datum of gage is 519.24 ft above National Geodetic Vertical Datum of 1929, from 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.--No estimated daily discharges. Records good. Flow is largely regulated by Lake Worth (station 08045400) 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 poll of Benbrook Lake. The city of Fort Worth diverts water upstream from station and from Cedar Creek Reservoir (station 08063010) for municipal and industrial uses and returns sewage effluent to river downstream from station 08048543. There are many small diversions upstream from station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 364 ft³/s (263,700 acre-ft/yr, unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft³/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 ft³/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, 9,030 ft³/s Apr. 22 at 1130 hours (gage height, 4.69 ft); minimum daily, 4.3 ft³/s Sept. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	474	32	164	50	52	66	129	100	37	24	12
2	11	88	34	127	53	39	52	86	100	52	25	9.2
3	10	41	33	102	54	36	47	64	81	59	24	9.8
4	9.0	37	62	86	107	95	41	55	46	40	25	8.7
5	11	33	164	71	78	40	41	57	361	36	27	4.3
6	18	30	43	62	76	36	54	54	675	36	27	6.4
7	100	28	34	59	71	35	49	47	119	38	25	15
8	24	27	34	56	69	35	50	44	88	37	31	18
9	18	26	31	55	65	35	44	282	80	42	30	18
10	16	24	31	48	65	36	45	677	67	35	27	17
11	61	23	98	42	61	34	48	1890	209	35	28	11
12	75	25	139	40	60	29	47	954	74	36	28	22
13	197	28	373	39	47	179	294	655	58	31	27	17
14	48	29	57	40	44	631	97	261	54	29	27	1500
15	27	28	130	40	42	86	45	590	47	30	25	174
16	20	27	361	195	42	59	39	558	50	22	24	77
17	16	43	190	126	42	51	37	556	45	16	20	43
18	15	415	261	95	43	50	33	557	169	9.9	14	31
19	16	40	71	58	43	48	33	563	54	14	12	28
20	1420	31	55	46	43	706	31	675	44	24	6.3	26
21	81	28	48	46	44	212	32	1610	41	29	6.8	24
22	40	29	43	47	48	103	1790	625	54	47	23	22
23	136	35	40	51	809	82	180	596	51	1190	27	19
24	600	36	38	51	107	50	66	582	41	134	12	16
25	214	75	35	52	74	46	51	568	38	52	15	18
26	174	48	34	55	51	219	44	564	37	41	12	17
27	223	41	34	58	37	802	178	439	48	36	10	14
28	65	30	35	57	37	111	683	268	46	33	12	12
29	104	31	50	53	---	57	502	261	116	30	16	573
30	71	30	150	52	---	154	642	225	44	25	19	46
31	65	---	507	50	---	54	---	163	---	24	21	---
TOTAL	3896.0	1880	3247	2123	2362	4202	5361	14655	3037	2299.9	650.1	2808.4
MEAN	126	62.7	105	68.5	84.4	136	179	473	101	74.2	21.0	93.6
MAX	1420	474	507	195	809	802	1790	1890	675	1190	31	1500
MIN	9.0	23	31	39	37	29	31	44	37	9.9	6.3	4.3
AC-FT	7730	3730	6440	4210	4690	8330	10630	29070	6020	4560	1290	5570

CAL YR 1984 TOTAL 21338.48 MEAN 58.3 MAX 1420 MIN .31 AC-FT 42320
WTR YR 1985 TOTAL 46521.40 MEAN 127 MAX 1890 MIN 4.3 AC-FT 92280

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX

LOCATION.--Lat 32°45'06", long 97°17'21", Tarrant County, Hydrologic 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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 478.70 ft above National Geodetic Vertical Datum of 1929, from State Department of Highways and Public Transportation benchmark.

REMARKS.--Estimated daily discharges: Oct. 1-6, 9-11, 17-19, and Nov. 11-17. Records good except those below 30 ft³/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 at station.

AVERAGE DISCHARGE.--9 years, 360 ft³/s (260,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s Oct. 13, 1981 (gage height, 36.26 ft); minimum, 0.84 ft³/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, 6,250 ft³/s Apr. 22 at 1400 hours (gage height, 20.11 ft); minimum daily, 4.8 ft³/s Aug. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	777	15	134	32	40	47	170	45	12	7.5	9.9
2	11	134	16	80	26	30	42	77	45	12	7.8	6.8
3	10	41	16	64	27	26	39	58	40	28	7.5	6.8
4	9.0	33	32	49	62	65	36	49	26	12	7.2	6.7
5	11	28	147	41	46	33	34	46	482	8.3	7.9	5.4
6	18	24	35	37	37	27	35	42	1080	8.3	9.6	5.1
7	119	22	23	35	35	27	35	38	71	8.6	9.9	9.0
8	29	20	20	33	34	25	34	36	45	8.7	8.8	12
9	18	19	18	31	32	25	35	130	39	8.7	9.0	12
10	16	17	17	29	31	26	33	438	33	8.8	8.3	12
11	70	17	34	25	28	25	33	1750	127	9.1	8.5	8.8
12	126	19	54	24	26	23	34	1300	41	9.1	10	10
13	277	21	543	23	24	158	321	548	27	9.1	11	17
14	84	22	60	24	22	932	75	134	22	9.4	12	1860
15	36	21	110	24	21	67	44	344	18	9.5	13	231
16	26	20	622	136	21	47	37	326	17	12	13	107
17	16	80	320	62	20	41	33	319	17	8.4	11	57
18	15	717	533	44	21	38	31	316	130	8.7	8.7	40
19	16	40	63	31	21	35	28	314	33	8.7	7.3	36
20	2350	26	46	26	22	1030	28	575	20	8.7	6.0	33
21	226	21	40	24	22	216	27	1860	17	9.1	4.8	29
22	50	19	33	25	28	78	2580	445	19	16	8.0	25
23	145	17	29	26	1320	60	281	376	26	1370	14	17
24	964	17	27	26	84	46	64	347	19	145	13	13
25	548	55	24	26	55	42	50	328	12	23	11	14
26	144	32	22	25	41	120	42	316	12	18	8.0	13
27	209	28	22	24	32	1180	216	247	14	15	5.7	13
28	58	18	22	24	31	95	1900	123	16	14	6.5	11
29	78	16	43	24	---	56	275	117	33	13	7.6	945
30	52	16	148	24	---	152	1120	102	18	9.8	10	77
31	36	---	902	23	---	49	---	71	---	7.9	13	---
TOTAL	5778.0	2337	4036	1223	2201	4814	7589	11342	2544	1848.9	285.6	3642.5
MEAN	186	77.9	130	39.5	78.6	155	253	366	84.8	59.6	9.21	121
MAX	2350	777	902	136	1320	1180	2580	1860	1080	1370	14	1860
MIN	9.0	16	15	23	20	23	27	36	12	7.9	4.8	5.1
AC-FT	11460	4640	8010	2430	4370	9550	15050	22500	5050	3670	566	7220

CAL YR 1984 TOTAL 31263.8 MEAN 85.4 MAX 2350 MIN 6.0 AC-FT 62010
WTR YR 1985 TOTAL 47641.0 MEAN 131 MAX 2580 MIN 4.8 AC-FT 94500

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 microsiemens Nov. 6, 1978; minimum, 102 microsiemens June 7, 1982.
pH (1976-85): 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, 0.0°C Jan. 31, Feb. 1, 2, 1985.
DISSOLVED OXYGEN (1976-85): 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, 782 microsiemens Nov. 13; minimum daily, 124 microsiemens Apr. 22.
pH: Maximum, 8.8 units Jan. 29; minimum, 7.0 units Aug. 30, 31.
WATER TEMPERATURES: Minimum, 0.0°C Jan. 31, Feb. 1, 2.
DISSOLVED OXYGEN: Maximum, 18.6 mg/L July 16; minimum, 0.3 mg/L Oct. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 15...	0945	36	420	7.7	20.0	5.4	61	1.5	150	29
JAN 08...	1030	33	660	8.1	7.0	10.8	89	2.4	250	44
MAR 05...	0940	33	558	7.9	12.5	8.7	81	2.5	210	39
APR 15...	1330	42	592	8.1	24.0	10.1	123	5.2	220	40
JUN 28...	0900	18	488	7.7	23.0	5.6	66	2.4	180	23
SEP 10...	0920	12	480	7.5	27.0	4.8	61	2.2	160	44

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 15...	50	5.9	27	1	7.2	120	38	32	.30
JAN 08...	90	7.1	34	1	12	210	82	40	.40
MAR 05...	72	6.9	33	1	10	170	70	36	.40
APR 15...	75	7.2	36	1	11	177	64	41	.30
JUN 28...	60	6.9	26	.9	4.6	156	37	33	.40
SEP 10...	50	7.6	36	1	6.5	112	44	57	.50

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 15...	6.4	240	.37	.030	.40	.340	.76	1.1	.180
JAN 08...	7.8	400	1.6	.040	1.6	.190	.51	.70	.160
MAR 05...	3.2	330	.95	.050	1.0	.220	.78	1.0	.120
APR 15...	5.3	350	.66	.040	.70	.240	.86	1.1	.110
JUN 28...	6.5	270	--	<.010	<.10	.050	.75	.80	.120
SEP 10...	7.8	280	.08	.020	.10	.060	.64	.70	.100

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	5778.0	339	193	3020	18	286	33	514	130
NOV.	1984	2337	463	264	1660	34	216	46	291	160
DEC.	1984	4036	465	265	2890	35	380	46	506	160
JAN.	1985	1223	592	337	1110	55	181	61	200	180
FEB.	1985	2201	452	257	1530	33	196	45	267	160
MAR.	1985	4814	425	242	3150	29	375	42	546	150
APR.	1985	7589	360	206	4210	22	443	35	723	130
MAY	1985	11342	356	203	6230	20	619	35	1060	140
JUNE	1985	2544	384	219	1500	24	162	38	258	140
JULY	1985	1848.9	323	184	919	17	85	31	156	120
AUG.	1985	285.5	465	265	204	34	26	46	36	160
SEPT	1985	3642.5	299	171	1680	14	141	29	283	120
TOTAL		47640.9	**	**	28100	**	3110	**	4840	**
WTD.AVG.		131	383	218	**	24	**	38	**	140

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	558	554	556	524	210	408	---	---	670	503	415	450
2	572	556	566	690	420	489	---	---	680	532	488	516
3	578	558	567	716	484	528	---	---	690	565	479	525
4	602	556	570	610	532	542	---	---	705	594	566	582
5	582	486	530	610	558	580	---	---	650	619	591	610
6	574	440	526	666	594	625	---	---	670	626	612	620
7	486	304	441	700	620	648	---	---	680	646	614	629
8	498	474	486	714	630	676	---	---	690	650	632	641
9	512	502	507	738	652	689	---	---	700	672	640	658
10	522	506	515	722	642	671	---	---	710	690	668	679
11	544	212	443	774	596	658	---	---	700	694	688	691
12	432	374	416	678	596	630	---	---	650	712	684	694
13	426	206	349	782	604	665	---	---	400	702	684	689
14	398	338	363	698	610	655	---	---	476	702	662	682
15	430	402	420	672	618	642	---	---	450	684	660	672
16	480	432	453	670	622	647	---	---	385	718	428	593
17	488	462	476	646	146	594	---	---	416	666	590	616
18	508	280	453	454	274	404	---	---	380	670	614	643
19	462	356	434	482	444	461	470	426	460	666	634	650
20	474	138	316	548	470	497	538	472	511	660	616	639
21	370	260	329	558	492	524	590	540	562	630	604	612
22	406	324	364	544	502	523	599	583	590	650	604	628
23	354	260	306	586	522	551	618	596	607	614	598	606
24	396	190	295	762	546	617	633	607	619	620	602	610
25	378	258	323	538	426	457	658	630	653	644	600	617
26	436	304	367	560	474	536	677	647	658	604	588	597
27	448	364	394	558	482	516	700	678	687	592	590	592
28	478	408	445	660	556	605	703	689	699	616	572	594
29	522	310	438	706	598	645	722	398	664	596	578	586
30	482	384	436	762	618	660	573	391	536	606	582	596
31	570	480	527	---	---	---	600	250	467	602	588	594
MONTH	602	138	439	782	146	578	722	250	594	718	415	616

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	592	578	584	620	538	569	---	---	508	380	336	358
2	628	560	585	602	574	586	---	---	538	424	384	406
3	632	576	603	608	598	603	585	490	568	466	424	442
4	672	488	575	600	490	520	607	581	589	496	458	484
5	608	550	582	567	540	553	631	611	618	492	464	478
6	608	570	579	581	563	575	639	567	601	535	480	520
7	626	564	594	593	581	587	601	569	585	555	529	542
8	620	562	587	607	593	601	607	595	602	567	539	555
9	596	570	582	617	595	605	635	607	616	575	503	556
10	582	566	576	607	569	589	643	629	635	529	384	421
11	576	552	566	597	587	592	647	635	642	386	196	327
12	560	540	552	613	601	608	651	635	644	340	252	293
13	570	544	552	627	224	570	639	210	496	384	334	362
14	576	560	568	440	284	395	569	482	537	422	358	395
15	572	558	566	464	440	452	593	569	592	422	360	395
16	592	560	569	496	462	479	607	579	588	394	382	389
17	586	574	578	541	496	517	593	575	585	396	382	391
18	590	574	581	545	533	539	597	581	587	398	386	392
19	600	580	587	561	549	555	617	593	601	396	390	394
20	606	588	593	---	---	356	625	593	610	396	252	361
21	614	594	601	442	332	371	637	611	621	396	200	289
22	632	574	603	513	450	476	621	124	337	394	354	374
23	446	256	380	541	503	515	---	---	371	398	386	392
24	440	432	435	559	545	550	438	---	406	398	390	395
25	502	438	464	591	561	583	452	424	438	398	392	395
26	568	506	542	597	218	556	511	450	482	398	392	395
27	608	570	593	456	254	393	523	200	493	402	392	396
28	640	602	613	478	422	446	318	170	255	414	402	408
29	---	---	---	509	454	493	410	326	353	424	414	419
30	---	---	---	---	---	465	396	334	367	428	416	422
31	---	---	---	---	---	486	---	---	---	436	404	427
MONTH	672	256	564	627	218	522	651	124	529	575	196	412

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	446	432	440	490	470	481	414	396	406	474	406	451
2	557	418	454	541	490	501	454	402	422	482	410	454
3	456	420	441	781	460	629	432	400	415	501	428	467
4	488	460	478	611	515	559	426	390	405	521	420	477
5	547	138	450	557	529	543	438	390	414	505	420	478
6	386	220	301	679	513	542	438	396	423	535	462	495
7	444	398	414	547	492	528	448	422	436	553	456	512
8	472	432	455	607	486	521	470	426	447	543	448	504
9	462	436	449	533	438	490	---	---	456	476	408	452
10	468	438	454	545	438	486	---	---	465	472	414	449
11	446	346	406	509	452	487	---	---	450	484	440	472
12	486	400	444	498	442	477	---	---	466	515	480	494
13	505	470	490	501	442	476	---	---	475	501	462	475
14	521	452	484	519	454	494	---	---	496	462	164	272
15	474	452	465	557	474	514	---	---	512	306	182	261
16	468	438	456	527	244	475	---	---	501	342	246	314
17	478	434	460	---	---	460	---	---	475	368	340	355
18	519	242	420	---	---	480	---	---	454	408	364	392
19	480	432	460	---	---	492	---	---	450	402	394	398
20	488	452	474	---	---	501	---	---	462	408	398	404
21	470	440	456	---	---	498	---	---	475	418	400	407
22	513	428	452	---	---	460	---	---	460	424	402	410
23	452	304	422	---	---	290	---	---	525	428	398	413
24	446	400	427	---	---	301	---	---	509	428	400	415
25	436	414	425	352	332	339	---	---	475	436	432	433
26	460	420	438	358	330	348	---	---	461	460	434	452
27	476	418	457	374	342	363	---	---	474	490	444	460
28	501	464	483	382	356	371	---	---	481	537	488	519
29	496	444	470	376	334	354	---	---	477	348	268	297
30	503	468	490	396	364	383	490	422	468	404	352	388
31	---	---	---	410	254	395	480	420	458	---	---	---
MONTH	557	138	447	781	244	459	490	390	461	553	164	426

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	7.7	8.1	7.7	7.3	7.5	---	---	---	8.1	7.9	8.0
2	8.5	7.7	8.1	7.7	7.5	7.6	---	---	---	8.1	8.1	8.1
3	8.6	7.7	8.2	7.5	7.4	7.5	---	---	---	8.1	8.0	8.0
4	8.4	7.6	8.0	7.5	7.4	7.4	---	---	---	8.0	7.9	7.9
5	8.3	7.5	7.8	7.5	7.4	7.5	---	---	---	8.2	7.9	7.9
6	7.8	7.4	7.7	7.4	7.3	7.4	---	---	---	7.9	7.9	7.9
7	7.9	7.4	7.7	7.3	7.2	7.3	---	---	---	8.0	7.9	7.9
8	8.1	7.5	7.7	7.4	7.3	7.3	---	---	---	8.4	8.0	8.0
9	7.9	7.4	7.7	7.3	7.3	7.3	---	---	---	8.1	8.0	8.0
10	8.2	7.5	7.8	7.5	7.3	7.4	---	---	---	8.2	8.0	8.1
11	7.8	7.4	7.6	7.6	7.4	7.5	---	---	---	8.2	8.1	8.1
12	7.7	7.5	7.6	7.7	7.4	7.5	---	---	---	8.3	8.2	8.2
13	7.7	7.5	7.6	7.7	7.3	7.5	---	---	---	8.2	8.2	8.2
14	7.7	7.5	7.6	7.8	7.3	7.5	---	---	---	8.3	8.1	8.2
15	7.8	7.5	7.6	7.9	7.3	7.5	---	---	---	8.4	8.1	8.2
16	7.7	7.5	7.6	8.1	7.4	7.6	---	---	---	8.2	7.9	8.1
17	7.9	7.6	7.7	7.9	7.4	7.6	---	---	---	8.3	8.1	8.2
18	8.0	7.2	7.6	7.8	7.6	7.7	---	---	---	8.2	8.1	8.1
19	7.9	7.5	7.7	7.7	7.6	7.6	7.8	7.8	7.8	8.2	7.9	8.0
20	7.9	7.5	7.7	7.7	7.4	7.5	7.9	7.8	7.8	8.3	8.2	8.2
21	7.9	7.7	7.8	7.5	7.4	7.5	7.9	7.8	7.8	8.3	8.1	8.2
22	7.9	7.7	7.8	7.5	7.4	7.5	7.8	7.8	7.8	8.5	8.0	8.2
23	7.9	7.7	7.7	7.5	7.4	7.4	7.9	7.8	7.8	8.4	8.2	8.3
24	8.0	7.6	7.8	7.5	7.4	7.4	8.0	7.8	7.9	8.5	8.1	8.3
25	8.0	7.6	7.8	7.8	7.4	7.5	8.0	7.9	8.0	8.5	8.1	8.4
26	7.7	7.6	7.7	8.2	7.4	7.6	8.0	7.9	7.9	8.7	8.2	8.3
27	7.8	7.6	7.7	7.7	7.5	7.6	8.1	7.8	7.9	8.4	8.1	8.2
28	7.7	7.5	7.6	7.6	7.5	7.6	8.0	7.8	7.9	8.7	8.1	8.4
29	7.7	7.4	7.5	7.6	7.5	7.6	8.1	7.8	7.9	8.8	8.1	8.4
30	7.5	7.4	7.5	7.5	7.4	7.5	7.9	7.8	7.9	8.7	8.0	8.4
31	7.4	7.3	7.3	---	---	---	8.1	7.9	7.9	8.5	8.2	8.3
MONTH	8.6	7.2	7.7	8.2	7.2	7.5	8.1	7.8	7.9	8.8	7.9	8.2

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.5	8.2	8.3	8.1	7.9	8.0	---	---	---	8.0	7.7	7.8
2	8.3	8.2	8.2	8.4	7.8	8.0	---	---	---	7.8	7.7	7.8
3	8.3	8.1	8.2	8.3	7.8	8.1	8.1	7.7	7.9	7.8	7.7	7.7
4	8.1	7.9	8.1	8.2	7.8	8.0	8.3	7.8	8.0	7.8	7.7	7.8
5	8.1	8.0	8.0	8.3	7.9	8.1	8.4	7.9	8.1	8.0	7.7	7.9
6	8.2	7.9	8.0	8.3	7.9	8.1	8.4	7.9	8.1	8.2	7.8	8.0
7	8.3	8.0	8.1	8.3	7.8	8.0	8.5	8.0	8.2	8.2	7.8	8.0
8	8.3	8.0	8.1	8.3	7.7	7.9	8.4	8.0	8.2	8.2	7.8	8.0
9	8.3	7.9	8.1	8.3	7.7	7.9	8.4	8.0	8.2	8.1	7.7	7.9
10	8.4	7.8	8.1	8.5	7.7	8.0	8.4	8.0	8.1	7.9	7.8	7.8
11	8.6	8.1	8.3	8.4	7.7	8.0	8.3	8.0	8.1	7.9	7.5	7.8
12	8.5	8.1	8.3	8.2	7.7	7.9	8.3	7.9	8.1	7.7	7.5	7.6
13	8.4	8.0	8.2	7.9	7.7	7.8	8.0	7.7	7.9	7.8	7.7	7.8
14	8.5	7.9	8.2	7.9	7.8	7.8	8.0	7.8	7.9	7.7	7.7	7.7
15	8.4	8.0	8.2	7.9	7.7	7.8	8.2	7.8	8.1	7.9	7.7	7.8
16	8.6	7.9	8.2	7.9	7.7	7.8	8.2	7.7	7.9	8.0	7.9	8.0
17	8.4	7.9	8.1	7.9	7.8	7.8	8.1	7.7	7.9	8.1	7.9	8.0
18	8.3	7.8	8.1	8.0	7.8	7.9	8.3	7.6	7.9	8.1	8.0	8.0
19	8.3	7.8	8.0	8.0	7.8	7.8	8.2	7.7	7.9	8.1	8.0	8.0
20	8.3	7.8	8.1	7.9	7.8	7.8	8.2	7.7	7.9	8.0	7.9	7.9
21	8.1	7.8	7.9	7.8	7.8	7.8	8.1	7.7	7.9	8.2	7.7	7.8
22	7.9	7.7	7.8	7.9	7.8	7.9	---	---	---	7.9	7.8	7.9
23	8.0	7.7	7.9	7.9	7.8	7.8	---	---	---	8.0	7.9	8.0
24	7.9	7.8	7.8	8.0	7.8	7.8	---	---	---	8.1	7.9	8.0
25	7.9	7.7	7.8	8.1	7.8	7.8	7.7	7.6	7.6	8.2	8.0	8.1
26	8.1	7.8	7.9	8.2	7.8	8.0	7.9	7.6	7.7	8.2	8.0	8.1
27	8.1	8.0	8.0	7.9	7.7	7.7	7.9	7.6	7.7	8.2	8.0	8.1
28	8.1	7.9	8.0	7.7	7.6	7.7	8.0	7.6	7.8	8.3	7.9	8.1
29	---	---	---	7.8	7.6	7.7	7.7	7.5	7.6	8.3	7.9	8.1
30	---	---	---	---	---	---	7.8	7.5	7.7	8.4	7.9	8.1
31	---	---	---	---	---	---	---	---	---	8.5	8.0	8.2
MONTH	8.6	7.7	8.1	8.5	7.6	7.9	8.5	7.5	7.9	8.5	7.5	7.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.6	7.9	8.2	8.3	7.6	7.9	8.3	7.4	7.8	8.5	7.1	7.7
2	8.5	7.9	8.2	8.3	7.6	7.9	8.3	7.3	7.8	8.5	7.2	7.8
3	8.4	7.8	8.1	8.6	7.5	8.1	8.3	7.3	7.8	8.5	7.3	7.9
4	8.4	7.8	8.1	8.3	7.7	8.0	8.4	7.4	7.9	8.5	7.3	7.9
5	8.4	7.8	8.1	8.3	7.6	7.9	8.4	7.4	7.9	8.4	7.4	7.9
6	8.2	7.7	7.9	8.3	7.5	7.9	8.4	7.4	7.8	---	7.6	7.9
7	7.9	7.7	7.8	8.3	7.6	7.9	8.2	7.4	7.7	8.6	7.3	7.9
8	8.3	7.8	8.0	8.3	7.5	7.8	8.3	7.4	7.8	8.6	7.3	7.9
9	8.5	7.8	8.1	8.4	7.5	7.9	---	---	---	8.6	7.3	7.9
10	8.5	7.9	8.3	8.4	7.4	7.8	---	---	---	8.7	7.4	8.0
11	8.2	7.7	7.9	8.4	7.5	7.9	---	---	---	8.5	7.3	7.9
12	8.4	7.7	8.0	8.4	7.6	7.9	---	---	---	8.5	7.3	7.9
13	8.3	7.7	8.0	8.4	7.6	8.0	---	---	---	8.6	7.6	8.2
14	8.3	7.8	8.0	8.4	7.6	7.9	---	---	---	8.2	7.5	7.9
15	8.3	7.7	8.0	8.4	7.6	7.9	---	---	---	7.9	7.6	7.7
16	8.1	7.5	7.8	8.3	7.6	7.8	---	---	---	7.7	7.5	7.6
17	7.9	7.5	7.7	8.4	7.4	7.8	---	---	---	7.6	7.4	7.5
18	7.9	7.5	7.6	---	---	---	---	---	---	7.5	7.4	7.5
19	7.6	7.4	7.5	---	---	---	---	---	---	7.6	7.5	7.5
20	7.7	7.5	7.6	---	---	---	---	---	---	7.7	7.4	7.5
21	8.0	7.5	7.7	---	---	---	---	---	---	7.9	7.5	7.6
22	8.2	7.6	7.9	---	---	---	---	---	---	8.6	7.5	7.9
23	8.2	7.7	7.9	---	---	---	---	---	---	8.4	7.5	8.0
24	8.1	7.6	7.8	---	---	---	---	---	---	8.5	7.5	8.0
25	8.1	7.6	7.8	---	---	---	---	---	---	8.3	7.7	8.0
26	8.1	7.6	7.8	7.6	7.3	7.4	---	---	---	8.4	7.5	7.9
27	8.2	7.6	7.9	7.8	7.3	7.5	---	---	---	8.3	7.5	7.8
28	8.4	7.7	8.0	8.6	7.3	8.0	---	---	---	8.2	7.5	7.8
29	8.5	7.6	8.0	8.7	7.4	8.1	8.2	7.1	7.7	7.8	7.5	7.6
30	8.4	7.7	8.0	8.6	7.4	8.0	8.3	7.0	7.6	7.8	7.5	7.6
31	---	---	---	8.5	7.4	7.9	8.3	7.0	7.5	---	---	---
MONTH	8.6	7.4	7.9	8.7	7.3	7.9	8.4	7.0	7.8	8.7	7.1	7.8

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	14.5	18.0	21.5	19.0	21.0	---	---	---	11.5	7.0	9.5
2	21.5	15.5	18.5	19.0	17.0	18.0	---	---	---	7.0	5.5	6.0
3	23.0	17.5	20.5	19.5	17.0	18.0	---	---	---	8.0	5.0	6.5
4	21.5	20.0	21.0	19.0	17.0	17.5	---	---	---	9.0	5.5	7.0
5	24.5	20.5	22.5	18.5	14.5	16.5	---	---	---	9.5	6.0	7.5
6	25.0	22.5	24.0	17.5	14.0	16.0	---	---	---	10.0	6.0	8.0
7	25.0	22.0	23.5	18.0	14.5	16.5	---	---	---	10.0	7.0	8.5
8	26.5	21.5	24.0	22.0	17.0	19.5	---	---	---	9.5	6.5	8.0
9	24.0	21.0	22.5	23.0	19.5	21.0	---	---	---	9.5	7.5	8.5
10	24.5	21.0	22.5	19.5	15.0	16.5	---	---	---	8.5	6.0	7.0
11	23.0	21.0	21.5	16.5	12.5	14.5	---	---	---	6.0	4.0	5.0
12	24.0	21.5	22.5	16.5	12.0	14.5	---	---	---	3.5	2.0	2.5
13	23.0	21.0	22.0	16.5	13.0	15.0	---	---	---	4.5	2.5	3.5
14	22.5	20.5	21.5	19.5	14.5	17.0	---	---	---	8.0	4.0	5.5
15	23.0	20.0	21.5	20.5	17.5	18.5	---	---	---	7.0	4.0	5.5
16	24.5	21.0	22.0	17.5	14.5	16.0	---	---	---	7.5	6.0	7.0
17	21.5	17.0	19.5	14.5	12.5	13.5	---	---	---	9.0	5.0	6.5
18	25.0	20.5	22.0	13.5	12.5	13.5	---	---	---	10.0	5.5	8.0
19	22.0	18.5	20.5	12.5	10.5	11.5	---	---	---	11.5	6.0	8.5
20	21.5	19.0	20.0	11.0	10.0	10.5	15.0	13.0	13.5	6.0	1.0	2.5
21	19.0	17.5	18.5	12.0	8.5	10.5	16.0	14.0	15.5	6.0	1.0	3.0
22	17.0	15.5	16.0	12.0	8.5	10.5	14.5	12.0	13.0	6.5	2.5	4.5
23	16.5	15.0	15.5	13.0	8.5	11.0	14.0	11.0	12.5	6.5	4.0	5.5
24	15.5	13.5	14.5	12.5	8.5	10.5	15.5	11.0	13.5	9.5	5.0	7.0
25	16.0	14.5	15.5	14.5	11.5	12.5	10.5	8.0	8.5	10.5	6.0	8.0
26	18.0	15.5	16.5	14.5	12.5	14.0	12.0	9.0	10.5	7.5	5.0	6.5
27	19.5	17.5	18.5	13.0	10.0	11.5	14.0	12.0	13.0	8.5	7.0	7.5
28	21.0	16.5	19.0	12.0	8.0	10.0	17.5	14.5	16.5	10.0	5.5	7.5
29	19.0	17.0	18.0	14.0	9.0	11.5	19.5	17.0	18.0	9.0	6.5	8.0
30	22.0	17.5	19.5	14.5	10.5	12.5	18.0	14.0	15.5	11.5	7.5	10.0
31	22.5	20.0	21.0	---	---	---	13.5	12.0	13.0	7.0	.0	2.5
MONTH	26.5	13.5	20.0	23.0	8.0	14.5	19.5	8.0	13.5	11.5	.0	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.0	.5	19.0	13.0	15.5	---	---	---	23.5	22.0	23.0
2	4.0	.0	1.5	16.0	15.0	15.5	---	---	---	25.5	20.5	22.5
3	4.0	1.0	2.5	20.0	15.5	17.5	23.5	17.0	20.0	27.0	20.0	23.5
4	3.0	2.0	3.0	18.0	15.0	17.0	24.0	18.0	21.0	27.0	20.5	23.5
5	4.0	3.0	3.5	17.0	12.5	14.5	22.5	17.5	20.0	27.5	21.5	24.0
6	5.0	3.0	4.0	14.5	12.5	13.5	23.0	16.5	19.5	28.0	21.5	24.5
7	7.5	2.5	4.5	16.0	13.5	15.0	20.5	17.5	19.0	28.0	22.5	25.5
8	8.5	3.0	5.5	19.0	15.5	17.5	21.5	16.5	18.5	28.0	24.0	26.0
9	11.0	6.0	8.5	20.0	16.5	18.5	22.5	17.5	19.5	28.5	23.0	25.0
10	10.5	6.5	9.0	21.5	17.0	19.0	19.0	17.0	18.0	25.0	22.0	23.0
11	8.5	4.0	6.5	24.5	18.0	21.0	22.5	17.0	19.5	23.0	22.0	22.5
12	11.0	4.5	7.5	20.0	16.0	17.0	23.0	18.5	20.5	24.5	21.5	23.0
13	11.5	6.5	9.0	17.5	13.0	16.5	21.0	17.5	19.5	23.5	22.5	23.0
14	10.5	7.5	9.0	16.5	13.5	14.5	25.0	18.0	21.5	25.5	20.5	23.0
15	11.5	6.0	9.0	15.5	13.0	14.5	27.5	19.0	26.0	25.0	22.0	23.0
16	13.5	7.5	10.0	14.5	13.5	14.0	27.0	20.5	23.5	26.0	22.5	24.0
17	13.5	10.0	11.5	18.5	12.5	15.0	27.5	20.0	23.5	25.0	23.0	24.0
18	14.0	12.0	13.0	19.0	13.0	16.0	28.0	21.5	24.5	23.5	22.0	22.5
19	13.5	12.0	12.5	16.0	14.5	15.0	24.0	20.5	22.0	25.0	21.5	23.0
20	14.5	11.0	12.5	17.5	15.0	16.5	25.5	20.5	23.0	23.5	21.0	23.0
21	15.5	13.5	14.5	16.0	15.0	15.5	26.5	21.0	24.0	23.0	21.0	22.0
22	18.0	15.5	16.5	19.0	14.0	16.5	---	---	---	23.5	22.5	23.0
23	18.0	15.0	16.5	20.5	15.0	17.5	---	---	---	25.5	22.0	23.5
24	15.5	13.5	14.5	22.0	14.5	18.5	---	---	---	26.5	23.0	24.5
25	17.0	12.5	14.5	23.5	17.0	20.0	25.0	19.0	22.0	27.0	24.0	25.0
26	17.0	13.5	15.0	20.5	17.5	19.0	23.5	20.5	22.0	27.0	24.0	25.0
27	16.0	11.0	13.5	---	---	---	26.5	22.0	24.0	26.5	24.0	25.0
28	14.0	12.5	13.0	24.5	20.0	22.0	22.5	19.5	21.5	28.5	23.5	25.5
29	---	---	---	22.5	21.5	22.0	22.5	21.0	21.5	30.0	25.0	27.0
30	---	---	---	---	---	---	25.5	22.0	23.0	30.5	26.0	28.0
31	---	---	---	---	---	---	---	---	---	31.5	26.0	28.5
MONTH	18.0	.0	9.5	24.5	12.5	17.0	28.0	16.5	21.5	31.5	20.0	24.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.5	26.5	29.0	32.5	25.0	28.5	34.0	28.0	31.5	34.0	28.0	31.0
2	31.5	25.5	28.5	31.5	25.5	28.5	35.0	29.5	32.0	33.5	28.5	30.5
3	31.5	26.0	28.5	31.0	25.5	28.0	34.5	29.0	32.0	34.0	27.5	30.5
4	30.5	26.0	28.0	33.0	25.5	29.0	34.0	28.5	31.5	32.5	27.5	30.0
5	28.0	24.0	26.5	34.0	25.5	29.5	33.5	28.0	31.0	33.0	26.5	29.5
6	27.0	24.0	25.0	33.0	27.5	30.5	34.0	28.0	31.0	29.5	26.5	28.0
7	31.0	24.5	27.5	33.0	26.5	30.0	32.0	28.5	30.0	32.0	26.5	29.0
8	33.0	26.5	29.5	33.5	27.0	30.5	33.0	27.0	---	32.5	27.0	30.0
9	32.5	27.5	30.0	34.5	27.5	31.0	---	---	---	32.5	27.5	30.0
10	32.0	27.0	29.5	34.5	28.0	31.0	---	---	---	31.5	27.0	29.5
11	28.5	25.0	27.5	34.5	29.0	32.0	---	---	---	30.0	26.5	28.0
12	28.5	25.0	26.5	34.0	28.0	31.0	---	---	---	30.5	25.5	27.5
13	30.5	23.0	26.5	33.0	27.5	30.5	---	---	---	30.0	27.5	29.0
14	31.0	24.0	27.5	33.0	26.5	30.0	---	---	---	27.5	23.0	24.0
15	33.0	25.5	29.0	33.0	27.0	30.0	---	---	---	23.0	22.0	22.5
16	34.5	27.5	30.5	33.5	28.0	30.5	---	---	---	26.0	22.0	23.5
17	34.0	27.5	30.5	34.5	28.5	31.0	---	---	---	28.0	22.5	25.0
18	31.0	24.5	28.0	---	---	---	---	---	---	29.0	24.0	26.5
19	32.0	25.0	28.5	---	---	---	---	---	---	29.5	24.0	26.5
20	31.0	25.5	28.0	---	---	---	---	---	---	29.5	24.5	27.0
21	30.0	25.5	27.5	---	---	---	---	---	---	28.0	23.5	26.0
22	29.0	26.0	27.0	---	---	---	---	---	---	28.5	24.0	26.0
23	30.0	25.5	27.5	---	---	---	---	---	---	26.5	23.0	24.5
24	31.5	26.0	28.5	---	---	---	---	---	---	25.0	19.5	22.5
25	32.5	26.5	29.5	---	---	---	---	---	---	24.0	21.5	23.0
26	33.0	26.5	29.5	33.0	27.5	30.5	---	---	---	24.0	18.5	21.0
27	29.5	25.5	27.0	34.5	28.0	31.5	---	---	---	24.0	18.0	21.0
28	30.5	23.0	26.5	35.5	28.5	32.0	---	---	---	22.5	19.5	21.0
29	31.5	24.5	28.0	35.0	29.0	32.0	---	---	---	20.5	18.5	19.5
30	31.5	25.0	28.0	33.5	28.5	31.0	33.0	26.5	30.0	19.5	16.0	17.5
31	---	---	---	33.0	27.5	30.5	34.0	27.0	30.5	---	---	---
MONTH	34.5	23.0	28.0	35.5	25.0	30.5	35.0	26.5	31.0	34.0	16.0	26.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.1	6.6	10.1	7.0	2.5	5.0	---	---	---	10.6	9.7	10.1
2	12.5	6.4	9.6	7.3	4.8	6.4	---	---	---	11.4	10.6	11.1
3	12.9	6.0	9.6	6.0	4.2	5.4	---	---	---	11.5	11.1	11.2
4	10.6	4.0	8.1	5.7	4.3	5.0	---	---	---	11.4	10.8	11.1
5	9.9	.3	5.4	6.0	3.7	5.0	---	---	---	11.2	10.6	10.9
6	7.2	2.7	5.6	3.4	1.8	2.8	---	---	---	11.2	10.7	10.9
7	7.7	3.5	5.6	2.7	1.4	1.9	---	---	---	11.4	10.4	10.9
8	9.3	4.1	6.2	1.5	.8	1.2	---	---	---	11.3	10.6	10.9
9	8.3	2.7	5.6	1.9	.6	1.1	---	---	---	10.9	9.9	10.4
10	10.1	3.8	6.4	4.5	.5	2.3	---	---	---	12.0	10.0	10.9
11	6.4	3.2	5.0	6.0	2.0	3.5	---	---	---	12.3	10.9	11.5
12	6.5	4.7	5.5	6.2	2.1	3.8	---	---	---	13.1	11.5	12.3
13	6.5	3.5	5.1	7.4	1.2	3.3	---	---	---	13.3	12.1	12.6
14	6.4	5.5	5.8	7.4	1.2	3.3	---	---	---	13.8	11.8	12.6
15	7.4	5.0	6.0	8.2	.8	3.4	---	---	---	14.3	11.6	12.8
16	6.7	5.0	5.7	11.1	1.4	5.3	---	---	---	12.1	10.2	11.2
17	7.6	4.6	6.0	8.7	2.7	5.4	---	---	---	13.1	11.0	11.9
18	6.0	3.9	4.5	8.2	7.1	7.8	---	---	---	13.2	10.6	11.9
19	5.5	3.3	4.3	7.8	6.5	7.0	9.0	8.7	8.9	13.4	10.2	11.7
20	5.6	3.0	4.4	7.0	5.3	6.1	8.8	8.1	8.6	13.9	11.2	12.6
21	6.0	5.6	5.9	5.8	4.2	5.3	8.4	7.9	8.1	14.7	12.8	13.6
22	6.8	5.8	6.2	6.1	3.5	5.4	8.9	7.9	8.4	14.5	12.4	13.4
23	7.0	6.5	6.7	6.1	4.3	5.3	9.2	8.5	8.9	14.7	11.9	13.3
24	7.8	6.2	6.9	5.2	4.5	4.8	9.1	8.4	8.7	14.9	11.6	13.0
25	7.2	6.3	6.8	7.5	5.9	6.6	10.4	9.1	9.8	14.8	11.4	12.8
26	6.9	5.9	6.5	6.1	4.3	5.1	10.4	9.6	10.0	15.7	11.4	13.2
27	6.7	6.1	6.4	7.0	4.8	5.8	9.7	8.7	9.3	13.3	11.0	12.2
28	6.6	5.7	6.3	5.7	4.2	5.1	9.4	7.8	8.6	17.0	10.4	13.3
29	8.0	5.3	6.3	5.2	3.0	4.2	10.3	7.0	8.4	16.9	11.5	13.6
30	6.3	3.9	5.7	4.5	.8	3.0	8.9	7.4	8.5	15.5	10.1	12.4
31	4.1	1.7	3.0	---	---	---	9.8	8.5	9.2	13.6	10.4	12.0
MONTH	12.9	.3	6.2	11.1	.5	4.5	10.4	7.0	8.9	17.0	9.7	12.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.7	11.9	13.1	11.5	8.7	9.8	---	---	---	7.4	7.0	7.2
2	14.8	12.3	13.5	10.5	8.2	9.3	---	---	---	7.6	6.9	7.3
3	15.0	12.2	13.4	11.4	7.9	9.2	11.1	6.9	8.9	7.5	6.8	7.1
4	12.8	11.1	11.9	10.6	7.2	8.8	12.4	7.6	9.5	8.1	6.7	7.3
5	12.6	11.3	11.8	12.1	8.3	10.0	13.7	7.4	10.1	9.2	6.8	7.8
6	13.4	11.0	12.0	12.5	8.8	10.6	13.6	8.2	10.6	11.4	6.8	8.8
7	14.6	11.2	12.8	11.2	8.1	9.6	14.7	8.1	11.1	11.5	6.7	9.0
8	14.7	11.0	12.7	12.2	7.3	9.7	14.7	8.4	11.0	11.8	6.4	8.7
9	14.0	10.3	11.9	11.7	7.2	9.5	14.8	8.3	10.8	11.1	6.3	7.9
10	13.8	9.1	11.2	13.7	7.1	10.1	13.0	8.1	9.9	7.9	6.5	7.4
11	15.9	10.5	12.7	13.8	6.8	9.8	13.8	7.6	10.0	7.6	5.9	7.1
12	16.6	11.5	13.5	11.9	6.6	9.1	13.4	7.5	9.9	7.1	5.9	6.8
13	16.3	11.1	13.3	9.4	6.6	8.0	8.2	7.0	7.7	7.1	6.7	6.9
14	15.8	10.5	12.9	9.4	8.8	9.1	10.1	7.2	8.4	7.1	6.6	6.9
15	16.0	10.7	13.1	9.4	8.5	8.9	12.0	7.0	10.5	8.1	6.6	7.5
16	15.3	10.3	12.5	9.5	8.4	8.9	12.4	6.8	9.2	8.2	7.3	7.7
17	15.2	9.3	11.9	10.2	8.7	9.3	12.1	7.0	9.1	8.4	7.2	7.7
18	13.6	9.3	11.4	10.5	8.4	9.2	13.2	6.4	9.0	8.7	7.4	8.0
19	14.6	9.1	11.2	8.7	8.2	8.4	11.4	6.1	8.2	8.8	7.7	8.2
20	13.9	9.3	11.1	8.9	8.3	8.7	11.9	6.3	8.4	7.9	7.2	7.6
21	10.8	8.5	9.3	8.8	8.5	8.6	11.3	5.9	8.1	7.9	7.1	7.5
22	9.2	7.5	8.2	9.2	8.2	8.7	---	---	---	8.0	7.5	7.8
23	9.4	6.5	8.8	9.5	8.0	8.7	---	---	---	7.8	6.9	7.5
24	9.4	8.9	9.2	10.9	8.0	9.2	---	---	---	8.8	7.4	8.0
25	10.1	9.1	9.5	11.3	7.8	9.3	7.4	6.4	6.9	9.0	7.4	8.1
26	10.1	8.9	9.4	11.3	7.6	9.2	7.7	6.6	7.0	9.1	7.3	8.1
27	11.0	9.3	10.1	---	---	---	7.9	6.5	7.1	9.0	7.6	8.2
28	10.4	8.9	9.8	7.0	5.9	6.6	8.0	6.9	7.3	8.6	6.9	7.9
29	---	---	---	6.8	5.8	6.3	7.0	6.5	6.8	8.5	6.2	7.1
30	---	---	---	---	---	---	7.3	6.4	7.0	8.6	6.0	7.2
31	---	---	---	---	---	---	---	---	---	10.1	5.9	7.6
MONTH	16.6	6.5	11.5	13.8	5.8	9.0	14.8	5.9	8.9	11.8	5.9	7.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.9	5.4	7.7	13.6	5.1	9.1	11.0	4.5	8.0	13.7	2.0	7.6
2	10.5	5.4	7.7	12.4	4.9	7.9	10.9	4.0	7.5	12.9	2.4	8.1
3	8.5	4.7	6.5	10.5	3.0	6.3	11.0	4.2	7.8	13.5	3.4	9.3
4	10.0	5.1	7.2	15.0	4.7	8.9	11.7	4.3	8.0	12.1	3.5	9.2
5	9.6	5.1	6.8	14.4	4.4	8.7	12.4	4.3	8.3	13.6	4.3	8.9
6	6.1	4.4	5.2	14.2	3.7	8.5	11.7	3.7	7.5	12.1	6.3	8.6
7	5.5	4.1	4.8	14.2	4.0	8.6	11.1	3.6	7.0	15.6	3.8	9.5
8	8.7	5.0	6.5	14.9	3.9	8.8	11.7	4.0	7.8	16.2	3.6	9.3
9	10.6	5.5	7.5	15.0	4.1	9.1	---	---	---	16.3	3.7	9.4
10	11.7	6.2	8.7	13.3	2.3	7.5	---	---	---	16.0	3.7	9.5
11	8.0	5.6	6.8	14.7	2.8	8.3	---	---	---	12.4	3.1	8.1
12	11.1	5.4	7.9	15.6	3.6	9.1	---	---	---	14.1	3.4	8.8
13	11.2	6.2	8.3	14.7	3.8	9.2	---	---	---	14.8	6.5	11.5
14	11.2	6.3	8.5	16.6	4.7	10.2	---	---	---	6.3	3.5	5.6
15	12.7	6.0	9.0	13.6	4.0	8.7	---	---	---	7.3	5.0	6.0
16	12.4	5.6	8.7	18.6	2.6	8.1	---	---	---	6.2	5.5	5.9
17	11.5	5.3	8.1	14.1	1.0	9.7	---	---	---	6.1	5.4	5.7
18	7.7	4.8	6.4	---	---	---	---	---	---	6.3	5.4	5.8
19	9.7	4.7	7.0	---	---	---	---	---	---	6.9	5.8	6.2
20	10.6	5.7	7.9	---	---	---	---	---	---	7.9	5.7	6.4
21	11.1	6.0	8.3	---	---	---	---	---	---	10.0	5.5	8.0
22	10.8	5.8	8.1	---	---	---	---	---	---	10.7	6.1	8.5
23	10.5	5.7	7.5	---	---	---	---	---	---	13.1	5.6	9.2
24	12.5	5.5	8.9	---	---	---	---	---	---	16.3	6.6	10.8
25	13.3	8.0	10.4	6.7	5.2	5.7	---	---	---	12.1	8.6	9.9
26	15.0	6.2	10.7	6.3	5.0	5.5	---	---	---	16.1	6.6	10.8
27	12.2	4.5	8.2	8.3	5.0	6.4	---	---	---	15.1	7.3	10.7
28	12.6	5.2	8.7	12.9	5.0	8.3	---	---	---	13.0	6.9	9.4
29	14.4	5.5	9.3	14.4	5.4	9.3	---	---	---	7.1	7.0	7.0
30	14.3	4.8	9.1	12.4	4.6	8.3	14.9	2.0	7.9	7.4	7.1	7.2
31	---	---	---	11.7	5.1	8.3	13.0	2.0	6.9	---	---	---
MONTH	15.0	4.1	7.9	18.6	1.0	8.3	14.9	2.0	7.7	16.3	2.0	8.4

08049200 LAKE ARLINGTON AT ARLINGTON, TX.

LOCATION.--Lat 32°42'58", long 97°11'32", Tarrant County, Hydrolgoic 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 mi^2.

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, non-recording gage at same site and datum.

REMARKS.--The 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 spillway is a 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 the 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 herein represent total contents. Data regarding the dam and lake are given in 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 provided 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, 56,720 acre-ft Apr. 28 at 2000 hours (elevation, 554.69 ft); minimum, 23,700 acre-ft.

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

538.0	23,320	548.0	41,430
540.0	26,520	550.0	45,710
542.0	29,950	552.0	50,240
544.0	35,570	555.0	57,540
546.0	37,390		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27240	35460	33050	40920	41620	42780	42400	47690	44080	40790	36560	26250
2	27240	35460	33090	40920	41560	42690	42270	47250	43840	40610	36210	25970
3	27180	35370	33130	40890	41540	42670	42170	46620	43670	40540	35840	25690
4	27160	35210	33330	40850	41640	42590	42100	46270	43430	40420	35460	25410
5	27160	35080	33660	40810	41640	42500	42080	45950	43890	40300	35100	25120
6	27280	34970	33760	40710	41640	42460	42060	45820	44190	40070	34760	24880
7	27380	34800	33930	40670	41640	42330	42060	45640	44120	39890	34420	24790
8	27510	34700	34060	40560	41640	42250	42080	45470	44060	39690	34020	24560
9	27600	34550	34210	40540	41640	42140	42120	45380	43890	39540	33650	24300
10	27680	34320	34320	40520	41620	42060	42170	45190	43760	39340	33280	24070
11	27940	34170	34510	40590	41600	41850	42230	46240	43860	39140	32870	23940
12	28090	33980	34620	40650	41580	41750	42230	46270	43860	38900	32490	23840
13	28550	33850	35420	40810	41540	41980	42540	46040	43780	38660	32120	23770
14	28790	33740	35650	40890	41560	42350	42610	45840	43630	38380	31830	24340
15	28920	33550	36130	41020	41560	42310	42650	45640	43520	38180	31520	24490
16	28980	33390	36810	41350	41540	42250	42690	45490	43260	37960	31200	24580
17	29070	33570	37570	41540	41540	42170	42760	45320	43010	37710	30840	24710
18	29690	33760	37980	41640	41540	42060	42760	45140	42990	37430	30470	24770
19	29810	33700	38100	41680	41540	41960	42760	44950	42950	37220	30040	24820
20	33110	33650	38360	41660	41560	43350	42800	44970	42800	37040	29690	24860
21	33330	33570	38520	41640	41560	43520	42800	46600	42560	37040	29320	24800
22	33460	33480	38640	41640	41680	43520	44360	46380	42380	37060	28920	24710
23	33550	33400	38780	41640	43090	43430	44470	46130	42290	38200	28550	24610
24	34420	33400	38720	41660	43090	43330	44360	45930	42170	38180	28210	24610
25	34890	33400	38620	41640	43070	43220	44190	45710	41930	38160	27970	24610
26	35080	33390	38620	41660	42990	43160	44080	45490	41640	38100	27790	24610
27	35190	33290	38780	41680	42900	43090	44900	45270	41430	37960	27530	24630
28	35140	33170	38920	41680	42840	43010	55920	45100	41370	37770	27160	24640
29	35160	33020	39240	41700	---	42900	50970	44840	41240	37490	26840	25410
30	35210	32960	39750	41640	---	42690	48720	44620	41020	37220	26640	25580
31	35270	---	41120	41620	---	42560	---	44320	---	36910	26440	---
MAX	35270	35460	41120	41700	43090	43520	55920	47690	44190	40790	36560	26250
MIN	27160	32960	33050	40520	41540	41750	42060	44320	41020	36910	26440	23770
(†)	544.90	543.67	547.85	548.09	548.67	548.54	551.34	549.36	547.80	545.75	539.95	539.43
(‡)	+8110	-2310	+8160	+500	+1220	-280	+6160	-4400	-3300	-4110	-10470	-860

CAL YR 1984 MAX 43650 MIN 26790 ‡ +11680
WTR YR 1985 MAX 55920 MIN 23770 ‡ -1580

† 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 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
28...	1401	1.00	304	8.4	9.5	.91	11.2	100	120
28...	1403	10.0	304	8.4	8.5	--	11.2	98	--
28...	1407	20.0	304	8.4	8.5	--	11.0	96	--
28...	1408	25.0	304	8.4	8.5	--	11.0	96	--
28...	1409	30.0	304	8.1	8.5	--	10.8	94	--
28...	1411	40.0	308	8.1	8.0	--	10.7	92	--
28...	1413	46.0	330	8.1	8.0	--	10.9	94	120
MAY									
09...	1126	1.00	305	7.9	25.5	1.20	6.1	75	110
09...	1127	10.0	305	7.8	24.5	--	5.6	68	--
09...	1128	20.0	300	7.7	23.0	--	4.8	57	--
09...	1129	30.0	260	7.6	21.0	--	4.0	45	--
09...	1130	35.0	265	7.6	20.5	--	.6	7	--
09...	1131	40.0	285	7.6	20.0	--	.6	7	--
09...	1132	46.0	295	7.5	20.0	--	.6	7	110
AUG									
08...	1030	1.00	315	8.5	33.0	1.60	6.1	86	110
08...	1031	10.0	315	8.5	32.5	--	6.0	84	--
08...	1032	15.0	320	7.9	32.0	--	3.1	43	--
08...	1033	20.0	326	7.5	31.0	--	.6	8	--
08...	1034	30.0	345	7.2	26.0	--	.4	5	--
08...	1035	41.0	350	7.1	24.5	--	.4	5	120

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									
28...	24	39	5.0	22	.9	4.5	94	31	22
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	25	40	5.1	22	.9	4.5	96	34	22
MAY									
09...	19	36	4.0	16	.7	5.6	88	29	16
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	13	38	3.7	15	.7	5.5	97	22	16
AUG									
08...	20	35	4.6	19	.8	4.8	87	29	20
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	0	42	4.5	17	.7	4.7	136	14	17

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324304097113601 LAKE ARLINGTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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									
28...	.30	3.6	180	.30	1.0	1.3	.030	6	5
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	.30	.50	.80	.030	20	<10
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	4.0	190	.30	.70	1.0	.050	19	56
MAY									
09...	.20	3.9	160	.40	.70	1.1	.120	41	5
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	.40	.60	1.0	.270	40	60
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	.40	1.1	1.5	.090	60	220
09...	--	--	--	--	--	--	--	--	--
09...	--	5.5	160	.20	1.8	2.0	.080	54	670
AUG									
08...	.30	3.7	170	<.10	.50	--	.030	<3	8
08...	--	--	--	<.10	.50	--	.030	30	120
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	<.10	.50	--	.020	30	30
08...	--	--	--	--	--	--	--	--	--
08...	--	8.3	190	<.10	2.1	--	.100	610	1900

324320097121101 LAKE ARLINGTON SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
28...	1426	1.00	308	8.2	8.5	10.5	92
28...	1428	10.0	308	8.2	8.5	10.6	93
28...	1430	20.0	308	8.2	8.5	10.6	93
28...	1432	30.0	308	8.2	8.5	10.6	93
28...	1434	40.0	308	8.2	8.0	10.2	88
MAY							
09...	1156	1.00	305	8.0	26.0	6.2	77
09...	1157	10.0	305	7.9	25.0	5.9	72
09...	1158	20.0	305	7.8	24.0	5.2	62
09...	1159	25.0	280	7.7	23.0	3.0	35
09...	1200	30.0	250	7.7	21.0	.6	7
09...	1201	35.0	250	7.7	21.0	.6	7
AUG							
08...	1100	1.00	316	8.7	33.0	6.1	86
08...	1101	10.0	316	8.6	33.0	5.9	84
08...	1102	15.0	320	8.0	32.0	3.0	42
08...	1103	20.0	330	7.5	30.5	.4	5
08...	1104	30.0	345	7.3	26.0	.4	5
08...	1105	35.0	345	7.2	25.5	.4	5

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324253097121801 LAKE ARLINGTON SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
28...	1507	1.00	311	8.4	10.0	10.4	94
28...	1509	5.00	311	8.4	9.0	10.6	94
28...	1511	10.0	311	8.4	9.0	10.8	96
28...	1513	20.0	311	8.3	8.5	10.8	94
28...	1515	30.0	311	8.3	8.5	10.6	93
28...	1517	39.0	311	8.3	8.5	10.4	91
MAY							
09...	1221	1.00	305	7.9	28.5	5.6	73
09...	1222	10.0	305	7.8	24.0	5.4	65
09...	1223	20.0	305	7.7	24.0	5.2	62
09...	1224	25.0	300	7.7	23.0	3.1	37
09...	1225	30.0	280	7.7	22.0	1.1	13
09...	1226	38.0	268	7.7	21.0	.6	7
AUG							
08...	1115	1.00	321	8.9	33.5	5.7	82
08...	1116	10.0	321	8.6	32.5	5.2	73
08...	1117	20.0	330	7.6	30.5	.7	10
08...	1118	30.0	341	7.4	27.5	.3	4

324257097130301 LAKE ARLINGTON SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
28...	1532	1.00	311	8.3	10.5	10.8	99
28...	1534	10.0	311	8.3	10.5	10.8	99
28...	1536	13.0	311	8.3	10.5	10.8	99
MAY							
09...	1246	1.00	308	7.8	32.0	5.8	80
09...	1247	10.0	308	7.8	32.0	5.8	80
09..	1248	22.0	308	7.8	32.0	5.6	78
AUG							
08...	1200	1.00	325	9.0	37.5	5.3	81
08...	1201	10.0	325	9.1	37.5	5.3	81
08...	1202	16.0	325	9.1	37.5	5.3	81

324301097123301 LAKE ARLINGTON SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
28...	1456	1.00	311	8.4	10.0	10.4	94
28...	1458	10.0	311	8.3	9.0	10.6	94
28...	1500	20.0	311	8.3	8.5	10.6	93
28...	1502	31.0	311	8.3	8.5	10.0	87
MAY							
09...	1231	1.00	308	7.9	28.0	5.8	75
09...	1232	10.0	306	7.9	25.0	5.7	70
09...	1233	20.0	306	7.7	24.0	4.4	53
09...	1234	30.0	280	7.6	22.0	.8	9
AUG							
08...	1130	1.00	325	9.1	33.5	5.6	80
08...	1131	10.0	325	8.6	32.5	5.1	72
08...	1132	15.0	330	8.0	31.0	3.2	44
08...	1133	20.0	335	7.6	30.5	.4	5
08...	1134	27.0	345	7.4	28.0	.4	5

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324228097130301 LAKE ARLINGTON SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
28...	1543	1.00	311	8.4	10.5	10.6	97
28...	1545	10.0	311	8.3	9.5	10.8	97
28...	1547	18.0	311	8.3	9.0	11.0	97
MAY							
09...	1306	1.00	310	7.8	28.0	5.3	68
09...	1307	10.0	310	7.8	25.0	5.3	65
09...	1308	20.0	310	7.7	24.0	4.4	53
AUG							
08...	1215	1.00	328	8.8	35.5	5.2	77
08...	1216	10.0	326	8.8	32.5	5.3	75
08...	1217	15.0	328	8.3	32.0	4.0	56
08...	1218	18.0	329	8.1	32.0	3.1	43

324143097132201 LAKE ARLINGTON SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
28...	1556	1.00	330	8.1	9.0	.73	11.0	97	120
28...	1558	10.0	315	8.4	8.0	--	11.2	97	--
28...	1600	20.0	315	8.4	7.5	--	11.3	96	--
28...	1602	27.0	335	8.0	7.5	--	11.3	96	120
MAY									
09...	1316	1.00	307	8.3	26.5	.30	7.0	88	110
09...	1317	10.0	309	8.0	25.5	--	6.2	77	--
09...	1318	15.0	318	7.9	25.0	--	5.7	70	--
09...	1319	20.0	360	7.7	23.0	--	2.2	26	--
09...	1320	24.0	360	7.6	23.0	--	1.8	21	130
AUG									
08...	1230	1.00	326	9.0	33.5	1.10	6.1	87	100
08...	1231	10.0	326	8.8	32.0	--	5.4	75	--
08...	1232	15.0	329	8.6	31.5	--	4.6	64	--
08...	1233	22.0	331	8.2	31.0	--	3.6	49	110

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									
28...	25	40	5.1	21	.9	4.3	96	34	22
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	26	40	5.1	21	.9	4.4	95	33	22
MAY									
09...	0	37	4.2	17	.7	5.6	148	26	16
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	38	43	5.0	21	.8	4.5	90	29	17
AUG									
08...	15	34	4.6	19	.8	4.9	89	30	21
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	19	36	4.8	19	.8	4.8	91	30	20

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324143097132201 LAKE ARLINGTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
JAN								
28...	3.6	190	.30	.60	.90	.040	12	6
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	3.6	190	.30	.60	.90	.040	14	3
MAY								
09...	4.0	200	.40	.50	.90	.060	24	6
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--
09...	5.9	180	.40	.80	1.2	.080	36	170
AUG								
08...	3.6	170	<.10	.50	--	.030	4	4
08...	--	--	--	--	--	--	--	--
08...	--	--	.10	.60	.70	.050	20	30
08...	4.1	170	<.10	.70	--	.070	6	56

324133097130601 LAKE ARLINGTON SITE EL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
28...	1613	1.00	315	8.4	9.5	11.4	102
28...	1615	10.0	315	8.4	8.0	11.4	99
28...	1617	17.0	315	8.4	7.5	11.4	97
MAY							
09...	1326	1.00	305	8.3	26.0	7.1	89
09...	1327	10.0	309	8.1	25.5	6.2	77
09...	1328	15.0	350	7.9	25.0	5.8	71

324041097134601 LAKE ARLINGTON SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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)	HARD-NESS (MG/L AS CACO3)
JAN									
28...	1626	1.00	335	8.1	9.5	.46	11.6	104	120
28...	1628	10.0	325	8.4	8.0	--	11.6	100	--
28...	1630	13.0	330	7.9	7.5	--	11.4	97	120
MAY									
09...	1351	1.00	312	8.4	26.0	.30	7.4	92	110
09...	1352	10.0	316	7.9	25.0	--	5.4	66	--
09...	1353	15.0	320	7.7	24.0	--	4.8	58	180
AUG									
08...	1300	1.00	326	8.8	33.0	.60	5.9	84	100
08...	1301	10.0	330	8.3	31.0	--	3.8	52	110

LAKE ARLINGTON AT ARLINGTON, TX--Continued

324041097134601 LAKE ARLINGTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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									
28...	26	40	5.2	23	.9	4.3	95	35	22
28...	--	--	--	--	--	--	--	--	--
28...	30	41	5.4	23	.9	4.0	95	38	24
MAY									
09...	0	38	4.2	17	.7	5.9	112	28	16
09...	--	--	--	--	--	--	--	--	--
09...	95	62	7.2	28	.9	6.0	90	56	24
AUG									
08...	12	34	4.7	19	.8	4.9	92	29	20
08...	18	36	4.7	19	.8	4.7	91	29	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)
JAN								
28...	3.7	190	.30	.60	.90	.040	6	6
28...	--	--	--	--	--	--	--	--
28...	3.9	200	.30	.60	.90	.050	11	12
MAY								
09...	4.2	180	.40	1.2	1.6	.090	31	10
09...	--	--	--	--	--	--	--	--
09...	8.2	250	.50	.70	1.2	.120	36	99
AUG								
08...	3.7	170	<.10	.60	--	.040	3	3
08...	4.3	170	<.10	.60	--	.040	<3	22

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX.

LOCATION.--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 Mountain Creek, and at mile 514.6.

DRAINAGE AREA.--3,065 mi².

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 above 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.--Estimated daily discharges: Dec. 31 to Jan. 8, Feb. 6 to Mar. 20, Sept. 2, and 4-30. Records fair. 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 recitified in 1956. Gage-height telemeter at station.

AVERAGE DISCHARGE.--60 years (water years 1926-85), 554 ft³/s (401,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s May 17, 1949 (gage-height, 28.00 ft, site and datum then in use), from rating curve extended above 36,000 ft³/s; minimum observed, 3.2 ft³/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, 5,380 ft³/s Apr. 23 at 0800 hours (gage height, 19.30 ft); minimum daily, 61 ft³/s Aug. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	627	163	1800	206	120	292	1840	346	192	93	140
2	106	1610	157	685	212	110	273	873	320	185	107	133
3	106	471	166	420	228	100	246	590	358	419	99	154
4	107	289	178	315	294	110	232	445	313	289	80	160
5	111	240	536	300	445	220	226	386	590	198	93	157
6	117	222	503	290	300	300	217	322	2560	166	91	163
7	305	210	284	280	260	450	226	292	1000	160	84	175
8	283	192	240	265	250	350	198	282	442	163	61	163
9	218	188	220	258	240	300	206	273	356	160	103	172
10	220	163	215	249	230	250	195	518	314	157	94	200
11	176	140	202	227	230	200	184	803	487	143	87	180
12	485	137	238	212	210	200	182	2900	563	175	82	160
13	511	130	543	215	200	550	514	1210	306	147	95	160
14	642	133	1340	211	170	2000	815	974	263	133	95	400
15	291	147	549	212	160	500	323	614	240	137	86	3000
16	195	143	1220	416	160	300	243	665	221	154	97	700
17	164	169	1170	532	160	280	210	655	212	157	137	200
18	504	1320	2040	307	150	280	202	635	454	166	138	100
19	450	702	1120	267	160	280	158	621	515	154	122	90
20	1660	286	523	221	160	1300	173	1320	252	182	150	85
21	3290	222	426	215	170	1520	168	2860	221	150	214	80
22	542	210	363	215	170	625	1540	2080	209	182	120	75
23	526	182	303	217	2500	438	4040	975	225	700	124	75
24	824	182	267	218	400	409	730	779	228	1440	131	110
25	2210	243	251	221	180	362	412	707	193	225	135	150
26	785	318	220	204	150	378	345	673	181	150	135	110
27	666	267	243	195	140	2260	321	627	210	124	144	100
28	649	215	289	203	130	1080	3040	500	219	124	133	95
29	462	178	318	210	---	477	4260	421	218	101	122	95
30	479	172	523	206	---	532	3700	406	254	107	123	1700
31	298	---	900	201	---	454	---	366	---	96	142	---
TOTAL	17492	9708	15710	9987	8265	16735	23871	26612	12270	7036	3517	9282
MEAN	564	324	507	322	295	540	796	858	409	227	113	309
MAX	3290	1610	2040	1800	2500	2260	4260	2900	2560	1440	214	3000
MIN	106	130	157	195	130	100	158	273	181	96	61	75
AC-FT	34700	19260	31160	19810	16390	33190	47350	52780	24340	13960	6980	18410

CAL YR 1984 TOTAL 116379 MEAN 318 MAX 3290 MIN 46 AC-FT 230800
WTR YR 1985 TOTAL 160485 MEAN 440 MAX 4260 MIN 61 AC-FT 318300

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 microsiemens Dec. 12, 1978; minimum, 154 microsiemens 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, 911 microsiemens July 19; minimum, 210 microsiemens Dec. 31.
pH: Maximum, 8.4 units Apr. 13; minimum, 7.0 units Aug. 5.
WATER TEMPERATURES: Maximum, 33.0°C on several days during July and August; minimum, 8.0°C Jan. 21.
DISSOLVED OXYGEN: Maximum, 13.9 mg/L Oct. 2; minimum, 0.2 mg/L July 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 15...	1400	291	538	7.9	23.5	7.6	91	.8	140	31
JAN 08...	1410	265	770	7.7	13.0	9.6	92	1.8	240	41
MAR 05...	1420	220	751	7.7	17.5	8.3	87	2.5	230	48
APR 17...	1415	202	808	7.5	24.0	6.8	81	5.2	210	33
JUN 27...	1430	234	724	7.7	29.0	6.5	85	1.1	180	19
SEP 10...	1340	201	720	7.5	30.5	5.7	77	2.8	140	28

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM 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 15...	47	5.7	46	2	7.8	110	53	54	.50
JAN 08...	82	8.7	66	2	8.5	200	91	64	.60
MAR 05...	77	8.7	63	2	8.8	180	94	63	.60
APR 17...	71	8.5	79	2	10	180	86	79	.70
JUN 27...	60	7.2	79	3	9.7	161	72	78	.80
SEP 10...	45	7.0	83	3	12	113	59	88	.70

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 15...	6.5	290	4.2	.040	4.2	.180	2.1	2.3	1.90
JAN 08...	9.4	450	4.6	.030	4.6	.140	.96	1.1	3.00
MAR 05...	6.7	430	3.2	.100	3.3	.260	1.1	1.4	1.80
APR 17...	8.5	450	2.5	.180	2.7	.720	1.2	1.9	2.70
JUN 27...	10	410	2.3	.100	2.4	.160	1.1	1.3	1.70
SEP 10...	9.8	370	6.6	1.40	8.0	.310	1.5	1.8	3.50

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	17492	466	262	12400	37	1730	47	2240	140
NOV.	1984	9708	618	348	9120	51	1350	66	1730	160
DEC.	1984	15710	580	326	13800	48	2030	61	2610	160
JAN.	1985	9987	693	391	10500	60	1610	76	2060	170
FEB.	1985	8265	676	381	8500	58	1290	74	1650	170
MAR.	1985	16735	610	344	15500	51	2300	65	2950	160
APR.	1985	23871	496	279	18000	40	2570	52	3320	140
MAY	1985	26612	490	276	19800	39	2780	50	3600	140
JUNE	1985	12270	569	321	10600	47	1540	60	1990	150
JULY	1985	7036	675	381	7230	58	1100	74	1400	170
AUG.	1985	3517	759	428	4070	66	629	84	802	180
SEPT	1985	9282	520	293	7330	42	1060	54	1360	140
TOTAL		160485	**	**	137000	**	20000	**	25700	**
WTD.AVG.		440	561	316	**	46	**	59	**	150

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	852	816	831	678	522	622	774	762	768	492	322	416
2	840	786	823	528	442	469	784	764	771	574	496	549
3	828	790	802	582	454	511	806	788	792	636	574	606
4	848	826	837	674	586	627	792	772	780	710	640	679
5	856	834	844	724	676	697	766	674	703	762	696	722
6	852	806	842	726	704	717	670	580	614	782	736	761
7	826	528	720	766	724	740	660	582	611	778	750	768
8	822	638	702	778	764	771	728	664	696	796	766	778
9	640	442	603	788	776	781	764	730	749	826	798	811
10	614	482	573	788	776	780	784	764	772	828	804	814
11	732	532	669	786	774	779	788	772	779	824	798	808
12	698	524	616	790	770	778	836	784	812	814	796	805
13	574	358	472	786	774	777	834	602	728	836	802	820
14	526	416	465	790	764	774	588	442	480	842	808	827
15	578	444	515	822	812	817	584	464	521	828	816	823
16	640	584	602	844	812	827	514	418	471	864	694	777
17	758	654	705	824	778	805	456	408	434	748	642	697
18	786	392	661	746	462	569	410	366	385	768	658	713
19	614	360	460	496	450	464	542	384	457	778	758	765
20	550	332	421	588	500	541	670	546	607	800	768	784
21	340	264	287	660	592	627	734	670	695	802	778	792
22	486	326	413	702	662	684	760	734	741	796	764	778
23	534	486	516	720	700	710	794	762	775	826	770	803
24	528	402	485	714	678	702	796	772	783	842	822	833
25	414	338	369	718	684	694	786	772	779	848	820	832
26	462	346	402	726	644	695	788	774	781	846	822	833
27	508	470	489	668	638	653	808	768	780	---	---	831
28	520	508	513	674	660	667	852	808	829	---	---	823
29	568	514	535	732	676	703	854	744	834	---	---	816
30	610	572	591	760	734	750	786	644	713	---	---	833
31	652	612	631	---	---	---	686	210	462	---	---	841
MONTH	856	264	593	844	442	691	854	210	681	864	322	766

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	851	834	798	816	743	655	699	468	378	431
2	---	---	831	828	780	809	813	721	761	535	472	509
3	---	---	811	844	812	831	841	815	828	599	535	570
4	---	---	803	850	794	819	835	803	814	659	583	621
5	---	---	751	788	742	763	837	811	824	699	635	672
6	---	---	717	797	767	779	851	819	838	731	675	701
7	---	---	725	859	801	822	859	819	843	787	733	756
8	---	---	748	877	843	862	853	775	814	821	793	807
9	---	---	751	887	869	878	845	799	813	837	823	831
10	---	---	760	905	881	892	907	847	885	843	647	792
11	---	---	771	897	867	879	907	851	872	641	545	596
12	---	---	782	893	861	874	893	855	872	555	324	391
13	796	788	794	889	529	856	897	607	775	460	360	420
14	820	800	811	657	366	479	723	484	586	539	462	496
15	812	742	793	593	438	525	687	581	635	613	519	571
16	820	786	807	723	603	666	775	687	720	561	503	540
17	846	800	827	759	705	731	827	775	822	555	476	537
18	850	808	830	757	715	742	853	831	844	585	527	545
19	820	786	806	813	749	770	865	839	853	551	503	534
20	838	812	829	813	356	519	877	849	864	501	404	448
21	860	834	848	517	390	464	883	845	864	404	274	340
22	872	826	847	625	525	591	859	262	584	434	310	370
23	870	336	486	727	625	680	408	320	346	498	440	481
24	564	388	482	763	725	742	597	420	530	533	498	517
25	664	552	621	789	767	778	705	593	652	549	513	535
26	732	650	686	809	492	776	753	687	711	569	517	548
27	776	724	750	697	294	438	793	629	772	547	496	532
28	812	772	791	591	390	506	759	288	439	601	490	546
29	---	---	---	689	601	651	374	288	344	627	565	606
30	---	---	---	743	559	686	420	326	374	625	591	613
31	---	---	---	667	595	622	---	---	---	639	593	612
MONTH	872	336	761	905	294	718	907	262	719	843	274	563

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	667	625	650	717	675	688	793	747	769	789	759	779
2	695	641	670	729	697	715	821	749	782	787	771	780
3	693	647	675	763	296	663	813	773	796	777	745	757
4	709	653	680	689	591	658	793	737	778	759	735	751
5	727	258	634	765	697	743	767	719	738	807	745	772
6	563	280	368	771	723	753	731	705	718	805	787	795
7	484	322	406	775	741	759	755	711	737	791	773	747
8	613	476	557	779	749	767	759	735	746	809	759	781
9	691	589	641	817	773	794	843	751	792	811	733	771
10	691	643	674	825	795	812	831	725	794	737	717	725
11	695	551	634	839	803	825	769	741	752	787	723	758
12	527	464	505	849	797	826	757	719	735	787	767	778
13	661	519	588	837	807	820	723	673	707	787	765	777
14	709	667	693	815	795	806	745	685	726	823	300	519
15	737	689	714	829	799	812	779	743	758	426	318	357
16	751	723	742	809	771	786	791	737	765	565	436	493
17	755	705	731	825	775	801	773	743	754	577	436	502
18	743	422	653	839	791	813	769	737	754	659	589	623
19	551	312	480	911	793	845	775	739	754	717	663	694
20	647	476	556	893	789	849	761	711	723	779	721	760
21	709	653	687	863	827	849	773	659	741	837	747	797
22	739	655	718	821	749	795	823	755	786	815	737	775
23	755	575	715	799	627	743	811	783	799	787	737	765
24	749	675	718	673	330	404	791	775	783	755	735	745
25	709	633	664	771	412	510	771	741	758	767	743	758
26	733	691	715	669	597	634	789	737	758	787	755	769
27	755	715	733	729	675	707	741	713	724	813	771	791
28	771	719	743	751	711	733	765	743	752	795	759	780
29	763	731	745	741	629	693	787	767	776	777	244	546
30	771	695	747	717	670	697	813	783	795	410	286	367
31	---	---	---	767	721	743	799	767	783	---	---	---
MONTH	771	258	648	911	296	743	843	659	759	837	244	700

