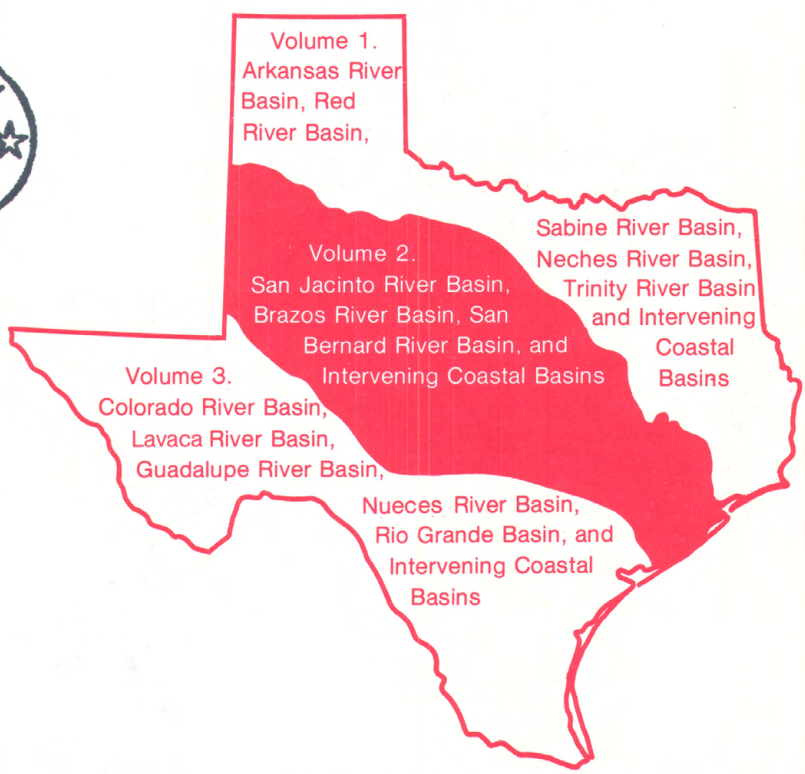
Water Resources Data Texas Water Year 1987

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-87-2
Prepared in cooperation with the State of Texas
and with other agencies

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

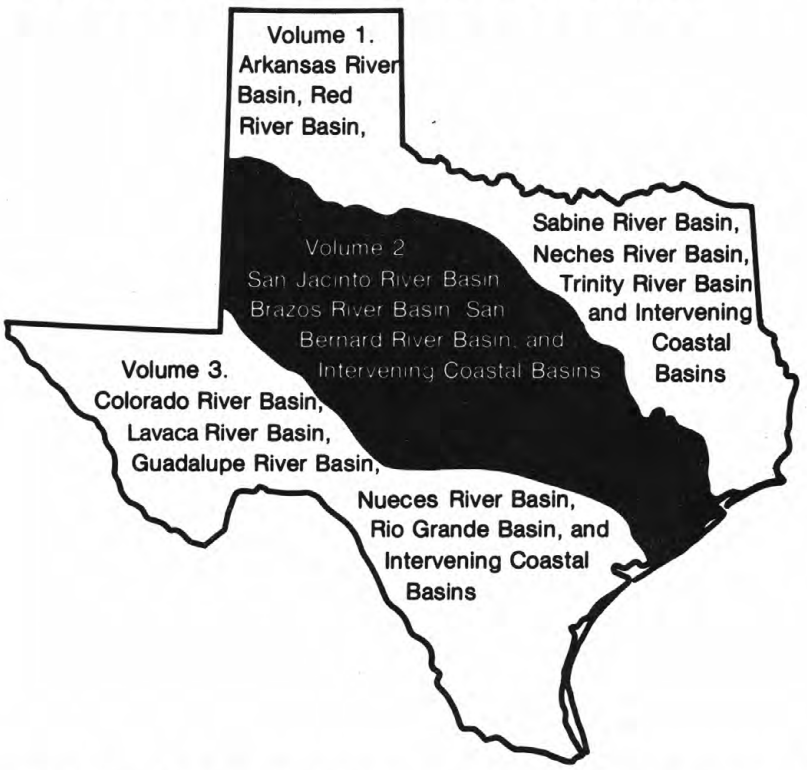
The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

Water Resources Data
Texas
Water Year 1987

Volume 2. San Jacinto River Basin, Brazos River Basin, San Bernard 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-87-2
Prepared in cooperation with the State of Texas
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, 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

1988

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, Lavacá 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 is accurate,

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16. Abstract (Limit: 200 words)

Surface-water data for the 1987 water year for Texas are presented in three volumes, appropriately identified as to content by river basins. Data in each volume consist of records of stage, discharge, and water quality of streams and canals; and stage, contents, and water quality of lakes and reservoirs. Also included are crest-stage and flood-hydrograph partial-record stations, reconnaissance partial-record stations, and low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. Records for a few pertinent stations in bordering States are also included. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Texas.

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FOR WHICH RECORDS ARE PUBLISHED

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WATER RESOURCES DATA - TEXAS, 1987

VOLUME 2
SAN JACINTO RIVER BASIN, BRAZOS RIVER BASIN, SAN BERNARD RIVER BASIN, AND INTERVENING 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 2 contains records for water discharge at 112 gaging stations; stage only at 9 gaging stations; stage and contents at 24 lakes and reservoirs; and water quality at 72 gaging stations. Also included are data for 39 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-87-2." 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 District 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 1987 are:

Corps of Engineers, U.S. Army.

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

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, Carrollton, Corpus Christi, Dallas, Gainesville, Garland, Georgetown, Graham, Houston, Lubbock, Nacogdoches, Runaway Bay, San Angelo, San Antonio, and Wichita Falls; Bexar, Medina, and Atascosa Counties Water Control and Improvement District No. 1; Brazos River Authority; 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; Lower Colorado River Authority; Lower Neches Valley Authority; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; Pecos River Commission; Red Bluff Water Power Control District; Sabine River Authority of Texas; Sabine River Compact Administration; San Antonio City Public Service Board; San Antonio City Water Board; San Antonio River Authority; San Jacinto River Authority; Tarrant County Water Control and Improvement District No. 1; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; Upper Trinity Basin Water Quality Compact; West Central Texas Municipal Water District; and Wichita County Water Improvement District No. 2.

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.

Precipitation for the first half of the 1987 water year was generally above normal over the entire State. For the second half of the year, the western two-thirds of the State received normal to above-normal precipitation, with an extremely wet period occurring during May and June. For eastern Texas, precipitation during the latter half of the 1987 water year ranged from normal to below normal.

As a result of the above-normal precipitation which occurred during the year, record or near-record runoff volumes were recorded at a number of gaging sites. Streamflow stations on the Guadalupe River near Spring Branch and at Victoria and on the Red River near Burkburnett had the largest yearly runoff totals since those stations were established. The lower station on the Colorado, which was established in 1948, had the second highest recorded runoff total while the lower station on the Brazos River experienced the third largest runoff total since that station was established in 1922. Although runoff in Texas streams was extremely large during the year, no outstanding floods occurred except for the upper Guadalupe River basin where severe flooding occurred during July.

Conservation storage in 71 selected reservoirs throughout the State, with a combined conservation capacity of 31,903,700 acre-feet, increased from 85 percent at the end of September 1986, to 88 percent at the end of September 1987. Records from these 71 reservoirs indicate that contents increased in 28, decreased in 36, and remained the same in 7.

The area for which water-resources data are presented in volume 2 extends from the New Mexico border in northwestern Texas, southeastward across the central part of the State to the upper middle Texas Gulf Coast. Normal annual precipitation ranges from less than 17 inches in the westernmost part of the area to nearly 50 inches along the Gulf Coast. Annual runoff ranges from less than 1.0 inch in the west to more than 15 inches in places along the Gulf Coast. The location of selected streamflow and water-quality stations in the area of Texas covered by volume 2 is shown in figure 1.

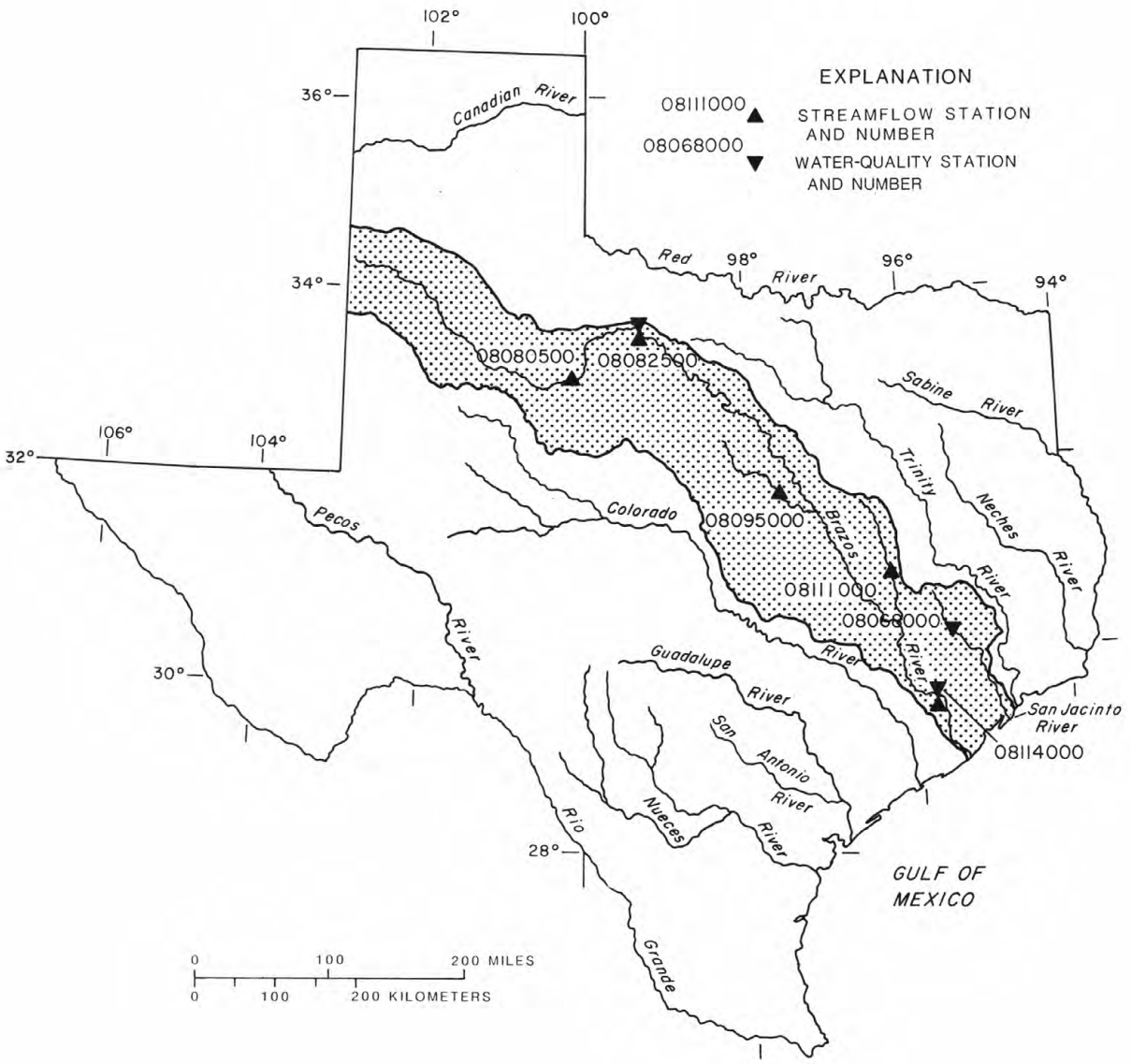

Figure 1.--Area of Texas covered by volume 2 (shaded) and location of selected streamflow and water-quality stations in volume 2.