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.8	7.7	7.7	7.9	7.8	7.8	7.9	7.7	7.8	7.7	7.6	7.7
2	7.8	7.7	7.7	7.9	7.8	7.8	7.9	7.6	7.8	7.7	7.7	7.7
3	7.7	7.6	7.7	7.9	7.8	7.8	7.9	7.6	7.8	7.7	7.7	7.7
4	7.7	7.6	7.7	7.9	7.9	7.9	7.9	7.6	7.8	7.7	7.6	7.7
5	7.8	7.7	7.7	7.9	7.9	7.9	7.9	7.8	7.8	7.7	7.6	7.7
6	7.7	7.7	7.7	7.9	7.8	7.8	7.8	7.8	7.8	7.7	7.7	7.7
7	7.8	7.6	7.7	7.9	7.8	7.8	7.9	7.8	7.8	7.7	7.6	7.7
8	7.7	7.5	7.6	7.9	7.8	7.9	7.9	7.9	7.9	7.7	7.5	7.6
9	7.7	7.5	7.5	7.9	7.8	7.9	7.9	7.9	7.9	7.7	7.6	7.7
10	7.6	7.5	7.6	8.1	7.6	7.9	7.9	7.6	7.8	7.7	7.7	7.7
11	7.7	7.6	7.7	7.9	7.6	7.7	7.8	7.7	7.7	7.7	7.7	7.7
12	7.7	7.6	7.6	7.9	7.6	7.8	7.8	7.7	7.7	7.8	7.7	7.7
13	7.8	7.6	7.7	7.8	7.6	7.7	7.8	7.7	7.8	7.8	7.7	7.7
14	---	---	---	7.8	7.6	7.7	7.8	7.6	7.7	7.7	7.6	7.7
15	---	---	---	7.9	7.6	7.8	7.8	7.7	7.7	7.7	7.6	7.7
16	---	---	---	7.9	7.6	7.8	7.8	7.7	7.8	8.1	7.6	7.7
17	---	---	---	7.8	7.7	7.7	7.8	7.7	7.7	7.8	7.6	7.7
18	---	---	---	7.9	7.8	7.9	7.8	7.7	7.8	7.7	7.6	7.7
19	---	---	---	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.7
20	---	---	---	7.9	7.8	7.9	7.8	7.7	7.7	7.7	7.7	7.7
21	---	---	---	7.9	7.9	7.9	7.8	7.7	7.8	7.8	7.7	7.7
22	---	---	---	7.9	7.9	7.9	7.9	7.7	7.8	7.7	7.7	7.7
23	---	---	---	7.9	7.8	7.8	7.9	7.8	7.8	7.7	7.7	7.7
24	---	---	---	7.9	7.7	7.9	7.9	7.8	7.8	7.7	7.7	7.7
25	---	---	---	7.9	7.8	7.8	7.9	7.8	7.9	7.8	7.7	7.7
26	---	---	---	7.8	7.8	7.8	7.9	7.8	7.9	7.8	7.7	7.7
27	---	---	---	7.8	7.8	7.8	7.9	7.8	7.9	---	---	---
28	---	---	---	7.9	7.8	7.8	7.8	7.8	7.8	---	---	---
29	7.8	7.7	7.7	7.9	7.9	7.9	7.8	7.7	7.7	---	---	---
30	7.8	7.7	7.8	7.9	7.7	7.8	7.8	7.6	7.7	---	---	---
31	7.8	7.8	7.8	---	---	---	8.0	7.6	7.7	---	---	---
MONTH	7.8	7.5	7.7	8.1	7.6	7.8	8.0	7.6	7.8	8.1	7.5	7.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.6	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.6
2	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7	7.6	7.6	7.6
3	---	---	---	7.7	7.6	7.7	7.7	7.7	7.7	7.7	7.6	7.7
4	---	---	---	7.7	7.6	7.7	7.7	7.7	7.7	7.7	7.6	7.6
5	---	---	---	7.7	7.6	7.7	7.7	7.7	7.7	7.7	7.6	7.7
6	---	---	---	7.7	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
7	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7	7.7	7.7	7.7
8	---	---	---	7.7	7.6	7.6	7.8	7.7	7.7	7.7	7.6	7.6
9	---	---	---	7.7	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.6
10	---	---	---	7.7	7.6	7.6	7.7	7.6	7.7	7.8	7.6	7.7
11	---	---	---	7.7	7.5	7.6	7.8	7.7	7.7	7.8	7.7	7.8
12	---	---	---	7.7	7.5	7.6	7.7	7.7	7.7	7.7	7.5	7.6
13	7.7	7.7	7.7	7.9	7.6	7.7	8.4	7.6	7.7	7.7	7.5	7.6
14	7.7	7.7	7.7	7.8	7.5	7.7	7.7	7.5	7.6	7.7	7.6	7.6
15	7.7	7.6	7.6	7.7	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6
16	7.7	7.6	7.6	7.6	7.5	7.6	7.7	7.6	7.6	7.7	7.4	7.7
17	7.6	7.5	7.6	7.6	7.5	7.6	7.7	7.6	7.7	7.7	7.5	7.7
18	7.6	7.5	7.6	7.7	7.6	7.7	7.7	7.6	7.7	7.7	7.6	7.7
19	7.6	7.5	7.6	7.7	7.6	7.7	7.8	7.6	7.7	7.7	7.7	7.7
20	7.6	7.5	7.6	7.8	7.5	7.7	7.7	7.7	7.7	7.8	7.6	7.7
21	7.6	7.5	7.5	7.6	7.5	7.6	7.7	7.7	7.7	7.9	7.5	7.7
22	7.6	7.5	7.5	7.6	7.3	7.4	8.0	7.6	7.7	7.7	7.5	7.6
23	7.7	7.3	7.6	7.5	7.4	7.5	7.7	7.5	7.6	7.7	7.6	7.6
24	7.5	7.4	7.5	7.7	7.5	7.6	7.5	7.4	7.5	7.7	7.7	7.7
25	7.6	7.3	7.5	7.7	7.6	7.6	7.6	7.5	7.6	7.8	7.7	7.7
26	7.6	7.5	7.6	7.8	7.6	7.7	7.7	7.6	7.6	7.8	7.7	7.7
27	7.6	7.6	7.6	8.1	7.6	7.7	7.7	7.6	7.6	7.8	7.8	7.8
28	7.6	7.6	7.6	7.6	7.5	7.6	7.8	7.5	7.7	7.8	7.7	7.8
29	---	---	---	7.6	7.5	7.5	7.7	7.7	7.7	7.8	7.7	7.7
30	---	---	---	7.7	7.5	7.6	7.7	7.6	7.7	7.8	7.7	7.8
31	---	---	---	7.8	7.6	7.7	---	---	---	7.9	7.8	7.8
MONTH	7.7	7.3	7.6	8.1	7.3	7.6	8.4	7.4	7.7	7.9	7.4	7.7

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.8	7.8	8.1	7.7	7.9	7.7	7.6	7.6	7.7	7.6	7.6
2	7.9	7.8	7.9	7.9	7.7	7.8	7.7	7.6	7.6	7.7	7.5	7.6
3	7.9	7.8	7.8	7.8	7.6	7.7	7.6	7.6	7.6	7.7	7.5	7.6
4	8.0	7.8	7.9	7.7	7.5	7.6	7.7	7.6	7.7	7.6	7.5	7.5
5	8.1	7.8	7.9	7.6	7.5	7.6	7.7	7.0	7.7	7.6	7.5	7.5
6	8.0	7.7	7.8	7.8	7.4	7.6	7.8	7.6	7.7	7.6	7.6	7.6
7	7.7	7.6	7.7	7.8	7.6	7.7	7.8	7.7	7.7	7.7	7.5	7.6
8	7.8	7.7	7.7	7.9	7.7	7.8	7.8	7.7	7.8	7.7	7.6	7.6
9	7.8	7.8	7.8	7.8	7.6	7.7	7.8	7.7	7.8	7.6	7.5	7.6
10	7.9	7.8	7.9	7.7	7.6	7.6	7.8	7.6	7.7	7.6	7.5	7.5
11	7.9	7.6	7.8	7.7	7.6	7.6	7.8	7.7	7.7	7.5	7.5	7.5
12	7.7	7.5	7.6	7.7	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
13	7.7	7.5	7.6	7.7	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
14	7.7	7.7	7.7	7.7	7.5	7.6	7.7	7.6	7.7	7.7	7.3	7.5
15	7.8	7.7	7.7	7.7	7.5	7.6	7.7	7.7	7.7	7.6	7.5	7.6
16	7.9	7.7	7.8	7.7	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
17	7.8	7.7	7.7	7.6	7.5	7.6	7.8	7.7	7.8	7.5	7.4	7.5
18	7.8	7.5	7.7	7.7	7.5	7.6	7.8	7.7	7.8	7.5	7.5	7.5
19	7.7	7.5	7.6	7.8	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
20	7.7	7.5	7.6	7.7	7.5	7.6	7.7	7.7	7.7	7.6	7.6	7.6
21	7.8	7.7	7.7	7.7	7.5	7.6	7.7	7.6	7.7	7.7	7.6	7.6
22	7.8	7.7	7.7	7.6	7.5	7.5	7.7	7.6	7.7	7.7	7.6	7.6
23	7.8	7.6	7.7	7.6	7.4	7.5	7.8	7.7	7.7	7.7	7.5	7.6
24	7.7	7.6	7.7	7.5	7.3	7.5	7.7	7.6	7.6	7.6	7.5	7.6
25	7.8	7.6	7.7	7.5	7.5	7.5	7.8	7.6	7.7	7.6	7.5	7.6
26	7.8	7.7	7.7	7.5	7.4	7.5	7.8	7.7	7.8	7.6	7.6	7.6
27	7.8	7.7	7.7	7.5	7.4	7.5	7.8	7.6	7.7	7.6	7.6	7.6
28	7.9	7.7	7.8	7.5	7.5	7.5	7.7	7.5	7.6	7.6	7.5	7.6
29	7.9	7.7	7.8	7.6	7.4	7.5	7.7	7.6	7.6	7.6	7.5	7.7
30	7.9	7.7	7.8	7.7	7.5	7.6	7.8	7.6	7.6	7.6	7.5	7.5
31	---	---	---	7.7	7.6	7.6	7.7	7.6	7.6	---	---	---
MONTH	8.1	7.5	7.7	8.1	7.3	7.6	7.8	7.0	7.7	7.7	7.3	7.6

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	20.5	21.5	25.0	24.0	24.5	19.0	18.0	18.5	13.5	11.5	12.5
2	23.0	21.0	22.0	24.0	23.0	23.5	18.5	18.0	18.5	11.0	10.5	10.5
3	24.0	22.0	23.0	23.0	22.5	22.5	18.0	17.5	17.5	11.0	9.5	10.5
4	24.0	23.5	24.0	22.5	22.0	22.0	17.0	15.5	16.5	11.5	9.5	10.5
5	25.5	24.0	24.5	22.0	21.5	22.0	15.5	14.0	14.5	12.0	10.5	11.5
6	27.0	25.5	26.0	21.5	21.0	21.5	14.0	13.5	13.5	13.0	11.0	12.0
7	26.5	24.5	25.5	22.0	21.0	21.5	14.5	13.5	14.0	13.0	12.0	12.5
8	26.5	24.5	25.5	23.5	22.0	22.5	16.0	14.5	15.0	13.5	12.0	12.5
9	25.0	23.5	24.5	24.5	23.0	24.0	17.5	16.0	17.0	13.5	12.5	13.0
10	24.5	23.5	24.0	24.0	20.5	22.5	18.0	17.5	17.5	13.0	12.0	12.5
11	24.5	23.5	24.0	21.5	19.5	21.0	18.5	17.5	18.0	12.0	11.0	11.5
12	25.5	23.5	24.5	21.5	20.0	20.5	19.5	18.5	19.0	10.5	10.0	10.0
13	24.5	23.0	23.5	21.5	20.0	20.5	19.5	19.0	19.5	10.5	10.0	10.0
14	24.0	23.0	23.5	23.0	20.5	21.5	19.0	17.0	18.0	12.0	10.5	11.0
15	24.0	22.5	23.0	23.5	21.5	22.5	18.0	17.0	17.5	11.5	11.0	11.5
16	24.5	24.0	24.0	22.5	20.5	21.5	17.0	16.5	17.0	12.0	9.5	11.0
17	24.0	22.5	23.0	20.5	19.0	20.0	17.0	16.5	17.0	11.5	9.0	10.0
18	24.5	23.5	24.0	19.0	17.5	18.0	17.0	16.5	17.0	12.0	10.0	11.0
19	24.5	23.5	24.0	17.5	16.5	17.0	16.5	16.0	16.5	12.5	11.0	12.0
20	23.5	22.5	23.0	17.0	16.5	16.5	18.0	16.5	17.0	11.0	9.0	9.5
21	23.5	21.5	22.5	17.0	16.5	16.5	19.0	18.0	18.5	9.5	8.0	9.0
22	21.5	19.5	20.5	17.0	16.5	17.0	19.0	18.0	18.5	10.5	8.5	9.5
23	20.0	19.5	20.0	17.0	16.5	17.0	18.0	17.0	17.5	12.0	10.0	11.0
24	20.0	18.5	19.5	17.5	16.5	17.0	18.0	17.0	17.5	12.5	11.5	12.0
25	19.5	19.0	19.0	18.5	17.0	17.5	17.0	15.5	16.0	13.5	12.0	13.0
26	20.5	19.0	19.5	18.5	18.0	18.5	16.0	15.5	15.5	12.5	11.5	12.0
27	22.0	20.5	21.5	18.0	17.0	17.5	17.5	15.0	16.5	---	---	---
28	22.5	22.0	22.0	17.0	16.5	16.5	19.0	17.5	18.5	---	---	---
29	22.5	21.5	22.0	17.5	16.5	17.0	20.0	19.0	19.5	---	---	---
30	23.5	22.5	23.0	18.0	17.5	17.5	19.5	17.0	18.5	---	---	---
31	24.5	23.5	24.0	---	---	---	17.0	13.5	15.5	---	---	---
MONTH	27.0	18.5	23.0	25.0	16.5	20.0	20.0	13.5	17.0	13.5	8.0	11.0

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.5	27.5	28.5	30.0	27.5	29.0	33.0	30.5	31.5	32.5	30.0	31.5
2	29.0	27.0	28.5	30.0	28.0	29.0	33.0	10.0	31.0	32.5	30.5	31.5
3	29.5	27.5	28.5	29.5	25.5	28.5	32.5	10.0	30.5	32.0	30.0	31.0
4	29.5	27.5	28.5	30.5	27.0	28.5	33.0	30.5	32.0	31.5	30.0	30.5
5	28.0	24.5	27.0	31.0	28.0	29.5	32.5	12.0	30.5	31.5	29.5	30.5
6	26.0	24.0	25.0	31.5	29.0	30.0	32.5	30.5	31.5	30.5	29.5	30.0
7	27.5	25.0	26.5	31.0	28.5	30.0	32.0	30.5	31.0	32.0	29.5	30.5
8	30.0	27.0	28.0	31.0	29.0	30.0	---	---	---	32.0	30.0	31.0
9	30.5	28.0	29.0	31.5	29.0	30.5	---	---	---	32.0	30.0	31.0
10	30.0	28.5	29.5	32.0	29.5	31.0	32.5	30.0	31.5	31.5	29.5	30.5
11	29.5	27.0	28.0	32.0	30.0	31.0	32.5	30.0	31.5	30.5	29.5	30.0
12	28.0	27.0	27.5	32.0	30.0	31.0	32.0	30.0	31.0	30.0	28.5	29.5
13	28.0	25.5	27.0	32.0	30.0	31.0	31.5	30.0	30.5	30.5	29.0	30.0
14	28.5	26.0	27.5	32.0	29.5	31.0	31.5	29.5	30.5	30.0	24.5	27.0
15	30.0	27.0	28.5	32.5	30.0	31.0	31.5	29.5	30.5	26.0	24.0	24.5
16	31.0	28.0	29.5	32.0	29.5	31.0	32.0	29.5	31.0	26.0	24.5	25.0
17	31.5	28.5	30.0	32.5	30.0	31.5	32.5	30.5	31.5	27.5	25.0	26.0
18	30.5	26.0	28.5	32.5	30.5	31.5	33.0	30.5	32.0	28.5	27.0	27.5
19	30.0	25.0	28.0	32.0	30.5	31.5	32.5	30.5	32.0	29.5	27.5	28.5
20	29.0	26.5	28.0	31.5	29.5	30.5	32.5	30.5	31.5	29.0	28.0	28.5
21	29.0	27.5	28.5	30.0	29.0	29.5	32.5	30.5	31.5	29.0	27.5	28.0
22	29.0	27.0	28.0	29.5	28.5	29.0	33.0	30.5	31.5	29.0	27.5	28.0
23	29.5	27.5	28.5	29.0	28.5	28.5	33.0	30.5	32.0	28.0	27.0	27.5
24	30.0	28.0	29.0	28.5	26.5	27.5	32.0	31.0	31.5	27.0	25.0	26.0
25	30.5	28.5	29.5	30.0	8.0	28.0	31.5	29.5	30.5	26.5	25.5	26.0
26	31.0	28.5	29.5	31.5	8.0	28.5	31.0	29.0	30.0	26.0	24.5	25.0
27	30.0	28.5	29.5	32.5	30.0	31.0	31.0	29.0	30.0	25.5	23.5	24.5
28	29.0	26.5	28.0	32.5	30.0	31.5	31.5	29.5	30.0	25.0	24.0	24.5
29	29.5	26.5	28.0	33.0	10.0	31.0	31.5	29.5	30.5	25.0	21.5	23.0
30	30.0	27.0	28.5	32.5	30.0	31.5	31.5	29.5	30.5	21.0	20.0	20.5
31	---	---	---	32.5	30.0	31.0	32.0	29.5	31.0	---	---	---
MONTH	31.5	24.0	28.5	33.0	8.0	30.0	33.0	10.0	31.0	32.5	20.0	28.0

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	8.1	7.8	7.9	4.4	3.3	3.8	8.9	7.1	8.2
2	13.9	8.8	10.2	8.3	8.1	8.1	3.9	3.3	3.5	9.5	9.0	9.3
3	13.6	8.6	9.7	8.5	8.3	8.4	4.0	3.6	3.8	9.9	9.5	9.7
4	12.8	8.0	9.2	8.6	8.4	8.5	4.1	3.8	4.0	9.9	9.5	9.7
5	9.0	6.8	7.5	8.7	8.6	8.6	4.7	4.1	4.4	9.7	9.4	9.6
6	---	---	---	13.7	8.5	10.0	5.0	4.7	4.8	9.7	9.3	9.5
7	---	---	---	13.1	7.7	9.5	5.4	5.0	5.2	9.6	9.3	9.5
8	---	---	---	12.1	6.6	8.9	5.5	5.4	5.5	9.7	8.1	9.3
9	---	---	---	---	---	---	5.6	5.5	5.6	10.0	9.6	9.8
10	---	---	---	---	---	---	6.0	5.7	5.9	11.0	10.2	10.7
11	---	---	---	---	---	---	6.3	6.0	6.2	11.8	11.3	11.6
12	---	---	---	---	---	---	6.6	6.3	6.4	12.5	12.0	12.3
13	---	---	---	---	---	---	7.0	6.7	6.9	12.7	11.7	12.3
14	---	---	---	11.9	8.9	9.7	7.7	7.0	7.4	12.0	10.1	11.1
15	---	---	---	12.3	9.0	9.8	7.9	7.7	7.8	10.3	8.6	9.5
16	7.6	7.4	7.5	12.1	9.0	9.8	8.5	8.0	8.3	8.8	8.4	8.7
17	7.9	7.6	7.8	12.8	9.1	10.1	8.9	8.6	8.8	9.4	8.9	9.2
18	8.0	7.5	7.8	9.2	8.6	8.8	---	---	---	9.2	8.3	8.6
19	7.7	7.6	7.6	10.1	9.3	9.8	9.7	9.4	9.6	8.6	8.3	8.4
20	8.5	7.7	8.1	10.2	10.1	10.2	9.4	8.5	9.1	8.9	8.6	8.8
21	8.7	7.6	8.1	10.2	9.7	10.0	9.0	8.5	8.8	9.0	8.8	8.9
22	8.9	8.1	8.5	9.7	9.1	9.4	9.8	8.9	9.5	9.2	9.1	9.1
23	9.0	8.8	8.9	11.9	8.7	9.7	10.1	9.7	9.9	9.5	9.4	9.4
24	9.3	8.8	9.0	11.0	8.0	8.8	9.9	9.6	9.7	9.1	8.7	9.0
25	9.1	9.0	9.1	8.0	7.3	7.5	9.8	8.2	9.2	8.8	8.5	8.6
26	9.0	8.7	8.9	9.4	7.2	8.1	8.1	6.0	7.0	8.6	7.9	8.3
27	8.7	8.3	8.4	10.2	9.4	9.9	5.9	4.7	5.3	---	---	---
28	8.4	8.3	8.3	10.6	10.3	10.4	4.6	3.8	4.2	---	---	---
29	8.9	8.3	8.4	10.3	7.3	9.0	4.0	3.7	3.9	---	---	---
30	8.3	8.1	8.2	7.2	5.1	6.0	4.9	4.1	4.4	---	---	---
31	8.1	7.9	8.0	---	---	---	7.2	4.9	5.9	---	---	---
MONTH	13.9	6.8	8.5	13.7	5.1	9.1	10.1	3.3	6.5	12.7	7.1	9.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.0	7.7	7.9	7.6	7.3	7.5	6.8	5.7	5.9
2	---	---	---	8.0	7.6	7.8	7.7	7.2	7.5	6.7	6.5	6.7
3	---	---	---	8.0	7.7	7.8	7.4	7.0	7.2	7.0	6.7	6.8
4	---	---	---	8.0	7.2	7.7	7.3	6.9	7.1	7.0	6.6	6.8
5	---	---	---	8.3	7.6	7.7	7.5	6.8	7.1	6.8	6.6	6.7
6	---	---	---	8.0	7.6	7.8	7.8	6.8	7.3	6.7	6.5	6.6
7	---	---	---	8.3	7.9	8.1	7.8	6.9	7.4	6.7	6.3	6.6
8	---	---	---	8.1	7.7	8.0	8.5	7.3	7.8	6.2	5.9	6.1
9	---	---	---	8.2	7.4	7.8	8.3	7.4	7.9	5.9	5.7	5.8
10	---	---	---	8.2	7.3	7.7	7.2	6.2	6.6	6.2	5.3	5.8
11	---	---	---	8.0	2.8	7.0	6.2	5.9	6.1	6.6	5.9	6.4
12	---	---	---	6.6	5.3	6.3	5.9	5.4	5.6	6.6	3.8	5.4
13	9.8	4.7	7.4	6.4	5.2	5.4	5.7	5.1	5.4	6.6	5.5	6.2
14	10.5	9.7	10.1	7.7	5.7	6.4	6.3	5.3	5.7	6.7	6.1	6.5
15	10.6	9.9	10.2	7.8	7.5	7.7	6.5	6.3	6.4	6.7	6.5	6.6
16	10.5	9.5	10.0	8.2	7.1	7.6	6.4	6.1	6.3	6.9	2.5	6.5
17	9.3	7.7	8.7	8.1	7.0	7.8	6.6	5.8	6.6	6.8	3.1	6.3
18	7.6	5.3	6.7	8.1	7.9	8.0	6.5	6.0	6.2	6.7	6.1	6.5
19	5.2	4.0	4.6	8.0	7.7	7.9	6.4	5.7	6.1	6.9	6.5	6.7
20	3.8	3.2	3.5	8.9	6.2	7.7	6.4	5.7	6.0	7.3	5.7	6.6
21	3.1	2.6	2.8	6.8	5.7	6.3	6.2	5.6	5.9	7.4	5.5	6.7
22	2.6	2.4	2.5	6.7	.4	3.9	7.9	5.2	6.3	7.4	5.7	6.1
23	4.1	2.1	3.3	6.2	3.4	5.0	7.7	5.0	6.6	6.9	6.7	6.8
24	6.9	4.4	6.0	7.2	3.9	6.5	5.7	4.6	5.3	7.0	6.6	6.9
25	7.8	3.8	7.3	7.1	6.3	6.8	6.5	5.1	6.3	6.9	6.2	6.6
26	7.9	7.7	7.8	8.1	6.9	7.2	6.5	6.3	6.4	6.6	6.3	6.4
27	8.1	7.8	8.0	8.3	4.6	6.4	6.4	6.1	6.2	6.8	6.5	6.7
28	8.1	7.9	8.0	6.2	5.2	5.9	7.3	5.5	6.6	6.9	6.3	6.7
29	---	---	---	6.1	3.6	4.7	7.5	6.3	7.3	6.6	6.1	6.4
30	---	---	---	7.0	4.4	6.5	7.0	5.8	6.4	6.4	5.9	6.2
31	---	---	---	7.3	6.8	7.1	---	---	---	6.4	5.8	6.1
MONTH	10.6	2.1	6.7	8.9	.4	7.0	8.5	4.6	6.6	7.4	2.5	6.4

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.5	5.7	6.1	8.6	5.9	7.1	8.3	4.2	5.7	9.9	5.2	6.5
2	6.7	5.7	6.1	8.3	6.1	7.0	8.1	3.9	5.1	10.0	4.9	6.7
3	6.8	5.5	6.0	7.0	5.6	6.4	8.1	4.1	4.9	9.9	5.0	6.4
4	5.9	4.2	5.2	6.5	5.4	5.9	8.3	3.9	5.4	10.2	5.2	6.4
5	4.6	2.8	3.5	6.7	5.2	5.9	7.9	5.2	5.8	6.2	5.4	5.7
6	4.9	3.2	4.2	8.7	4.8	6.1	7.9	4.8	5.6	6.1	5.1	5.4
7	5.5	4.6	5.3	8.9	5.5	6.6	6.0	5.1	5.5	9.6	5.1	6.4
8	5.6	5.3	5.5	7.8	5.7	6.5	---	---	---	9.8	5.2	6.5
9	5.6	5.3	5.4	7.2	5.3	6.1	---	---	---	5.9	5.3	5.6
10	5.9	5.4	5.6	7.1	5.0	5.7	6.4	4.9	5.5	6.2	5.4	5.7
11	6.0	5.4	5.7	8.7	4.5	5.8	9.1	5.1	6.0	5.7	5.0	5.3
12	6.1	5.4	5.7	8.8	2.7	5.0	8.9	5.1	6.1	9.4	4.9	5.5
13	6.5	5.5	6.1	6.4	3.9	5.0	6.6	5.1	5.8	5.5	4.6	4.9
14	7.0	6.3	6.6	8.0	3.2	5.1	6.3	5.2	5.7	6.1	1.1	4.4
15	7.2	6.4	6.7	6.6	3.1	4.6	6.0	5.0	5.5	5.7	2.7	4.1
16	8.1	6.4	7.0	5.4	2.9	3.8	6.3	5.1	5.6	5.9	5.4	5.7
17	7.1	6.0	6.4	4.1	2.6	3.0	6.4	5.1	5.7	5.8	5.4	5.6
18	6.5	5.6	6.0	3.5	2.2	2.8	6.3	5.0	5.6	5.8	5.6	5.7
19	6.3	5.2	5.8	3.3	2.2	2.7	6.2	5.0	5.5	5.6	5.4	5.5
20	6.8	5.4	6.3	3.3	2.3	2.7	8.4	5.1	5.9	5.7	5.5	5.6
21	6.7	6.1	6.4	3.2	2.4	2.8	6.0	4.9	5.4	5.7	5.4	5.6
22	6.4	6.0	6.2	3.2	2.5	2.7	7.7	4.8	5.6	10.4	5.5	6.6
23	6.5	5.5	6.0	4.8	2.6	3.4	6.4	5.1	5.6	6.6	5.8	6.2
24	6.2	5.4	5.9	3.9	.2	2.4	5.8	4.6	5.1	6.9	6.2	6.5
25	6.8	5.9	6.3	4.4	4.0	4.2	7.6	5.0	5.6	11.1	6.2	7.0
26	6.8	5.8	6.2	4.3	3.7	4.1	8.7	5.4	6.3	11.3	6.1	7.0
27	7.3	5.8	6.4	8.0	3.4	4.5	9.3	5.7	6.6	11.2	5.7	6.8
28	7.9	5.6	6.6	8.0	3.2	4.4	9.4	5.2	6.4	11.1	5.4	6.6
29	8.1	5.8	6.8	8.2	3.3	5.2	10.1	5.2	6.5	7.8	4.8	6.3
30	8.0	5.9	6.8	8.4	3.7	5.3	9.9	5.1	6.4	6.4	1.9	4.7
31	---	---	---	8.4	4.2	5.7	9.9	5.2	6.5	---	---	---
MONTH	8.1	2.8	6.0	8.9	.2	4.8	10.1	3.9	5.8	11.3	1.1	5.9

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	1045	457	3.95	May 21	0300	407	3.81
Nov. 1	1215	502	4.07	June 5	2045	*507	*4.30
Dec. 17	2000	449	3.93				

Minimum daily discharge, 0.03 ft^3/s for several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	24	.17	1.7	.17	2.9	1.3	.52	.60	.28	.05	.48
2	.15	.41	.17	2.5	.17	2.4	1.3	.56	.72	.35	4.7	.28
3	.14	.17	.17	1.1	.17	2.6	1.3	.58	.61	.59	.07	.25
4	.52	.17	1.7	.65	3.4	5.1	1.6	.67	.82	.45	.03	.48
5	.33	.17	5.3	.43	1.0	2.3	1.7	.66	27	.65	.05	.17
6	2.2	.17	.17	.29	.62	2.5	1.7	.75	23	.43	.06	.42
7	2.1	.22	.09	.28	.22	1.3	1.7	.81	.07	.58	.05	.11
8	.45	.28	.09	.28	.17	.28	1.7	.83	.04	.45	.09	.17
9	3.9	.28	.09	.75	.17	.28	1.7	.98	.04	.45	.07	.08
10	.67	.28	.09	.27	.12	.27	1.7	1.0	.04	.69	.08	.14
11	2.0	.28	.09	.17	.09	.34	1.3	1.9	5.0	.57	.18	.26
12	2.0	.28	.09	.17	.09	.55	1.0	.87	.03	.64	.16	.14
13	11	.28	11	.17	.09	14	18	.84	.03	.39	.28	3.6
14	1.2	.28	6.1	.17	.13	8.9	1.1	.42	.03	.27	.20	13
15	.40	.28	14	.14	.23	.92	.78	.35	.03	.17	.09	.44
16	1.1	.41	5.9	5.8	.32	.66	.78	.36	.06	.24	.25	.29
17	.55	9.1	55	.25	.36	.58	.59	.35	.03	.24	.09	.22
18	.79	9.0	7.8	.16	.40	.36	.23	.40	.60	.15	.20	.36
19	.78	.08	1.6	.14	.70	1.5	.28	.46	.10	.23	.15	.43
20	49	.07	1.0	.37	.66	30	.28	16	.04	2.4	.39	.48
21	.79	.03	.97	.36	.81	1.5	.28	28	.06	15	.24	.47
22	1.9	.03	.62	.36	2.2	1.0	33	.81	.05	.10	.14	.49
23	3.4	.03	.55	.36	61	.78	2.9	.67	2.4	.03	.16	.56
24	25	.12	.54	.38	2.4	.79	1.1	.49	.03	.03	.18	.51
25	1.5	1.3	.45	.09	.89	.74	1.0	.39	.03	.03	.21	.55
26	1.5	4.1	.41	.09	1.0	12	1.1	.44	.05	.05	.15	.55
27	2.6	.27	.42	.28	.85	6.3	5.9	.46	.05	.06	.17	.62
28	.09	.17	.45	.19	2.1	1.2	5.8	.46	.13	.11	.31	.98
29	3.2	.17	1.7	.17	---	1.3	3.7	.52	.12	.07	.17	12
30	.12	.17	1.2	.17	---	4.3	.68	.58	.29	.07	.47	.59
31	.30	---	39	.17	---	1.4	---	.60	---	.06	.28	---
TOTAL	119.73	52.60	156.93	18.41	80.53	109.05	95.50	62.73	62.10	25.83	9.72	39.12
MEAN	3.86	1.75	5.06	.59	2.88	3.52	3.18	2.02	2.07	.83	.31	1.30
MAX	49	24	55	5.8	61	30	33	28	27	15	4.7	13
MIN	.05	.03	.09	.09	.09	.27	.23	.35	.03	.03	.03	.08
AC-FT	237	104	311	37	160	216	189	124	123	51	19	78

CAL YR 1984 TOTAL 568.12 MEAN 1.55 MAX 55 MIN .00 AC-FT 1130
WTR YR 1985 TOTAL 832.25 MEAN 2.28 MAX 61 MIN .03 AC-FT 1650

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 10-17. Records fair. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--25 years, 14.4 ft^3/s (3.11 in/yr), 10,430 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, 1976-85.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	0845	1,370	16.32	Apr. 28	0745	*4,980	*24.68
Dec. 31	1215	1,360	16.27	July 23	1245	893	14.78

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	6.1	.03	44	1.0	2.0	1.4	10	.91	.26	.10	.00
2	.00	.07	.00	12	1.0	1.7	1.3	6.8	.84	.21	.10	.00
3	.00	.00	.00	7.4	1.3	1.5	1.4	4.5	.83	.19	.09	.00
4	.00	.00	.00	4.5	1.8	3.1	1.2	3.4	.69	.19	.09	.00
5	.00	.00	.72	3.0	1.9	1.6	1.1	2.8	1.3	.17	.07	.00
6	.00	.00	.11	2.1	1.8	1.3	.95	2.2	12	.16	.04	.00
7	.00	.00	.01	1.8	1.6	1.1	.86	1.9	2.2	.14	.01	.00
8	.00	.00	.00	1.5	1.1	.88	.77	1.7	1.1	.13	.00	.00
9	.00	.00	.00	1.5	1.1	.93	.80	12	.69	.13	.00	.00
10	.00	.00	.00	1.5	1.0	.88	.73	17	.50	.12	.00	.00
11	3.9	.00	.00	1.3	.89	.93	.74	10	.52	.11	.00	.00
12	1.1	.00	.00	1.2	.83	.81	.78	8.0	.51	.11	.00	.00
13	9.4	.00	19	1.1	.80	6.1	2.9	7.0	.44	.10	.00	.00
14	.61	.00	8.2	1.1	.83	67	1.8	6.0	.59	.08	.00	1.2
15	.03	.00	3.0	1.1	.78	9.9	1.1	5.0	.50	.07	.00	.16
16	.19	.00	64	5.1	.77	3.2	.79	4.0	.44	.06	.00	.04
17	.01	.00	19	2.4	.78	1.8	.57	3.0	.32	.03	.00	.00
18	.00	9.4	28	1.8	.78	1.2	.49	2.4	.44	.00	.00	.00
19	.00	.04	8.0	1.4	.78	1.1	.44	2.2	.43	.00	.00	.00
20	265	.00	2.2	1.2	.78	182	.44	2.5	.32	.00	.00	.00
21	3.2	.00	1.2	1.0	.82	24	.50	168	.28	1.8	.00	.00
22	.62	.00	.64	1.0	.98	8.8	29	17	2.9	.32	.00	.00
23	1.1	.00	.51	1.1	182	4.7	6.1	7.5	.44	132	.00	.00
24	36	.00	.41	1.1	19	3.1	1.6	4.5	.33	3.2	.00	.00
25	7.9	.05	.31	1.1	4.1	2.6	.79	3.4	.32	.72	.00	.00
26	.27	.20	.30	1.0	2.3	2.3	.62	2.6	.23	.28	.00	.00
27	9.1	.05	.32	1.0	1.8	3.1	45	2.0	.22	.21	.00	.00
28	.21	.00	.27	1.0	1.5	3.2	2490	1.8	.25	.18	.00	.00
29	.00	.00	17	1.0	---	2.2	58	1.6	.23	.14	.00	10
30	.00	.00	135	1.1	---	2.8	18	1.4	.23	.16	.00	1.1
31	.00	---	456	1.0	---	1.8	---	1.1	---	.12	.00	---
TOTAL	338.64	15.91	764.23	108.4	234.12	347.63	2670.17	323.3	31.00	141.39	.50	12.50
MEAN	10.9	.53	24.7	3.50	8.36	11.2	89.0	10.4	1.03	4.56	.016	.42
MAX	265	9.4	456	44	182	182	2490	168	12	132	.10	10
MIN	.00	.00	.00	1.0	.77	.81	.44	1.1	.22	.00	.00	.00
CFSM	.17	.008	.39	.06	.13	.18	1.42	.17	.02	.07	.000	.007
IN.	.20	.01	.45	.06	.14	.21	1.58	.19	.02	.08	.00	.01
AC-FT	672	32	1520	215	464	690	5300	641	61	280	1.0	25

CAL YR 1984 TOTAL 3738.12 MEAN 10.2 MAX 844 MIN .00 CFSM .16 IN 2.21 AC-FT 7410
WTR YR 1985 TOTAL 4987.79 MEAN 13.7 MAX 2490 MIN .00 CFSM .22 IN 2.95 AC-FT 9890

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 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

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

REMARKS.--Estimated daily (midnight) elevations: Oct. 1-12. Elevation records good except those for estimated daily (midnight) elevations, which are fair. This station is used to aid in the operation Mountain Creek Lake. Gage-height telemeter located at station. Joe Pool Dam, located about 2 mi upstream, has been under construction and was essentially completed at the end of this water year. The reservoir has been operated as a temporary detention basin all year.

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, 462.75 ft Apr. 28 at 0700 hours; minimum elevation, 455.25 ft Oct. 3-13.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	455.26	459.21	457.79	461.77	457.78	458.16	457.93	461.27	457.43	457.04	457.20	456.37
2	455.26	459.31	457.71	461.46	457.76	458.57	457.82	460.92	457.41	457.00	457.17	456.35
3	455.25	458.87	457.67	461.11	457.74	459.01	457.75	460.51	457.40	457.62	457.13	456.35
4	455.25	458.00	457.68	460.49	457.77	458.70	457.70	459.96	457.38	457.30	457.10	456.34
5	455.25	457.85	458.30	460.24	457.82	458.32	457.65	459.41	457.36	457.22	457.05	456.33
6	455.25	457.75	458.33	459.84	457.86	458.03	457.61	458.77	457.53	457.16	457.00	456.33
7	455.25	457.67	458.16	459.44	457.85	457.93	457.57	458.33	457.59	457.13	456.96	456.32
8	455.25	457.64	458.05	459.03	457.81	457.90	457.54	458.08	457.49	457.10	456.92	456.32
9	455.25	457.61	458.00	458.76	457.78	457.87	457.51	457.99	457.43	457.06	456.88	456.30
10	455.25	457.59	457.89	458.55	457.78	457.86	457.50	457.91	457.37	457.03	456.82	456.30
11	455.25	457.52	457.83	458.42	457.75	457.85	457.50	458.06	457.40	457.00	456.78	456.29
12	455.25	457.60	457.81	458.24	457.71	457.80	457.50	458.28	457.33	456.97	456.73	456.29
13	456.27	457.56	458.55	458.15	457.70	457.97	457.65	459.67	457.29	456.93	456.69	456.28
14	457.55	457.55	458.86	458.08	457.68	459.87	457.64	460.12	457.26	456.89	456.64	456.28
15	457.72	457.57	459.55	458.00	457.67	459.87	457.61	459.56	457.25	456.87	456.60	456.28
16	457.57	457.65	460.77	458.46	457.66	459.32	457.58	458.77	457.24	456.84	456.56	456.27
17	457.42	457.92	460.74	458.82	457.66	458.70	457.55	458.20	457.23	456.80	456.51	456.27
18	457.40	457.97	461.11	458.40	457.65	458.18	457.51	457.93	457.21	456.76	456.48	456.26
19	457.30	457.98	460.52	458.29	457.65	457.94	457.49	457.81	457.18	456.73	456.45	456.26
20	460.18	457.89	459.95	457.90	457.65	460.67	457.47	457.78	457.14	456.72	456.44	456.26
21	460.64	457.84	459.31	458.00	457.65	460.72	457.45	459.56	457.11	456.79	456.44	456.25
22	459.94	457.77	458.73	458.00	457.69	460.14	457.89	459.23	457.27	456.77	456.43	456.24
23	458.86	457.75	458.24	457.95	461.03	459.57	458.00	458.56	457.26	457.79	456.43	456.23
24	458.17	457.80	458.04	457.99	460.81	458.89	457.80	458.09	457.28	457.91	456.41	456.23
25	457.62	457.66	457.91	457.84	460.69	458.36	457.69	457.85	457.25	457.73	456.41	456.22
26	458.25	457.94	457.86	457.85	459.34	458.04	457.62	457.73	457.22	457.60	456.40	456.22
27	458.62	458.10	457.88	457.87	458.75	457.95	460.74	457.65	457.19	457.50	456.40	456.20
28	458.95	458.06	457.89	457.90	458.35	457.89	462.04	457.59	457.15	457.42	456.40	456.20
29	459.73	457.92	458.43	457.84	---	457.85	461.89	457.56	457.11	457.35	456.39	456.21
30	459.99	457.87	461.11	458.11	---	457.86	461.59	457.51	457.07	457.29	456.38	456.20
31	460.10	---	461.57	457.86	---	457.91	---	457.46	---	457.24	456.37	---
MAX	460.64	459.31	461.57	461.77	461.03	460.72	462.04	461.27	457.59	457.91	457.20	456.37
MIN	455.25	457.52	457.67	457.84	457.65	457.80	457.45	457.46	457.07	456.72	456.37	456.20

CAL YR 1984 MAX 464.91 MIN 455.25
WTR YR 1985 MAX 462.04 MIN 455.25

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 mi^2.

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 with six 34- by 27foot 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 Joe Pool Dam, see REMARKS for station 08049900. Figures given herein represent total contents. Gage-height telemeter is 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 provided by 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, 24,250 acre-ft Apr. 28 at 1200 hours (elevation, 457.49 ft); minimum, 15,760 acre-ft Oct. 1, 2 (elevation, 454.04 ft).

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

454.0	15,670	457.0	22,840
455.0	17,890	458.0	25,720
456.0	20,260		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15760	22630	22580	22930	22400	22630	22710	22840	22900	22790	22250	19740
2	15760	22980	22450	23300	22430	22760	22810	23680	22810	22740	22140	19640
3	15800	22580	22450	22380	22450	22740	22960	23330	22740	23440	22090	19600
4	15830	22580	22480	23730	22580	22710	22980	23190	22660	23730	21960	19480
5	15870	22630	22810	22870	22660	22840	22790	23680	22980	23680	21890	19430
6	15910	22660	22960	22380	22710	22980	22740	23100	23560	23590	21810	19360
7	15980	22630	23070	21960	22760	23100	22660	23270	23560	23560	21730	19310
8	15960	22710	23130	22250	22840	23130	22690	23330	23590	23500	21650	19240
9	16000	22660	23040	22500	22980	23240	22710	23420	23560	23470	21550	19190
10	16030	22560	23070	22610	22840	23330	22710	23470	23440	23330	21450	19100
11	16090	22530	23240	22710	23010	22740	22690	23700	23530	23270	21340	19080
12	16230	22530	23130	22840	23010	22760	22690	23850	23470	23190	21270	19030
13	16710	22530	22430	23010	22980	22980	22840	23160	23390	23100	21160	18960
14	16850	22580	22710	23040	23040	22710	22740	23850	23330	23010	21060	19050
15	16800	22450	22610	22580	23100	23240	22760	23270	23300	22930	21010	19030
16	16820	22430	22840	22960	23070	22790	22740	23590	23240	22840	20930	18980
17	16820	22630	23210	23100	23130	23100	22760	23700	23190	22760	20850	18960
18	17110	22580	22560	22660	23130	23330	22740	23190	23160	22690	20780	18860
19	17180	22630	22870	22710	23130	22350	22740	23270	23130	22610	20670	18840
20	19380	22660	22710	22810	23190	22580	22710	22870	23040	22610	20600	18770
21	20140	22690	23100	22840	23210	23300	22710	22870	22930	22710	20520	18740
22	21190	22710	22400	22930	23300	22560	22040	23300	23130	22660	20440	18700
23	21630	22710	22630	23010	22450	23070	20410	23560	23190	22630	20360	18530
24	23010	22790	22610	23070	23470	22870	20490	23010	23270	22690	20260	18480
25	22690	22900	22710	23100	22960	22870	20520	23100	23210	22690	20170	18360
26	22500	22400	22760	22980	22630	22870	20540	23130	23160	22660	20090	18340
27	22740	22430	22690	22200	23010	22790	21160	23010	23040	22630	20000	18250
28	22740	22580	22320	22250	23270	22760	23010	23040	22980	22580	19950	18250
29	22870	22530	22740	22430	---	22840	23420	23040	22930	22530	19900	18580
30	23040	22530	22430	22250	---	22610	23010	23130	22870	22430	19880	18530
31	22530	---	22480	22320	---	22710	---	22930	---	22320	19830	---
MAX	23040	22980	23240	23730	23470	23330	23420	23850	23590	23730	22250	19740
MIN	15760	22400	22320	21960	22400	22350	20410	22840	22660	22320	19830	18250
(†)	434.16	434.39	435.55	435.60	435.54	435.45	435.50	435.44	435.13	434.39	433.30	432.85
(‡)	+39600	+5100	+26000	+1100	-1400	-2000	+1100	-1300	-7000	-16500	-23700	-9600

CAL YR 1984 MAX 23850 MIN 15760 (‡) +60400
WTR YR 1985 MAX 23850 MIN 15760 (‡) +11400

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

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 404.31 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1984, at datum 3.0 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-3 and Dec. 19 to May 8. Records fair except those for estimated daily discharges, which are poor. Flow regulated by Mountain Creek Lake (station 08050050), 1.5 mi upstream. Gage-height telemeters located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 99.2 ft^3/s (71,870 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, 5,350 ft^3/s Dec. 31 at 2145 hours (gage height, 16.28 ft); minimum daily, 0.05 ft^3/s June 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	259	.55	1630	1.1	474	1.5	1510	3.2	1.3	1.0	.44
2	.41	.99	.53	1390	.90	5.0	1.3	611	3.2	1.2	.44	.38
3	.39	479	.53	1700	.90	247	1.1	1110	7.2	4.7	.39	.34
4	.37	.81	.60	1.1	.85	70	1.0	538	4.8	7.8	.38	.28
5	.39	.68	1.2	1.0	.85	1.3	.90	53	4.1	2.5	.31	.15
6	.36	.62	.80	848	.90	1.1	.80	547	8.5	1.6	.29	.21
7	.42	.60	.73	565	.90	.90	.75	6.0	3.4	1.2	.32	.39
8	.40	.66	.64	10	.95	.80	.80	3.0	.93	1.1	.32	.40
9	.36	.62	.61	1.5	.85	.75	.80	1.9	.40	.94	.32	.31
10	.39	.53	.56	1.3	.85	.80	.75	2.0	.28	.95	.32	.24
11	.39	.51	.54	.90	.79	364	.75	2.4	.49	.95	.32	.24
12	.43	.51	.70	.85	.80	1.4	.80	2.5	.19	1.0	.27	.30
13	.64	.51	743	.80	.75	42	323	555	.11	.80	.23	.32
14	.63	.53	55	.80	.75	841	157	16	.07	.73	.25	.42
15	.43	.63	540	396	.75	6.0	5.5	446	.05	.75	.29	.57
16	.41	.50	702	3.0	.70	574	1.8	13	.30	.74	.40	.62
17	.40	.49	892	26	.70	5.0	1.3	5.2	1.5	.60	.44	.60
18	.65	387	1680	368	.70	1.3	.90	246	1.5	.49	.39	.46
19	.67	.83	1010	3.0	.65	662	.80	8.5	2.0	.51	.34	.36
20	74	.76	652	1.3	.65	947	.80	422	1.9	.61	.32	.31
21	.77	.72	10	1.1	.65	356	.75	405	1.7	1.7	.32	.24
22	.57	.65	692	.90	52	1150	1680	15	4.1	1.7	.32	.22
23	.81	.60	10	.80	372	20	1330	8.6	3.9	1.2	.32	.17
24	99	.53	1.3	.75	2150	332	20	296	4.5	1.2	.32	.17
25	928	.63	1.1	.75	1090	216	1.3	8.0	3.4	.97	.32	.33
26	708	431	1.0	55	505	148	1.1	5.2	2.4	.77	.37	.38
27	316	.95	140	678	6.0	436	1.0	4.1	1.7	.71	.42	.45
28	323	.72	373	10	1.5	4.0	3900	3.9	1.6	.62	.44	.53
29	264	.71	5.0	1.5	---	1.2	2140	3.6	1.6	.55	.44	1.5
30	.81	.61	928	1.3	---	305	2000	3.5	1.5	.40	.44	1.8
31	413	---	3000	1.1	---	10	---	4.0	---	.38	.44	---
TOTAL	3136.53	1572.90	11443.39	7699.75	4193.44	7223.55	11576.50	6855.4	70.52	40.67	11.49	13.13
MEAN	101	52.4	369	248	150	233	386	221	2.35	1.31	.37	.44
MAX	928	479	3000	1700	2150	1150	3900	1510	8.5	7.8	1.0	1.8
MIN	.36	.49	.53	.75	.65	.75	.75	1.9	.05	.38	.23	.15
AC-FT	6220	3120	22700	15270	8320	14330	22960	13600	140	81	23	26

CAL YR 1984 TOTAL 47525.92 MEAN 130 MAX 4440 MIN .08 AC-FT 94270
WTR YR 1985 TOTAL 53837.27 MEAN 147 MAX 3900 MIN .05 AC-FT 106800

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 at downstream side 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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1949 to September 1985 (discontinued).
Water-quality records.--Chemical and biochemical analyses: October 1969 to September 1982. Sediment records: January 1966 to September 1976.

REVISED RECORDS.--WSP1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 548.72 ft above 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.--No discharge records published for current year due to major inaccuracies in the stage-discharge relation caused by variable backwater from cofferdam during construction of Ray Roberts Dam. Flow is affected at times by 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^2 in the Elm Fork Trinity River watershed. The city of Gainesville discharges sewage effluent into the river upstream from this station. A gage-height telemeter is located at station. All equipment was removed and station discontinued on Sept. 18, 1985.

AVERAGE DISCHARGE.--35 years (water years 1950-84), 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.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 24	1545	27.9	5.68
Dec. 5	1415	11.4	6.34
Jan. 16	1230	64.7	7.60
Feb. 28	1200	173	12.50
Mar. 25	1645	390	24.29

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	1430	43									
2	.22	1960	31									
3	.20	1200	21									
4	.20	830	15									
5	1.0	656	13									
6	1.2	543	---									
7	1.9	453	---									
8	.32	382	---									
9	.22	329	---									
10	.19	266	---									
11	.17	203	---									
12	.16	149	---									
13	17	113	---									
14	28	87	---									
15	20	62	---									
16	1.3	42	---									
17	3.4	30	---									
18	11	243	---									
19	1.8	380	---									
20	.77	405	---									
21	89	330	---									
22	16	274	---									
23	5.6	220	---									
24	8.1	171	---									
25	38	133	---									
26	150	106	---									
27	255	85	---									
28	358	80	---									
29	344	67	---									
30	279	54	---									
31	660	---	---									
TOTAL	2292.01	11283	---									
MEAN	73.9	376	---									
MAX	660	1960	---									
MIN	.16	30	---									
AC-FT	4550	22380	---									

08050500 ELM FORK TRINITY RIVER NEAR SANGER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to September 1985 (discontinued). Sediment records: January 1966 to September 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 24...	1630	28	360	7.8	13.5	70	81	8.1	79	4.3	71
DEC 05...	1530	11	770	8.4	6.5	15	2.8	12.1	100	2.2	220
FEB 28...	1600	173	600	7.6	11.5	45	25	10.2	95	1.5	220
MAR 25...	1722	390	501	7.9	16.0	--	--	8.2	--	--	--
APR 04...	1545	197	560	8.0	18.5	20	25	8.5	94	1.5	220
JUN 27...	1730	70	470	8.2	26.0	30	23	9.2	115	4.9	200
AUG 07...	1630	6.2	795	7.7	28.0	--	--	8.3	108	2.2	250

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM 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 24...	0	25	2.0	50	3	5.0	120	24	22	.20	7.5
DEC 05...	0	78	6.1	76	2	5.6	239	52	73	.20	4.7
FEB 28...	52	81	5.0	37	1	3.1	171	47	54	.20	8.5
MAR 25...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	34	81	4.7	31	1	3.0	188	32	37	.20	10
JUN 27...	12	74	4.6	25	.8	3.9	192	26	27	.20	9.6
AUG 07...	0	87	7.5	81	2	3.9	290	56	53	.30	9.6

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)
OCT 24...	210	79	13	1.7	.100	1.8	.750	1.3	2.0	1.40	8.0
DEC 05...	440	7	5	--	<.010	1.0	.030	.97	1.0	.800	--
FEB 28...	340	46	11	1.3	.030	1.3	.100	.80	.90	.140	5.4
MAR 25...	--	--	--	--	--	1.0	--	--	1.2	.140	6.1
APR 04...	310	31	3	.96	.040	1.0	.040	.86	.90	.170	6.8
JUN 27...	290	51	12	--	<.010	.40	.050	.75	.80	.160	7.6
AUG 07...	470	--	--	--	--	--	--	--	--	--	--

08050500 ELM FORK TRINITY RIVER NEAR SANGER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 28...	1600	<1	93	1	<10	2	42
APR 04...	1545	<1	84	<1	<10	2	15
AUG 07...	1630	4	98	<1	<10	3	5

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 28...	1	8	<.1	<1	6	63
APR 04...	1	14	<.1	<1	<1	33
AUG 07...	1	24	<.1	1	<1	13

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 mi².

PERIOD OF RECORD.--April 1949 to December 1984, January to September 1985 (gage heights and discharge measurements only), discontinued.
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 above National Geodetic Vertical Datum of 1929 (U.S. Army 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.--Estimated daily discharges: Nov. 29 to Dec. 5. Daily discharge records fair. No daily discharges computed for Jan. 1 to Sept. 30 because of major inaccuracies in stage discharge relation caused by variable backwater from cofferdam during construction of Ray Roberts Dam. No know diversion above station. Data collection platform located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years (water years 1950-84), 120 ft³/s (6.13 in/yr), 86,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/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 during period October to December 1984, 3,360 ft³/s Nov. 2 at 0200 hours (gage height, 19.50 ft); no flow Oct. 1-19.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2380	4.0									
2	.00	2940	3.3									
3	.00	930	2.0									
4	.00	438	1.6									
5	.00	287	1.8									
6	.00	194	2.9									
7	.00	129	2.2									
8	.00	74	5.1									
9	.00	43	3.8									
10	.00	22	2.8									
11	.00	8.4	3.7									
12	.00	4.0	2.9									
13	.00	3.3	28									
14	.00	3.0	249									
15	.00	2.5	1850									
16	.00	1.6	2500									
17	.00	2.0	1570									
18	.00	278	468									
19	.00	421	561									
20	19	170	535									
21	24	83	436									
22	22	43	325									
23	17	23	238									
24	27	16	167									
25	594	12	108									
26	638	12	62									
27	108	32	34									
28	215	41	21									
29	129	22	61									
30	37	9.0	1370									
31	289	---	642									
TOTAL	2119.00	8623.8	11261.1									
MEAN	68.4	287	363									
MAX	638	2940	2500									
MIN	.00	1.6	1.6									
CFSM	.26	1.08	1.37									
IN.	.30	1.21	1.57									
AC-FT	4200	17110	22340									

CAL YR 1984 TOTAL 28824.57 MEAN 78.8 MAX 2940 MIN .00 CFSM .30 IN 4.03 AC-FT 57170

08051000 ISLE DU BOIS CREEK NEAR PILOT POINT, TX

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 24...	1200	24	205	7.8	13.0	450	27	8.7	84	2.5	66
DEC 05...	1140	1.8	300	7.5	6.0	400	180	10.0	81	2.2	88
MAR 01...	1000	44	520	7.5	11.5	150	55	10.6	99	1.3	160
25...	1430	101	425	7.8	17.5	--	--	7.5	--	--	--
APR 03...	1435	38	530	7.4	16.5	30	37	7.8	82	1.5	160
JUN 27...	1015	2.6	742	7.4	25.0	15	14	7.6	93	4.4	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)
OCT 24...	21	21	3.4	18	1	4.6	46	38	14	.20	12
DEC 05...	6	28	4.5	27	1	4.5	83	40	17	.20	10
MAR 01...	59	49	9.6	41	1	3.7	103	66	65	.20	11
25...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	61	50	9.4	42	1	3.6	103	58	65	.20	9.3
JUN 27...	43	67	12	67	2	5.0	174	69	85	.30	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 24...	140	207	25	2.9	.050	2.9	.120	1.8	1.9	.550	13
DEC 05...	180	67	60	.95	.050	1.0	.100	1.3	1.4	.430	12
MAR 01...	310	72	15	.48	.020	.50	.100	1.1	1.2	.120	7.7
25...	--	--	--	--	--	.30	--	--	1.2	.130	8.4
APR 03...	300	35	3	.18	.020	.20	.030	.97	1.0	.100	7.8
JUN 27...	420	42	19	--	<.010	<.10	.050	.95	1.0	.100	7.2

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 01...	1000	<1	100	<1	<10	3	200
APR 03...	1435	<1	97	<1	10	1	220

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 01...	<1	160	<.1	<1	<1	29
APR 03...	1	130	<.1	<1	<1	22

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 mi².

WATER-DISCHARGE RECORDS

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 above 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.--Estimated daily discharges: Oct. 31 to Nov. 3, Nov. 17-21, Dec. 5-6, Dec. 30 to Jan. 1, Feb. 19 to Mar. 4 and Mar. 20-22. Records poor. 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 mi² in the Clear Creek watershed. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--31 years (water years 1950-80) prior to regulation, 74.3 ft³/s (53,830 acre-ft/yr); 5 years (water years 1981-85) after completion of floodwater retarding structures, 139 ft³/s (100,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft³/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, 3,130 ft³/s Mar. 20 about 1500 hours (gage height, 18.78 ft, from crest-stage gage); no flow many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	377	3.6	1250	30	125	152	270	80	11	3.0	.00
2	.00	128	3.3	549	29	123	122	151	75	9.4	2.1	.00
3	.00	14	2.5	305	32	111	112	98	70	18	1.3	.00
4	.00	.55	1.8	202	32	120	108	70	67	20	1.1	.00
5	.00	.07	78	145	50	154	94	53	68	18	1.0	.00
6	.00	.03	11	110	84	99	81	45	1260	18	.89	.00
7	.00	.02	8.8	89	82	90	68	38	668	15	.89	.00
8	.00	.01	7.3	72	77	86	57	35	301	11	.89	.00
9	.00	.01	6.0	65	83	82	52	32	207	7.3	.79	.00
10	.00	.00	6.0	62	87	79	47	29	171	17	.79	.00
11	.00	.03	5.5	60	69	77	45	32	156	9.4	1.0	.00
12	.00	.09	5.1	53	59	70	43	45	222	16	.33	.00
13	.00	.12	11	48	55	109	81	276	123	11	.12	.00
14	.00	.10	90	49	53	737	160	506	84	3.3	.06	3.8
15	.00	.48	22	49	52	363	87	263	68	3.6	.04	.00
16	.00	2.3	356	55	50	208	62	190	57	3.9	.79	.00
17	.00	102	191	70	48	159	52	248	49	3.3	1.1	.00
18	.00	255	61	75	48	122	46	176	146	5.1	.10	.00
19	.00	74	35	65	53	105	43	124	127	2.5	.04	.00
20	.04	34	30	45	53	2060	41	169	56	2.1	.02	.00
21	.08	25	27	34	50	1600	40	1040	37	1.9	.02	.00
22	.09	19	19	35	430	961	137	759	31	15	.01	.00
23	.17	13	10	37	1320	544	303	448	28	13	.00	.38
24	4.8	9.4	5.1	36	730	310	154	274	26	8.8	.00	.00
25	1.8	13	3.6	36	428	220	96	198	25	7.3	.00	.01
26	20	9.4	2.1	32	240	168	72	159	24	12	.00	.00
27	37	6.8	1.1	30	157	122	63	127	28	5.5	.00	.00
28	28	5.5	1.2	30	117	101	66	113	38	3.9	.00	.01
29	20	4.3	19	29	---	93	302	106	31	3.6	.00	1.2
30	9.5	3.9	298	28	---	304	542	97	21	3.9	.00	.05
31	128	---	732	28	---	250	---	88	---	3.6	.00	---
TOTAL	249.48	1097.11	2053.0	3773	4598	9752	3328	6259	4344	283.4	16.38	5.45
MEAN	8.05	36.6	66.2	122	164	315	111	202	145	9.14	.53	.18
MAX	128	377	732	1250	1320	2060	542	1040	1260	20	3.0	3.8
MIN	.00	.00	1.1	28	29	70	40	29	21	1.9	.00	.00
AC-FT	495	2180	4070	7480	9120	19340	6600	12410	8620	562	32	11

CAL YR 1984 TOTAL 11860.86 MEAN 32.4 MAX 732 MIN .00 AC-FT 23530
WTR YR 1985 TOTAL 35758.82 MEAN 98.0 MAX 2060 MIN .00 AC-FT 70930

08051500 CLEAR CREEK NEAR SANGER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1984 to September 1985. Sediment analyses: February 1966 to May 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to August 1977.
WATER TEMPERATURES: May 1968 to August 1977.
SUSPENDED SEDIMENT DISCHARGE: May 1968 to August 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)
MAR										
25...	1230	292	453	8.1	17.0	9.0	210	--	76	4.4
APR										
22...	2255	325	--	--	--	--	--	--	--	--
23...	0945	334	--	--	--	--	--	--	--	--
24...	0844	190	--	--	--	--	--	--	--	--
30...	1410	550	--	--	--	--	--	--	--	--
JUN										
06...	0500	860	376	7.5	--	--	--	--	--	--
06...	0730	1220	298	7.4	--	--	--	--	--	--
06...	0930	1120	256	7.5	--	--	--	--	--	--
06...	1230	1940	262	7.5	--	--	--	--	--	--
07...	1200	630	255	8.2	--	--	--	--	--	--
08...	1200	300	315	8.3	--	--	--	--	--	--
28...	1105	39	630	--	--	--	220	56	70	12
AUG										
08...	1650	1.0	990	--	--	--	250	140	77	15

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)
MAR									
25...	16	.5	2.5	--	38	18	.20	10	--
APR									
22...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
28...	45	1	2.7	169	45	72	.20	12	360
AUG									
08...	93	3	2.9	118	63	200	.30	13	530

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR									
25...	.50	--	--	--	1.0	--	.090	--	5.6
APR									
22...	.70	--	.110	--	1.6	--	.230	.020	--
23...	1.3	--	.090	--	1.8	--	.280	.020	--
24...	.70	--	.050	--	1.1	--	.130	.010	--
30...	1.2	--	.120	--	1.8	--	.440	.020	--
JUN									
06...	--	.40	.180	.52	--	.70	--	.070	--
06...	--	.54	.220	.48	--	.70	--	.040	--
06...	--	.64	.190	.81	--	1.0	--	.050	--
06...	.30	.29	.190	.41	5.3	.60	2.60	.010	4.1
07...	--	.24	.060	.44	--	.50	--	<.010	--
08...	--	.18	.080	.52	--	.60	--	.010	--
28...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1956 to September 1976, October 1979 to current year.
Water-quality records.--Chemical analyses: January 1968, March 1985 to September 1985. Specific conductance: December 1966 to September 1975. Water temperatures: February 1966 to September 1975. Sediment records: February 1966 to September 1975.

REVISED RECORDS.--WDR TX-70-1: 1969.

GAGE.--Water-stage recorder. Datum of gage is 534.76 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--Estimated daily discharges: Jan 12-13, 19-21, and Feb. 7-8. 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 mi² above station. Several observations of water temperature were obtained during the year. Automatic water-quality sampler at this station.

AVERAGE DISCHARGE.--26 years (water year 1957-76, 1980-1985), 47.1 ft³/s (34,130 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft³/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.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 31	2200	1,870	14.85	Apr. 23	0345	1,190	14.22
Feb. 23	1515	1,690	14.73	May 14	0200	1,300	14.36
Mar. 21	1045	1,310	14.37	May 21	2145	*6,000	*16.29

Minimum daily discharge, no flow Oct. 1-24, July 11 and July 14 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	170	2.4	668	2.3	36	8.0	87	5.6	.08	.00	.00
2	.00	415	1.7	220	1.8	25	6.1	38	4.4	.02	.00	.00
3	.00	230	1.3	128	1.6	18	4.2	17	3.4	.08	.00	.00
4	.00	150	1.2	102	1.7	28	3.1	10	2.6	.27	.00	.00
5	.00	85	1.4	74	4.2	28	2.4	6.7	2.5	.53	.00	.00
6	.00	64	1.6	52	22	18	1.8	4.1	332	.30	.00	.00
7	.00	51	1.4	32	24	14	1.4	2.5	117	.14	.00	.00
8	.00	43	1.4	22	25	11	1.0	1.7	62	.10	.00	.00
9	.00	36	1.1	18	20	8.9	.84	1.3	37	.04	.00	.00
10	.00	30	.92	16	19	7.1	.74	.99	25	.01	.00	.00
11	.00	23	.85	12	15	5.4	.76	.91	24	.00	.00	.00
12	.00	17	.84	9.1	10	4.0	.77	.87	22	.07	.00	.00
13	.00	13	20	7.0	7.9	3.6	1.8	418	10	.01	.00	.00
14	.00	11	50	5.4	6.9	248	6.6	541	6.3	.00	.00	.00
15	.00	9.4	608	4.3	5.9	82	2.1	76	4.2	.00	.00	.00
16	.00	7.9	448	5.8	5.0	43	1.1	46	3.1	.00	.00	.00
17	.00	5.8	221	16	4.2	28	.79	18	2.3	.00	.00	.00
18	.00	56	275	11	3.7	18	.71	7.8	2.3	.00	.00	.00
19	.00	40	147	7.4	3.5	14	.59	4.7	2.6	.00	.00	.00
20	.00	25	143	5.1	2.9	418	.47	7.3	2.0	.00	.00	.00
21	.00	18	101	3.4	2.5	817	.38	2320	1.6	.00	.00	.00
22	.00	15	76	2.1	2.7	333	286	1800	1.3	.00	.00	.00
23	.00	12	46	1.7	1000	187	721	344	1.2	.00	.00	.00
24	.00	10	29	1.8	425	103	163	276	.99	.00	.00	.00
25	87	8.7	20	1.9	195	77	87	138	.87	.00	.00	.00
26	57	7.7	15	1.7	114	52	52	79	.71	.00	.00	.00
27	46	6.4	12	1.7	79	35	33	44	.57	.00	.00	.00
28	46	5.1	11	1.7	54	21	24	22	.41	.00	.00	.00
29	36	3.8	15	2.0	---	15	21	15	.30	.00	.00	.00
30	27	3.3	267	1.9	---	13	407	9.9	.18	.00	.00	.00
31	22	---	717	1.6	---	10	---	7.4	---	.00	.00	---
TOTAL	321.00	1572.1	3237.11	1436.6	2058.8	2721.0	1839.65	6345.17	678.43	1.65	.00	.00
MEAN	10.4	52.4	104	46.3	73.5	87.8	61.3	205	22.6	.053	.000	.000
MAX	87	415	717	668	1000	817	721	2320	332	.53	.00	.00
MIN	.00	3.3	.84	1.6	1.6	3.6	.38	.87	.18	.00	.00	.00
AC-FT	637	3120	6420	2850	4080	5400	3650	12590	1350	3.3	.00	.00

CAL YR 1984 TOTAL 6691.23 MEAN 18.3 MAX 717 MIN .00 AC-FT 13270
WTR YR 1985 TOTAL 20211.51 MEAN 55.4 MAX 2320 MIN .00 AC-FT 40090

08052700 LITTLE ELM CREEK NEAR AUBREY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: June 1962 to June 1963, June 1965 to January 1968, October 1984 to September 1985.
Sediment analyses: April 1966 to October 1974.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December1966 to June 1975.
WATER TEMPERATURES: February 1966 to June 1975.
SUSPENDED SEDIMENT DISCHARGE: February 1966 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	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)
MAR									
25...	1230	75	292	--	140	--	49	3.7	12
APR									
22...	1100	35	--	--	--	--	--	--	--
22...	2029	810	--	--	--	--	--	--	--
22-23	2100	--	--	--	--	--	--	--	--
23...	1635	410	--	--	--	--	--	--	--
24...	1320	150	--	--	--	--	--	--	--
30...	1540	425	--	--	--	--	--	--	--
JUN									
06...	0615	140	412	7.1	--	--	--	--	--
06...	1015	410	413	7.4	--	--	--	--	--
06...	1400	583	407	7.4	--	--	--	--	--
06...	1500	598	350	7.5	--	--	--	--	--
06...	1900	492	330	7.8	--	--	--	--	--
07...	0400	155	304	7.9	--	--	--	--	--
25...	1740	.86	395	--	150	24	55	4.1	20

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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR									
25...	.5	4.1	--	57	5.1	.30	17	--	--
APR									
22...	--	--	--	--	--	--	--	--	3.8
22...	--	--	--	--	--	--	--	--	3.7
22-23	--	--	--	--	--	--	--	--	3.5
23...	--	--	--	--	--	--	--	--	5.2
24...	--	--	--	--	--	--	--	--	4.4
30...	--	--	--	--	--	--	--	--	2.1
JUN									
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	1.6
06...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
25...	.7	5.9	130	60	9.7	.40	3.3	240	--

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
MAR									
25...	--	--	--	--	--	--	--	--	8.4
APR									
22...	--	.260	--	17	--	7.70	.030	--	--
22...	--	.340	--	3.4	--	.910	.100	--	--
22-23	--	.210	--	2.7	--	.740	.080	--	--
23...	--	.310	--	2.5	--	.530	.100	--	--
24...	--	.280	--	2.5	--	.490	.090	--	--
30...	--	.110	--	2.5	--	.570	.100	--	--
JUN									
06...	.10	.130	.57	--	.70	--	.050	--	--
06...	1.3	.260	.84	--	1.1	--	.050	--	--
06...	.97	.100	.70	--	.80	--	.040	--	--
06...	1.6	.100	.80	1.1	.90	.460	.090	17	--
06...	1.2	.100	.80	--	.90	--	.060	--	--
07...	.95	.080	.72	--	.80	--	.060	--	--
25...	--	--	--	--	--	--	--	--	--

08052780 HICKORY CREEK AT DENTON, TX

LOCATION.--Lat 33°09'06", long 97°08'30", Denton County, Hydrologic Unit 12030103, on left bank 4 ft upstream from upstream side of bridge on Farm Road 1830, 0.4 mi downstream from Graveyard Branch, 1.2 mi downstream from Roark Branch, 1.4 mi upstream from Atchison, Topeka, and Santa Fe Railroad Co. bridge, and 4.4 mi south of Denton County Courthouse.

DRAINAGE AREA.--129 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1985 to September 1985.

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

REMARKS.--No estimated daily discharges. Records good. There are nine floodwater-retarding structures with a combined detention capacity of 5,560 acre-ft affecting runoff from 17.0 mi² above this station. Several observations of water temperature were made during the year. An automatic sampler for sampling storm runoff is located at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33 ft³/s Sept. 14, 1985 at 0515 hours (gage height, 4.39 ft). no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stage, 29.54 ft Oct. 30, 1974, from information by the State Department of Highways and Public Transportation. Historic peaks from nearby stations indicate that any outstanding floods probably occurred in May 1908 and October 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period June 20 to September, 33 ft³/s Sept. 14 at 0515 hours (gage height, 4.39 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, JUNE TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	1.5	.06	.00
2									---	1.5	.05	.00
3									---	1.5	.04	.00
4									---	1.3	.04	.00
5									---	1.1	.03	.00
6									---	.92	.02	.00
7									---	.74	.01	.00
8									---	.57	.00	.00
9									---	.50	.00	.00
10									---	.40	.00	.00
11									---	.34	.00	.00
12									---	.32	.00	.00
13									---	.25	.00	.00
14									---	.21	.00	3.5
15									---	.18	.00	.81
16									---	.16	.00	.11
17									---	.15	.00	.02
18									---	.12	.00	.00
19									---	.10	.00	.00
20									11	.10	.00	.00
21									7.7	.10	.00	.00
22									5.0	2.3	.00	.00
23									3.9	5.9	.00	.00
24									3.1	.49	.00	.00
25									2.6	.18	.00	.00
26									2.2	.12	.00	.00
27									1.7	.10	.00	.00
28									1.6	.26	.00	.00
29									1.6	.19	.00	.95
30									1.4	.11	.00	.73
31									---	.07	.00	---
TOTAL									---	21.78	.25	6.12
MEAN									---	.70	.008	.20
MAX									---	5.9	.06	3.5
MIN									---	.07	.00	.00
AC-FT									---	43	.5	12

WTR YR 1985 TOTAL - MEAN - MAX - MIN - AC-FT -

08052780 HICKORY CREEK NEAR DENTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1984 to September 1985..

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
MAR								
25...	1224	33	461	8.0	17.0	8.5	190	--
APR								
22...	2345	--	--	--	--	--	--	--
23...	1245	--	--	--	--	--	--	--
24...	1034	--	--	--	--	--	--	--
30...	1700	--	--	--	--	--	--	--
JUN								
28...	1505	1.7	517	--	--	--	220	18

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)
MAR									
25...	68	4.6	26	.9	2.9	--	36	14	.20
APR									
22...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
JUN									
28...	78	6.2	26	.8	3.7	203	30	18	.30

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, 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, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR								
25...	11	--	1.7	--	.90	.110	--	6.5
APR								
22...	--	--	.90	.130	2.0	.150	.040	--
23...	--	--	1.6	.190	1.9	.250	.060	--
24...	--	--	1.3	.110	1.2	.120	.030	--
30...	--	--	1.2	.120	2.0	.270	.040	--
JUN								
28...	9.2	290	--	--	--	--	--	--

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 located 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 U.S. Army 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, 575,700 acre-ft Mar. 30 at 0800 hours (elevation, 519.72 ft); minimum daily, 297,600 acre-ft Oct. 20 0800 (elevation, 506.80 ft).