Streamflow

Streamflow was above normal over most of the area covered by volume 2 from early October through January. Flow rates were back in the normal range in February and generally remained there through May. Heavy rainfall in June produced excessive runoff in June and July, with streamflow returning to normal during August and September. Total runoff for the 1987 water year for the Brazos River at Richmond (station 08114000, established in 1922) was the third highest for the period of record, exceeded only during the 1951 and 1957 water years.

Streamflow at the hydrologic index station North Bosque River near Clifton was excessive (within the highest 25 percent of record) during the periods December through March and June and July, and normal for the remainder of the year. A comparison of streamflow for the 1987 water year with streamflow for the period of record at five selected stations (fig. 1) for which data are included in volume 2 is presented in the following table:

Station no.	and name	Discharge during 1987 water year (cubic feet per second) Max.	Min.	Avg.	Discharge during period of record (cubic feet per second) Max.	Min.	Avg.
08080500	Double Mountain Fork Brazos River near Aspermont, Tex. 1/	20,800	4.4	227	91,400	0	162 (1925-34, 1941-87)
08082500	Brazos River at Seymour, Tex.	21,900	44	742	95,400	0	378 (1925-87)
08095000	North Bosque River near Clifton, Tex. 2/	20,500	9.1	285	92,800	0	161 (1968-87)
08111000	Navasota River near Bryan, Tex.	7,320	14	740	38,200	0	600 (1961-87)
08114000	Brazos River at Richmond, Tex.	67,800	1,650	13,550	123,000	35	7,301 (1941-87)

1/ National Stream Quality Accounting Network (NASQAN) site.
2/ Hydrologic index station.

Streamflow was variable at the other three hydrologic index stations in the State. 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. Streamflow in the Neches River near Rockland was excessive during November, December, and March, deficient (within the lowest 25 percent of record) during May and normal for the remainder of the year. The North Concho River near Carlsbad had excessive streamflow from October through April and during July, and normal flow rates for the remaining four months. Streamflow in the Guadalupe River near Spring Branch was excessive during the entire water year.

Conservation storage in 21 selected reservoirs in this area (volume 2) of the State, with a total combined conservation capacity of 3,921,370 acre-feet, decreased from 94 percent at the end of September 1986, to 89 percent at the end of September 1987. Records from the 21 reservoirs indicate that contents increased in 7, decreased in 10, and remained the same in 4.

Water Quality

Dissolved-solids concentrations in most streams in the State are inversely related to water discharge. During years when rainfall and runoff are deficient, streamflow commonly is much more mineralized than in years when rainfall 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 rainfall and runoff.

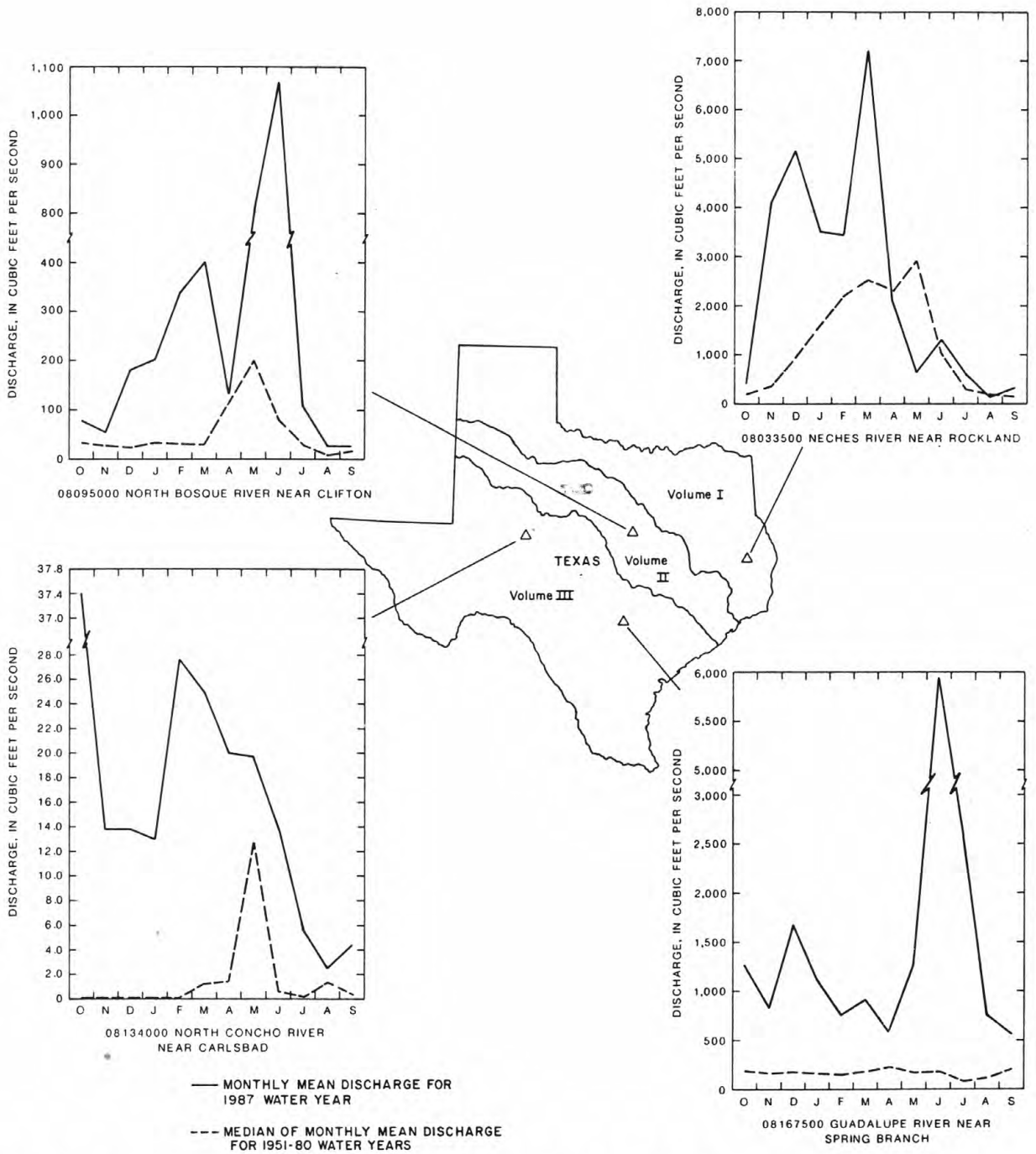

Figure 2.--Comparison of monthly mean discharges at four long-term hydrologic index gaging stations during the 1987 water year with median of the monthly mean discharges for 1951-80 water years.

Records of discharge-weighted-average concentrations of dissolved solids for the 1987 water year are compared with those for the 1983-87 water years for selected long-term daily or continuous-record stations (fig. 1) in the San Jacinto and Brazos 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)	
		1987	83-87	1987	1983-87
San Jacinto River basin					
08068000	West Fork San Jacinto River near Conroe, Tex.	482	528	131	110
Brazos River basin					
08082500	Brazos River at Seymour, Tex.	742	382	3,020	3,070
08114000	Brazos River at Richmond, Tex.	13,550	7,067	461	364

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 1987 water year that began October 1, 1986, and ended September 30, 1987. 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 indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Texas, for surface-water stations where only miscellaneous measurements are made.

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 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 record. 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 "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 Texas District Office 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 Texas District Office.

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 meter (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 ($CaCO_3$).

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 sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with 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 [mg O/(m^2.time)] for periphyton and macrophytes and [mg O/(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, 1987, is called the "1987 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 abbreviation 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, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (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 measurement, 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.
7-C3. "A model for simulation of flow in singular and interconnected channels," by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1983. 110 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.

08067600 LAKE CONROE NEAR CONROE, TX

LOCATION.--Lat 30°21'30", long 95°33'39", Montgomery County, Hydrologic Unit 12040101, at service outlet tower at Conroe Dam on West Fork San Jacinto River, 140 ft upstream from centerline of dam, and 7.4 mi west of Conroe.

DRAINAGE AREA.--445 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--The lake is formed by an earthfill dam 11,300 ft long, including a controlled spillway. The dam was completed Sept. 1, 1972, and deliberate impoundment began Jan. 9, 1973. Water is used for municipal and industrial purposes in the Houston metropolitan area. In addition, a small diversion is made for cooling purposes at the Gulf State Utilities generating plant on Lewis Creek Reservoir near Conroe. During the current year, 1,641 acre-ft was diverted to Lewis Creek Reservoir for that purpose. A spillway with five 40- x 30-foot tainter gates is located near the center of dam. Low-flow releases are made through a separate multi-gated inlet tower. The tower has three gated openings and one uncontrolled opening. It is connected to a stilling basin and a concrete weir by a 14-foot-diameter conduit through the dam. 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	212.0	-
Design flood	205.5	532,000
Top of tainter gates	202.5	462,600
Top of conservation pool (uncontrolled tower outlet)	201.0	430,300
Crest of spillway (sill of tainter gates)	173.0	64,960
Lowest gated outlet (invert)	144.5	300

COOPERATION.--The capacity table, furnished by the San Jacinto River Authority, is based on Geological Survey maps dated 1958-59.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 512,000 acre-ft May 22, 1983 (elevation, 204.66 ft); minimum since normal operating level was reached, 360,400 acre-ft Nov. 22, 1980 (elevation, 197.46 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 454,500 acre-ft June 14 at 0200 to 1000 hours (elevation, 202.13 ft); minimum, 407,000 acre-ft Sept. 15,16 (elevation, 199.87 ft).