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

506.0	284,800	512.0	391,000	518.0	530,800
508.0	317,300	514.0	434,700	520.0	583,500
510.0	351,900	516.0			

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	302700	312700	323000	407200	438600	501700	570000	556500	512400	462000	431800	390100
2	301800	317200	323000	421900	437600	502500	566300	557600	505200	461100	430400	388900
3	301200	322300	322000	429700	437200	500000	562300	557600	497100	459900	429100	387400
4	300900	325700	321800	433100	437900	504500	558600	557300	489500	458800	428200	385700
5	300500	326700	321500	435400	437900	504500	557300	556800	483700	458300	426800	384300
6	300500	326700	320700	436500	438100	504200	553700	556800	486800	457600	425700	383100
7	300400	326900	319800	437600	438300	504200	549800	556800	489200	456200	424600	381800
8	300100	326700	319300	438100	437900	504000	544900	554200	489500	455300	422400	380800
9	299900	327100	319000	438800	438300	503700	540500	550000	488500	454400	419900	379600
10	299600	326600	318500	439700	439900	502700	535200	545400	486300	453400	418200	378400
11	299400	325900	318200	440100	439200	502500	530800	541800	486600	452100	416400	377400
12	299400	325600	317500	439500	438800	501700	526300	538000	483900	450900	414600	376400
13	299700	324500	319000	439000	439000	505200	524500	550300	481000	449500	412700	376600
14	299600	324200	320000	439500	438800	510700	520400	554700	478800	448100	411600	379800
15	299200	324200	326100	439200	437900	513700	516200	552900	478100	447000	410500	379000
16	299100	323200	332400	440600	438600	515900	511700	550000	476500	445900	408900	378200
17	298100	325200	338900	440600	438300	516400	506900	547200	474800	444700	407900	377400
18	298300	325600	348800	440800	438600	516700	503000	543600	474100	443600	406600	376600
19	297800	325400	351900	440600	438600	517700	499800	540300	471900	442400	405700	375800
20	299700	325200	356000	440400	438100	535900	497800	538700	468900	441700	404600	375000
21	299600	325000	358400	440100	438800	551600	494400	548200	467200	442200	403700	374200
22	299200	324900	359900	439700	439500	559400	509900	554200	467700	442000	402200	373200
23	299400	324700	360500	439500	461800	565200	517200	555200	468100	441500	401200	372400
24	303800	323900	362200	439500	478100	570300	518700	554700	467700	440400	400100	371200
25	306600	324000	361800	439700	491400	572200	518200	551900	467200	439900	398800	370300
26	307700	324700	362000	439000	496300	573300	518200	548500	467000	439000	397100	369100
27	308700	324400	362200	439500	498000	574900	521200	544900	466700	437900	395800	368100
28	309400	323700	362400	438800	499800	574400	522500	540300	465600	437000	394800	367000
29	309400	323700	363700	438300	---	574100	536700	534400	464600	435800	393700	369700
30	309500	323400	368900	439200	---	573800	553700	527800	463200	434200	392600	368900
31	310000	---	386400	439700	---	571400	---	520700	---	432900	391400	---
MAX	310000	327100	386400	440800	499800	574900	570000	557600	512400	462000	431800	390100
MIN	297800	312700	317500	407200	437200	500000	494400	520700	463200	432900	391400	367000
(†)	507.56	508.36	511.78	514.22	516.76	519.56	518.89	517.60	515.24	513.92	512.02	510.91
(‡)	+6700	+13400	+63000	+53300	+60100	+71600	-17700	-33000	-57500	-30300	-41500	-22500

CAL YR 1984 MAX 441300 MIN 297800 (‡) -2500
WTR YR 1985 MAX 574900 MIN 297800 (‡) +65600

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

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 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
JAN												
29...	1005	1.00	350	7.9	5.5	.55	12.2	98	K86	K12	130	28
29...	1006	.90	--	--	--	--	--	--	--	--	--	--
29...	1008	10.0	350	7.8	5.5	--	12.2	98	--	--	--	--
29...	1010	20.0	350	7.8	5.5	--	12.2	98	--	--	--	--
29...	1011	30.0	350	7.8	--	--	12.2	--	--	--	--	--
29...	1012	40.0	350	7.8	5.5	--	12.2	98	--	--	--	--
29...	1014	50.0	350	7.8	5.5	--	12.1	97	--	--	--	--
29...	1017	57.0	350	7.9	5.5	--	12.0	96	--	--	120	26
MAR												
20...	1022	1.00	385	8.0	14.0	.67	10.8	107	50	K18	130	29
20...	1023	1.10	--	--	--	--	--	--	--	--	--	--
20...	1024	10.0	384	8.0	13.0	--	10.8	104	--	--	--	--
20...	1026	20.0	388	8.0	13.0	--	10.5	101	--	--	--	--
20...	1028	30.0	386	8.0	12.5	--	10.5	100	--	--	--	--
20...	1030	40.0	386	8.0	12.5	--	10.5	100	--	--	--	--
20...	1032	50.0	386	8.0	12.5	--	10.5	100	--	--	--	--
20...	1034	60.0	386	7.9	12.5	--	10.4	99	--	--	130	29
AUG												
13...	0750	1.00	340	8.2	28.5	1.80	5.7	74	K1	K12	110	22
13...	0751	2.70	--	--	--	--	--	--	--	--	--	--
13...	0752	10.0	340	8.1	28.5	--	5.5	72	--	--	--	--
13...	0753	20.0	346	7.6	28.0	--	3.3	43	--	--	--	--
13...	0754	30.0	353	7.4	27.5	--	1.0	13	--	--	--	--
13...	0755	40.0	364	7.3	26.0	--	.4	5	--	--	--	--
13...	0756	54.0	370	7.2	25.0	--	.4	5	--	--	120	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)	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)
JAN												
29...	43	4.4	29	1	4.2	98	44	28	.40	4.2	220	14
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	42	4.3	29	1	4.2	97	44	28	--	4.2	210	23
MAR												
20...	44	4.2	25	1	4.4	98	42	25	.30	4.0	210	18
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	44	4.3	26	1	4.4	99	40	25	--	4.1	210	20
AUG												
13...	39	4.2	22	.9	4.6	93	33	22	.30	1.3	180	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	43	4.1	21	.9	4.4	118	26	22	--	4.7	200	11

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330419096575401 LEWISVILLE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN												-
29...	.59	.010	.60	.070	.63	.70	1.3	.040	.050	--	10	<1
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.59	.010	.60	.070	.63	.70	1.3	.040	.050	--	10	<10
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.69	.010	.70	.080	.42	.50	1.2	.050	.050	--	9	<1
MAR												
20...	--	<.010	.70	.070	.73	.80	1.5	.050	.060	--	7	5
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	<.010	.60	.080	.72	.80	1.4	.050	.060	--	80	<10
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	<.010	.70	.090	.91	1.0	1.7	.050	.060	--	40	<10
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.69	.010	.70	.100	.60	.70	1.4	.060	.070	--	25	4
AUG												
13...	--	<.010	<.10	.020	.68	.70	--	.010	.020	--	4	3
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	.09	.010	.10	.070	.53	.60	.70	.010	.020	3.6	30	10
13...	.08	.020	.10	.080	.42	.50	.60	.010	.020	--	30	70
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	<.010	<.10	.580	.52	1.1	--	.080	.170	--	590	790

330410096584501 LEWISVILLE LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
29...	1046	1.00	350	8.0	5.5	12.2	98
29...	1048	10.0	350	8.0	5.5	12.2	98
29...	1050	20.0	350	8.0	5.5	12.2	98
29...	1052	30.0	350	8.0	5.5	12.2	98
29...	1054	44.0	350	8.0	5.5	12.2	98
MAR							
20...	1057	1.00	387	8.0	14.5	10.8	108
20...	1059	10.0	387	8.0	13.0	10.6	102
20...	1101	20.0	387	8.0	13.0	10.6	102
20...	1103	30.0	387	8.0	13.0	10.6	102
20...	1105	40.0	386	8.0	13.0	10.6	102
20...	1107	50.0	386	8.0	12.5	10.2	97
AUG							
13...	0815	1.00	340	8.4	28.5	5.8	76
13...	0816	10.0	340	8.3	28.5	5.7	74
13...	0817	20.0	343	8.0	28.5	4.5	59
13...	0818	20.0	347	7.6	28.0	2.2	28
13...	0819	30.0	354	7.5	27.5	.6	8
13...	0820	35.0	361	7.5	27.0	.4	5
13...	0821	41.0	365	7.4	26.0	.4	5

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330450096560501 LEWISVILLE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
29...	1105	1.00	360	8.0	5.0	11.7	93
29...	1106	5.00	360	8.0	5.0	11.7	93
29...	1107	10.0	370	8.0	5.0	11.7	93
29...	1108	20.0	370	8.0	5.0	11.7	93
29...	1109	30.0	370	8.0	5.0	11.7	93
MAR							
20...	1122	1.00	430	8.3	15.0	11.3	114
20...	1124	10.0	430	8.2	14.5	10.7	107
20...	1126	20.0	390	8.0	13.0	10.4	100
20...	1128	34.0	390	8.0	13.0	10.2	98
AUG							
13...	0840	1.00	342	8.5	29.0	6.0	79
13...	0841	10.0	342	8.4	28.5	5.8	76
13...	0842	20.0	350	8.4	28.5	5.7	74
13...	0843	27.0	350	8.3	28.5	5.4	70

330606097025601 LEWISVILLE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
29...	1430	1.00	310	7.8	6.0	12.7	103
29...	1432	10.0	310	7.8	6.0	12.6	102
29...	1434	24.0	310	7.8	6.0	12.6	102
MAR							
20...	1447	1.00	393	7.9	16.0	9.7	100
20...	1449	10.0	389	7.8	15.0	9.5	96
20...	1451	20.0	388	7.8	15.0	9.0	91
20...	1453	28.0	386	7.8	15.0	9.0	91
AUG							
13...	1126	1.00	355	8.4	31.0	6.0	82
13...	1127	10.0	355	8.2	30.0	5.3	71
13...	1128	23.0	361	8.0	30.0	4.3	58

330755096572001 LEWISVILLE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
JAN										
29...	1151	1.00	330	7.8	5.0	.37	12.1	96	.78	.020
29...	1153	10.0	330	7.8	5.0	--	12.1	96	--	--
29...	1155	20.0	330	7.8	5.0	--	12.1	96	--	--
29...	1157	30.0	330	7.8	5.0	--	12.1	96	--	--
29...	1159	35.0	320	7.8	5.0	--	11.8	93	.78	.020
MAR										
20...	1147	1.00	381	8.0	15.0	--	10.5	106	.78	.020
20...	1149	10.0	382	8.0	14.0	--	10.3	102	--	--
20...	1151	20.0	384	8.0	14.0	--	10.3	102	--	--
20...	1153	30.0	384	8.0	14.0	--	10.3	102	--	--
20...	1155	40.0	376	8.0	14.0	--	10.3	102	.79	.010
AUG										
13...	0910	1.00	336	8.6	30.0	.80	6.3	84	--	<.010
13...	0911	10.0	336	8.6	30.0	--	6.3	84	--	--
13...	0912	20.0	336	8.6	30.0	--	6.2	83	--	--
13...	0913	32.0	336	8.5	30.0	--	6.1	82	--	.010

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330755096572001 LEWISVILLE LAKE SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
JAN									
29...	.80	.080	.92	1.0	1.8	.060	.080	20	<10
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	.80	.090	.51	.60	1.4	.070	.080	30	<10
MAR									
20...	.80	.070	.93	1.0	1.8	.060	.080	100	<10
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	.80	.080	.72	.80	1.6	.050	.070	60	<10
AUG									
13...	<.10	.030	.57	.60	--	.010	.030	10	<10
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	<.10	.040	.96	1.0	--	.030	.090	20	10

330959096565301 LEWISVILLE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
JAN												
29...	1228	1.00	290	7.8	4.5	.18	12.2	95	K130	K72	110	28
29...	1229	.30	--	--	--	--	--	--	--	--	--	--
29...	1230	10.0	270	7.8	4.5	--	12.2	95	--	--	--	--
29...	1232	20.0	270	7.8	4.5	--	12.1	94	--	--	--	--
29...	1234	25.0	285	7.9	4.5	--	12.1	94	--	--	110	28
MAR												
20...	1232	1.00	365	7.8	16.0	.24	9.8	101	90	40	130	39
20...	1233	.40	--	--	--	--	--	--	--	--	--	--
20...	1234	10.0	364	7.8	15.0	--	9.5	96	--	--	--	--
20...	1236	20.0	364	7.8	15.0	--	9.4	95	--	--	--	--
20...	1238	30.0	362	7.8	15.0	--	9.3	94	--	--	140	45
AUG												
13...	0940	1.00	345	8.3	30.0	1.00	5.4	72	K10	K5	110	1
13...	0941	1.60	--	--	--	--	--	--	--	--	--	--
13...	0942	10.0	345	8.3	30.0	--	5.3	71	--	--	--	--
13...	0943	20.0	345	8.2	30.0	--	5.0	67	--	--	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)
JAN											
29...	40	3.4	17	.7	3.7	86	44	11	7.1	180	22
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	40	3.4	15	.6	3.6	86	41	11	7.2	170	55
MAR											
20...	46	4.0	20	.8	4.5	93	50	16	6.0	200	30
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	48	4.2	19	.7	4.4	92	55	13	6.6	210	34
AUG											
13...	37	4.0	21	.9	4.8	108	32	23	1.8	190	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	38	4.1	22	.9	4.7	95	32	23	2.0	180	--

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330959096565301 LEWISVILLE LAKE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
JAN											
29...	1.1	.050	1.1	.190	.91	1.1	2.2	.130	.170	45	6
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	1.1	.040	1.1	.180	.72	.90	2.0	.120	.170	61	6
MAR											
20...	1.2	.060	1.3	.120	.88	1.0	2.3	.080	.120	26	5
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	1.3	.060	1.4	.120	.98	1.1	2.5	.080	.120	70	5
AUG											
13...	--	<.010	<.10	.040	.66	.70	--	.020	.040	<3	1
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	<.010	<.10	.060	.74	.80	--	.020	.040	10	16

330722096592201 LEWISVILLE LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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)
JAN										
29...	1328	1.00	290	7.9	4.5	.27	12.4	97	.67	.030
29...	1330	10.0	290	7.8	4.5	--	12.4	97	--	--
29...	1332	24.0	290	7.8	4.5	--	12.4	97	.66	.040
MAR										
20...	1342	1.00	384	7.8	16.0	.21	9.6	99	.86	.040
20...	1344	10.0	383	7.8	15.0	--	9.6	97	--	--
20...	1346	20.0	386	7.9	14.0	--	10.3	102	--	--
20...	1348	28.0	385	7.9	14.0	--	10.1	100	.78	.020
AUG										
13...	1015	1.00	334	8.6	30.0	.80	6.6	88	--	<.010
13...	1016	10.0	346	8.3	30.0	--	5.8	78	--	--
13...	1017	22.0	365	7.9	29.0	--	4.0	53	.18	.020

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)
JAN									
29...	.70	.200	.70	.90	1.6	.130	.150	50	<10
29...	--	--	--	--	--	--	--	--	--
29...	.70	.220	.68	.90	1.6	.160	.180	50	<10
MAR									
20...	.90	.160	.74	.90	1.8	.130	.190	30	<10
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	.80	.100	.60	.70	1.5	.070	.080	30	<10
AUG									
13...	<.10	.020	.58	.60	--	.010	.020	10	<10
13...	--	--	--	--	--	--	--	--	--
13...	.20	.070	.73	.80	1.0	.060	.100	20	40

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330944097003601 LEWISVILLE LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
JAN												
29...	1351	1.00	320	7.9	4.5	.18	12.3	96	K62	K48	130	46
29...	1352	.30	--	--	--	--	--	--	--	--	--	--
29...	1353	9.00	316	7.9	4.5	--	12.3	96	--	--	--	--
MAR												
20...	1407	1.00	394	7.9	17.0	.21	9.8	103	210	58	140	25
20...	1408	.40	--	--	--	--	--	--	--	--	--	--
20...	1409	10.0	408	7.8	15.5	--	9.6	98	--	--	--	--
20...	1411	15.0	419	7.8	15.5	--	9.2	94	--	--	140	31
AUG												
13...	1045	1.00	397	8.7	30.0	.30	5.7	76	K5	K18	140	14
13...	1046	.50	--	--	--	--	--	--	--	--	--	--
13...	1047	11.0	397	8.5	30.0	--	5.4	72	--	--	130	10

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)
JAN											
29...	46	4.0	19	.8	3.7	86	42	20	9.0	200	44
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
MAR											
20...	48	4.4	23	.9	4.0	113	33	24	6.9	210	29
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	50	4.7	23	.9	3.9	113	32	26	7.8	220	34
AUG											
13...	47	4.6	25	1	5.4	123	25	29	1.2	210	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	46	4.5	24	.9	5.3	124	24	29	1.1	210	55

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)
JAN											
29...	.76	.040	.80	.320	.68	1.0	1.8	.200	.240	240	18
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
MAR											
20...	.76	.040	.80	.150	.75	.90	1.7	.130	.190	<3	<1
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	.76	.040	.80	.130	.77	.90	1.7	.120	.180	81	5
AUG											
13...	--	<.010	<.10	.030	1.3	1.3	--	.070	.140	10	4
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	<.010	<.10	.050	.85	.90	--	.090	.240	7	6

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1984 to September 1985

Date	1-29-85
Time	1006
TOTAL CELLS/ml	10,397
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	227
Kirchneriella contorta	455
Mesotaenium sp.	227
Schroederia setigera	57
Selenastrum minutum	57
CYANOPHYTA (Blue-green algae)	
Aphanothece saxicola	341
Chroococcus minutus	455
Chroococcus multicoloratus	341
Chroococcus turicensis	2386
Dactylococcopsis fascicularis	227
Dactylococcopsis musicola	170
Synechococcus aeruginosa	170
Synechococcus elongatus	5170
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella pseudostelligera	57
Order Pennales	
Navicula minuscula	57

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1984 to September 1985

Date	3-20-85
Time	1023
TOTAL CELLS/ml	5,683
NUMBER OF SPECIES	9
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/ml
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1250
Aphanocapsa elachista	114
Dactylococcopsis fascicularis	114
Merismopedia minima	568
Synechococcus aeruginosa	114
Synechococcus elongatus	1648
Synechocystis sp.	57
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	795
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus hantzschii var. pusilus	1023

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1984 to September 1985

Date	8-13-85
Time	0751
TOTAL CELLS/ml	245,015
NUMBER OF SPECIES	32
DEPTH COLLECTED (ft.)	2.7

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlorococcum sp.	454
Cosmarium sp.	114
Crucigenia apiculata	454
Oocystis sp.	341
Scenedesmus sp.	227
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	1022
Anabaena spirodes var. crassa	1363
Anabaenopsis circularis	2045
Anabaenopsis raciborskii	32035
Aphanizomenon sp.	1590
Aphanocapsa delicatissima	23515
Aphanocapsa elachista	6021
Chroococcus limneticus	8520
Chroococcus pallidus	341
Chroococcus prescottii	227
Lyngbya contorta	2726
Lyngbya nana	31467
Lyngbya subtilis ?	2954
Merismopedia punctata	14200
Microcoleus lacustris	20334
Microcystis sp. 1	15677
Microcystis sp. 2	1818
Oscillatoria angustissima	18290
Oscillatoria limnetica	4771
Oscillatoria subtilissima	47826
Oscillatoria sp.	1363
Pseudoanabaena sp.	3294
Synechococcus elongatus	795
Synechococcus lineare	909
Synechocystis sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Coscinodiscus sp.	114
Cyclotella atomus	114

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake EC (330959096565301)

Phytoplankton Analyses October 1984 to September 1985

Date	1-29-85
Time	1229
TOTAL CELLS/ml	8,061
NUMBER OF SPECIES	35
DEPTH COLLECTED (ft.)	0.3

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	57
Ankistrodesmus nannoselene	57
Closterium sp.	57
Kirchneriella contorta	227
Schroederia setigera	114
Tetrastrum staurogeniaeforme	227
CHRYSOPHYTA (Golden-brown algae)	
Chroococcus dispersus	227
Chroococcus multicoloratus	57
Chroococcus turicensis	114
Dactylococcopsis fascicularis	398
Dactylococcopsis raphidioides	114
Oscillatoria acuminatum	2386
Synechococcus aeruginosa	57
Synechococcus elongatus	170
EUGLENOPHYTA (Euglenoids)	
Euglena caudata	170
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas sp.	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Coscinodiscus sp.	14
Cyclotella ocellata	909
Cyclotella pseudostelligera	1818
Melosira lirata	227
Stephanodiscus hantzschii var. *pusilus*	54
Stephanodiscus tenuis	3
Order Pennales	
Gomphonema olivaceum	57
Gyrosigma spencerii	7
Navicula cryptocephala	76
Navicula halophila	76
Navicula secreta var. *apiculata*	76
Nitzschia acicularis	13
Nitzschia dissipata	13
Nitzschia frustulum	13
Nitzschia hungarica	25
Nitzschia palea	63
Nitzschia thermalis	114
Surirella angustata	7
Synedra fasciculata	7

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake EC (330959096565301)

Phytoplankton Analyses October 1984 to September 1985

Date	3-20-85
Time	1233
TOTAL CELLS/ml	9,382
NUMBER OF SPECIES	9
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Mesotaenium sp.	170
CYANOPHYTA (Blue-green algae)	
Chroococcus multicoloratus	170
Dactylococcopsis fascicularis	568
Dactylococcopsis musicola	455
Synechococcus aeruginosa	227
Synechococcus elongatus	6705
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Stephanodiscus hantzschii var. pusilus	966
Order Pennales	
Navicula cryptocephala	114
Synedra rumpens var. familiaris	7

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake EC (330959096565301)

Phytoplankton Analyses October 1984 to September 1985

Date	8-13-85
Time	0941
TOTAL CELLS/ml	603,213
NUMBER OF SPECIES	51
DEPTH COLLECTED (ft.)	1.6

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlorococcum sp.	227
Cosmarium sp.	454
Elakotothrix viridis	454
Gloeocystis sp.	227
Mesotaenium sp.	454
Nephrocytium sp.	454
Oocystis borgei	1818
Oocystis lacustris	454
Scenedesmus serratus	1818
Schroederia setigera	681
Sphaerocystis schroeteri	3181
CYANOPHYTA (Blue-green algae)	
Anabaena catenata	2726
Anabaena spirodes var. crassa	18858
Anabaenopsis circularis	9997
Anabaenopsis raciborskii	39306
Aphanizomenon sp.	8634
Aphanocapsa delicatissima	75658
Aphanocapsa elachista	16358
Chroococcus limneticus	2954
Chroococcus prescottii	7270
Chroococcus refractus	19539
Chroococcus varius	6816
Dactylococcopsis fascicularis	227
Dactylococcopsis raphidioides	5680
Lyngbya contorta	11814
Lyngbya nana	90880
Merismopedia punctata	6362
Merismopedia tenuissima	21130
Merismopedia sp.	8634
Microcystis glauca	35670
Microcystis sp. 1	5907
Microcystis sp. 2	120643
Oscillatoria angustissima	23629
Oscillatoria limnetica	5453
Pseudoanabaena sp.	38624
Raphidiopsis curvata	1363
Synechococcus elongatus	227
Synechococcus lineare	1590
Synechococcus lineare var. spirale	1136
Synechocystis sp.	454
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Coscinodiscus sp.	909
Cyclotella meneghiniana	680
Cyclotella stelligera	227
Melosira distans	400
Melosira roseana	60
Melosira sp.	100
Stephanodiscus tenuis ?	1259
Order Pennales	
Nitzschia intermedia ?	227
Nitzschia palea	1000
Nitzschia paleacea	363
Synedra delicatissima	227

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1984 to September 1985

Date	1-29-85
Time	1352
TOTAL CELLS/ml	882
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	0.3

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	57
Scenedesmus minima	114
CYANOPHYTA (Blue-green algae)	
Dactylococcopsis fascicularis	114
Dactylococcopsis musicola	57
Synechococcus aeruginosa	57
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	57
Cyclotella pseudostelligera	284
Order Pennales	
Navicula minusculus	14
Navicula secreta var. apiculata	14
Synedra rumpens var. meneghiniana	57

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1984 to September 1985

Date	3-20-85
Time	1408
TOTAL CELLS/ml	10,795
NUMBER OF SPECIES	25
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	114
Ankistrodesmus falcatus	114
Chodatella longiseta	57
Pteromonas sp.	57
CHRYSOPHYTA (Golden-brown algae)	
Mallomonas sp.	57
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	341
Aphanocapsa elachista	341
Chroococcus dispersus	909
Chroococcus minutus	170
Chroococcus multicoloratus	398
Chroococcus turicensis	170
Dactylococcopsis fascicularis	57
Dactylococcopsis musicola	682
Synechococcus aeruginosa	284
Synechococcus elongatus	5114
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	227
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	284
Cyclotella stelligera	193
Stephanodiscus hantzschii var. pusilus	1000
Order Pennales	
Navicula cryptocephala	99
Navicula halophila	14
Navicula minusculus	14
Navicula rhyncocephala	28
Nitzschia palea	57
Nitzschia sp.	14

LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1984 to September 1985

Date	8-13-85
Time	1046
TOTAL CELLS/ml	1,012,204
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	1136
Chlorococcum sp.	1136
Phacotus lenticularis	1136
Pteromonas sp.	1136
Scenedesmus serratus	4544
Schroederia setigera	1136
Treubaria sp.	3408
CYANOPHYTA (Blue-green algae)	
Aphanizomenon sp.	9088
Aphanocapsa delicatissima	207888
Aphanocapsa elachista	5680
Chroococcus limneticus	40896
Chroococcus pallidus	1136
Chroococcus refractus	4544
Dactylococcopsis acicularis	1136
Dactylococcopsis fascicularis	9088
Lyngbya nana	34080
Lyngbya subtilis ?	191984
Merismopedia elegans	31808
Merismopedia tenuissima	53392
Microcoleus lacustris	13632
Microcystis glauca	13632
Microcystis sp. 1	13632
Microcystis sp. 2	201072
Pseudoanabaena sp.	82928
Spirulina laxa	2272
Synechococcus elongatus	7952
Synechococcus lineare	2272
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	1136
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Coscinodiscus sp.	2272
Cyclotella meneghiniana	16006
Cyclotella pseudostelligera	28
Cyclotella stelligera	3306
Melosira lirata	9088
Melosira sp.	2272
Stephanodiscus tenuis ?	1136
Order Pennales	
Diploneis sp.	1136
Nitzschia palea	5680
Nitzschia paleacea	26128
Synedra delicatissima	1136
Synedra rumpens	1136

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX

LOCATION (revised).--Lat 33°02'44", long 96°57'39", Denton County, Hydrologic Unit 12030103, on left bank at downstream edge of highway right-of-way 90 ft left of left end 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 above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Jan. 6, 1950, nonrecording gage 0.6 mi upstream at datum 3.26 ft lower.

REMARKS.--Estimated daily discharges: Dec. 23 to Jan. 8, Mar. 21-27, June 2-25, and Sept. 18-19. 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 at station.

AVERAGE DISCHARGE.--5 years (water years 1950-54), prior to regulation, 402 ft^3/s (291,200 acre-ft/yr); 31 years (water years 1955-85), regulated, 645 ft^3/s (467,300 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, 0.8 ft^3/s Jan. 19, 1955. Maximum discharge since construction of Lewisville Dam in 1954, 15,000 ft^3/s (gage-height, 27.83 ft) 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, 4,250 ft^3/s May 31 at 1600 hours (gage height, 20.12 ft); minimum daily, 0.82 ft^3/s Oct. 31.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	14	139	110	192	236	2670	339	4230	427	387	379
2	150	36	257	69	230	237	2670	529	4220	448	355	343
3	186	36	350	68	184	237	2670	390	4210	359	330	388
4	181	36	282	133	170	390	2660	366	4150	249	309	387
5	145	92	247	238	168	553	2660	354	3990	248	312	368
6	120	149	261	180	150	553	2650	357	3830	248	354	351
7	118	195	295	93	131	553	2640	359	3170	295	390	319
8	117	197	281	131	136	558	2630	1000	3020	354	652	328
9	118	198	260	138	165	559	2630	2190	3000	338	995	382
10	118	200	261	138	166	561	2610	2230	2990	346	562	373
11	103	202	312	149	155	563	2610	2230	3030	369	558	342
12	84	202	336	140	142	562	2610	2230	3020	329	558	322
13	85	202	283	140	142	567	2660	1980	3010	371	506	309
14	84	203	129	140	142	708	2630	1260	2750	415	379	362
15	84	205	119	140	142	578	2610	2130	2040	352	346	237
16	81	202	121	115	142	572	2590	2160	2000	323	346	218
17	90	190	129	76	178	570	2590	2140	2040	305	382	195
18	103	219	207	107	218	571	2210	2140	2160	293	360	181
19	76	168	61	113	199	575	1490	2130	2160	339	342	253
20	109	147	108	110	164	842	1460	2140	1930	343	386	294
21	85	145	90	159	148	660	1450	2250	1310	267	368	199
22	83	144	108	208	150	665	1460	2230	709	198	355	268
23	76	140	156	163	637	690	347	2600	704	160	369	278
24	120	131	157	118	126	690	542	2810	720	174	361	233
25	95	133	119	129	91	1500	934	3180	386	200	373	255
26	2.7	121	123	143	159	2750	826	3240	236	297	332	234
27	3.1	102	130	145	233	2720	725	3240	215	328	349	212
28	1.8	102	139	130	233	2680	1600	3290	215	284	362	191
29	1.3	112	140	128	---	2680	605	3740	319	257	337	231
30	.99	126	150	119	---	2680	943	4160	438	359	342	147
31	.82	---	138	122	---	2670	---	4230	---	438	393	---
TOTAL	2751.71	4349	5888	4092	5093	30930	59382	63624	66202	9713	12750	8579
MEAN	88.8	145	190	132	182	998	1979	2052	2207	313	411	286
MAX	186	219	350	238	637	2750	2670	4230	4230	448	995	388
MIN	.82	14	61	68	91	236	347	339	215	160	309	147
AC-FT	5460	8630	11680	8120	10100	61350	117800	126200	131300	19270	25290	17020

CAL YR 1984 TOTAL 73603.71 MEAN 201 MAX 458 MIN .82 AC-FT 146000
WTR YR 1985 TOTAL 273353.71 MEAN 749 MAX 4230 MIN .82 AC-FT 542200

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 microsiemens Nov. 14, 1983; minimum daily, 200 microsiemens May 13, 1982.
WATER TEMPERATURES: Maximum, 33.0°C July 27, 1977; minimum, 0.0°C Jan. 31 and Feb. 9, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 598 microsiemens Dec. 17; minimum daily, 266 microsiemens Jan. 26.
WATER TEMPERATURES: Maximum daily, 30.0°C July 16; minimum daily, 5.0°C on several days during January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT											
25...	1300	.50	420	8.0	17.0	70	55	8.2	86	.7	130
DEC											
06...	1425	243	398	8.2	9.0	20	1.5	11.8	102	.6	130
MAR											
01...	1330	237	397	8.2	10.5	25	16	12.4	113	.7	130
APR											
05...	1230	2660	380	8.2	16.5	15	30	9.2	96	.7	130
JUN											
25...	1230	222	360	7.2	24.5	15	13	7.1	86	1.2	130
AUG											
05...	1135	309	350	7.2	28.0	--	--	6.9	89	1.0	120
SEP											
16...	1400	221	--	--	--	10	6.0	--	--	--	--

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											
25...	49	46	4.5	33	1	5.0	85	54	62	.40	4.6
DEC											
06...	33	44	4.6	30	1	4.7	96	48	34	.30	3.6
MAR											
01...	39	46	4.6	22	.9	4.6	95	48	29	.30	4.4
APR											
05...	33	46	4.3	25	1	4.3	100	45	25	.30	4.4
JUN											
25...	16	46	4.2	22	.9	4.5	116	30	22	.30	4.4
AUG											
05...	11	42	4.3	22	.9	4.7	112	33	24	.30	1.6
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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											
25...	260	85	5	.99	.010	1.0	.090	.81	.90	.510	--
DEC											
06...	230	9	4	.58	.020	.60	.250	.55	.80	.130	4.6
MAR											
01...	220	29	18	.78	.020	.80	.390	.81	1.2	.310	5.0
APR											
05...	210	18	3	.77	.030	.80	.030	.87	.90	.060	5.1
JUN											
25...	200	26	11	.58	.020	.60	.180	.62	.80	.100	4.3
AUG											
05...	200	--	--	--	--	--	--	--	--	--	--
SEP											
16...	--	12	4	.29	.010	.30	.190	.51	.70	.200	--

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							
01...	1330	<1	53	<1	<10	3	17
APR							
05...	1230	<1	53	<1	<10	1	17
AUG							
05...	1135	3	51	<1	<10	2	5

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						
01...	4	8	<.1	<1	<1	22
APR						
05...	<1	5	<.1	<1	1	<3
AUG						
05...	1	10	<.1	<1	<1	5

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	2751.71	409	225	1670	26	195	43	319	140
NOV.	1984	4349	416	229	2690	27	315	44	521	140
DEC.	1984	5888	425	233	3700	28	439	46	735	140
JAN.	1985	4092	401	220	2430	26	284	42	462	130
FEB.	1985	5093	409	224	3090	26	360	43	588	140
MAR.	1985	30930	384	211	17700	24	2020	38	3180	130
APR.	1985	59382	374	206	33100	23	3750	36	5810	130
MAY	1985	63624	369	203	34900	23	3950	35	6060	130
JUNE	1985	66202	362	200	35700	22	4010	34	6090	130
JULY	1985	9713	358	197	5170	22	578	33	871	130
AUG.	1985	12750	376	207	7130	24	809	37	1260	130
SEPT	1985	8579	348	192	4440	21	492	31	729	120
TOTAL		273353.71	**	**	152000	**	17200	**	26600	**
WTD.AVG.		749	373	206	**	23	**	36	**	130

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407	455	411	455	369	405	367	408	362	355	382	344
2	405	417	407	400	387	402	373	354	363	352	381	341
3	404	405	404	379	420	404	373	290	362	363	386	340
4	403	412	405	392	421	400	374	298	363	365	384	342
5	381	413	410	475	421	388	372	397	364	362	382	343
6	406	414	404	472	416	390	371	398	369	356	384	345
7	388	409	406	416	431	388	370	397	366	358	377	347
8	406	407	408	399	421	385	371	396	364	360	376	344
9	394	410	407	439	405	389	372	370	362	359	375	343
10	479	406	406	473	402	389	371	372	357	352	372	341
11	414	411	405	418	411	390	373	373	353	359	371	342
12	459	412	407	412	403	390	372	372	355	358	374	344
13	414	409	443	409	409	388	373	380	356	357	373	348
14	417	412	434	399	408	401	372	381	357	356	378	357
15	415	411	494	413	407	392	374	370	361	356	375	345
16	410	409	464	412	405	389	372	369	360	358	374	350
17	412	411	598	455	390	390	371	371	360	362	377	356
18	410	415	424	418	392	389	370	369	358	361	375	354
19	420	421	436	407	417	389	378	371	357	357	373	345
20	399	423	456	410	406	431	377	372	356	360	374	360
21	417	422	458	404	403	397	375	370	358	363	376	354
22	421	418	426	304	446	389	412	373	390	372	378	347
23	420	416	431	395	413	382	410	369	415	376	375	358
24	370	420	427	404	445	384	401	370	386	363	374	355
25	400	422	429	411	446	377	382	369	385	367	377	350
26	408	458	428	266	398	376	378	375	401	354	376	352
27	444	433	427	308	397	374	382	367	384	352	376	350
28	436	437	424	361	400	383	371	364	383	354	375	362
29	413	435	419	340	---	382	459	362	373	351	374	344
30	400	424	452	413	---	376	351	364	368	354	375	360
31	448	---	461	383	---	373	---	363	---	350	372	---
MEAN	414	419	433	401	410	390	379	369	368	359	376	349

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

ONCE-DAILY

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

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. There are 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 structues 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); 5 years (water years 1981-85) after completion at floodwater-retarding structures, 151 ft^3/s (109,400 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, 1976-85.

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, 3,080 ft^3/s May 14 at 0045 hours (gage height, 12.41 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SP
1	.00	164	1.1	955	19	86	334	350	34	24	6.3	.0
2	.00	64	.65	435	21	85	168	182	32	24	5.1	.0
3	.00	32	.33	215	24	74	117	113	29	21	4.7	.0
4	.00	15	.21	153	26	76	96	80	27	18	3.6	.0
5	.00	9.9	.31	105	33	83	81	65	27	18	1.7	.0
6	.00	6.7	.79	78	38	64	70	55	686	16	.26	.0
7	.00	4.7	4.8	65	40	54	62	50	1090	17	.10	.0
8	.00	4.0	4.8	56	40	52	56	47	577	17	.05	.0
9	.00	4.0	3.5	51	41	51	53	44	312	15	.00	.0
10	.00	3.7	2.9	49	41	48	52	42	153	13	.00	.0
11	.00	2.7	2.7	44	38	48	52	41	157	11	.00	.0
12	.00	1.5	2.7	38	33	44	52	49	216	12	.00	.0
13	.00	.57	11	33	30	39	56	753	96	12	.00	.0
14	.00	.18	43	32	29	660	128	1450	63	13	.00	.0
15	.00	.05	25	34	28	383	89	426	49	10	.00	.0
16	.00	.00	118	35	28	204	66	193	42	8.8	.00	.0
17	.00	.00	125	42	28	146	55	115	37	8.7	.00	.0
18	.00	.00	56	40	27	109	49	74	35	9.1	.00	.0
19	.00	7.2	31	36	27	89	46	55	34	9.1	.00	.0
20	.00	12	22	32	27	1730	45	67	32	9.3	.00	.0
21	.00	7.7	18	21	27	2130	44	975	28	9.3	.00	.0
22	.00	4.6	15	23	30	922	233	694	29	11	.00	.0
23	.00	3.6	12	28	909	517	326	255	27	24	.00	.0
24	.00	2.5	9.3	29	807	312	136	140	25	21	.00	.0
25	.00	2.0	7.8	30	382	203	77	93	24	13	.00	.0
26	.00	1.7	6.2	29	212	142	58	70	22	11	.00	.0
27	28	4.4	5.5	27	133	122	54	55	25	26	.00	.0
28	21	4.9	5.5	27	96	101	89	48	25	14	.00	.0
29	20	4.3	17	27	---	86	224	44	27	11	.00	.0
30	7.4	2.7	125	27	---	401	884	40	24	8.6	.00	.0
31	2.3	---	598	27	---	703	---	37	---	7.2	.00	--
TOTAL	78.70	370.60	1275.09	2823	3214	9764	3852	6702	3984	442.1	21.81	.0
MEAN	2.54	12.4	41.1	91.1	115	315	128	216	133	14.3	.70	.00
MAX	28	164	598	955	909	2130	884	1450	1090	26	6.3	.0
MIN	.00	.00	.21	21	19	39	44	37	22	7.2	.00	.0
AC-FT	156	735	2530	5600	6370	19370	7640	13290	7900	877	43	.0

CAL YR 1984 TOTAL 6244.20 MEAN 17.1 MAX 598 MIN .00 AC-FT 12390
WTR YR 1985 TOTAL 32527.30 MEAN 89.1 MAX 2130 MIN .00 AC-FT 64520

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 mi^2.

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 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 mi^2 in the Denton Creek watershed. Gage-height telemeter located 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 U.S. Army 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, 201,700 acre-ft May 2 at 1600 hours (elevation, 537.75 ft); minimum daily, 108,100 acre-ft Dec. 12 at 1600 hours (elevation, 523.31 ft).

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

523.0	106,500	529.0	140,400	535.0	181,200
525.0	117,200	531.0	153,300	537.0	195,900
527.0	128,400	533.0	166,800	539.0	211,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110100	110300	108700	119900	127300	139200	172300	201500	181800	181300	170800	158300
2	110000	110400	108500	122500	127100	139500	172700	201600	181500	181100	170300	157900
3	109800	110500	108400	123400	127100	139500	173000	201400	181300	180700	169900	157500
4	109700	110600	108400	124100	127000	140300	173300	200900	181200	180400	169400	157000
5	109600	110600	108400	124500	127400	140400	173400	200100	181800	180000	168900	156500
6	109600	110400	108500	124700	127600	140600	173500	198400	184500	179700	168600	156200
7	109600	110300	108300	125000	127800	140900	173500	196500	186800	179300	168200	155900
8	109600	110300	108300	125200	127900	141100	173500	194100	188200	179000	167700	155200
9	109500	110300	108300	126600	128100	141300	173500	191500	188800	178600	167300	155200
10	109500	110200	108200	125700	128400	141400	173500	188900	189000	178300	166800	154700
11	109500	110000	108200	125800	128400	141700	173600	186200	189500	177800	166400	154500
12	109600	109900	108200	125800	128400	141700	173700	184000	189700	177400	165900	154100
13	109700	109700	108700	125900	128500	142500	175700	185100	189500	177000	165500	155100
14	109700	109700	108800	125900	128700	144600	176100	188500	189000	176600	165100	156400
15	109600	109600	109200	126200	128600	146200	176400	187900	188600	176100	164800	156300
16	109500	109400	109500	126500	128700	146800	176600	186500	187800	175700	164300	156000
17	109400	109900	110400	126600	128700	147200	176600	185400	186800	175300	164000	155700
18	109400	110100	111800	126700	128800	147500	176700	184200	186200	174900	163600	155400
19	109400	110000	112100	126900	128900	147900	176700	183400	185200	174500	163200	155100
20	109900	109900	112300	126900	128900	153800	176800	183500	184200	174200	162800	155000
21	110000	109900	112400	126800	129200	159700	176800	192600	183700	174300	162400	155000
22	109900	109200	112500	126800	129500	162400	183100	195000	183400	174100	162000	154700
23	109900	109100	112600	126900	133600	163900	184500	192300	183300	173800	161700	154200
24	110800	109100	112600	126900	136200	164900	184900	189700	183100	173500	161300	153900
25	111000	108900	112600	127000	137300	165500	184900	187600	182900	173300	160900	153600
26	111000	109200	112600	127000	138000	166400	185000	185000	182500	173000	160400	153500
27	111100	108800	112600	127000	138300	168000	186200	183200	182300	172600	159900	153500
28	111000	108700	112600	127000	138800	168700	187300	182600	181800	172300	159600	153300
29	110600	108700	112100	127100	---	169200	192000	182500	181700	172000	159400	153000
30	110300	108600	112700	127300	---	170100	200300	182300	181500	171600	159000	152600
31	110000	---	113400	127300	---	171400	---	182100	---	171200	158600	---
MAX	111100	110600	113400	127300	138800	171400	200300	201600	189700	181300	170800	158300
MIN	109400	108600	108200	119900	127000	139200	172300	182100	181200	171200	158600	152600
(†)	523.65	523.40	524.29	526.81	528.73	533.65	537.57	535.13	535.05	533.62	531.80	530.90
(‡)	-200	-1400	+4800	+13900	+11500	+32600	+28900	-18200	-600	-10300	-12600	-6000

CAL YR 1984 MAX 138900 MIN 108200 (‡) -16700
WTR YR 1985 MAX 201600 MIN 108200 (‡) +42400

(†) Elevation, in feet, at end of month.
(‡) 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 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
MAR							
19...	1242	1.00	417	8.1	14.0	9.7	95
19...	1244	10.0	417	8.1	14.0	9.7	95
19...	1246	20.0	417	8.1	14.0	9.7	95
19...	1248	34.0	417	8.1	13.5	9.6	93
AUG							
12...	1120	1.00	352	8.3	29.5	5.6	75
12...	1121	10.0	352	8.2	29.5	5.6	75
12...	1122	20.0	355	8.0	29.0	5.0	66
12...	1123	25.0	355	7.6	29.0	3.2	42
12...	1124	30.0	363	7.4	27.5	.4	5
12...	1125	37.0	372	7.4	26.0	.4	5

325822097030401 GRAPEVINE LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
MAR												
19...	1202	1.00	418	8.1	14.0	.80	9.7	95	50	K3	150	37
19...	1203	1.30	--	--	--	--	--	--	--	--	--	--
19...	1204	10.0	418	8.1	14.0	--	9.7	95	--	--	--	--
19...	1206	20.0	418	8.1	14.0	--	9.7	95	--	--	--	--
19...	1208	30.0	418	8.1	14.0	--	9.7	95	--	--	--	--
19...	1210	40.0	412	8.0	14.0	--	9.6	94	--	--	--	--
19...	1212	50.0	412	7.6	13.0	--	9.4	90	--	--	150	38
AUG												
12...	1044	1.00	352	8.2	29.5	1.80	6.1	82	K2	K3	130	28
12...	1045	3.00	--	--	--	--	--	--	--	--	--	--
12...	1046	10.0	352	8.1	29.5	--	6.1	82	--	--	--	--
12...	1047	20.0	352	7.8	29.0	--	5.6	74	--	--	--	--
12...	1048	25.0	355	7.5	29.0	--	2.4	32	--	--	--	--
12...	1049	30.0	364	7.2	27.5	--	.4	5	--	--	--	--
12...	1050	40.0	373	7.2	25.5	--	.4	5	--	--	--	--
12...	1051	53.0	380	7.1	24.5	--	.4	5	--	--	150	10

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)
MAR												
19...	48	7.1	23	.9	4.9	112	38	29	.20	3.3	220	9
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	48	7.2	23	.9	4.4	112	38	29	--	4.4	220	56
AUG												
12...	41	6.3	21	.8	4.6	101	28	27	.30	3.6	190	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	48	6.2	20	.8	4.6	136	23	26	--	7.3	220	8

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325822097030401 GRAPEVINE LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
MAR											
19...	--	<.010	.30	.100	.70	.80	1.1	.060	.010	<3	<1
19...	--	--	--	--	--	--	--	--	--	--	--
19...	.29	.010	.30	.120	.38	.50	.80	.040	.040	30	<10
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	<.010	.30	.100	.80	.90	1.2	.040	.040	20	<10
19...	--	--	--	--	--	--	--	--	--	--	--
19...	.29	.010	.30	.180	.82	1.0	1.3	.050	.080	36	21
AUG											
12...	--	<.010	<.10	.040	.56	.60	--	<.010	<.010	5	64
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.040	.46	.50	--	<.010	.010	20	40
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.170	.33	.50	--	<.010	<.010	110	960
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.960	.44	1.4	--	.120	.150	280	1300

325930097053801 GRAPEVINE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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)
MAR												
19...	1347	1.00	420	8.1	14.5	.70	9.5	94	60	K16	150	33
19...	1349	10.0	420	8.1	14.5	--	9.5	94	--	--	--	--
19...	1351	20.0	420	8.1	14.5	--	9.5	94	--	--	--	--
19...	1353	30.0	420	8.0	14.0	--	9.2	90	--	--	--	--
19...	1355	38.0	420	8.0	14.0	--	9.2	90	--	--	150	35
AUG												
12...	1145	1.00	350	8.9	30.5	1.80	6.5	88	K12	K4	--	--
12...	1147	10.0	350	8.8	30.5	--	6.5	88	--	--	--	--
12...	1148	20.0	352	8.6	30.0	--	4.7	63	--	--	--	--
12...	1149	25.0	354	7.6	29.0	--	.9	12	--	--	--	--
12...	1150	30.0	359	7.4	28.5	--	.4	5	--	--	--	--
12...	1151	40.0	369	7.4	28.0	--	.4	5	--	--	--	--
12...	1152	44.0	373	7.3	27.0	--	.4	5	--	--	--	--

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)
MAR											
19...	48	7.1	23	.9	4.3	116	38	29	3.4	220	12
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	48	7.0	23	.9	4.3	114	40	30	3.5	220	47
AUG											
12...	--	--	--	--	--	106	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	126	--	--	--	--	--

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

325930097053801 GRAPEVINE LAKE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
MAR											
19...	--	<.010	.30	.100	.70	.80	1.1	.040	.040	<3	<1
19...	--	--	--	--	--	--	--	--	--	--	--
19...	.29	.010	.30	.100	.40	.50	.80	.040	.040	40	<10
19...	--	--	--	--	--	--	--	--	--	--	--
19...	.29	.010	.30	.120	.48	.60	.90	.040	.080	11	5
AUG											
12...	--	<.010	<.10	.030	.57	.60	--	<.010	<.010	10	<10
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.020	.48	.50	--	<.010	<.010	20	<10
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.030	.57	.60	--	.010	.010	30	30
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.10	.550	.45	1.0	--	.020	.040	--	--

325933097081401 GRAPEVINE LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
MAR							
19...	1417	1.00	424	8.1	14.0	9.2	90
19...	1419	10.0	424	8.1	14.0	9.2	90
19...	1421	18.0	424	8.1	14.0	9.1	89
AUG							
12...	1220	1.00	353	8.7	30.5	5.9	80
12...	1221	10.0	353	8.5	30.5	5.3	72
12...	1222	22.0	353	8.5	30.5	5.3	72

330106097094601 GRAPEVINE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
MAR							
19...	1442	1.00	440	8.1	14.5	9.3	92
19...	1444	10.0	440	8.1	14.5	9.3	92
AUG							
12...	1245	1.00	364	8.6	32.0	5.8	81
12...	1246	12.0	360	8.4	31.0	5.0	69

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

330207097103701 GRAPEVINE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	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)
MAR												
19...	1502	1.00	470	8.1	15.0	.20	9.2	92	70	K22	200	40
19...	1504	7.00	470	8.1	15.0	--	9.2	92	--	--	200	41
AUG												
12...	1300	1.00	366	8.5	32.0	.50	5.9	82	K14	K12	130	19
12...	1301	.90	--	--	--	--	--	--	--	--	--	--
12...	1302	8.00	361	8.4	31.5	--	5.0	69	--	--	130	27

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)
MAR											
19...	69	6.3	19	.6	3.9	159	45	19	7.6	270	69
19...	69	6.4	19	.6	3.9	158	39	24	7.6	260	61
AUG											
12...	40	6.2	21	.9	4.8	107	30	29	4.8	200	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	42	6.5	22	.9	4.7	105	30	29	4.8	200	23

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)
MAR											
19...	.38	.020	.40	.090	.91	1.0	1.4	.040	.100	8	12
19...	.48	.020	.50	.100	.60	.70	1.2	.060	.100	18	12
AUG											
12...	--	<.010	<.10	.040	.66	.70	--	.020	.040	<3	1
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	.010	<.10	.060	.44	.50	--	.020	.070	<3	7

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1984 to September 1985

Date	3-19-85
Time	1203
TOTAL CELLS/ml	6,106
NUMBER OF SPECIES	9
DEPTH COLLECTED (ft.)	1.3

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Closteriopsis longissima	28
Kirchneriella lunaria	142
Schroederia setigera	28
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	85
Aphanothece sp.	114
Dactylococcopsis fascicularis	227
Dactylococcopsis musicola	28
Synechococcus elongatus	5227
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	227

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake AC (325822097030401)

Phytoplankton Analyses October 1984 to September 1985

Date	8-12-85
Time	1045
TOTAL CELLS/ml	226,258
NUMBER OF SPECIES	45
DEPTH COLLECTED (ft.)	3.0

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Chlorococcum sp.	341
Crucigenia apiculata	909
Elakotothrix viridis	227
Mesotaenium sp.	227
Oocystis sp.	227
Pteromonas sp.	227
Scenedesmus sp.	454
Selenastrum sp.	114
Spondylosium planum	341
Tetraedron minimum	114
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaena spirodes var. crassa	9202
Anabaenopsis circularis	10224
Anabaenopsis raciborskii	26128
Aphanizomenon sp.	1818
Aphanocapsa delicatissima	52142
Aphanocapsa elachista	16358
Aphanothece saxicola	16699
Chroococcus limneticus var. subsalsus	454
Chroococcus pallidus	4090
Dactylococcopsis fascicularis	114
Lyngbya contorta	682
Lyngbya nana	32376
Lyngbya sp.	1477
Microcystis aeruginosa	1818
Microcystis marina	795
Microcystis sp.	1818
Oscillatoria angustissima	3862
Oscillatoria limnetica	4544
Pseudoanabaena sp.	18290
Spirulina laxa	1498
Spirulina sp.	1022
Synechococcus elongatus	454
Synechococcus lineare	10224
Synechococcus sp.	454
Synechocystis sp.	
EUGLENOPHYTA (Euglenoids)	
Trachelomonas zmiewiki	114
PYRROPHYTA (Dinoflagellates)	
Peridinium sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella giganteus	341
Cyclotella meneghiniana	95
Cyclotella pseudostelligera	700
Order Pennales	
Achnanthes microcephala	3862
Navicula accomoda	57
Nitzschia acicularis	114
Nitzschia palea	114
Synedra rumpens	909

GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake EC (330207097103701)

Phytoplankton Analyses October 1984 to September 1985

Date	8-12-85
Time	1301
TOTAL CELLS/ml	153,763
NUMBER OF SPECIES	48
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/ml
CHLOROPHYTA (Green algae)	
Actinastrum hantzschii	454
Chlorococcum sp.	341
Cosmarium sp.	114
Dictyosphaerium sp.	682
Elakotothrix viridis	227
Gloeocystis sp.	568
Golenkinia radiata	114
Nephrocytium sp.	227
Scenedesmus quadricauda	227
Scenedesmus sp.	1818
Schroederia setigera	114
Staurastrum sp.	227
Tetraedron minimum	114
Treubaria sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaena spirodes var. crassa	2954
Anabaenopsis raciborskii	13632
Aphanizomenon sp.	8179
Aphanocapsa delicatissima	16131
Aphanocapsa elachista	5453
Aphanocapsa elachista var. conferta	3635
Aphanothece saxicola	1818
Chroococcus limneticus var. subsalsus	3635
Chroococcus pallidus	1136
Dactylococcopsis fascicularis	341
Lyngbya contorta	3635
Lyngbya nana	17381
Lyngbya subtilis ?	8974
Merismopedia punctata	909
Merismopedia tenuissima	1818
Oscillatoria angustissima	4544
Oscillatoria limnetica	3635
Pseudoanabaena sp.	42146
Spirulina laxa	3181
Synechococcus lineare	341
EUGLENOPHYTA (Euglenoids)	
Euglena acus	227
Phacus lemmermannii	114
Trachelomonas zmiewiki	114
XANTHOPHYTA (Yellow-green algae)	
Centritractus sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella giganteus	1136
Cyclotella meneghiniana	955
Cyclotella pseudostelligera	522
Order Pennales	
Achnanthes microcephala	568
Diploneis sp.	227
Nitzschia acicularis	114
Nitzschia inconspicua	114
Nitzschia microcephala	57
Nitzschia palea	341
Synedra rumpens	341

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 records.--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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. 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 city of Grapevine diverts water from Denton Creek just downstream from Grapevine Dam. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1948-52), prior to regulation, 140 ft^3/s (101,400 acre-ft/yr); 33 years (water years 1953-85), regulated, unadjusted, 155 ft^3/s (112,300 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, 1,610 ft^3/s May 24, at 1500 hours (gage height, 16.17 ft); minimum daily, 4.7 ft^3/s Feb. 16-17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	223	15	69	24	7.7	8.0	288	132	44	134	95
2	36	27	16	14	24	7.2	6.5	538	129	46	141	93
3	35	22	17	12	20	6.8	8.4	538	84	95	144	99
4	36	18	17	11	9.0	8.1	13	492	56	129	144	104
5	36	18	20	10	9.1	9.0	13	596	76	121	144	106
6	36	18	18	9.8	8.9	6.6	13	968	82	107	144	97
7 33	36	18	16	9.0	8.7	6.1	6.2	1200	66	111	141	92
8	35	17	18	9.4	8.4	6.3	6.9	1290	63	116	135	86
9	35	17	18	9.1	8.4	6.6	7.6	1460	63	122	124	91
10	36	16	17	9.0	8.5	7.6	8.8	1450	102	127	129	92
11	36	17	19	9.1	8.1	7.6	9.6	1440	169	127	128	95
12	36	16	19	8.7	8.2	7.2	6.2	1320	162	125	127	93
13	35	16	24	8.9	7.8	11	117	831	259	126	127	89
14	36	15	22	8.9	6.5	34	16	266	365	130	127	125
15	30	15	26	9.0	5.1	9.2	9.2	917	364	132	114	77
16	21	15	33	9.9	4.7	6.5	8.0	1220	462	133	102	71
17	21	17	30	9.3	4.7	5.5	8.5	785	550	134	102	70
18	21	24	43	9.1	5.2	5.1	8.7	799	561	133	102	74
19	21	17	13	8.7	6.0	5.5	9.9	564	561	133	104	74
20	29	16	11	8.4	6.1	88	9.4	366	491	136	111	72
21	23	16	11	13	6.3	14	8.7	423	282	125	108	70
22	20	15	9.6	26	6.0	8.0	213	665	107	94	107	71
23	22	15	9.2	26	270	6.5	32	1340	114	88	112	73
24	64	15	9.6	26	17	5.8	28	1570	110	87	115	75
25	42	15	9.6	26	11	5.1	37	1410	111	85	114	74
26	57	18	9.6	26	9.6	6.1	53	1330	109	82	111	73
27	73	17	10	26	7.7	19	168	1080	110	83	114	72
28	85	18	9.8	26	7.1	9.6	557	448	84	90	112	71
29	154	17	9.8	26	---	7.6	208	133	49	100	111	113
30	217	16	9.3	25	---	11	354	128	47	112	106	63
31	224	---	100	25	---	8.8	---	129	---	125	100	---
TOTAL	1624	724	609.5	523.3	526.1	353.1	1952.6	25984	5920	3398	3734	2550
MEAN	52.4	24.1	19.7	16.9	18.8	11.4	65.1	838	197	110	120	85.0
MAX	224	223	100	69	270	88	557	1570	561	136	144	125
MIN	20	15	9.2	8.4	4.7	5.1	6.2	128	47	44	100	63
AC-FT	3220	1440	1210	1040	1040	700	3870	51540	11740	6740	7410	5060

CAL YR 1984 TOTAL 16394.5 MEAN 44.8 MAX 224 MIN 9.2 AC-FT 32520
WTR YR 1985 TOTAL 47898.6 MEAN 131 MAX 1570 MIN 4.7 AC-FT 95010

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 above 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.--No estimated daily discharges. 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 for municipal use from pool at gage and from the river 14 mi downstream. A water treatment plant returns water to river below this station. In addition, 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 are 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); 31 years (water years 1955-85), regulated, unadjusted, 727 ft^3/s (526,700 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, 6,170 ft^3/s Apr. 28 at 0200 hours (gage height, 5.64 ft); minimum daily, 1.4 ft3/s Jan. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SP
1	41	163	13	458	64	163	2390	477	3850	183	213	17
2	43	72	60	115	107	168	2340	641	3920	186	181	10
3	73	37	154	69	61	162	2350	503	3960	198	166	13
4	90	30	136	157	58	260	2350	463	3920	126	152	24
5	69	15	104	55	53	378	2350	503	3810	99	154	17
6	37	13	79	18	30	366	2310	822	4030	99	178	18
7	35	43	109	2.1	4.5	364	2300	1100	3060	111	217	17
8	37	53	109	71	4.7	368	2290	1660	2790	161	361	13
9	51	46	93	37	30	362	2320	3280	2780	155	785	17
10	46	47	63	1.4	38	368	2330	3430	2760	156	376	19
11	67	49	116	53	33	361	2310	3390	3070	192	361	17
12	50	47	138	35	22	369	2300	3260	2910	149	359	11
13	33	43	192	19	12	390	2780	2670	2930	170	332	11
14	26	41	45	28	31	863	2460	1050	2840	225	206	42
15	19	68	182	26	31	447	2360	2320	1970	180	171	17
16	28	62	235	62	28	414	2320	3020	1930	152	153	13
17	19	83	442	23	71	400	2300	2440	2090	151	189	7
18	84	265	945	20	211	380	2030	2410	2340	139	178	9
19	40	52	46	48	238	365	1210	2250	2300	148	151	0
20	202	55	98	32	198	1230	1150	1990	2080	207	209	13
21	38	39	24	28	185	566	1160	2740	1210	299	194	6
22	22	36	16	91	146	474	2300	2300	170	156	170	10
23	46	49	68	59	1690	793	740	3470	107	54	179	15
24	191	38	32	8.9	251	784	404	4040	112	66	193	2
25	475	43	18	19	48	1100	768	4250	98	43	194	18
26	5.5	57	12	38	50	2270	721	4260	83	116	155	15
27	42	28	9.0	62	165	2710	869	4080	104	134	167	18
28	10	26	18	20	162	2460	4270	3860	93	127	185	3
29	48	10	39	29	---	2400	892	3860	67	91	171	39
30	38	11	43	30	---	2440	2460	3860	200	149	162	14
31	24	---	988	24	---	2410	---	3850	---	251	206	--
TOTAL	2029.5	1621	4626.0	1738.4	4022.2	26585	59134	78249	61584	4673	7068	465
MEAN	65.5	54.0	149	56.1	144	858	1971	2524	2053	151	228	15
MAX	475	265	988	458	1690	2710	4270	4260	4030	299	785	42
MIN	5.5	10	9.0	1.4	4.5	162	404	463	67	43	151	9
AC-FT	4030	3220	9180	3450	7980	52730	117300	155200	122200	9270	14020	920

CAL YR 1984 TOTAL 41097.6 MEAN 112 MAX 988 MIN 1.5 AC-FT 81520
WTR YR 1985 TOTAL 255975.1 MEAN 701 MAX 4270 MIN 1.4 AC-FT 507700

08056500 TURTLE CREEK AT DALLAS, TX

LOCATION.--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 maximum only), October 1951 to September 1980, and April 1984 to current year. 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 above National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1951, at site 52 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow is slightly affected by eight small on-channel dams above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1952-80, 1985) 8.38 ft^3/s (6,070 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s Apr. 28, 1966, gage height 10.54 ft, from rating curve 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 lease 1903, that of Apr. 28, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	1130	4,150	*7.64	May 14	0200	1,610	4.92
Nov. 1	1300	1,850	5.22	May 21	0330	2,680	6.19
Mar. 26	2245	1,980	5.38	June 5	1945	1,810	5.17
Apr. 22	1145	2,510	6.00	July 3	1945	1,610	4.92

Minimum daily discharge, 0.68 ft^3/s Sept. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	102	5.1	11	1.5	9.2	13	7.1	1.8	1.6	1.6	.79
2	1.0	9.0	3.1	17	2.8	6.3	3.7	9.2	1.6	1.5	1.4	.92
3	1.6	7.0	5.9	9.4	2.6	4.4	7.8	12	4.0	108	1.2	.89
4	5.9	6.9	8.9	8.8	9.5	14	4.8	9.6	3.4	15	1.6	.85
5	3.3	6.5	26	8.0	9.4	7.3	2.6	5.7	115	9.1	2.3	.99
6	8.1	6.0	7.0	8.0	8.4	4.6	4.0	5.4	76	3.4	2.2	1.4
7	16	5.1	5.7	7.7	7.0	4.5	7.8	5.2	12	2.9	1.2	2.3
8	4.8	2.6	5.4	7.6	5.1	4.3	5.1	4.4	7.0	3.7	1.2	1.4
9	43	4.0	5.5	8.8	5.1	5.3	6.5	2.7	5.4	4.0	1.2	1.7
10	7.7	2.7	5.2	7.9	4.0	3.8	4.5	2.4	5.3	1.5	1.3	1.1
11	32	1.2	5.4	9.6	3.3	4.4	2.3	3.8	18	3.3	1.4	1.1
12	22	1.6	5.6	9.3	3.3	4.2	2.8	6.3	12	1.6	1.2	1.5
13	77	4.7	55	6.5	3.4	28	111	30	7.6	1.6	1.2	1.2
14	14	4.1	42	3.9	2.9	47	9.2	65	3.7	1.5	1.1	19
15	4.8	3.7	64	2.5	2.1	10	11	10	2.0	1.5	1.5	2.9
16	20	2.5	39	26	1.5	9.9	13	9.7	2.0	1.6	1.3	3.1
17	4.6	22	171	13	3.9	9.8	8.9	7.5	2.2	1.4	1.3	2.0
18	141	66	40	9.6	3.2	8.7	5.1	4.6	15	1.6	1.3	1.7
19	7.2	5.1	15	7.6	4.9	6.3	4.2	3.4	6.3	21	1.2	2.2
20	418	3.2	9.8	6.3	3.8	100	4.0	52	4.3	14	1.2	1.9
21	11	4.2	8.5	4.6	1.7	12	5.5	187	1.5	51	1.2	1.9
22	26	4.0	7.3	2.7	4.2	12	213	8.1	17	5.0	1.2	1.4
23	14	3.3	7.0	6.0	96	9.9	15	6.7	5.6	3.0	1.1	1.3
24	106	5.6	6.8	5.5	14	9.8	12	5.2	3.7	2.7	1.6	1.2
25	49	25	6.6	3.7	13	8.4	12	4.5	1.7	2.5	1.0	1.2
26	15	69	6.6	4.3	8.3	112	10	4.4	1.3	2.0	.95	1.2
27	26	7.8	14	4.3	4.5	38	47	3.8	1.6	1.7	.94	1.2
28	7.3	6.6	7.3	4.9	5.5	13	102	10	2.8	1.6	.91	1.7
29	49	6.4	74	5.1	---	17	13	12	4.3	1.7	.94	86
30	7.7	6.3	42	3.8	---	48	9.2	5.9	1.2	1.7	.97	4.7
31	12	---	50	1.6	---	16	---	2.1	---	1.5	.90	---
TOTAL	1156.6	404.1	754.7	235.0	234.9	588.1	670.0	505.7	345.3	274.2	39.61	150.74
MEAN	37.3	13.5	24.3	7.58	8.39	19.0	22.3	16.3	11.5	8.85	1.28	5.02
MAX	418	102	171	26	96	112	213	187	115	108	2.3	86
MIN	1.0	1.2	3.1	1.6	1.5	3.8	2.3	2.1	1.2	1.4	.90	.79
AC-FT	2290	802	1500	466	466	1170	1330	1000	685	544	79	299

WTR YR 1985	TOTAL	5358.95	MEAN	14.7	MAX	418	MIN	.79	AC-FT 10630
CAL 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 mi².

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. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 368.02 ft above 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.--Estimated daily discharges: June 12-17. 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. The Trinity 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 at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--82 years, 1,522 ft³/s (1,103,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184,000 ft³/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft³/s; minimum observed for periods 1903-6, 1920-75, 1.2 ft³/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, 12,400 ft³/s Apr. 29 at 0715 hours (gage height, 33.89 ft); minimum daily, 244 ft³/s Dec. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	312	2140	306	8430	432	917	3070	7340	3980	430	410	348
2	306	4400	281	4400	443	751	2900	4040	3920	415	407	339
3	307	2090	289	2970	470	563	2810	2850	3940	704	386	351
4	313	927	331	1430	565	972	2770	1520	3980	1070	366	350
5	320	611	937	976	788	913	2770	1430	4130	417	354	353
6	315	519	861	1850	631	765	2680	1540	7420	367	360	368
7	687	458	424	644	542	732	2650	1560	6510	351	351	381
8	489	448	361	969	490	725	2590	1590	4460	352	378	356
9	502	423	303	549	468	706	2590	2550	3310	353	733	361
10	1050	408	269	542	462	698	2620	3410	3070	348	752	366
11	468	405	244	503	455	938	2620	4010	3390	355	519	360
12	831	397	245	471	447	706	2610	5460	3700	343	505	359
13	1870	390	1470	464	439	757	3980	5830	3500	332	511	354
14	1710	376	2530	464	425	4550	5130	4840	3300	331	451	1430
15	662	370	2450	721	419	3520	3580	3210	2400	333	387	3160
16	507	333	4110	925	408	1750	2890	3850	2400	337	369	870
17	406	397	3840	1100	404	1030	2700	3720	2500	341	360	566
18	957	3270	8160	986	404	899	2620	3450	3000	340	354	443
19	1450	2270	5600	535	415	981	2090	3280	3130	378	349	410
20	3600	686	2850	480	462	4370	1560	4440	2620	559	352	389
21	7800	485	779	466	450	5360	1520	6560	2040	876	365	369
22	3520	436	942	488	453	3130	4570	7390	1300	1320	347	373
23	1620	387	424	467	4990	1640	10900	5100	607	607	350	367
24	2280	372	365	469	6550	1470	5590	4930	569	2050	360	371
25	6600	511	321	457	2970	1760	2660	4940	532	767	364	360
26	4410	994	289	451	1070	2180	1570	4870	433	447	363	356
27	2470	799	348	950	820	6210	1260	4820	418	399	354	355
28	1810	439	709	461	593	5680	6900	4630	408	389	349	350
29	1340	366	404	447	---	3960	11600	3980	393	380	344	1550
30	1190	330	2590	440	---	4440	8680	3860	414	372	349	2540
31	828	---	4240	436	---	3710	---	4060	---	369	349	---
TOTAL	50930	26437	47272	34941	27465	66783	112480	125060	81774	16432	12548	18905
MEAN	1643	881	1525	1127	981	2154	3749	4034	2726	530	405	630
MAX	7800	4400	8160	8430	6550	6210	11600	7390	7420	2050	752	3160
MIN	306	330	244	436	404	563	1260	1430	393	331	344	339
AC-FT	101000	52440	93760	69310	54480	132500	223100	248100	162200	32590	24890	37500

CAL YR 1984 TOTAL 316647 MEAN 865 MAX 11800 MIN 215 AC-FT 628100
WTR YR 1985 TOTAL 621027 MEAN 1701 MAX 11600 MIN 244 AC-FT 1232000

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 1984 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1984 to current year.
pH: February 1984 to current year.
WATER TEMPERATURES: February 1984 to current year.
DISSOLVED OXYGEN: February 1984 to current year.

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 PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 976 micorsiemens July 17, 1985; minimum, 93 microsiemens Oct. 20, 1984.
pH: Maximum, 8.6 units Oct. 20, 1984; minimum, 7.0 units on several days during 1984-85.
WATER TEMPERATURES: Maximum, 32.5°C July 7, Aug. 19, 20, 1984, Aug. 2, 4, 1985; minimum, 8.0°C Feb. 2, 5, 1985.
DISSOLVED OXYGEN: Maximum, 9.7 mg/L Mar. 12, 29, 30, 1984; minimum, 0.0 mg/L July 21, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 976 microsiemens July 17; minimum, 93 microsiemens Oct. 20.
WATER TEMPERATURES: Maximum, 32.5°C Aug. 2, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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										
17...	1030	440	645	7.7	21.5	5.6	64	10	150	28
JAN										
10...	1100	539	890	7.4	12.5	8.8	83	9.1	250	42
MAR										
07...	0940	740	706	7.4	14.5	8.8	87	9.1	190	27
APR										
17...	0900	2710	452	7.5	18.5	8.9	95	4.9	150	25
JUN										
27...	0930	421	862	7.1	27.5	4.5	57	12	190	10
SEP										
12...	1010	353	820	7.7	28.0	4.5	58	9.4	150	19

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									
17...	50	5.6	62	2	9.1	120	85	58	.70
JAN									
10...	87	8.3	83	2	11	210	130	75	.80
MAR									
07...	64	6.6	71	2	8.1	160	100	66	.60
APR									
17...	50	4.9	36	1	5.6	120	59	32	.40
JUN									
27...	65	6.7	99	3	10	180	98	85	.90
SEP									
12...	48	6.5	97	4	16	128	84	90	.90

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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									
17...	7.6	350	4.6	.360	5.0	2.10	2.2	4.3	2.70
JAN									
10...	9.8	530	1.8	.230	2.0	4.10	1.9	6.0	2.80
MAR									
07...	6.6	420	1.3	.260	1.6	2.00	1.6	3.6	1.40
APR									
17...	5.3	270	1.3	.070	1.4	.850	.95	1.8	.710
JUN									
27...	11	480	2.4	.480	2.9	5.20	1.8	7.0	1.80
SEP									
12...	10	430	5.0	.560	5.6	1.20	1.5	2.7	3.80

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	50930	445	277	38100	30	4110	74	10100	150
NOV.	1984	26437	572	343	24500	46	3270	85	6090	170
DEC.	1984	47272	563	340	43400	44	5590	86	11000	170
JAN.	1985	34941	645	378	35700	56	5290	91	8540	170
FEB.	1985	27465	645	376	27900	57	4250	89	6610	170
MAR.	1985	66783	540	329	59400	40	7270	84	15200	170
APR.	1985	112480	437	276	83800	28	8370	75	22700	160
MAY	1985	125060	427	270	91300	26	8920	74	24800	160
JUNE	1985	81774	434	273	60400	28	6120	74	16300	160
JULY	1985	16432	711	409	18100	66	2950	94	4170	170
AUG.	1985	12548	791	446	15100	79	2680	98	3330	170
SEPT	1985	18905	639	373	19100	57	2900	88	4510	170
TOTAL		621027	**	**	517000	**	61700	**	133000	**
WTD.AVG.		1701	503	308	**	37	**	80	**	160

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	865	833	846	653	329	510			775	---	---	499
2	885	838	859	485	378	422			790	---	---	531
3	883	870	877	574	434	505			740	---	---	549
4	881	818	869	669	553	628			732	---	---	601
5	872	814	847	803	669	733			676	---	---	626
6	896	873	881	804	762	774			696	---	---	574
7	739	495	597	775	728	760			711	---	---	676
8	815	555	742	804	761	778			718	---	---	640
9	804	266	660	807	780	792			722	---	---	769
10	612	348	465	813	790	801			737	---	---	890
11	629	353	547	809	781	794			746	---	---	884
12	673	525	597	805	770	787			787	---	---	885
13	641	150	426	815	784	799			705	---	---	887
14	508	327	440	815	785	797			627	---	---	890
15	586	482	517	802	761	785			621	---	---	786
16	640	482	590	879	791	854			552	---	---	721
17	723	609	650	876	490	794			581	---	---	630
18	795	227	639	593	373	443			386	---	---	705
19	590	264	444	460	349	399			464	---	---	827
20	530	93	340	560	468	513			532	---	---	856
21	344	269	299	636	559	590			596	---	---	865
22	497	309	388	---	---	642			571	---	---	874
23	549	475	513	---	---	690			633	---	---	876
24	563	261	442	---	---	732			667	---	---	881
25	373	274	353	---	---	725			718	887	868	880
26	493	372	409	---	---	650			768	888	870	882
27	527	475	503	---	---	670			751	885	611	721
28	567	504	539	---	---	700			738	918	771	867
29	615	304	510	---	---	725			776	889	859	874
30	630	453	565	---	---	766			674	879	860	869
31	707	568	633	---	---	---			570	892	871	882
MONTH	896	93	580	879	329	685			670	918	611	771

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	914	887	898	839	640	760	500	495	497	446	338	392
2	961	897	923	809	644	753	512	498	507	518	425	466
3	921	852	885	816	780	794	521	504	515	517	491	500
4	938	797	844	802	637	718	519	443	482	578	514	560
5	813	737	763	758	671	702	468	458	462	644	505	558
6	800	733	759	692	667	678	466	460	464	686	465	581
7	803	772	791	697	671	688	475	460	466	548	527	536
8	835	794	814	718	689	701	460	451	457	552	518	527
9	842	822	831	718	683	699	463	451	456	516	432	461
10	866	825	841	714	695	704	460	451	457	471	425	441
11	860	833	845	795	644	697	465	453	459	473	422	440
12	855	838	847	724	665	709	469	457	460	452	338	398
13	866	830	847	723	422	680	465	295	420	419	144	370
14	908	861	874	554	401	492	506	415	455	463	347	411
15	953	871	895	548	413	479	436	419	431	486	455	473
16	911	872	892	616	554	590	452	435	444	478	451	461
17	949	879	906	649	619	637	462	442	449	465	427	446
18	942	868	891	685	612	660	468	452	457	470	436	447
19	906	872	885	726	662	687	520	452	499	453	438	444
20	871	819	837	665	401	507	558	510	522	467	379	425
21	876	832	853	508	450	469	558	511	533	444	280	360
22	902	853	868	616	513	578	532	240	423	396	339	360
23	875	364	533	620	583	602	454	341	380	424	399	415
24	470	405	425	604	585	597	500	360	411	456	423	432
25	592	476	549	675	590	617	546	495	521	435	423	428
26	726	605	662	603	394	529	612	540	554	429	418	423
27	792	613	714	534	399	449	740	272	589	426	417	421
28	815	773	781	477	405	445	522	252	402	421	414	418
29	---	---	---	504	479	492	390	348	366	431	418	426
30	---	---	---	538	417	489	422	335	391	429	409	419
31	---	---	---	533	493	509	---	---	---	416	409	413
MONTH	961	364	802	839	394	616	740	240	464	686	144	447

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	418	407	413	---	---	782	822	784	805	850	833	839
2	411	404	408	---	---	801	837	784	808	837	820	827
3	411	402	407	---	---	625	873	801	840	852	809	827
4	412	404	409	---	---	498	895	835	863	839	813	825
5	420	354	403	809	685	755	875	853	864	841	825	832
6	388	323	356	923	799	874	882	844	856	840	803	820
7	397	353	371	921	864	894	855	810	839	870	787	829
8	418	400	410	900	853	870	847	794	820	882	826	850
9	429	416	422	874	845	858	813	490	622	858	837	847
10	436	417	430	913	854	885	658	531	587	849	819	836
11	463	430	444	911	899	902	697	652	674	817	800	811
12	469	424	444	904	873	891	679	643	658	853	794	814
13	426	390	411	902	861	879	675	642	660	859	808	829
14	424	409	420	898	869	881	733	644	685	834	421	687
15	458	420	445	877	850	861	820	728	782	430	354	379
16	468	445	458	958	833	872	864	811	837	602	442	514
17	457	451	454	976	845	892	894	830	855	615	580	593
18	495	430	459	953	854	893	856	822	841	717	576	657
19	499	408	447	946	587	859	845	801	823	776	723	753
20	443	425	435	760	525	670	878	839	857	820	771	799
21	494	431	465	803	476	716	879	829	856	877	815	848
22	595	488	529	567	442	527	900	821	861	904	834	866
23	737	544	667	695	549	612	900	861	880	858	815	835
24	773	626	724	786	377	543	910	859	888	821	808	816
25	779	688	740	629	483	556	936	863	901	820	802	811
26	855	779	813	741	602	681	874	812	843	837	808	820
27	---	---	860	786	731	755	899	833	858	851	819	833
28	---	---	868	839	773	806	877	826	852	871	839	848
29	---	---	876	915	794	837	885	820	853	836	329	571
30	---	---	803	834	795	815	887	860	873	469	364	414
31	---	---	---	841	795	816	885	849	862	---	---	---
MONTH	855	323	526	976	377	778	936	490	810	904	329	761

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.8	7.7	7.7	7.7	7.4	7.5				---	---	---
2	7.8	7.7	7.8	7.4	7.3	7.3				---	---	---
3	7.9	7.7	7.8	7.6	7.3	7.4				---	---	---
4	7.9	7.8	7.8	7.5	7.4	7.5				---	---	---
5	7.9	7.7	7.8	7.5	7.5	7.5				---	---	---
6	7.9	7.8	7.8	7.5	7.5	7.5				---	---	---
7	8.2	7.6	7.8	7.5	7.3	7.5				---	---	---
8	7.8	7.7	7.8	7.4	7.2	7.3				---	---	---
9	8.1	7.7	7.9	7.2	7.1	7.1				---	---	---
10	7.9	7.7	7.7	7.2	7.1	7.2				---	---	---
11	7.9	7.7	7.7	7.3	7.2	7.3				---	---	---
12	7.8	7.7	7.7	7.5	7.3	7.4				---	---	---
13	8.2	7.7	7.8	7.5	7.3	7.3				---	---	---
14	7.7	7.7	7.7	7.6	7.3	7.4				---	---	---
15	7.8	7.7	7.7	7.7	7.6	7.6				---	---	---
16	8.3	7.7	7.8	7.7	7.6	7.7				---	---	---
17	8.2	7.7	7.8	7.7	7.7	7.7				---	---	---
18	8.1	7.8	7.9	8.2	7.7	7.9				---	---	---
19	8.1	7.8	7.9	7.7	7.6	7.7				---	---	---
20	8.6	7.8	8.0	7.8	7.7	7.7				---	---	---
21	8.0	7.9	7.9	7.8	7.7	7.8				---	---	---
22	7.9	7.8	7.8	---	---	7.8				---	---	---
23	7.9	7.8	7.9	---	---	---				---	---	---
24	8.0	7.9	7.9	---	---	---				---	---	---
25	8.0	7.9	8.0	---	---	---				7.5	7.5	7.5
26	8.0	7.8	7.9	---	---	---				7.6	7.5	7.6
27	8.0	7.9	7.9	---	---	---				7.8	7.5	7.7
28	8.0	7.9	7.9	---	---	---				7.6	7.5	7.6
29	8.2	7.9	8.0	---	---	---				7.6	7.5	7.6
30	8.0	7.1	7.6	---	---	---				7.6	7.5	7.5
31	7.7	7.4	7.4	---	---	---				7.6	7.6	7.6
MONTH	8.6	7.1	7.8	8.2	7.1	7.5				7.8	7.5	7.6

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.6	7.6	7.6	7.8	7.5	7.6	7.6	7.5	7.6	7.4	7.4	7.4
2	7.6	7.6	7.6	7.9	7.5	7.6	7.6	7.6	7.6	7.5	7.4	7.4
3	7.6	7.5	7.6	7.6	7.5	7.6	7.6	7.6	7.6	7.6	7.5	7.6
4	7.6	7.5	7.6	7.8	7.6	7.6	7.6	7.5	7.6	7.7	7.5	7.6
5	7.6	7.5	7.5	7.6	7.5	7.6	7.7	7.6	7.6	7.7	7.6	7.7
6	7.8	7.5	7.6	7.7	7.6	7.6	7.6	7.6	7.6	7.8	7.7	7.7
7	7.7	7.5	7.5	7.6	7.4	7.5	7.6	7.6	7.6	7.7	7.5	7.7
8	7.7	7.5	7.6	7.4	7.4	7.4	7.6	7.6	7.6	7.7	7.5	7.7
9	7.6	7.5	7.5	7.4	7.4	7.4	7.6	7.6	7.6	7.7	7.7	7.7
10	7.6	7.4	7.5	7.4	7.4	7.4	7.6	7.6	7.6	7.7	7.6	7.7
11	7.7	7.4	7.5	7.7	7.3	7.4	7.6	7.5	7.5	7.7	7.6	7.7
12	7.7	7.5	7.6	7.5	7.3	7.4	7.6	7.5	7.6	7.7	7.5	7.6
13	7.6	7.3	7.5	7.5	7.2	7.3	7.6	7.5	7.5	8.1	7.6	7.7
14	7.5	7.4	7.5	7.6	7.3	7.5	7.5	7.3	7.4	7.7	7.5	7.6
15	7.5	7.5	7.5	7.4	7.3	7.3	7.5	7.4	7.4	7.7	7.5	7.6
16	7.5	7.5	7.5	7.6	7.2	7.3	7.5	7.5	7.5	7.7	7.7	7.7
17	7.6	7.4	7.5	7.2	7.0	7.1	7.6	7.4	7.5	7.7	7.4	7.5
18	7.5	7.4	7.4	7.1	7.0	7.1	7.6	7.5	7.5	7.5	7.5	7.5
19	7.4	7.4	7.4	7.3	7.0	7.0	7.6	7.5	7.5	7.5	7.5	7.5
20	7.5	7.4	7.4	7.5	7.3	7.4	7.6	7.5	7.5	7.5	7.4	7.5
21	7.5	7.4	7.5	7.4	7.2	7.3	7.6	7.5	7.5	7.6	7.3	7.4
22	7.5	7.4	7.4	7.4	7.2	7.3	7.6	7.4	7.5	7.4	7.4	7.4
23	7.7	7.4	7.5	7.3	7.1	7.1	7.5	7.3	7.4	7.5	7.4	7.5
24	7.4	7.3	7.3	7.2	7.1	7.1	7.3	7.3	7.3	7.6	7.5	7.5
25	7.7	7.3	7.5	7.5	7.2	7.3	7.4	7.3	7.3	7.6	7.5	7.5
26	7.8	7.4	7.5	7.5	7.2	7.3	7.6	7.4	7.5	7.6	7.5	7.6
27	7.9	7.5	7.6	7.6	7.3	7.4	7.6	7.5	7.5	7.6	7.6	7.6
28	7.5	7.5	7.5	7.4	7.3	7.4	7.7	7.5	7.5	7.6	7.5	7.6
29	---	---	---	7.5	7.4	7.4	7.5	7.4	7.4	7.6	7.5	7.5
30	---	---	---	7.6	7.4	7.5	7.5	7.3	7.4	7.5	7.4	7.5
31	---	---	---	7.6	7.5	7.6	---	---	---	7.6	7.4	7.5
MONTH	7.9	7.3	7.5	7.9	7.0	7.4	7.7	7.3	7.5	8.1	7.3	7.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.4	7.3	7.3	---	---	---	7.9	7.7	7.8	7.5	7.5	7.5
2	7.3	7.3	7.3	---	---	---	7.9	7.9	7.9	7.5	7.5	7.5
3	7.3	7.3	7.3	---	---	---	7.9	7.9	7.9	7.6	7.5	7.5
4	7.4	7.3	7.3	---	---	---	7.9	7.8	7.9	7.6	7.5	7.6
5	7.4	7.3	7.3	---	---	---	8.0	7.8	7.9	7.6	7.6	7.6
6	7.5	7.4	7.5	7.3	7.2	7.2	8.0	7.9	7.9	7.6	7.6	7.6
7	7.6	7.5	7.5	7.4	7.3	7.3	8.0	7.2	7.7	7.6	7.0	7.5
8	7.5	7.5	7.5	7.4	7.4	7.4	7.6	7.6	7.6	7.6	7.6	7.6
9	7.5	7.5	7.5	7.4	7.1	7.3	7.8	7.6	7.7	7.6	7.0	7.6
10	7.6	7.5	7.6	---	---	---	7.8	7.7	7.7	7.6	7.3	7.6
11	7.6	7.5	7.6	---	---	---	7.8	7.6	7.7	7.7	7.3	7.5
12	7.7	7.6	7.7	---	---	---	7.9	7.8	7.8	7.8	7.6	7.7
13	7.8	7.6	7.7	---	---	---	7.8	7.7	7.8	7.9	7.6	7.8
14	7.9	7.8	7.9	---	---	---	7.8	7.7	7.7	7.8	7.6	7.7
15	7.9	7.8	7.9	---	---	---	7.7	7.6	7.7	7.9	7.7	7.8
16	7.9	7.8	7.9	---	---	---	7.7	7.6	7.7	8.1	7.8	8.0
17	7.9	7.9	7.9	---	---	---	7.8	7.3	7.7	8.2	8.1	8.1
18	7.9	7.7	7.9	---	---	---	7.8	7.0	7.7	8.1	8.0	8.1
19	8.0	7.7	7.9	---	---	---	7.8	7.7	7.7	8.2	8.1	8.1
20	8.1	8.0	8.0	---	---	---	7.7	7.7	7.7	8.2	8.1	8.1
21	8.1	8.0	8.0	---	---	---	7.8	7.7	7.7	8.2	8.1	8.1
22	8.0	7.8	7.9	---	---	---	7.8	7.6	7.7	8.2	8.0	8.1
23	7.8	7.6	7.8	---	---	---	7.8	7.7	7.7	8.2	8.1	8.2
24	7.8	7.7	7.7	7.7	7.5	7.6	7.8	7.7	7.8	8.2	8.1	8.1
25	7.8	7.6	7.7	7.8	7.6	7.7	7.8	7.1	7.7	8.1	8.1	8.1
26	7.8	7.6	7.7	7.8	7.8	7.8	7.8	7.8	7.8	8.1	7.8	8.0
27	---	---	---	7.8	7.7	7.8	7.8	7.8	7.8	8.1	7.9	8.0
28	---	---	---	7.8	7.7	7.7	7.9	7.7	7.8	8.1	7.8	8.0
29	---	---	---	7.9	7.7	7.8	7.8	7.6	7.7	8.0	7.8	7.9
30	---	---	---	8.0	7.8	7.9	7.6	7.5	7.6	7.9	7.6	7.8
31	---	---	---	7.9	7.7	7.8	7.5	7.5	7.5	---	---	---
MONTH	8.1	7.3	7.7	8.0	7.1	7.6	8.0	7.0	7.7	8.2	7.0	7.8

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	20.0	21.0	22.0	20.5	21.5				---	---	---
2	23.0	20.5	21.5	20.5	19.5	20.0				---	---	---
3	24.0	21.5	22.5	19.5	19.0	19.0				---	---	---
4	24.0	23.0	23.5	19.5	19.0	19.0				---	---	---
5	25.5	23.0	24.0	19.0	18.5	19.0				---	---	---
6	27.0	24.5	25.5	19.0	18.0	18.5				---	---	---
7	25.0	24.0	24.5	19.0	18.0	18.5				---	---	---
8	27.0	24.5	25.5	21.0	19.0	20.0				---	---	---
9	26.0	22.0	24.5	22.0	21.0	21.5				---	---	---
10	24.5	22.5	23.5	21.5	19.0	20.0				---	---	---
11	24.0	23.0	24.0	19.0	18.0	18.5				---	---	---
12	25.0	23.5	24.5	18.5	17.0	18.0				---	---	---
13	25.0	21.0	23.5	18.5	17.5	18.0				---	---	---
14	23.5	22.5	23.0	19.5	18.0	18.5				---	---	---
15	24.0	23.0	23.5	20.5	19.5	20.0				---	---	---
16	25.0	24.0	24.0	19.5	18.5	19.0				---	---	---
17	24.0	21.5	22.5	18.5	15.5	17.5				---	---	---
18	23.5	22.0	23.0	15.5	13.5	14.5				---	---	---
19	23.0	22.0	22.5	14.0	13.0	13.0				---	---	---
20	22.5	18.5	21.0	14.0	13.0	13.5				---	---	---
21	20.0	19.0	19.5	15.0	13.5	14.0				---	---	---
22	19.0	18.0	18.5	---	---	14.5				---	---	---
23	18.0	17.5	18.0	---	---	---				---	---	---
24	18.0	14.5	16.5	---	---	---				---	---	---
25	16.0	15.0	15.5	---	---	---				14.0	13.0	13.5
26	18.5	15.5	16.5	---	---	---				13.0	12.0	12.5
27	20.0	18.5	19.0	---	---	---				13.0	9.0	10.5
28	20.5	19.5	20.0	---	---	---				13.5	10.5	12.5
29	20.5	16.5	19.0	---	---	---				13.0	12.5	13.0
30	21.5	18.5	20.0	---	---	---				15.0	13.0	14.0
31	22.5	21.0	21.5	---	---	---				13.5	9.5	11.5
MONTH	27.0	14.5	21.5	22.0	13.0	18.0				15.0	9.0	12.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.5	8.5	9.0	18.5	16.0	17.0	16.5	15.5	16.0	22.5	22.0	22.0
2	10.0	8.0	9.0	18.0	16.5	17.5	17.0	15.5	16.5	22.5	21.5	22.0
3	9.5	9.0	9.0	19.0	17.5	18.0	17.5	16.5	17.0	22.5	21.0	22.0
4	9.5	9.0	9.0	19.0	17.5	18.0	18.0	17.0	17.5	23.0	21.0	22.0
5	9.0	8.0	9.0	18.0	16.5	17.0	18.0	17.0	17.5	23.5	21.5	22.5
6	9.5	8.5	9.0	16.5	15.5	16.0	18.0	17.0	17.5	23.0	21.5	22.5
7	11.5	9.5	10.0	16.0	14.5	15.0	17.5	17.0	17.5	23.0	21.5	22.5
8	12.0	10.5	11.0	16.5	15.0	16.0	17.5	16.5	17.0	23.0	22.0	22.5
9	13.0	11.5	12.0	17.0	16.0	16.5	18.0	16.5	17.0	22.0	21.5	21.5
10	14.0	12.5	13.5	18.0	16.5	17.5	17.0	17.0	17.0	21.5	21.0	21.5
11	12.5	11.0	12.0	19.5	17.5	18.5	17.5	16.5	17.0	21.5	21.5	21.5
12	13.0	11.5	12.0	18.5	17.0	17.5	18.0	17.0	17.5	22.5	21.5	22.0
13	14.0	12.0	13.0	17.5	15.0	17.0	18.0	17.0	17.5	22.5	21.0	22.0
14	14.5	13.0	13.5	15.5	14.5	15.0	19.0	17.5	18.5	22.5	21.0	21.5
15	14.5	12.5	13.5	15.0	14.0	14.5	19.5	18.5	19.0	22.5	21.5	22.0
16	15.0	13.0	14.0	15.5	14.5	15.0	19.5	18.5	19.0	23.0	21.5	22.5
17	15.5	14.5	15.0	16.5	14.5	15.5	19.5	18.5	19.0	23.0	22.5	22.5
18	17.0	15.5	16.0	17.0	15.0	16.0	20.0	18.5	19.0	22.5	22.0	22.5
19	16.5	16.0	16.5	17.0	15.5	16.0	20.0	19.0	19.5	22.5	21.5	22.0
20	16.5	15.0	15.5	16.5	15.5	16.0	19.5	18.5	19.0	23.0	21.5	22.0
21	17.5	16.0	16.5	16.0	15.5	16.0	20.5	18.5	19.5	22.5	20.5	21.5
22	19.0	17.5	18.0	17.0	15.5	16.0	19.5	18.0	19.0	22.0	21.5	21.5
23	19.0	16.0	17.0	17.5	16.0	16.5	19.5	18.5	19.0	23.0	21.5	22.5
24	17.0	16.0	16.5	17.5	16.0	16.5	21.0	19.0	20.0	23.5	22.5	23.0
25	16.0	15.0	15.5	18.5	17.0	17.5	22.0	20.0	21.0	23.5	23.0	23.0
26	17.5	16.0	16.5	17.5	16.0	16.5	21.0	20.5	20.5	23.5	23.0	23.0
27	17.0	15.0	16.0	18.5	16.5	17.5	22.0	20.5	21.0	23.0	22.5	22.5
28	16.5	16.0	16.5	19.0	18.0	18.5	21.5	19.5	20.5	23.5	22.5	23.0
29	---	---	---	18.5	17.0	18.0	21.5	21.0	21.0	24.0	23.5	23.5
30	---	---	---	18.5	16.0	17.5	22.5	21.5	22.0	24.5	23.5	24.0
31	---	---	---	16.0	15.5	16.0	---	---	---	24.5	24.0	24.0
MONTH	19.0	8.0	13.5	19.5	14.0	16.5	22.5	15.5	18.5	24.5	20.5	22.5

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--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	28.5	27.0	27.5	32.0	30.0	31.0	32.0	29.5	30.5
2	24.5	24.0	24.5	29.0	27.5	28.0	32.5	30.5	31.5	31.5	29.5	30.5
3	24.5	24.0	24.5	28.5	22.5	27.0	32.0	30.0	31.0	31.5	29.0	30.0
4	25.0	24.0	24.5	28.0	25.0	26.5	32.5	30.0	31.0	31.0	29.0	30.0
5	24.5	23.5	24.0	29.5	27.0	28.0	31.5	30.0	31.0	30.5	29.0	29.5
6	24.5	23.5	24.0	30.0	28.0	29.0	31.5	30.0	30.5	29.5	28.5	29.0
7	25.0	24.0	24.5	30.0	28.0	29.0	31.0	29.5	30.5	31.0	28.0	29.5
8	26.0	25.0	25.5	30.0	28.0	29.0	31.5	29.0	30.5	31.0	29.0	30.0
9	26.5	25.5	26.0	30.5	28.5	29.5	31.0	29.5	30.0	31.0	29.0	30.0
10	26.0	25.5	25.5	30.5	29.0	29.5	31.0	28.5	30.0	31.0	29.0	30.0
11	25.5	25.0	25.0	30.5	28.5	29.5	31.0	29.0	30.0	29.5	28.5	29.0
12	25.5	24.5	25.0	30.5	28.5	29.5	31.0	29.0	30.0	29.5	28.0	28.5
13	26.0	24.5	25.0	30.5	28.5	29.5	30.5	29.0	30.0	30.0	28.0	29.0
14	26.0	25.0	25.5	30.5	28.5	29.5	30.5	28.5	29.5	29.0	25.5	27.0
15	26.5	25.5	26.0	30.0	28.5	29.5	31.0	29.0	30.0	25.0	24.5	24.5
16	27.0	26.0	26.5	31.0	28.5	29.5	31.5	29.0	30.5	26.0	24.0	25.0
17	27.0	26.0	26.5	31.0	29.0	30.0	32.0	30.0	31.0	27.0	25.0	26.0
18	26.5	25.5	26.0	31.5	29.0	30.0	32.0	30.0	31.0	28.0	26.0	27.0
19	26.5	25.5	26.0	31.0	29.0	30.0	32.0	30.0	31.0	28.5	27.0	27.5
20	26.5	25.5	26.0	29.0	27.5	28.0	31.5	30.0	31.0	28.5	27.0	28.0
21	26.5	25.5	26.0	28.5	26.0	27.5	32.0	30.0	31.0	28.0	27.0	27.5
22	26.5	25.5	26.0	27.5	26.5	27.0	32.0	30.0	31.0	28.5	26.5	27.5
23	27.5	26.0	27.0	28.5	26.5	27.5	32.0	29.5	31.0	27.5	26.0	27.0
24	28.5	26.5	27.5	28.0	27.0	27.5	31.0	30.0	30.5	26.5	25.0	25.5
25	29.0	27.0	28.0	29.5	27.5	28.5	30.5	29.0	29.5	26.0	25.0	25.5
26	29.5	27.5	28.5	31.0	28.5	29.5	30.5	28.5	29.5	25.5	24.0	24.5
27	28.5	27.5	28.0	32.0	29.5	30.5	30.0	28.5	29.0	25.5	23.5	24.5
28	28.5	26.0	27.0	32.0	30.0	31.0	30.5	28.0	29.0	24.5	23.5	24.0
29	28.5	26.0	27.5	32.0	30.0	31.0	30.5	28.5	29.5	24.0	21.5	23.0
30	29.0	26.5	27.5	32.0	30.0	31.0	31.0	29.0	30.0	22.0	20.5	21.0
31	---	---	---	31.5	29.5	30.5	31.5	29.0	30.0	---	---	---
MONTH	29.5	23.5	26.0	32.0	22.5	29.0	32.5	28.0	30.5	32.0	20.5	27.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.4	6.2	6.8						
2	---	---	---	7.1	5.2	6.2						
3	5.3	4.9	5.1	8.0	5.8	7.0						
4	4.9	3.5	4.4	7.5	7.1	7.2						
5	4.1	3.0	3.5	7.4	6.6	7.2						
6	4.8	3.8	4.2	7.4	7.1	7.3						
7	5.7	3.8	4.1	7.4	7.1	7.3						
8	5.0	4.2	4.7	7.1	6.7	7.0						
9	5.0	4.4	4.8	6.8	6.4	6.6						
10	4.6	4.3	4.5	6.7	5.9	6.4						
11	6.0	4.5	4.9	6.9	6.7	6.8						
12	5.8	5.0	5.5	7.0	6.7	6.9						
13	5.7	4.3	4.9	6.8	6.6	6.7						
14	4.7	4.3	4.5	6.6	6.2	6.5						
15	5.4	4.6	5.0	6.2	6.0	6.1						
16	5.7	5.3	5.5	5.9	5.6	5.7						
17	6.1	5.4	5.7	7.4	5.8	6.4						
18	7.7	5.7	6.2	8.7	7.8	8.4						
19	6.0	5.4	5.6	7.8	6.9	7.4						
20	9.2	5.5	6.8	8.1	7.6	8.0						
21	6.8	4.2	5.3	8.1	7.8	8.0						
22	6.7	5.1	5.6	---	---	8.0						
23	7.6	6.7	7.1	---	---	---						
24	9.1	7.5	8.1	---	---	---						
25	8.7	7.7	8.2	---	---	---						
26	8.0	6.8	7.6	---	---	---						
27	7.8	6.8	7.2	---	---	---						
28	7.7	6.5	7.0	---	---	---						
29	8.3	6.5	7.3	---	---	---						
30	7.3	6.6	7.0	---	---	---						
31	7.4	6.2	6.8	---	---	---						
MONTH	9.2	3.0	5.8	8.7	5.2	7.0						

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	6.6	6.1	6.3
2							---	---	---	7.3	6.7	7.0
3							---	---	---	8.1	7.3	7.9
4							9.1	8.8	8.9	7.9	7.4	7.5
5							9.0	8.8	8.9	7.9	7.4	7.6
6							9.0	8.9	8.9	8.3	7.4	7.7
7							9.1	8.9	9.0	7.9	7.8	7.9
8							9.2	9.1	9.1	7.9	7.8	7.8
9							9.2	9.1	9.2	8.5	7.9	8.3
10							9.2	9.0	9.1	8.4	8.0	8.3
11							9.2	9.0	9.1	8.1	7.9	8.0
12							9.1	8.8	9.0	8.1	5.1	6.8
13							9.1	8.3	8.8	8.3	6.7	7.5
14							8.2	7.7	8.0	8.0	7.0	7.5
15							8.5	8.0	8.3	8.1	6.9	7.6
16							8.7	8.5	8.6	8.3	8.1	8.1
17							9.0	8.7	8.8	8.1	7.1	7.7
18							9.0	8.7	8.9	7.5	7.2	7.4
19							8.8	8.1	8.3	7.6	7.4	7.5
20							8.3	8.0	8.2	7.4	6.3	6.9
21							8.3	7.8	8.2	7.7	6.1	6.6
22							8.2	6.7	7.8	6.2	5.8	6.0
23							7.2	5.3	5.8	7.2	6.2	7.0
24							5.7	4.9	5.3	7.4	7.1	7.3
25							7.1	5.3	6.2	7.6	7.4	7.5
26							7.7	7.2	7.5	7.6	7.5	7.5
27							7.9	7.3	7.5	7.7	7.5	7.6
28							8.4	5.8	7.2	7.7	7.3	7.5
29							6.2	5.6	5.8	7.3	7.2	7.3
30							7.2	5.6	6.4	7.5	7.2	7.4
31							---	---	---	7.5	7.0	7.4
MONTH							9.2	4.9	8.0	8.5	5.1	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	7.3	7.4	5.5	4.7	5.1	4.5	3.5	4.1	5.2	3.5	4.3
2	7.6	7.3	7.4	5.3	4.6	5.0	4.3	3.6	4.0	5.4	3.8	4.5
3	7.6	7.4	7.5	7.5	3.9	4.8	4.6	3.7	4.2	5.5	4.0	4.7
4	7.5	7.3	7.5	4.9	3.3	4.1	4.8	3.9	4.2	5.5	4.2	4.7
5	7.6	6.8	7.4	4.9	4.4	4.6	5.0	3.7	4.3	5.4	4.2	4.7
6	6.5	5.2	5.9	5.2	4.2	4.6	4.8	3.8	4.2	5.2	4.4	4.6
7	6.6	5.8	6.2	5.1	3.1	4.3	4.7	3.7	4.1	5.2	2.2	3.9
8	6.8	6.5	6.7	5.3	4.1	4.7	4.8	3.7	4.2	5.1	4.0	4.5
9	6.9	6.5	6.7	5.5	4.2	4.7	6.2	4.0	5.2	5.3	4.0	4.7
10	7.0	6.7	6.8	5.2	4.1	4.6	6.3	5.7	6.0	5.5	4.3	4.8
11	6.9	6.5	6.8	5.0	3.9	4.3	6.3	5.2	5.8	5.4	4.5	4.8
12	7.1	6.7	6.9	4.9	3.6	4.2	6.7	6.2	6.4	4.9	4.0	4.4
13	8.3	7.0	7.7	4.9	3.6	4.1	6.5	5.9	6.2	5.0	3.8	4.3
14	8.2	8.0	8.1	5.1	3.6	4.2	6.2	5.4	6.0	4.3	1.8	3.4
15	8.1	7.5	7.9	4.6	3.7	4.1	5.6	4.9	5.1	4.0	1.1	2.8
16	7.8	7.3	7.7	5.1	3.6	4.1	5.7	4.5	5.0	6.0	4.1	5.5
17	7.7	7.6	7.7	5.1	3.7	4.3	5.8	4.6	5.1	6.1	5.4	5.8
18	7.6	6.3	7.3	5.2	3.7	4.4	6.1	4.5	5.2	5.8	5.3	5.6
19	7.2	6.6	7.0	4.4	2.7	3.5	6.4	4.9	5.7	5.8	5.4	5.7
20	7.2	7.0	7.1	3.5	.3	2.2	5.9	4.8	5.4	5.9	5.6	5.7
21	7.1	6.7	6.9	5.5	.0	2.5	6.1	4.7	5.3	6.0	5.7	5.8
22	6.9	4.2	5.8	5.8	4.4	5.3	5.9	4.4	5.1	6.3	5.7	6.0
23	5.1	3.3	4.7	5.1	4.1	4.6	5.8	4.4	5.0	6.7	5.9	6.4
24	4.9	3.5	4.4	4.5	.3	2.3	4.7	4.3	4.5	7.0	6.4	6.7
25	4.7	4.0	4.4	4.2	2.9	3.4	4.8	3.8	4.4	6.8	6.2	6.5
26	4.6	4.3	4.4	3.8	3.0	3.4	5.2	4.3	4.7	6.9	6.4	6.7
27	4.8	4.3	4.5	4.0	2.0	3.5	5.2	4.3	4.7	6.7	6.2	6.5
28	5.0	4.3	4.6	4.3	3.1	3.8	4.9	4.3	4.7	6.4	5.8	6.2
29	5.3	4.6	4.9	4.6	2.4	3.7	5.0	3.8	4.3	6.7	5.1	5.9
30	5.7	4.6	5.0	4.0	3.0	3.6	5.2	3.7	4.3	6.5	.3	4.1
31	---	---	---	5.1	3.9	4.5	4.9	3.7	4.2	---	---	---
MONTH	8.3	3.3	6.4	7.5	.0	4.1	6.7	3.5	4.9	7.0	.3	5.1

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 1984 to current year.

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.--Estimated daily discharges: Oct. 6, 7, 9, 12, 13, 16, 18, 20-25; Nov. 1, 2, 17, 18, 26; Dec. 5, 13-19, 29-31; Jan. 16; Feb. 23, 24; Mar. 13, 14; 20, 30; Apr. 13, 22. Records fair except those for estimated daily discharges, which are poor. Some regulation at low flow from on- and off-channel dams from which many small diversions are made. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1962-80, 85), 56.6 ft /s , 11.57 in/yr, 41,010 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 24,100 ft^3/s Apr. 27 at 2315 hours (elevation, 489.20 ft); minimum daily, 3.9 ft^3/s Oct. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	536	26	105	25	73	62	104	15	6.9	8.2	7.5
2	4.5	265	27	106	33	49	59	86	17	7.4	8.7	7.6
3	5.5	75	24	88	28	45	54	75	14	76	6.9	7.9
4	12	65	42	83	70	89	50	68	14	34	7.1	8.6
5	22	47	256	74	71	42	39	64	279	11	7.2	14
6	167	28	43	67	66	34	37	62	268	9.9	7.7	25
7	167	34	34	61	61	31	35	55	52	14	7.5	12
8	16	33	32	59	57	30	29	51	36	12	7.5	8.1
9	143	27	26	66	50	24	29	52	27	9.7	8.2	8.4
10	44	32	22	22	41	23	30	46	19	10	7.4	6.3
11	60	26	22	35	33	23	30	46	132	9.6	8.2	15
12	128	18	22	38	24	20	28	43	42	10	8.8	11
13	512	22	300	37	24	94	325	89	23	9.5	8.9	10
14	83	15	320	37	14	791	59	142	16	9.6	9.1	421
15	36	17	495	35	7.2	71	42	41	16	7.9	7.8	54
16	60	26	720	254	6.8	64	31	36	15	9.5	8.1	38
17	24	79	1800	69	6.6	52	24	25	12	9.0	8.1	36
18	66	624	1380	56	14	46	23	23	147	8.8	6.7	28
19	31	58	493	49	32	35	21	22	45	10	7.8	19
20	1230	34	97	36	26	1070	20	147	22	37	7.5	16
21	903	37	92	33	25	91	29	1240	17	164	7.3	14
22	127	36	72	38	48	69	1750	81	23	77	8.4	12
23	142	31	65	40	1330	60	158	60	32	73	7.1	47
24	969	30	61	38	101	54	101	54	66	41	8.6	20
25	893	88	55	33	75	52	84	46	55	36	7.0	18
26	115	267	51	29	67	72	80	35	19	23	10	13
27	328	55	77	44	60	560	1300	32	12	19	7.0	12
28	80	28	60	36	54	70	2220	33	10	15	5.8	9.6
29	78	38	174	30	---	59	151	40	10	13	5.6	380
30	57	31	291	29	---	295	341	24	12	12	6.4	68
31	70	---	828	30	---	67	---	20	---	9.0	7.9	---
TOTAL	6576.9	2702	8007	1757	2449.6	4155	7241	2942	1467	793.8	238.5	1347.0
MEAN	212	90.1	258	56.7	87.5	134	241	94.9	48.9	25.6	7.69	44.9
MAX	1230	624	1800	254	1330	1070	2220	1240	279	164	10	421
MIN	3.9	15	22	22	6.6	20	20	20	10	6.9	5.6	6.3
CFSM	3.19	1.36	3.89	.85	1.32	2.02	3.63	1.43	.74	.39	.12	.68
IN.	3.68	1.51	4.49	.98	1.37	2.33	4.06	1.65	.82	.44	.13	.75
AC-FT	13050	5360	15880	3490	4860	8240	14360	5840	2910	1570	473	2670

CAL YR 1984	TOTAL	-	MEAN	-	MAX	-	MIN	-	CVSM	-	IN	-	AC-FT	-
WTR YR 1985	TOTAL	39676.8	MEAN	109	MAX	2220	MIN	3.9	CFSM	1.64	IN	22.23	AC-FT	78700

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 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 17-18, Jan. 19-24, Apr. 19-21, June 9-19, July 4-12, July 20 to Aug. 7, and Sept. 1-12. Records fair except those for estimated daily discharges, which are poor. 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.--28 years (water years 1958-85), 1,793 ft³/s (1,299,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,700 ft³/s May 27, 1957 (gage height, 32.02 ft); minimum daily, 131 ft³/s Dec. 9, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 25, 1908, reached a stage of 41.1 ft, from information by U.S. Army 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, 12,400 ft³/s Apr. 29 at 2000 hours (gage height, 24.95); minimum daily, 449 ft³/s Sept. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	528	2140	675	7820	845	1210	3460	9840	3940	666	784	512
2	520	4370	638	6470	814	1320	3090	6540	3890	622	740	483
3	522	2680	654	3650	827	981	2980	3800	3880	1300	756	487
4	567	1330	687	2300	904	1340	2930	1780	3910	900	756	493
5	618	1060	1360	1500	1200	1410	2900	1620	3890	750	663	483
6	585	922	1500	2310	1120	1190	2830	2240	6500	700	622	501
7	1080	809	979	1090	1130	1110	2790	1920	7970	680	551	509
8	938	820	785	1610	891	1100	2720	1880	5850	670	557	485
9	835	798	720	1010	853	1080	2700	2500	4450	665	817	481
10	1610	740	725	1000	847	1080	2730	3350	4100	655	1080	449
11	983	695	675	951	863	1200	2740	3900	3940	650	738	464
12	1270	684	661	925	825	1170	2730	4840	3940	645	720	493
13	2270	673	1670	860	780	1040	3540	6160	4000	635	733	483
14	2750	673	3510	850	764	4040	5380	6640	3710	622	695	1160
15	1480	690	3610	1000	746	4590	4230	4320	2890	640	601	3490
16	1000	628	4720	1460	723	2290	3150	3990	2740	659	588	1310
17	876	645	4770	1830	700	1560	2860	3810	2740	663	564	790
18	1040	2920	10100	1770	707	1290	2740	3440	2820	640	547	717
19	2260	3240	9540	1070	723	1240	2420	3440	3220	654	572	501
20	3980	1330	5420	1000	801	3760	1930	4160	2940	1000	574	503
21	9230	904	2140	951	785	6600	1800	6700	2360	749	597	487
22	5940	764	1720	907	787	4100	3760	9000	1570	1690	585	487
23	2570	677	1210	858	3880	2380	10900	7040	907	996	574	479
24	2320	659	1040	847	7570	2010	9360	5280	835	1880	572	473
25	6310	925	967	835	4990	2060	4630	5010	836	1330	555	483
26	6110	1340	881	822	1730	2140	2030	4810	706	772	551	468
27	3760	1700	946	1220	1330	3500	1610	4730	645	787	536	473
28	2650	1090	1380	867	1010	6720	6110	4610	613	772	540	464
29	1920	1340	1020	811	---	4700	11700	4130	572	753	534	1410
30	2020	735	2660	777	---	4480	11200	3830	601	774	514	3170
31	1360	---	3630	840	---	4350	---	3980	---	803	528	---
TOTAL	69902	37981	70993	50211	39145	77041	123950	139290	90965	25722	19744	23188
MEAN	2255	1266	2290	1620	1398	2485	4132	4493	3032	830	637	773
MAX	9230	4370	10100	7820	7570	6720	11700	9840	7970	1880	1080	3490
MIN	520	628	638	777	700	981	1610	1620	572	622	514	449
AC-FT	138700	75340	140800	99590	77640	152800	245900	276300	180400	51020	39160	45990

CAL YR 1984 TOTAL 458914 MEAN 1254 MAX 12900 MIN 504 AC-FT 910300
WTR YR 1985 TOTAL 768132 MEAN 2104 MAX 11700 MIN 449 AC-FT 1524000

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 specitic 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, 1973-85): Maximum, 1,130 microsiemens Dec. 17, 1977; minimum, 112 microsiemens Oct. 20, 1984.
pH: 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, Sept. 10, 1985; 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, 976 microsiemens Feb. 3; minimum, 112 microsiemens Oct. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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										
16...	1430	990	614	7.3	24.0	4.9	59	15	140	14
JAN										
09...	1545	996	800	7.4	14.5	7.4	73	12	230	33
MAR										
06...	1610	1320	712	7.6	16.0	8.0	81	5.5	190	33
APR										
16...	1430	3220	496	7.0	20.5	7.9	89	7.9	160	24
JUN										
26...	1530	779	722	7.2	28.5	3.8	50	11	190	26
SEP										
11...	1530	459	748	7.3	30.0	3.8	51	8.2	120	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									
16...	50	4.6	57	2	9.8	130	84	52	.90
JAN									
09..	83	6.2	67	2	10	200	110	60	.80
MAR									
06...	67	6.2	62	2	8.6	160	93	54	.80
APR									
16...	55	4.8	36	1	5.8	133	57	32	.40
JUN									
26...	66	6.0	73	2	12	164	92	62	.90
SEP									
11...	41	5.4	87	4	14	131	83	75	1.2

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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 16...	9.7	350	1.7	.370	2.1	3.70	1.3	5.0	2.90
JAN 09...	9.6	470	2.3	.210	2.5	4.00	8.0	12	2.90
MAR 06...	7.1	390	1.4	.300	1.7	3.60	.40	4.0	2.10
APR 16...	5.8	280	1.2	.130	1.3	1.40	.90	2.3	.930
JUN 26...	14	420	1.5	.340	1.8	4.60	1.8	6.4	2.00
SEP 11...	11	400	3.5	.530	4.0	1.70	3.8	5.5	4.80

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	69902	407	233	43900	27	5070	54	10100	130
NOV.	1984	37981	597	341	35000	45	4580	78	8040	160
DEC.	1984	70993	551	315	60300	40	7700	72	13900	150
JAN.	1985	50211	680	388	52600	54	7310	89	12100	160
FEB.	1985	39145	671	383	40500	54	5660	88	9280	160
MAR.	1985	77041	564	322	67000	41	8530	74	15400	160
APR.	1985	123950	460	263	88100	31	10300	61	20300	140
MAY	1985	139290	453	259	97400	30	11300	60	22500	140
JUNE	1985	90965	462	264	64800	31	7610	61	15000	140
JULY	1985	25722	697	398	27600	55	3850	91	6330	170
AUG.	1985	19744	782	446	23800	66	3490	100	5440	170
SEPT	1985	23188	636	363	22700	49	3090	83	5210	160
TOTAL		768132	**	**	624000	**	78500	**	144000	**
WTD.AVG.		2104	526	301	**	38	**	69	**	150

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	800	740	768	676	420	537	758	742	749	---	---	498
2	834	776	800	476	400	433	754	734	743	---	---	537
3	820	764	792	568	434	498	776	716	739	---	---	603
4	820	768	791	640	546	595	800	782	789	---	---	675
5	802	746	775	740	638	670	792	596	662	---	---	715
6	820	786	800	752	728	738	644	616	626	---	---	648
7	798	500	627	736	720	728	688	630	652	---	---	770
8	692	510	596	746	714	729	724	688	702	---	---	710
9	716	672	699	752	732	740	740	724	729	---	---	800
10	---	---	502	752	732	742	786	738	752	844	828	837
11	---	---	534	740	720	729	812	776	791	848	826	838
12	---	---	490	750	706	726	818	780	798	838	804	817
13	---	---	431	764	728	748	804	368	647	844	810	822
14	---	---	387	770	734	755	548	362	480	846	814	833
15	---	---	492	764	750	757	496	386	455	872	664	837
16	614	518	571	786	738	752	478	380	448	776	646	686
17	614	550	579	828	748	785	504	368	450	728	646	697
18	674	300	598	762	394	507	412	374	399	736	598	679
19	494	296	403	516	400	462	448	398	439	804	716	767
20	504	112	322	614	520	567	---	---	534	804	742	765
21	286	198	259	668	618	642	---	---	650	852	762	799
22	376	268	308	702	672	692	---	---	686	852	808	826
23	460	380	431	734	696	712	---	---	719	840	804	822
24	514	288	430	734	696	714	---	---	750	864	808	828
25	308	224	280	718	582	647	---	---	798	856	826	846
26	338	296	314	688	438	613	---	---	811	858	826	841
27	410	332	387	584	504	543	---	---	800	890	640	755
28	454	396	422	674	584	626	---	---	733	862	678	776
29	532	396	468	716	672	692	---	---	774	866	840	854
30	606	466	531	746	690	720	---	---	648	856	820	840
31	648	582	609	---	---	---	---	---	599	854	796	822
MONTH	834	112	529	828	394	660	818	362	663	890	598	759

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	836	804	814	---	---	750	---	---	512	---	---	393
2	880	838	856	---	---	698	---	---	514	---	---	467
3	976	838	871	---	---	720	---	---	519	---	---	535
4	932	798	838	---	---	688	525	505	514	---	---	570
5	828	768	789	---	---	681	521	507	516	---	---	591
6	782	750	764	731	715	719	---	---	520	---	---	612
7	808	778	789	737	715	725	---	---	523	---	---	571
8	822	796	810	737	711	726	---	---	521	---	---	575
9	826	802	817	743	713	729	---	---	524	---	---	512
10	830	796	813	725	707	716	---	---	518	---	---	485
11	826	790	802	785	677	714	---	---	522	---	---	480
12	830	796	817	735	667	705	---	---	509	---	---	450
13	830	804	821	745	609	726	---	---	452	---	---	411
14	846	814	834	553	416	502	---	---	431	---	---	395
15	862	822	835	585	436	495	---	---	449	---	---	446
16	856	838	846	---	---	599	---	---	490	---	---	474
17	866	834	848	---	---	630	501	476	492	---	---	450
18	856	800	832	---	---	662	---	480	508	---	---	452
19	856	826	841	---	---	687	---	---	546	---	---	460
20	856	796	826	---	---	544	---	---	578	---	---	425
21	824	798	812	519	464	483	---	---	597	---	---	398
22	842	826	833	627	503	568	---	---	475	---	---	375
23	838	400	582	---	---	631	---	---	381	---	---	432
24	---	---	418	---	---	636	---	---	413	---	---	480
25	---	---	543	---	---	632	---	---	508	---	---	482
26	---	---	660	---	---	602	---	---	580	---	---	478
27	---	---	712	---	---	448	---	---	632	---	---	476
28	---	---	762	---	---	431	---	---	412	---	---	467
29	---	---	---	---	---	494	---	---	363	---	---	458
30	---	---	---	---	---	502	---	---	390	458	440	448
31	---	---	---	---	---	510	---	---	---	448	432	438
MONTH	976	400	778	785	416	624	525	476	497	458	432	474

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	468	428	437	801	771	784	763	725	746	827	751	796
2	513	424	454	775	763	767	741	721	729	789	729	766
3	---	---	452	775	320	704	761	717	738	797	741	768
4	---	---	454	635	478	581	773	739	759	833	765	796
5	---	---	451	665	591	627	777	727	757	833	763	788
6	---	---	411	731	669	704	793	743	772	865	757	792
7	---	---	380	759	735	749	787	771	779	819	757	789
8	---	---	420	753	731	742	---	---	808	817	749	784
9	---	---	444	761	737	752	---	---	790	831	769	789
10	---	---	451	817	757	781	---	---	589	835	---	790
11	---	---	453	929	809	839	---	---	653	791	---	786
12	---	---	460	891	747	777	---	---	746	797	773	784
13	440	420	431	779	741	759	---	---	767	809	773	788
14	450	422	442	839	709	772	---	---	787	825	488	751
15	482	442	460	821	747	776	---	---	801	645	388	437
16	503	476	486	867	703	806	---	---	812	545	436	492
17	488	472	481	889	725	819	---	---	831	613	553	589
18	505	454	486	883	783	824	---	---	828	683	595	623
19	505	418	461	889	791	832	---	---	823	707	681	693
20	454	442	449	839	559	680	---	---	838	769	699	716
21	513	442	479	705	503	653	---	---	841	793	759	775
22	571	509	539	733	440	560	---	---	848	813	755	785
23	663	569	622	---	---	640	---	---	850	791	731	767
24	723	653	686	---	---	560	---	---	863	783	751	769
25	731	705	713	605	464	544	---	---	867	785	747	767
26	761	715	731	683	597	630	---	---	841	777	749	765
27	785	733	758	723	687	703	---	---	832	791	751	777
28	793	781	786	735	697	714	---	---	794	805	753	781
29	797	769	786	795	693	728	817	759	785	787	362	605
30	801	789	796	779	735	757	853	797	824	454	350	412
31	---	---	---	775	721	750	861	815	835	---	---	---
MONTH	801	418	529	929	320	720	861	717	791	865	350	724

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.2	7.3	7.6	7.3	7.5	---	---	---	---	---	---
2	7.4	7.3	7.3	7.5	7.3	7.4	---	---	---	---	---	---
3	7.4	7.2	7.3	7.5	7.3	7.4	---	---	---	---	---	---
4	7.3	7.3	7.3	7.5	7.3	7.4	7.4	7.1	7.3	---	---	---
5	7.3	7.3	7.3	7.6	7.2	7.4	---	---	---	---	---	---
6	7.5	7.3	7.4	7.5	7.2	7.3	---	---	---	---	---	---
7	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---	---	---	---
8	7.5	7.3	7.4	7.4	7.3	7.4	---	---	---	---	---	---
9	7.4	7.3	7.3	7.5	7.2	7.4	---	---	---	---	---	---
10	---	---	---	7.3	7.1	7.2	---	---	---	7.8	7.4	7.7
11	---	---	---	7.4	7.1	7.3	---	---	---	7.7	7.6	7.7
12	---	---	---	7.4	7.1	7.2	---	---	---	7.8	7.7	7.7
13	---	---	---	7.3	7.1	7.2	---	---	---	7.8	7.8	7.8
14	---	---	---	7.2	7.1	7.1	---	---	---	7.8	7.7	7.8
15	---	---	---	7.2	7.0	7.1	---	---	---	7.8	7.6	7.7
16	7.3	7.2	7.3	7.1	7.0	7.0	---	---	---	7.8	7.6	7.7
17	7.3	7.2	7.3	7.1	7.0	7.0	---	---	---	7.9	7.6	7.8
18	7.4	7.2	7.3	7.8	7.0	7.5	7.7	7.4	7.6	7.8	7.6	7.7
19	7.5	7.3	7.4	7.7	7.5	7.6	---	---	---	7.6	7.4	7.5
20	8.1	7.2	7.5	7.8	7.4	7.6	---	---	---	7.8	7.6	7.7
21	7.8	7.7	7.8	7.7	7.3	7.5	---	---	---	7.6	7.5	7.6
22	7.6	7.4	7.6	7.7	7.2	7.4	---	---	---	7.6	7.5	7.5
23	7.3	7.3	7.3	7.7	7.3	7.5	---	---	---	7.4	7.3	7.4
24	7.5	7.3	7.4	7.7	7.3	7.5	---	---	---	7.5	7.4	7.6
25	7.6	7.5	7.6	8.0	7.5	7.7	---	---	---	7.4	7.4	7.5
26	7.6	7.5	7.6	7.8	7.5	7.6	---	---	---	7.4	7.3	7.4
27	7.4	7.3	7.4	7.9	7.6	7.8	---	---	---	7.6	7.4	7.5
28	7.8	7.1	7.2	7.6	7.1	7.3	---	---	---	7.5	7.3	7.4
29	7.6	7.1	7.3	---	---	---	---	---	---	7.4	7.3	7.4
30	7.6	7.3	7.4	---	---	---	---	---	---	7.4	7.3	7.3
31	7.6	7.4	7.5	---	---	---	---	---	---	7.4	7.4	7.4
MONTH	8.1	7.1	7.4	8.0	7.0	7.4	7.7	7.1	7.5	7.9	7.3	7.6

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--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	---	---	---	---	---	---	---	---	---
2	7.4	7.3	7.4	---	---	---	---	---	---	---	---	---
3	7.4	7.3	7.4	---	---	---	---	---	---	7.4	7.2	7.3
4	7.4	7.3	7.3	---	---	---	7.7	7.4	7.5	7.6	7.3	7.4
5	7.4	7.3	7.4	---	---	---	7.5	7.3	7.5	---	---	---
6	7.4	7.4	7.4	7.7	7.6	7.6	7.7	7.3	7.5	---	---	---
7	7.4	7.3	7.4	7.5	7.5	7.5	---	---	---	---	---	---
8	7.4	7.3	7.3	7.5	7.4	7.4	---	---	---	---	---	---
9	7.3	7.3	7.3	7.4	7.4	7.4	---	---	---	---	---	---
10	7.4	7.2	7.3	7.4	7.4	7.4	---	---	---	---	---	---
11	7.3	7.2	7.3	7.5	7.4	7.4	---	---	---	---	---	---
12	7.4	7.3	7.3	7.5	7.4	7.5	---	---	---	---	---	---
13	7.4	7.4	7.4	7.5	7.4	7.4	---	---	---	---	---	---
14	7.4	7.4	7.4	7.7	7.3	7.5	---	---	---	---	---	---
15	7.5	7.4	7.4	7.7	7.4	7.5	---	---	---	---	---	---
16	7.5	7.4	7.4	7.5	7.3	7.4	7.5	7.2	7.4	7.6	7.5	7.5
17	7.5	7.4	7.4	---	---	---	7.4	7.3	7.4	7.6	7.2	7.4
18	7.4	7.4	7.4	---	---	---	7.4	7.3	7.5	7.7	7.2	7.3
19	7.4	7.3	7.4	---	---	---	---	---	7.4	7.5	7.2	7.4
20	7.4	7.3	7.4	---	---	---	---	---	---	---	---	---
21	7.4	7.3	7.3	7.5	7.4	7.4	---	---	---	---	---	---
22	7.4	7.3	7.3	7.4	7.2	7.3	---	---	---	---	---	---
23	7.6	7.4	7.5	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
31	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
MONTH	7.6	7.2	7.4	7.7	7.2	7.4	7.7	7.2	7.5	7.7	7.2	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.7	7.7	7.2	7.1	7.1	7.9	7.4	7.6	7.4	7.3	7.4
2	---	---	---	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.3	7.3
3	---	---	---	7.8	7.1	7.3	7.4	7.3	7.3	7.4	7.2	7.3
4	---	---	---	7.3	7.0	7.1	7.3	7.3	7.3	7.4	7.2	7.3
5	---	---	---	7.1	7.1	7.1	7.4	7.2	7.3	7.4	7.2	7.3
6	---	---	---	7.2	7.1	7.1	7.3	7.2	7.3	7.4	7.2	7.3
7	---	---	---	7.3	7.2	7.2	7.3	7.3	7.3	7.4	7.2	7.3
8	---	---	---	7.3	7.2	7.3	---	---	---	7.3	7.2	7.2
9	---	---	---	7.4	7.2	7.3	---	---	---	7.6	7.2	7.3
10	---	---	---	7.4	7.1	7.2	---	---	---	---	---	---
11	---	---	---	7.3	7.2	7.2	---	---	---	---	---	---
12	---	---	---	8.0	7.2	7.6	---	---	---	7.2	7.1	7.1
13	---	---	---	7.9	7.2	7.6	---	---	---	7.1	7.0	7.1
14	7.8	7.7	7.7	7.8	7.1	7.5	---	---	---	7.5	7.1	7.2
15	7.8	7.6	7.7	8.0	7.2	7.4	---	---	---	7.7	7.3	7.5
16	7.6	7.2	7.3	7.3	7.2	7.3	---	---	---	7.4	7.3	7.3
17	7.3	7.2	7.3	7.3	7.2	7.3	---	---	---	7.3	7.2	7.2
18	7.7	7.2	7.4	7.3	7.2	7.2	---	---	---	7.2	7.1	7.1
19	7.7	7.6	7.6	7.3	7.2	7.2	---	---	---	7.2	7.1	7.1
20	7.7	7.5	7.6	7.3	7.0	7.2	---	---	---	7.2	7.1	7.1
21	7.5	7.2	7.3	7.2	7.0	7.2	---	---	---	7.2	7.1	7.1
22	7.4	7.1	7.3	7.4	7.0	7.2	---	---	---	7.3	7.1	7.1
23	7.2	7.1	7.2	7.6	7.0	7.1	---	---	---	7.2	7.1	7.1
24	7.3	7.1	7.2	7.7	7.1	7.5	---	---	---	7.3	7.1	7.2
25	7.3	7.2	7.2	7.8	7.5	7.5	---	---	---	7.2	7.0	7.1
26	7.3	7.2	7.2	8.5	7.7	7.9	---	---	---	7.2	7.1	7.2
27	7.3	7.1	7.2	8.4	7.9	8.2	---	---	---	7.2	7.1	7.2
28	7.4	7.1	7.2	8.3	7.7	7.9	---	---	---	7.3	7.2	7.2
29	7.2	7.1	7.1	7.7	7.6	7.6	7.5	7.2	7.3	7.8	7.2	7.4
30	7.2	7.1	7.1	7.7	7.5	7.6	7.4	7.3	7.3	7.9	7.4	7.6
31	---	---	---	7.9	7.5	7.7	7.4	7.3	7.4	---	---	---
MONTH	7.9	7.1	7.4	8.5	7.0	7.4	7.9	7.2	7.4	7.9	7.0	7.2

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	20.0	22.0	23.0	21.5	22.5	18.5	16.5	17.5	---	---	---
2	23.0	21.0	22.5	21.5	20.0	20.5	18.5	17.0	18.0	---	---	---
3	24.0	22.0	23.0	20.0	19.5	20.0	18.0	16.0	17.0	---	---	---
4	24.5	23.0	24.0	21.0	20.0	20.5	17.5	15.5	16.5	---	---	---
5	25.0	23.5	24.5	21.0	19.5	20.0	15.5	12.0	13.0	---	---	---
6	26.5	25.0	25.5	20.5	19.0	20.0	13.0	12.0	12.5	---	---	---
7	26.0	23.5	24.5	21.0	19.0	20.0	14.0	12.0	13.0	---	---	---
8	25.5	23.0	24.5	22.5	20.5	21.5	15.5	13.5	14.5	---	---	---
9	25.5	24.5	25.0	23.5	22.5	23.0	17.5	15.0	16.5	---	---	---
10	---	---	---	23.0	20.5	21.5	18.0	16.0	17.5	14.5	13.0	14.0
11	---	---	---	20.5	19.0	20.0	18.5	17.0	18.0	13.5	12.5	13.0
12	---	---	---	20.5	18.5	19.5	19.5	18.5	19.0	12.0	10.5	11.5
13	---	---	---	20.5	19.0	20.0	19.5	17.0	18.5	12.5	10.5	11.5
14	---	---	---	21.5	19.5	20.5	16.5	14.0	16.0	13.5	11.5	12.5
15	---	---	---	22.5	21.0	21.5	15.5	14.5	15.0	13.5	10.0	13.0
16	24.0	23.0	23.5	22.0	20.5	21.0	15.5	15.0	15.0	12.5	10.0	11.5
17	23.0	21.0	22.0	20.5	19.0	20.0	16.0	15.0	15.5	12.0	9.5	11.0
18	24.0	22.0	23.0	19.5	14.5	16.0	16.0	15.0	15.5	12.5	10.0	11.5
19	23.0	20.5	21.5	15.5	14.0	14.5	16.0	14.0	14.5	14.5	12.0	13.0
20	21.5	17.5	20.0	16.0	14.0	15.0	---	---	---	13.5	10.0	11.0
21	18.5	18.0	18.0	16.5	15.0	16.0	---	---	---	12.0	9.5	10.5
22	17.5	17.0	17.0	17.0	15.5	16.5	---	---	---	12.5	10.5	12.0
23	17.0	16.5	17.0	17.0	15.5	16.5	---	---	---	13.0	11.5	12.5
24	17.5	14.5	16.5	17.0	15.5	16.5	---	---	---	14.0	11.5	13.0
25	14.5	13.5	14.0	17.5	15.5	16.5	---	---	---	14.5	13.0	14.0
26	17.0	14.0	15.5	17.5	16.0	17.0	---	---	---	14.5	12.0	13.0
27	18.5	17.5	18.0	15.5	14.5	15.0	---	---	---	13.5	9.5	11.5
28	19.5	18.0	19.0	16.0	14.0	15.0	---	---	---	14.0	10.5	12.5
29	20.0	18.5	19.5	17.0	15.5	16.5	---	---	---	14.0	12.5	13.5
30	22.0	19.5	21.0	18.0	16.0	17.0	---	---	---	15.0	13.5	14.5
31	23.5	22.0	22.5	---	---	---	---	---	---	14.5	10.5	12.0
MONTH	26.5	13.5	21.0	23.5	14.0	18.5	19.5	12.0	16.0	15.0	9.5	12.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.5	9.0	9.5	---	---	---	---	---	---	---	---	---
2	11.0	9.0	10.0	---	---	---	---	---	---	---	---	---
3	11.0	9.5	10.5	---	---	---	---	---	---	---	---	23.5
4	10.5	10.0	10.5	---	---	---	19.5	18.0	18.5	---	---	23.5
5	10.0	9.0	9.5	---	---	---	19.5	18.5	19.0	---	---	24.0
6	10.5	9.0	9.5	---	---	16.0	---	18.5	19.0	---	---	---
7	11.5	9.5	10.5	17.0	15.5	16.5	---	---	---	---	---	---
8	12.5	10.5	11.5	18.0	16.5	17.5	---	---	---	---	---	---
9	13.0	11.5	12.0	19.0	17.5	18.0	---	---	---	---	---	---
10	14.5	12.5	13.5	19.5	18.0	18.5	---	---	---	---	---	---
11	13.5	11.0	12.0	21.0	19.0	20.0	---	---	---	---	---	---
12	13.5	11.0	12.5	20.5	18.5	19.0	---	---	---	---	---	---
13	14.5	12.5	13.5	19.0	17.0	18.5	---	---	---	---	---	---
14	14.5	13.0	14.0	16.5	15.0	16.0	---	---	---	---	---	---
15	14.0	12.5	13.5	16.0	15.0	15.5	---	---	---	---	---	---
16	15.0	13.0	14.0	17.0	16.0	16.5	21.0	19.5	21.0	---	---	24.0
17	15.5	14.5	15.0	---	---	---	21.5	20.0	21.0	---	---	---
18	17.0	15.5	16.0	---	---	---	21.5	20.5	21.0	---	---	---
19	17.0	16.0	16.5	---	---	---	---	---	---	---	---	---
20	16.5	15.5	16.0	---	---	17.0	---	---	---	---	---	---
21	17.5	16.0	16.5	17.5	16.5	17.0	---	---	---	---	---	---
22	18.5	17.5	18.0	18.0	16.5	17.0	---	---	---	---	---	---
23	19.0	16.0	17.0	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	26.5	25.5	26.0
30	---	---	---	---	---	---	---	---	---	27.0	26.0	26.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	19.0	9.0	13.0	21.0	15.0	17.5	21.5	18.0	20.0	27.0	25.5	24.5

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	26.0	26.5	28.0	27.5	27.5	31.5	30.0	31.0	31.5	30.0	30.5
2	---	---	---	28.5	28.0	28.0	32.0	30.5	31.5	31.0	30.0	30.5
3	---	---	---	29.0	23.5	27.5	32.0	31.0	31.5	31.0	29.5	30.0
4	---	---	---	26.0	24.5	25.5	32.0	30.5	31.5	30.5	30.0	30.0
5	---	---	---	27.5	26.0	26.5	31.5	30.5	31.0	30.5	29.5	30.0
6	---	---	---	28.5	27.5	28.0	31.5	30.5	31.0	30.0	29.0	29.5
7	---	---	---	30.0	28.5	29.0	31.0	30.0	30.5	30.5	29.0	29.5
8	---	---	---	29.5	28.5	29.0	---	---	---	30.5	29.5	30.0
9	---	---	---	30.0	29.0	29.5	---	---	---	33.5	29.5	31.0
10	---	---	---	---	29.5	29.5	---	---	---	34.0	27.0	30.5
11	---	---	---	---	---	29.5	---	---	---	29.5	26.0	28.0
12	---	---	---	---	29.5	29.5	---	---	---	29.0	28.0	29.0
13	---	---	26.0	---	29.5	29.5	---	---	---	30.0	28.5	29.0
14	26.5	25.5	26.0	---	29.5	29.5	---	---	---	29.5	25.5	28.0
15	27.5	26.0	26.5	---	---	29.5	---	---	---	26.5	24.0	24.5
16	27.5	26.0	27.0	---	---	29.5	---	---	---	26.0	24.0	25.0
17	27.5	26.5	27.0	---	---	30.0	---	---	---	27.0	25.5	26.0
18	27.0	26.0	26.5	---	---	30.0	---	---	---	28.0	26.5	27.0
19	26.5	25.5	26.0	---	---	30.0	---	---	---	28.5	27.0	28.0
20	26.5	25.5	26.0	---	---	28.0	---	---	---	28.5	27.5	28.0
21	26.5	25.0	25.5	---	---	27.5	---	---	---	28.5	27.0	28.0
22	26.0	25.0	25.5	---	---	27.0	---	---	---	28.0	27.0	27.5
23	27.0	26.0	26.5	---	---	27.5	---	---	---	28.0	27.0	27.5
24	27.5	27.0	27.5	---	27.0	27.5	---	---	---	27.0	25.5	26.0
25	28.5	27.5	28.0	29.5	27.5	28.5	---	---	---	26.5	25.5	26.0
26	29.0	28.5	28.5	30.5	29.0	29.5	---	---	---	26.0	24.5	25.5
27	28.5	28.0	28.0	31.5	30.0	30.5	---	---	---	25.5	24.5	25.0
28	27.5	27.0	27.0	31.5	30.0	31.0	---	---	---	24.5	23.5	24.0
29	27.5	27.0	27.0	31.5	30.5	31.0	30.0	29.0	30.0	24.5	21.5	23.0
30	28.0	27.5	27.5	31.5	30.5	31.0	30.5	29.0	30.0	21.5	20.5	21.5
31	---	---	---	31.5	30.0	30.5	31.0	29.5	30.5	---	---	---
MONTH	29.0	25.0	27.0	31.5	23.5	29.0	32.0	29.0	31.0	34.0	20.5	27.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.9	3.4	3.6	6.5	5.4	6.0	7.1	6.8	6.9	---	---	---
2	3.6	3.2	3.4	6.4	4.8	5.8	6.9	6.6	6.8	---	---	---
3	3.7	3.1	3.4	6.8	4.7	5.8	7.2	6.8	7.0	---	---	---
4	3.5	2.7	3.2	6.7	6.2	6.4	7.3	6.9	7.1	---	---	---
5	3.4	2.5	2.9	6.7	6.2	6.4	8.7	7.3	8.2	---	---	---
6	3.0	2.2	2.6	6.7	6.4	6.6	8.8	7.5	8.4	---	---	---
7	4.3	3.1	3.8	6.6	6.4	6.5	8.2	7.5	7.9	---	---	---
8	4.4	3.9	4.2	6.5	6.0	6.2	8.0	7.6	7.8	---	---	---
9	4.2	3.5	3.9	6.1	5.6	5.8	7.5	6.9	7.2	9.8	9.7	9.8
10	---	---	---	5.9	5.5	5.6	7.0	6.6	6.8	8.6	8.2	8.4
11	---	---	---	6.2	5.7	6.0	6.6	5.8	6.4	8.7	7.9	8.6
12	---	---	---	6.2	6.0	6.1	5.8	4.8	5.5	9.1	8.7	8.9
13	---	---	---	6.2	5.8	6.1	7.4	5.0	5.9	9.0	8.7	8.9
14	---	---	---	6.1	5.8	5.9	7.5	5.4	6.6	8.8	8.5	8.7
15	---	---	---	5.8	5.4	5.6	8.2	5.8	7.3	10.1	8.4	8.7
16	5.3	4.9	5.1	5.6	5.0	5.5	8.0	7.0	7.8	10.1	8.6	9.3
17	5.7	5.1	5.4	5.8	5.1	5.5	7.5	6.1	6.6	9.6	9.0	9.3
18	6.2	5.4	5.7	8.0	5.5	7.3	7.6	6.5	7.1	9.9	8.8	9.2
19	6.1	5.6	5.9	7.4	6.5	7.0	---	---	---	8.7	8.4	8.5
20	8.9	5.8	7.0	7.3	7.0	7.1	---	---	---	9.2	8.4	8.9
21	7.2	5.5	6.2	7.3	6.9	7.1	---	---	---	9.1	8.4	8.8
22	6.6	5.8	6.1	7.1	6.8	7.0	---	---	---	8.8	8.5	8.7
23	8.1	6.7	7.5	7.1	6.9	7.0	---	---	---	8.7	8.4	8.5
24	9.3	8.0	8.6	7.1	6.8	6.9	---	---	---	8.6	8.0	8.3
25	10.0	9.2	9.6	7.4	6.8	7.0	---	---	---	8.2	8.0	8.1
26	9.3	7.8	8.8	7.2	6.2	6.7	---	---	---	8.5	8.0	8.3
27	8.8	7.8	8.4	7.6	7.1	7.3	---	---	---	10.1	8.1	9.1
28	9.3	7.0	8.5	7.5	6.8	7.2	---	---	---	9.5	8.4	8.8
29	8.7	6.0	7.5	7.3	7.1	7.2	---	---	---	8.6	8.2	8.3
30	6.5	5.7	6.2	7.4	6.9	7.1	---	---	---	8.3	8.0	8.1
31	6.1	5.5	5.9	---	---	---	---	---	---	8.8	8.0	8.4
MONTH	10.0	2.2	5.7	8.0	4.7	6.5	8.8	4.8	7.1	10.1	7.9	8.7

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	8.7	8.9	---	---	---	---	---	---	---	---	---
2	8.8	8.6	8.8	---	---	---	---	---	---	---	---	---
3	9.0	8.1	8.6	---	---	---	---	---	---	---	---	---
4	9.1	8.8	8.9	---	---	---	8.4	7.0	7.9	6.8	5.4	6.2
5	9.5	8.8	9.2	---	---	---	7.3	6.9	7.1	---	---	---
6	9.6	9.1	9.4	---	---	---	---	---	---	---	---	---
7	9.5	9.0	9.3	8.0	7.8	7.9	---	---	---	---	---	---
8	9.1	8.1	8.9	7.9	7.6	7.7	---	---	---	---	---	---
9	8.9	8.7	8.9	7.6	7.4	7.5	---	---	---	---	---	---
10	8.8	8.3	8.4	7.5	7.2	7.3	---	---	---	---	---	---
11	8.8	7.3	8.2	7.6	7.0	7.2	---	---	---	---	---	---
12	8.9	8.4	8.7	7.6	6.8	7.2	---	---	---	---	---	---
13	8.5	8.1	8.3	7.7	6.8	7.0	---	---	---	---	---	---
14	8.1	7.4	7.9	8.6	7.6	8.0	---	---	---	---	---	---
15	8.4	7.3	7.9	8.0	7.0	7.7	---	---	---	---	---	---
16	8.2	7.9	8.1	---	---	---	7.5	7.2	7.4	6.9	6.2	6.5
17	8.0	6.6	7.6	---	---	---	6.9	6.0	6.5	---	---	---
18	7.5	6.6	7.1	---	---	---	---	---	---	---	---	---
19	7.1	6.7	7.0	---	---	---	---	---	---	---	---	---
20	7.5	6.7	7.2	---	---	---	---	---	---	---	---	---
21	7.5	6.5	7.0	6.5	5.4	6.0	---	---	---	---	---	---
22	6.7	5.7	6.3	6.2	6.2	5.8	---	---	---	---	---	---
23	8.2	5.6	6.9	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	7.1	6.6	6.8
31	---	---	---	---	---	---	---	---	---	6.8	5.9	6.4
MONTH	9.6	5.6	8.2	8.6	5.4	7.2	8.4	6.0	7.2	7.1	5.4	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.3	5.5	6.0	---	---	---	3.3	2.3	2.7	2.9	2.4	2.7
2	6.2	5.5	6.0	---	---	---	2.3	1.8	2.0	3.0	2.3	2.7
3	---	---	---	---	---	---	---	---	---	3.1	2.4	2.9
4	---	---	---	---	---	---	---	---	---	3.0	2.3	2.8
5	---	---	---	---	---	---	---	---	---	3.1	1.5	2.6
6	---	---	---	---	---	---	---	---	---	2.7	1.2	2.3
7	---	---	---	---	---	---	---	---	---	2.6	1.3	2.1
8	---	---	---	---	---	---	---	---	---	2.6	2.0	2.3
9	---	---	---	---	---	---	---	---	---	2.4	.5	1.6
10	---	---	---	---	---	8.1	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	3.1	2.3	2.9
13	---	---	---	---	---	---	---	---	---	3.2	2.3	2.8
14	6.9	6.6	6.7	---	---	---	---	---	---	3.4	1.9	2.9
15	6.8	6.0	6.5	---	---	---	---	---	---	3.8	1.3	2.7
16	---	---	---	---	---	---	---	---	---	5.3	3.9	4.7
17	---	---	---	---	---	---	---	---	---	5.3	4.9	5.1
18	---	---	---	---	---	---	---	---	---	5.0	4.5	4.9
19	---	---	---	---	---	---	---	---	---	4.9	4.4	4.7
20	---	---	---	---	---	---	---	---	---	4.8	4.5	4.6
21	---	---	---	---	---	---	---	---	---	5.1	4.4	4.7
22	---	---	---	---	---	---	---	---	---	5.0	4.6	4.8
23	---	---	---	---	---	---	---	---	---	5.3	4.7	4.9
24	---	---	---	3.1	.5	1.3	---	---	---	5.4	5.0	5.2
25	---	---	---	4.8	3.3	4.2	---	---	---	5.3	4.9	5.1
26	---	---	3.8	5.1	4.3	4.6	---	---	---	5.2	4.9	5.1
27	---	---	---	4.7	3.6	4.2	---	---	---	6.3	4.8	5.2
28	---	---	---	4.1	2.8	3.7	---	---	---	6.2	5.6	5.9
29	---	---	---	3.8	3.0	3.5	3.3	2.8	3.2	7.0	4.2	5.8
30	---	---	---	3.8	2.7	3.3	3.4	2.7	3.1	6.8	2.8	5.4
31	---	---	---	3.1	2.2	2.7	3.2	2.5	2.9	---	---	---
MONTH	6.9	5.5	5.8	5.1	.5	4.0	3.4	1.8	2.8	7.0	.5	3.9

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 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 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 390.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, (water years 1976-80, 1985), 6.57 ft^3/s (4,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,060 ft^3/s Oct. 20, 1984 (gage height, 25.12 ft.); from rating curve extended above 1,900 ft^3/s on basis of velocity-area study. No flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum(*) from rating curve extended above 1,900 ft^3/s on basis of velocity-area study.