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

199.0	389,700
201.0	430,300
203.0	473,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412100	412100	431800	431100	431800	435000	427600	423000	429400	431800	423700	410900
2	411700	411700	431300	430700	431500	432400	427800	422800	429600	432400	423500	410500
3	411500	411500	431300	432800	431100	431500	427600	422600	432000	431500	423000	410100
4	411500	414200	431100	431500	430900	430700	427000	423000	431800	430300	422400	409400
5	411700	414000	431100	431100	430900	430500	427600	423500	430900	429400	422000	409000
6	411700	414200	430700	431300	431300	430500	427600	423700	430700	429400	421400	408600
7	411300	416200	430900	431500	430700	430700	427600	423900	430900	429600	420400	408200
8	411300	417300	430900	431300	430900	430700	427600	424300	431500	430300	420000	408000
9	411100	417700	433000	431800	430300	430700	427200	424300	432800	430700	419700	407600
10	410900	418300	432000	431500	429800	431300	427200	424500	432800	430100	419500	407600
11	410300	417300	431500	430900	430100	431100	426500	424500	432200	429400	418900	408000
12	413800	419500	430700	430700	430500	431300	426800	424500	444100	429400	418700	407800
13	413600	419500	430300	430700	430300	431100	427600	424900	454300	429200	417900	407800
14	413400	419300	431500	430900	429800	430900	427200	424700	453200	429200	417500	407600
15	413800	419500	437100	431300	434100	431100	427000	424700	448800	428600	417300	407000
16	413600	419700	438400	431800	433000	431300	426500	424700	445800	428000	416700	409200
17	413400	420200	437900	434500	431800	436200	426300	424700	442600	427600	416200	409400
18	413400	420600	441400	434100	430700	437300	425900	424900	440100	427400	416000	412300
19	412900	420400	440500	432800	430700	436000	425700	424300	435200	427400	415800	412300
20	412900	420800	438800	432000	432600	433700	425700	423500	432200	427000	415400	412100
21	412500	420200	437100	431100	433700	431800	426500	423500	429800	427400	414600	411700
22	412500	420400	438400	430700	433900	430700	425700	423700	429600	427400	414400	411300
23	413800	423500	439400	429800	433000	430900	425500	424100	429600	427000	414000	410700
24	413400	427000	439400	430700	433000	430500	425500	424700	429600	426300	413400	410300
25	413100	432000	438400	430900	434100	430700	425300	424500	429600	426100	412300	409600
26	412900	435000	436000	430700	436900	430700	424900	423900	429600	425700	411700	409200
27	412700	435400	433000	430500	437900	429800	424500	423700	428600	425700	411300	408800
28	412700	433900	431500	430700	437500	429800	424300	423700	428000	425500	411100	408600
29	412500	432000	430900	431100	---	428800	423700	427800	427600	424900	411100	409000
30	412500	431300	430900	431300	---	428400	423000	428600	429200	424700	411300	408200
31	412100	---	430900	430900	---	428000	---	429600	---	424100	411300	---
MAX	413800	435400	441400	434500	437900	437300	427800	429600	454300	432400	423700	412300
MIN	410300	411500	430300	429800	429800	428000	423000	422600	427600	424100	411100	407000
(†)	200.12	201.05	201.03	201.03	201.34	200.89	200.65	200.97	200.95	200.70	200.08	199.93
(ϕ)	-200	+19200	-400	0	+6600	-9500	-5000	+6600	-400	-5100	-12800	-3100

CAL YR 1986 MAX 449500 MIN 408800 (ϕ) +600
WTR YR 1987 MAX 454300 MIN 407000 (ϕ) -4100

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

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1973 to current year.

302127095335501 - LAKE CONROE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
26...	1054	1.00	230	8.60	10.0	0.80	10.6	93	86
26...	1056	10.0	230	8.50	10.0	--	10.5	92	--
26...	1058	20.0	230	8.50	10.0	--	10.4	91	--
26...	1100	30.0	230	8.50	10.0	--	10.3	90	--
26...	1102	40.0	230	8.50	9.5	--	10.0	87	--
26...	1104	53.0	230	8.50	9.5	--	9.8	85	86
MAY									
28...	1024	1.00	240	6.80	24.5	0.48	5.1	61	87
28...	1026	10.0	240	6.80	24.5	--	4.8	57	--
28...	1028	20.0	245	6.60	23.0	--	1.5	17	--
28...	1030	30.0	245	6.80	20.5	--	0	0	--
28...	1032	40.0	245	6.90	19.0	--	0	0	--
28...	1034	51.0	250	6.90	19.0	--	0	0	90
AUG									
31...	1130	1.00	235	7.90	29.0	0.92	5.7	74	84
31...	1132	10.0	235	7.90	28.5	--	3.3	42	--
31...	1134	20.0	235	7.80	28.5	--	2.6	33	--
31...	1136	30.0	235	7.70	28.0	--	1.4	18	--
31...	1138	40.0	270	7.00	21.5	--	0	0	--
31...	1140	50.0	340	6.80	19.5	--	0	0	110

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
26...	8	31	2.2	12	0.6	3.3	78	9.2	15
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	8	31	2.2	12	0.6	3.4	78	9.4	15
MAY									
28...	11	31	2.3	13	0.6	3.1	76	11	23
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	8	32	2.4	13	0.6	3.2	82	11	22
AUG									
31...	6	30	2.3	13	0.6	3.6	78	8.3	18
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	0	39	2.9	14	0.6	4.0	136	11	21

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)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
26...	0.20	7.7	130	0.300	0.80	0.030	8	2
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	--	0.300	0.60	0.020	<10	<10
26...	--	--	--	--	--	--	--	--
26...	--	7.8	130	0.300	1.0	0.020	11	18
MAY								
28...	0.10	5.6	130	<0.100	0.50	0.020	<3	14
28...	--	--	--	--	--	--	--	--
28...	--	--	--	<0.100	0.60	0.030	20	200
28...	--	--	--	<0.100	0.60	0.020	160	1100
28...	--	--	--	--	--	--	--	--
28...	--	8.2	140	<0.100	0.60	0.070	550	1800
AUG								
31...	0.20	7.2	130	<0.100	0.70	0.020	<3	39
31...	--	--	--	--	--	--	--	--
31...	--	--	--	<0.100	0.80	0.030	20	130
31...	--	--	--	<0.100	0.90	0.030	340	960
31...	--	--	--	--	--	--	--	--
31...	--	17	200	<0.100	6.0	0.510	3100	5800

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302132095333701 - LAKE CONROE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1120	1.00	230	8.50	10.0	0.66	10.8	95
26...	1122	10.0	230	8.40	10.0	--	10.5	92
26...	1124	20.0	230	8.50	10.0	--	10.1	89
26...	1126	30.0	230	8.40	10.0	--	10.1	89
26...	1128	47.0	230	8.50	10.0	--	10.1	89
MAY								
28...	1050	1.00	240	6.80	24.5	0.51	4.8	57
28...	1052	10.0	240	6.70	24.0	--	3.5	41
28...	1054	20.0	245	6.60	22.0	--	0	0
28...	1056	30.0	245	6.70	20.0	--	0	0
28...	1058	40.0	245	6.80	18.5	--	0	0
28...	1100	55.0	260	6.80	17.5	--	0	0
AUG								
31...	1200	1.00	235	7.90	29.0	0.91	5.2	67
31...	1202	10.0	235	7.80	28.5	--	4.8	61
31...	1204	20.0	235	7.80	28.5	--	4.0	51
31...	1206	30.0	240	7.30	28.0	--	1.1	14
31...	1208	40.0	270	7.00	22.0	--	0.3	3
31...	1210	50.0	285	6.90	20.0	--	0	0
31...	1212	56.0	320	6.80	19.5	--	0	0

302245095365301 - LAKE CONROE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1030	1.00	230	8.90	10.5	0.71	10.6	94
26...	1032	10.0	230	9.00	10.0	--	10.4	91
26...	1034	20.0	230	9.10	10.0	--	10.4	91
26...	1036	30.0	230	9.20	10.0	--	10.0	88
MAY								
28...	0956	1.00	245	7.10	27.0	0.48	6.7	84
28...	0958	10.0	245	6.90	26.0	--	5.9	73
28...	1000	20.0	245	6.50	23.0	--	0.2	2
28...	1002	30.0	250	6.60	20.5	--	0.2	2
AUG								
31...	1104	1.00	240	7.90	29.0	0.72	5.6	72
31...	1106	10.0	240	7.90	29.0	--	5.9	76
31...	1108	20.0	240	7.90	29.0	--	5.8	75
31...	1110	29.0	240	7.80	28.5	--	5.8	74

302323095341201 - LAKE CONROE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1216	1.00	230	8.40	10.5	0.64	10.5	93
26...	1218	10.0	230	8.40	10.0	--	10.2	90
26...	1220	20.0	230	8.40	10.0	--	10.2	90
26...	1222	30.0	230	8.40	10.0	--	10.2	90
26...	1224	40.0	230	8.40	10.0	--	10.3	90
26...	1226	53.0	230	8.40	10.0	--	10.4	91
MAY								
28...	1132	1.00	245	7.10	25.5	0.59	6.1	74
28...	1134	10.0	245	7.00	25.5	--	5.9	72
28...	1136	20.0	245	6.80	24.5	--	3.9	47
28...	1138	30.0	245	6.70	20.0	--	0	0
28...	1140	40.0	250	6.70	19.0	--	0	0
28...	1142	52.0	250	6.70	18.5	--	0	0
AUG								
31...	1302	1.00	235	7.90	29.0	0.98	5.7	74
31...	1304	10.0	240	7.80	29.0	--	5.4	70
31...	1306	20.0	240	7.70	28.5	--	4.4	56
31...	1308	30.0	250	7.20	27.0	--	0.3	4
31...	1310	40.0	270	6.90	22.5	--	0	0
31...	1312	51.0	295	6.80	21.0	--	0	0

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302320095334001 - LAKE CONROE SITE CL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1200	1.00	230	8.40	10.0	0.71	10.6	93
26...	1202	10.0	230	8.40	10.0	--	10.4	91
26...	1204	20.0	230	8.40	10.0	--	10.4	91
26...	1206	30.0	230	8.40	10.0	--	10.4	91
26...	1208	40.0	230	8.40	10.0	--	10.4	91
MAY								
28...	1114	1.00	245	7.00	25.5	0.52	5.8	71
28...	1116	10.0	245	6.90	25.0	--	5.7	69
28...	1118	20.0	245	6.70	23.0	--	2.8	33
28...	1120	30.0	245	6.70	20.0	--	0	0
28...	1122	42.0	250	6.80	19.0	--	0	0
AUG								
31...	1246	1.00	240	7.90	29.5	1.05	5.5	72
31...	1248	10.0	240	7.80	28.5	--	4.9	63
31...	1250	20.0	240	7.60	28.5	--	3.8	49
31...	1252	30.0	260	7.20	26.5	--	0	0
31...	1254	43.0	280	6.90	22.5	--	0	0

302448095374101 - LAKE CONROE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1250	1.00	230	8.40	10.5	0.49	10.8	96
26...	1252	10.0	230	8.40	10.0	--	10.7	94
26...	1254	20.0	230	8.30	10.0	--	10.3	90
26...	1256	30.0	230	8.30	10.0	--	10.2	90
MAY								
28...	1230	1.00	240	7.70	27.5	0.48	7.2	91
28...	1232	10.0	240	7.50	27.0	--	6.8	85
28...	1234	20.0	240	7.10	26.5	--	5.6	70
28...	1236	29.0	245	6.80	24.0	--	0	0
AUG								
31...	1336	1.00	240	8.20	29.0	0.79	6.5	84
31...	1338	10.0	240	8.10	29.0	--	6.2	80
31...	1340	20.0	240	8.00	29.0	--	6.2	80
31...	1342	29.0	240	8.00	29.0	--	6.0	78

302607095360901 - LAKE CONROE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
26...	1310	1.00	225	8.40	10.5	0.62	11.0	98	84
26...	1312	10.0	225	8.30	10.0	--	10.5	92	--
26...	1314	20.0	225	8.30	10.0	--	10.1	89	--
26...	1316	30.0	225	8.30	10.0	--	10.0	88	--
26...	1318	41.0	225	8.30	10.0	--	10.0	88	84
MAY									
28...	1252	1.00	240	7.50	27.0	0.46	6.5	81	87
28...	1254	10.0	240	7.40	27.0	--	6.3	79	--
28...	1256	20.0	245	7.30	26.5	--	5.6	70	--
28...	1258	30.0	250	6.80	20.5	--	0	0	--
28...	1300	42.0	250	6.90	19.5	--	0	0	87
AUG									
31...	1554	1.00	240	7.80	28.5	1.00	5.4	69	84
31...	1556	10.0	240	7.80	28.5	--	4.9	63	--
31...	1558	20.0	240	7.70	28.5	--	2.7	35	--
31...	1600	30.0	250	7.20	27.5	--	0.7	9	--
31...	1602	40.0	295	6.70	23.0	--	0	0	98

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302607095360901 - LAKE CONROE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
26...	10	30	2.2	12	0.6	3.2	74	9.7
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	10	30	2.1	12	0.6	3.2	74	9.8
MAY								
28...	12	31	2.3	13	0.6	3.1	75	11
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	3	31	2.3	13	0.6	3.1	84	10
AUG								
31...	7	30	2.2	13	0.6	3.7	77	8.2
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	0	35	2.6	13	0.6	3.6	108	5.2

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
26...	21	7.5	130	0.200	1.4	0.030	12	2
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	22	7.6	130	0.200	0.60	0.040	16	9
MAY								
28...	22	5.5	130	<0.100	1.0	0.020	8	24
28...	--	--	--	--	--	--	--	--
28...	--	--	--	<0.500	1.3	0.220	40	420
28...	--	--	--	--	--	--	--	--
28...	23	7.8	140	<0.100	1.4	0.130	720	1600
AUG								
31...	18	7.6	130	<0.100	0.70	0.040	<3	28
31...	--	--	--	--	--	--	--	--
31...	--	--	--	<0.100	0.90	0.030	50	260
31...	--	--	--	--	--	--	--	--
31...	20	12	160	<0.100	3.4	0.400	1600	3400

302714095372201 - LAKE CONROE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
26...	1344	1.00	220	8.40	11.0	0.50	10.7	96
26...	1346	10.0	220	8.30	10.0	--	10.3	90
26...	1348	24.0	220	8.40	10.0	--	10.3	90
MAY								
28...	1324	1.00	240	7.60	28.0	0.68	6.5	83
28...	1326	10.0	240	7.50	27.5	--	6.1	77
28...	1328	21.0	240	7.40	27.0	--	5.3	66
AUG								
31...	1424	1.00	240	7.90	29.0	0.86	5.8	75
31...	1426	10.0	240	7.90	29.0	--	5.6	73
31...	1428	22.0	240	7.70	29.0	--	5.4	70

08067600 LAKE CONROE NEAR CONROE, TX--Continued

303129095360501 - LAKE CONROE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
26...	1420	1.00	200	8.10	10.0	0.30	10.2	90	63
26...	1422	10.0	200	8.10	9.5	--	10.0	87	--
26...	1424	20.0	210	8.10	9.0	--	9.9	85	--
26...	1426	33.0	215	8.10	9.5	--	9.9	86	66
MAY									
28...	1400	1.00	250	7.40	28.5	0.38	6.8	88	88
28...	1402	10.0	250	7.40	28.0	--	6.6	84	--
28...	1404	20.0	250	7.30	28.0	--	6.0	77	--
28...	1406	31.0	255	7.30	28.0	--	5.8	74	85
AUG									
31...	1450	1.00	245	7.80	29.0	0.99	5.8	75	85
31...	1452	10.0	245	7.40	28.5	--	3.9	50	--
31...	1454	20.0	245	7.30	28.0	--	3.4	43	--
31...	1456	29.0	245	7.30	28.0	--	3.2	41	82

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
26...	13	22	2.0	14	0.8	3.1	50	15
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	17	23	2.1	15	0.8	3.1	49	17
MAY								
28...	13	31	2.5	16	0.8	3.2	75	12
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	13	30	2.4	15	0.7	3.2	72	11
AUG								
31...	10	30	2.4	14	0.7	3.9	75	8.7
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	6	29	2.4	15	0.8	4.0	76	9.1

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
26...	20	12	120	0.200	0.80	0.080	74	2
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	24	14	130	0.200	1.4	0.150	63	16
MAY								
28...	26	7.1	140	<0.100	1.9	0.060	7	4
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	25	6.6	140	<0.100	1.2	0.160	14	10
AUG								
31...	20	10	130	<0.100	1.4	0.060	12	22
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	20	11	140	<0.100	2.0	0.060	<3	5

08067610 LAKE CONROE AT OUTFLOW WEIR NEAR CONROE, TX

LOCATION.--Lat 30°21'23", long 95°33'37", Montgomery County, Hydrologic Unit 12040101, on left side of stilling basin of outflow weir, 620 ft downstream from centerline of dam on West Fork San Jacinto River, 770 ft downstream from service outlet tower, 3.0 mi upstream from State Highway 105, and 7.4 mi west of Conroe.

DRAINAGE AREA.--445 mi².

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

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 138.48 ft above National Geodetic Vertical Datum of 1929 (levels by San Jacinto River Authority).

REMARKS.--No estimated daily discharges. Records good. Discharge represents controlled outflow from service tower and does not constitute the total outflow from Lake Conroe. Uncontrolled low flows through weir published at West Fork San Jacinto River below Lake Conroe (station 08067650).

AVERAGE DISCHARGE.--14 years, 10.8 ft³/s (7,820 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 339 ft³/s Feb. 19-25, 1974; no controlled releases for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 119 ft³/s Aug. 26-29; maximum gage height, 9.47 ft June 17 at 2200 hours (result of backwater from taintor gate releases); no controlled releases for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	82	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	118	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	119	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	119	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	119	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	119	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	118	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	40	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	834.00	.00
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	26.9	.00
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	119	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1650	.00

CAL YR 1986 TOTAL .00 MEAN .00 MAX .00 MIN .00 AC-FT .00
WTR YR 1987 TOTAL 834.00 MEAN 2.28 MAX 119.00 MIN .00 AC-FT 1650.00

08067650 WEST FORK SAN JACINTO RIVER BELOW LAKE CONROE NEAR CONROE, TX

LOCATION.--Lat 30°20'31", long 95°32'34", Montgomery County, Hydrologic Unit 12040101, on right bank at downstream side of bridge on State Highway 105, 3.0 mi downstream from Lake Conroe Dam, and 5.9 mi west of Conroe.

DRAINAGE AREA.--451 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1972 to current year (discharge for periods of outflow from Lake Conroe only).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 116.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Discharge is outflow from Lake Conroe, but floodflows may include local runoff. Discharge estimated during periods of backwater.

AVERAGE DISCHARGE.--15 years (water years 1973-87), 239 ft³/s (173,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,780 ft³/s May 22, 1983 (gage height, 35.50 ft); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1940 reached a stage of 41.94 ft, from information by the State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,650 ft³/s June 14 at 1700 hours to June 15 at 1900 hours (gage height, 28.58 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	12	2.0	22	2160	.92	.32	111	41	.92	3.7
2	.00	.00	2.9	1.3	232	1810	1.3	.32	3.6	161	.92	.00
3	.00	.00	2.5	3.3	234	658	.60	.32	124	447	.92	.00
4	.00	.00	2.5	2.5	233	566	.60	.32	639	454	.92	.00
5	.00	.00	2.5	2.0	171	147	.60	.60	620	302	.92	.00
6	.00	.00	2.0	2.5	12	8.6	.92	.60	296	13	.92	.00
7	.00	.00	2.0	2.0	1.6	1.6	.92	.60	24	6.1	.92	.00
8	.00	.00	2.5	9.0	1.3	1.6	.92	.92	3.3	19	.92	.00
9	.00	.00	206	219	.92	1.6	.92	.60	415	230	.92	.00
10	.00	.00	475	226	.60	1.6	.92	.92	867	237	.60	.00
11	.00	.00	340	194	.92	2.0	.92	.92	1280	237	.32	.00
12	.00	.00	231	10	.92	2.0	.92	.92	1610	236	.00	.00
13	.00	.00	127	1.3	.92	2.0	.92	.92	2240	109	.00	.00
14	.00	.00	5.7	1.3	.92	1.6	.92	.92	2630	7.0	.00	.00
15	.00	.00	340	1.3	272	1.6	.60	.92	2650	2.0	.00	.00
16	.00	.00	944	1.6	672	9.8	.60	.92	2620	2.0	.00	.00
17	.00	.00	1680	305	658	440	.60	.92	2580	1.6	.00	.00
18	.00	.00	1700	982	420	907	.60	.92	2550	1.6	.00	1.2
19	.00	.00	1670	1120	121	1200	.60	.92	2550	1.6	.00	.60
20	.00	.00	1620	776	385	1210	.60	.60	1930	1.6	.00	.00
21	.00	.00	1620	432	595	1080	.32	.60	1060	1.3	.00	.00
22	.00	.00	1650	245	589	404	.00	.60	117	1.3	.00	.00
23	.00	.00	1690	12	587	238	.32	.60	37	1.3	.00	.00
24	.00	.32	1600	.60	612	210	.60	.92	2.0	.92	30	.00
25	.00	174	1600	1.3	e680	15	.32	.60	2.0	.92	117	.00
26	.00	636	1600	.92	e1510	1.6	.32	.60	2.0	.92	119	.00
27	.00	1030	1560	.92	1600	1.3	.60	.60	2.0	.92	118	.00
28	.00	1210	936	.92	1800	1.3	.60	.60	1.6	.92	117	.00
29	.00	1070	352	.92	---	2.9	.60	76	1.3	.92	120	.00
30	.00	283	178	1.3	---	2.0	.60	213	84	.92	121	.00
31	.00	---	9.7	.92	---	.92	---	46	---	.92	66	---
TOTAL	.00	4403.32	22163.3	4558.90	11413.10	11089.01	20.18	354.52	27051.8	2520.76	817.20	5.50
MEAN	.00	147	715	147	408	358	.67	11.4	902	81.3	26.4	.18
MAX	.00	1210	1700	1120	1800	2160	1.3	213	2650	454	121	3.7
MIN	.00	.00	2.0	.60	.60	.92	.00	.32	1.3	.92	.00	.00
AC-FT	.00	8730	43960	9040	22640	22000	40	703	53660	5000	1620	11

CAL YR 1986	TOTAL 77591.22	MEAN 213	MAX 2620	MIN .00	AC-FT 153900
WTR YR 1987	TOTAL 84396.78	MEAN 231	MAX 2650	MIN .00	AC-FT 167400

e Estimated.

08067900 LAKE CREEK NEAR CONROE, TX
(Low-flow partial-record station)

LOCATION.--Lat 30°15'12", long 95°34'43", Montgomery County, Hydrologic Unit 12040101, at bridge on county road and 8.3 mi southwest of Conroe.

DRAINAGE AREA.--291 mi².