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 13	1330	1,810	22.02	Apr. 22	1500	905	18.33
Oct. 20	1430	*3,060	*25.12	May 21	0515	2,000	22.57
Dec. 17	2230	1,080	19.24				

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	103	.81	14	1.8	4.7	2.7	3.3	.26	.00	.08	.00
2	.01	19	.77	6.9	1.9	2.0	1.4	1.8	.13	.00	.06	.00
3	.00	4.0	.66	5.3	1.9	1.3	1.4	1.0	.10	8.9	.04	.00
4	.41	2.0	2.2	3.6	5.3	3.4	1.7	.73	.10	3.1	.01	.00
5	.24	.73	46	2.9	4.2	2.4	1.7	.66	.09	.27	.00	.00
6	12	.63	5.1	2.4	2.1	1.6	1.3	.51	26	.03	.00	.00
7	38	.60	2.9	2.3	1.4	1.9	1.2	.37	1.8	.00	.00	.00
8	1.1	.52	2.0	1.7	1.2	1.4	1.2	.49	.46	.00	.00	.00
9	85	.46	1.3	1.6	1.2	1.1	.84	.27	.37	.00	.00	.00
10	24	.35	.57	2.6	1.3	.79	.19	.11	.15	.00	.00	.00
11	11	.71	.51	1.6	1.2	.90	.18	1.3	.56	.00	.00	.00
12	8.4	.44	.86	1.2	.86	.88	.36	2.0	1.4	.00	.00	.00
13	290	.82	136	1.1	.05	8.8	42	93	.36	.00	.00	.00
14	23	1.1	37	1.0	.03	120	6.5	59	.08	.00	.00	.00
15	1.1	1.2	54	1.1	.02	4.1	1.8	3.4	.07	.45	.00	.00
16	.41	1.0	80	27	.04	2.0	1.6	1.3	.07	.01	.00	.00
17	.49	1.3	209	4.9	1.3	2.0	1.5	.58	.07	.00	.00	.00
18	3.0	29	131	1.5	1.0	1.9	.66	.23	.21	.00	.00	.00
19	7.0	3.6	12	.71	.67	1.9	.82	.24	.10	.02	.00	.00
20	482	1.8	5.8	1.4	.71	114	.82	32	.06	17	.00	.00
21	20	1.1	5.0	1.4	.95	6.7	.75	308	.06	14	.00	.00
22	3.7	.70	3.4	1.4	1.9	3.2	222	5.0	.44	7.0	.00	.00
23	15	.80	2.3	1.6	174	2.1	21	2.3	.13	.76	.00	.00
24	55	.99	2.5	1.8	8.3	1.2	3.5	1.7	.07	.09	.00	.00
25	75	8.6	2.3	1.8	2.8	1.7	.82	1.1	.06	.00	.00	.00
26	95	46	2.1	1.7	2.0	1.9	.61	.70	.03	.04	.00	.00
27	67	17	2.3	1.7	1.4	69	7.2	.46	.03	.09	.00	.00
28	7.3	3.8	4.3	1.7	.99	4.5	273	.53	.01	.08	.00	.00
29	68	2.5	5.7	1.7	---	2.7	15	.58	.01	.12	.00	57
30	11	1.7	58	1.8	---	62	9.5	.61	.01	.11	.00	2.1
31	2.9	---	103	1.8	---	5.5	---	.47	---	.10	.00	---
TOTAL	1407.06	255.45	919.38	103.21	220.52	437.57	623.25	523.74	33.29	52.17	.19	59.10
MEAN	45.4	8.52	29.7	3.33	7.88	14.1	20.8	16.9	1.11	1.68	.006	1.97
MAX	482	103	209	27	174	120	273	308	26	17	.08	57
MIN	.00	.35	.51	.71	.02	.79	.18	.11	.01	.00	.00	.00
AC-FT	2790	507	1820	205	437	868	1240	1040	66	103	.4	117

WTR YR 1985 TOTAL 4634.93 MEAN 12.7 MAX 482 MIN .00 AC-FT 9190

08058900 EAST FORK TRINITY RIVER AT MCKINNEY, TX

LOCATION.--Lat 33°14'38", long 96°36'31", Collin County, Hydrologic Unit 12030106, at 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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. At end of year, flow from 89.1 mi² 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.--10 years, regulated, 86.6 ft³/s (62,740 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,800 ft³/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, 2,200 ft³/s May 21 at 2200 hours (gage height, 18.05 ft, from graph); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	199	14	739	44	191	93	549	48	12	.00	.00
2	.00	352	11	347	61	176	82	386	37	13	.00	.00
3	.00	226	8.1	286	56	164	76	271	31	20	.00	.00
4	.00	157	6.8	242	38	211	69	190	24	16	.00	.00
5	.00	97	7.4	197	76	208	58	150	22	15	.00	.00
6	.00	51	15	165	109	162	49	121	319	13	.00	.00
7	.00	35	30	140	109	141	41	97	230	11	.00	.00
8	.00	30	29	117	109	135	34	80	153	12	.00	.00
9	.00	27	29	100	112	129	27	65	114	8.0	.00	.00
10	.00	20	26	92	108	123	25	50	85	7.7	.00	.00
11	.00	16	28	80	88	119	25	43	73	8.3	.00	.00
12	.00	13	26	64	65	102	27	43	71	7.6	.00	.00
13	.00	10	203	53	55	86	35	275	58	6.0	.00	.00
14	.00	8.5	183	54	48	529	76	386	50	3.9	.00	.00
15	.00	7.4	101	50	39	274	52	180	44	1.5	.00	.00
16	.00	6.1	285	75	34	179	33	110	37	.55	.00	.00
17	.00	4.4	543	135	32	132	24	81	34	.15	.00	.00
18	.00	12	852	97	31	106	20	58	32	.04	.00	.00
19	.00	69	376	79	30	94	19	47	49	.02	.00	.00
20	.00	36	346	55	30	1050	16	66	34	.00	.00	.00
21	.00	20	268	44	31	1350	15	1420	28	1.7	.00	.00
22	.00	15	221	65	31	632	378	1120	25	9.9	.00	.00
23	.00	13	166	42	782	415	680	476	23	2.6	.00	.00
24	.40	11	131	42	622	314	360	318	23	3.7	.00	.00
25	114	9.2	103	43	365	252	266	247	22	1.1	.00	.00
26	48	8.5	81	36	275	212	207	198	20	.44	.00	.00
27	23	13	70	36	210	243	157	162	18	4.5	.00	.00
28	21	14	70	54	178	172	143	141	16	5.7	.00	.00
29	18	17	69	52	---	135	130	110	14	2.3	.00	.00
30	14	16	520	48	---	130	1320	84	14	.06	.00	.00
31	11	---	551	46	---	110	---	64	---	.00	.00	---
TOTAL	249.40	1513.1	5369.3	3675	3768	8276	4537	7588	1748	187.76	.00	.00
MEAN	8.05	50.4	173	119	135	267	151	245	58.3	6.06	.000	.000
MAX	114	352	852	739	782	1350	1320	1420	319	20	.00	.00
MIN	.00	4.4	6.8	36	30	86	15	43	14	.00	.00	.00
AC-FT	495	3000	10650	7290	7470	16420	9000	15050	3470	372	.00	.00

CAL YR 1984 TOTAL 15121.60 MEAN 41.3 MAX 852 MIN .00 AC-FT 29990
WTR YR 1985 TOTAL 36911.56 MEAN 101 MAX 1420 MIN .00 AC-FT 73210

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 Branch, 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 19-23, Nov. 7-15, Feb. 1, June 15, 17, June 28 to July 11, and Aug. 24-29. Records fair. 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.--10 years regulated, 45.0 ft^3/s (32,600 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, 1,610 ft^3/s Mar 21 at 1230 hours (gage height, 15.17 ft); minimum daily, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	30	502	54	98	82	254	30	5.5	2.2	.00
2	.00	.00	28	233	77	89	75	157	28	5.2	2.6	.00
3	.00	.00	27	175	58	84	70	121	26	4.9	22	.00
4	.00	.00	24	137	43	95	65	94	23	4.9	12	.00
5	.00	36	30	116	58	87	59	77	20	4.7	4.3	.00
6	.00	23	43	103	78	73	53	52	123	4.7	3.0	.00
7	.00	15	40	94	83	69	48	42	86	4.4	2.6	.00
8	.00	13	36	87	85	69	44	36	60	4.2	3.1	.00
9	.00	11	32	82	79	66	41	31	48	4.0	2.4	.00
10	.00	10	31	79	81	62	41	27	41	3.7	2.0	.00
11	.00	9.0	31	71	78	59	41	26	42	3.3	1.9	.00
12	.00	8.8	32	63	70	53	40	29	44	3.1	1.6	.00
13	.00	8.6	57	59	61	50	45	110	38	2.7	1.7	.00
14	.00	10	149	62	57	269	64	164	27	2.4	1.2	.00
15	.00	24	110	61	53	139	45	77	24	1.7	1.4	.00
16	.00	20	242	72	49	96	37	55	22	1.7	1.6	.00
17	.00	18	448	91	48	85	32	39	21	1.6	1.7	.00
18	.00	52	807	76	46	77	29	29	20	1.4	1.4	.00
19	.00	51	434	68	46	73	26	25	28	1.3	.80	.00
20	22	32	406	57	49	525	26	51	17	1.3	.60	.00
21	12	26	292	49	49	1180	27	821	11	10	.54	.00
22	4.0	23	218	50	50	508	510	463	8.8	17	.29	.00
23	.50	22	173	53	509	338	613	227	8.0	14	.22	.00
24	.00	22	154	56	382	255	225	133	7.3	9.6	.19	.00
25	.00	23	129	56	226	180	161	94	7.3	8.6	.13	.00
26	.00	33	121	51	160	126	132	70	5.8	12	.08	.00
27	.00	66	114	51	114	143	110	54	5.5	15	.06	.00
28	.00	47	110	60	96	105	95	50	5.8	4.6	.03	.00
29	.00	38	109	56	---	90	84	44	5.5	3.4	.01	.00
30	.00	33	390	54	---	241	557	41	5.5	2.8	.00	.00
31	.00	---	387	53	---	99	---	35	---	2.4	.00	---
TOTAL	38.50	674.40	5234	2877	2839	5483	3477	3528	838.5	166.1	71.65	.00
MEAN	1.24	22.5	169	92.8	101	177	116	114	28.0	5.36	2.31	.000
MAX	22	66	807	502	509	1180	613	821	123	17	22	.00
MIN	.00	.00	24	49	43	50	26	25	5.5	1.3	.00	.00
AC-FT	76	1340	10380	5710	5630	10880	6900	7000	1660	329	142	.00

CAL YR 1984 TOTAL 12143.33 MEAN 33.2 MAX 807 MIN .00 AC-FT 24090
WTR YR 1985 TOTAL 25227.15 MEAN 69.1 MAX 1180 MIN .00 AC-FT 50040

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 present size in December 1975. Deliberate impoundment began Sept. 14, 1953, and the dam was completed in October 1953. Low-flow outlets consist of five 36-inch-diameter controlled sluice gates. Capacity table is based on Table No. 9 (Design Memo, 1970 Conditions). 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 and Sister Grove Creek drainage basins. Gage-height telemeter located at station. Figures given herein represent total contents. Data regarding 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 U.S. Army 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, 551,100 acre-ft May 25 at 1600 hours (elevation, 496.15 ft); minimum daily, 348,500 acre-ft Oct. 18 at 1600 hours (elevation, 486.51 ft).

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

486.0	339,200	492.0	456,500	496.0	547,400
488.0	376,200	494.0	500.700	497.0	571,900
490.0	415,200				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352200	363600	367200	462200	459600	500900	543800	540200	526000	459000	436600	403700
2	351400	363800	367400	465200	459000	499500	541200	539500	522300	458300	435600	402500
3	351000	364000	367000	467200	458800	497700	537600	538300	518800	457900	434500	401400
4	350900	364900	367000	468700	458500	498200	534300	536400	515500	457300	433300	399800
5	350300	364900	367200	469600	460000	496600	532900	534800	514400	456800	432300	398600
6	350100	364400	366600	470200	461300	495000	530500	532400	513900	456000	431400	397800
7	351200	364000	365700	470600	462200	493200	526700	529800	513200	454900	430400	396800
8	350900	363600	365700	469800	462800	492100	523000	526700	511400	453800	429400	395900
9	350700	364000	365900	468700	463900	490300	519700	523700	509800	453000	428200	394900
10	350300	363400	365700	467800	465700	488500	517900	520200	506300	452300	427100	393900
11	350300	363100	365500	466500	465200	487600	516200	517600	503800	451500	426100	393500
12	350000	362700	365500	464400	465400	485400	514200	515100	498600	450400	424700	392800
13	350700	361800	368700	462200	466300	485800	513700	515100	494500	449400	423500	392800
14	350500	361600	371300	461100	466300	490500	512100	524400	490100	448300	422900	392400
15	350100	361800	375100	459800	465900	492300	510500	525600	486300	447300	421900	391800
16	350100	361000	379700	460900	466300	492800	508200	525800	481800	446400	420700	390800
17	349400	362700	395500	460900	466300	492500	505400	525600	477600	445600	419600	390000
18	349800	363600	415000	460900	466700	491600	502000	523900	474800	444500	418600	389300
19	349200	364400	423300	460000	467000	491600	498800	521400	471700	443500	417800	388500
20	353400	364200	429600	459200	466700	503400	496400	522100	468900	442900	416400	387900
21	353300	363800	433500	458300	467000	516500	493200	533100	467200	445200	415400	387000
22	353300	363600	435600	457900	469100	525300	510200	544800	466700	445000	414000	385800
23	353100	363200	436400	457700	486700	529100	526300	549100	466100	444500	413000	385000
24	354200	363100	439100	458100	496800	531500	531700	550600	465400	443700	412200	384100
25	358200	363100	438700	458500	500200	531500	532200	550100	464800	442900	411000	383300
26	359500	366200	439300	458300	502900	530500	531000	547400	463900	442400	410000	382200
27	360600	367200	439700	458800	502500	534100	530500	545500	463300	441600	409100	381000
28	361000	367000	440300	458500	501600	535500	532900	542200	462000	440600	407900	380400
29	361200	367400	442600	458800	---	535200	533800	538600	460900	439500	407100	382200
30	361200	367400	446400	460300	---	541900	536900	534100	460000	438500	406300	381600
31	360800	---	454300	460700	---	544300	---	530700	---	437600	405300	---
MAX	361200	367400	454300	470600	502900	544300	543800	550600	526000	459000	436600	403700
MIN	349200	361000	365500	457700	458500	485400	493200	515100	460000	437600	405300	380400
(†)	487.17	487.52	491.88	492.18	494.03	495.86	495.55	495.29	492.15	491.09	489.49	488.27
(‡)	+7700	+6600	+86900	+6400	+40900	+42700	-7400	-6200	-70700	-22400	-32300	-23700

CAL YR 1984 MAX 454900 MIN 349200 (‡) +76300
WTR YR 1985 MAX 550600 MIN 349200 (‡) +28500

(†) 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 above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1969, at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Apr. 9-26, May 20 to June 5, and July 12 to Aug. 23. Records fair. Flow is regulated by Lavon Lake (station 08060500).

AVERAGE DISCHARGE.--32 years, 340 ft^3/s (246,300 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, 2,160 ft^3/s, date and time unknown (gage height, 13.12 ft); no flow Oct. 1-19 and June 28 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.6	1.2	3.4	1.4	1080	856	548	2000	.00	.00	.00
2	.00	2.2	.91	1.8	1.5	1080	1640	970	2000	.00	.00	.00
3	.00	1.7	.82	1.5	1.5	1070	1650	967	1670	.00	.00	.00
4	.00	1.1	.82	1.5	1.5	1080	1700	959	1500	.00	.00	.00
5	.00	.63	1.3	1.5	1.2	1080	1720	969	1130	.00	.00	.00
6	.00	.56	1.2	1.8	1.2	1070	1710	1280	1100	.00	.00	.00
7	.00	.56	1.2	438	1.2	1070	1710	1490	794	.00	.00	.00
8	.00	.59	1.0	919	1.2	1090	1740	1490	802	.00	.00	.00
9	.00	.82	.82	919	1.2	1070	1170	1490	788	.00	.00	.00
10	.00	.60	.82	919	.82	1050	1000	1490	1280	.00	.00	.00
11	.00	.56	.75	919	.82	1040	1000	1480	1840	.00	.00	.00
12	.00	.56	.56	919	.82	1040	1000	1480	1850	.00	.00	.00
13	.00	.42	7.8	906	.78	1010	1000	1020	1840	.00	.00	.00
14	.00	.57	5.2	892	.49	434	1000	30	1830	.00	.00	.00
15	.00	.82	4.9	706	.36	213	1000	7.6	1840	.00	.00	.00
16	.00	.96	14	546	.36	446	1000	6.0	1810	.00	.00	.00
17	.00	2.5	22	546	.36	446	1330	5.7	1800	.00	.00	.00
18	.00	4.8	16	546	.24	473	1500	666	1780	.00	.00	.00
19	.00	2.4	1.4	530	.18	495	1500	1080	1270	.00	.00	.00
20	11	1.5	1.2	499	.16	490	1500	1230	770	.00	.00	.00
21	5.6	1.3	1.2	499	263	229	1500	531	613	.00	.00	.00
22	2.5	.76	.97	224	485	1.7	562	1500	1.8	.00	.00	.00
23	2.5	.69	.82	3.4	281	.82	3.0	10	.56	.00	.00	.00
24	6.0	.82	1.0	2.4	2.6	.80	1.0	3.0	.35	.00	.00	.00
25	33	.72	1.2	1.5	1.7	889	1130	802	.10	.00	.00	.00
26	9.5	4.7	1.2	1.5	1.5	1680	1610	5.0	.03	.00	.00	.00
27	8.8	5.1	1.2	1.5	591	1410	1040	1500	.01	.00	.00	.00
28	8.1	2.2	.82	1.5	1080	1060	24	1830	.00	.00	.00	.00
29	7.3	1.2	.82	1.5	---	1060	5.6	2000	.00	.00	.00	.00
30	5.0	1.2	1.9	1.3	---	427	4.1	2000	.00	.00	.00	.00
31	1.4	---	9.3	1.2	---	1.6	---	2000	---	.00	.00	---
TOTAL	100.70	45.14	104.33	10954.3	2723.09	23586.92	32605.7	30839.3	30309.85	.00	.00	.00
MEAN	3.25	1.50	3.37	353	97.3	761	1087	995	1010	.000	.000	.000
MAX	33	5.1	22	919	1080	1680	1740	2000	2000	.00	.00	.00
MIN	.00	.42	.56	1.2	.16	.80	1.0	3.0	.00	.00	.00	.00
AC-FT	200	90	207	21730	5400	46780	64670	61170	60120	.00	.00	.00

CAL YR 1984 TOTAL 820.56 MEAN 2.24 MAX 79 MIN .00 AC-FT 1630
WTR YR 1985 TOTAL 131269.33 MEAN 360 MAX 2000 MIN .00 AC-FT 260400

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 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. 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 at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1969-85), 94.3 ft³/s (68,320 acre-ft).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft³/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 4,000 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 20	1500	4,890	21.05	Apr. 22	0300	*11,900	*26.06
Dec. 18	0130	10,000	25.42	May 21	0745	4,930	21.12
Apr. 22	1630	7,620	24.42				

Minimum discharge, 7.6 ft³/s Oct. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	503	53	397	73	158	90	200	50	26	18	23
2	16	110	50	277	74	118	77	133	49	25	18	24
3	15	70	47	243	74	126	70	106	48	29	18	24
4	15	67	52	211	87	185	66	95	47	26	19	23
5	28	64	122	169	106	108	60	88	257	25	19	23
6	29	58	56	160	111	94	60	83	525	24	19	28
7	80	56	50	145	108	91	53	77	61	23	19	24
8	23	53	48	130	96	88	48	73	49	24	19	23
9	21	53	47	124	92	85	46	69	45	23	21	23
10	21	51	45	116	88	79	44	66	43	23	19	22
11	22	49	41	104	83	76	45	67	64	23	21	35
12	90	47	41	92	73	71	45	65	47	23	22	43
13	199	46	766	93	72	118	300	264	39	22	21	25
14	66	45	166	93	68	939	59	319	37	22	21	231
15	33	46	513	86	69	157	45	65	36	21	24	33
16	39	45	1020	349	67	121	41	59	34	20	24	28
17	32	46	2120	141	66	106	40	57	34	18	23	25
18	59	735	3600	102	67	95	40	55	227	18	24	24
19	32	77	486	92	67	87	37	55	43	17	24	22
20	1170	64	311	150	68	1470	37	274	36	23	22	23
21	92	59	262	93	66	266	39	1800	33	380	22	22
22	83	56	201	77	80	157	2710	139	33	52	23	22
23	147	53	177	76	1450	130	835	87	33	37	23	31
24	788	53	163	76	313	109	190	74	41	24	23	24
25	1100	100	141	76	182	98	129	66	46	21	24	20
26	108	307	129	74	154	99	108	62	31	19	25	19
27	235	89	171	77	129	840	337	59	28	19	24	19
28	79	62	167	78	120	118	3330	59	28	19	23	20
29	74	58	169	73	---	90	384	57	28	19	24	585
30	57	53	630	73	---	881	848	55	27	18	24	45
31	66	---	826	72	---	122	---	51	---	17	24	---
TOTAL	4837	3175	12670	4119	4103	7282	10213	4779	2099	1080	674	1533
MEAN	156	106	409	133	147	235	340	154	70.0	34.8	21.7	51.1
MAX	1170	735	3600	397	1450	1470	3330	1800	525	380	25	585
MIN	15	45	41	72	66	71	37	51	27	17	18	19
AC-FT	9590	6300	25130	8170	8140	14440	20260	9480	4160	2140	1340	3040

CAL YR 1984 TOTAL 44640 MEAN 122 MAX 3600 MIN 13 AC-FT 88540
WTR YR 1985 TOTAL 56564 MEAN 155 MAX 3600 MIN 15 AC-FT 112200

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 sq mi².

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, 1978. 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 provided 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, 510,600 acre-ft Apr. 28 at 0900 hours (elevation, 436.40 ft); minimum, 418,200 acre-ft Oct. 4 (elevation, 432.20 ft).

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

432.0	414,000	434.0	456,500	436.0	501,400
433.0	435,000	435.0	478,600	437.0	524,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419600	465500	464600	491500	489500	492200	489000	491100	487700	480700	464400	440500
2	419200	463500	465700	488300	487900	491700	488300	489900	488100	480900	463500	439900
3	418600	462600	465300	488600	487700	490600	487200	489000	488600	480900	462400	438800
4	419200	464000	466600	489000	487400	492900	486500	487900	487400	479800	462000	437500
5	418400	463100	467500	487900	488800	491100	489200	486700	490400	480000	461100	436400
6	420400	462000	465700	488300	489000	490200	489700	486500	490800	479500	460400	436000
7	421900	462000	465700	488100	488800	490200	490200	487000	488300	478600	458700	435800
8	421700	460900	466200	487700	488100	491100	489500	487000	486700	477500	457800	435200
9	422300	462200	467000	489200	488800	491100	488800	486500	485200	476800	456700	435000
10	422100	462000	466800	488800	491700	491100	488600	486500	485400	476400	456300	435000
11	422700	460900	466800	489200	489000	493100	488800	486300	486700	475300	456300	434700
12	422900	460000	467500	487200	489000	491100	489000	486500	485400	475000	454800	434100
13	428400	459300	475000	486500	490400	494500	491100	493300	485200	474200	454100	434100
14	428400	458900	477100	487000	489500	492900	491300	498800	486500	473000	454100	434700
15	428600	460200	482000	486500	488600	489500	491500	493300	487400	472800	453200	435000
16	429900	458500	484900	491100	489000	490400	491100	488600	488100	471700	452100	434700
17	428800	459800	498800	489900	488800	489700	490400	486500	489200	471000	451300	433900
18	432400	462600	490600	490800	489200	489200	489500	486100	491100	470600	450400	433500
19	431400	462200	484700	499500	489200	491700	489700	486500	491300	469500	450000	433500
20	444600	461500	480900	489700	488600	496800	490200	488800	489700	469900	448900	433100
21	445700	460700	480200	489500	489200	494500	489700	498600	487700	471300	447800	432600
22	446500	460400	479800	488800	490200	491700	504800	493800	487400	471000	447400	431800
23	445200	460200	479500	488600	499100	489200	494500	489200	486500	471000	446500	432600
24	449500	459800	481800	489000	492000	487400	488600	487900	486500	470400	446300	430500
25	454800	460200	480200	489700	489500	487400	487900	487000	485800	470100	445900	431600
26	455200	464600	480700	488100	491700	488600	489000	485800	485200	469700	444600	429700
27	457200	465100	480700	489000	490200	491500	499100	485800	485200	468800	443700	428400
28	458200	464200	481100	488100	490800	491100	501400	486500	483600	468200	443100	428600
29	460000	465300	484700	487700	---	490600	488600	486700	482500	466400	442400	433900
30	460400	465100	485200	492200	---	492700	489900	487000	481600	465700	441600	431800
31	460000	---	491100	492200	---	488800	---	488600	---	465100	441400	---
MAX	460400	465500	498800	499500	499100	496800	504800	498800	491300	480900	464400	440500
MIN	418400	458500	464600	486500	487400	487400	486500	485800	481600	465100	441400	428400
(†)	434.16	434.39	435.55	435.60	435.54	435.45	435.50	435.44	435.13	434.39	433.30	432.85
(‡)	+39600	+5100	+26000	+1100	-1400	-2000	+1100	-1300	-7000	-16500	-23700	-9600

CAL YR 1984 MAX 498800 MIN 418400 (‡) +60400
WTR YR 1985 MAX 504800 MIN 418400 (‡) +11400

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

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 mi^2.

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 above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 4.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 16-17 and May 4-12. Records good except those for estimated daily discharges, which are fair. Flow is slightly regulated by several small on-channel dams. There are several small diversions above station including the irrigation of a golf course. Low flows are sustained by effluents from the city of Garland. A recording rain gage is located at station.

AVERAGE DISCHARGE.--27 years, 29.7 ft^3/s (12.76 in/yr), 21,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/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 greater than base discharge of 2,500 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 20	1430	*8,900	*18.85	Apr. 28	0200	6,720	18.31
Dec. 13	1400	2,860	16.51	May 13	1515	3,770	17.15
Dec. 17	2200	3,010	16.63	May 14	0445	4,530	17.52
Mar. 27	0215	2,640	16.28	May 21	0615	4,490	17.50
Apr. 22	1445	5,790	18.03				

Minimum daily discharge, 0.02 ft^3/s Oct. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	309	9.2	39	4.0	25	21	19	7.3	1.5	.67	.71
2	.35	41	7.6	45	4.5	9.2	17	17	7.1	1.4	.60	.59
3	.06	16	7.0	22	4.8	7.9	9.7	14	6.2	157	.36	.34
4	.07	12	14	14	17	32	9.1	12	5.9	31	.33	.44
5	6.7	9.2	160	12	24	10	7.3	11	190	5.6	.35	.57
6	24	7.5	17	9.6	15	7.7	7.9	9.5	497	3.5	.68	.57
7	218	7.9	11	8.6	8.7	6.7	7.3	9.0	19	2.2	.78	.68
8	8.5	7.0	9.3	7.8	6.5	6.8	6.5	8.7	12	2.2	.95	1.6
9	32	5.5	8.3	14	6.8	6.9	7.7	8.3	11	2.5	.85	.73
10	46	4.7	7.1	16	7.2	6.0	7.5	7.9	9.6	2.1	1.4	.63
11	50	4.2	6.5	8.8	6.2	5.8	7.4	7.9	29	9.5	1.1	6.6
12	72	4.2	7.2	7.5	5.6	6.9	7.1	7.9	13	3.4	1.1	12
13	554	4.2	645	6.7	5.3	31	216	603	8.8	2.1	.94	2.7
14	71	5.1	115	7.4	5.0	392	20	780	7.3	1.7	.79	330
15	9.7	4.1	200	7.2	5.0	17	12	26	6.6	1.7	1.3	54
16	52	4.6	439	154	5.0	12	9.9	19	5.4	12	14	13
17	14	5.4	760	22	5.3	9.6	8.1	15	5.3	9.6	3.5	6.8
18	352	362	533	15	5.3	8.4	7.8	14	34	2.8	2.2	6.4
19	60	22	74	12	6.8	7.9	6.7	12	18	1.5	.93	3.9
20	1330	12	37	8.9	12	498	6.5	149	8.2	13	.82	2.4
21	63	11	27	8.8	8.4	29	28	979	4.8	100	.80	2.6
22	54	9.1	15	9.4	25	17	1090	31	8.4	21	.53	2.1
23	100	7.9	11	9.2	722	12	62	21	6.7	6.8	.43	5.8
24	283	7.6	9.4	9.1	26	10	16	17	5.1	4.3	1.3	5.1
25	295	85	6.9	8.6	15	11	12	15	3.8	3.9	3.2	1.3
26	142	421	5.9	7.3	12	38	11	12	4.1	4.1	1.2	.47
27	225	47	24	7.6	9.2	527	47	11	2.7	5.7	.72	.33
28	24	16	27	7.6	8.8	23	1600	13	1.8	3.7	1.6	.47
29	305	12	30	4.8	---	17	63	9.9	1.8	2.5	.83	581
30	30	11	258	5.3	---	365	26	8.8	1.6	.89	.96	20
31	14	---	368	5.0	---	31	---	7.5	---	1.2	.87	---
TOTAL	4435.82	1475.2	3849.4	520.2	986.4	2186.8	3357.5	2875.4	941.5	420.39	46.09	1063.83
MEAN	143	49.2	124	16.8	35.2	70.5	112	92.8	31.4	13.6	1.49	35.5
MAX	1330	421	760	154	722	527	1600	979	497	157	14	581
MIN	.06	4.1	5.9	4.8	4.0	5.8	6.5	7.5	1.6	.89	.33	.33
CFSM	4.53	1.56	3.92	.53	1.11	2.23	3.54	2.94	.99	.43	.05	1.12
IN.	5.22	1.74	4.53	.61	1.16	2.57	3.95	3.38	1.11	.49	.05	1.25
AC-FT	8800	2930	7640	1030	1960	4340	6660	5700	1870	834	91	2110

CAL YR 1984 TOTAL 16274.43 MEAN 44.5 MAX 1440 MIN .00 CFSM 1.41 IN 19.16 AC-FT 32280
WTR YR 1985 TOTAL 22158.53 MEAN 60.7 MAX 1600 MIN .06 CFSM 1.92 IN 26.08 AC-FT 43950

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 374.86 ft (revised, datum lowered 3.00 ft effective Oct. 1, 1984) above National Geodetic Vertical Datum of 1929 (from State Department of Highways and Public Transportation bridge plans). Prior to Aug. 26, 1975, recording gage at 3 ft higher datum located at site 126 ft upstream and 868 ft to left. From Aug. 26, 1975, to May 12, 1977, recording gage at 3 ft higher datum located at site 105 ft downstream.

REMARKS.--Estimated daily discharges: Sept. 20-27. Records good except those for estimated daily discharges, which are fair. Flow is regulated by Lake Ray Hubbard (station 08061550). Low flow is sustained by sewage effluent from the city of Garland into Duck Creek, that enters the East Fork Trinity River 0.2 mi upstream from this station. Gage height telemeters located at station.

AVERAGE DISCHARGE.--12 years (water years 1974-85), 546 ft^3/s (395,600 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, 17,900 ft^3/s Apr. 28 at 1430 hours (gage height, 17.38 ft); minimum daily, 22 ft^3/s Oct. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	332	48	946	59	1190	906	858	1910	45	40	43
2	33	470	45	1320	48	1170	1830	1630	1890	48	41	42
3	29	103	43	720	46	1160	1820	1870	1860	54	40	42
4	22	78	43	96	49	2070	1840	1840	1810	370	39	42
5	34	71	219	80	101	2610	1850	1850	1790	69	39	42
6	38	64	111	67	77	1920	1850	1820	3200	56	41	43
7	276	56	60	336	64	1170	1870	1830	2480	48	41	43
8	66	50	53	1230	53	1170	1810	1870	2110	51	41	42
9	39	47	48	1230	52	1170	1640	1880	1780	54	39	42
10	100	46	45	1240	55	1170	1140	1840	1760	56	40	42
11	53	42	42	1220	84	1180	1140	1840	1770	62	39	42
12	115	38	41	1220	50	1530	1160	1850	1780	71	41	43
13	382	38	769	1220	46	1870	1480	2380	1720	59	41	43
14	483	37	570	1220	43	4460	1280	4650	1460	56	41	189
15	76	46	537	818	46	2620	1190	3860	1110	58	41	178
16	69	41	811	190	43	615	1180	3810	1120	61	42	151
17	107	35	1640	148	43	590	1570	1990	1100	77	42	95
18	64	417	11300	293	42	597	1930	519	1110	43	42	58
19	511	105	7570	670	42	601	1930	1160	1130	42	42	52
20	1080	50	3550	686	46	2220	1960	1690	1090	42	42	50
21	1440	43	2880	614	269	2070	1970	4920	1100	54	42	46
22	107	39	1400	359	620	1930	5400	4010	747	118	42	44
23	193	37	110	45	3910	1900	11200	3570	69	44	43	43
24	229	37	70	43	4650	1530	5430	1520	59	42	43	42
25	1010	68	61	41	2330	548	962	557	57	41	43	42
26	224	229	49	40	89	1090	1920	1840	54	38	43	42
27	527	573	47	39	592	3410	1950	1860	54	43	44	36
28	195	93	97	45	1160	2850	13600	1880	51	42	44	40
29	423	66	64	43	---	2670	10500	1920	48	42	44	258
30	297	55	478	44	---	3210	1600	1940	45	42	44	199
31	116	---	576	81	---	2390	---	1940	---	40	43	---
TOTAL	8364	3406	33377	16344	14709	54681	85908	66994	36264	1968	1289	2116
MEAN	270	114	1077	527	525	1764	2864	2161	1209	63.5	41.6	70.5
MAX	1440	573	11300	1320	4650	4460	13600	4920	3200	370	44	258
MIN	22	35	41	39	42	548	906	519	45	38	39	36
AC-FT	16590	6760	66200	32420	29180	108500	170400	132900	71930	3900	2560	4200

CAL YR 1984 TOTAL 63158 MEAN 173 MAX 11300 MIN 20 AC-FT 125300
WTR YR 1985 TOTAL 325420 MEAN 892 MAX 13600 MIN 22 AC-FT 645500

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, 1,100 microsiemens Aug. 29, 1985; minimum daily, 220 microsiemens 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, 1,100 microsiemens Aug. 29; minimum daily, 280 microsiemens Dec. 16.
WATER TEMPERATURES: Maximum daily, 30.0°C July 27, Sept. 1; minimum daily, 6.0°C Jan. 21, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 15...	1030	45	542	8.0	22.0	70	15	3.4	40	15	170
JAN 07...	1100	1000	720	7.6	14.0	50	5.4	2.4	23	24	260
FEB 11...	1200	48	606	8.2	10.0	20	12	4.3	38	15	200
APR 10...	1321	2440	323	7.8	17.0	5	14	10.4	109	3.5	130
JUN 28...	0830	51	1040	7.9	26.0	30	11	.0	0	50	230
AUG 06...	1025	42	981	7.7	30.0	--	--	.0	0	64	260
SEP 18...	0935	64	--	7.6	26.0	30	8.3	.5	6	--	--

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 15...	7	62	2.8	31	1	6.7	160	44	44	.60	7.8
JAN 07...	18	97	3.7	47	1	6.2	240	72	54	.70	9.1
FEB 11...	0	73	3.7	49	2	6.6	200	56	42	.60	6.6
APR 10...	17	48	2.9	17	.7	4.4	115	31	14	.40	.7
JUN 28...	11	88	3.5	88	3	12	224	49	150	1.2	7.6
AUG 06...	42	97	4.2	69	2	13	218	49	130	1.5	8.1
SEP 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, 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 15...	290	63	23	.28	.020	.30	5.60	.40	6.0	.760	12
JAN 07...	430	58	32	.17	.030	.20	8.40	2.6	11	2.30	15
FEB 11...	360	20	8	.17	.030	.20	7.00	5.0	12	1.00	12
APR 10...	190	22	2	.38	.020	.40	.740	1.4	2.1	.110	2.7
JUN 28...	530	14	8	--	.010	<.10	15.0	2.0	17	1.00	44
AUG 06...	500	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	9	8	--	<.010	<.10	13.0	.00	13	.610	35

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 11...	1200	1	47	<1	<10	2	18
AUG 06...	1025	3	30	<1	<10	2	260

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 11...	3	57	<.1	<1	<1	17
AUG 06...	2	66	.2	<1	<1	14

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	8364	383	222	5010	19	423	33	745	140
NOV.	1984	3406	549	305	2810	39	358	45	415	170
DEC.	1984	33377	313	184	16600	13	1150	27	2470	120
JAN.	1985	16344	342	200	8820	15	679	30	1310	130
FEB.	1985	14709	370	214	8500	18	734	32	1260	130
MAR.	1985	54681	324	191	28200	13	1920	28	4200	130
APR.	1985	85908	315	186	43200	12	2840	28	6440	120
MAY	1985	66994	325	191	34600	13	2410	29	5160	130
JUNE	1985	36264	309	183	17900	12	1200	27	2670	120
JULY	1985	1968	819	431	2290	80	428	63	335	190
AUG.	1985	1289	965	493	1720	110	376	72	250	190
SEPT	1985	2116	709	378	2160	65	371	55	317	180
TOTAL		325420	**	**	172000	**	12900	**	25600	**
WTD.AVG.		892	334	195	**	15	**	29	**	130

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	622	646	728	310	700	360	513	350	314	902	976	997
2	750	410	717	298	658	345	314	322	313	966	960	873
3	765	588	745	350	672	332	311	327	312	1030	897	870
4	934	648	768	667	665	305	316	322	310	650	837	965
5	713	651	504	700	550	311	314	325	292	680	788	1050
6	666	685	543	740	674	312	312	320	304	766	942	962
7	302	720	641	575	708	329	310	327	306	850	941	1020
8	510	743	777	308	786	327	310	323	297	923	906	871
9	655	809	764	312	788	335	318	323	298	973	983	793
10	403	804	759	310	796	330	339	325	300	940	1010	855
11	613	790	901	298	615	334	331	330	303	978	811	920
12	396	746	900	308	845	326	337	328	293	859	850	997
13	390	967	317	302	896	317	338	327	290	925	895	950
14	352	920	335	307	872	292	318	297	292	930	945	485
15	535	850	384	310	916	307	329	314	291	904	962	482
16	693	875	280	459	870	374	336	316	297	960	1010	483
17	536	925	285	533	928	360	337	311	306	717	920	810
18	706	320	289	478	925	363	319	809	310	988	1080	880
19	318	490	287	332	919	365	322	330	309	980	903	917
20	298	627	281	330	958	375	324	285	302	984	900	955
21	329	698	297	332	607	321	320	305	305	612	973	980
22	505	715	429	325	361	320	305	306	304	484	1020	878
23	434	728	632	751	367	319	304	325	703	774	1030	842
24	400	786	713	838	296	322	302	350	749	880	1060	960
25	330	687	651	824	298	666	427	726	898	984	979	934
26	460	591	672	755	661	343	317	327	936	1000	1010	1000
27	393	388	758	784	475	298	315	319	889	839	1030	1020
28	506	575	742	729	329	317	301	320	1040	864	1040	985
29	398	643	765	811	---	318	299	321	1020	793	1100	425
30	440	730	335	902	---	300	391	324	948	972	1070	432
31	595	---	300	775	---	317	---	317	---	1020	1020	---
MEAN	514	692	564	518	683	340	331	350	461	875	963	853

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	23.0	18.0	---	---	10.0	17.0	21.0	23.0	28.0	29.0	30.0
2	20.0	19.0	18.0	---	9.0	---	16.0	21.0	22.0	28.0	29.0	28.0
3	21.0	19.0	---	---	10.0	12.0	16.0	21.0	22.0	27.0	---	28.0
4	22.0	20.0	14.0	10.0	---	10.0	16.0	21.0	25.0	---	---	29.0
5	23.0	19.0	12.0	13.0	---	10.0	17.0	22.0	26.0	28.0	29.0	29.0
6	25.0	---	10.0	14.0	10.0	10.0	17.0	20.0	25.0	29.0	29.0	28.0
7	24.0	---	11.0	---	10.0	11.0	17.0	20.0	26.0	---	29.0	29.0
8	25.0	21.0	15.0	10.0	12.0	12.0	16.0	21.0	27.0	28.0	29.0	29.0
9	25.0	21.0	17.0	9.0	13.0	12.0	17.0	21.0	26.0	28.0	29.0	28.0
10	23.0	20.0	16.0	9.0	13.0	13.0	17.0	22.0	26.0	28.0	29.0	28.0
11	24.0	19.0	17.0	9.0	10.0	---	17.0	21.0	26.0	27.0	29.0	28.0
12	22.0	18.0	18.0	7.0	10.0	13.0	17.0	21.0	26.0	28.0	---	28.0
13	23.0	19.0	19.0	8.0	10.0	14.0	17.0	20.0	26.0	28.0	---	28.0
14	20.0	22.0	15.0	9.0	14.0	12.0	18.0	20.0	---	---	29.0	26.0
15	22.0	21.0	15.0	8.0	13.0	12.0	18.0	21.0	26.0	28.0	29.0	26.0
16	24.0	19.0	14.0	13.0	16.0	13.0	18.0	21.0	26.0	28.0	29.0	26.0
17	20.0	---	15.0	9.0	16.0	15.0	17.0	21.0	27.0	28.0	29.0	27.0
18	24.0	12.0	14.0	10.0	---	14.0	18.0	21.0	---	29.0	29.0	27.0
19	19.0	15.0	15.0	10.0	16.0	15.0	---	22.0	27.0	28.0	29.0	27.0
20	21.0	16.0	12.0	6.0	16.0	15.0	19.0	21.0	27.0	27.0	29.0	27.0
21	18.0	15.0	13.0	6.0	15.0	13.0	18.0	22.0	26.0	27.0	29.0	27.0
22	17.0	---	13.0	6.0	9.0	13.0	18.0	21.0	26.0	27.0	29.0	28.0
23	16.0	16.0	15.0	11.0	10.0	14.0	19.0	---	27.0	28.0	29.0	27.0
24	16.0	17.0	16.0	12.0	9.0	13.0	19.0	---	28.0	---	29.0	25.0
25	---	13.0	13.0	14.0	9.0	18.0	21.0	23.0	27.0	28.0	29.0	25.0
26	19.0	16.0	15.0	12.0	14.0	16.0	19.0	21.0	27.0	28.0	---	25.0
27	20.0	14.0	12.0	12.0	14.0	15.0	21.0	21.0	27.0	30.0	28.0	25.0
28	22.0	---	17.0	13.0	9.0	16.0	20.0	---	23.0	29.0	28.0	24.0
29	20.0	16.0	---	14.0	---	16.0	21.0	21.0	27.0	29.0	28.0	24.0
30	19.0	15.0	17.0	14.0	---	16.0	21.0	21.0	26.0	29.0	28.0	19.0
31	22.0	---	16.0	---	---	13.0	---	22.0	---	29.0	29.0	---
MEAN	21.0	18.0	15.0	10.5	12.0	13.5	18.0	21.0	26.0	28.0	29.0	27.0

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 above National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1983, at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: May 23 to July 7. Records fair except those for estimated daily discharges, which are poor. Flow largely regulated by Lavon Lake (station 08060500) since September 1953 and Lake Ray Hubbard (station 098061550) since Mar. 22, 1970. The city of Forney discharges sewage effluent into a triburary below Lake Ray Hubbard and above this station. The North Texas Municipal Water District discharges sewage effluent into tributaries above this station from the Mesquite and Chandler's Landing sewage treatment plants. 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. A gage-height telemeter is located at station.

AVERAGE DISCHARGE.--4 years (water years 1950-53) prior to regulation by Lavon Lake, 652 ft^3/s (472,400 acre-ft/yr); 32 years (water years 1954-85) regulated, 594 ft^3/s (430,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft /s May 28, 1957 (gage height, 22.81 ft); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,700 ft^3/s Apr. 29 at 1500 hours (gage height, 15.53 ft); minimum daily, 53 ft^3/s Sept. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	339	120	2270	88	1190	2390	2660	2050	85	59	58
2	70	1370	107	1820	92	1190	1970	1250	2010	80	59	57
3	71	549	96	1530	92	1150	2120	1690	2000	130	59	59
4	63	229	94	515	95	1230	2120	1940	1980	291	58	65
5	83	169	453	294	220	1900	2120	1940	1910	151	56	57
6	88	148	506	258	218	2290	2120	1900	1900	80	63	64
7	273	128	179	234	168	1740	2100	2020	3350	69	65	63
8	229	114	129	1020	126	1220	2090	2030	2600	66	64	59
9	103	107	108	1300	103	1200	2080	2070	2220	70	65	57
10	489	97	94	1310	104	1190	1860	2080	1900	72	61	63
11	283	92	88	1290	116	1190	1640	2040	1880	78	64	64
12	295	85	79	1270	111	1200	1630	2040	1890	78	63	63
13	371	81	659	1260	80	1570	1990	2050	1830	86	64	74
14	1060	80	1910	1260	74	2350	2020	2500	1570	72	65	93
15	261	77	1680	1240	78	4410	1710	4850	1230	73	65	264
16	138	81	1540	556	70	2910	1670	4060	1240	71	65	196
17	196	71	1230	656	68	710	1680	4010	1220	78	61	104
18	120	285	5190	287	69	591	2000	2200	1230	96	66	89
19	588	432	13300	775	70	578	2120	827	1250	71	70	76
20	553	133	8780	842	73	1150	2170	1200	1210	81	65	69
21	2180	104	4390	749	86	2440	2160	1850	1230	136	65	61
22	1570	89	2740	646	654	2180	2270	5020	850	153	63	70
23	470	82	1260	189	1580	1640	7440	4100	172	131	61	59
24	738	75	367	107	4600	1540	12700	3700	162	71	66	63
25	2030	91	273	99	5190	849	5770	1630	95	67	64	66
26	2050	231	233	98	2570	909	1550	657	94	61	59	60
27	1610	1360	211	99	409	1370	2030	1950	92	57	58	53
28	1010	623	244	92	1070	2780	2540	1970	85	70	69	54
29	447	192	248	93	---	2450	15700	1990	85	66	64	103
30	1070	145	1290	88	---	2030	11000	2030	80	62	60	370
31	398	---	1530	87	---	2350	---	2050	---	59	60	---
TOTAL	18978	7659	49128	22334	18274	51497	102760	72304	39415	2811	1946	2653
MEAN	612	255	1585	720	653	1661	3425	2332	1314	90.7	62.8	88.4
MAX	2180	1370	13300	2270	5190	4410	15700	5020	3350	291	70	370
MIN	63	71	79	87	68	578	1550	657	80	57	56	53
AC-FT	37640	15190	97450	44300	36250	102100	203800	143400	78180	5580	3860	5260

CAL YR 1984 TOTAL 104008 MEAN 284 MAX 13300 MIN 42 AC-FT 206300
WTR YR 1985 TOTAL 389759 MEAN 1068 MAX 15700 MIN 53 AC-FT 773100

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 mi².

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 above National Geodetic Vertical Datum of 1929. July 25, 1924, to 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.--Estimated daily discharges: Feb. 23 to Mar. 6. Records good. At times, flow is affected by storage in 15 upstream reservoirs having 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 mi². Two separate gage-height telemeters at station.

AVERAGE DISCHARGE.--48 years (water years 1925, 1939-85), 2,609 ft³/s (1,890,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft³/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 ft³/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 (discharge believed to have been about the same as that of Apr. 22, 1942).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,300 ft³/s Apr. 30 at 1500 hours (gage height, 28.77 ft); minimum daily, 560 ft³/s Sept. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	604	2320	1000	10900	1080	2200	6750	18700	6000	898	633	587
2	625	5510	926	10500	1060	2300	5190	13700	5950	923	691	561
3	619	5980	873	8540	1020	2000	5150	9070	5900	909	687	558
4	625	3360	876	5430	1060	1500	5080	5850	5920	2650	639	591
5	652	1860	1570	2970	1360	2200	5020	4480	5920	2220	598	591
6	716	1550	3010	2600	1650	1900	4950	3920	6470	1140	604	593
7	1020	1320	2000	2800	1440	3240	4850	4150	8800	914	605	612
8	1620	1190	1320	2250	1260	2550	4760	4080	9310	843	615	620
9	1110	1160	1130	2820	1120	2420	4690	4120	7200	849	654	585
10	2050	1090	1030	2500	1080	2350	4580	5150	5660	843	1100	607
11	1940	990	999	2420	1050	2330	4270	5690	5390	826	1010	626
12	1660	938	937	2310	1080	2570	4200	6120	5720	868	794	614
13	1980	917	1990	2210	995	2510	4270	7140	5890	842	807	617
14	5070	899	7110	2160	952	5740	6440	8880	5510	809	812	611
15	3620	892	7970	2150	932	9280	6800	8990	5230	796	726	2500
16	1700	896	9010	2130	919	7960	5360	7880	4460	859	644	3480
17	1310	834	9040	3030	894	4090	4580	7250	3990	839	629	1470
18	1090	1350	15400	2500	859	2490	4510	6390	4300	830	607	949
19	2140	4660	19600	2220	878	2250	4600	5270	4740	815	591	761
20	2760	3250	19500	1910	918	4860	3980	5610	4940	949	604	697
21	8990	1510	13800	1810	963	9370	3550	7820	4410	1360	615	652
22	10500	1110	6900	1680	1070	9020	3870	11600	3660	2080	627	610
23	7040	946	4690	1410	2300	6250	10300	12600	2480	2220	590	590
24	3920	875	2300	1140	9000	4350	15300	10900	1610	1520	613	584
25	8080	957	1820	1110	10100	3740	16200	8070	1330	2650	649	590
26	9950	1340	1590	1080	10200	3250	8940	6520	1130	1160	616	577
27	10200	3540	1460	1090	10100	4810	4480	6710	997	808	608	564
28	7590	2880	1710	1570	8400	8560	6770	6680	991	704	606	569
29	4080	1510	1980	1090	---	9200	16900	6410	937	681	599	619
30	3980	1150	4380	1030	---	7320	20600	6030	882	685	591	3170
31	3140	---	7960	1000	---	7550	---	5960	---	657	591	---
TOTAL	110381	56784	153881	88360	73740	140160	206940	231740	135727	35147	20755	26755
MEAN	3561	1893	4964	2850	2634	4521	6898	7475	4524	1134	670	892
MAX	10500	5980	19600	10900	10200	9370	20600	18700	9310	2650	1100	3480
MIN	604	834	873	1000	859	1500	3550	3920	882	657	590	558
AC-FT	218900	112600	305200	175300	146300	278000	410500	459700	269200	69710	41170	53070

CAL YR 1984 TOTAL 686690 MEAN 1876 MAX 19600 MIN 599 AC-FT 1362000
WTR YR 1985 TOTAL 1280370 MEAN 3508 MAX 20600 MIN 558 AC-FT 2540000

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 microsiemens Oct. 13, 1956; minimum, 122 microsiemens 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, 851 microsiemens Feb. 5; minimum, 176 microsiemens Oct. 21.
pH: Maximum, 8.0 units Oct. 21; minimum, 7.1 units on several days during August and September.
WATER TEMPERATURE: Maximum, 32.5°C July 29, Aug. 1-5; minimum, 6.0°C Jan. 22, Feb. 3.
DISSOLVED OXYGEN: Maximum, 9.9 mg/L Jan. 4, 5; minimum, 0.3 mg/L July 5, 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 16...	0900	1700	452	7.4	22.5	4.1	48	13	140	31
JAN 09...	1000	2820	600	7.7	11.0	8.4	76	14	190	22
MAR 06...	1220	1900	510	7.7	14.0	7.5	72	13	170	25
APR 16...	0910	5360	424	7.5	19.5	6.6	72	12	150	30
JUN 26...	0830	1190	612	7.4	28.5	3.8	49	15	180	27
SEP 11...	0930	626	728	7.3	29.5	2.2	29	12	130	4

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 16...	50	3.9	33	1	7.0	110	56	33	.50
JAN 09...	69	4.6	47	2	7.0	170	77	39	.60
MAR 06...	59	4.3	40	1	6.0	140	71	31	.50
APR 16...	52	4.2	30	1	5.0	117	49	27	.40
JUN 26...	63	5.3	62	2	8.6	152	74	53	.70
SEP 11...	45	5.2	82	3	15	130	78	81	1.2

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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 16...	7.6	260	1.5	.400	1.9	.990	1.1	2.1	1.40
JAN 09...	7.7	350	1.5	.200	1.7	2.30	1.5	3.8	2.00
MAR 06...	4.8	300	1.4	.280	1.7	1.20	1.7	2.9	1.20
APR 16...	4.5	240	1.5	.110	1.6	.120	1.5	1.6	.750
JUN 26...	11	370	2.6	.570	3.2	2.00	1.0	3.0	2.00
SEP 11...	8.9	390	3.8	.870	4.7	1.70	2.5	4.2	3.60

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	110381	393	222	66000	23	6870	47	14000	130
NOV.	1984	56784	537	301	46200	36	5530	65	9980	150
DEC.	1984	153881	424	239	99100	26	10700	51	21100	140
JAN.	1985	88360	549	308	73500	38	8950	67	15900	150
FEB.	1985	73740	578	324	64500	41	8200	71	14100	150
MAR.	1985	140160	467	263	99500	29	11000	56	21200	150
APR.	1985	206940	403	227	127000	23	13000	48	26800	140
MAY	1985	231740	395	223	139000	23	14100	47	29400	140
JUNE	1985	135727	403	227	83300	23	8560	48	17600	140
JULY	1985	35147	623	349	33100	45	4310	76	7250	160
AUG.	1985	20755	717	401	22500	56	3130	89	4970	160
SEPT	1985	26755	630	353	25500	46	3350	77	5580	160
TOTAL		1280370	**	**	879000	**	97700	**	188000	**
WTD.AVG.		3508	452	254	**	28	**	54	**	140

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	758	696	722	554	514	540	674	636	655	442	362	402
2	776	712	740	580	368	460	692	666	685	420	392	404
3	722	694	711	426	378	410	718	694	708	486	420	450
4	742	706	722	520	422	467	718	708	713	534	490	511
5	758	730	746	554	516	528	712	612	675	630	514	565
6	762	730	745	604	558	590	636	536	580	698	630	650
7	742	684	711	676	604	643	588	556	572	702	548	583
8	706	514	602	684	672	677	606	568	588	662	582	620
9	558	486	529	682	674	677	642	596	617	610	480	555
10	662	354	528	696	678	686	694	644	666	590	488	555
11	488	366	428	698	694	696	718	694	706	596	564	585
12	486	426	451	708	696	702	736	714	721	576	564	572
13	538	444	479	704	690	694	750	450	644	574	564	569
14	558	266	380	700	686	695	466	364	429	568	558	564
15	442	308	374	716	694	708	428	350	386	576	556	567
16	466	444	453	732	710	724	384	330	362	708	566	642
17	560	466	512	734	716	727	422	332	392	722	580	639
18	594	552	570	768	708	726	372	266	310	650	604	628
19	660	378	570	718	428	508	316	300	311	672	550	649
20	476	340	402	478	412	443	362	336	349	588	536	563
21	478	176	269	542	480	516	404	362	384	632	586	616
22	304	284	296	618	544	587	454	408	429	622	604	613
23	408	306	346	---	---	600	540	462	505	742	614	676
24	472	358	431	---	---	620	616	532	571	762	736	748
25	360	280	329	---	---	615	654	620	644	764	750	757
26	346	300	335	---	---	570	672	652	662	794	762	781
27	350	318	332	516	390	462	670	654	662	810	790	796
28	428	338	385	484	434	452	704	666	687	838	792	809
29	476	430	453	560	496	527	712	640	690	800	668	691
30	508	390	457	634	562	600	628	392	535	804	692	755
31	506	430	455	---	---	---	458	380	417	816	802	809
MONTH	776	176	499	768	368	595	750	266	557	838	362	623

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	814	802	807	570	512	543	450	424	438	402	364	373
2	815	785	798	604	572	589	464	442	451	398	364	380
3	787	773	779	596	520	559	470	440	454	452	400	415
4	831	783	801	582	522	556	462	446	452	462	440	448
5	851	779	808	592	502	559	456	442	450	494	444	470
6	810	728	762	518	482	501	450	440	444	482	442	456
7	788	714	722	509	476	487	444	432	440	503	466	486
8	737	703	719	551	505	534	442	434	438	470	438	463
9	755	731	738	547	529	537	438	426	432	476	456	464
10	766	746	754	547	529	539	448	432	440	482	428	454
11	766	758	762	541	527	536	454	446	451	450	422	432
12	774	764	764	559	527	547	458	444	450	452	420	437
13	776	756	762	541	486	507	460	448	454	436	356	395
14	774	762	770	490	388	457	466	344	420	390	294	361
15	790	774	783	446	388	421	462	418	438	364	344	353
16	800	782	793	446	386	408	428	418	426	408	366	387
17	802	788	794	553	454	517	440	426	433	408	390	398
18	808	796	803	561	547	553	438	426	430	438	390	405
19	816	806	812	569	561	566	446	414	433	480	440	453
20	818	796	809	571	440	498	458	430	444	450	432	442
21	816	800	808	446	376	411	470	456	464	436	318	393
22	818	744	802	442	402	421	480	432	460	320	300	312
23	696	486	580	494	446	477	476	276	344	350	316	331
24	522	382	440	498	472	488	346	330	338	380	350	367
25	418	390	397	555	484	506	378	348	363	432	380	402
26	474	402	431	575	515	545	448	380	420	426	390	409
27	626	480	551	543	380	494	486	450	470	392	384	388
28	640	514	596	438	372	398	482	306	435	394	386	389
29	---	---	---	430	378	406	348	266	319	402	388	394
30	---	---	---	466	432	445	362	340	347	400	380	393
31	---	---	---	448	418	429	---	---	---	394	384	390
MONTH	851	382	719	604	372	498	486	266	426	503	294	408

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	408	390	400	737	703	713	761	699	737	773	743	754
2	406	394	400	735	715	721	751	727	738	783	765	773
3	398	390	394	749	683	714	755	725	742	793	765	779
4	394	386	390	711	318	606	743	739	742	765	713	740
5	398	388	393	537	246	433	773	745	764	735	701	718
6	396	366	387	490	404	441	763	745	752	743	699	716
7	370	346	357	569	494	532	747	735	741	749	713	730
8	370	348	356	639	573	607	763	731	747	755	721	738
9	386	370	379	681	645	668	755	737	749	755	727	740
10	392	382	387	709	667	697	781	739	756	753	735	742
11	396	380	390	737	701	721	759	565	615	751	711	731
12	406	392	398	771	727	749	627	569	586	765	705	737
13	406	378	391	785	763	774	667	631	650	743	711	736
14	388	374	380	775	759	765	669	635	646	733	713	723
15	408	378	394	773	753	759	659	641	652	751	505	692
16	418	396	408	773	745	758	657	645	652	507	378	402
17	418	410	415	769	721	738	705	647	675	472	416	437
18	416	368	399	753	719	736	749	707	725	537	476	513
19	444	384	412	801	733	761	773	739	751	571	541	563
20	442	380	409	797	743	767	775	735	754	601	575	585
21	406	394	401	789	665	745	771	705	728	661	605	642
22	426	392	405	659	529	592	747	701	721	691	659	679
23	480	424	451	519	392	445	761	733	746	717	691	703
24	521	456	489	543	519	532	773	727	746	731	715	722
25	587	511	545	721	436	559	785	719	743	729	715	720
26	641	561	615	527	440	482	791	759	773	719	697	710
27	651	617	632	605	529	559	789	743	764	717	701	706
28	671	645	660	647	607	617	779	743	759	711	701	705
29	715	663	692	703	651	683	743	707	728	707	665	697
30	735	717	720	713	699	706	755	725	738	717	364	579
31	---	---	---	713	703	709	761	727	743	---	---	---
MONTH	735	346	448	801	246	654	791	565	721	793	364	680

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.3	7.2	7.2	7.4	7.4	7.4	7.4	7.4	7.4	7.7	7.6	7.7
2	7.3	7.2	7.3	7.4	7.4	7.4	7.5	7.4	7.4	7.7	7.7	7.7
3	7.3	7.2	7.2	7.5	7.4	7.4	7.4	7.4	7.4	7.7	7.7	7.7
4	7.3	7.2	7.2	7.5	7.4	7.5	7.5	7.4	7.4	7.8	7.7	7.7
5	7.3	7.2	7.2	7.5	7.5	7.5	7.5	7.4	7.4	7.8	7.6	7.7
6	7.2	7.2	7.2	7.5	7.5	7.5	7.5	7.5	7.5	7.8	7.7	7.8
7	7.2	7.2	7.2	7.5	7.5	7.5	7.6	7.5	7.5	7.9	7.7	7.8
8	7.2	7.2	7.2	7.5	7.4	7.5	7.6	7.5	7.5	7.8	7.7	7.7
9	7.2	7.2	7.2	7.5	7.4	7.4	7.5	7.5	7.5	7.8	7.7	7.7
10	7.5	7.2	7.3	7.4	7.4	7.4	7.6	7.5	7.5	7.8	7.7	7.7
11	7.4	7.2	7.3	7.4	7.4	7.4	7.6	7.5	7.5	7.7	7.7	7.7
12	7.3	7.2	7.2	7.4	7.4	7.4	7.6	7.5	7.5	7.8	7.7	7.8
13	7.3	7.2	7.2	7.4	7.4	7.4	7.6	7.5	7.6	7.8	7.8	7.8
14	7.5	7.2	7.4	7.4	7.4	7.4	7.6	7.5	7.6	7.8	7.8	7.8
15	7.4	7.3	7.3	7.4	7.4	7.4	7.7	7.5	7.6	7.8	7.7	7.8
16	7.4	7.3	7.4	7.4	7.4	7.4	7.8	7.6	7.7	7.8	7.7	7.7
17	7.4	7.3	7.4	7.4	7.3	7.4	7.7	7.7	7.7	7.8	7.6	7.7
18	7.3	7.3	7.3	7.4	7.3	7.4	7.9	7.7	7.8	7.8	7.7	7.7
19	7.3	7.2	7.3	7.5	7.2	7.4	7.9	7.8	7.8	7.7	7.6	7.7
20	7.4	7.2	7.4	7.5	7.4	7.5	7.8	7.7	7.8	7.8	7.7	7.7
21	8.0	7.3	7.7	7.5	7.4	7.4	7.7	7.7	7.7	7.8	7.7	7.8
22	7.7	7.6	7.6	7.5	7.4	7.4	7.7	7.6	7.6	7.8	7.8	7.8
23	7.6	7.5	7.5	7.4	7.4	7.4	7.6	7.6	7.6	7.8	7.7	7.8
24	7.6	7.5	7.5	---	---	---	7.6	7.5	7.5	7.7	7.6	7.7
25	7.7	7.6	7.6	---	---	---	7.6	7.5	7.6	7.7	7.6	7.7
26	7.7	7.6	7.6	---	---	---	7.6	7.6	7.6	7.8	7.7	7.7
27	7.6	7.5	7.5	7.4	7.3	7.4	7.6	7.5	7.6	7.7	7.7	7.7
28	7.5	7.4	7.5	7.5	7.4	7.5	7.6	7.5	7.6	7.7	7.6	7.6
29	7.5	7.4	7.5	7.4	7.4	7.4	7.6	7.5	7.6	7.8	7.7	7.7
30	7.5	7.4	7.5	7.4	7.4	7.4	7.6	7.5	7.6	7.7	7.6	7.7
31	7.4	7.4	7.4	---	---	---	7.7	7.6	7.6	7.7	7.6	7.7
MONTH	8.0	7.2	7.4	7.5	7.2	7.4	7.9	7.4	7.6	7.9	7.6	7.7

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.7	7.6	7.7	7.7	7.6	7.6	7.8	7.7	7.8	7.7	7.5	7.5
2	7.7	7.7	7.7	7.6	7.5	7.6	7.7	7.7	7.7	7.5	7.4	7.5
3	7.7	7.7	7.7	7.6	7.5	7.6	7.7	7.7	7.7	7.5	7.5	7.5
4	7.7	7.6	7.7	7.6	7.6	7.6	7.7	7.7	7.7	7.5	7.5	7.5
5	7.6	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.6	7.5	7.5	7.5
6	7.6	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.6	7.5	7.5	7.5
7	7.6	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.6	7.5	7.5	7.5
8	7.6	7.6	7.6	7.6	7.6	7.6	7.7	7.6	7.7	7.5	7.5	7.5
9	7.6	7.5	7.6	7.6	7.5	7.6	7.7	7.6	7.7	7.5	7.4	7.5
10	7.6	7.5	7.5	7.6	7.5	7.6	7.7	7.6	7.6	7.5	7.4	7.5
11	7.6	7.5	7.5	7.6	7.5	7.5	7.6	7.6	7.6	7.5	7.5	7.5
12	7.6	7.5	7.5	7.5	7.5	7.5	7.6	7.6	7.6	7.5	7.5	7.5
13	7.5	7.5	7.5	7.6	7.5	7.6	7.6	7.5	7.6	7.5	7.4	7.5
14	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.5	7.6	7.5	7.5
15	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.5
16	7.5	7.4	7.5	7.7	7.6	7.7	7.6	7.5	7.5	7.6	7.5	7.5
17	7.4	7.4	7.4	7.6	7.6	7.6	7.6	7.5	7.5	7.6	7.6	7.6
18	7.5	7.4	7.4	7.6	7.5	7.6	7.5	7.5	7.5	7.7	7.5	7.6
19	7.4	7.4	7.4	7.5	7.5	7.5	7.6	7.5	7.5	7.6	7.5	7.5
20	7.4	7.4	7.4	7.7	7.5	7.6	7.5	7.5	7.5	7.6	7.5	7.6
21	7.4	7.4	7.4	7.7	7.6	7.7	7.5	7.5	7.5	7.6	7.5	7.5
22	7.4	7.4	7.4	7.7	7.7	7.7	7.5	7.5	7.5	7.6	7.5	7.6
23	7.5	7.4	7.4	7.7	7.7	7.7	7.7	7.4	7.6	7.6	7.5	7.5
24	7.5	7.4	7.5	7.7	7.7	7.7	7.6	7.5	7.5	7.6	7.6	7.6
25	7.6	7.5	7.6	7.7	7.6	7.7	7.5	7.5	7.5	7.6	7.6	7.6
26	7.7	7.6	7.7	7.7	7.6	7.6	7.5	7.4	7.4	7.6	7.5	7.6
27	7.6	7.5	7.6	7.6	7.5	7.6	7.5	7.4	7.5	7.6	7.6	7.6
28	7.7	7.5	7.6	7.6	7.6	7.6	7.6	7.4	7.5	7.7	7.6	7.6
29	---	---	---	7.6	7.6	7.6	7.7	7.5	7.6	7.6	7.6	7.6
30	---	---	---	7.7	7.7	7.7	7.5	7.5	7.5	7.6	7.6	7.6
31	---	---	---	7.8	7.7	7.7	---	---	---	7.6	7.5	7.6
MONTH	7.7	7.4	7.5	7.8	7.5	7.6	7.8	7.4	7.6	7.7	7.4	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.6	7.5	7.6	7.6	7.4	7.5	7.3	7.3	7.3	7.3	7.3	7.3
2	7.6	7.6	7.6	7.5	7.4	7.4	7.3	7.2	7.3	7.3	7.2	7.2
3	7.6	7.6	7.6	7.5	7.4	7.4	7.3	7.2	7.3	7.2	7.2	7.2
4	7.6	7.6	7.6	7.5	7.2	7.4	7.3	7.3	7.3	7.2	7.2	7.2
5	7.6	7.5	7.6	7.6	7.2	7.3	7.4	7.3	7.4	7.2	7.2	7.2
6	7.6	7.4	7.5	7.4	7.3	7.3	7.4	7.3	7.4	7.2	7.2	7.2
7	7.5	7.4	7.5	7.4	7.3	7.3	7.4	7.3	7.4	7.2	7.2	7.2
8	7.5	7.5	7.5	7.4	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2
9	7.5	7.5	7.5	7.4	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2
10	7.5	7.5	7.5	7.4	7.3	7.4	7.3	7.3	7.3	7.3	7.3	7.3
11	7.6	7.5	7.5	7.4	7.3	7.4	7.3	7.3	7.3	7.3	7.3	7.3
12	7.5	7.5	7.5	7.5	7.4	7.4	7.3	7.3	7.3	7.4	7.3	7.3
13	7.6	7.5	7.5	7.4	7.4	7.4	7.3	7.2	7.2	7.3	7.3	7.3
14	7.6	7.5	7.5	7.4	7.3	7.3	7.2	7.1	7.2	7.3	7.3	7.3
15	7.5	7.5	7.5	7.3	7.2	7.2	7.1	7.1	7.1	7.3	7.2	7.3
16	7.5	7.5	7.5	7.3	7.2	7.3	7.1	7.1	7.1	7.5	7.3	7.4
17	7.5	7.5	7.5	7.3	7.3	7.3	7.1	7.1	7.1	7.3	7.3	7.3
18	7.5	7.5	7.5	7.3	7.3	7.3	7.2	7.1	7.1	7.3	7.3	7.3
19	7.5	7.4	7.5	7.4	7.3	7.3	7.2	7.1	7.2	7.3	7.2	7.3
20	7.5	7.4	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2
21	7.5	7.4	7.5	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2
22	7.5	7.4	7.4	7.4	7.3	7.4	7.2	7.2	7.2	7.2	7.2	7.2
23	7.4	7.4	7.4	7.4	7.3	7.4	7.2	7.2	7.2	7.2	7.2	7.2
24	7.4	7.3	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.2	7.1	7.2
25	7.3	7.3	7.3	7.3	7.2	7.3	7.2	7.2	7.2	7.2	7.1	7.1
26	7.4	7.3	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.1	7.1
27	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.2	7.1	7.1
28	7.5	7.4	7.4	7.3	7.2	7.2	7.4	7.2	7.3	7.2	7.2	7.2
29	7.5	7.4	7.4	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.2	7.2
30	7.5	7.4	7.4	7.2	7.2	7.2	7.3	7.3	7.3	7.5	7.2	7.3
31	---	---	---	7.3	7.2	7.2	7.4	7.3	7.3	---	---	---
MONTH	7.6	7.3	7.5	7.6	7.2	7.3	7.4	7.1	7.3	7.5	7.1	7.2

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

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

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

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

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

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

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.2	2.8	3.0	5.3	4.7	5.0	5.4	5.0	5.2	8.2	7.5	7.9
2	4.1	3.0	3.7	5.1	4.2	4.7	5.1	4.6	4.9	9.2	8.3	8.7
3	4.4	3.8	4.1	5.8	5.1	5.4	5.2	4.7	4.9	9.7	9.2	9.5
4	4.1	3.5	3.9	5.8	5.2	5.6	5.3	4.7	5.0	9.9	9.7	9.8
5	3.7	3.0	3.5	5.9	5.6	5.8	7.2	5.2	5.9	9.9	8.7	9.4
6	3.3	2.6	2.9	6.0	5.8	5.8	7.4	5.9	6.9	8.7	8.1	8.4
7	3.1	2.0	2.8	6.0	5.7	5.9	7.7	7.4	7.6	9.7	8.1	9.4
8	2.2	1.2	1.7	5.8	5.0	5.5	7.5	6.5	7.1	9.3	7.3	8.5
9	3.5	2.2	2.7	5.3	4.5	4.9	6.5	5.6	6.2	9.3	8.2	8.7
10	3.3	2.0	2.9	4.7	4.4	4.5	5.7	5.1	5.5	9.1	8.6	8.8
11	3.2	2.3	2.8	4.8	4.3	4.6	5.1	4.8	5.0	9.2	8.9	9.0
12	3.5	3.0	3.3	5.0	4.2	4.6	4.8	4.3	4.6	9.7	9.2	9.6
13	3.6	2.5	3.1	5.4	4.6	5.0	5.0	3.7	4.3	9.8	9.4	9.6
14	3.8	2.3	3.2	5.3	4.5	4.9	4.9	3.0	3.8	9.8	9.4	9.6
15	4.3	3.9	4.1	4.9	4.4	4.7	6.4	5.1	5.9	9.7	9.1	9.4
16	4.3	3.9	4.1	4.5	4.1	4.2	7.0	5.2	6.6	9.3	8.1	8.6
17	4.3	3.5	4.0	4.3	3.7	4.0	6.8	6.5	6.7	9.1	7.4	8.2
18	3.5	2.8	3.2	4.3	2.5	3.8	7.2	6.8	7.1	8.8	7.8	8.4
19	3.4	1.6	2.9	6.1	2.0	4.7	7.0	6.7	6.8	8.8	7.5	8.0
20	4.0	1.9	3.1	6.8	6.2	6.7	7.1	6.7	6.9	9.0	8.7	8.8
21	4.9	3.1	4.3	6.7	6.4	6.5	6.7	6.4	6.6	9.1	8.8	9.0
22	4.6	4.1	4.4	6.8	5.5	6.1	6.7	6.1	6.4	9.7	9.1	9.5
23	5.4	4.6	5.0	---	---	---	7.0	6.4	6.8	9.4	8.2	8.8
24	6.9	5.5	6.1	---	---	---	6.9	6.6	6.7	8.4	7.4	8.0
25	7.4	6.1	6.9	---	---	---	7.0	6.7	6.9	7.6	7.0	7.3
26	7.2	6.3	6.6	---	---	---	7.2	6.9	7.1	7.3	6.9	7.1
27	6.4	5.1	5.8	---	---	---	7.6	7.1	7.4	7.0	6.4	6.7
28	5.7	5.1	5.4	6.4	4.8	5.9	7.2	6.3	6.8	6.9	6.2	6.6
29	5.8	5.1	5.6	6.4	6.0	6.2	6.4	5.3	5.7	8.2	7.2	7.9
30	6.0	4.5	5.4	6.1	5.4	5.9	6.8	6.0	6.3	7.7	6.7	7.1
31	5.7	5.3	5.6	---	---	---	7.7	6.1	6.8	7.1	6.5	6.8
MONTH	7.4	1.2	4.1	6.8	2.0	5.2	7.7	3.0	6.1	9.9	6.2	8.5

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	6.9	7.1	8.0	7.2	7.6	7.7	7.4	7.6	5.1	4.8	4.9
2	8.2	7.1	7.7	7.2	6.5	6.8	7.5	6.8	7.3	4.8	4.5	4.7
3	8.5	8.1	8.3	7.2	2.0	6.7	7.3	7.1	7.2	5.2	4.8	5.0
4	8.0	7.5	7.8	7.1	6.7	6.8	7.2	6.9	7.1	5.8	5.2	5.6
5	7.5	7.2	7.3	7.8	6.7	7.1	7.0	6.4	6.7	5.7	5.3	5.5
6	7.6	7.1	7.4	8.1	7.5	7.8	7.0	6.7	6.8	5.7	5.3	5.6
7	7.8	7.4	7.6	8.1	7.3	7.6	7.2	6.8	6.9	5.4	5.1	5.2
8	7.7	7.3	7.5	7.3	6.8	6.9	7.3	6.9	7.1	5.4	4.8	5.2
9	7.4	6.7	7.1	6.8	6.5	6.6	7.5	7.0	7.3	5.1	4.6	4.9
10	6.8	6.0	6.4	6.6	6.2	6.3	7.3	6.7	7.0	5.3	4.5	4.9
11	7.0	6.1	6.7	6.4	6.0	6.1	6.9	6.7	6.8	5.6	5.3	5.5
12	6.7	6.0	6.3	6.1	5.6	5.8	6.9	6.4	6.7	5.8	5.5	5.6
13	6.4	6.0	6.2	6.5	5.8	6.1	6.7	6.3	6.4	5.8	4.1	5.1
14	6.3	5.9	6.1	7.3	6.6	6.9	6.6	5.4	5.9	5.5	4.4	5.1
15	6.1	5.5	5.9	7.5	6.8	7.1	6.4	5.9	6.3	5.3	5.1	5.2
16	5.5	3.8	5.2	7.8	7.0	7.5	6.4	6.1	6.2	6.1	5.2	5.7
17	4.7	2.2	3.3	7.0	6.8	6.9	6.3	6.0	6.2	6.3	6.0	6.1
18	4.9	4.5	4.7	7.0	6.3	6.6	6.2	6.0	6.1	6.4	5.6	6.0
19	4.5	4.1	4.3	6.3	6.1	6.2	6.4	5.9	6.1	5.8	4.6	5.5
20	4.6	4.1	4.3	6.8	6.1	6.4	6.2	5.5	5.9	5.9	5.7	5.8
21	4.4	4.0	4.2	6.8	6.3	6.6	5.7	5.5	5.5	5.8	5.0	5.5
22	4.2	.5	3.2	6.9	6.5	6.8	5.7	5.4	5.5	5.8	5.4	5.6
23	6.0	2.8	4.9	6.9	6.3	6.7	5.7	5.1	5.4	5.7	5.5	5.6
24	6.6	3.9	5.4	6.6	6.3	6.5	5.5	5.1	5.2	6.2	5.7	5.9
25	7.8	5.8	6.9	6.6	5.9	6.4	5.2	4.9	5.1	6.2	5.8	6.0
26	8.1	7.7	7.9	6.3	5.5	6.0	5.1	4.2	4.6	6.2	5.1	5.9
27	7.6	6.3	7.0	6.7	5.2	6.1	5.4	5.1	5.2	6.4	6.2	6.3
28	8.0	5.5	6.6	6.2	5.3	5.7	5.5	4.4	5.1	6.5	6.4	6.4
29	---	---	---	6.2	5.8	6.1	5.5	5.0	5.3	6.5	6.2	6.3
30	---	---	---	6.6	6.2	6.4	5.2	5.0	5.1	6.2	5.9	6.0
31	---	---	---	7.5	6.5	7.0	---	---	---	6.1	4.7	5.6
MONTH	8.5	.5	6.2	8.1	2.0	6.7	7.7	4.2	6.2	6.5	4.1	5.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.1	5.2	5.8	6.0	3.7	4.5	5.4	3.3	4.2	3.8	3.0	3.5
2	6.1	5.6	5.8	5.2	3.5	4.3	5.3	3.0	4.2	4.1	3.1	3.6
3	5.9	5.8	5.8	4.7	3.2	3.9	4.3	2.8	3.7	4.2	3.4	3.7
4	6.2	5.8	5.9	4.1	.6	2.2	4.0	2.6	3.2	4.2	3.4	3.8
5	6.1	5.7	5.8	2.0	.3	.9	3.6	1.9	2.7	4.1	3.4	3.8
6	6.0	3.7	5.4	3.0	2.1	2.6	3.8	2.4	3.4	4.3	3.6	3.9
7	4.7	3.8	4.4	3.9	3.0	3.4	4.9	2.8	3.3	3.9	2.8	3.4
8	5.2	4.7	5.0	4.6	3.1	3.9	3.2	2.7	2.9	3.6	3.1	3.3
9	5.3	5.1	5.2	4.6	3.0	3.9	3.5	2.4	3.0	3.4	2.8	3.0
10	5.4	5.2	5.3	4.7	3.0	4.0	3.3	2.2	2.5	3.1	2.5	2.9
11	5.4	5.0	5.3	4.1	2.7	3.4	2.7	2.1	2.4	3.1	2.5	2.9
12	5.4	5.0	5.2	4.4	2.9	3.6	2.9	2.4	2.7	3.6	2.3	2.9
13	5.6	5.3	5.4	4.5	3.0	3.8	2.9	2.3	2.7	3.5	2.4	3.0
14	5.5	5.2	5.4	4.4	2.9	3.7	3.2	2.7	3.0	3.2	2.7	2.9
15	5.4	5.0	5.1	4.2	2.9	3.7	3.2	2.9	3.1	2.9	.9	1.8
16	5.1	4.8	5.0	4.0	2.9	3.3	3.9	2.9	3.4	3.2	1.1	2.3
17	4.8	4.6	4.7	4.2	2.8	3.5	3.4	2.9	3.1	3.5	1.4	2.9
18	5.0	4.3	4.7	4.4	2.8	3.4	3.1	2.7	2.9	3.3	1.6	2.8
19	4.8	4.6	4.7	4.6	3.2	3.9	2.9	2.5	2.7	3.4	3.0	3.2
20	5.0	4.5	4.8	3.9	2.6	2.9	2.9	2.5	2.7	3.3	2.6	3.0
21	5.0	4.6	4.8	2.5	1.5	2.1	3.0	2.6	2.9	3.1	2.5	2.8
22	4.7	4.2	4.5	1.9	.9	1.6	3.1	2.6	2.9	3.0	2.4	2.7
23	4.2	3.5	4.0	3.1	.7	1.9	3.4	2.7	3.1	3.1	2.3	2.7
24	3.9	2.1	3.0	3.1	2.7	3.0	3.3	2.9	3.1	3.2	2.7	2.9
25	3.4	2.7	3.1	2.7	.3	1.5	3.0	2.6	2.8	3.2	2.5	2.9
26	4.1	3.4	3.6	2.6	1.9	2.3	2.7	2.5	2.6	3.3	2.8	3.1
27	4.1	3.4	3.8	3.3	2.6	3.0	2.6	2.4	2.5	3.5	2.9	3.2
28	4.1	3.3	3.7	3.7	3.0	3.4	4.6	2.5	3.6	3.4	2.8	3.1
29	4.5	3.4	3.9	3.8	2.8	3.3	4.7	3.7	4.2	3.3	2.9	3.0
30	4.6	3.6	4.0	4.5	2.7	3.5	4.8	3.7	4.3	3.7	2.0	2.8
31	---	---	---	4.8	2.9	3.8	5.0	3.7	4.2	---	---	---
MONTH	6.2	2.1	4.8	6.0	.3	3.2	5.4	1.9	3.2	4.3	.9	3.1

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 above National Geodetic Vertical Datum of 1929. Prior to May 3, 1967, at site 0.9 mi upstream at datum 1.28 ft higher.