PERIOD OF RECORD.--Occasional discharge measurements: October 1968 to current year. Chemical analyses: November 1968 to current year. Chemical and biochemical analyses: October 1985 to current year. Radiochemical analyses: February 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
OCT 27...	0945	18	210	7.00	17.0	65	15	9.6	98	1.1	180	190
NOV 20...	0926	30	262	6.90	19.0	75	20	9.4	101	1.9	140	520
DEC 16...	1115	880	246	7.30	11.5	110	57	12.0	108	1.9	3800	8100
JAN 20...	1325	538	384	7.40	8.0	90	44	12.3	102	1.9	K1700	5000
FEB 18...	1205	170	585	7.80	12.0	55	32	9.8	90	2.6	1100	2500
MAR 23...	1150	86	272	6.70	19.0	82	30	9.5	103	1.7	210	500
APR 30...	0948	10	470	7.20	22.0	23	12	9.0	102	1.6	86	40
MAY 19...	1008	17	390	7.00	25.0	55	8.3	6.6	80	1.8	130	140
JUN 30...	1000	23	280	7.00	26.5	65	20	6.3	78	1.0	92	7300
JUL 22...	0930	16	258	6.90	26.5	22	13	6.3	78	1.0	210	620
AUG 19...	0909	4.1	257	7.40	28.5	36	11	5.0	65	0.8	44	700
SEP 24...	1005	12	230	7.00	20.5	47	18	6.9	76	1.3	210	240

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 27...	59	15	20	2.3	16	0.9	3.0	44	14	31	<0.10	18
NOV 20...	81	18	28	2.8	17	0.9	4.1	63	16	29	0.10	18
DEC 16...	85	16	30	2.5	15	0.7	3.4	69	16	26	0.10	12
JAN 20...	120	44	40	3.7	27	1	3.9	71	20	63	0.10	15
FEB 18...	170	85	61	5.2	46	2	3.7	89	21	120	0.20	15
MAR 23...	86	24	30	2.7	19	0.9	3.1	62	10	39	0.10	14
APR 30...	130	46	45	4.3	37	1	2.7	84	12	84	0.10	20
MAY 19...	110	33	37	3.5	30	1	3.3	74	6.0	67	0.10	16
JUN 30...	87	19	30	3.0	19	0.9	3.0	68	12	38	<0.10	22
JUL 22...	79	23	27	2.8	20	1	3.0	56	14	38	0.20	22
AUG 19...	67	24	22	2.9	22	1	2.6	43	7.1	45	0.10	22
SEP 24...	66	18	22	2.7	19	1	2.8	48	14	34	0.10	17

08067900 LAKE CREEK NEAR CONROE, TX--Continued
(Low-flow partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT 27...	130	27	9	--	0.010	<0.100	0.040	0.16	0.20	0.030	0.060	0.18
NOV 20...	150	40	28	--	0.010	<0.100	0.010	0.69	0.70	0.210	0.120	0.37
DEC 16...	150	110	8	--	0.030	<0.100	0.040	0.86	0.90	0.130	0.060	0.18
JAN 20...	220	68	16	--	0.030	<0.100	0.060	1.1	1.2	0.170	0.060	0.18
FEB 18...	330	68	14	0.190	0.010	0.200	0.030	1.1	1.1	0.120	0.040	0.12
MAR 23...	160	46	15	--	0.080	<0.100	0.020	1.4	1.4	0.120	0.060	0.18
APR 30...	260	18	6	--	0.010	<0.100	0.020	0.38	0.40	0.220	0.020	0.06
MAY 19...	210	36	5	0.090	0.010	0.100	0.040	0.96	1.0	0.110	0.040	0.12
JUN 30...	170	37	22	0.080	0.020	0.100	0.070	0.93	1.0	0.230	0.040	0.12
JUL 22...	160	14	5	--	<0.010	<0.100	0.030	0.57	0.60	0.150	0.090	0.28
AUG 19...	150	22	1	--	<0.010	<0.100	0.010	0.39	0.40	0.150	0.070	0.21
SEP 24...	140	25	10	--	0.010	<0.100	0.060	0.64	0.70	0.110	0.030	0.09

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
OCT 27...	9.2	9.6	3	0.200	<0.100	<10	--	<10	--	1100	<100	--
NOV 20...	10	6.0	2	1.00	<0.100	<10	<1	<10	<1	1300	<100	<10
DEC 16...	13	13	<1	1.40	0.100	<10	--	<10	--	2800	200	--
JAN 20...	13	6.3	<1	1.40	0.100	10	--	<10	--	1500	200	--
FEB 18...	9.7	10	3	2.30	0.200	10	<1	<10	1	1700	<100	<10
MAR 23...	12	10	2	1.70	0.200	<10	--	<10	--	1500	<100	--
APR 30...	4.6	5.7	1	4.10	0.600	<10	--	<10	--	820	<100	--
MAY 19...	14	11	3	5.90	0.600	<10	<1	<10	20	1300	<100	<10
JUN 30...	11	10	2	1.80	0.200	<10	--	100	--	1500	<100	--
JUL 22...	8.4	8.5	<1	1.60	0.200	<10	--	30	--	7300	<100	--
AUG 19...	5.5	5.4	<1	1.60	0.300	<10	<10	--	40	770	<100	<10
SEP 24...	11	10	3	2.10	0.300	<10	--	<10	--	1400	<100	--

DATE	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	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)
OCT 27...	90	--	<0.10	--	30	--	--	--	--	--	--	--
NOV 20...	70	12	<0.10	0.02	10	1	<0.4	<0.4	4.2	0.4	3.4	0.4
DEC 16...	110	--	<0.10	--	20	--	--	--	--	--	--	--
JAN 20...	60	--	<0.10	--	<10	--	--	--	--	--	--	--
FEB 18...	110	59	0.20	0.01	<10	3	1.4	1.3	5.5	1.7	4.1	1.6
MAR 23...	90	--	<0.10	--	150	--	--	--	--	--	--	--
APR 30...	150	--	<0.10	--	<10	--	--	--	--	--	--	--
MAY 19...	140	<10	<0.10	0.10	<10	<10	1.4	1.0	4.0	1.6	2.9	1.5
JUN 30...	110	--	<0.10	--	10	--	--	--	--	--	--	--
JUL 22...	140	--	<0.10	--	30	--	--	--	--	--	--	--
AUG 19...	110	28	0.20	<0.10	<10	<10	--	--	--	--	--	--
SEP 24...	100	--	<0.10	--	<10	--	--	--	--	--	--	--

08067900 LAKE CREEK NEAR CONROE, TX--Continued
(Low-flow partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	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 27...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	0.08	0.23	<0.1	<1	<0.10	<1.0	--	<0.1	<0.1	<1.0	--	<0.1
DEC 16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 20...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	0.12	1.0	<0.1	<1	<0.10	<1.0	<0.010	<0.1	<0.1	<1.0	<0.010	0.3
MAR 23...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	0.08	0.46	<0.1	<1	<0.10	<1.0	<0.010	<0.1	<0.1	<1.0	<0.010	<0.1
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1	<0.1	<1.0	<0.010	<0.1
SEP 24...	--	--	--	--	--	--	--	--	--	--	--	--

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)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	--	<0.1	<0.010	<0.1	--	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1
DEC 16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 20...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.010	<0.1	<0.010	0.2	<0.01	<0.1	<0.010	--	<0.010	<0.1	<0.010	--
MAR 23...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<0.010	0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1
SEP 24...	--	--	--	--	--	--	--	--	--	--	--	--

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)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	<0.01	<0.1	--	<0.1	<0.010	<0.1	--	<0.1	<0.01	<0.1	--	<0.1
DEC 16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 20...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1
MAR 23...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1
SEP 24...	--	--	--	--	--	--	--	--	--	--	--	--

08067900 LAKE CREEK NEAR CONROE, TX--Continued
(Low-flow partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOTAL (UG/L)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	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)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	<0.01	<0.1	<0.01	<0.1	--	<0.1	--	<0.1	<0.1	<1.00	--
DEC 16...	--	--	--	--	--	--	--	--	--	--	--
JAN 20...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	--
MAR 23...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<0.01	<0.1	<0.01	<0.1	<0.01	0.2	<0.01	<0.1	<0.1	<1.00	<0.01
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<0.01
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

DATE	SILVEX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOX-APHENE, TOTAL (UG/L)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	--	<1	<10	<0.01	<0.1	--	--	--	--	--	--
DEC 16...	--	--	--	--	--	--	--	--	--	--	--
JAN 20...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.1	<1	<10	<0.01	<0.1	--	<0.1	--	<0.1	--	<0.1
MAR 23...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<0.1	<1	<10	<0.01	<0.1	0.06	<0.1	<0.01	<0.1	<0.01	<0.1
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<0.1	<1	<10	<0.01	<0.1	0.01	<0.1	<0.01	<0.1	<0.01	<0.1
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX
(National stream-quality accounting network)

LOCATION.--Lat 30°14'40", long 95°27'25", Montgomery County, Hydrologic Unit 12040101, near right bank at downstream side of pier of bridge on Interstate Highway 45 and U.S. Highway 75, 300 ft upstream from Missouri Pacific Railroad Co. bridge, 3.5 mi downstream from Lake Creek, 4.2 mi south of Conroe, and at mile 79.

DRAINAGE AREA.--828 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to September 1927, July 1939 to current year.

REVISED RECORDS.--WSP 1058: 1926. WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 95.03 ft above National Geodetic Vertical Datum of 1929. May 7, 1924, to Sept. 30, 1927, nonrecording gage at railroad bridge 285 ft downstream at datum 30.10 ft higher. July 13, 1939, to Sept. 30, 1963, water-stage recorder at datum 5.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow has been regulated since Jan. 9, 1973, by Lake Conroe (station 08067600), capacity 532,000 acre-ft, 14.5 mi upstream. There are no other large diversions above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1925-27, 1940-72) prior to regulation by Lake Conroe, 477 ft³/s (345,600 acre-ft/yr); 15 years (water years 1973-87) regulated, 555 ft³/s (402,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s Nov. 25, 1940 (gage height, 30.85 ft), present datum, from rating curve extended above 43,000 ft³/s on basis of velocity-area studies; no flow June 14, 1956, and Sept. 19 to Oct. 1, 1965, result of temporary dams.
Maximum stage since at least December 1913, that of Nov. 25, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1913 reached a stage of 30.2 ft, present site and datum, from information by Missouri Pacific Railroad Co., discharge 101,000 ft³/s, from rating curve as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,290 ft³/s June 14 at 1100 hours (gage height, 17.73 ft); minimum daily, 21 ft³/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	33	218	166	86	3750	78	36	555	242	34	63
2	35	35	124	145	234	3290	74	37	689	586	33	42
3	35	36	93	179	312	1560	85	38	639	1110	32	38
4	30	39	76	214	306	992	71	43	1400	631	32	32
5	31	108	65	149	300	545	65	45	1430	537	31	29
6	36	383	59	122	135	234	76	53	1390	186	30	27
7	40	345	54	112	103	175	75	102	859	114	29	26
8	36	264	52	107	88	150	70	73	401	123	28	25
9	34	392	133	203	75	135	66	74	503	455	27	24
10	32	324	569	312	70	124	64	97	1620	453	26	24
11	32	153	510	306	67	134	62	199	2100	376	26	34
12	168	109	285	159	65	129	58	132	3230	429	26	30
13	208	96	235	99	64	118	58	158	4840	580	25	32
14	201	215	97	93	64	109	56	118	5230	314	25	30
15	229	433	528	92	475	105	57	95	5060	139	24	28
16	181	258	1670	97	1080	102	55	78	4790	92	24	59
17	150	116	2760	284	941	468	52	70	3740	75	24	150
18	87	80	3720	1630	813	1350	54	61	3340	66	24	136
19	61	68	3900	1780	393	1890	54	53	2880	58	23	606
20	51	62	3120	1490	492	1990	51	48	2440	53	23	213
21	44	56	2830	935	1120	1660	49	45	1870	53	22	100
22	47	52	2820	672	1250	855	47	42	904	96	22	67
23	59	53	3210	281	1500	485	46	41	363	55	22	52
24	62	94	3060	171	1260	400	44	42	219	49	21	45
25	61	432	3220	143	1020	223	41	156	210	47	97	39
26	54	1150	3310	128	1830	126	40	64	155	44	120	36
27	47	1830	2520	111	2590	109	39	96	129	42	123	34
28	41	2240	1560	103	3330	100	38	93	114	39	125	37
29	38	1920	740	99	---	99	38	233	105	38	131	38
30	36	869	484	94	---	136	37	511	149	37	155	33
31	34	---	219	87	---	109	---	243	---	36	154	---
TOTAL	2237	12245	42241	10563	20063	21652	1700	3176	51354	7155	1538	2129
MEAN	72.2	408	1363	341	717	698	56.7	102	1712	231	49.6	71.0
MAX	229	2240	3900	1780	3330	3750	85	511	5230	1110	155	606
MIN	30	33	52	87	64	99	37	36	105	36	21	24
AC-FT	4440	24290	83790	20950	39790	42950	3370	6300	101900	14190	3050	4220

CAL YR 1986	TOTAL	153726	MEAN	421	MAX	4820	MIN	19	AC-FT	304900
WTR YR 1987	TOTAL	176053	MEAN	482	MAX	5230	MIN	21	AC-FT	349200

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1959 to current year. Pesticide analyses: May 1975 to June 1982. Sediment records: February 1966 to September 1967, October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1961 to current year.
WATER TEMPERATURE: October 1961 to current year.
DISSOLVED OXYGEN: August 1979 to May 1981.

INSTRUMENTATION.--From August 1979 to May 1981, a four-parameter water-quality monitor recorded specific conductance, pH, water temperature, and dissolved solids at this station. From 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, 848 microsiemens June 29, 1985; minimum, 40 microsiemens Nov. 24, 1985.
WATER TEMPERATURE: Maximum, 37.0°C June 26, 1984; minimum daily, 0.0°C Dec. 22, 1963, Jan. 31, 1968.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 588 microsiemens Aug. 23; minimum, 106 microsiemens July 3.
WATER TEMPERATURE: Maximum, 32.0°C Aug. 11, 17, 20, 22; minimum, 2.0°C Feb. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV											
12...	0940	111	241	6.80	17.0	--	34	9.2	94	1.4	150
JAN											
27...	0925	111	318	7.20	9.5	60	26	10.4	91	1.3	96
FEB											
18...	0930	915	297	7.90	11.0	--	9.7	10.4	93	2.8	680
24...	1233	1240	227	6.80	11.5	70	32	10.0	91	2.2	820
MAR											
23...	1445	442	252	6.70	18.0	--	--	10.6	131	2.0	--
MAY											
19...	1305	52	386	6.90	26.0	--	17	7.7	95	1.3	84
JUN											
12...	1110	2970	200	7.20	24.5	70	--	7.4	89	4.2	3000
JUL											
15...	0925	144	228	6.80	26.5	--	--	6.8	84	0.9	--
AUG											
10...	1120	26	405	7.50	27.0	--	--	6.3	79	1.0	92
17...	0915	24	461	7.20	28.0	--	14	6.0	77	0.9	3700

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV											
12...	500	73	10	25	2.5	18	1	4.3	63	14	28
JAN											
27...	52	85	19	29	3.1	28	1	2.8	66	15	48
FEB											
18...	310	100	19	36	2.9	19	0.9	3.1	83	12	34
24...	1200	77	18	27	2.3	15	0.8	3.3	59	11	29
MAR											
23...	--	80	17	28	2.5	17	0.9	3.1	63	11	30
MAY											
19...	92	93	16	31	3.7	38	2	3.8	77	14	58
JUN											
12...	3600	66	5	23	2.0	12	0.7	3.2	61	10	19
JUL											
15...	--	62	6	21	2.2	18	1	3.8	56	21	23
AUG											
10...	120	78	0	25	3.7	51	3	4.6	87	15	60
17...	270	75	0	24	3.7	60	3	5.2	90	16	65

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV											
12...	0.20	17	157	150	--	--	0.490	--	0.010	<0.010	0.500
JAN											
27...	0.10	17	--	180	26	21	0.680	--	0.020	--	0.700
FEB											
18...	0.20	8.7	176	170	--	--	--	--	0.020	<0.010	<0.100
24...	0.10	9.2	--	130	53	3	0.180	--	0.020	--	0.200
MAR											
23...	0.10	10	--	140	--	--	0.170	--	0.030	--	0.200
MAY											
19...	0.20	20	225	220	--	--	1.29	--	0.010	<0.010	1.30
JUN											
12...	0.10	10	--	120	51	25	--	--	0.020	--	<0.100
JUL											
15...	0.30	17	--	140	--	--	0.590	--	0.010	--	0.600
AUG											
10...	0.20	24	--	240	--	--	2.78	--	0.020	--	2.80
17...	0.70	25	271	260	--	--	2.67	2.58	0.030	0.020	2.70

DATE	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, 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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)
NOV											
12...	0.500	0.030	0.040	1.1	1.1	0.390	0.370	0.240	0.74	--	38
JAN											
27...	--	0.050	--	0.85	0.90	0.290	--	--	--	8.1	--
FEB											
18...	<0.100	0.040	0.030	1.8	1.8	0.140	0.060	0.050	0.15	--	70
24...	--	0.090	--	1.7	1.8	0.110	--	--	--	9.4	--
MAR											
23...	--	0.100	--	1.0	1.1	0.170	--	--	--	--	--
MAY											
19...	1.30	0.040	0.050	1.2	1.2	0.860	0.730	0.710	2.2	--	40
JUN											
12...	--	0.050	--	2.0	2.0	0.160	--	--	--	12	--
JUL											
15...	--	0.040	--	0.96	1.0	0.440	--	--	--	--	--
AUG											
10...	--	0.080	--	1.1	1.2	1.40	--	--	--	4.2	--
17...	2.60	0.100	0.110	0.80	0.90	1.60	1.50	1.20	3.7	--	23

DATE	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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)
NOV											
12...	11	92	80	2	85	<0.5	1	<1	<3	3	180
JAN											
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
18...	173	83	20	<1	110	<0.5	1	<1	<3	1	46
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	5.6	83	30	1	110	<0.5	<1	<1	<3	2	86
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
15...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
17...	1.5	99	20	2	72	0.9	<1	<1	<3	2	71

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	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 12...	<5	7	42	<0.1	<10	3	<1	<1	97	<6	13
JAN 27...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<5	6	5	0.4	<10	<1	<1	<1	120	<6	9
24...	--	--	--	--	--	--	--	--	--	--	--
MAR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<5	11	73	0.1	<10	3	<1	<1	180	<6	25
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--
17...	11	5	70	<0.1	<10	<1	<1	<1	220	<6	18

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	2237	253	143	863	34	206	9.0	54	71
NOV.	1986	12245	216	123	4080	27	889	8.6	286	64
DEC.	1986	42241	194	111	12700	23	2630	8.2	940	59
JAN.	1987	10563	240	136	3880	31	887	9.0	258	69
FEB.	1987	20063	276	155	8410	38	2040	9.5	517	76
MAR.	1987	21652	236	134	7820	30	1760	9.0	527	68
APR.	1987	1700	399	218	1000	64	295	9.4	43	95
MAY	1987	3176	324	180	1540	48	409	9.6	83	84
JUNE	1987	51354	226	128	17800	29	4000	8.7	1200	66
JULY	1987	7155	223	127	2450	28	545	8.7	168	65
AUG.	1987	1538	353	194	806	55	228	9.2	38	87
SEPT	1987	2129	303	169	969	44	251	9.4	54	80
TOTAL		176053	**	**	62300	**	14100	**	4170	**
WTD.AVG.		482	231	131	**	30	**	8.8	**	67

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	390	353	369	359	309	339	226	207	213	287	270	277
2	400	383	393	361	256	310	255	226	239	294	282	288
3	411	375	399	310	273	292	275	250	260	296	248	278
4	383	356	368	331	254	308	293	268	279	282	255	265
5	382	354	367	324	189	224	305	272	289	288	282	285
6	393	357	380	320	190	234	308	283	295	297	286	291
7	374	320	333	220	192	205	312	289	300	300	283	292
8	327	318	321	234	199	210	319	296	308	312	294	301
9	348	326	336	252	209	228	319	188	278	309	251	285
10	363	349	356	215	198	205	261	229	237	253	246	250
11	369	363	366	242	215	226	246	231	238	255	247	251
12	364	149	278	266	238	248	254	246	250	306	251	278
13	166	151	158	272	253	264	273	250	257	336	307	320
14	209	146	162	336	259	287	316	275	292	345	327	336
15	245	196	212	280	154	181	322	179	246	346	331	340
16	213	195	201	195	162	171	217	197	204	344	323	337
17	217	214	216	236	197	212	208	198	202	329	191	272
18	232	217	223	288	238	256	197	170	186	198	169	177
19	256	232	243	331	289	304	177	167	171	226	199	211
20	281	257	268	406	337	383	201	178	191	265	212	237
21	323	263	288	433	410	424	199	195	197	264	213	235
22	383	292	323	448	433	440	194	180	190	234	207	211
23	374	260	304	483	447	463	179	171	173	252	218	241
24	297	250	277	478	314	385	191	178	187	256	241	250
25	278	242	262	310	149	227	191	185	189	279	232	245
26	279	240	260	262	158	226	185	176	178	304	262	279
27	285	260	272	215	201	207	208	180	193	364	280	329
28	322	285	294	202	193	198	218	207	213	378	337	363
29	339	287	317	208	190	197	229	219	224	403	335	381
30	348	291	320	212	205	208	247	230	237	387	335	369
31	357	307	330	---	---	---	273	247	256	394	335	364
MONTH	411	146	297	483	149	269	322	167	231	403	169	285
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	396	314	357	227	185	202	366	323	341	450	414	427
2	369	253	304	235	182	204	370	338	355	424	380	400
3	288	255	266	230	212	223	366	299	345	396	356	376
4	287	250	276	238	230	234	387	359	374	401	356	373
5	292	277	285	258	236	247	384	347	362	378	336	353
6	400	300	352	293	260	277	356	332	349	368	232	334
7	399	367	381	315	288	299	393	348	364	316	189	255
8	425	381	396	322	295	308	417	376	394	377	304	334
9	440	393	414	352	311	326	412	383	400	386	305	344
10	455	411	435	359	337	348	422	393	406	402	301	356
11	449	408	432	358	327	343	438	378	401	388	239	294
12	451	410	435	359	334	349	435	387	408	343	297	327
13	451	414	435	374	347	359	414	370	398	---	---	285
14	465	417	443	383	354	366	403	376	393	---	---	325
15	453	264	320	392	357	376	398	373	385	---	---	350
16	289	216	242	426	382	398	455	386	410	---	---	340
17	290	247	272	417	234	317	442	401	425	---	---	370
18	366	278	315	256	234	247	431	394	410	---	---	400
19	367	337	351	253	233	243	430	399	418	---	---	420
20	380	256	326	247	231	238	431	400	413	---	---	425
21	297	253	266	231	217	225	459	419	431	---	---	440
22	343	286	311	226	218	222	463	437	450	---	---	445
23	286	277	282	233	223	228	475	429	447	---	---	470
24	306	286	295	248	228	237	480	439	458	---	---	390
25	315	306	311	292	244	264	481	434	458	---	---	285
26	313	217	260	307	282	294	469	428	442	---	---	360
27	252	208	244	322	296	308	482	456	469	---	---	370
28	244	213	227	348	311	323	458	417	435	---	---	395
29	---	---	---	345	314	332	443	403	425	---	---	365
30	---	---	---	342	288	306	453	405	429	---	---	245
31	---	---	---	338	296	310	---	---	---	---	---	260
MONTH	465	208	330	426	182	289	482	299	407	450	189	358