REMARKS.--No estimated daily discharges. Records good. There are 62 flood-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. Gage-height telemeter at station. Addtional telemeter (data collection platform, battery, and antenna) equipment was discontinued Jan. 31, 1982, and subsequently removed.

AVERAGE DISCHARGE.--21 years, 3,599 ft³/s (2,607,000 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, 29,700 ft³/s May 2 at 1400 hours (gage height, 33.70 ft); minimum daily, 615 ft³/s Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	680	2800	1170	9220	1070	3330	8910	25500	5980	819	700	650
2	636	2490	1030	10900	1120	3550	7570	29000	6000	826	683	648
3	639	5480	948	11700	1110	3110	5530	28200	5930	848	707	632
4	629	5660	899	11700	1080	2760	5070	25300	5840	828	721	624
5	632	3100	935	8410	1170	3420	4920	19800	5850	2100	684	648
6	648	1790	1620	3540	1500	3020	4830	10700	5920	1950	653	657
7	768	1480	2640	2650	1730	3260	4720	5060	6750	1050	649	657
8	937	1290	1930	2490	1520	3020	4610	3770	8700	839	659	678
9	1420	1180	1340	2270	1330	2490	4520	3570	9550	766	654	688
10	1100	1150	1140	2530	1210	2340	4440	3640	8610	767	676	665
11	1680	1080	1050	2330	1160	2290	4290	4620	5940	784	984	679
12	1810	990	1020	2250	1130	2260	4010	5490	4960	751	1000	698
13	1520	943	985	2160	1150	2420	3930	6350	5470	765	812	695
14	1960	925	3110	2100	1080	4250	4280	8360	5750	754	802	696
15	4160	907	7290	2060	1020	8750	6540	9350	5200	717	810	698
16	3190	896	8980	2080	999	10500	7040	9700	4670	699	758	2150
17	1640	896	10200	2210	987	10300	5450	9290	3880	741	687	2890
18	1250	873	11700	2800	969	5500	4390	8340	3520	739	663	1520
19	1050	1430	12700	2380	940	2620	4270	6930	3790	727	653	993
20	1960	3900	13800	2090	947	4320	4270	5100	4160	729	637	832
21	3040	2910	17300	1850	979	10200	3690	5490	4280	816	651	765
22	7850	1520	21900	1740	1040	11800	3350	8340	3780	1140	661	722
23	9540	1100	22200	1640	2990	12000	4430	11400	3150	1780	672	678
24	7960	957	15500	1410	9670	10300	9150	12500	2160	1850	649	658
25	5310	901	6200	1190	14400	5480	12000	12900	1440	1360	660	646
26	8340	974	2450	1160	15900	3660	14100	12300	1190	2140	682	649
27	9790	1540	1750	1130	15100	7540	14300	10200	1030	1260	664	633
28	10300	3160	1550	1160	8690	9960	13700	8060	924	860	661	615
29	9140	2650	1740	1480	---	10700	15800	7370	906	756	654	648
30	4490	1550	1940	1170	---	11100	20200	6860	862	725	657	702
31	3600	---	5480	1100	---	10400	---	6220	---	722	648	---
TOTAL	107669	56522	182497	102900	91991	186650	214310	329710	136192	31608	21851	25114
MEAN	3473	1884	5887	3319	3285	6021	7144	10640	4540	1020	705	837
MAX	10300	5660	22200	11700	15900	12000	20200	29000	9550	2140	1000	2890
MIN	629	873	899	1100	940	2260	3350	3570	862	699	637	615
AC-FT	213600	112100	362000	204100	182500	370200	425100	654000	270100	62690	43340	49810

CAL YR 1984 TOTAL 721776 MEAN 1972 MAX 22200 MIN 555 AC-FT 1432000
WTR YR 1985 TOTAL 1487014 MEAN 4074 MAX 29000 MIN 615 AC-FT 2949000

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT												
17...	1520	1560	405	7.4	22.0	100	4.2	48	12	200	2000	140
JAN												
08...	1730	2270	672	7.4	10.5	98	9.2	83	12	1000	320	220
FEB												
13...	1430	1160	758	7.7	10.5	17	7.1	64	11	--	--	220
MAY												
14...	1700	8860	395	7.6	23.0	300	5.2	61	2.6	--	1900	130
JUN												
25...	1900	1380	506	7.4	28.0	120	4.6	59	10	--	620	150
SEP												
17...	1630	2890	412	7.6	25.0	240	.6	7	24	4350	3350	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)
OCT											
17...	42	50	3.5	22	.9	6.3	98	50	29	.50	7.7
JAN											
08...	39	79	5.2	50	2	7.4	180	95	47	.60	9.1
FEB											
13...	36	79	6.1	69	2	8.2	187	100	61	.90	8.7
MAY											
14...	21	45	4.5	24	1	4.9	110	41	22	.30	4.7
JUN											
25...	27	54	4.6	32	1	5.7	127	52	33	.60	6.1
SEP											
17...	32	49	4.5	32	1	6.1	109	53	32	.50	6.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
17...	255	230	2.6	.190	2.1	1.20	.650	.620	341	1440	97
JAN											
08...	404	410	2.2	1.90	3.9	1.70	1.40	1.20	268	1640	9
FEB											
13...	451	460	3.2	4.80	9.0	2.10	2.00	1.90	41	128	90
MAY											
14...	324	210	1.4	.150	.60	.800	.400	.300	945	22600	89
JUN											
25...	296	270	3.0	.090	1.3	.930	.620	.670	599	2230	51
SEP											
17...	255	250	2.5	.140	2.0	2.70	.430	.350	--	--	--

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT										
17...	1520	2	37	2.0	1	2	<3	3	20	7
FEB										
13...	1430	--	44	2.2	<1	--	<3	--	9	--
MAY										
14...	1700	2	51	<.5	2	<1	<3	8	65	2
SEP										
17...	1630	3	47	<.5	1	<1	<3	4	71	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)
OCT										
17...	12	3	<.1	<10	3	<1	<1	380	<6	12
FEB										
13...	15	9	<.1	10	--	--	--	620	<6	25
MAY										
14...	8	3	<.1	<10	2	<1	<1	330	<6	21
SEP										
17...	10	6	<.1	<10	<1	<1	<1	320	<6	20

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 highway embankment at left end 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 4-6, Mar. 17-31, and May 26 to June 24. Records good except those below 10 ft^3/s, which are fair, and estimated daily discharges, which are poor. 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.--22 years (water years 1964-85), 108 ft^3/s (78,250 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 Transporation and local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Apr. 29	2230	*1,240	*13.08				

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	16	7.7	645	3.7	39	24	395	5.7	.20	.84	.00
2	.04	64	4.3	513	3.6	34	17	150	5.0	.35	.48	.00
3	.04	100	2.8	154	3.5	29	14	84	3.8	.26	.15	.00
4	.04	24	1.8	80	4.0	23	12	55	3.0	.31	.05	.00
5	.04	8.8	3.3	50	23	22	10	42	2.0	.23	.05	.00
6	.05	5.0	69	35	160	20	9.4	33	2.1	.20	.00	.00
7	.17	3.7	43	24	126	16	7.2	27	2.2	.14	.00	.00
8	.03	2.2	27	20	68	13	6.3	22	2.2	.11	.00	.00
9	.06	1.4	15	16	42	11	5.9	18	2.1	.00	.00	.00
10	.16	1.1	11	14	30	9.7	5.3	15	1.9	.00	.00	.00
11	.06	.74	8.6	12	22	8.8	4.9	12	1.7	.00	.00	.00
12	.25	.60	6.6	11	16	7.5	4.5	10	1.4	.13	.00	.00
13	.25	.44	5.7	9.8	12	6.8	4.3	9.5	1.1	.12	.00	.00
14	.25	.51	80	9.1	9.0	52	8.1	9.2	1.2	.10	.00	.01
15	.16	.35	79	8.3	7.1	190	11	9.6	1.0	.10	.00	16
16	.00	.25	102	17	6.0	79	6.7	8.8	.97	.15	.00	7.1
17	.00	.25	3.4	169	5.2	42	4.7	7.1	.90	2.8	.00	4.9
18	.00	.13	477	83	4.1	31	4.0	6.2	1.2	11	.00	5.0
19	.00	.02	805	43	3.8	27	3.6	5.1	4.0	2.5	.00	4.1
20	.16	.02	633	25	3.5	50	3.2	5.8	55	4.3	.00	3.6
21	31	.00	243	15	3.3	340	3.1	50	6.0	31	.00	3.0
22	63	.00	125	11	3.3	110	58	370	2.0	32	.00	2.6
23	16	.00	73	8.2	199	80	650	212	2.7	136	.00	2.1
24	18	.00	46	6.2	833	44	981	55	1.6	81	.01	1.5
25	248	.02	32	5.2	594	16	654	31	1.3	22	.00	1.0
26	446	.10	26	4.6	174	9.0	190	23	1.1	11	.00	.69
27	327	.10	21	4.3	81	20	107	20	.83	5.3	.00	.64
28	180	35	17	4.0	48	110	285	14	.56	4.3	.00	.41
29	50	31	14	3.7	---	70	908	11	.40	4.2	.00	1.2
30	15	14	55	3.6	---	21	1030	8.9	.29	2.2	.00	1.2
31	7.2	---	282	3.7	---	20	---	6.5	---	1.4	.00	---
TOTAL	1403.00	309.73	3319.2	2007.7	2488.1	1550.8	5032.2	1725.7	115.25	353.40	1.58	55.05
MEAN	45.3	10.3	107	64.8	88.9	50.0	168	55.7	3.84	11.4	.051	1.84
MAX	446	100	805	645	833	340	1030	395	55	136	.84	16
MIN	.00	.00	1.8	3.6	3.3	6.8	3.1	5.1	.29	.00	.00	.00
AC-FT	2780	614	6580	3980	4940	3080	9980	3420	229	701	3.1	109

CAL YR 1984 TOTAL 13300.58 MEAN 36.3 MAX 1560 MIN .00 AC-FT 26380
WTR YR 1985 TOTAL 18361.71 MEAN 50.3 MAX 1030 MIN .00 AC-FT 36420

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 Brush Creek, and 5.3 mi south of Kaufman.

DRAINAGE AREA.--233 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 343.24 ft above State Department of Highways and Public Transportation datum.

REMARKS.--Estimated daily discharges: Feb. 14-19 and Aug. 8 to Sept. 17. Records fair except for estimated daily discharges, which are poor. 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 mi² in the Cedar Creek drainage basin. Gage-height telemeter at station.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 149 ft³/s (108,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,200 ft³/s Apr. 19, 1976 (gage height, 26.19 ft), from rating curve extended above 50,000 ft³/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 Transporation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 25	1930	5,050	18.97	Apr. 29	0600	*12,500	*20.82
Dec. 18	2100	8,830	20.03	May 22	2400	3,590	18.35
Apr. 24	0945	3,590	18.35				

Minimum daily discharge, 0.10 ft³/s Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	195	9.6	2380	9.3	59	48	1050	19	2.3	2.0	.43
2	15	1080	7.1	1030	14	56	26	349	17	3.4	1.7	.37
3	16	585	5.0	264	13	42	16	235	14	3.1	1.7	.31
4	16	154	3.7	150	9.9	58	12	162	8.7	2.4	2.2	.27
5	17	85	53	95	15	84	8.4	110	7.6	2.7	2.0	.25
6	18	47	449	59	27	58	6.5	84	7.8	2.0	1.8	.23
7	23	26	143	38	82	37	5.6	64	8.1	2.3	1.6	.22
8	28	16	53	25	61	26	6.5	46	8.4	1.6	1.4	.20
9	20	12	27	20	42	18	5.8	26	7.6	2.0	1.3	.17
10	26	9.1	15	17	33	14	5.1	14	6.9	2.4	1.2	.14
11	53	6.7	9.6	16	23	12	4.2	13	6.5	2.7	1.1	.13
12	65	5.6	14	14	21	10	1.8	22	4.9	2.7	1.0	.12
13	79	4.6	268	12	17	9.9	1.9	19	4.0	2.4	.82	.10
14	455	4.3	1260	9.3	13	700	10	16	4.5	2.8	.70	4.0
15	235	4.1	586	9.0	11	1010	9.6	101	3.5	2.7	.52	10
16	69	3.5	1100	39	9.0	215	7.4	37	3.4	2.6	.40	8.0
17	44	3.3	1450	426	8.1	106	4.8	13	3.2	2.4	.32	3.9
18	31	4.0	5280	180	7.1	67	4.0	5.6	3.7	4.4	.28	3.9
19	20	10	4430	83	5.6	45	3.6	4.0	199	7.1	.23	4.5
20	170	6.8	1250	48	7.2	647	3.0	9.0	91	27	.22	4.7
21	1250	5.2	517	33	6.9	1280	3.3	695	25	38	.20	5.1
22	716	3.9	307	24	7.3	852	38	2680	7.4	22	.17	5.1
23	201	3.7	202	19	692	189	1540	2050	9.9	20	.15	5.3
24	564	3.0	128	16	2030	87	3020	299	6.1	13	.13	4.4
25	3510	2.8	93	14	570	54	530	143	3.7	8.7	2.0	5.3
26	3380	5.4	62	15	182	32	183	104	7.8	3.7	1.5	6.3
27	1310	159	36	13	113	143	126	75	7.6	5.1	1.3	5.3
28	1260	146	24	11	73	428	1370	59	7.6	5.1	1.2	5.3
29	389	41	20	11	---	134	9120	39	3.9	5.1	1.1	5.8
30	683	17	554	11	---	70	3610	28	2.8	4.0	1.0	8.7
31	332	---	1420	9.3	---	71	---	22	---	2.7	.80	---
TOTAL	15011	2649.0	19776.0	5090.6	4102.4	6613.9	19730.5	8573.6	510.6	208.4	32.04	98.54
MEAN	484	88.3	638	164	147	213	658	277	17.0	6.72	1.03	3.28
MAX	3510	1080	5280	2380	2030	1280	9120	2680	199	38	2.2	10
MIN	15	2.8	3.7	9.0	5.6	9.9	1.8	4.0	2.8	1.6	.13	.10
AC-FT	29770	5250	39230	10100	8140	13120	39140	17010	1010	413	64	195

CAL YR 1984 TOTAL 53751.59 MEAN 147 MAX 5280 MIN .00 AC-FT 106600
WTR YR 1985 TOTAL 82396.58 MEAN 226 MAX 9120 MIN .10 AC-FT 163400

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 herin 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 provided by the Tarrant County Water Control and Improvement District No. 1. The area and capacity tables were provided 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, 684,000 acre-ft Apr. 28 at 1000 hours (elevation, 322.14 ft); minimum 534,800 acre-ft Oct. 5-6 (elevation, 317.40 ft).

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

317.0	523,000	321.0	646,000
319.0	582,600	323.0	713,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538000	572900	568700	640600	646000	679200	676900	678900	677600	658300	642500	612600
2	536800	573200	569900	644400	644700	677600	675600	677200	676200	657300	640900	612000
3	536200	574800	568400	644700	644400	674300	674300	677900	674900	658300	640600	609500
4	535000	575100	569300	644700	646000	678900	674300	677600	674600	656300	639300	608200
5	534800	574800	569900	644400	646000	677200	675900	677600	672900	655700	638300	607000
6	537700	572900	569600	644400	647700	676600	675900	677200	676600	655300	637300	606000
7	539400	572600	569300	645100	647700	676900	675900	677200	675600	653000	636400	606000
8	539100	572900	569900	644700	647700	677600	674600	677600	674900	652700	634800	604500
9	539700	572300	570200	646000	647400	677600	672900	677600	674600	651300	633500	604200
10	540300	572000	569600	646000	651700	676900	673300	677200	673600	651300	633500	602600
11	540000	571100	568700	645100	648000	679200	672300	676600	673600	651300	633200	602600
12	540600	570500	569300	643100	648000	677200	671900	676200	672600	650700	630900	604200
13	540600	569000	571400	642500	649000	679600	673600	679600	670600	649700	628600	603500
14	541800	568700	573500	642800	647700	677900	672600	678200	668600	648400	629600	604500
15	541800	570200	576000	642200	647400	677200	672600	678200	668300	647400	628600	603500
16	542700	568700	579600	646000	646700	677900	672600	677600	667300	647700	627700	602300
17	540000	570500	587600	644700	646700	676900	671900	677600	666300	645700	626100	601000
18	542100	569300	597900	646400	647000	675900	670300	676600	670900	645100	625400	600400
19	538300	569300	612900	654300	646700	675600	669300	675200	670300	643100	624800	599800
20	539400	567800	620900	645100	646000	678900	670900	677600	669300	646400	623500	598500
21	541200	567500	623800	645400	646400	677600	667600	680900	668600	648000	622500	598200
22	543500	566600	624800	645400	647700	678900	673900	681300	667900	648000	620900	596700
23	542400	566300	624500	644700	675200	677600	678900	683300	667300	649000	619900	596400
24	546200	566000	627000	644700	679200	677600	680900	680600	666600	648400	621900	593900
25	552000	566300	624500	645700	678900	677600	679200	680600	665600	647400	619900	595100
26	556900	569000	625100	644400	679200	679200	679200	679600	664600	648000	619000	592000
27	562900	569300	624500	646000	677600	677900	680900	678900	665000	647400	617400	590400
28	567200	569600	625100	644400	678900	678900	682700	678200	662600	646400	616100	589500
29	567200	569600	625400	644100	---	676200	679200	677900	661600	645100	615400	595700
30	567800	569600	626700	648000	---	677900	682300	678200	660000	644100	614500	592600
31	568100	---	633500	648700	---	675600	---	677600	---	642800	613800	---
MAX	568100	575100	633500	654300	679200	679600	682700	683300	677600	658300	642500	612600
MIN	534800	566000	568400	640600	644400	674300	667600	675200	660000	642800	613800	589500
(†)	318.52	318.57	320.61	321.08	321.99	321.89	322.09	321.95	321.42	320.90	320.00	319.32
(‡)	+29000	+1500	+63900	+15200	+30200	-3300	+6700	-4700	-17600	-17200	-29000	-21200

CAL YR 1984 MAX 680900 MIN 534800 (‡) +20300
WTR YR 1985 MAX 683300 MIN 534800 (‡) +53500

(†) 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 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
25...	1140	1.00	267	7.8	10.0	11.6	102
25...	1142	10.0	267	7.8	10.0	11.6	102
25...	1144	20.0	267	7.8	10.0	11.6	102
25...	1146	30.0	261	7.7	10.0	11.8	104
25...	1148	40.0	264	7.7	10.0	11.8	104
MAY							
23...	1055	1.00	240	8.7	25.0	7.1	86
23...	1056	10.0	240	8.6	25.0	7.0	84
23...	1057	20.0	240	8.1	24.0	6.0	71
23...	1058	30.0	240	7.6	23.0	4.0	46
AUG							
15...	0856	1.00	251	7.8	29.0	7.0	91
15...	0857	10.0	251	7.8	29.0	7.0	91
15...	0858	20.0	251	7.7	29.0	6.9	90
15...	0859	31.0	251	7.7	29.0	6.5	85

321113096041201 CEDAR CREEK RESERVOIR SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
25...	1045	1.00	244	7.7	10.0	1.13	9.4	83	77
25...	1047	10.0	260	7.7	10.0	--	9.6	85	--
25...	1049	20.0	260	7.7	10.0	--	10.0	88	--
25...	1051	30.0	260	7.7	10.0	--	10.2	90	--
25...	1053	40.0	263	7.6	10.0	--	10.4	92	--
25...	1055	50.0	260	7.6	9.5	--	10.6	92	--
25...	1057	60.0	260	7.6	9.0	--	11.0	95	--
25...	1059	64.0	245	7.6	9.0	--	11.0	95	76
MAY									
23...	1030	1.00	238	8.6	24.5	1.10	7.0	84	73
23...	1031	10.0	238	8.5	24.0	--	6.8	81	--
23...	1032	20.0	238	8.3	24.0	--	6.3	75	--
23...	1033	30.0	238	7.5	23.0	--	4.6	53	--
23...	1034	40.0	240	7.3	22.0	--	3.6	41	--
23...	1035	50.0	243	7.1	21.0	--	1.7	19	--
23...	1036	60.0	246	7.1	20.5	--	1.4	16	76
AUG									
15...	0830	1.00	250	7.6	29.0	1.80	6.6	86	76
15...	0831	10.0	250	7.6	29.0	--	6.5	85	--
15...	0832	20.0	250	7.5	29.0	--	6.3	82	--
15...	0833	30.0	250	7.3	28.5	--	5.4	70	--
15...	0834	35.0	250	7.1	28.0	--	1.6	21	--
15...	0835	40.0	258	6.9	26.0	--	.3	4	--
15...	0836	50.0	264	6.9	24.0	--	.3	4	--
15...	0837	56.0	273	6.8	23.5	--	.3	4	77

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321113096041201 CEDAR CREEK RESERVOIR SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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									
25...	18	23	4.7	18	.9	4.3	59	29	19
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	17	23	4.5	18	.9	4.5	59	28	19
MAY									
23...	16	22	4.4	17	.9	3.9	57	29	18
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	15	23	4.4	17	.9	3.8	61	29	18
AUG									
15...	12	23	4.5	17	.9	4.6	64	25	17
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	0	23	4.7	18	.9	4.7	90	17	19

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									
25...	.20	1.8	140	<.10	.90	--	.010	40	<10
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	<.10	.50	--	.010	30	<10
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	<.10	1.2	--	.020	40	<10
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	1.7	130	<.10	1.1	--	.010	24	10
MAY									
23...	.20	2.4	130	<.10	.60	--	.030	25	2
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	<.10	.70	--	.020	40	<10
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	.20	.60	.80	.020	10	120
23...	--	--	--	--	--	--	--	--	--
23...	--	4.8	140	.30	.80	1.1	.050	20	620
AUG									
15...	.20	3.7	130	<.10	.50	--	.030	6	22
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	<.10	.70	--	.050	120	360
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	<.10	.70	--	.130	350	1300
15...	--	--	--	--	--	--	--	--	--
15...	--	8.5	150	<.10	1.8	--	.550	1100	2600

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321116096035301 CEDAR CREEK RESERVOIR SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
25...	1120	1.00	263	7.8	10.5	10.6	95
25...	1122	10.0	264	7.8	10.0	10.8	95
25...	1124	20.0	265	7.7	10.0	11.0	97
25...	1126	30.0	260	7.7	9.5	11.2	98
25...	1128	40.0	264	7.6	9.5	11.6	101
25...	1130	48.0	258	7.6	9.5	12.0	105
MAY							
23...	1105	1.00	240	8.7	25.0	7.0	84
23...	1106	10.0	240	8.6	24.5	7.0	84
23...	1107	20.0	240	8.5	24.5	6.6	79
23...	1108	31.0	240	7.8	22.5	4.0	46
AUG							
15...	0910	1.00	251	7.7	29.0	6.5	85
15...	0911	10.0	251	7.6	29.0	6.3	82
15...	0912	20.0	251	7.5	29.0	5.5	72
15...	0913	30.0	251	7.3	28.5	4.2	54
15...	0914	35.0	251	7.1	28.0	1.8	23
15...	0915	37.0	254	7.1	27.0	.4	5

321227096032701 CEDAR CREEK RESERVOIR SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
25...	1158	1.00	260	7.8	11.0	.18	10.2
25...	1200	10.0	261	7.8	11.0	--	11.2
25...	1202	20.0	264	7.8	10.0	--	11.6
25...	1204	30.0	259	7.8	10.0	--	11.6
25...	1206	40.0	258	7.8	10.0	--	11.8
25...	1208	50.0	260	7.7	10.0	--	11.8
MAY							
23...	1120	1.00	240	8.7	25.0	1.10	6.8
23...	1121	10.0	240	8.5	24.0	--	6.5
23...	1122	20.0	240	8.3	24.0	--	6.2
23...	1123	30.0	242	7.6	23.0	--	4.5
23...	1124	45.0	245	7.4	21.0	--	1.2
AUG							
15...	0928	1.00	252	8.3	30.0	1.00	7.5
15...	0929	10.0	252	8.0	30.0	--	7.2
15...	0930	20.0	252	7.2	29.0	--	3.6
15...	0931	25.0	252	7.0	28.0	--	.4
15...	0932	30.0	254	7.0	28.0	--	.4
15...	0933	35.0	254	7.0	27.5	--	.4
15...	0934	43.0	258	7.0	26.5	--	.5

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321227096032701 CEDAR CREEK RESERVOIR SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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							
25...	92	<.10	.60	--	.040	100	20
25...	101	--	--	--	--	--	--
25...	102	--	--	--	--	--	--
25...	102	--	--	--	--	--	--
25...	104	--	--	--	--	--	--
25...	104	<.10	1.9	--	.020	20	<10
MAY							
23...	82	<.10	.60	--	.030	20	60
23...	77	--	--	--	--	--	--
23...	73	--	--	--	--	--	--
23...	52	--	--	--	--	--	--
23...	13	.30	.60	.90	.050	40	490
AUG							
15...	100	<.10	.50	--	.020	10	10
15...	96	--	--	--	--	--	--
15...	47	<.10	.50	--	.030	40	80
15...	5	--	--	--	--	--	--
15...	5	<.10	.60	--	.030	210	510
15...	5	--	--	--	--	--	--
15...	6	<.10	.90	--	.100	540	1100

321403096060601 CEDAR CREEK RESERVOIR SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
25...	1236	1.00	247	7.8	12.0	11.0	102
25...	1238	10.0	256	7.8	10.0	11.4	101
25...	1240	20.0	260	7.7	10.0	11.4	101
25...	1242	30.0	260	7.7	10.0	11.2	99
25...	1244	40.0	253	7.6	10.0	11.2	99
25...	1246	51.0	252	7.6	10.0	11.2	99
MAY							
23...	1140	1.00	240	8.5	24.0	6.5	77
23...	1141	10.0	240	8.2	24.0	6.0	71
23...	1142	20.0	240	8.1	23.5	5.8	68
23...	1143	30.0	240	7.5	23.0	3.4	40
23...	1144	40.0	243	7.4	22.0	2.4	27
23...	1145	48.0	243	7.4	22.0	2.4	27
AUG							
15...	0950	1.00	255	8.6	30.5	8.1	109
15...	0951	10.0	255	8.0	29.5	7.2	95
15...	0952	20.0	255	7.7	29.5	6.4	84
15...	0953	30.0	255	7.3	29.0	3.5	46
15...	0954	35.0	261	7.1	28.0	.4	5
15...	0955	40.0	268	7.0	26.0	.4	5
15...	0956	46.0	269	7.0	26.0	.4	5

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321548096082301 CEDAR CREEK RESERVOIR SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
25...	1308	1.00	231	7.8	12.0	.76	11.8	109	78
25...	1309	5.00	262	7.8	10.0	--	11.8	104	--
25...	1310	10.0	259	7.8	10.0	--	11.8	104	--
25...	1312	20.0	252	7.7	10.0	--	11.6	102	--
25...	1314	30.0	257	7.7	10.0	--	11.6	102	--
25...	1316	40.0	256	7.6	10.0	--	11.6	102	--
25...	1318	45.0	244	7.6	9.0	--	11.6	100	76
MAY									
23...	1205	1.00	240	8.6	25.0	.67	6.6	80	72
23...	1206	10.0	240	8.3	24.0	--	6.2	73	--
23...	1207	20.0	240	8.2	24.0	--	6.0	71	--
23...	1208	30.0	240	7.5	22.5	--	3.4	39	--
23...	1209	38.0	240	7.5	22.5	--	3.0	35	73
AUG									
15...	1020	1.00	257	8.6	30.0	.80	7.5	100	76
15...	1021	10.0	257	8.4	30.0	--	7.0	93	--
15...	1022	20.0	257	8.4	30.0	--	7.0	93	--
15...	1023	30.0	257	8.3	30.0	--	6.8	90	--
15...	1024	42.0	257	8.2	30.0	--	6.7	89	76

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									
25...	17	24	4.4	18	.9	4.2	61	28	18
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	16	23	4.5	18	.9	4.2	60	28	18
MAY									
23...	16	22	4.2	17	.9	3.8	56	28	18
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	16	22	4.3	17	.9	4.3	57	27	17
AUG									
15...	10	23	4.5	18	.9	4.7	66	25	18
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	10	23	4.5	18	.9	4.7	66	25	18

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								
25...	1.9	140	<.10	.70	--	.020	14	1
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	<.10	.80	--	.020	20	<10
25...	--	--	--	--	--	--	--	--
25...	2.1	130	<.10	1.1	--	.020	22	4
MAY								
23...	2.6	130	.10	.70	.80	.040	<3	2
23...	--	--	--	--	--	--	--	--
23...	--	--	.10	.70	.80	.050	40	<10
23...	--	--	--	--	--	--	--	--
23...	3.9	130	.30	.70	1.0	.070	18	41
AUG								
15...	3.7	140	<.10	.60	--	.050	<3	2
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	3.8	140	<.10	.70	--	.050	14	32

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

321818096064301 CEDAR CREEK RESERVOIR SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
25...	1338	1.00	250	7.8	11.0	--	10.0
25...	1339	5.00	254	7.8	11.0	--	10.4
25...	1340	10.0	258	7.7	11.0	--	11.2
25...	1342	20.0	260	7.6	10.0	--	11.2
MAY							
23...	1225	1.00	240	8.6	25.5	.73	6.8
23...	1226	10.0	240	8.2	24.5	--	6.0
23...	1227	19.0	240	7.7	24.0	--	4.0
AUG							
15...	1046	1.00	259	8.8	31.0	.70	7.2
15...	1047	10.0	259	8.3	30.5	--	5.8
15...	1048	17.0	259	7.9	30.5	--	4.3

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							
25...	90	<.10	1.3	--	.040	30	10
25...	94	--	--	--	--	--	--
25...	101	--	--	--	--	--	--
25...	99	<.10	1.2	--	.030	40	10
MAY							
23...	83	<.10	.90	--	.050	60	<10
23...	72	--	--	--	--	--	--
23...	47	.10	.70	.80	.050	20	<10
AUG							
15...	97	<.10	.90	--	.080	40	20
15...	78	--	--	--	--	--	--
15...	58	<.10	.90	--	.050	30	<10

321843096101701 CEDAR CREEK RESERVOIR SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
25...	1406	1.00	242	7.8	11.5	11.4	104
25...	1408	10.0	246	7.8	11.0	11.1	100
25...	1410	20.0	252	7.7	10.0	11.2	99
25...	1412	31.0	255	7.6	11.0	11.2	101
MAY							
23...	1300	1.00	225	8.3	26.0	6.5	80
23...	1301	10.0	230	8.0	24.5	5.6	67
23...	1302	25.0	240	7.8	24.0	4.8	57
AUG							
15...	1118	1.00	259	8.8	30.5	8.4	113
15...	1119	10.0	259	8.6	30.5	7.6	102
15...	1120	23.0	259	8.5	30.5	7.2	97

CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued

322119096104901 CEDAR CREEK RESERVOIR SITE GR

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
25...	1454	1.00	229	7.8	12.0	11.1	103
25...	1456	11.0	236	7.7	12.0	11.0	102
MAY							
23...	1345	1.00	220	8.0	25.0	6.2	75
23...	1346	10.0	220	8.0	25.0	5.8	70
23...	1347	14.0	220	7.9	24.5	5.4	65
AUG							
15...	1150	1.00	261	9.0	31.0	8.4	114
15...	1151	12.0	261	8.7	30.0	8.0	106

322119096095401 CEDAR CREEK RESERVOIR SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
25...	1430	1.00	210	7.8	15.0	.18	11.2	111	69
25...	1432	10.0	238	7.8	12.0	--	10.6	98	--
25...	1434	22.0	221	7.6	12.0	--	10.6	98	71
MAY									
23...	1320	1.00	220	8.0	25.5	.24	6.0	73	71
23...	1321	10.0	220	7.9	24.5	--	5.6	67	--
23...	1322	20.0	220	7.8	24.0	--	4.9	58	68
AUG									
15...	1142	1.00	261	8.9	30.5	.60	8.4	113	79
15...	1143	10.0	261	8.7	30.0	--	8.0	106	--
15...	1144	20.0	261	8.5	30.0	--	7.6	101	79

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									
25...	18	21	4.0	16	.9	4.1	51	25	15
25...	--	--	--	--	--	--	--	--	--
25...	12	22	3.9	16	.9	4.0	59	26	15
MAY									
23...	15	22	3.8	14	.8	4.2	56	24	13
23...	--	--	--	--	--	--	--	--	--
23...	12	21	3.7	14	.8	4.0	56	25	12
AUG									
15...	10	24	4.6	18	.9	4.9	69	25	18
15...	--	--	--	--	--	--	--	--	--
15...	12	24	4.6	18	.9	5.1	67	25	17

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								
25...	3.5	120	<.10	1.4	--	.070	39	12
25...	--	--	--	--	--	--	--	--
25...	3.3	130	<.10	1.0	--	.060	37	4
MAY								
23...	6.1	120	.40	.80	1.2	.120	190	10
23...	--	--	--	--	--	--	--	--
23...	5.7	120	.40	.90	1.3	.110	31	2
AUG								
15...	3.4	140	<.10	.70	--	.060	<3	<1
15...	--	--	--	--	--	--	--	--
15...	3.5	140	<.10	.70	--	.080	<3	3

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 U.S. Army 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, lake was operated as a detention basin only. Deliberate impoundment began Mar. 15, 1963, and dam was completed in September 1963. Low-flow outlet works consist of two 36-inch-diameter gate-controlled conduits. Lake was built for flood control and water conservation. Capacity table prior to September 1976 is based on survey made in February 1956 by U.S. Army 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 is located at station. Figures given herein represent total contents. Data regarding 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 U.S. Army 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, 115,900 acre-ft Dec. 23 at 0830 hours (elevation, 433.56 ft); minimum daily, 44,760 acre-ft Oct. 6 at 0800 hours (elevation, 421.94 ft).

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

421.0	40,710	427.0	70,390	433.0	111,500
423.0	49,590	429.0	82,620	435.0	127,700
425.0	59,520	431.0	96,400		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44980	57120	61820	108200	58540	61500	57930	58800	56360	54310	51420	47400
2	44890	57720	61760	108400	57930	61030	58030	58700	56160	54160	51230	47210
3	44850	57830	61610	108700	57520	60820	58030	58640	56060	54060	51130	47120
4	44760	57880	61080	108700	57420	60250	58180	58540	55900	53910	50980	46980
5	44670	57780	60350	107500	57620	59620	58080	58490	55750	53720	50890	46800
6	45200	57670	59520	105600	57720	59000	58130	58390	56360	53570	50740	46670
7	45370	57670	59000	103500	57830	58540	58030	58340	56260	53520	50550	46580
8	45330	57720	58540	101500	57830	58390	58130	58440	56160	53420	50500	46440
9	45280	57830	58390	99390	58080	58490	58130	58290	56100	53320	50360	46350
10	45280	57670	58290	97130	58340	58640	58180	58030	56000	53180	50170	46260
11	45460	57570	58290	94890	57830	58750	58240	57720	55850	53570	50020	46440
12	45730	57470	58130	92760	57270	58700	57780	57520	55650	53470	49880	46350
13	45900	57370	67790	90720	57060	59310	57570	57980	55450	53320	49690	46260
14	45860	57370	72530	88650	57220	61870	57570	57670	55350	53220	49540	46170
15	45860	57320	76800	86540	57120	62560	57620	57420	55250	53080	49450	46130
16	45820	57170	81260	85130	57120	62450	57570	57120	55150	52930	49360	46040
17	45680	57220	84130	83210	57170	62080	57670	56960	55000	52830	49160	45950
18	46040	57670	110900	81330	57270	61610	57620	56960	55200	52690	49070	45820
19	46850	57420	112600	79420	57370	61030	57570	56910	55100	52590	48930	45730
20	46890	57370	113500	77410	57320	63250	57620	56810	54960	52540	48790	45680
21	46890	57320	113600	75390	57470	63470	57370	57170	54810	52740	48650	45590
22	46850	57270	114100	73470	57780	62560	57720	57170	54810	52690	48550	45500
23	46760	57220	115400	71650	60870	61500	57720	57220	54810	52590	48370	45330
24	48510	57720	114400	69990	61500	60450	57670	57120	54660	52490	48370	45200
25	51950	57520	112800	68230	61980	59360	57620	57060	54660	52390	48180	45110
26	52340	59210	110500	66620	62290	58700	57520	56910	54510	52250	48040	44940
27	55350	61500	107200	65140	62140	59060	57470	56660	54900	52100	47900	44800
28	56260	61660	105100	63680	61870	58800	58340	56710	54760	52000	47810	45110
29	56410	61820	103300	62240	---	58440	58540	56660	54560	51860	47720	46530
30	56460	61760	103700	60610	---	58080	58700	56610	54460	51710	47620	46620
31	56460	---	107100	59260	---	57880	---	56460	---	51570	47530	---
MAX	56460	61820	115400	108700	62290	63470	58700	58800	56360	54310	51420	47400
MIN	44670	57120	58130	59260	57060	57880	57370	56460	54460	51570	47530	44800
(†)	424.40	425.43	432.44	424.95	425.45	424.68	424.84	424.40	424.00	423.41	422.56	422.36
(‡)	+11350	+5300	+45340	-47840	+2610	-3990	+820	-2240	-2000	-2890	-4040	-910

CAL YR 1984 MAX 115400 MIN 44670 (‡) +54360
WTR YR 1985 MAX 115400 MIN 44670 (‡) +1510

(†) 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 (revised) above 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.--Estimated daily discharges: Nov. 8-29 and Aug. 9 to Sept. 18. Records fair except those for estimated daily discharges, which are poor. Flow regulated since Mar. 15, 1963, by Navarro Mills Lake. Flow is affected at times by discharge from the flood-detention pool of a floodwater-retarding structure with a capacity of capacity of 297 acre-ft. This structure controls runoff from 1.28 mi^2 below Navarro Mills Lake and above this station. On Apr. 21, 1983, gage-height telemeter was reinstalled.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft^3/s July 3, 1961 (gage height, 25.50 ft, revised), 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, revised).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, about 31 ft (revised) June 19, 1929, from information by local residents. Floods in 1946 and 1957 reached a stage of about 26 ft (revised), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft^3/s Dec. 18 at 0930 hours (gage height, 20.58 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	15	.65	198	461	350	3.1	4.6	1.8	.13	.00	.00
2	.25	20	.82	182	314	386	2.6	4.2	1.5	.17	.00	.00
3	.13	.70	73	179	312	384	2.4	3.9	1.1	.48	.00	.00
4	.17	.15	484	182	172	384	2.3	3.8	1.4	.48	.00	.00
5	.13	.12	639	678	3.8	382	2.6	3.4	1.2	1.7	.00	.00
6	.13	.23	557	1110	3.3	379	2.7	3.3	2.5	1.1	.85	.00
7	1.6	.30	299	1100	2.8	376	3.8	3.3	1.5	.13	1.5	.00
8	.10	.30	297	1090	2.3	186	4.3	4.4	1.4	.08	.59	.00
9	.03	.30	164	1080	2.3	2.1	3.1	77	1.5	.03	.40	.00
10	.05	.25	62	1070	2.2	1.6	2.8	141	1.5	.25	.30	.00
11	.71	.30	63	1070	173	1.4	3.7	146	1.4	.05	.25	.00
12	1.3	.25	60	1050	346	1.2	242	141	1.1	.48	.20	.00
13	.48	.25	165	1040	173	1.3	239	157	.85	.10	.15	.00
14	.25	.20	188	1030	1.7	21	5.6	153	.48	.03	.10	.00
15	.10	.25	446	1020	1.2	95	5.0	144	1.0	.00	.05	.00
16	.25	.25	700	1010	.99	370	5.3	142	.48	.05	.00	.00
17	.48	1.2	705	1010	1.1	365	5.0	69	6.1	.10	.00	.00
18	1.3	1.0	1280	992	1.1	361	4.4	3.9	2.6	.00	.00	.00
19	1.5	1.0	263	981	1.7	358	4.6	3.2	2.1	.20	.00	.00
20	.57	.85	232	975	1.7	366	4.2	2.4	1.5	.10	.00	.00
21	.50	.71	470	960	1.1	496	4.2	4.2	.85	.85	.00	.00
22	.80	.59	696	946	11	705	4.2	2.7	.71	.71	.00	.00
23	.47	.59	885	931	240	697	4.0	2.8	.38	.25	.00	.00
24	5.3	.85	1050	900	23	693	3.8	2.3	.38	.25	.00	.00
25	5.5	1.1	1030	853	6.1	688	3.7	2.1	.30	.38	.00	.00
26	.28	1.0	1180	816	3.7	539	4.2	1.7	.25	.30	.00	.00
27	.16	1.2	1670	800	170	345	4.4	1.7	1.3	.17	.00	.00
28	.11	1.7	1530	792	341	342	5.0	1.7	1.9	.03	.00	.00
29	.16	.85	726	783	---	341	4.4	1.4	1.2	.00	.00	6.8
30	.20	.45	168	774	---	342	4.2	4.3	.17	.00	.00	.17
31	.19	---	242	701	---	150	---	3.0	---	.00	.00	---
TOTAL	23.37	51.94	16325.47	26303	2773.09	10108.6	590.6	1238.3	40.45	8.60	4.39	6.97
MEAN	.75	1.73	527	848	99.0	326	19.7	39.9	1.35	.28	.14	.23
MAX	5.5	20	1670	1110	461	705	242	157	6.1	1.7	1.5	6.8
MIN	.03	.12	.65	179	.99	1.2	2.3	1.4	.17	.00	.00	.00
AC-FT	46	103	32380	52170	5500	20050	1170	2460	80	17	8.7	14

CAL YR 1984 TOTAL 24471.12 MEAN 66.9 MAX 1670 MIN .00 AC-FT 48540
WTR YR 1985 TOTAL 57474.78 MEAN 157 MAX 1670 MIN .00 AC-FT 114000

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 mi².

WATER-DISCHARGE RECORDS

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 above 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.--Estimated daily discharges: Nov. 29 to Jan. 10 and June 26 to Aug. 7. 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 mi² in the Richland Creek drainage basin. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1940-62) prior to regulation by Navarro Mills Lake, 404 ft³/s (292,700 acre-ft/yr); 23 years (water years 1963-85) regulated, unadjusted, 310 ft³/s (224,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,900 ft³/s May 12, 1948 (gage height, 24.16 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, 5,200 ft³/s Feb. 24 at 1700 hours (gage height, 20.48 ft); maximum gage-height at main channel, 20.58 ft Feb. 24 at 1300 hours; no flow many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	21	28	358	710	534	90	6.7	.02	.00	.00	.00
2	.00	40	21	232	490	497	22	7.1	.40	.03	.00	.00
3	.00	61	15	202	340	453	15	7.6	.77	.16	.00	.00
4	.00	32	64	194	330	426	10	7.2	.29	.05	.00	.00
5	.00	33	487	200	190	403	9.4	7.1	.05	.25	.00	.00
6	.00	21	718	994	27	368	8.0	5.7	.43	.07	.00	.00
7	.01	15	489	1220	10	352	7.0	5.4	.11	.00	.00	.00
8	.00	12	311	1190	5.9	342	7.7	5.2	.00	.00	.00	.00
9	.00	7.9	286	1170	4.0	115	6.9	4.6	.00	.00	.00	.00
10	.00	3.9	113	1140	3.4	24	6.4	46	.33	.00	.00	.00
11	.01	2.2	64	1130	3.2	15	5.2	99	.32	.00	.00	.00
12	.10	1.7	61	1120	190	13	4.0	99	.08	.02	.00	.00
13	.07	1.3	110	1110	293	12	323	109	.02	.02	.00	.00
14	.06	1.1	175	1100	130	231	95	238	.00	.05	.00	.00
15	.03	.75	325	1080	13	645	38	131	.00	.05	.00	.00
16	.00	.40	750	1080	4.3	393	18	111	.00	.03	.00	.00
17	.00	.57	900	1190	2.6	430	13	107	.00	.02	.00	.00
18	.41	12	940	1160	2.0	378	9.7	59	.00	.02	.00	.00
19	367	2.0	2890	1090	2.2	349	8.8	20	.01	.00	.00	.00
20	212	1.4	551	1040	2.9	552	9.1	11	16	.00	.00	.00
21	37	1.1	833	1030	3.0	896	8.3	8.1	7.7	.34	.00	.00
22	27	.95	917	1000	2.1	803	8.0	4.5	3.2	.66	.00	.00
23	23	.91	1110	982	1640	790	7.5	3.6	2.0	2.3	.00	.00
24	20	1.3	1210	959	4410	745	7.4	2.9	1.8	4.4	.00	.00
25	106	1.8	1200	915	2430	719	7.1	.21	.91	4.4	.00	.00
26	145	2.1	1160	868	795	703	6.4	.57	4.4	2.6	.00	.00
27	64	160	1580	831	477	518	7.6	1.6	1.8	1.4	.00	.00
28	47	180	1940	814	542	446	7.9	1.4	.45	.71	.00	.00
29	44	63	1570	804	---	378	9.1	.54	.25	.38	.00	.15
30	41	46	343	793	---	350	7.7	.17	.03	.10	.00	143
31	25	---	191	783	---	331	---	.05	---	.03	.00	---
TOTAL	1158.69	727.38	21352	27779	13052.6	13211	783.2	1110.24	41.37	18.09	.00	143.15
MEAN	37.4	24.2	689	896	466	426	26.1	35.8	1.38	.58	.000	4.77
MAX	367	180	2890	1220	4410	896	323	238	16	4.4	.00	143
MIN	.00	.40	15	194	2.0	12	4.0	.05	.00	.00	.00	.00
AC-FT	2300	1440	42350	55100	25890	26200	1550	2200	82	36	.00	284

CAL YR 1984 TOTAL 51898.79 MEAN 142 MAX 4770 MIN .00 AC-FT 102900
WTR YR 1985 TOTAL 79376.72 MEAN 217 MAX 4410 MIN .00 AC-FT 157400

08063500 RICHLAND CREEK NEAR RICHLAND, TX--Continued

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 microsiemens Nov. 5, 1968; minimum daily, 119 microsiemens 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, 975 microsiemens July 5; minimum daily, 155 microsiemens Dec. 19.
WATER TEMPERATURES: 30.0°C July 28; minimum daily, 4.0°C Feb. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
JAN 11...	1200	1110	264	7.3	9.0	80	53	12.4	106	1.5	100
FEB 15...	0900	9.8	370	7.9	6.5	80	33	13.1	106	1.6	140
MAY 15...	1300	129	361	7.7	22.5	35	86	7.3	85	2.3	130
JUN 26...	1500	4.8	886	8.0	30.5	10	6.5	7.6	103	2.5	280

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)
JAN 11...	14	37	2.6	12	.5	3.1	89	29	9.7	.30	7.3
FEB 15...	26	50	3.6	18	.7	3.8	114	38	14	.30	7.1
MAY 15...	28	48	3.5	17	.7	4.8	107	34	15	.30	4.9
JUN 26...	66	97	8.1	65	2	13	210	97	96	.40	6.9

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, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 11...	150	118	20	.55	.050	.60	.080	.52	.60	.110	4.7
FEB 15...	200	28	10	.56	.040	.60	.090	1.1	1.2	.080	6.0
MAY 15...	190	106	15	1.2	.040	1.2	.090	.71	.80	.200	6.9
JUN 26...	510	23	8	--	<.010	<.10	.050	.55	.60	.050	6.9

08063500 RICHLAND CREEK NEAR RICHLAND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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...	0900	5	62	<1	10	2	34
MAY 15...	1300	2	67	<1	<10	4	59
JUN 26...	1500	2	120	1	<10	4	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)
FEB 15...	<1	5	<.1	<1	<1	11
MAY 15...	5	1	<.1	<1	<1	18
JUN 26...	6	3	<.1	<1	<1	17

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	1158.69	275	160	499	15	48	30	95	93
NOV.	1984	727.38	291	169	333	17	33	32	64	98
DEC.	1984	21352	231	135	7760	12	713	25	1450	78
JAN.	1985	27779	276	160	12000	15	1150	30	2280	93
FEB.	1985	13052.6	233	135	4770	13	443	25	894	79
MAR.	1985	13211	330	192	6840	20	699	37	1330	110
APR.	1985	783.2	470	273	578	32	68	57	120	150
MAY	1985	1110.24	426	248	743	29	86	51	152	140
JUNE	1985	41.37	715	416	47	60	6.7	94	11	230
JULY	1985	18.09	874	510	25	83	4.0	120	6.0	270
AUG.	1985	0.00	*	*	0.00	*	0.00	*	0.00	*
SEPT	1985	143.15	277	161	62	15	6.0	31	12	93
TOTAL		79376.72	**	**	33700	**	3260	**	6420	**
WTD.AVG.		217	270	157	**	15	**	30	**	91

TRINITY RIVER BASIN

08063500 RICHLAND CREEK NEAR RICHLAND, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	335	335	250	294	295	374	723	555	---		---
2	---	359	355	267	305	309	412	751	571	952		---
3	---	245	380	270	307	325	436	770	599	954		---
4	---	269	280	274	304	336	454	789	618	971		---
5	---	263	215	279	330	338	492	809	635	975		---
6	---	271	195	265	354	340	505	822	616	970		---
7	471	285	228	245	388	343	530	865	635	---		---
8	---	300	240	261	409	346	552	904	---	---		---
9	---	306	265	276	420	375	573	932	---	---		---
10	---	321	300	271	425	404	587	555	630	---		---
11	467	332	335	274	428	427	614	441	634	---		---
12	457	343	360	275	375	461	629	422	645	939		---
13	462	351	345	272	317	496	450	380	657	945		---
14	463	362	313	271	326	327	460	329	---	940		---
15	457	371	275	280	356	252	470	359	---	947		---
16	---	379	253	283	381	305	482	437	---	955		---
17	---	372	225	273	399	290	494	445	---	958		---
18	463	340	218	281	405	348	503	456	---	956		---
19	250	385	155	276	408	351	509	464	690	---		---
20	284	405	281	278	419	337	525	475	666	---		---
21	336	412	263	279	440	300	545	483	723	875		---
22	352	425	259	280	455	327	561	491	786	863		---
23	365	445	230	276	229	335	579	509	765	890		---
24	400	430	225	278	175	343	585	514	755	888		---
25	290	418	235	277	210	352	610	535	794	904		---
26	245	421	246	290	249	354	640	527	775	854		---
27	284	289	232	288	327	341	655	516	805	815		---
28	258	273	221	287	300	330	680	520	829	765		---
29	255	297	275	286	---	353	668	533	925	735		795
30	299	332	301	290	---	364	690	542	939	704		276
31	304	---	286	287	---	373	---	550	---	697		---
MEAN	358	345	269	275	348	348	542	576	706	889		536

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

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21.0	---	---	5.5	14.0	17.0	22.0	26.0	27.0		---
2	---	19.0	10.0	10.0	5.0	---	16.0	22.0	26.0	26.0		---
3	---	---	13.0	8.0	---	---	17.0	21.0	26.0	25.0		---
4	---	---	10.0	8.0	5.0	15.0	18.0	---	26.0	26.0		---
5	---	16.0	---	9.0	5.0	---	21.0	---	26.0	28.0		---
6	---	15.0	10.0	---	5.0	15.0	---	22.0	26.0	28.0		---
7	22.0	15.0	10.0	11.0	4.0	14.0	---	22.0	25.0	---		---
8	---	19.0	12.0	10.0	4.0	16.0	18.0	23.0	---	---		---
9	---	17.0	12.0	11.0	6.0	---	17.0	22.0	---	---		---
10	---	19.0	11.0	10.0	---	19.0	17.0	23.0	27.0	---		---
11	21.0	---	12.0	10.0	7.0	18.0	18.0	24.0	26.0	---		---
12	27.0	14.0	14.0	8.0	7.0	18.0	18.0	24.0	25.0	26.0		---
13	23.0	13.0	15.0	---	6.0	18.0	19.0	24.0	24.0	---		---
14	23.0	15.0	17.0	10.0	7.0	17.0	---	22.0	---	---		---
15	22.0	18.0	---	8.0	7.0	14.0	18.0	21.0	---	27.0		---
16	---	17.0	14.0	10.0	12.0	---	19.0	23.0	---	27.0		---
17	---	---	15.0	8.0	11.0	16.0	20.0	---	---	27.0		---
18	23.0	---	15.0	9.0	---	15.0	21.0	---	---	28.0		---
19	17.0	---	---	8.0	12.0	16.0	21.0	---	25.0	---		---
20	21.0	12.0	16.0	---	13.0	16.0	---	22.0	25.0	---		---
21	---	12.0	17.0	6.0	14.0	17.0	---	---	25.0	---		---
22	18.0	11.0	15.0	6.0	---	16.0	22.0	23.0	27.0	26.0		---
23	---	---	---	7.0	---	---	21.0	23.0	---	26.0		---
24	---	13.0	---	9.0	---	---	23.0	23.0	25.0	26.0		---
25	18.0	14.0	---	8.0	14.0	17.0	21.0	---	26.0	27.0		---
26	17.0	14.0	14.0	8.0	15.0	18.0	21.0	26.0	26.0	27.0		---
27	19.0	12.0	15.0	---	14.0	19.0	---	---	25.0	---		---
28	19.0	12.0	15.0	8.0	13.0	20.0	---	---	25.0	30.0		---
29	19.0	11.0	16.0	9.0	---	21.0	23.0	---	---	28.0		---
30	20.0	11.0	16.0	10.0	---	---	23.0	25.0	---	28.0		18.0
31	21.0	---	16.0	8.0	---	17.0	---	25.0	---	27.0		---
MEAN	20.5	15.0	14.0	8.5	8.5	17.0	19.5	23.0	25.5	27.0		18.0

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.

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 dam was completed Mar. 27, 1966. Controlled low-flow outlet works consists of a 10.0-foot-diameter concrete conduit with two 5.0- by 10.0-foot sluice gates. Lake was built for flood control and water conservation. Capacity table beginning October 1976 is based on a survey completed in 1972. Runoff from 81.4 mi² above Bardwell Lake is modified by Lake Waxahachie, with a capacity of 13,500 acre-ft at spillway elevation. The city of Waxahachie divertes water from Lake Waxahachie and returns an unknown amount of effluent to Waxahachie Creek. Inflow is affected at times by discharge from 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 U.S. Army 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, 74,030 acre-ft Dec. 22 at 0800 hours (elevation, 426.57 ft); minimum daily, 42,390 acre-ft Oct. 6 at 1600 hours (elevation, 418.07 ft).

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

418.0	42,170	422.0	55,920	426.0	71,630
420.0	48,780	424.0	63,550	428.0	80,300

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42670	49370	52540	71710	54420	57600	56550	58240	52180	51100	50010	47560
2	42580	49370	52580	71800	54090	57490	55960	58050	52110	51030	49900	47460
3	42520	49370	52540	71420	54020	57450	55300	57680	52040	50960	49830	47390
4	42480	49370	52760	70510	54020	57450	54670	57230	52010	50920	49730	47220
5	42420	50170	53040	69560	53440	57190	54120	56850	51900	50890	49660	47090
6	42990	50170	53110	68700	53260	56930	53510	56410	52150	50820	49590	46980
7	43120	50310	53180	67690	52970	56780	53260	56030	52110	50750	49450	46920
8	43090	50420	53290	66640	52860	56630	53260	55700	52080	50640	49380	46850
9	43090	50520	53400	65640	53010	56440	53260	55300	52040	50570	49270	46820
10	43090	50520	53080	64610	53360	56180	53290	54850	51970	50500	49200	46640
11	43180	50490	53150	63580	53040	55960	53330	54450	52010	50460	49100	46640
12	43280	50490	53260	62220	52760	55740	53400	54050	51900	50400	48960	46580
13	43860	50560	55300	61100	52720	55890	53580	53760	51760	50290	48850	46510
14	43990	50490	56150	60020	52830	57900	53620	53470	51690	50220	48810	46480
15	43990	50130	57980	58770	52760	58050	53690	53110	51650	50150	48740	46410
16	44020	50100	59260	58160	52760	58050	53730	52720	51580	50110	48680	46310
17	43920	50070	63310	57190	52900	57940	53730	52500	51550	50040	48540	46240
18	43920	49930	70220	56110	52970	57750	53730	52500	51860	49970	48470	46170
19	43790	49680	71340	55040	53080	57450	53760	52470	51830	49940	48410	46100
20	43920	50910	73020	53870	53110	60330	53840	52500	51720	49900	48340	46070
21	44240	50880	73950	53400	53220	60750	53730	52970	51550	50290	48240	46000
22	44440	50880	74000	53510	53440	60480	54310	53010	51620	50500	48170	45900
23	44440	50910	73780	53690	56150	60250	54420	52830	51720	50570	48070	45830
24	45360	51120	73020	53840	56780	59870	54450	52540	51650	50600	48170	45660
25	46690	51090	71960	54020	57230	59410	54420	52430	51620	50540	48100	45630
26	47030	51720	70750	54090	57640	59220	54490	52360	51550	50500	48030	45490
27	48540	51900	69440	54310	57680	59110	54560	52330	51510	50430	47930	45390
28	49020	51760	68500	54380	57640	58660	57230	52330	51370	50360	47830	45490
29	48600	51970	67000	54450	---	58280	57710	52260	51260	50250	47800	45970
30	48850	51970	68700	54640	---	57860	58050	52220	51190	50150	47730	46100
31	48990	---	70880	54850	---	57150	---	52220	---	50080	47660	---
MAX	49020	51970	74000	71800	57680	60750	58050	58240	52180	51100	50010	47560
MIN	42420	49370	52540	53400	52720	55740	53260	52220	51190	49900	47660	45390
(†)	420.06	420.91	425.85	421.71	422.46	422.33	422.57	420.98	420.69	420.37	419.67	419.21
(‡)	+6220	+2980	+18910	-16030	+2790	-490	+900	-5830	-1030	-1110	-2420	-1560

CAL YR 1984 MAX 74000 MIN 42420 (†) +22000
WTR YR 1985 MAX 74000 MIN 42420 (‡) +3330

(†) 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 left bank at downstream side of highway embankment near left end of bridge on county road, 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 above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Estimated daily discharges: May 28 to June 19 and June 23 to Sept. 30. 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.--22 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 U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 826 ft^3/s Dec. 26 at 1930 hours (gage height, 10.73 ft); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.8	3.3	337	133	175	319	.40	.80	.00	.00	.00
2	1.7	1.5	3.3	346	134	174	319	97	.11	.00	.00	.00
3	3.3	1.3	3.3	501	135	177	318	180	.05	.00	.00	.00
4	3.4	1.3	3.3	667	138	176	317	180	.01	.00	.00	.00
5	3.2	1.3	3.3	667	139	173	317	182	.00	.00	.00	.00
6	3.1	1.4	3.1	663	139	176	314	179	.00	.00	.00	.00
7	3.2	1.5	2.7	660	139	176	132	177	.00	.00	.00	.00
8	3.0	1.6	1.1	654	78	178	4.1	178	.00	.00	.00	.00
9	2.9	1.5	.79	654	2.6	178	3.2	178	.00	.00	.00	.00
10	2.9	2.1	1.2	653	2.5	177	3.4	178	.00	.00	.00	.00
11	2.8	2.3	.27	650	83	176	2.8	178	.00	.00	.00	.00
12	2.8	2.4	.08	642	155	174	2.6	178	.00	.00	.00	.00
13	2.8	2.5	2.5	638	67	175	2.9	179	.00	.00	.00	.00
14	2.3	2.7	.61	627	1.5	183	3.4	181	.00	.00	.00	.00
15	2.3	2.9	.66	626	.12	184	2.0	180	.00	.00	.00	.00
16	2.0	2.9	1.0	625	.11	185	.53	181	.00	.00	.00	.00
17	1.8	2.9	2.4	619	.10	180	.37	73	.00	.00	.00	.00
18	1.9	3.0	103	617	.10	175	1.2	1.1	.17	.00	.00	.00
19	1.8	3.0	4.8	614	.11	175	.46	1.1	.18	.00	.00	.00
20	1.9	3.0	.33	612	.12	181	.37	1.1	.56	.00	.00	.00
21	1.8	3.0	204	280	.14	242	.43	.93	.61	.00	.00	.00
22	1.8	3.3	379	2.4	.22	331	.72	31	.62	.00	.00	.00
23	1.8	3.8	482	2.4	1.7	328	.53	92	.14	.00	.00	.00
24	1.9	3.6	632	2.2	.32	327	.35	92	.57	.00	.00	.00
25	1.8	3.3	687	2.5	.22	328	.35	37	.14	.00	.00	.00
26	1.7	3.4	717	2.1	.29	326	.35	2.0	.05	.00	.00	.00
27	2.0	3.3	803	2.1	76	327	.37	1.8	.02	.00	.00	.00
28	2.0	3.5	788	2.1	178	326	2.5	1.1	.01	.00	.00	.00
29	2.0	3.4	782	2.3	---	322	1.1	.18	.00	.00	.00	.23
30	2.6	3.3	783	2.2	---	322	.68	.26	.00	.00	.00	.14
31	2.9	---	645	57	---	319	---	.37	---	.00	.00	---
TOTAL	74.2	76.8	7043.04	12429.3	1604.15	7046	2070.71	2941.34	4.04	.00	.00	.37
MEAN	2.39	2.56	227	401	57.3	227	69.0	94.9	.13	.000	.000	.012
MAX	3.4	3.8	803	667	178	331	319	182	.80	.00	.00	.23
MIN	1.7	1.3	.08	2.1	.10	173	.35	.18	.00	.00	.00	.00
AC-FT	147	152	13970	24650	3180	13980	4110	5830	8.0	.00	.00	.7

CAL YR 1984 TOTAL 14454.35 MEAN 39.5 MAX 803 MIN .08 AC-FT 28670
WTR YR 1985 TOTAL 33289.95 MEAN 91.2 MAX 803 MIN .00 AC-FT 66030

08064100 CHAMBERS CREEK NEAR RICE, TX

LOCATION.--Lat 32°11'54", long 96°31'12", Navarro County, Hydrologic Unit 12030109, on downstream side of highway embankment 20 ft left of left end of bridge on Farm Road 1126, 3.6 mi downstream from Oak Branch, 3.9 mi upstream from Cummins Creek, 4.2 mi upstream from bridge on Interstate Highway 45, 5.0 mi downstream from Waxahachie Creek, and 3.4 mi southwest of Rice.

DRAINAGE AREA.--807 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 340.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow from 178 mi² 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 PERIOD OF RECORD.--Maximum discharge, 4,630 ft³/s Mar. 12 at 2400 hours (gage-height, 26.00 ft); minimum daily, 0.07 ft³/s Aug. 19. Flood information for next downstream station (08064500) indicates maximum stage since at least 1870 occurred in August 1887 and other significant floods occurred in December 1913, May 1944 and May 1958. Stages for these floods are unknown for this station and over the years a leeve system has been developed along the main channel to limit crop land flooding.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,200 ft³/s Dec. 18 at 1500 hours (gage-height, 29.02 ft); no flow Aug. 6 to Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	39	20	4840	250	421	489	230	14	1.1	.12	.00
2	.67	63	15	3220	243	420	467	180	12	.87	.07	.00
3	.69	59	11	1400	247	388	454	290	10	.75	.04	.00
4	.83	55	9.0	1220	263	377	443	274	9.5	.66	.03	.00
5	1.3	36	30	1060	271	359	439	265	8.5	.65	.02	.00
6	1.6	28	230	973	287	331	432	257	11	.68	.00	.00
7	17	22	134	906	281	314	310	253	14	.57	.00	.00
8	3.6	21	74	864	245	305	72	255	14	.42	.00	.00
9	.79	20	49	847	73	303	60	279	9.7	.28	.00	.00
10	.60	17	40	827	66	297	56	251	7.8	.26	.00	.00
11	.91	15	36	798	100	293	55	250	6.7	.43	.00	.00
12	1.3	13	35	771	249	301	52	248	5.9	.54	.00	.00
13	1.1	11	994	753	193	286	50	246	5.2	1.2	.00	.00
14	43	11	2940	749	41	1730	50	250	5.6	.86	.00	.00
15	3.4	11	2480	741	37	2040	48	246	4.7	.58	.00	.00
16	16	10	2820	754	36	760	43	248	4.2	.43	.00	.00
17	6.1	6.1	2040	960	35	550	38	190	3.8	.27	.00	.00
18	2.0	7.0	9830	841	35	442	35	38	7.1	.18	.00	.00
19	.95	9.8	6250	773	34	387	32	35	14	.12	.00	.00
20	1.2	14	2340	752	33	1700	31	32	4.9	.10	.00	.00
21	.87	10	1640	567	31	3630	31	38	4.1	.23	.00	.00
22	9.5	6.9	1370	122	32	1640	46	71	3.9	13	.00	.00
23	24	6.8	1070	121	770	885	116	154	3.8	13	.00	.00
24	129	5.8	1060	123	2420	721	62	153	6.3	15	.00	.00
25	699	7.5	1040	118	989	637	41	119	6.7	11	.00	.00
26	232	53	974	107	470	587	33	32	7.1	6.4	.00	.00
27	661	830	1060	99	362	1010	30	27	3.8	2.6	.00	.00
28	575	142	1020	97	432	763	411	24	2.6	1.2	.00	.00
29	152	48	1010	88	---	604	1220	22	1.8	.69	.00	.00
30	80	28	1700	87	---	550	495	19	1.3	.42	.00	.00
31	51	---	4580	106	---	517	---	16	---	.23	.00	---
TOTAL	2717.07	1605.9	46901.0	25684	8525	23548	6141	4992	214.0	74.72	.28	.00
MEAN	87.6	53.5	1513	829	304	760	205	161	7.13	2.41	.009	.000
MAX	699	830	9830	4840	2420	3630	1220	290	14	15	.12	.00
MIN	.60	5.8	9.0	87	31	286	30	16	1.3	.10	.00	.00
AC-FT	5390	3190	93030	50940	16910	46710	12180	9900	424	148	.6	.00

CAL YR 1984	TOTAL	83025.29	MEAN 227	MAX 9830	MIN .07	AC-FT 164700			
WTR YR 1985	TOTAL	120402.97	MEAN 330	MAX 9830	MIN .00	AC-FT 238800			

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1983 to current year.
WATER TEMPERATURES: October 1983 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, 959 microsiemens Jan. 24, 1984; minimum daily, 187 microsiemens Dec. 18, 1984.
WATER TEMPERATURES: Minium daily, 3.0°C Jan. 1, 13, 20, 22, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 954 microsiemens July 20; minimum daily, 187 microsiemens Dec. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 16...	1400	21	294	7.8	22.5	550	200	6.5	76	2.0	100
JAN 09...	1300	840	386	7.9	9.0	80	60	12.1	106	1.0	160
FEB 12...	1730	246	444	8.0	5.5	10	24	--	--	1.5	150
MAY 15...	1900	245	399	7.8	24.0	10	33	8.4	101	1.6	150
JUN 27...	1630	3.4	780	7.8	28.5	7	9.6	6.7	87	1.9	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)
OCT 16...	20	38	2.3	21	.9	4.8	85	39	18	.30	7.6
JAN 09...	28	59	2.5	18	.7	3.4	130	50	12	.30	7.3
FEB 12...	19	56	3.0	22	.8	3.2	134	49	16	.30	5.1
MAY 15...	21	57	2.8	21	.8	3.4	133	41	15	.30	2.0
JUN 27...	60	73	5.3	80	3	3.6	144	130	86	.50	3.9

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)
OCT 16...	180	268	18	--	<.010	.20	.030	1.3	1.3	.220	8.5
JAN 09...	230	110	26	.97	.030	1.0	.090	.71	.80	.070	--
FEB 12...	240	32	14	1.1	.030	1.1	.070	.43	.50	.030	--
MAY 15...	220	62	14	.88	.020	.90	.050	1.7	1.7	.070	--
JUN 27...	470	21	1	--	<.010	<.10	.040	.36	.40	.050	--

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	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 16...	1400	3	52	1	<10	<1	24
FEB 12...	1730	3	68	2	10	21	46
MAY 15...	1900	2	70	<1	<10	4	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)
OCT 16...	6	3	<.1	<1	<1	6
FEB 12...	5	5	<.1	<1	<1	40
MAY 15...	1	<1	<.1	<1	<1	14

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	2717.07	357	212	1550	8.3	61	70	511	140
NOV.	1984	1605.9	342	202	878	7.3	32	67	291	140
DEC.	1984	46901.0	264	157	19900	2.6	333	54	6840	110
JAN.	1985	25684	372	220	15300	9.6	665	72	4990	150
FEB.	1985	8525	445	262	6040	17	393	82	1880	160
MAR.	1985	23548	409	242	15400	13	820	77	4920	160
APR.	1985	6141	446	263	4370	17	287	82	1360	160
MAY	1985	4992	443	261	3520	17	225	82	1100	160
JUNE	1985	214.0	682	399	230	52	30	110	62	200
JULY	1985	74.72	857	498	100	89	18	120	24	210
AUG.	1985	0.28	933	540	0.4	110	0.08	120	0.09	200
SEPT	1985	0.00	*	*	0.00	*	0.00	*	0.00	*
TOTAL		120402.97	**	**	67200	**	2860	**	22000	**
WTD.AVG.		330	349	207	**	8.8	**	68	**	140

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

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

EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	475	378	408	298	408	466	444	551	560	817	925	
2	471	360	442	360	422	471	440	596	583	825	932	
3	469	375	456	378	417	475	437	533	598	831	939	
4	463	391	485	369	432	482	435	397	612	847	945	
5	450	409	468	371	446	488	429	400	633	863	952	
6	447	475	427	375	440	431	425	405	625	859	---	
7	398	431	435	376	450	482	419	412	618	869	---	
8	412	433	519	378	498	474	571	404	621	882	---	
9	435	435	526	379	595	462	590	372	640	902	---	
10	451	432	530	380	607	461	596	376	663	912	---	
11	444	433	533	375	590	466	597	382	686	900	---	
12	430	436	531	379	436	462	586	389	710	891	---	
13	435	439	450	377	500	481	594	395	723	875	---	
14	297	438	308	378	594	430	594	409	735	887	---	
15	317	436	233	380	601	334	595	398	748	896	---	
16	294	435	216	379	600	384	594	402	755	911	---	
17	365	437	346	355	585	430	591	456	760	922	---	
18	470	438	187	395	564	475	616	519	750	930	---	
19	545	439	195	398	574	480	620	580	747	945	---	
20	665	458	225	443	592	368	622	582	781	954	---	
21	617	508	258	497	590	337	624	606	786	940	---	
22	600	474	297	539	605	427	626	593	789	865	---	
23	520	486	312	536	537	438	509	521	791	854	---	
24	430	527	326	580	342	442	525	513	780	840	---	
25	300	493	337	576	484	446	541	525	778	845	---	
26	360	470	351	568	497	439	555	537	775	859	---	
27	415	292	340	570	518	375	580	541	780	868	---	
28	337	314	355	574	461	408	550	545	792	881	---	
29	333	349	375	579	---	440	335	547	803	897	---	
30	369	375	347	585	---	443	451	550	810	912	---	
31	370	---	293	501	---	445	---	559	---	921	---	
MEAN	432	427	371	440	514	440	536	484	714	884	939	

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

ONCE-DAILY

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

08064700 TEHUACANA CREEK NEAR STREETMAN, TX

LOCATION.--Lat 31°50'54", long 96°17'23", Freestone County, Hydrologic Unit 12030201, at 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 2-27, Dec. 27-29, Jan. 12-14, Jan. 23 to Feb. 2, Feb. 17-22, Apr. 2 to May 30, and Aug. 25 to Sept. 18. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 65.8 ft^3/s (6.47 in/yr), 47,670 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.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 19	0830	2,550	20.28	Feb. 23	2130	*6,060	*23.37

Minimum daily discharge, no flow many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	1.5	.00	180	1.1	22	9.1	3.0	.46	.04	.01	.00
2	.02	3.0	.00	31	1.0	31	5.2	3.2	.40	.04	.01	.00
3	.02	13	.00	18	5.2	20	3.6	3.3	.38	.04	.01	.00
4	.02	5.0	.00	12	5.2	16	3.1	3.2	.36	.04	.00	.00
5	.03	2.6	279	7.5	34	15	3.2	3.2	.34	.04	.00	.00
6	.03	.60	178	5.5	166	12	3.1	2.6	.76	.04	.00	.00
7	.08	.20	9.1	4.2	61	9.6	2.8	2.3	1.7	.04	.00	.00
8	31	.08	.42	4.0	24	8.1	2.2	2.2	5.3	.03	.00	.00
9	6.2	.02	.02	4.9	12	7.2	3.0	2.1	1.7	.03	.00	.00
10	1.9	.00	.00	4.6	8.2	6.8	10	4.0	.70	.03	.00	.00
11	2.5	.00	.00	4.2	9.0	6.1	50	20	.49	.05	.00	.00
12	4.5	.00	.00	4.0	14	5.8	140	43	.34	.07	.00	.00
13	11	.00	248	3.4	7.9	5.4	60	5.2	.23	.06	.00	.00
14	2.7	.00	351	3.0	5.1	39	13	105	.15	.05	.00	.00
15	.56	.00	49	4.0	3.4	83	8.2	20	.16	.04	.00	.00
16	.05	.00	743	57	2.7	27	5.7	2.2	.36	.04	.00	.00
17	.33	.05	221	285	2.1	14	4.3	46	.32	.04	.00	.00
18	2.8	.60	581	55	1.7	9.0	3.9	20	.54	.04	.00	.00
19	1040	5.0	222	22	1.4	6.9	4.1	10	.41	.04	.00	.01
20	51	.00	58	12	1.3	387	3.7	4.3	.26	.04	.00	.01
21	13	.00	27	7.2	1.1	229	3.5	2.8	.16	.23	.00	.01
22	4.8	.00	14	5.5	.90	45	3.4	1.9	.11	35	.00	.01
23	1.8	.00	8.7	4.2	2890	21	3.3	1.0	.31	1.7	.00	.01
24	1.5	1.0	6.1	3.6	2280	12	3.2	.70	.18	1.5	.00	.00
25	75	12	4.7	3.0	185	8.4	3.0	.50	.11	.33	.00	.00
26	30	60	4.1	2.6	50	6.3	2.8	.42	.09	.12	.00	.00
27	3.6	190	3.4	2.2	27	14	3.3	.38	.07	.05	.00	.01
28	6.9	30	3.0	1.8	20	29	3.7	.33	.05	.03	.00	.00
29	6.1	1.3	2.3	1.6	---	13	4.0	.29	.05	.02	.00	.43
30	.43	.06	4.0	1.4	---	9.7	3.7	.36	.05	.02	.00	6.8
31	.09	---	47	1.2	---	12	---	.72	---	.01	.00	---
TOTAL	1297.98	326.01	3063.84	755.6	5820.30	1130.3	372.1	314.20	16.54	39.85	.03	7.29
MEAN	41.9	10.9	98.8	24.4	208	36.5	12.4	10.1	.55	1.29	.001	.24
MAX	1040	190	743	285	2890	387	140	105	5.3	35	.01	6.8
MIN	.02	.00	.00	1.2	.90	5.4	2.2	.29	.05	.01	.00	.00
CFSM	.30	.08	.70	.17	1.47	.26	.09	.07	.004	.009	.000	.002
IN.	.34	.09	.80	.20	1.52	.30	.10	.08	.00	.01	.00	.00
AC-FT	2570	647	6080	1500	11540	2240	738	623	33	79	.06	14

CAL YR 1984 TOTAL 12650.04 MEAN 34.6 MAX 3180 MIN .00 CFSM .24 IN 3.31 AC-FT 25090
WTR YR 1985 TOTAL 13144.04 MEAN 36.0 MAX 2890 MIN .00 CFSM .25 IN 3.44 AC-FT 26070

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1968 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	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 18...	1200	.65	229	6.8	14.0	63	20	17	5.0
NOV 27...	1700	273	588	7.1	--	150	55	38	13
MAY 16...	1400	2.2	967	--	28.0	200	97	50	19

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 18...	19	1	5.9	43	29	27	.10	9.8	140
NOV 27...	59	2	5.6	94	88	70	.30	6.8	340
MAY 16...	110	3	6.3	106	98	170	.30	4.6	520

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 mi².

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 234.93 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those during October and November, which are poor. There is some regulation upstream by Coon Creek Lake. No known diversions above station. There were several observations of water temperature made during the year.

AVERAGE DISCHARGE.--23 years, 97.0 ft³/s (70,280 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,550 ft³/s May 11, 1968 (gage height, 15.90 ft); minimum daily, 0.8 ft³/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.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 25	0900	*1,510	*11.28	No other peak greater than base discharge.			

Minimum daily discharge, 1.2 ft³/s Oct. 5, 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	37	114	78	86	318	158	129	28	10	9.0	2.8
2	1.4	60	100	89	87	257	158	141	25	8.7	7.4	2.8
3	1.4	56	77	106	86	241	149	144	23	8.6	6.5	2.8
4	1.3	66	66	116	89	222	129	125	22	11	5.7	2.8
5	1.2	64	67	115	96	197	107	92	20	11	5.2	2.8
6	1.2	55	70	101	103	179	91	71	20	12	4.8	2.8
7	2.0	40	75	89	110	165	80	61	23	18	4.6	3.6
8	2.1	30	81	80	115	146	69	52	28	18	4.6	3.7
9	2.0	23	77	74	116	138	62	44	28	14	4.3	3.7
10	1.7	19	68	78	110	132	55	40	26	12	4.1	3.5
11	1.5	17	64	80	113	123	49	37	23	11	3.9	3.9
12	2.2	17	61	88	112	114	47	33	20	12	3.8	4.2
13	3.4	14	64	92	119	108	46	30	21	14	4.2	3.8
14	3.8	11	72	88	119	117	46	40	17	13	3.7	3.8
15	3.3	10	86	80	105	132	46	48	16	12	3.6	3.8
16	3.2	9.7	114	85	95	161	45	52	14	10	3.5	3.9
17	2.5	9.8	135	102	87	178	43	51	12	9.4	3.5	3.9
18	1.8	16	158	111	79	174	40	41	11	9.0	3.2	3.8
19	3.6	22	179	136	75	152	36	35	15	9.1	3.0	3.5
20	6.4	33	195	148	72	170	34	30	16	9.5	3.0	3.1
21	12	44	217	133	70	219	31	33	17	11	3.0	3.1
22	16	43	195	116	70	362	30	43	16	14	3.2	3.1
23	19	37	159	94	351	381	29	59	14	24	2.9	3.1
24	20	34	129	83	701	305	29	66	15	49	2.9	3.1
25	32	33	110	87	1410	232	28	66	20	62	3.0	3.6
26	42	36	98	95	918	183	28	61	20	52	3.0	3.4
27	44	64	91	95	535	162	27	51	15	36	3.2	3.1
28	46	76	84	87	388	150	57	41	12	24	3.2	3.0
29	41	93	78	83	---	151	89	33	12	18	3.2	4.9
30	39	108	74	85	---	164	104	30	12	14	3.1	11
31	38	---	74	85	---	165	---	30	---	11	3.1	---
TOTAL	396.4	1177.5	3232	2979	6417	5898	1942	1809	561	547.3	125.4	110.4
MEAN	12.8	39.3	104	96.1	229	190	64.7	58.4	18.7	17.7	4.05	3.68
MAX	46	108	217	148	1410	381	158	144	28	62	9.0	11
MIN	1.2	9.7	61	74	70	108	27	30	11	8.6	2.9	2.8
AC-FT	786	2340	6410	5910	12730	11700	3850	3590	1110	1090	249	219

CAL YR 1984 TOTAL 21482.3 MEAN 58.7 MAX 563 MIN 1.2 AC-FT 42610
WTR YR 1985 TOTAL 25195.0 MEAN 69.0 MAX 1410 MIN 1.2 AC-FT 49970

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 mi².

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 above National Geodetic Vertical Datum of 1929. Prior to July 1932, nonrecording gage at site 1.5 mi downstream at datum 1.06 ft lower. July 15, 15, 1932, to Oct. 7, 1934, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 14-19, 21-25, Oct. 28 to Nov. 6, Nov. 21 to Dec. 10, Jan. 16-23, Jan. 28 to Feb. 8, May 10-12, and May 25 to June 6. 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. Streamflow 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 mi² 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. A gage-height telemeter is located at station.

AVERAGE DISCHARGE.--30 years (water years 1924-53) unregulated, 5,045 ft³/s (3,655,000 acre-ft/yr); 32 years (water years 1954-85) regulated, 4,427 ft³/s (3,207,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft³/s Apr. 29, 1942 (gage height, 51.64 ft); minimum observed, 28 ft³/s Aug. 24, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1890 reached a stage of 53 ft (discharge about 180,000 ft³/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 ft³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,900 ft³/s Dec. 26 from 1400 to 2000 hours (gage height, 36.06 ft); minimum daily, 575 ft³/s Sept. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	657	8500	3500	6300	2500	18400	12000	13500	6700	903	816	578
2	677	7500	2500	9260	2450	16700	12000	14100	6000	876	789	589
3	626	5500	2000	11100	2400	11600	10000	14600	5800	856	753	604
4	626	4000	1800	12300	2400	7360	7340	15100	5800	884	739	594
5	601	5500	2000	13100	2450	5380	6310	15700	5800	885	764	575
6	633	6000	2100	13300	2500	5040	5780	16300	5770	1260	756	576
7	765	3190	2000	10900	2600	4760	5580	16600	5810	2260	722	597
8	787	2200	2500	7420	3170	4640	5450	16000	6100	1650	692	607
9	820	1820	3000	5820	2950	4540	5320	11400	7080	1070	695	610
10	1260	1560	2500	5070	2550	4100	5090	6700	7990	863	698	631
11	1430	1430	2000	5040	2720	3600	4910	4200	8170	815	689	638
12	1650	1360	1680	5000	2430	3270	4810	4500	7040	833	780	630
13	2140	1260	1500	4850	2160	3120	4620	5540	5660	805	1070	649
14	1850	1170	1630	4690	2110	3160	4470	6320	5280	781	967	655
15	1890	1120	3400	4560	2210	4170	4640	7300	5480	793	836	654
16	3190	1100	6000	4680	1930	7360	5590	8390	5340	774	802	656
17	3880	1090	9000	5090	1600	9700	6440	8910	4970	741	780	1030
18	2840	1090	12000	5530	1480	10400	6240	8960	4440	735	707	2590
19	1830	1120	13500	5770	1410	9480	5400	8560	3980	765	641	2310
20	1760	1300	14200	5370	1360	7030	4840	7660	3930	767	619	1440
21	2610	3100	15000	4820	1340	6660	4730	6320	4190	765	597	1010
22	5000	3500	15600	4490	1320	10000	4480	5720	4400	806	594	854
23	6000	3000	16500	4050	3240	12000	4020	6780	4210	1130	595	774
24	7500	2400	17400	3640	10800	14000	4130	8660	3710	1540	610	729
25	9020	2000	18200	3160	14000	14000	6360	9700	2970	2220	620	697
26	8300	1800	18800	2770	16200	13000	8840	11000	2010	1840	592	677
27	8210	2500	17700	2600	17500	11000	10400	11500	1500	2010	601	675
28	11000	3000	12500	2500	18200	9000	11400	11500	1240	2000	606	677
29	16000	2700	7340	2450	---	9000	12300	10500	1040	1310	590	689
30	13000	3500	5550	2400	---	10000	12800	9000	949	977	583	750
31	10000	---	5130	2400	---	11500	---	7700	---	854	580	---
TOTAL	126552	85310	238530	180430	127980	263970	206290	308720	143359	34768	21883	24745
MEAN	4082	2844	7695	5820	4571	8515	6876	9959	4779	1122	706	825
MAX	16000	8500	18800	13300	18200	18400	12800	16600	8170	2260	1070	2590
MIN	601	1090	1500	2400	1320	3120	4020	4200	949	735	580	575
AC-FT	251000	169200	473100	357900	253800	523600	409200	612300	284400	68960	43400	49080

CAL YR 1984 TOTAL 992924 MEAN 2713 MAX 18800 MIN 536 AC-FT 1969000
WTR YR 1985 TOTAL 1762537 MEAN 4829 MAX 18800 MIN 575 AC-FT 3496000

08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX

LOCATION.--Lat 31°34'11", long 95°53'17", Leon County, Hydrologic Unit 12030201, on 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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Aug. 20 to Sept. 9. Records fair. No known diversions or regulation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1963-85), 74.2 ft³/s (6.72 in/yr), 53,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s May 16, 1965 (gage height, 14.91 ft), and Apr. 25, 1966, from rating curve extended above 5,800 ft³/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.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 23	2400	*9,990	*14.97	No other peak greater than base discharge.			

Minimum discharge, no flow Aug. 26 to Sept. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	40	31	82	31	157	43	44	3.5	.37	.05	.00
2	.72	125	23	223	31	170	36	28	2.9	.39	.03	.00
3	.83	220	19	310	36	129	31	20	2.5	.47	.03	.00
4	1.0	256	17	96	44	86	27	15	2.3	.44	.02	.00
5	1.1	63	29	55	84	77	25	13	2.1	.35	.02	.00
6	1.5	33	118	42	130	54	21	11	2.1	.28	.01	.00
7	7.6	24	238	35	150	44	19	10	2.3	.22	.01	.00
8	88	20	125	31	86	40	18	10	2.4	.20	.01	.00
9	180	18	40	29	53	39	16	30	2.4	.17	.01	.00
10	53	16	31	35	68	36	16	46	2.3	.15	.01	.03
11	14	14	26	44	274	34	15	22	2.1	.93	.01	.15
12	20	13	24	39	267	32	15	14	1.9	1.2	.01	.11
13	57	12	35	30	231	30	15	16	1.6	.59	.01	.08
14	63	11	104	30	75	33	17	111	1.4	.47	.03	.25
15	21	11	131	30	51	46	17	118	1.3	.54	.06	.22
16	12	11	188	82	43	47	15	40	1.1	.57	.06	.17
17	7.8	12	251	227	38	36	14	19	.94	.43	.06	.13
18	5.4	13	458	717	35	30	12	14	.81	.33	.06	.09
19	25	21	382	473	33	26	11	12	.85	.33	.05	.08
20	95	21	237	107	33	247	10	9.9	.87	.49	.04	.06
21	194	19	136	48	31	348	11	27	1.2	1.4	.07	.05
22	322	16	68	37	31	416	16	28	1.5	2.8	.03	.05
23	366	14	48	34	1130	246	14	20	1.3	12	.02	.06
24	216	13	39	34	3490	72	12	15	1.1	6.3	.02	.07
25	388	18	33	33	795	52	10	10	1.0	2.9	.01	.07
26	718	26	30	31	393	44	8.6	8.1	.95	1.4	.00	.10
27	1000	38	28	30	137	43	8.4	6.7	.80	.61	.00	.10
28	531	145	29	39	83	45	115	6.0	.68	.20	.00	.09
29	259	247	29	49	---	43	260	5.5	.55	.11	.00	1.1
30	266	79	28	40	---	43	113	5.2	.43	.08	.00	1.5
31	111	---	38	35	---	56	---	4.2	---	.07	.00	---
TOTAL	5025.62	1569	3013	3127	7883	2801	961.0	738.6	47.18	36.79	.74	4.56
MEAN	162	52.3	97.2	101	282	90.4	32.0	23.8	1.57	1.19	.024	.15
MAX	1000	256	458	717	3490	416	260	118	3.5	12	.07	1.5
MIN	.67	11	17	29	31	26	8.4	4.2	.43	.07	.00	.00
CFSM	1.08	.35	.65	.67	1.88	.60	.21	.16	.01	.008	.000	.001
IN.	1.25	.39	.75	.78	1.95	.69	.24	.18	.01	.01	.00	.00
AC-FT	9970	3110	5980	6200	15640	5560	1910	1470	94	73	1.5	9.0

CAL YR 1984 TOTAL 17563.05 MEAN 48.0 MAX 1000 MIN .03 CFSM .32 IN 4.36 AC-FT 34840
WTR YR 1985 TOTAL 25207.49 MEAN 69.1 MAX 3490 MIN .00 CFSM .46 IN 6.25 AC-FT 50000

08065350 TRINITY RIVER NEAR CROCKETT, TX
(National stream-quality accounting network)

LOCATION.--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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 141.15 ft above 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.--Estimated daily discharges: Oct. 1, May 12-23, and June 24. Records fair. For statement regarding regulation by upstream reservoirs, see station 08065000. Flow from 44 mi² in the Elkhart Creek basin is affected by storage in Houston County Lake near Crockett (capacity 19,500 acre-ft). There are many diversions above station for irrigation, municipal, and industrial uses. Gage-height telemeter at station.

AVERAGE DISCHARGE.--21 years (water years 1965-85), 5,587 ft³/s (4,048,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,000 ft³/s May 15, 1969 (gage height, 52.24 ft); at former site and datum; minimum, 275 ft³/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, 23,400 ft³/s Mar. 2 at 0100 hours (gage height, 27.67 ft); minimum daily, 718 ft³/s Aug. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	830	9890	4010	6390	3110	23100	13800	16000	7440	1120	1020	732
2	818	9130	3040	8940	2990	23200	13500	16400	6680	1010	967	731
3	834	7030	2500	12300	2940	21000	12500	16800	6260	939	935	730
4	755	5310	2230	14700	2890	15300	10600	17300	6140	906	896	759
5	754	6200	2430	15800	2930	9340	8250	17700	6080	949	870	757
6	723	6460	2720	16400	3010	6530	6790	18200	5980	973	883	727
7	941	4820	2650	16000	3200	5890	6250	18600	5990	1820	889	723
8	1050	3150	3320	12600	3660	5310	6000	18900	6070	2410	858	742
9	1020	2570	3950	8310	3750	5100	5800	18000	6770	1800	818	759
10	1260	2330	3680	6300	3640	4830	5540	12700	8110	1260	817	792
11	1810	2130	3130	5670	5660	4300	5260	6690	9130	1140	817	891
12	4280	2010	2760	5520	4970	3920	5120	4700	8890	1310	817	858
13	3030	1930	2730	5300	3600	3700	4960	4500	7100	1120	989	817
14	2730	1830	3250	5140	3350	3590	4730	6000	5610	1020	1310	823
15	2510	1730	3330	4940	3410	3870	4590	7540	5410	977	1190	828
16	2760	1720	6510	5480	3260	6170	5070	9000	5560	974	1040	828
17	3490	1690	11500	8980	2830	10400	6390	9400	5310	978	1010	828
18	3630	1700	13800	8580	2580	12800	7120	9400	4860	961	965	1710
19	3320	1850	15300	7880	2470	13100	6420	9000	4310	916	888	2970
20	3060	1800	16600	7810	2390	12100	5380	8400	3770	1100	812	2610
21	6670	2160	17600	7250	2350	11300	4970	7400	4010	1500	780	1710
22	10800	3540	18200	6100	2320	11700	4870	6790	4190	1330	748	1200
23	10200	3570	18700	4990	3450	14800	4630	6420	4310	1260	718	970
24	13700	2800	19200	4320	10800	16400	4510	8380	4100	1570	730	877
25	16200	2280	19800	3900	19300	17000	5450	10600	3610	2060	771	813
26	17200	2170	20500	3540	22300	16600	8240	12000	2990	2460	778	778
27	14300	3140	21000	3310	21800	14600	10900	12800	2360	2170	743	735
28	17100	3350	20000	3260	22000	10600	12700	13000	1950	2420	740	728
29	20300	3320	14500	3190	---	10600	14500	12300	1650	2210	761	786
30	16800	4240	8080	3150	---	12400	15400	10300	1310	1530	758	825
31	13600	---	6060	3230	---	13500	---	8520	---	1170	747	---
TOTAL	196475	105850	293080	229280	170960	343050	230240	353740	155950	43363	27065	30037
MEAN	6338	3528	9454	7396	6106	11070	7675	11410	5198	1399	873	1001
MAX	20300	9890	21000	16400	22300	23200	15400	18900	9130	2460	1310	2970
MIN	723	1690	2230	3150	2320	3590	4510	4500	1310	906	718	723
AC-FT	389700	210000	581300	454800	339100	680400	456700	701600	309300	86010	53680	59580

CAL YR 1984 TOTAL 1280476 MEAN 3499 MAX 21000 MIN 700 AC-FT 2540000
WTR YR 1985 TOTAL 2179090 MEAN 5970 MAX 23200 MIN 718 AC-FT 4322000

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 microsiemens Sept. 22, 1964; minimum, 105 microsiemens July 28, 1979.
pH: Maximum, 9.6 units Aug. 11, 12, 1981; minimum, 5.9 units Aug. 12, 1977.
WATER TEMPERATURES (1975-85): Maximum, 37.0°C July 4, 1970, Sept. 4, 1978; minimum, 1.0°C Jan. 17, 1978, Nov. 24, 1984.
DISSOLVED OXYGEN: Maximum, 19.3 mg/L Feb. 10, 1981; minimum, 0.0 mg/L Apr. 20, 1976, and Nov. 24, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 832 microsiemens Sept. 7; minimum, 182 microsiemens Feb. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
JAN 22...	1350	6040	436	7.5	8.2	80	85	10.0	84	5.1	150
MAR 07...	1435	5810	500	7.6	18.7	250	150	6.0	64	3.0	170
MAY 08...	1245	18900	398	7.4	23.5	90	62	6.8	81	2.6	140
JUN 07...	1250	6030	411	7.9	27.0	10	130	7.3	92	1.5	140
JUL 26...	0720	2480	701	7.6	30.5	40	120	4.9	66	1.7	180
AUG 28...	1240	732	693	8.1	31.0	25	27	7.2	97	1.7	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)
JAN 22...	37	51	4.8	31	1	4.9	110	61	29	.40	9.8
MAR 07...	44	59	5.4	38	1	5.3	126	74	38	.40	6.1
MAY 08...	22	50	4.1	23	.9	6.1	120	48	18	.40	7.5
JUN 07...	31	50	4.3	29	1	5.3	112	50	26	.40	4.6
JUL 26...	55	64	6.0	78	3	11	130	79	76	.70	13
AUG 28...	18	53	5.8	80	3	9.5	138	75	79	1.0	8.5

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

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)
JAN 22...	260	253	49	1.3	.110	1.4	.610	1.5	2.1	.700	8.9
MAR 07...	300	249	18	2.3	.270	2.6	.200	1.7	1.9	.790	11
MAY 08...	230	102	14	.83	.070	.90	.170	1.2	1.4	.700	10
JUN 07...	240	242	18	--	<.010	1.7	.050	.85	.90	.560	5.9
JUL 26...	410	223	25	4.8	.320	5.1	.040	1.3	1.3	--	11
AUG 28...	390	41	8	3.7	.030	3.7	.050	.95	1.0	2.00	9.8

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 22...	1350	2	60	<1	<10	3	84
JUL 26...	0720	6	90	<1	<10	11	1400

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 22...	1	19	<.1	<1	<1	19
JUL 26...	5	120	<.1	<1	<1	16

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	196475	314	178	94400	24	12700	37	19400	100
NOV.	1984	105850	457	258	73800	38	10900	54	15600	130
DEC.	1984	293080	345	196	155000	26	20700	40	31800	110
JAN.	1985	229280	381	216	134000	29	18200	45	27600	120
FEB.	1985	170960	384	217	100000	31	14300	45	21000	120
MAR.	1985	343050	361	205	190000	28	25600	42	39100	120
APR.	1985	230240	455	257	160000	37	23200	54	33600	140
MAY	1985	353740	372	211	201000	29	27300	44	41600	120
JUNE	1985	155950	445	251	106000	36	15200	53	22200	130
JULY	1985	43363	584	328	38400	53	6240	71	8320	150
AUG.	1985	27065	688	385	28100	68	4940	85	6240	160
SEPT	1985	30037	689	385	31200	68	5520	86	6940	160
TOTAL		2179090	**	**	1312000	**	185000	**	273000	**
WTD.AVG.		5970	394	223	**	31	**	46	**	120

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	812	765	772	---	---	351	572	512	543	---	---	427
2	777	754	762	---	---	374	503	476	482	---	---	374
3	789	771	784	---	---	383	473	426	446	---	---	409
4	792	775	783	407	380	394	453	431	446	---	---	349
5	773	757	767	485	380	403	446	361	397	---	---	273
6	784	749	760	515	402	463	363	322	341	---	---	299
7	786	764	774	431	398	412	479	334	414	---	---	327
8	762	677	727	431	422	427	546	485	513	---	---	285
9	794	691	747	444	421	427	535	482	505	---	---	341
10	743	661	705	464	438	452	579	544	571	---	---	364
11	677	623	650	500	467	482	549	534	538	---	---	390
12	637	288	393	507	495	501	535	514	524	---	---	405
13	583	413	479	551	509	526	518	452	497	---	---	420
14	683	595	650	562	553	557	463	314	386	---	---	437
15	660	537	569	622	573	593	486	318	390	---	---	450
16	633	517	556	629	621	625	522	472	505	---	---	411
17	625	514	537	629	617	622	516	406	454	---	---	374
18	583	524	556	635	615	630	413	385	400	---	---	431
19	529	345	352	611	557	589	381	345	360	---	---	419
20	410	234	342	628	611	619	353	341	348	390	376	385
21	285	230	255	648	624	637	---	---	310	452	391	427
22	287	221	240	685	639	654	---	---	266	453	416	431
23	341	251	298	708	620	686	---	---	191	459	429	444
24	348	278	319	601	474	510	---	---	211	472	441	463
25	---	---	275	490	478	484	---	---	220	473	435	466
26	---	---	240	483	421	472	---	---	352	463	435	450
27	---	---	225	414	278	327	---	---	361	477	460	471
28	---	---	197	330	257	282	---	---	372	484	470	476
29	---	---	211	498	339	443	---	---	301	485	470	476
30	---	---	244	532	480	507	---	---	347	523	482	501
31	---	---	326	---	---	---	---	---	418	535	523	527
MONTH	812	221	500	708	257	494	579	314	400	535	376	410

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	556	532	543	---	---	201	---	---	362	---	---	366
2	572	557	565	---	---	225	---	---	340	---	---	324
3	560	537	551	---	---	247	---	---	383	---	---	296
4	555	532	547	---	---	345	---	---	419	---	---	249
5	546	484	512	---	---	404	---	---	454	---	---	222
6	549	493	519	501	409	453	---	---	469	---	---	298
7	567	550	563	543	498	520	---	---	484	---	---	373
8	589	559	573	524	418	440	---	---	495	445	443	444
9	604	560	589	536	448	509	---	---	509	468	441	448
10	583	403	549	537	483	514	---	---	522	492	442	464
11	400	311	347	493	481	487	---	---	530	509	479	487
12	421	315	354	485	476	480	---	---	535	532	498	521
13	493	430	473	518	485	501	---	---	539	516	493	502
14	504	493	500	529	520	527	---	---	552	493	463	480
15	529	500	511	533	524	535	---	---	546	---	---	448
16	590	531	563	539	512	533	498	497	504	---	---	425
17	---	---	525	530	389	436	556	490	512	---	---	391
18	---	---	562	417	380	406	---	---	425	---	---	402
19	---	---	584	431	389	419	---	---	436	---	---	414
20	---	---	599	392	348	377	---	---	475	---	---	405
21	---	---	614	374	326	351	---	---	494	---	---	416
22	---	---	634	442	371	414	---	---	513	---	---	418
23	---	---	649	402	318	345	---	---	536	---	---	420
24	443	276	382	380	347	363	---	---	550	---	---	376
25	300	245	278	---	---	301	---	---	574	---	---	399
26	312	240	266	---	---	280	---	---	464	---	---	297
27	328	305	315	---	---	349	---	---	501	---	---	316
28	---	---	182	---	---	404	---	---	440	---	---	399
29	---	---	---	---	---	414	---	---	399	---	---	364
30	---	---	---	477	345	375	---	---	382	---	---	330
31	---	---	---	424	395	408	---	---	---	---	---	375
MONTH	604	240	495	543	318	405	556	490	478	532	441	389

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	439	513	490	501	582	552	561	778	760	769
2	---	---	458	537	516	524	669	584	619	775	738	752
3	---	---	474	568	541	560	697	593	661	760	741	748
4	---	---	491	579	543	557	586	516	537	780	741	765
5	---	---	475	607	577	589	547	520	528	787	755	768
6	---	---	503	---	---	615	589	546	568	779	747	762
7	---	---	520	---	---	549	638	592	611	832	771	784
8	---	---	493	---	---	489	670	639	648	801	766	780
9	---	---	530	---	---	517	709	675	693	792	759	776
10	---	---	436	---	---	470	726	704	713	773	743	750
11	---	---	374	---	---	548	738	721	728	760	718	730
12	---	---	400	---	---	520	748	729	736	735	706	720
13	---	---	385	---	---	569	749	735	744	774	727	748
14	---	---	408	---	---	593	759	741	748	814	766	777
15	---	---	422	---	---	610	766	750	755	822	760	783
16	---	---	427	---	---	625	769	746	756	761	727	739
17	---	---	403	559	520	536	749	733	740	735	723	728
18	---	---	420	596	556	573	768	745	753	759	726	740
19	---	---	430	660	598	622	767	756	762	779	465	734
20	439	423	435	671	624	659	782	766	774	757	476	708
21	453	436	445	622	340	459	770	680	740	744	603	692
22	447	430	441	621	346	485	675	632	643	604	505	560
23	434	410	424	710	634	680	651	628	636	503	484	491
24	462	436	447	710	600	654	695	660	678	540	491	500
25	465	420	443	706	671	695	704	684	692	503	487	492
26	449	436	442	738	687	709	709	678	685	522	506	514
27	452	445	448	784	716	746	694	679	687	532	514	519
28	465	450	455	722	590	659	706	692	699	573	535	552
29	496	466	476	620	494	566	725	694	710	610	576	589
30	491	485	487	518	451	474	757	726	743	616	605	611
31	---	---	---	548	524	539	773	757	764	---	---	---
MONTH	496	410	448	784	340	577	782	516	687	832	465	686

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.5	7.6	---	---	---	7.3	7.2	7.2	---	---	---
2	7.6	7.5	7.5	---	---	---	7.2	7.2	7.2	---	---	---
3	7.7	7.5	7.6	---	---	---	7.2	7.2	7.2	---	---	---
4	7.5	7.5	7.5	7.3	7.2	7.2	7.4	7.1	7.2	---	---	---
5	7.5	7.5	7.5	7.3	7.3	7.3	7.3	7.1	7.2	---	---	---
6	7.6	7.5	7.5	7.3	7.2	7.3	7.2	7.1	7.1	---	---	---
7	7.5	7.5	7.5	7.3	7.3	7.3	7.4	7.1	7.2	---	---	---
8	7.5	7.4	7.5	7.3	7.3	7.3	7.4	7.0	7.4	---	---	---
9	7.4	7.3	7.4	7.4	7.3	7.3	7.5	7.0	7.4	---	---	---
10	7.4	7.3	7.3	7.4	7.3	7.4	7.5	7.5	7.5	---	---	---
11	7.4	7.3	7.3	7.4	7.4	7.4	7.5	7.5	7.5	---	---	---
12	7.4	7.1	7.2	7.4	7.4	7.4	7.5	7.4	7.4	---	---	---
13	7.2	7.1	7.2	7.5	7.4	7.4	7.4	7.3	7.4	---	---	---
14	7.2	7.2	7.2	7.5	7.4	7.5	7.3	7.1	7.2	---	---	---
15	7.3	7.3	7.3	7.7	7.6	7.7	7.4	7.1	7.2	---	---	---
16	7.4	7.3	7.3	7.6	7.6	7.6	7.4	7.2	7.3	---	---	---
17	7.4	7.3	7.4	7.6	7.5	7.5	7.3	7.2	7.3	---	---	---
18	7.4	7.2	7.3	7.6	7.5	7.5	7.4	7.3	7.3	---	---	---
19	7.4	7.2	7.4	7.5	7.4	7.5	7.4	7.4	7.4	---	---	---
20	7.4	7.2	7.3	7.5	7.5	7.5	7.5	7.4	7.4	7.6	7.6	7.6
21	7.3	7.1	7.2	7.6	7.5	7.5	---	---	---	7.6	7.5	7.6
22	7.3	7.2	7.2	7.6	7.3	7.5	---	---	---	7.6	7.5	7.5
23	7.2	7.1	7.2	7.3	7.1	7.2	---	---	---	7.5	7.5	7.5
24	7.2	7.0	7.1	7.3	7.1	7.3	---	---	---	7.6	7.5	7.6
25	---	---	---	7.4	7.2	7.3	---	---	---	7.6	7.5	7.6
26	---	---	---	7.4	7.3	7.4	---	---	---	7.7	7.6	7.6
27	---	---	---	7.4	7.0	7.1	---	---	---	7.6	7.6	7.6
28	---	---	---	---	---	---	---	---	---	7.6	7.6	7.6
29	---	---	---	7.2	7.0	7.1	---	---	---	7.7	7.6	7.6
30	---	---	---	7.3	7.1	7.2	---	---	---	7.7	7.6	7.6
31	---	---	---	---	---	---	---	---	---	7.7	7.6	7.7
MONTH	7.7	7.0	7.4	7.7	7.0	7.4	7.5	7.0	7.3	7.7	7.5	7.6

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--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	---	---	---	---	---	---	---	---	---
2	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
3	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
4	7.7	7.6	7.6	---	---	---	---	---	---	---	---	---
5	7.6	7.6	7.6	---	---	---	---	---	---	---	---	---
6	7.6	7.6	7.6	7.7	7.4	7.6	---	---	---	---	---	---
7	7.7	7.6	7.6	7.5	7.4	7.5	---	---	---	---	---	---
8	7.7	7.6	7.6	7.6	7.4	7.5	---	---	---	7.5	7.5	7.5
9	7.7	7.6	7.6	7.6	7.5	7.5	---	---	---	7.5	7.3	7.4
10	7.6	7.4	7.6	7.6	7.4	7.5	---	---	---	7.4	7.3	7.3
11	7.5	7.3	7.4	7.6	7.5	7.5	---	---	---	7.5	7.3	7.4
12	7.4	7.3	7.3	7.6	7.5	7.6	---	---	---	7.5	7.4	7.4
13	7.4	7.4	7.4	7.6	7.4	7.6	---	---	---	7.5	7.5	7.5
14	7.5	7.4	7.4	7.8	7.5	7.5	---	---	---	7.5	7.4	7.5
15	7.5	7.4	7.5	7.8	7.5	7.5	---	---	---	7.5	7.5	7.5
16	7.5	7.5	7.5	7.8	7.4	7.5	7.6	7.6	7.6	---	---	---
17	---	---	---	7.8	7.4	7.5	7.6	7.4	7.5	---	---	---
18	---	---	---	7.7	7.4	7.5	7.6	7.3	7.4	---	---	---
19	---	---	---	7.6	7.4	7.5	---	---	---	---	---	---
20	---	---	---	7.7	7.5	7.5	---	---	---	---	---	---
21	---	---	---	7.7	7.5	7.5	---	---	---	---	---	---
22	---	---	---	7.6	7.4	7.5	---	---	---	7.6	7.5	7.6
23	---	---	---	7.7	7.5	7.6	---	---	---	7.6	7.5	7.6
24	7.7	7.3	7.4	7.6	7.5	7.5	---	---	---	---	---	---
25	7.8	7.7	7.7	7.6	7.5	7.5	---	---	---	---	---	---
26	7.8	7.5	7.7	---	---	---	---	---	---	---	---	---
27	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
28	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	7.7	7.5	7.6	---	---	---	---	---	---
31	---	---	---	7.6	7.5	7.6	---	---	---	---	---	---
MONTH	7.8	7.3	7.6	7.8	7.4	7.5	7.6	7.3	7.5	7.6	7.3	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	7.7	7.6	7.6	7.7	7.5	7.6	7.8	7.7	7.7
2	---	---	---	7.7	7.6	7.7	7.7	7.5	7.6	7.9	7.7	7.7
3	---	---	---	7.7	7.6	7.7	7.8	7.6	7.7	7.8	7.7	7.7
4	---	---	---	7.7	7.6	7.7	7.8	7.6	7.7	7.8	7.7	7.7
5	---	---	---	7.7	7.7	7.7	7.8	7.6	7.7	7.8	7.8	7.8
6	---	---	---	---	---	---	7.9	7.6	7.7	7.9	7.7	7.8
7	---	---	---	---	---	---	7.9	7.6	7.8	7.9	7.7	7.7
8	---	---	---	---	---	---	7.9	7.7	7.8	7.8	7.6	7.7
9	---	---	---	---	---	---	8.0	7.7	7.8	7.8	7.6	7.7
10	---	---	---	---	---	---	7.9	7.7	7.8	7.7	7.6	7.6
11	---	---	---	---	---	---	8.0	7.7	7.9	7.7	7.5	7.6
12	---	---	---	---	---	---	8.1	7.8	8.0	7.6	7.5	7.5
13	---	---	---	---	---	---	8.1	7.9	8.0	7.6	7.5	7.5
14	---	---	---	---	---	---	8.0	7.8	7.9	7.6	7.5	7.6
15	---	---	---	---	---	---	7.9	7.7	7.8	7.6	7.6	7.6
16	---	---	---	---	---	---	7.9	7.8	7.8	7.6	7.6	7.6
17	---	---	---	7.8	7.6	7.7	8.0	7.7	7.8	7.6	7.6	7.6
18	---	---	---	7.9	7.6	7.8	8.1	7.8	7.9	7.6	7.5	7.6
19	---	---	---	7.9	7.7	7.8	8.0	7.8	7.9	7.6	7.4	7.5
20	7.6	7.6	7.6	7.8	7.7	7.8	8.0	7.7	7.8	7.5	7.2	7.3
21	7.6	7.6	7.6	7.7	7.2	7.4	7.9	7.7	7.8	7.4	7.2	7.3
22	7.6	7.6	7.6	7.6	7.2	7.5	8.0	7.7	7.8	7.4	7.4	7.4
23	7.7	7.5	7.6	7.7	7.6	7.7	8.0	7.7	7.8	7.5	7.4	7.5
24	7.7	7.6	7.6	7.7	7.5	7.6	8.0	7.7	7.8	7.6	7.5	7.5
25	7.6	7.5	7.6	7.6	7.5	7.6	7.9	7.7	7.8	7.5	7.5	7.5
26	7.7	7.6	7.6	7.6	7.5	7.5	7.9	7.7	7.7	7.6	7.5	7.6
27	7.6	7.5	7.6	7.6	7.5	7.5	7.9	7.7	7.8	7.6	7.5	7.6
28	7.6	7.6	7.6	7.5	7.4	7.5	7.9	7.7	7.8	7.6	7.5	7.6
29	7.7	7.6	7.6	7.5	7.5	7.5	7.9	7.7	7.8	7.6	7.5	7.6
30	7.6	7.5	7.6	7.6	7.5	7.6	7.7	7.6	7.7	7.7	7.6	7.6
31	---	---	---	7.7	7.5	7.6	7.8	7.6	7.7	---	---	---
MONTH	7.7	7.5	7.6	7.9	7.2	7.6	8.1	7.5	7.8	7.9	7.2	7.6

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

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

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

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

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	31.0	29.0	30.0	33.0	31.0	32.0	33.0	31.0	32.0
2	---	---	---	31.5	29.5	30.5	33.5	31.5	32.5	33.0	31.5	32.0
3	---	---	---	31.0	30.0	30.5	33.5	32.0	33.0	32.5	31.5	32.0
4	---	---	---	30.5	29.5	30.0	34.0	32.5	33.0	32.0	31.0	31.5
5	---	---	---	31.0	29.0	30.0	34.0	32.5	33.0	31.5	30.5	31.0
6	---	---	---	---	---	---	34.0	32.5	33.0	31.5	30.5	31.0
7	---	---	---	---	---	---	34.0	32.5	33.0	32.0	30.5	31.5
8	---	---	---	---	---	---	33.5	32.0	33.0	32.0	31.0	31.5
9	---	---	---	---	---	---	33.5	32.0	33.0	32.0	31.0	31.5
10	---	---	---	---	---	---	33.5	32.0	32.5	31.0	30.5	30.5
11	---	---	---	---	---	---	33.5	32.5	33.0	30.5	29.0	30.0
12	---	---	---	---	---	---	33.5	32.5	33.0	29.5	29.0	29.0
13	---	---	---	---	---	---	33.5	32.0	32.5	30.0	29.0	29.0
14	---	---	---	---	---	---	33.0	31.5	32.5	30.0	29.0	29.5
15	---	---	---	---	---	---	32.5	31.5	32.0	29.5	28.5	29.0
16	---	---	---	---	---	---	32.5	31.0	31.5	29.5	28.0	28.5
17	---	---	---	32.5	31.0	31.5	32.5	31.0	32.0	29.0	28.0	28.5
18	---	---	---	32.5	31.0	32.0	33.0	31.5	32.0	30.0	28.0	29.0
19	---	---	29.0	33.0	31.5	32.0	33.5	32.0	32.5	30.5	28.5	29.0
20	29.5	28.0	29.0	32.0	30.5	31.5	33.5	32.0	32.5	30.0	28.0	29.0
21	29.5	28.5	29.0	30.0	29.0	29.5	33.5	32.0	32.5	29.0	28.0	28.5
22	29.5	29.0	29.0	31.5	29.0	30.0	33.5	32.0	32.5	29.0	27.5	28.0
23	29.5	28.5	29.0	32.0	30.5	31.0	33.0	32.0	32.5	28.5	27.0	28.0
24	30.0	28.5	29.5	31.5	30.5	31.0	33.5	31.5	32.0	27.5	26.5	27.0
25	30.5	29.0	29.5	32.0	30.5	31.0	32.5	31.0	31.5	27.0	26.5	26.5
26	31.0	29.5	30.0	32.0	30.5	31.5	32.0	30.5	31.0	26.5	25.5	26.0
27	31.5	30.0	30.5	32.5	31.0	31.5	31.5	30.0	30.5	26.0	24.5	25.0
28	31.0	29.5	30.0	32.5	31.0	31.5	31.5	30.0	30.5	24.5	24.0	24.5
29	31.0	28.5	29.5	32.5	31.5	31.5	31.5	30.0	30.5	24.0	23.5	24.0
30	30.5	28.5	29.5	32.5	31.0	31.5	32.0	30.5	31.0	23.5	21.5	22.5
31	---	---	---	33.0	31.0	32.0	32.5	31.0	31.5	---	---	---
MONTH	31.5	28.0	29.5	33.0	29.0	31.0	34.0	30.0	32.0	33.0	21.5	29.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.6	8.2	9.1	---	---	---	4.1	1.3	2.9			
2	12.2	8.9	9.9	---	---	---	4.6	2.8	3.6			
3	12.4	9.6	10.7	---	---	---	6.0	4.3	5.0			
4	11.9	10.0	10.9	8.3	6.9	7.4	7.6	6.1	6.9			
5	11.4	9.8	10.4	8.8	6.4	7.3	9.1	7.6	8.5			
6	10.2	8.8	9.4	7.7	5.5	6.5	9.1	6.5	7.9			
7	9.6	8.1	8.7	8.6	6.5	7.5	9.8	7.4	8.6			
8	9.6	7.7	8.4	9.4	7.9	8.5	8.4	6.3	7.8			
9	8.3	7.1	7.7	9.1	8.2	8.5	12.0	7.7	9.9			
10	8.2	7.0	7.4	8.7	7.9	8.4	10.5	9.6	9.9			
11	8.0	7.1	7.3	9.2	7.6	8.1	9.7	8.6	9.1			
12	8.2	6.1	7.2	9.3	7.6	8.4	8.8	8.1	8.4			
13	6.0	4.7	5.4	9.4	7.7	8.5	9.9	7.0	8.2			
14	4.7	3.6	4.1	9.7	8.0	8.6	9.0	7.7	8.3			
15	5.2	3.8	4.4	9.7	8.1	8.8	7.8	7.0	7.5			
16	5.0	4.1	4.4	8.0	6.8	7.3	7.2	4.6	6.2			
17	4.5	3.3	4.1	6.9	6.1	6.4	4.4	2.5	3.0			
18	3.9	1.7	2.3	7.3	5.8	6.6	4.1	2.6	3.2			
19	7.3	4.3	7.0	5.8	4.8	5.3	4.3	3.4	3.7			
20	9.0	7.3	8.1	5.0	4.5	4.8	3.9	3.2	3.5			
21	8.9	7.1	7.9	5.5	4.0	4.5	---	---	---			
22	7.5	7.2	7.3	4.6	2.0	3.8	---	---	---			
23	7.5	7.2	7.4	1.9	.2	.6	---	---	---			
24	7.1	6.1	6.6	5.9	.0	2.4	---	---	---			
25	---	---	---	9.2	3.6	5.6	---	---	---			
26	---	---	---	5.9	4.8	5.2	---	---	---			
27	---	---	---	4.8	4.1	4.5	---	---	---			
28	---	---	---	5.1	3.1	4.0	---	---	---			
29	---	---	---	8.5	3.1	4.8	---	---	---			
30	---	---	---	4.0	1.7	3.0	---	---	---			
31	---	---	---	---	---	---	---	---	---			
MONTH	12.4	1.7	7.3	9.7	.0	6.1	12.0	1.3	6.6			

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.7	5.3	5.5	---	---	---	---	---	---	---	---	---
2	7.3	5.0	5.8	---	---	---	---	---	---	---	---	---
3	7.1	5.1	6.0	---	---	---	---	---	---	---	---	---
4	8.4	3.7	7.1	---	---	---	---	---	---	---	---	---
5	8.9	4.1	7.4	---	---	---	---	---	---	---	---	---
6	10.1	6.4	7.6	6.7	3.7	4.5	---	---	---	---	---	---
7	9.3	6.1	7.3	6.1	3.0	4.1	---	---	---	---	---	---
8	11.4	5.5	7.7	6.9	3.5	5.6	---	---	---	---	---	---
9	10.4	6.9	8.3	6.0	4.7	5.3	---	---	---	---	---	---
10	8.0	6.3	7.2	5.9	4.1	4.9	---	---	---	---	---	---
11	6.9	5.2	5.9	6.5	5.0	5.6	---	---	---	---	---	---
12	8.5	4.9	6.3	5.9	5.5	5.7	---	---	---	---	---	---
13	9.8	5.1	7.0	---	---	---	---	---	---	---	---	---
14	8.9	6.6	8.0	---	---	---	---	---	---	---	---	---
15	8.3	5.8	6.7	---	---	---	---	---	---	---	---	---
16	11.8	5.5	7.6	---	---	---	7.9	6.5	6.9	---	---	---
17	---	---	---	---	---	---	9.6	4.6	7.1	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	7.4	6.0	6.7
23	---	---	---	---	---	---	---	---	---	---	---	---
24	5.4	4.0	4.6	---	---	---	---	---	---	---	---	---
25	6.1	4.3	5.0	---	---	---	---	---	---	---	---	---
26	6.3	4.6	5.2	---	---	---	---	---	---	---	---	---
27	6.2	4.7	5.4	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.8	3.7	6.6	6.9	3.0	5.1	9.6	4.6	7.0	7.4	6.0	6.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	3.3	2.5	2.8	5.9	3.4	4.7	---	---	---
2	---	---	---	3.1	2.5	2.7	4.3	2.7	3.3	---	---	---
3	---	---	---	3.1	2.6	2.7	4.0	2.5	3.1	---	---	---
4	---	---	---	3.0	2.4	2.7	4.8	2.8	3.7	---	---	---
5	---	---	---	3.6	2.4	2.8	5.2	3.2	4.0	---	---	---
6	---	---	---	---	---	---	5.4	3.7	4.4	---	---	---
7	---	---	---	---	---	---	5.8	4.1	4.8	---	---	---
8	---	---	---	---	---	---	6.2	4.5	5.2	---	---	---
9	---	---	---	---	---	---	6.9	4.8	5.6	---	---	---
10	---	---	---	---	---	---	6.9	5.1	5.8	---	---	---
11	---	---	---	---	---	---	7.3	5.6	6.3	7.4	6.9	7.2
12	---	---	---	---	---	---	8.2	6.1	7.0	7.3	6.0	6.6
13	---	---	---	---	---	---	---	---	---	7.7	6.6	7.1
14	---	---	---	---	---	---	---	---	---	7.5	6.7	7.1
15	---	---	---	---	---	---	---	---	---	7.6	6.4	6.9
16	---	---	---	---	---	---	---	---	---	7.7	6.4	7.0
17	---	---	---	5.5	4.7	5.0	---	---	---	7.7	2.7	5.9
18	---	---	---	5.5	4.8	5.1	---	---	---	7.5	1.2	6.2
19	---	---	---	5.6	4.7	5.1	---	---	---	7.7	6.8	7.4
20	7.3	6.4	6.9	5.4	4.8	5.0	---	---	---	7.9	7.1	7.6
21	7.9	6.8	7.3	5.0	4.7	4.8	---	---	---	7.8	6.8	7.2
22	7.6	7.1	7.3	5.3	4.9	5.1	---	---	---	7.9	7.2	7.5
23	7.5	7.0	7.2	5.4	5.0	5.2	---	---	---	7.8	6.9	7.4
24	7.4	6.6	6.9	5.2	4.9	5.0	---	---	---	7.5	5.9	6.7
25	7.0	6.3	6.6	5.1	4.8	5.0	---	---	---	8.0	3.2	6.0
26	6.6	5.8	6.2	5.1	4.8	4.9	---	---	---	8.0	7.2	7.6
27	6.0	5.3	5.7	5.7	5.0	5.4	---	---	---	8.1	7.3	7.7
28	6.3	5.2	5.7	5.7	5.0	5.4	---	---	---	8.3	7.5	7.8
29	6.0	4.5	5.1	5.5	4.9	5.2	---	---	---	8.4	7.7	8.1
30	6.6	3.2	4.7	5.5	5.0	5.3	---	---	---	---	---	---
31	---	---	---	6.0	5.1	4.8	---	---	---	---	---	---
MONTH	7.9	3.2	6.3	6.0	2.4	4.5	8.2	2.5	4.8	8.4	1.2	7.1

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 mi².

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 7, Feb. 12, and May 19-27. Records good. There are no diversions 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 mi² in the upper Caney Creek and Town Branch drainage basins. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 220 ft³/s (9.31 in/yr), 159,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,800 ft³/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.--Peak discharges greater than base discharge of 3,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 13	0700	4,900	18.50	Oct. 29	0500	11,000	20.02
Oct. 21	2100	17,000	21.45	Jan. 18	0400	3,810	17.90
Oct. 26	0100	*31,600	*24.12	Feb. 12	0900	3,650	17.80

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	558	119	633	37	849	61	6.7	4.5	.49	.22	.00
2	.02	231	65	962	31	1480	44	6.0	3.6	.43	.17	.00
3	.00	453	43	921	25	1780	33	6.0	3.2	.38	.13	.00
4	.00	614	34	830	22	536	28	5.5	2.7	.37	.09	.00
5	.00	230	171	1020	22	170	24	5.1	2.7	.36	.07	.00
6	.00	89	692	711	30	102	19	5.1	2.6	.29	.06	.00
7	.00	53	761	225	55	70	17	4.9	2.5	2.0	.06	.00
8	3.4	36	388	111	48	55	15	4.3	2.4	2.2	.05	.00
9	14	28	107	74	33	48	13	4.0	2.3	2.1	.05	.00
10	9.0	22	65	66	165	44	12	3.5	2.3	1.9	.04	.00
11	10	18	48	79	1470	39	11	3.2	2.2	2.4	.04	.00
12	710	15	37	72	3260	35	11	2.9	2.1	3.2	.03	.00
13	4010	12	308	48	1860	32	10	10	1.6	1.2	.03	.00
14	2680	9.5	1000	38	510	29	9.5	514	1.5	.77	.03	.00
15	1070	8.7	1450	34	134	26	9.0	892	1.2	.63	.03	.01
16	142	15	1530	295	79	26	8.3	1520	1.1	.58	.03	.55
17	66	111	969	1490	57	26	7.8	537	.95	4.6	.03	.72
18	96	141	1070	3240	44	25	7.5	70	.89	2.5	.03	.47
19	513	53	555	1510	35	22	7.0	40	.89	1.5	.02	.25
20	2300	31	185	342	30	331	6.5	30	.89	.91	.02	.12
21	14800	24	112	113	27	983	6.3	60	.89	.59	.01	.02
22	11400	17	80	69	24	1520	5.7	70	.95	1.8	.01	.00
23	4460	12	60	55	210	863	68	50	2.0	6.3	.00	.00
24	4120	8.8	46	47	1280	149	301	35	2.2	3.1	.00	.00
25	9560	24	37	42	2900	82	120	25	1.2	1.6	.00	.00
26	16500	192	31	37	1480	60	47	20	1.0	1.0	.00	.00
27	3820	900	27	33	373	52	26	17	.84	.70	.00	.00
28	2500	1280	25	50	220	62	17	15	.65	.47	.00	.00
29	8970	1830	23	95	---	107	11	9.5	.59	.36	.00	.00
30	4010	616	22	71	---	63	8.1	7.0	.55	.27	.00	.00
31	1880	---	357	48	---	61	---	5.6	---	.22	.00	---
TOTAL	93643.46	7632.0	10417	13361	14461	9727	963.7	3984.3	52.99	45.22	1.25	2.14
MEAN	3021	254	336	431	516	314	32.1	129	1.77	1.46	.040	.071
MAX	16500	1830	1530	3240	3260	1780	301	1520	4.5	6.3	.22	.72
MIN	.00	8.7	22	33	22	22	5.7	2.9	.55	.22	.00	.00
CFSM	9.41	.79	1.05	1.34	1.61	.98	.10	.40	.006	.005	.000	.000
IN.	10.85	.88	1.21	1.55	1.68	1.13	.11	.46	.01	.01	.00	.00
AC-FT	185700	15140	20660	26500	28680	19290	1910	7900	105	90	2.5	4.2

CAL YR 1984 TOTAL 118299.08 MEAN 323 MAX 16500 MIN .00 CFSM 1.01 IN 13.71 AC-FT 234600
WTR YR 1985 TOTAL 154291.06 MEAN 423 MAX 16500 MIN .00 CFSM 1.32 IN 17.88 AC-FT 306000

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1984 to September 1985.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1984 to September 1985.
WATER TEMPERATURES: October 1984 to September 1985.
SUSPENDED SEDIMENT DISCHARGE: October 1984 to September 1985.

INSTRUMENTATION.--Beginning October 1984, specific conductance and water temperature are 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 CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,120 microsiemens Sept. 21; minimum daily, 56 microsiemens Oct. 13.
WATER TEMPERATURES: Maximum daily, 31.5°C Aug. 9, 10: minimum daily, 2.5°C Feb. 3.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 470 mg/L Mar. 20; minimum daily, 10.0 mg/L July 25.
SEDIMENT LOADS: Maximum daily, 2,900 tons Oct. 26; minimum daily, 0.00 tons on many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
APR												
16...	1325	8.3	697	7.1	20.5	6.7	75	170	110	43	14	69
MAY												
28...	1320	15	346	6.7	24.0	6.0	72	85	47	23	6.8	31
JUN												
28...	1236	.64	864	6.9	25.5	5.4	66	200	100	51	17	98
JUL												
31...	1210	.23	710	7.0	27.5	5.0	64	140	42	36	13	84
SEP												
20...	1155	.14	1070	7.2	24.5	6.6	79	250	110	62	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
APR											
16...	2	6.6	55	130	94	.10	24	410	9.3	8.8	<1
MAY											
28...	2	6.0	39	56	43	.10	18	210	11	10	6
JUN											
28...	3	7.1	97	130	140	.20	16	520	10	9.9	4
JUL											
31...	3	7.4	102	98	100	.20	10	410	11	.9	3
SEP											
20...	4	9.2	139	170	160	.20	12	650	10	10	4

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
APR								
16...	1325	2	300	20	1300	<100	230	<.1
MAY								
28...	1320	2	<100	<10	2500	<100	190	<.1
JUN								
28...	1236	3	100	<10	850	<100	600	<.1
JUL								
31...	1210	6	100	120	1200	100	870	<.1
SEP								
20...	1155	3	200	<10	1200	<100	990	<.1

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 to SEPTEMBER 1985

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)
APR 16...	1325	<.1	<1	<.10	<1.0	<.10	<.1	<.1	<1.0	<.10	.1
MAY 28...	1320	<.1	<1	<.10	<1.0	<.01	<.1	<.1	2.0	<.01	<.1
JUL 31...	1210	<.1	<1	<.10	<1.0	<.01	<.1	<.1	<1.0	<.01	<.1
SEP 20...	1155	<.1	<1	<.10	<1.0	<.01	<.1	<.1	<1.0	<.01	<.1

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
APR 16...	<.10	<.1	<.10	<.1	.01	<.1	<.01	<.1	<.10	<.01	<.1
MAY 28...	<.01	.1	<.01	.3	<.01	<.5	<.01	.2	<.01	<.01	<.1
JUL 31...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1
SEP 20...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)
APR 16...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01
MAY 28...	<.01	<.5	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.5	<.01
JUL 31...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01
SEP 20...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
APR 16...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1	<1
MAY 28...	<.1	<.01	<.5	<.01	<.5	<.01	<.1	<.01	<.5	<.1	<1
JUL 31...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1	<1
SEP 20...	<.1	<.01	<.1	<.01	<.1	<.01	.4	<.01	<.1	<.1	<1

DATE	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
APR 16...	<10	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.1
MAY 28...	<10	<.01	<.5	--	<.1	--	--	<.1	--	<.1
JUL 31...	<10	<.01	<.1	.02	<.1	<.01	<.01	<.1	<.01	<.1
SEP 20...	<10	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.1

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	93643.46	114	65	16500	14	3570	19	4730	25
NOV.	1984	7632.0	246	142	2920	32	652	40	822	55
DEC.	1984	10417	189	109	3050	24	675	31	867	42
JAN.	1985	13361	210	121	4360	27	968	34	1230	47
FEB.	1985	14461	259	149	5830	34	1310	42	1640	58
MAR.	1985	9727	238	137	3590	30	800	39	1010	53
APR.	1985	963.7	495	289	753	67	176	79	207	110
MAY	1985	3984.3	289	167	1800	38	407	47	503	64
JUNE	1985	52.99	690	409	58	99	14	110	16	160
JULY	1985	45.22	651	384	47	92	11	100	13	150
AUG.	1985	1.25	787	468	1.6	110	0.4	120	0.4	180
SEPT	1985	2.14	1020	617	3.6	160	0.9	160	0.9	240
TOTAL		154291.06	**	**	38900	**	8580	**	11000	**
WTD.AVG.		423	163	93	**	21	**	27	**	36

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	296	274	285	214	152	183	238	211	224	371	292	327
2	315	295	303	259	216	241	262	239	251	288	207	240
3	---	---	---	267	209	248	280	263	272	217	206	212
4	---	---	---	217	198	203	300	281	290	214	183	200
5	---	---	---	253	219	237	349	300	313	181	156	168
6	---	---	---	273	253	262	302	183	249	187	156	169
7	---	---	---	300	275	288	181	151	160	227	188	208
8	589	425	481	324	301	314	208	162	173	261	228	245
9	598	407	505	363	325	347	231	176	202	292	261	277
10	396	321	350	381	365	374	261	213	235	389	293	329
11	321	252	297	407	383	395	292	241	266	388	360	368
12	198	73	144	427	408	418	335	265	295	361	347	354
13	66	56	59	450	428	439	337	172	265	385	351	364
14	72	61	65	470	451	460	179	155	166	418	385	404
15	130	73	96	490	470	481	160	134	145	450	419	434
16	197	135	169	595	487	526	154	133	143	490	337	437
17	260	198	219	647	516	580	160	146	155	309	188	243
18	287	224	260	513	450	469	145	136	139	185	124	146
19	241	170	197	447	432	438	198	145	170	149	123	133
20	175	135	166	438	431	435	244	202	224	217	152	185
21	134	118	125	448	439	443	282	246	265	259	218	239
22	123	119	121	455	447	451	325	284	303	298	260	278
23	128	122	124	460	454	457	348	323	333	328	298	314
24	135	127	133	465	460	462	375	349	363	352	329	347
25	130	114	126	541	460	498	398	376	387	393	353	373
26	108	94	97	627	552	599	418	398	409	444	394	422
27	106	94	99	532	231	293	439	419	429	491	446	467
28	138	107	124	235	203	217	472	441	453	596	492	532
29	135	108	116	201	177	187	487	473	477	593	562	577
30	112	105	107	209	179	193	506	487	497	562	551	555
31	148	113	129	---	---	---	513	342	449	573	552	560
MONTH	598	56	188	647	152	371	513	133	281	596	123	326

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	580	573	577	288	230	247			333	---	---	590
2	588	581	584	229	195	213			355	---	---	611
3	597	587	592	205	189	194			381	---	---	620
4	621	598	609	264	207	235			405	---	---	639
5	653	624	638	306	265	286			429	---	---	663
6	678	653	665	339	307	324			454	---	---	681
7	774	687	734	373	340	357			472	---	---	691
8	772	753	763	402	376	390			501	---	---	720
9	753	740	747	426	404	415			533	---	---	734
10	741	529	682	446	428	437			549	---	---	752
11	518	275	430	475	448	461			575	---	---	767
12	270	212	226	501	476	488			600	---	---	780
13	226	213	218	517	500	510			621	---	---	765
14	257	227	243	532	516	524			655	---	---	537
15	302	258	279	553	530	543			669	---	---	362
16	347	304	328	568	551	559			692	---	---	177
17	371	348	359	588	570	581			696	---	---	192
18	407	373	391	605	589	596			709	---	---	210
19	433	408	421	619	602	613			722	---	---	231
20	457	434	445	621	308	481			737	---	---	254
21	489	459	474	331	284	308			745	---	---	269
22	521	490	507	---	---	165			762	---	---	293
23	624	324	457	---	---	172			725	---	---	308
24	309	217	265	---	---	193			456	---	---	343
25	211	165	180	---	---	215			489	---	---	357
26	202	166	180	---	---	233			501	---	---	366
27	282	205	245	---	---	260			524	---	---	388
28	329	276	292	---	---	254			545	629	352	405
29	---	---	---	---	---	229			552	435	358	395
30	---	---	---	---	---	245			575	428	392	408
31	---	---	---	---	---	295				471	432	455
MONTH	774	165	448	621	189	356			565	629	352	483

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	510	471	489	860	847	851	729	711	718			---
2	717	507	600	885	862	873	746	730	738			---
3	750	496	576	914	884	901	761	745	752			---
4	706	541	611	965	911	932	769	759	764			---
5	787	530	576	998	963	977	784	770	775			---
6	542	534	539	---	---	985	792	780	784			---
7	552	542	547	992	754	817	798	785	791			---
8	600	554	566	819	764	796	799	790	794			---
9	838	569	701	816	550	669	803	795	799			---
10	991	597	874	551	516	531	805	798	802			---
11	847	609	707	524	397	473	806	800	803			---
12	701	614	629	764	483	687	805	797	802			---
13	820	633	709	693	662	675	801	787	797			---
14	899	702	784	661	647	653	795	791	793			---
15	951	788	860	671	654	663	796	791	793			1090
16	890	700	802	684	672	679	797	792	794			1010
17	988	703	890	687	665	678	---	---	885			1000
18	921	728	808	665	478	589	---	---	1020			1030
19	928	741	832	480	461	469	---	---	1050			1050
20	857	750	793	486	474	479	---	---	1080			1090
21	788	771	783	570	484	527	---	---	1110			1120
22	773	765	769	619	571	595	---	---	1100			---
23	865	764	790	758	589	689	---	---	---			---
24	933	761	801	642	550	595	---	---	---			---
25	---	---	911	570	550	563	---	---	---			---
26	---	---	1000	588	569	578	---	---	---			---
27	---	---	1040	624	589	607	---	---	---			---
28	---	---	931	651	625	638	---	---	---			---
29	861	846	854	678	652	664	---	---	---			---
30	848	843	846	704	677	689	---	---	---			---
31	---	---	---	712	692	704	---	---	---			
MONTH	991	471	754	998	397	685	806	711	852			1060

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.5	4.0	5.0	15.5	13.5	14.5				---	---	---
2	4.0	3.0	3.5	17.0	15.0	16.0				---	---	---
3	3.0	2.5	2.5	19.0	16.5	17.5				---	---	---
4	3.5	3.0	3.0	18.5	17.5	18.0				---	---	---
5	4.0	3.5	3.5	17.0	16.0	16.5				---	---	---
6	5.5	4.0	4.5	16.0	15.0	15.5				---	---	---
7	5.5	4.5	5.0	16.5	14.5	15.5				---	---	---
8	6.0	4.0	5.0	18.0	16.0	17.0				---	---	---
9	8.5	6.0	7.0	19.5	17.5	18.5				---	---	---
10	13.0	8.5	10.5	20.0	18.5	19.0				---	---	---
11	12.0	9.0	10.5	21.0	19.5	20.0				---	---	---
12	9.5	7.0	8.5	21.0	20.5	20.5				---	---	---
13	10.5	8.0	9.0	22.0	20.0	21.0				---	---	---
14	9.5	9.0	9.5	21.5	17.5	19.5				---	---	---
15	9.5	8.5	9.0	17.5	16.5	17.0				---	---	---
16	10.5	8.0	9.5	16.5	16.0	16.5				---	---	---
17	11.0	9.5	10.5	17.0	15.0	16.0				---	---	---
18	12.5	10.5	11.5	17.0	15.5	16.0				---	---	---
19	13.5	11.5	12.5	16.5	15.5	16.0				---	---	---
20	14.5	13.0	13.5	18.5	15.5	16.5				---	---	---
21	16.0	14.5	15.0	17.0	16.5	17.0				---	---	---
22	18.0	16.0	17.0	---	---	---				---	---	---
23	18.0	16.0	17.0	---	---	---				---	---	---
24	16.0	14.0	15.0	---	---	---				---	---	---
25	16.0	13.0	14.5	---	---	---				---	---	---
26	16.0	14.0	15.0	---	---	---				---	---	---
27	15.5	14.5	15.0	---	---	---				---	---	---
28	15.0	14.0	14.5	---	---	---				24.5	23.5	24.0
29	---	---	---	---	---	---				26.0	23.0	24.5
30	---	---	---	---	---	---				27.0	24.0	25.5
31	---	---	---	---	---	---				27.0	25.0	26.0
MONTH	18.0	2.5	10.0	22.0	13.5	17.5				27.0	23.0	25.0

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	25.5	26.5	25.5	23.5	24.5	30.5	27.5	29.0	---	---	---
2	27.5	26.0	26.5	26.0	24.5	25.0	30.0	27.0	28.5	---	---	---
3	27.5	26.0	27.0	26.5	25.0	25.5	29.5	27.0	28.5	---	---	---
4	27.5	26.0	27.0	25.0	24.0	24.5	29.5	27.5	28.5	---	---	---
5	27.0	26.0	26.5	24.5	23.5	24.0	30.0	27.0	28.5	---	---	---
6	26.5	25.5	26.0	---	---	---	30.5	27.5	29.0	---	---	---
7	27.0	24.5	26.0	25.5	24.5	25.0	31.0	28.0	29.0	---	---	---
8	27.5	25.5	26.5	25.5	24.5	25.0	30.5	27.5	29.0	---	---	---
9	28.0	26.0	27.0	26.5	25.0	25.5	31.5	27.5	29.0	---	---	---
10	28.0	26.5	27.0	27.5	25.5	26.5	31.5	28.0	29.5	---	---	---
11	27.5	26.5	27.0	27.5	25.0	26.0	31.0	28.0	29.5	---	---	---
12	27.0	25.5	26.0	26.0	24.0	24.5	31.0	28.0	29.0	---	---	---
13	25.0	23.5	24.0	27.0	25.5	26.0	29.5	27.5	28.5	---	---	---
14	25.0	22.5	23.5	27.0	26.0	26.5	29.0	27.0	27.5	---	---	---
15	26.0	23.0	24.5	27.0	26.0	26.5	28.5	26.5	27.0	25.0	24.5	24.5
16	27.0	24.5	26.0	27.5	25.5	26.5	29.5	26.0	27.5	25.0	24.0	24.5
17	27.5	25.5	26.5	27.0	25.5	26.5	29.5	27.0	28.0	24.5	23.5	24.0
18	26.5	24.5	25.5	27.0	26.0	26.5	28.5	27.0	27.5	24.5	24.0	24.0
19	24.5	23.5	24.0	26.5	25.5	26.0	28.5	27.5	28.0	24.5	24.0	24.5
20	24.0	22.5	23.5	26.5	25.5	26.0	28.0	27.5	28.0	24.5	24.0	24.5
21	25.0	23.0	24.0	27.0	25.5	26.0	27.5	26.5	27.0	24.5	23.5	24.0
22	25.5	24.5	25.0	27.5	26.0	27.0	27.5	26.5	27.0	---	---	---
23	26.0	24.5	25.0	27.5	26.0	27.0	---	---	---	---	---	---
24	27.0	25.0	26.0	27.5	26.5	27.0	---	---	---	---	---	---
25	28.0	25.5	26.5	28.0	27.0	27.5	---	---	---	---	---	---
26	28.5	25.5	27.0	29.0	27.5	28.0	---	---	---	---	---	---
27	27.5	26.0	27.0	29.0	27.5	28.0	---	---	---	---	---	---
28	26.5	25.0	26.0	28.5	27.5	28.0	---	---	---	---	---	---
29	26.0	23.0	24.5	28.5	27.5	28.0	---	---	---	---	---	---
30	25.0	22.5	23.5	28.5	27.5	28.0	---	---	---	---	---	---
31	---	---	---	30.0	27.5	28.5	---	---	---	---	---	---
MONTH	28.5	22.5	25.5	30.0	23.5	26.5	31.5	26.0	28.5	25.0	23.5	24.5

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.04	55	.00	558	57	86	119	51	16
2	.02	45	.00	231	75	47	65	28	4.9
3	.00	---	.00	453	130	159	43	26	3.0
4	.00	---	.00	614	80	133	34	36	3.3
5	.00	---	.00	230	45	28	171	48	22
6	.00	---	.00	89	40	9.6	692	150	280
7	.00	---	.00	53	35	5.0	761	95	195
8	3.4	80	.73	36	30	2.9	388	50	52
9	14	75	2.8	28	30	2.3	107	30	8.7
10	9.0	57	1.4	22	30	1.8	65	32	5.6
11	10	70	1.9	18	22	1.1	48	28	3.6
12	710	311	572	15	20	.81	37	25	2.5
13	4010	78	847	12	23	.75	308	237	290
14	2680	30	217	9.5	18	.46	1000	142	371
15	1070	40	116	8.7	16	.38	1450	72	282
16	142	65	25	15	38	1.5	1530	34	140
17	66	55	9.8	111	78	23	969	72	188
18	96	70	18	141	100	38	1070	62	179
19	513	245	391	53	46	6.6	555	54	81
20	2300	151	774	31	28	2.3	185	51	25
21	14800	55	2200	24	21	1.4	112	52	16
22	11400	20	616	17	20	.92	80	38	8.2
23	4460	15	181	12	18	.58	60	32	5.2
24	4120	20	222	8.8	14	.33	46	28	3.5
25	9560	33	1250	24	46	3.0	37	26	2.6
26	16500	50	2900	192	105	54	31	18	1.5
27	3820	15	155	900	130	316	27	20	1.5
28	2500	21	142	1280	111	384	25	20	1.4
29	8970	30	727	1830	46	227	23	22	1.4
30	4010	17	184	616	44	73	22	21	1.2
31	1880	25	127	---	---	---	357	173	222

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	633	179	299	37	22	2.2	849	132	303
2	962	135	351	31	18	1.5	1480	118	472
3	921	127	316	25	14	.95	1780	65	312
4	830	70	157	22	18	1.1	536	72	104
5	1020	58	160	22	21	1.2	170	72	33
6	711	37	71	30	20	1.6	102	80	22
7	225	46	28	55	27	4.0	70	54	10
8	111	34	10	48	24	3.1	55	42	6.2
9	74	31	6.2	33	22	2.0	48	46	6.0
10	66	25	4.5	165	75	97	44	53	6.3
11	79	28	6.0	1470	248	878	39	52	5.5
12	72	25	4.9	3260	55	484	35	47	4.4
13	48	20	2.6	1860	50	251	32	50	4.3
14	38	22	2.3	510	90	124	29	38	3.0
15	34	18	1.7	134	65	24	26	44	3.1
16	295	109	172	79	47	10	26	34	2.4
17	1490	148	541	57	37	5.7	26	28	2.0
18	3240	55	481	44	30	3.6	25	38	2.6
19	1510	39	159	35	42	4.0	22	35	2.1
20	342	40	37	30	32	2.6	331	470	563
21	113	42	13	27	34	2.5	983	223	570
22	69	31	5.8	24	32	2.1	1520	67	275
23	55	22	3.3	210	236	195	863	45	105
24	47	18	2.3	1280	191	576	149	55	22
25	42	15	1.7	2900	72	564	82	70	15
26	37	19	1.9	1480	64	256	60	61	9.9
27	33	19	1.7	373	92	93	52	56	7.9
28	50	20	2.7	220	84	50	62	57	9.5
29	95	42	11	---	---	---	107	125	36
30	71	30	5.8	---	---	---	63	77	13
31	48	27	3.5	---	---	---	61	57	9.4

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	61	58	9.6	6.7	38	.69	4.5	40	.49
2	44	45	5.3	6.0	47	.76	3.6	46	.45
3	33	24	2.1	6.0	37	.60	3.2	39	.34
4	28	42	3.2	5.5	36	.53	2.7	70	.51
5	24	44	2.9	5.1	45	.62	2.7	58	.42
6	19	36	1.8	5.1	57	.78	2.6	76	.53
7	17	29	1.3	4.9	40	.53	2.5	46	.31
8	15	31	1.3	4.3	43	.50	2.4	50	.32
9	13	30	1.1	4.0	38	.41	2.3	48	.30
10	12	31	1.0	3.5	27	.26	2.3	50	.31
11	11	26	.77	3.2	43	.37	2.2	20	.12
12	11	34	1.0	2.9	36	.28	2.1	59	.33
13	10	32	.86	10	55	4.1	1.6	28	.12
14	9.5	26	.67	514	273	366	1.5	64	.26
15	9.0	49	1.2	892	97	223	1.2	26	.08
16	8.3	30	.67	1520	48	197	1.1	24	.07
17	7.8	38	.80	537	46	67	.95	27	.07
18	7.5	34	.69	70	62	12	.89	16	.04
19	7.0	18	.34	40	50	5.4	.89	25	.06
20	6.5	26	.46	30	52	4.2	.89	35	.08
21	6.3	33	.56	60	85	14	.89	25	.06
22	5.7	42	.65	70	97	18	.95	48	.12
23	68	33	7.5	50	217	29	2.0	25	.14
24	301	176	134	35	165	16	2.2	16	.10
25	120	130	42	25	137	9.2	1.2	18	.06
26	47	75	9.5	20	90	4.9	1.0	28	.08
27	26	68	4.8	17	50	2.3	.84	29	.07
28	17	54	2.5	15	48	1.9	.65	20	.04
29	11	50	1.5	9.5	34	.87	.59	26	.04
30	8.1	30	.66	7.0	39	.74	.55	38	.06
31	---	---	---	5.6	39	.59	---	---	---

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	.49	73	.10	.22	20	.01	.00	---	---
2	.43	30	.03	.17	20	.00	.00	---	---
3	.38	18	.02	.13	20	.00	.00	---	---
4	.37	24	.02	.09	15	.00	.00	---	---
5	.36	19	.02	.07	18	.00	.00	---	---
6	.29	27	.02	.06	20	.00	.00	---	---
7	2.0	30	.16	.06	25	.00	.00	---	---
8	2.2	20	.12	.05	30	.00	.00	---	---
9	2.1	30	.17	.05	25	.00	.00	---	---
10	1.9	35	.18	.04	20	.00	.00	---	---
11	2.4	35	.23	.04	16	.00	.00	---	---
12	3.2	30	.26	.03	18	.00	.00	---	---
13	1.2	25	.08	.03	20	.00	.00	---	---
14	.77	20	.04	.03	25	.00	.00	---	---
15	.63	18	.03	.03	20	.00	.01	16	.00
16	.58	20	.03	.03	16	.00	.55	18	.03
17	4.6	25	.31	.03	18	.00	.72	20	.04
18	2.5	30	.20	.03	20	.00	.47	25	.03
19	1.5	25	.10	.02	15	.00	.25	20	.01
20	.91	20	.05	.02	16	.00	.12	20	.00
21	.59	16	.03	.01	18	.00	.02	16	.00
22	1.8	25	.12	.01	20	.00	.00	---	---
23	6.3	50	.85	.00	---	---	.00	---	---
24	3.1	25	.21	.00	---	---	.00	---	---
25	1.6	10	.04	.00	---	---	.00	---	---
26	1.0	15	.04	.00	---	---	.00	---	---
27	.70	20	.04	.00	---	---	.00	---	---
28	.47	25	.03	.00	---	---	.00	---	---
29	.36	30	.03	.00	---	---	.00	---	---
30	.27	25	.02	.00	---	---	.00	---	---
31	.22	20	.01	.00	---	---	---	---	---

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 mi². Prior to June 1974, 228 mi².