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
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SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1			290	299	235	267	451	378	415	328	252	288
2			230	275	119	170	462	394	433	350	310	322
3			270	195	106	156	439	359	395	384	320	354
4			235	228	197	213	414	355	379	382	337	365
5			180	237	219	228	453	421	434	398	350	372
6			230	247	224	234	487	422	453	410	347	380
7			280	262	230	249	496	422	465	454	379	397
8			325	267	205	243	563	420	475	474	382	429
9			230	229	172	188	477	334	438	424	392	412
10			200	217	183	202	438	364	405	464	421	444
11			190	234	215	222	463	405	426	460	370	419
12			185	338	219	245	499	459	480	463	383	406
13			160	330	211	248	491	409	449	464	335	386
14			170	241	208	219	492	416	447	391	338	366
15			195	267	214	243	498	422	462	395	359	375
16			200	289	235	268	482	423	459	456	221	358
17			230	315	269	284	502	400	446	264	200	228
18			250	347	296	314	477	425	437	309	267	286
19			325	343	293	322	549	488	519	265	215	231
20			365	374	327	350	585	442	519	271	224	245
21			285	353	305	329	483	441	466	328	272	297
22			280	341	194	262	537	470	501	365	329	343
23			285	366	327	334	588	438	512	399	365	377
24			200	382	289	330	512	409	467	405	398	402
25			345	387	326	358	448	282	353	416	398	403
26			355	380	328	359	308	270	288	427	415	419
27			365	372	327	348	322	236	290	429	409	419
28			385	370	324	347	321	271	291	413	388	400
29			400	403	356	373	310	275	292	400	385	390
30			425	420	347	380	303	245	264	404	390	398
31				431	387	408	262	236	248	---	---	---
MONTH			269	431	106	280	588	236	416	474	200	364

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	28.0	25.5	26.5	20.5	18.0	19.5	14.0	12.5	13.0	11.5	9.5	10.5
2	27.5	25.5	26.5	20.5	20.0	20.0	13.0	11.0	12.0	10.5	9.0	10.0
3	27.5	25.5	26.5	20.5	19.5	20.0	12.5	10.5	11.5	11.5	10.0	11.0
4	28.0	25.5	27.0	21.5	20.5	21.0	13.0	10.5	12.0	10.5	9.0	9.5
5	27.5	25.5	26.0	21.0	18.0	19.0	13.0	11.0	12.0	10.5	8.0	9.0
6	26.0	24.0	25.0	18.0	17.0	17.5	13.5	11.0	12.5	11.5	9.0	10.0
7	24.0	22.0	23.0	18.5	17.0	17.5	15.5	13.0	14.0	13.5	11.5	12.5
8	22.5	22.0	22.5	20.0	18.5	19.0	17.0	15.0	16.0	14.0	13.0	13.5
9	23.5	22.5	23.0	21.0	19.5	20.0	16.5	14.0	15.5	14.0	11.5	13.5
10	24.5	22.0	23.0	22.0	21.0	21.5	14.0	12.0	13.0	11.5	10.5	11.0
11	24.0	22.0	23.0	21.5	18.5	20.0	12.0	11.0	11.5	10.5	9.0	9.5
12	23.0	19.5	21.5	18.0	17.5	18.0	11.5	10.5	11.0	10.5	8.0	9.5
13	19.5	18.0	18.5	17.0	14.0	15.0	11.5	10.5	11.0	11.0	10.0	10.5
14	18.5	16.5	17.5	14.0	13.0	13.5	11.0	11.0	11.0	12.5	11.0	11.5
15	18.5	16.5	17.5	13.0	12.0	12.0	11.5	11.0	11.5	13.5	12.5	13.0
16	18.0	16.5	17.5	14.5	12.0	13.0	12.0	11.5	12.0	---	---	---
17	18.5	16.0	17.0	17.0	14.5	15.5	12.5	12.0	12.5	---	---	---
18	19.0	16.5	17.5	19.0	17.0	18.0	13.0	12.5	12.5	---	---	---
19	19.5	17.0	18.5	19.5	18.5	19.0	12.5	12.0	12.5	---	---	---
20	19.5	17.5	18.5	20.5	19.5	20.0	12.0	11.5	11.5	---	---	---
21	20.5	17.5	19.0	19.0	17.5	18.0	12.0	11.5	12.0	---	---	---
22	20.5	20.0	20.0	19.5	18.0	18.5	11.5	11.0	11.5	---	---	---
23	21.0	20.5	20.5	20.5	19.5	20.0	11.0	10.5	10.5	---	---	---
24	21.5	20.5	21.0	19.5	17.0	18.0	10.5	10.0	10.5	---	---	---
25	21.0	18.5	20.0	17.0	13.5	15.5	10.5	9.5	10.0	---	---	---
26	20.0	17.5	19.0	14.5	13.0	14.0	11.0	10.0	10.5	---	---	---
27	20.0	17.0	18.5	14.5	14.0	14.0	11.5	11.0	11.0	---	---	---
28	19.5	17.0	18.5	14.0	13.0	13.5	11.5	11.0	11.5	---	---	---
29	20.0	17.5	19.0	14.0	13.0	13.0	12.0	11.0	11.5	---	---	---
30	20.0	17.5	19.0	14.5	13.0	13.5	11.5	11.0	11.5	---	---	---
31	19.5	17.5	18.5	---	---	---	12.5	10.5	11.5	---	---	---
MONTH	28.0	16.0	21.0	22.0	12.0	17.0	17.0	9.5	12.0	14.0	8.0	11.0

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued
(National stream-quality accounting network)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	15.5	14.5	15.0	---	---	---	25.0	22.0	24.0
2	---	---	---	15.0	14.0	14.5	---	---	---	25.5	23.5	24.5
3	---	---	---	15.0	14.0	14.5	---	---	---	25.0	23.0	24.0
4	15.0	14.0	14.5	16.0	13.5	14.5	---	---	---	23.0	21.5	22.5
5	14.0	13.0	13.5	16.5	13.0	15.0	---	---	---	23.5	22.0	23.0
6	14.0	9.0	11.5	18.5	14.5	16.5	---	---	---	23.0	22.0	22.5
7	14.5	7.0	10.0	18.0	14.5	16.0	19.5	14.5	18.0	24.0	21.0	22.5
8	21.0	4.0	12.0	20.5	13.5	16.5	19.5	14.5	17.0	24.5	22.5	23.5
9	15.0	5.5	10.0	22.5	11.0	16.5	21.0	15.0	18.0	24.0	22.5	23.0
10	18.5	2.0	10.5	18.0	12.0	14.5	23.5	17.0	20.0	24.5	22.0	23.0
11	21.5	10.0	15.5	13.5	10.0	12.0	25.0	20.0	22.5	24.0	21.5	23.0
12	21.5	10.5	15.5	15.5	8.0	11.5	25.0	21.5	23.0	23.5	22.5	23.0
13	21.0	11.5	15.5	16.0	7.5	12.0	24.5	22.0	23.0	---	---	---
14	22.0	11.5	17.5	19.5	7.0	14.5	23.0	18.5	21.0	---	---	---
15	19.0	14.5	16.5	20.5	16.0	18.0	23.5	17.5	20.5	---	---	---
16	15.5	13.0	14.0	22.5	15.5	19.5	24.5	18.5	21.5	---	---	---
17	13.5	12.0	13.0	21.5	16.5	19.5	25.5	19.5	22.5	---	---	---
18	13.0	11.0	12.0	21.5	18.0	19.5	26.5	21.0	23.5	---	---	---
19	11.5	11.0	11.5	20.5	17.0	18.0	26.0	21.0	23.5	---	---	---
20	11.0	10.5	10.5	20.5	17.0	18.5	27.0	22.0	24.5	---	---	---
21	10.5	10.5	10.5	18.5	16.5	17.5	25.5	21.5	24.0	---	---	---
22	11.0	10.0	10.5	19.0	16.5	18.0	25.5	21.5	23.5	---	---	---
23	11.5	10.0	10.5	18.5	17.0	18.0	25.5	21.0	23.5	---	---	---
24	11.5	11.0	11.5	18.5	15.5	17.0	26.0	21.5	24.0	---	---	---
25	12.0	11.5	11.5	17.5	15.5	16.5	25.5	21.5	23.5	---	---	---
26	12.5	12.0	12.0	18.5	14.0	16.0	25.5	20.5	23.5	---	---	---
27	13.0	12.5	12.5	20.0	12.5	16.0	26.0	21.0	23.5	---	---	---
28	16.0	14.5	15.5	22.5	11.5	17.5	26.5	22.0	24.5	---	---	---
29	---	---	---	---	---	---	26.5	22.5	24.5	---	---	---
30	---	---	---	---	---	---	25.5	23.0	24.5	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	22.0	2.0	12.5	22.5	7.0	16.0	27.0	14.5	22.5	25.5	21.0	23.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				29.0	25.5	27.0	31.0	27.5	29.5	29.0	25.0	27.0
2				27.5	25.5	26.5	31.5	28.0	29.5	29.0	25.5	27.0
3				28.0	25.0	26.0	31.0	27.5	29.5	28.5	23.5	26.5
4				28.5	26.5	27.0	31.0	27.5	29.5	28.5	23.5	26.5
5				28.0	26.0	27.0	31.0	28.0	29.5	28.0	24.0	26.5
6				29.5	27.0	28.0	31.5	28.5	30.0	28.5	24.0	26.5
7				28.0	26.5	27.0	30.5	26.0	28.0	28.5	24.5	26.5
8				27.0	25.5	26.0	29.0	26.0	27.0	29.5	25.5	27.5
9				26.5	25.0	25.5	29.0	26.0	28.0	30.0	26.0	28.0
10				28.0	26.0	27.0	30.5	26.5	29.0	29.5	26.0	27.5
11				28.5	26.5	27.5	32.0	28.0	30.0	26.5	25.0	26.0
12				29.5	27.0	28.0	31.5	28.0	30.0	25.5	24.0	25.0
13				30.0	27.0	28.5	31.5	28.0	30.0	27.0	23.0	25.0
14				30.0	27.0	29.0	31.5	28.0	30.0	29.0	25.5	27.0
15				29.5	26.5	28.0	31.5	28.0	30.0	29.0	26.0	27.5
16				29.5	27.0	28.0	31.5	28.5	30.0	28.0	25.5	27.0
17				29.0	27.0	28.0	32.0	28.0	30.0	27.5	25.0	26.0
18				30.0	26.5	28.5	31.5	27.5	29.5	27.0	25.0	26.0
19				30.5	27.0	28.5	31.5	27.5	29.5	25.0	24.5	25.0
20				29.5	27.0	28.5	32.0	27.0	29.5	26.5	23.5	25.0
21				31.0	26.5	28.0	31.0	27.0	29.0	27.0	23.5	25.0
22				29.5	26.0	27.5	32.0	26.5	29.0	26.0	23.0	24.5
23				28.0	26.5	27.5	30.5	26.0	28.5	25.0	21.5	23.5
24				29.5	26.0	28.0	30.0	25.5	28.0	25.0	21.0	23.0
25				30.0	26.0	28.0	30.5	27.0	29.0	25.0	21.0	23.0
26				30.0	26.0	28.5	31.0	28.0	29.0	24.0	21.5	23.0
27				30.5	26.5	28.5	30.0	26.0	28.5	25.0	22.5	23.5
28				31.0	26.5	29.0	30.5	27.5	28.5	24.5	23.5	24.0
29				30.5	27.0	29.0	29.0	27.5	28.5	25.0	23.5	24.5
30				31.0	27.5	29.5	27.5	26.5	27.0	24.0	21.5	23.0
31				31.0	28.0	29.5	28.0	26.0	27.0	---	---	---
MONTH				31.0	25.0	28.0	32.0	25.5	29.0	30.0	21.0	25.5

08068090 WEST FORK SAN JACINTO RIVER ABOVE LAKE HOUSTON NEAR PORTER, TX

LOCATION.--Lat 30°05'09", long 95°17'59", Montgomery County, Hydrologic Unit 12040101, on left bank, 4.4 mi southwest of Porter, 5.0 mi upstream from Spring Creek and 6.2 mi northwest of Humble.