PERIOD OF RECORD.--December 1965 to September 1985 (discontinued). 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 above National Geodetic Vertical Datum of 1929. Prior to June 19, 1974, at site 1.9 mi downstream at same datum.

REMARKS.--Estimated daily discharges: June 5 to July 3. Records good except those for estimated daily discharge, which are poor. No known diversion. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1967-71, 1975-85), 116 ft³/s (7.10 in/yr), 84,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,800 ft³/s Apr. 21, 1979, gage height, 33.87 ft, from rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow on that date; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 20	2200	3,820	19.60	Feb. 12	1000	2,760	18.00
Oct. 25	1600	2,520	17.60	Apr. 25	1200	2,780	18.04
Oct. 29	1400	*6,390	*22.73	May 14	1900	4,450	20.45
Jan. 18	0900	2,520	17.60				

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	131	33	900	38	894	43	38	9.8	.41	1.1	.00
2	.00	146	26	928	33	1640	36	29	7.9	.38	.69	.00
3	.00	194	21	399	30	494	29	27	6.9	.35	.48	.00
4	.00	115	18	474	31	155	25	18	6.0	.33	.34	.00
5	.00	76	19	212	37	98	22	15	5.4	.31	.23	.00
6	.00	60	201	91	56	65	19	12	4.8	.27	.17	.00
7	.00	51	152	58	51	49	18	11	4.2	3.7	.10	.00
8	6.9	45	48	43	38	41	17	9.9	3.7	6.7	.08	.00
9	3.0	38	32	35	31	37	15	9.1	3.2	6.8	.06	.00
10	1.1	41	26	43	248	32	14	8.7	4.0	6.8	.05	.00
11	.36	39	23	206	1660	30	14	9.6	4.5	5.3	.04	.00
12	.84	35	21	83	2400	28	14	8.5	3.5	5.4	.02	.00
13	5.2	33	203	44	534	26	14	321	2.8	3.4	.01	.00
14	10	33	1020	35	127	26	13	3250	2.4	4.8	.00	.00
15	5.3	32	1280	33	83	27	13	2350	2.2	4.2	.00	.00
16	2.3	37	650	406	61	31	12	416	2.0	2.4	.00	.00
17	2.0	30	900	1590	49	29	12	88	1.8	3.9	.00	.00
18	.81	63	356	2160	42	25	11	50	1.6	6.3	.00	.00
19	55	78	112	572	36	22	10	33	1.4	10	.00	.00
20	934	70	69	141	32	412	9.9	27	1.3	23	.00	.00
21	2720	47	50	81	31	1290	9.9	53	1.1	302	.00	.00
22	2680	35	39	57	30	1030	9.9	79	1.0	97	.00	.00
23	1390	30	32	48	326	164	11	54	.90	25	.00	.00
24	1250	28	27	46	1240	83	398	32	.80	15	.00	.00
25	2330	30	24	43	1260	57	2130	24	.72	10	.00	.00
26	1380	36	19	38	193	45	588	20	.65	7.7	.00	.00
27	388	312	21	36	157	42	202	18	.58	5.8	.00	.00
28	647	513	21	51	244	53	151	17	.53	4.6	.00	.00
29	4100	110	21	88	---	65	66	15	.49	3.5	.00	.00
30	2100	47	21	57	---	44	49	12	.45	2.7	.00	.00
31	319	---	186	43	---	39	---	11	---	1.8	.00	---
TOTAL	20330.81	2535	5671	9041	9098	7073	3975.7	7065.8	86.62	569.85	3.37	.00
MEAN	656	84.5	183	292	325	228	133	228	2.89	18.4	.11	.000
MAX	4100	513	1280	2160	2400	1640	2130	3250	9.8	302	1.1	.00
MIN	.00	28	18	33	30	22	9.9	8.5	.45	.27	.00	.00
CFSM	2.96	.38	.82	1.32	1.46	1.03	.60	1.03	.01	.08	.000	.000
IN.	3.41	.42	.95	1.51	1.52	1.19	.67	1.18	.01	.10	.00	.00
AC-FT	40330	5030	11250	17930	18050	14030	7890	14020	172	1130	6.7	.00

CAL YR 1984 TOTAL 39806.38 MEAN 109 MAX 4100 MIN .00 CFSM .49 IN 6.67 AC-FT 78960
WTR YR 1985 TOTAL 65450.15 MEAN 179 MAX 4100 MIN .00 CFSM .81 IN 10.97 AC-FT 129800

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 mi².

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 139.85 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 25, Mar. 23 to Apr. 1, Apr. 21-24, June 18-26, July 4-8, Sept. 9-12 and Sept. 27-30. Records good except those for estimated daily discharges and those below 0.50 ft³/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.--19 years (water years 1967-85), 42.4 ft³/s (10.10 in/yr), 30,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s June 7, 1981, from rating curve extended above 6,800 ft³/s on basis of slope-area measurement of peak flow, gage height, 30.37 ft; minimum, 0.01 ft³/s July 19, 20, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 10	2300	*2,990	*13.02	No other peak greater than base discharge.			

Minimum discharge, 0.12 ft³/s Sept. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	5.1	3.6	80	8.9	593	8.9	1.4	.67	.49	.18	.18
2	.50	21	2.1	26	8.3	95	8.3	1.2	.57	.42	.16	.17
3	.49	19	1.6	119	7.8	57	8.3	1.0	.49	.57	.16	.15
4	.48	8.3	1.6	51	7.3	42	8.3	.84	.49	5.0	.15	.15
5	.47	4.3	115	19	12	27	8.0	.78	.49	3.0	.15	.15
6	.46	2.8	51	10	12	17	6.4	.72	.49	2.4	.15	.15
7	.46	1.8	16	6.9	9.7	14	5.4	.67	.49	1.9	.15	.15
8	.45	1.4	8.4	4.8	6.9	13	4.8	.65	.49	1.6	.33	.13
9	.45	1.2	6.3	3.7	5.7	12	4.4	.63	.42	1.4	.79	1.0
10	.44	1.2	5.8	58	505	9.7	4.0	.61	2.5	1.3	.41	3.0
11	1.5	1.1	5.1	21	779	9.2	4.0	.70	3.6	1.2	.29	5.0
12	4.8	1.0	4.4	7.3	98	8.4	3.9	.57	1.8	4.3	.21	3.0
13	3.2	.90	4.3	4.4	50	7.6	3.8	.49	1.4	4.3	.22	2.4
14	4.8	.78	12	4.3	33	9.6	3.8	1.4	1.0	2.8	.35	1.5
15	5.2	.67	15	4.0	21	14	3.7	4.3	.78	2.0	.53	1.1
16	2.7	23	87	251	15	12	3.4	1.8	.78	7.8	.51	.96
17	4.4	13	51	250	12	9.3	2.6	1.2	.67	71	.48	.87
18	3.1	69	26	46	9.9	6.9	2.4	.90	2.0	8.5	.35	.75
19	36	47	16	26	7.7	5.5	2.1	.78	5.0	2.0	.30	.67
20	532	13	12	15	7.1	584	1.8	.67	3.0	1.3	.22	.61
21	467	5.9	9.2	9.2	6.6	128	3.0	6.8	2.0	1.5	3.6	.53
22	83	3.3	7.1	8.3	6.4	42	7.0	8.9	2.5	1.3	1.6	.49
23	72	2.0	5.3	8.5	783	26	5.0	4.0	2.0	2.6	.67	.49
24	212	1.8	5.1	8.6	245	18	3.5	2.8	1.5	1.5	.51	.49
25	87	4.7	4.3	8.0	146	13	2.5	1.6	1.2	1.1	.77	.49
26	67	12	3.6	6.6	65	11	2.3	1.2	.95	.66	.44	.49
27	31	62	3.3	15	104	137	2.3	1.0	.78	.41	.24	.49
28	20	29	3.3	24	243	53	2.3	1.0	.67	.29	.18	.49
29	18	10	3.3	13	---	19	2.1	.90	.67	.25	.18	1.0
30	12	5.4	3.3	11	---	11	1.8	.78	.57	.21	.18	4.0
31	7.3	---	30	10	---	9.4	---	.67	---	.21	.18	---
TOTAL	1678.73	371.65	522.0	1129.6	3215.3	2013.6	130.1	50.96	39.97	133.31	14.64	31.05
MEAN	54.2	12.4	16.8	36.4	115	65.0	4.34	1.64	1.33	4.30	.47	1.04
MAX	532	69	115	251	783	593	8.9	8.9	5.0	71	3.6	5.0
MIN	.44	.67	1.6	3.7	5.7	5.5	1.8	.49	.42	.21	.15	.13
CFSM	.95	.22	.30	.64	2.02	1.14	.08	.03	.02	.08	.008	.02
IN.	1.10	.24	.34	.74	2.10	1.31	.08	.03	.03	.09	.01	.02
AC-FT	3330	737	1040	2240	6380	3990	258	101	79	264	29	62

CAL YR 1984 TOTAL 9943.10 MEAN 27.2 MAX 1200 MIN .30 CFSM .48 IN 6.49 AC-FT 19720
WTR YR 1985 TOTAL 9330.91 MEAN 25.6 MAX 783 MIN .13 CFSM .45 IN 6.09 AC-FT 18510

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, 1,949,000 acre-ft Oct. 24 at 0400 hours (elevation, 132.90 ft); minimum, 1,642,000 acre-ft Sept. 29 (elevation, 129.18 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

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1651000	1817000	1818000	1832000	1798000	1904000	1808000	1843000	1789000	1786000	1767000	1698000
2	1647000	1797000	1813000	1820000	1798000	1904000	1798000	1840000	1787000	1786000	1766000	1695000
3	1646000	1785000	1809000	1811000	1798000	1889000	1788000	1842000	1782000	1788000	1757000	1693000
4	1644000	1788000	1807000	1809000	1805000	1896000	1788000	1840000	1780000	1788000	1757000	1689000
5	1647000	1791000	1805000	1813000	1806000	1869000	1792000	1843000	1780000	1787000	1752000	1689000
6	1647000	1798000	1803000	1815000	1809000	1836000	1783000	1844000	1788000	1784000	1749000	1688000
7	1655000	1797000	1802000	1820000	1809000	1809000	1784000	1849000	1793000	1781000	1751000	1688000
8	1655000	1797000	1800000	1818000	1809000	1798000	1779000	1854000	1794000	1781000	1747000	1687000
9	1656000	1800000	1798000	1809000	1809000	1789000	1772000	1852000	1797000	1783000	1744000	1687000
10	1656000	1799000	1796000	1803000	1843000	1782000	1775000	1849000	1797000	1782000	1744000	1689000
11	1661000	1795000	1795000	1794000	1881000	1784000	1778000	1836000	1813000	1785000	1741000	1689000
12	1673000	1793000	1794000	1783000	1882000	1782000	1781000	1816000	1822000	1782000	1736000	1691000
13	1711000	1784000	1802000	1782000	1876000	1785000	1785000	1805000	1822000	1779000	1735000	1689000
14	1735000	1789000	1818000	1784000	1859000	1787000	1786000	1831000	1820000	1779000	1736000	1687000
15	1746000	1793000	1822000	1784000	1834000	1784000	1788000	1839000	1820000	1779000	1735000	1685000
16	1759000	1801000	1840000	1813000	1819000	1792000	1788000	1840000	1815000	1779000	1727000	1681000
17	1757000	1801000	1848000	1842000	1813000	1790000	1788000	1836000	1817000	1778000	1726000	1680000
18	1766000	1813000	1850000	1859000	1803000	1793000	1792000	1833000	1834000	1777000	1726000	1678000
19	1790000	1811000	1847000	1867000	1796000	1804000	1798000	1823000	1826000	1776000	1722000	1680000
20	1841000	1803000	1842000	1858000	1787000	1839000	1803000	1819000	1813000	1775000	1723000	1681000
21	1909000	1793000	1846000	1847000	1788000	1850000	1800000	1824000	1808000	1773000	1722000	1683000
22	1934000	1793000	1844000	1834000	1787000	1850000	1807000	1818000	1807000	1778000	1720000	1687000
23	1947000	1795000	1843000	1820000	1830000	1854000	1817000	1813000	1807000	1771000	1717000	1691000
24	1940000	1797000	1853000	1811000	1845000	1852000	1818000	1805000	1803000	1770000	1717000	1680000
25	1928000	1800000	1848000	1803000	1853000	1853000	1815000	1798000	1801000	1770000	1718000	1687000
26	1917000	1803000	1851000	1792000	1864000	1850000	1820000	1791000	1802000	1771000	1713000	1675000
27	1908000	1818000	1851000	1797000	1874000	1855000	1825000	1795000	1805000	1772000	1708000	1660000
28	1891000	1819000	1855000	1788000	1887000	1843000	1828000	1797000	1804000	1769000	1704000	1646000
29	1881000	1823000	1857000	1787000	---	1818000	1831000	1798000	1798000	1770000	1704000	1651000
30	1868000	1822000	1849000	1794000	---	1822000	1839000	1801000	1794000	1770000	1702000	1643000
31	1839000	---	1845000	1800000	---	1811000	---	1803000	---	1765000	1700000	---
MAX	1947000	1823000	1857000	1867000	1887000	1904000	1839000	1854000	1834000	1788000	1767000	1698000
MIN	1644000	1784000	1794000	1782000	1787000	1782000	1772000	1791000	1780000	1765000	1700000	1643000
(†)	131.60	131.40	131.68	131.14	132.17	131.27	131.60	131.17	131.07	130.71	129.92	129.20
(‡)	+185000	-17000	+23000	-45000	+87000	-76000	+28000	-36000	-9000	-29000	-65000	-57000

CAL YR 1984 MAX 1947000 MIN 1644000 (‡) +57000
WTR YR 1985 MAX 1947000 MIN 1643000 (‡) -11000

(†) 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 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
26...	1222	1.00	340	8.2	11.5	.59	10.5	96	120
26...	1224	10.0	340	8.1	10.5	--	10.5	93	--
26...	1226	20.0	340	8.1	10.0	--	10.4	91	--
26...	1228	30.0	340	8.1	10.0	--	10.6	93	--
26...	1230	40.0	340	8.1	10.0	--	10.6	93	--
26...	1232	50.0	340	8.1	10.0	--	10.6	93	--
26...	1234	60.0	340	8.1	10.0	--	10.6	93	--
26...	1236	74.0	340	8.1	10.0	--	10.6	93	120
AUG									
29...	1250	1.00	385	8.5	30.0	.98	5.9	78	130
29...	1252	10.0	390	8.2	29.0	--	3.0	39	--
29...	1254	20.0	390	8.1	29.0	--	2.2	29	--
29...	1256	30.0	390	8.0	29.0	--	2.0	26	--
29...	1258	40.0	395	8.0	29.0	--	1.8	23	--
29...	1300	50.0	395	7.8	29.0	--	1.2	16	--
29...	1302	60.0	400	7.2	26.5	--	.0	0	--
29...	1304	70.0	400	7.0	24.0	--	.0	0	--
29...	1306	80.0	435	6.8	22.5	--	.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)
FEB									
26...	26	40	3.7	24	1	5.0	89	41	24
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	26	40	3.7	24	1	4.9	89	42	24
AUG									
29...	20	46	4.3	26	1	5.2	113	39	26
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	0	48	4.6	25	1	5.5	151	23	25

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									
26...	.30	9.3	200	--	--	--	--	27	2
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	.80	.60	1.4	.150	40	<10
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	9.4	200	.80	.60	1.4	.150	27	2
AUG									
29...	.40	4.6	220	<.10	.60	--	.250	8	12
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	.10	.80	.90	.280	20	60
29...	--	--	--	<.10	.80	--	.310	30	170
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	18	240	<.10	6.4	--	2.40	140	3200

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

303821095005001 LIVINGSTON RESERVOIR SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
26...	1250	1.00	340	8.3	12.0	.72	10.5	97
26...	1252	10.0	340	8.2	10.5	--	10.6	94
26...	1254	20.0	340	8.2	10.0	--	10.6	93
26...	1256	30.0	340	8.1	10.0	--	10.6	93
26...	1258	40.0	340	8.1	10.0	--	10.6	93
26...	1300	55.0	340	8.1	10.0	--	10.6	93
AUG								
29...	1322	1.00	385	8.6	30.0	.98	6.6	87
29...	1324	10.0	385	8.5	29.5	--	5.6	73
29...	1326	20.0	385	8.4	29.0	--	4.8	62
29...	1328	30.0	390	8.0	29.0	--	2.1	27
29...	1330	40.0	390	7.9	29.0	--	1.8	23
29...	1332	55.0	405	7.5	28.5	--	.0	0

303935095055401 LIVINGSTON RESERVOIR SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
26...	1150	1.00	355	8.4	13.0	.71	10.8	102
26...	1152	10.0	355	8.2	11.0	--	10.3	93
26...	1154	20.0	355	8.1	11.0	--	10.1	91
26...	1156	30.0	360	8.1	11.0	--	10.0	90
26...	1158	40.0	360	8.1	11.0	--	10.1	91
26...	1200	50.0	360	8.1	10.5	--	10.1	90
26...	1202	61.0	360	8.1	10.5	--	10.1	90
AUG								
29...	1220	1.00	385	8.8	30.0	.91	8.1	107
29...	1222	10.0	385	8.6	29.5	--	5.6	73
29...	1224	20.0	385	8.6	29.5	--	5.4	71
29...	1226	30.0	385	8.6	29.5	--	5.4	71
29...	1228	40.0	390	8.1	29.0	--	2.3	30
29...	1230	50.0	400	7.8	29.0	--	.7	9
29...	1232	60.0	420	7.2	27.0	--	.0	0
29...	1234	68.0	420	7.0	26.0	--	.0	0

304144095073001 LIVINGSTON RESERVOIR SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
26...	1114	1.00	350	8.3	12.0	.73	10.7	98
26...	1116	10.0	350	8.2	11.0	--	10.2	92
26...	1118	20.0	350	8.1	11.0	--	10.1	91
26...	1120	30.0	355	8.1	11.0	--	10.0	90
26...	1122	40.0	360	8.0	11.0	--	9.8	88
26...	1124	50.0	360	8.0	10.5	--	9.4	83
26...	1126	58.0	360	8.0	10.5	--	9.1	81
AUG								
29...	1146	1.00	400	8.7	30.0	.82	7.4	98
29...	1148	10.0	400	8.4	29.0	--	5.2	68
29...	1150	20.0	400	8.4	29.0	--	5.1	66
29...	1152	30.0	400	8.4	29.0	--	5.1	66
29...	1154	40.0	400	8.4	29.0	--	4.8	62
29...	1156	50.0	400	8.4	29.0	--	4.7	61
29...	1158	60.0	400	8.3	29.0	--	1.2	16
29...	1200	68.0	430	7.3	27.5	--	.0	0

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304521095075501 LIVINGSTON RESERVOIR SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
26...	1034	1.00	355	8.2	12.0	.60	9.8	90	120
26...	1036	10.0	355	8.1	11.5	--	9.7	88	--
26...	1038	20.0	355	8.1	11.5	--	9.7	88	--
26...	1040	30.0	355	8.0	11.0	--	9.5	85	--
26...	1042	40.0	355	8.0	11.0	--	9.4	84	--
26...	1044	50.0	355	7.9	11.0	--	9.1	82	--
26...	1046	60.0	360	7.9	10.5	--	9.2	82	120
AUG									
29...	1114	1.00	400	8.6	30.0	.73	7.1	94	130
29...	1116	10.0	400	8.5	29.0	--	5.8	75	--
29...	1118	20.0	400	8.5	29.0	--	5.7	74	--
29...	1120	30.0	400	8.5	29.0	--	5.6	73	--
29...	1122	40.0	400	8.5	29.0	--	5.5	71	--
29...	1124	50.0	400	8.5	29.0	--	5.4	70	--
29...	1126	66.0	400	8.4	29.0	--	5.0	65	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									
26...	30	40	3.9	25	1	4.8	86	45	26
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	30	42	4.0	25	1	4.9	92	44	25
AUG									
29...	16	46	4.4	28	1	5.2	117	41	29
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	18	46	4.5	28	1	5.2	116	41	27

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								
26...	9.1	210	.90	1.3	2.2	.190	17	2
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	.90	1.0	1.9	.200	30	<10
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	9.8	210	.80	.90	1.7	.200	24	20
AUG								
29...	4.9	230	<.10	.80	--	.310	4	7
29...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
29...	--	--	<.10	.80	--	.270	40	30
29...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
29...	6.1	230	<.10	1.3	--	.300	400	210

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304453095064901 LIVINGSTON RESERVOIR SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
26...	1004	1.00	355	8.3	12.5	.45	10.1	94
26...	1006	10.0	345	8.2	12.0	--	9.9	91
26...	1008	22.0	350	8.0	11.5	--	10.2	93
AUG								
29...	1042	1.00	390	8.6	29.5	.73	7.2	95
29...	1044	10.0	395	8.5	29.5	--	6.0	79
29...	1046	24.0	395	8.5	29.5	--	5.8	76

304659095052001 LIVINGSTON RESERVOIR SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
FEB							
26...	0930	1.00	310	7.9	13.0	.31	9.8
26...	0932	10.0	315	7.7	12.5	--	9.4
26...	0934	20.0	345	7.5	11.5	--	9.2
26...	0936	29.0	350	6.8	11.5	--	8.5
AUG							
29...	1010	1.00	400	8.7	29.5	.76	6.7
29...	1012	10.0	400	8.6	29.5	--	6.1
29...	1014	20.0	405	8.6	29.5	--	6.0
29...	1016	32.0	405	8.6	29.5	--	5.2

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							
26...	92	.60	1.0	1.6	.140	70	<10
26...	87	--	--	--	--	--	--
26...	84	--	--	--	--	--	--
26...	77	.80	1.0	1.8	.220	60	<10
AUG							
29...	88	<.10	.90	--	.320	30	<10
29...	80	--	--	--	--	--	--
29...	79	--	--	--	--	--	--
29...	68	<.10	1.0	--	.300	50	40

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304843095104001 LIVINGSTON RESERVOIR SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
26...	1332	1.00	325	7.7	15.0	.20	7.9	78
26...	1334	10.0	330	7.7	14.0	--	7.7	74
26...	1336	20.0	330	7.7	13.5	--	7.7	73
26...	1338	30.0	345	7.7	13.0	--	7.9	74
26...	1340	40.0	350	7.9	12.5	--	8.5	79
26...	1342	50.0	355	8.0	11.5	--	8.9	81
26...	1344	58.0	355	7.9	11.5	--	8.9	81
AUG								
29...	1436	1.00	435	8.6	30.0	.58	8.5	112
29...	1438	10.0	440	8.3	29.5	--	4.9	64
29...	1440	20.0	440	8.4	29.5	--	4.7	62
29...	1442	30.0	440	8.3	29.5	--	4.7	62
29...	1444	40.0	440	8.3	29.5	--	4.8	63
29...	1446	50.0	440	8.3	29.5	--	4.6	60
29...	1448	62.0	440	8.2	29.5	--	4.2	55

305411095144901 LIVINGSTON RESERVOIR SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
26...	1414	1.00	410	7.4	16.0	.17	5.7	57	120
26...	1416	10.0	410	7.5	16.0	--	5.6	56	--
26...	1418	20.0	405	7.4	16.0	--	5.5	55	--
26...	1420	30.0	405	7.5	15.5	--	5.5	55	--
26...	1422	40.0	395	7.5	15.5	--	5.4	54	--
26...	1424	49.0	390	7.5	15.5	--	5.7	57	110
AUG									
29...	1524	1.00	515	8.5	29.5	.43	7.3	96	150
29...	1526	10.0	520	8.3	29.0	--	4.3	56	--
29...	1528	20.0	520	8.3	29.0	--	4.3	56	--
29...	1530	30.0	520	8.2	29.0	--	3.9	51	--
29...	1532	40.0	530	8.1	29.0	--	2.7	35	--
29...	1534	52.0	540	8.1	29.0	--	2.2	29	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									
26...	47	39	5.4	35	1	5.1	73	65	38
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	43	37	5.2	32	1	5.1	71	61	38
AUG									
29...	15	50	5.0	48	2	6.7	131	54	49
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	14	51	5.1	51	2	6.8	135	54	50

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305411095144901 LIVINGSTON RESERVOIR SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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								
26...	10	240	1.6	1.1	2.7	.400	81	25
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	1.6	1.4	3.0	.430	170	30
26...	--	--	--	--	--	--	--	--
26...	9.8	230	1.6	1.7	3.3	.470	120	25
AUG								
29...	5.6	300	<.10	1.2	--	.320	8	5
29...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
29...	--	--	.10	1.2	1.3	.330	30	20
29...	--	--	--	--	--	--	--	--
29...	6.1	310	.10	1.6	1.7	.360	9	61

305447095161401 LIVINGSTON RESERVOIR SITE HC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)
FEB							
26...	1444	1.00	400	7.4	17.5	.12	7.2
26...	1446	10.0	365	7.3	14.5	--	7.8
26...	1448	20.0	370	7.5	14.5	--	7.4
26...	1450	30.0	375	7.5	14.0	--	7.0
26...	1452	42.0	420	7.5	14.5	--	6.8
AUG							
29...	1745	1.00	495	8.6	30.0	.49	9.4
29...	1747	10.0	500	8.4	29.5	--	6.5
29...	1749	20.0	510	8.1	29.0	--	4.0
29...	1751	30.0	515	8.2	29.0	--	4.4
29...	1753	45.0	520	8.2	29.0	--	4.3

305447095161401 LIVINGSTON RESERVOIR SITE HC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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							
26...	75	1.3	1.2	2.5	.330	60	40
26...	76	--	--	--	--	--	--
26...	72	--	--	--	--	--	--
26...	68	--	--	--	--	--	--
26...	66	1.3	1.2	2.5	.420	100	50
AUG							
29...	125	<.10	1.1	--	.320	30	<10
29...	86	--	--	--	--	--	--
29...	52	--	--	--	--	--	--
29...	58	--	--	--	--	--	--
29...	56	<.10	1.2	--	.330	30	30

LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305135095193601 LIVINGSTON RESERVOIR SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
27...	0900	1.00	270	7.6	15.0	.04	5.0	49
27...	0902	10.0	270	7.5	15.0	--	4.9	48
27...	0904	20.0	270	7.4	15.0	--	5.0	49
27...	0906	30.0	270	7.4	15.0	--	5.0	49
27...	0908	46.0	270	7.2	14.5	--	5.0	48
AUG								
29...	1700	1.00	595	8.4	31.0	.34	7.8	106
29...	1702	10.0	595	8.2	30.5	--	5.2	70
29...	1704	20.0	595	8.2	30.0	--	3.1	41
29...	1706	30.0	600	7.9	30.0	--	1.8	24
29...	1708	38.0	600	7.8	30.0	--	1.8	24

305135095235401 LIVINGSTON RESERVOIR SITE JC

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
FEB									
27...	0930	1.00	235	7.8	15.5	.03	5.2	51	76
27...	0932	10.0	240	7.8	15.5	--	5.1	50	--
27...	0934	20.0	240	7.8	15.5	--	5.1	50	--
27...	0936	30.0	240	7.8	15.0	--	5.1	50	--
27...	0938	40.0	240	7.7	15.0	--	5.0	49	77
AUG									
29...	1630	1.00	620	8.7	32.0	.49	13.8	190	170
29...	1632	10.0	625	7.8	30.5	--	4.0	54	--
29...	1634	20.0	620	7.7	30.5	--	2.2	29	--
29...	1636	30.0	610	7.9	30.0	--	2.9	39	--
29...	1638	42.0	600	7.8	30.0	--	1.9	25	160

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									
27...	20	26	2.7	17	.9	4.3	56	25	18
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	18	26	2.9	17	.9	4.5	59	25	20
AUG									
29...	21	58	5.4	61	2	8.1	146	65	61
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	19	56	5.2	61	2	7.8	143	61	60

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								
27...	5.7	130	.70	1.9	2.6	.600	61	2
27...	--	--	--	--	--	--	--	--
27...	--	--	.70	2.2	2.9	.820	150	10
27...	--	--	--	--	--	--	--	--
27...	7.8	140	.70	2.5	3.2	.920	34	21
AUG								
29...	9.2	360	1.5	1.7	3.2	.690	7	4
29...	--	--	--	--	--	--	--	--
29...	--	--	1.6	.90	2.5	.660	20	<10
29...	--	--	--	--	--	--	--	--
29...	9.3	350	.90	1.2	2.1	.520	8	10

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.--Estimated daily discharges: Jan. 18 to Feb. 3 and July 25-28. Records fair. 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 constitute the total flow from Livingston Reservoir since flow through taintor gates is not included in these totals.

AVERAGE DISCHARGE.--16 years, 213 ft³/s (154,300 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, 577 ft³/s Feb. 22, 23; maximum elevation, 81.46 ft Oct. 28 at 1800 to 2100 hours (backwater from Trinity River); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	.00	378	.00	450	.00	.00	.00	.00	319	241	99
2	141	.00	373	.00	450	.00	.00	.00	.00	216	252	102
3	141	.00	364	.00	460	.00	.00	.00	.00	277	241	102
4	141	.00	359	.00	467	.00	.00	.00	.00	277	229	102
5	130	47	350	.00	472	.00	.00	.00	181	277	229	99
6	120	108	350	.00	461	.00	.00	.00	289	264	222	99
7	130	102	350	.00	472	.00	.00	.00	289	277	211	108
8	120	243	346	.00	477	.00	.00	.00	289	306	211	120
9	120	402	346	.00	488	.00	.00	.00	289	306	211	108
10	120	402	346	.00	488	212	148	.00	289	306	211	105
11	120	402	350	.00	270	364	310	.00	298	319	211	102
12	120	397	350	.00	.00	364	277	.00	319	341	204	102
13	120	397	350	.00	.00	364	302	.00	328	341	204	96
14	120	392	350	245	.00	364	277	.00	328	341	76	90
15	130	402	355	397	.00	364	277	.00	328	341	.00	90
16	130	412	355	402	.00	359	289	.00	328	341	38	90
17	130	402	118	402	.00	359	204	.00	319	319	90	90
18	141	407	.00	416	.00	364	151	.00	341	289	96	90
19	130	407	.00	420	.00	369	141	.00	346	277	96	90
20	110	407	.00	420	.00	378	141	.00	346	264	62	90
21	.00	407	.00	420	350	132	141	.00	355	277	88	90
22	.00	402	.00	420	577	.00	141	.00	341	306	99	90
23	.00	397	.00	420	577	.00	141	.00	328	306	99	90
24	.00	400	.00	430	538	.00	264	.00	328	289	99	90
25	.00	405	.00	430	.00	.00	332	.00	310	280	102	90
26	.00	415	.00	430	.00	.00	341	.00	298	275	102	96
27	.00	421	.00	440	.00	.00	337	.00	298	275	102	99
28	.00	431	.00	440	.00	.00	341	.00	298	270	102	99
29	.00	431	.00	440	---	.00	170	.00	298	264	102	99
30	.00	412	.00	440	---	.00	.00	.00	310	252	102	99
31	.00	---	.00	450	---	.00	---	.00	---	241	99	---
TOTAL	2576.00	9450.00	5790.00	7462.00	6997.00	3993.00	4725.00	.00	8071.00	9033	4431.00	2916
MEAN	83.1	315	187	241	250	129	158	.000	269	291	143	97.2
MAX	162	431	378	450	577	378	341	.00	355	341	252	120
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	216	.00	90
AC-FT	5110	18740	11480	14800	13880	7920	9370	.00	16010	17920	8790	5780

CAL YR 1984 TOTAL 78279.00 MEAN 214 MAX 431 MIN .00 AC-FT 155300
WTR YR 1985 TOTAL 65444.00 MEAN 179 MAX 577 MIN .00 AC-FT 129800

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 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 100.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 16, 17, Feb. 5, 6, Aug. 26 to Sept. 3, Sept. 21-23, and Sept. 27, 28. Records good except those below 1.0 ft³/s and those for estimated daily discharges, which are poor. No diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 92.8 ft³/s (8.94 in/yr), 67,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft³/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 greater than base discharge of 2,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 21	1130	3,550	12.08	Feb. 24	0330	*4,360	*13.41
Nov. 16	0500	3,780	12.46	Mar. 1	1400	3,160	11.39

Minimum daily discharge, 0.15 ft³/s (estimated) Sept. 1-3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	59	21	1010	54	2540	37	9.6	3.5	1.4	.70	.15
2	1.1	822	19	249	45	618	28	8.4	3.5	1.2	.50	.15
3	1.0	162	16	349	41	246	22	7.4	3.5	1.7	2.7	.15
4	1.0	59	130	240	46	170	18	6.2	3.2	26	1.3	.30
5	1.1	34	339	127	141	111	19	5.5	2.9	18	.49	.68
6	1.6	22	282	85	115	75	18	4.8	2.9	8.2	.29	.31
7	3.2	16	94	65	68	62	15	4.5	2.9	6.1	.30	.29
8	2.9	14	52	54	45	55	14	4.7	2.4	4.0	7.1	.28
9	8.4	13	41	45	37	49	13	5.0	2.0	3.2	5.6	.60
10	9.1	12	35	52	177	44	12	5.7	1.8	3.2	1.3	11
11	13	10	31	70	2000	40	12	4.9	2.9	7.2	.46	32
12	18	10	28	41	378	37	12	4.5	7.3	11	.25	28
13	17	9.1	26	34	149	34	11	4.1	9.1	6.7	.20	8.1
14	49	8.4	45	34	91	34	10	4.7	4.1	3.6	.80	4.1
15	45	8.6	82	34	63	42	9.8	5.1	3.5	3.0	2.0	2.4
16	17	974	181	65	52	42	8.4	4.3	2.6	2.9	1.0	1.8
17	17	103	156	375	44	36	7.7	3.7	2.4	3.1	.69	1.1
18	22	165	73	175	39	31	6.4	3.2	6.7	6.5	.43	1.1
19	203	159	52	88	35	26	7.3	2.9	24	11	.25	1.0
20	477	55	42	57	32	524	6.2	2.9	9.1	14	.51	.89
21	2470	34	35	38	30	768	6.3	11	6.7	11	.80	.80
22	562	24	29	33	29	180	6.9	14	7.3	5.8	.70	.70
23	203	21	25	32	1490	89	14	16	5.3	3.2	.90	.90
24	414	19	25	31	2340	56	78	11	4.5	2.0	.49	1.0
25	218	21	23	31	782	41	25	8.4	3.8	1.4	.39	1.0
26	97	24	21	27	350	34	52	6.7	3.5	1.3	.22	1.0
27	56	44	20	709	342	100	66	5.3	2.6	1.1	.20	.95
28	41	60	20	452	452	133	27	4.9	2.4	1.0	.18	.90
29	75	36	20	156	---	65	16	4.5	2.0	.89	.17	12
30	46	27	336	93	---	44	11	4.1	1.6	.85	.16	30
31	35	---	1180	74	---	45	---	3.8	---	.87	.16	---
TOTAL	5125.5	3025.1	3479	4925	9467	6371	589.0	191.8	140.0	171.41	31.24	143.65
MEAN	165	101	112	159	338	206	19.6	6.19	4.67	5.53	1.01	4.79
MAX	2470	974	1180	1010	2340	2540	78	16	24	26	7.1	32
MIN	1.0	8.4	16	27	29	26	6.2	2.9	1.6	.85	.16	.15
CFSM	1.17	.72	.79	1.13	2.40	1.46	.14	.04	.03	.04	.007	.03
IN.	1.35	.80	.92	1.30	2.50	1.68	.16	.05	.04	.05	.01	.04
AC-FT	10170	6000	6900	9770	18780	12640	1170	380	278	340	62	285

CAL YR 1984 TOTAL 31897.94 MEAN 87.2 MAX 2470 MIN .60 CFSM .62 IN 8.42 AC-FT 63270
WTR YR 1985 TOTAL 33659.70 MEAN 92.2 MAX 2540 MIN .15 CFSM .65 IN 8.88 AC-FT 66760

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 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 40.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 22-23, 27-28, Nov. 3-6 and Aug. 28 to Sept. 26. Records good except those for estimated daily discharges, which are poor. Flow is completely regulated except during periods of flooding by Long King Creek. Regulation by Livingston Reservoir (station 08066190) 11.9 mi upstream, with capacity of 2,046,000 acre-ft, that began Sept. 29, 1968. No diversions between Livingston Reservoir and gaging station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1967-85), 6,895 ft³/s, 4,995,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96,200 ft³/s June 14, 1973, gage height, 46.36 ft; minimum daily, 191 ft³/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, 43,000 ft³/s Oct. 29 at 2400 hours to Oct. 30 at 2400 hours (gage height, 34.60 ft); minimum daily, 451 ft³/s Oct. 8, 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	678	35700	6390	19700	2230	26400	13900	12500	9650	2140	1480	740
2	673	28800	6710	18500	2200	29000	13800	12600	9610	2020	1480	732
3	663	15000	7210	18100	2180	27900	13800	12600	8940	1810	1480	733
4	502	7000	7560	16500	2270	27600	12800	12600	7350	1810	1480	752
5	455	4000	7870	15000	2280	27400	10200	12600	5770	1800	1450	770
6	461	2250	7860	14800	2300	26200	9310	13300	4480	1790	1330	760
7	455	2060	6860	14800	2220	21300	8410	14400	3920	1780	1310	753
8	451	2290	5680	14700	2510	14800	8030	14600	3900	1770	1330	767
9	451	2740	5550	14700	3590	10300	6800	14900	3900	1760	1320	775
10	455	2760	5430	14600	3780	7060	5270	15700	3890	1760	1310	830
11	492	2740	4380	12600	8710	5310	4300	15700	4010	1750	1300	850
12	580	2740	3440	9550	15700	4410	3780	15700	4890	1740	1300	773
13	532	2500	2680	8280	17100	4260	3730	13000	5440	1620	1310	769
14	638	1910	2810	5970	16900	3690	3720	9290	5510	1580	1310	764
15	575	1610	6010	3720	16300	4260	3610	8830	5530	1570	1290	760
16	515	3330	6480	3060	12800	4320	3510	10500	5510	1560	1270	755
17	509	2890	8770	4700	8900	4310	3650	11800	5510	1550	1270	751
18	497	2510	12100	9260	8190	4300	3580	12000	5620	1570	1260	747
19	658	3000	15800	11600	6960	4640	3650	11800	7450	1580	1260	743
20	1320	3860	16000	12900	4870	7710	4360	11900	8350	1570	1250	739
21	14200	3420	15900	13700	2940	12100	4450	11700	7490	1570	1270	735
22	28500	2300	15900	13600	2200	13100	4460	11700	5240	1530	1250	737
23	33500	2190	15900	13500	4370	12900	4320	11800	5080	1530	1240	778
24	37200	2180	16000	11700	14400	12800	5180	11600	5060	1520	1240	828
25	40500	2170	16000	9690	16300	12700	5380	10700	4950	1510	1250	869
26	42500	2400	16000	9070	17900	13500	6230	10700	3830	1510	1230	884
27	42700	2870	16300	8010	19700	16700	7340	10400	2750	1500	1210	3700
28	42800	3580	17700	8000	21200	19200	7870	9860	2190	1480	963	5890
29	42900	5070	17800	5220	---	19200	9160	9640	2160	1480	873	6010
30	43000	6320	18000	2590	---	17700	10600	9650	2150	1480	813	4660
31	42800	---	19100	2290	---	14700	---	9660	---	1480	767	---
TOTAL	422160	162190	330190	340410	241000	429770	205200	373730	160130	51120	38896	40354
MEAN	13620	5406	10650	10980	8607	13860	6840	12060	5338	1649	1255	1345
MAX	43000	35700	19100	19700	21200	29000	13900	15700	9650	2140	1480	6010
MIN	451	1610	2680	2290	2180	3690	3510	8830	2150	1480	767	732
AC-FT	837400	321700	654900	675200	478000	852400	407000	741300	317600	101400	77150	80040

CAL YR 1984 TOTAL 1747909 MEAN 4776 MAX 43000 MIN 451 AC-FT 3467000
WTR YR 1985 TOTAL 2795150 MEAN 7658 MAX 43000 MIN 451 AC-FT 5544000

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of of gage is 62.32 ft above National Geodetic Vertical Datum of 1929. September 1974 to August 1976, wire-weight gage read twice daily.

REMARKS.--Records fair except those for estimated daily discharges, Oct. 26 to Nov. 28, Dec. 12 to Mar. 18, and Mar. 28 to June 29, which are poor. No known diversions above station. There is regulation by Bear Foot Lake on Mill Creek (tributary to Menard Creek) located 0.5 mi upstream from station.

AVERAGE DISCHARGE.--19 years (water years 1967-85), 118 ft³/s (85,490 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,660 ft³/s May 8, 1969 (gage height, 30.33 ft), from rating curve extended above 5,600 ft³/s; minimum daily, 2.6 ft³/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, 1,730 ft³/s Feb. 26, time unknown (gage height, 19.79 ft, from peak mark); minimum daily, 11 ft³/s Oct. 2, 3, and Sept. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	100	67	200	140	900	185	124	25	14	19	12
2	11	150	60	220	120	1000	173	94	23	13	18	12
3	11	220	55	250	110	800	148	77	21	12	18	12
4	12	250	145	230	120	600	130	68	21	12	19	11
5	16	200	348	180	150	420	116	59	20	15	16	12
6	36	150	323	130	160	300	104	53	20	14	16	18
7	29	100	301	110	130	240	96	50	19	19	14	42
8	51	90	267	100	110	200	86	46	18	18	28	44
9	34	80	169	90	100	160	80	41	17	17	15	28
10	19	70	138	85	200	140	76	39	16	17	16	28
11	20	65	123	80	400	130	74	35	17	35	14	28
12	26	60	110	76	600	120	71	31	21	31	13	25
13	39	55	100	74	580	115	69	35	23	15	13	15
14	59	50	110	80	540	110	67	34	43	17	33	22
15	54	50	115	75	400	130	64	33	31	16	49	23
16	46	80	130	80	250	160	61	32	22	16	21	18
17	45	200	150	120	170	170	56	30	20	15	20	15
18	36	250	150	163	130	147	52	30	26	14	24	14
19	57	200	130	150	112	135	49	29	105	20	18	13
20	87	150	110	110	106	378	47	29	171	34	16	13
21	222	100	90	90	102	644	48	30	122	39	15	12
22	288	85	85	75	100	500	49	28	74	32	14	12
23	313	70	75	65	100	677	51	49	64	23	14	16
24	402	65	70	70	400	410	65	91	55	19	14	19
25	283	60	70	65	1200	234	84	91	44	16	14	12
26	350	60	65	60	1600	190	180	60	33	15	13	24
27	400	70	62	150	1000	165	405	42	21	13	13	12
28	300	80	60	300	670	192	469	33	18	15	12	13
29	200	74	60	300	---	287	417	29	18	17	12	78
30	150	73	70	240	---	322	193	28	18	25	12	77
31	120	---	120	170	---	215	---	27	---	21	12	---
TOTAL	3728	3307	3928	4188	9800	10191	3765	1477	1146	599	545	680
MEAN	120	110	127	135	350	329	126	47.6	38.2	19.3	17.6	22.7
MAX	402	250	348	300	1600	1000	469	124	171	39	49	78
MIN	11	50	55	60	100	110	47	27	16	12	12	11
AC-FT	7390	6560	7790	8310	19440	20210	7470	2930	2270	1190	1080	1350

CAL YR 1984 TOTAL 51196 MEAN 140 MAX 3420 MIN 10 AC-FT 101500
WTR YR 1985 TOTAL 43354 MEAN 119 MAX 1600 MIN 11 AC-FT 85990

NOTE.--No gage-height record Oct. 26 to Nov. 28 and Dec. 13 to Mar. 18.

TRINITY RIVER BASIN

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
10...	1335	18	65	--	16	5	4.5	1.1	6.5
NOV									
29...	1230	73	66	--	17	6	4.7	1.2	6.6
JAN									
18...	1155	163	79	9.5	17	10	4.8	1.2	9.1
FEB									
19...	1600	112	77	13.0	16	6	4.7	1.1	8.7
APR									
01...	1650	182	77	18.5	19	7	5.4	1.4	7.9
MAY									
21...	1530	34	94	--	19	8	5.5	1.3	11
JUL									
01...	1450	14	69	--	16	4	4.6	1.2	7.2
AUG									
20...	1555	16	63	28.0	15	5	4.2	1.1	6.8
SEP									
25...	1630	12	76	24.5	17	7	5.0	1.2	9.0

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								
10...	.7	1.3	11	6.7	10	<.10	10	47
NOV								
29...	.7	1.0	11	5.6	11	<.10	14	51
JAN								
18...	1	1.0	7	8.0	16	<.10	13	57
FEB								
19...	1	.80	10	5.0	15	<.10	11	52
APR								
01...	.8	1.2	12	5.5	15	<.10	12	56
MAY								
21...	1	1.3	11	8.4	19	<.10	12	65
JUL								
01...	.8	1.6	12	5.5	12	<.10	15	54
AUG								
20...	.8	1.0	10	6.6	11	<.10	13	50
SEP								
25...	1	1.2	10	5.4	15	<.10	15	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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 94.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, Feb. 20 to Apr. 2, Apr. 19, 20, 29, 30, and June 15-17, 30, which are poor. No known regulation above station.

AVERAGE DISCHARGE.--19 years, 27.0 ft³/s (9.45 in/yr), 19,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s June 13, 1973 (gage height, 25.69 ft); minimum daily, 1.0 ft³/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 ft³/s), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 24	0200	* 544	*12.38	No other peak greater than base discharge.			

Minimum discharge, 4.5 ft³/s Aug. 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	24	12	86	21	191	21	18	7.9	6.1	5.7	7.6
2	7.3	115	11	35	21	124	19	15	7.5	6.2	5.7	7.1
3	7.2	49	11	51	19	64	18	14	7.3	6.8	7.6	7.1
4	7.2	31	143	38	20	51	17	12	7.1	8.1	6.1	7.6
5	7.3	24	133	26	34	41	17	11	7.1	8.7	5.6	8.7
6	9.5	21	68	21	24	33	15	10	7.3	7.8	5.5	8.7
7	8.9	19	34	19	19	30	14	9.8	6.9	7.0	5.4	8.7
8	10	18	27	17	17	28	13	9.4	6.7	6.6	5.7	8.4
9	10	16	24	16	16	27	13	9.3	6.8	6.4	5.5	8.7
10	11	16	22	17	28	26	13	9.8	8.5	6.3	5.3	21
11	16	14	20	16	141	24	13	9.4	7.0	9.2	5.1	31
12	17	12	19	14	50	23	13	9.0	6.4	7.4	5.0	14
13	53	11	19	14	33	22	12	8.7	6.3	6.7	5.0	13
14	99	11	29	19	27	22	11	8.7	6.1	6.2	5.1	12
15	37	12	29	17	23	29	11	8.7	6.0	9.1	5.6	9.6
16	20	129	45	19	21	25	9.8	8.1	5.9	8.3	5.5	8.7
17	16	72	43	47	20	25	9.2	7.7	5.8	9.0	5.1	8.7
18	16	45	28	24	19	22	9.1	7.6	14	8.2	4.9	8.4
19	67	41	23	18	18	19	9.0	7.4	18	6.7	4.9	8.4
20	43	24	20	15	17	141	9.2	7.5	12	14	5.4	8.2
21	101	19	19	13	16	162	9.5	11	10	16	43	7.8
22	139	16	17	12	18	51	14	14	9.1	9.0	14	7.3
23	53	16	16	13	219	35	12	34	8.2	7.5	9.9	7.6
24	83	15	16	13	371	29	14	20	7.8	6.9	9.9	7.8
25	96	17	15	13	137	25	11	12	7.5	6.6	16	7.6
26	157	20	13	12	78	22	86	10	7.3	6.4	9.9	7.6
27	53	18	14	77	61	48	79	9.6	8.4	6.1	8.7	7.6
28	36	16	16	103	65	37	29	9.4	7.0	6.0	7.6	7.1
29	37	14	15	37	---	27	24	9.0	6.4	6.0	7.6	25
30	27	13	24	28	---	25	21	8.6	6.4	6.2	8.7	42
31	26	---	91	25	---	27	---	8.2	---	6.0	8.7	---
TOTAL	1277.9	868	1016	875	1553	1455	565.8	346.9	238.7	237.5	253.7	343.0
MEAN	41.2	28.9	32.8	28.2	55.5	46.9	18.9	11.2	7.96	7.66	8.18	11.4
MAX	157	129	143	103	371	191	86	34	18	16	43	42
MIN	7.2	11	11	12	16	19	9.0	7.4	5.8	6.0	4.9	7.1
CFSM	1.06	.75	.85	.73	1.43	1.21	.49	.29	.21	.20	.21	.29
IN.	1.23	.83	.97	.84	1.49	1.39	.54	.33	.23	.23	.24	.33
AC-FT	2530	1720	2020	1740	3080	2890	1120	688	473	471	503	680

CAL YR 1984	TOTAL	11191.6	MEAN 30.6	MAX 631	MIN 5.7	CFSM .79	IN 10.73	AC-FT	22200	
WTR YR 1985	TOTAL	9030.5	MEAN 24.7	MAX 371	MIN 4.9	CFSM .64	IN 8.66	AC-FT	17910	

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 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 10...	1540	11	67	--	15	4	3.7	1.4	7.3
NOV 26...	1415	19	66	16.0	15	5	3.7	1.4	7.1
JAN 17...	1740	41	57	10.5	14	6	3.4	1.3	6.3
FEB 20...	0810	17	67	13.0	15	6	3.7	1.4	6.6
APR 02...	1700	19	66	16.5	16	6	3.8	1.5	6.7
MAY 21...	1750	12	66	--	16	3	3.9	1.4	7.3
JUL 01...	1700	6.3	69	--	15	4	3.8	1.4	7.5
AUG 21...	1640	30	57	26.0	12	5	2.8	1.1	5.8
SEP 26...	1625	7.5	67	22.5	14	3	3.5	1.3	7.5

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 10...	.8	1.0	11	7.0	11	<.10	15	53
NOV 26...	.8	1.0	10	7.3	11	<.10	16	53
JAN 17...	.8	.90	8	6.0	10	--	12	45
FEB 20...	.8	.70	9	6.5	10	<.10	15	49
APR 02...	.8	1.0	10	5.0	12	<.10	15	51
MAY 21...	.8	1.5	13	7.3	11	<.10	14	54
JUL 01...	.9	1.5	11	6.6	11	<.10	16	54
AUG 21...	.8	1.8	7	6.5	9.5	<.10	11	43
SEP 26...	.9	1.1	11	6.2	10	<.10	17	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 at downstream side of bridge on State Highway 787, 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. WRD TX-81-1: 1980(M, m).

GAGE.--Water-stage recorder. Datum of gage is 35.92 ft above 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.--Records fair except those for estimated daily discharges, Oct 1-30, Dec. 31 to Jan. 3, Jan. 6-10, Apr. 12 to May 2, and June 18-30, which are poor. Since Sept. 28, 1968, flow regulated by Livingston Reservoir (station 08066190) capacity 1,788,000 acre-ft, 35 mi upstream. There are 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); 17 years (water years 1969-85) flow regulated by Livingston Reservoir, 7,214 ft³/s (5,227,000 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, 45,600 ft³/s Oct. 30 at 1400 hours (gage height, 24.38 ft); minimum daily, 476 ft³/s Oct. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	686	42000	6240	20700	2800	25100	14800	12300	9710	2350	1520	777
2	686	34900	6310	19800	2690	30500	14600	12800	9710	2310	1530	769
3	686	25800	6910	19200	2620	29600	14500	12800	9160	2080	1530	756
4	614	14900	7750	17400	2600	29200	14100	12700	7660	1970	1530	833
5	510	8490	8320	15500	2660	28700	11200	12600	6230	1930	1510	802
6	505	4720	8400	15100	2700	27900	10000	13000	5030	1920	1450	801
7	500	3430	7700	15000	2640	24400	8770	14700	4290	1890	1400	790
8	496	3200	6190	14900	2710	18500	8410	15100	4170	1870	1480	824
9	490	3680	5770	14800	3700	13000	7490	15300	4140	1870	1400	802
10	490	3790	5580	14700	4150	9350	5940	16100	4120	1860	1380	828
11	476	3700	4870	13400	8270	7090	4890	16100	4120	1850	1370	1020
12	631	3640	3880	10200	15500	5660	4190	16100	4590	1870	1370	946
13	647	3550	3050	8860	17600	5390	4000	15000	5250	1800	1360	856
14	773	3040	2680	7140	17600	4740	3970	10100	5500	1640	1380	817
15	790	2590	5090	4650	16800	5050	3950	8520	5520	1620	1400	798
16	686	3320	6400	3580	13100	5270	3880	10200	5490	1610	1360	786
17	567	3990	7810	4130	9240	5250	3850	11600	5490	1580	1330	779
18	567	3450	10900	8380	8380	5200	3780	11800	5550	1560	1320	780
19	686	3760	15400	11400	7100	5250	3710	11800	6680	1610	1310	777
20	990	4470	16200	12500	5060	7630	4050	11800	8410	1600	1300	772
21	8500	4170	16100	13700	3290	13100	4560	11900	8310	1650	1320	767
22	27500	3040	16100	13700	2580	14900	4560	11900	5940	1590	1310	767
23	34100	2750	16100	13600	5920	14800	4560	12000	5090	1540	1280	796
24	37600	2690	16100	12400	15300	14500	5110	11900	5020	1490	1280	957
25	41500	2670	16000	10100	17200	14100	6740	11100	4980	1490	1290	933
26	43900	2770	16000	9470	19000	14200	7050	10600	4310	1490	1270	949
27	44800	3140	16100	8280	20400	16600	7700	10500	3310	1490	1220	2630
28	45100	3290	17500	8690	21200	20000	7850	9930	2600	1490	1110	5420
29	45400	4480	18100	6370	---	20400	9360	9740	2430	1500	983	6080
30	45500	5900	18200	3710	---	19600	10100	9740	2380	1500	899	5370
31	45300	---	19000	3070	---	16600	---	9710	---	1510	839	---
TOTAL	431676	215320	330750	354430	252810	471580	217670	379440	165190	53530	41031	40982
MEAN	13930	7177	10670	11430	9029	15210	7256	12240	5506	1727	1324	1366
MAX	45500	42000	19000	20700	21200	30500	14800	16100	9710	2350	1530	6080
MIN	476	2590	2680	3070	2580	4740	3710	8520	2380	1490	839	756
AC-FT	856200	427100	656000	703000	501400	935400	431700	752600	327700	106200	81380	81290

CAL YR 1984 TOTAL 1960451 MEAN 5356 MAX 45500 MIN 476 AC-FT 3889000
WTR YR 1985 TOTAL 2954409 MEAN 8094 MAX 45500 MIN 476 AC-FT 5860000

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, 1953-85): Maximum daily, 3,800 microsiemens Oct. 30, 1956; minimum daily, 103 microsiemens Nov. 9, 1946.
WATER TEMPERATURES (1953-58, 1961-74, 1976-85): 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, 446 microsiemens Oct. 27,28; minimum daily, 192 microsiemens Nov. 17.
WATER TEMPERATURES: Maximum daily, 32.0°C Sept. 1; minimum daily, 5.5°C Feb. 2, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	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 26...	1315	44000	443	7.6	22.5	60	24	8.8	101	1.9	44
NOV 05...	1300	8260	326	7.4	20.5	70	40	8.4	93	2.0	50
FEB 14...	1330	17600	328	7.3	9.0	40	12	12.6	107	1.7	52
MAR 28...	1315	20300	339	7.6	17.5	5	14	12.0	126	1.9	130
JUN 20...	1115	8470	384	8.1	26.5	25	12	8.2	102	1.9	270
JUL 18...	1330	1550	380	8.2	29.0	25	18	10.0	129	3.2	K12
AUG 27...	1237	1220	384	8.8	29.0	15	2.5	11.2	144	4.5	K9

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 26...	230	140	36	47	4.5	38	1	5.6	100	49	40
NOV 05...	58	99	5	34	3.3	28	1	4.9	94	34	29
FEB 14...	2400	110	28	38	3.6	22	1	5.0	82	36	28
MAR 28...	150	110	29	38	3.9	24	1	4.8	82	46	26
JUN 20...	150	130	29	44	4.2	25	1	4.6	99	42	27
JUL 18...	290	130	26	45	4.1	26	1	5.0	103	43	31
AUG 27...	24	140	30	47	4.5	28	1	4.9	107	37	30

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, 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, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT 26...	.40	7.0	--	250	75	20	.29	.010	.30	--	.050
NOV 05...	.40	7.7	200	200	55	9	.48	.020	.50	.54	.050
FEB 14...	.30	10	188	190	14	1	.78	.020	.80	.76	.060
MAR 28...	.20	8.6	213	200	27	<1	.78	.020	.80	.80	.020
JUN 20...	.30	5.1	228	210	14	5	--	<.010	.20	.23	.020
JUL 18...	.30	6.0	231	220	8	1	--	<.010	<.10	<.10	.020
AUG 27...	.30	5.7	240	220	2	1	--	<.010	<.10	<.10	.030

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 26...	--	.85	.90	.220	--	--	5.6	--	--	--
NOV 05...	.030	.75	.80	.280	.220	.190	8.5	57	1270	92
FEB 14...	.040	--	--	.170	.130	.140	--	17	808	82
MAR 28...	.040	.68	.70	.190	.160	.140	7.3	98	5370	35
JUN 20...	.020	.78	.80	.160	.120	.100	6.6	46	1050	61
JUL 18...	.020	.58	.60	.200	.160	.120	8.0	5	21	92
AUG 27...	.020	.87	.90	.240	.180	.150	3.8	30	99	41

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 05...	1300	3	53	<.0	<1	<1	<3	3	48	15
FEB 14...	1330	1	48	<.5	<1	<1	<3	2	25	<1
JUN 20...	1115	4	56	<.5	<1	<1	<3	2	12	1
AUG 27...	1237	7	52	<.5	<1	<1	<3	1	9	<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)
NOV 05...	8	9	<.1	<10	4	<1	<1	230	<6	4
FEB 14...	9	5	<.1	<10	8	<1	<1	270	<6	<3
JUN 20...	10	2	<.1	<10	1	<1	<1	330	<6	12
AUG 27...	9	5	<.1	<10	<1	<1	<1	370	<6	27

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)
AUG 27...	1237	<.1	<.10	<.01	<.1	<.01	<.01	<.01	<.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOMYL TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
AUG 27...	<.01	<.01	<.01	<.01	<.01	<.01	<2.0	<.01	<.01	<.01	<.01

DATE	PARATHION, TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 27...	<.01	<.1	<2.0	<2.0	<1	<.01	.16	<.01	<.01	<.01

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

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.	1984	431676	437	239	279000	39	45000	42	48700	120
NOV.	1984	215320	323	182	106000	25	14600	31	17800	110
DEC.	1984	330750	322	182	162000	25	22200	30	27200	110
JAN.	1985	354430	328	185	177000	26	24500	31	29700	110
FEB.	1985	252810	319	180	123000	25	16800	30	20600	100
MAR.	1985	471580	338	190	242000	27	33900	32	40700	110
APR.	1985	217670	341	192	113000	27	15900	32	19000	110
MAY	1985	379440	369	206	211000	30	31000	35	35900	110
JUNE	1985	165190	380	211	94100	31	14000	36	16100	120
JULY	1985	53530	384	213	30800	32	4620	37	5280	120
AUG.	1985	41031	389	216	23900	32	3600	37	4100	120
SEPT	1985	40982	390	216	23900	33	3620	37	4110	120
TOTAL		2954409	**	**	1585000	**	230000	**	269000	**
WTD.AVG.		8094	356	199	**	29	**	34	**	110

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	373	325	299	310	326	337	352	377	386	384	397
2	432	345	326	311	322	333	339	357	377	387	386	399
3	438	312	320	320	332	340	340	360	379	388	385	397
4	440	311	302	330	335	337	340	361	380	384	386	380
5	437	317	297	333	332	342	340	363	381	386	388	386
6	411	319	298	334	328	347	341	362	382	385	389	390
7	408	313	301	333	322	349	342	361	384	388	389	395
8	419	290	298	332	324	346	343	363	375	386	370	385
9	407	289	305	333	335	347	345	364	383	380	386	395
10	405	303	314	334	338	346	343	365	385	374	389	392
11	422	323	312	335	300	345	344	368	384	384	391	310
12	418	311	315	334	320	344	345	369	377	380	389	320
13	382	312	317	336	326	345	346	367	380	386	390	364
14	345	315	320	337	334	348	345	366	382	387	384	384
15	350	321	317	334	339	345	346	369	378	381	378	388
16	312	316	316	333	342	344	347	379	383	384	387	390
17	335	192	315	329	340	343	349	377	385	381	388	394
18	382	259	319	327	342	341	348	376	383	386	400	396
19	389	250	325	332	342	338	349	377	369	385	389	397
20	355	274	324	334	341	318	348	378	375	373	391	397
21	351	302	322	337	338	302	347	375	376	375	393	398
22	419	304	324	341	337	323	348	376	378	379	392	402
23	435	308	325	343	315	327	348	371	379	385	390	398
24	443	305	324	341	240	331	346	374	380	386	392	387
25	445	310	326	340	289	338	340	375	381	385	391	398
26	443	305	329	341	303	340	346	376	380	387	387	395
27	446	304	333	337	318	343	326	377	382	388	391	398
28	446	308	331	278	329	340	330	379	384	389	392	405
29	445	311	330	308	---	340	336	377	386	387	394	383
30	444	313	329	300	---	339	345	378	385	390	402	399
31	426	---	331	292	---	341	---	378	---	385	395	---
MEAN	408	304	318	327	324	338	343	370	380	384	389	387

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

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

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 mi².

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.--Discharge below 10,000 ft³/s not published. Published discharges are estimated using records for Trinity River near Romayor (station 08066500), intervening area computation, and discharge measurements. Records poor. Considerable regulation of flow by Livingston Reservoir (station 08066190) 88.9 mi upstream. Many diversions above station for municipal supplies, industrial uses, and irrigation. Gage-height telemeter located at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 114,000 ft³/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, 46,000 ft³/s Nov. 1, 2; maximum gage height, 27.98 ft Nov. 2

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 46,000 ft³/s Nov. 1, 2; maximum gage height, 27.98 ft Nov. 2 at 0200 hours; minimum discharge not determined (affected by tides); minimum gage height not determined (affected by tides).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	46000	---	20200	---	23000	17000	10400				
2	---	46000	---	21100	---	27000	15200	12200				
3	---	43000	---	20900	---	30000	14600	12500				
4	---	36300	---	20500	---	31000	14200	12500				
5	---	26200	---	19200	---	31800	13400	12500				
6	---	17600	---	17600	---	31600	11800	12600				
7	---	12500	---	16800	---	31200	10600	13000				
8	---	---	---	16100	---	27800	---	14000				
9	---	---	---	15800	---	22100	---	14400				
10	---	---	---	15600	---	17600	---	14700				
11	---	---	---	15200	---	12800	---	15300				
12	---	---	---	14000	12000	10400	---	15600				
13	---	---	---	12000	16500	---	---	15600				
14	---	---	---	10500	18000	---	---	14000				
15	---	---	---	---	17500	---	---	11300				
16	---	---	---	---	15000	---	---	---				
17	---	---	---	---	11000	---	---	10400				
18	---	---	---	---	---	---	---	11500				
19	---	---	11600	10000	---	---	---	11600				
20	---	---	14600	12000	---	---	---	11700				
21	---	---	15600	13000	---	11800	---	11900				
22	10700	---	15800	14000	---	15400	---	11900				
23	23900	---	15800	14000	---	16100	---	12100				
24	29700	---	15800	13000	10000	15800	---	12200				
25	33100	---	15800	11500	16000	15200	---	11900				
26	36600	---	15900	10500	18000	14700	---	11300				
27	38900	---	16000	---	19500	14800	---	11000				
28	40200	---	16400	10200	21000	17000	---	10700				
29	42000	---	17400	10300	---	19600	---	10200				
30	44100	---	18000	---	---	20300	---	10000				
31	45300	---	18800	---	---	19500	---	---				
TOTAL	---	---	---	---	---	---	---	---				
MEAN	---	---	---	---	---	---	---	---				
MAX	---	---	---	---	---	---	---	---				
MIN	---	---	---	---	---	---	---	---				
AC-FT	---	---	---	---	---	---	---	---				

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 determined.

REMARKS.--No estimated daily discharges. Records good. No diversion between pump plant and gage. Water is pumped from Trinity River for industrial use.

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, 384 ft^3/s July 2, 3; minimum daily, 163 ft^3/s Oct. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	246	227	234	227	230	266	287	373	362	307	318
2	230	227	215	230	240	227	253	272	373	384	339	321
3	222	259	224	234	290	240	233	303	362	384	350	332
4	215	256	230	250	314	212	250	314	343	343	343	313
5	234	256	234	253	290	218	240	321	354	279	321	266
6	240	240	215	246	274	222	250	343	358	314	293	256
7	234	230	234	250	266	224	250	339	369	350	261	253
8	250	256	218	262	256	234	224	358	381	290	240	253
9	243	243	227	256	253	240	246	339	377	272	246	262
10	250	240	212	262	234	237	227	310	369	300	253	259
11	250	250	227	237	191	243	253	279	381	330	250	246
12	240	243	218	215	194	259	272	266	373	328	243	193
13	240	215	221	224	215	256	272	253	349	318	259	283
14	243	234	227	218	227	243	293	290	347	328	272	286
15	246	227	224	209	240	253	272	300	347	332	262	296
16	253	212	197	224	234	234	293	309	343	332	272	286
17	220	212	206	237	227	227	297	328	332	332	303	272
18	206	212	230	240	240	246	286	347	318	286	303	264
19	237	221	200	250	224	250	303	358	307	266	318	272
20	221	230	203	240	226	215	321	347	227	253	335	272
21	221	234	218	207	230	220	303	303	224	272	317	269
22	221	224	227	283	227	212	318	266	246	283	300	286
23	200	243	212	328	234	221	310	283	276	300	269	279
24	163	230	215	296	234	200	310	269	272	293	290	283
25	200	250	230	253	212	215	314	256	303	311	279	262
26	191	246	230	253	191	240	314	286	325	303	286	250
27	215	234	234	230	224	237	279	314	314	318	296	256
28	209	237	250	246	230	246	253	343	318	358	286	266
29	209	237	218	237	---	266	300	358	321	321	296	262
30	227	227	234	209	---	250	272	382	332	318	290	240
31	227	---	212	250	---	262	---	373	---	307	296	---
TOTAL	7003	7071	6869	7563	6644	7279	8274	9696	9914	9767	8975	8156
MEAN	226	236	222	244	237	235	276	313	330	315	290	272
MAX	253	259	250	328	314	266	321	382	381	384	350	332
MIN	163	212	197	207	191	200	224	253	224	253	240	193
AC-FT	13890	14030	13620	15000	13180	14440	16410	19230	19660	19370	17800	16180

CAL YR 1984 TOTAL 99875 MEAN 273 MAX 396 MIN 163 AC-FT 198100
WTR YR 1985 TOTAL 97211 MEAN 266 MAX 384 MIN 163 AC-FT 192800

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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 14, 15, Nov. 2 and June 19, 20. Records fair. Stage discharge relationship affected by seasonal vegetal growth. 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. Harris County Flood Control District rain gage and gage-height telemeters at station.

AVERAGE DISCHARGE.--14 years (water years 1972-85), 78.9 ft³/s (57,160 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,760 ft³/s June 5, 1981 (gage height, 23.92 ft); maximum gage height, 24.91 ft June 13, 1973; no flow occasionally during pumping season of some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 11	0700	1,700	18.30	Mar. 20	1800	*2,780	*21.02
Feb. 24	0100	1,280	16.62				

Minimum discharge, no flow June 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	8.9	1.4	496	5.2	772	5.7	3.9	.00	.56	52	1.0
2	4.0	210	1.3	201	4.4	318	5.1	4.6	.24	.97	44	.61
3	3.2	135	1.3	259	3.5	110	4.1	6.3	.27	1.1	66	.27
4	2.5	36	1.3	112	3.1	58	3.2	6.9	.55	13	63	.17
5	2.0	20	2.9	44	3.1	41	2.8	12	.12	11	61	.84
6	1.8	12	11	25	3.1	26	3.1	16	1.2	15	70	1.7
7	1.9	7.9	7.2	15	3.1	18	3.6	15	1.5	19	100	1.1
8	2.2	6.2	4.2	11	3.1	14	3.9	15	.80	26	124	.63
9	2.1	5.4	3.1	7.4	3.0	12	5.3	7.7	1.8	23	114	.26
10	2.1	4.1	2.7	6.8	47	9.5	5.7	.31	1.5	23	90	.22
11	2.6	3.4	2.5	13	1310	8.6	6.5	16	1.3	19	75	1.8
12	2.6	2.7	2.1	9.0	430	7.9	4.2	7.9	1.2	12	66	6.8
13	4.1	2.4	1.9	6.4	116	6.8	3.7	6.4	1.2	11	55	5.5
14	213	2.2	1.8	7.8	49	87	48	7.6	.23	8.0	77	4.4
15	240	2.1	1.7	11	28	177	22	2.7	1.4	24	60	2.1
16	69	2.1	13	11	23	118	15	.97	.22	29	33	1.3
17	47	21	41	70	16	69	8.6	2.5	.03	14	21	.79
18	29	14	19	43	11	33	.35	5.2	66	13	16	.58
19	62	8.6	11	24	8.2	15	3.4	8.3	541	7.3	9.5	.42
20	83	5.7	6.9	14	7.0	1550	1.2	3.8	390	34	9.6	.32
21	66	3.7	5.2	10	5.7	1460	6.4	16	195	43	41	.38
22	46	2.7	3.9	6.5	5.1	541	6.0	49	129	31	50	.32
23	40	2.2	2.7	5.2	301	190	6.9	39	38	22	45	.25
24	157	1.9	2.4	4.8	930	67	4.8	43	28	27	42	.33
25	120	1.8	2.1	4.0	669	29	2.5	12	12	31	59	.42
26	80	1.7	2.0	3.8	295	14	3.2	4.2	8.5	29	67	16
27	41	1.9	2.0	3.7	165	12	9.5	3.8	9.5	30	40	24
28	29	1.7	2.3	6.3	157	12	16	6.0	11	27	12	11
29	19	1.7	2.5	7.0	---	11	14	5.9	6.6	30	5.7	104
30	14	1.6	4.9	5.8	---	8.9	5.5	.67	.58	39	3.4	1010
31	11	---	191	5.6	---	8.4	---	.03	---	48	1.6	---
TOTAL	1402.3	530.6	358.3	1449.1	4604.6	5804.1	230.25	328.68	1448.74	660.93	1572.8	1197.51
MEAN	45.2	17.7	11.6	46.7	164	187	7.68	10.6	48.3	21.3	50.7	39.9
MAX	240	210	191	496	1310	1550	48	49	541	48	124	1010
MIN	1.8	1.6	1.3	3.7	3.0	6.8	.35	.03	.00	.56	1.6	.17
AC-FT	2780	1050	711	2870	9130	11510	457	652	2870	1310	3120	2380
(††)	6.66	1.18	2.87	2.18	6.36	4.89	1.69	.91	5.62	2.26	6.06	7.15

CAL YR 1984 TOTAL 8953.79 MEAN 24.5 MAX 455 MIN .00 AC-FT 17760 (††) 33.59
WTR YR 1985 TOTAL 19587.91 MEAN 53.7 MAX 1550 MIN .00 AC-FT 38850 (††) 47.83

(††) Rainfall, in inches, at gaging station.

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 1985

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)	1953-85	2-13-85 8-15-85	1.18 .81
		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, 1952-85	1- 8-85 8- 1-85	2.50 2.78
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	1964-85	2-20-85	3.16
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)	1947-85	2-19-85 8- 9-85	1.49 1.08
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, 1943-85	1- 9-85	.95
		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.	-	1979-85	5-30-85	101
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.	-	1979-85	5-13-85	9.2

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 1985

Station no.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Elevation (feet)	Discharge (ft^3/s)
		Red River basin					
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†, 1984-85	6- 6-85	16.50	18,000
		Trinity River basin					
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.	-	1981-85	6-28-83 3-12-84 2-25-85	a538.67 a537.81 545.36	- - -
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.	6.77	1962-79, 1984-85	4-27-85	567.67	4,070
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.	8.08	1974-79, 1984-85	10-20-84	516.31	1,820
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.	2.53	1974-79, 1984-85	10-20-84	431.59	954
		Cedar Bayou basin					
08067510	Cedar Bayou near Baytown, Tex.	Lat 29°46'12", long 94°54'59", Chambers-Harris County line, at bridge on State Highway 146, 0.2 mi downstream from Cary Bayou, 0.2 mi upstream from Saw Pit Gully, and 4.3 mi northeast of Baytown.	169	1984-85	9-24-84 10-20-84	e*2.53 *3.14	- -

* Elevation.
† Operated as a continuous-record station.
a Revised.
e Maximum for partial year; probably exceeded during year.

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 1985

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
Trinity River basin						
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.	-	1984-85	10-26-84 5- 8-85 5- 8-85	43.8 1,220 1,150
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.	-	1984-85	10-26-84 5- 8-85 5- 8-85	88.3 1,370 1,420

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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)
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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