DRAINAGE AREA.--962 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, at site 1.7 mi downstream, water years 1968-72, 1974-75. February to March 1984 (discharge measurements only). May 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 33 ft above National Geodetic Vertical datum of 1929, from topographic map (and levels).

REMARKS.--No estimated daily discharges. Records good. There is considerable regulation during high flow periods by Lake Conroe (capacity 532,000 acre-ft) 34.3 mi upstream. During periods of low base flow in tributaries entering Lake Houston, occasional releases are made from Lake Conroe in order to maintain water levels in Lake Houston, which has several large diversions. There are no large diversions upstream from station. There is only minor sewage effluent discharge from the city of Conroe and other small communities into the river upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (estimated), 20,000 ft³/s Nov. 26, 1986 (gage height, 26.97 ft), from rating curve extended above 4,800 ft³/s on basis of records for station 08068000; minimum daily, 26 ft³/s Sept. 18, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,390 ft³/s June 13 at 0800 hours (gage height, 22.04 ft), from rating curve extended above 4,800 ft³/s on basis of records for station 08068000; minimum daily, 34 ft³/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	48	628	308	130	4110	133	49	486	293	65	169
2	62	47	303	250	172	3850	112	51	822	685	62	83
3	60	47	233	322	409	2460	104	52	743	2160	57	62
4	56	64	193	462	394	1360	118	57	2080	1030	54	54
5	50	145	166	354	377	986	104	74	1620	778	52	47
6	62	256	145	252	298	446	105	71	1580	499	51	43
7	64	540	134	219	157	268	115	241	1260	290	48	40
8	65	335	127	193	144	212	105	171	719	267	46	38
9	62	371	169	197	117	182	100	158	528	1320	44	36
10	56	493	565	409	99	161	94	179	2060	1150	41	35
11	54	282	752	422	94	157	91	235	2830	792	40	39
12	418	169	525	355	90	172	88	300	4270	625	43	58
13	916	134	403	186	87	158	86	528	6940	740	42	49
14	582	141	286	157	87	147	83	248	5880	632	40	46
15	492	378	911	153	509	138	80	174	5640	323	39	44
16	363	435	2240	170	1310	127	79	131	5660	192	38	52
17	279	225	2620	498	1160	376	77	105	4980	155	35	251
18	194	129	3910	2010	1060	1460	73	90	4140	135	36	158
19	122	100	4820	2220	642	1950	72	79	3480	120	37	569
20	90	86	3780	2000	484	2170	71	70	2930	109	36	542
21	75	77	3190	1390	1410	2000	66	64	2310	105	37	200
22	76	75	3370	1060	1370	1340	64	59	1540	153	35	124
23	87	165	4760	581	1610	709	62	54	654	127	35	91
24	98	869	3990	306	1550	541	63	57	359	98	34	75
25	96	1210	3650	236	1300	423	58	217	380	92	37	64
26	85	1420	3700	206	2250	222	56	204	273	85	114	58
27	72	1820	3180	182	3070	176	56	96	199	77	130	54
28	63	2280	2180	162	3450	153	52	130	163	73	132	127
29	58	2290	1230	151	---	145	51	202	138	69	160	251
30	54	1500	791	144	---	158	48	1300	136	67	329	100
31	50	---	486	134	---	179	---	531	---	66	282	---
TOTAL	4935	16131	53437	15689	23830	26936	2466	5977	64800	13307	2231	3559
MEAN	159	538	1724	506	851	869	82.2	193	2160	429	72.0	119
MAX	916	2290	4820	2220	3450	4110	133	1300	6940	2160	329	569
MIN	50	47	127	134	87	127	48	49	136	66	34	35
AC-FT	9790	32000	106000	31120	47270	53430	4890	11860	128500	26390	4430	7060

CAL YR 1986	TOTAL	201830	MEAN	553	MAX	6470	MIN	30	AC-FT	400300
WTR YR 1987	TOTAL	233298	MEAN	639	MAX	6940	MIN	34	AC-FT	462700

08068090 WEST FORK SAN JACINTO RIVER ABOVE LAKE HOUSTON NEAR PORTER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: February 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
JAN												
17-24	0600	1350	231	--	--	--	--	--	--	--	--	--
29...	1015	157	345	6.80	15.0	80	30	9.6	96	1.4	72	36
FEB												
25...	0832	1320	235	6.80	12.0	90	57	10.0	92	2.2	720	850
MAY 29-												
JUN 07	0600	1070	171	--	--	--	--	--	--	--	--	--
11...	1145	2770	182	7.30	25.0	110	--	7.0	84	2.5	580	1200
AUG												
12...	1005	46	502	8.20	30.5	26	3.5	8.8	118	1.7	84	230

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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												
17-24	70	17	24	2.4	16	0.9	2.8	53	13	27	0.10	9.9
29...	84	21	28	3.3	31	2	2.5	63	17	50	0.10	17
FEB												
25...	72	16	25	2.3	16	0.9	3.1	56	13	28	0.20	9.4
MAY 29-												
JUN 07	45	9	15	1.8	13	0.9	3.0	36	11	21	0.10	8.3
11...	58	9	20	2.0	11	0.7	2.6	49	11	18	0.10	7.7
AUG												
12...	98	6	32	4.4	59	3	4.0	92	16	84	0.20	18

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, 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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN												
17-24	130	--	--	0.180	0.020	0.200	0.060	0.64	0.70	0.180	--	--
29...	190	28	21	0.580	0.020	0.600	0.060	0.94	1.0	0.240	7.4	<1
FEB												
25...	130	87	5	0.160	0.040	0.200	0.090	1.7	1.8	0.110	9.5	--
MAY 29-												
JUN 07	95	--	--	0.460	0.040	0.500	0.070	1.1	1.2	0.350	--	--
11...	100	116	19	--	0.020	<0.100	0.030	1.7	1.7	0.150	16	--
AUG												
12...	270	45	2	0.460	0.040	0.500	0.030	1.4	1.4	0.560	6.3	3

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
17-24	--	--	--	--	--	--	--	--	--	--	--
29...	110	6	<10	2	89	<5	46	<0.1	<1	2	11
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY 29-											
JUN 07	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	110	<1	<10	2	15	<5	8	<0.1	<1	<1	7

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
JAN											
17-24	--	--	--	--	--	--	--	--	--	--	--
29...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY 29-											
JUN 07	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	--	--	--	--	--	--	--	--	--	--	--

08068520 SPRING CREEK AT SPRING, TX

LOCATION.--Lat 30°05'31", long 95°24'21", Harris-Montgomery County line, Hydrologic Unit 12040102, near right bank at upstream side of bridge on Riley-Fussel Road, 1.1 mi northeast of Spring, 2.7 mi downstream from Missouri Pacific Railroad bridge, 3.6 mi downstream from former station 08068500 at Interstate Highway 45, 6.9 mi upstream from Cypress Creek, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--419 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1939 to current year. Prior to 1975, published as "near Spring".

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.17 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 5, 1946, nonrecording gage, and Jan. 6, 1946, to Oct. 1, 1965, water-stage recorder at site 3.6 mi upstream at different datum. Oct. 2, 1965, to Feb. 19, 1976, water-stage recorder at former site at datum 10.93 ft higher; unadjusted for land-surface subsidence.

REMARKS.--Records good except those for estsimated daily discharges, which are fair. No known diversion above station.

AVERAGE DISCHARGE.--48 years, 223 ft³/s (7.23 in/yr), 161.600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,700 ft³/s Nov. 25, 1940 (gage height, 33.60 ft) former site and datum, from graph based on gage readings; minimum, 1.1 ft³/s Oct. 23, 24, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1879, 34.3 ft, former site and datum, May 30, 1929, from floodmarks identified by local residents, discharge, 48,300 ft³/s.

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)
Dec. 25	1300	2,730	13.01	June 15	0900	*3,180	*13.92

Minimum discharge, 16 ft³/s Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	37	107	137	87	1820	53	30	195	98	31	110
2	46	37	88	120	101	1170	51	31	119	365	30	64
3	44	37	74	196	103	568	50	35	89	1010	29	41
4	41	60	66	161	97	277	50	56	161	844	27	33
5	44	121	60	141	91	200	49	66	361	235	27	28
6	144	144	54	117	84	168	67	73	456	225	26	25
7	176	234	52	105	78	142	67	135	254	611	25	24
8	122	128	49	100	75	e120	67	149	139	564	25	22
9	92	133	115	104	71	e106	61	94	412	1190	24	21
10	68	129	107	108	69	99	55	85	777	948	24	21
11	61	90	182	122	65	97	51	78	880	426	24	42
12	627	67	128	120	65	96	50	123	1940	216	23	39
13	691	52	96	97	65	98	49	185	2480	152	22	42
14	551	47	82	87	65	97	44	171	2670	108	22	33
15	298	45	1050	83	285	92	42	121	3060	85	21	35
16	153	42	1210	110	574	86	41	80	2390	71	20	72
17	102	40	1190	377	611	173	40	62	1170	63	20	134
18	76	38	1500	1010	418	382	39	55	1110	59	19	92
19	61	37	1510	1450	182	486	39	58	547	55	19	94
20	53	37	1320	1810	297	353	38	47	371	52	19	109
21	46	35	1430	973	434	175	37	43	214	50	19	84
22	51	35	1160	346	740	128	36	39	152	47	18	62
23	60	255	1740	223	841	108	35	40	124	44	17	43
24	74	336	2230	173	389	96	34	77	111	42	18	35
25	90	562	2640	144	291	92	33	52	161	40	17	29
26	87	669	1970	125	992	85	33	50	155	38	17	24
27	70	716	783	109	1260	77	32	39	105	38	18	21
28	56	450	336	100	1670	70	31	34	83	36	20	1210
29	48	196	231	95	---	64	30	149	75	34	30	558
30	43	135	181	92	---	63	31	284	95	34	358	141
31	39	---	154	88	---	57	---	223	---	32	403	---
TOTAL	4163	4944	21895	9023	10100	7645	1335	2764	20856	7812	1412	3288
MEAN	134	165	706	291	361	247	44.5	89.2	695	252	45.5	110
MAX	691	716	2640	1810	1670	1820	67	284	3060	1190	403	1210
MIN	39	35	49	83	65	57	30	30	75	32	17	21
AC-FT	8260	9810	43430	17900	20030	15160	2650	5480	41370	15500	2800	6520
CFSM	.32	.39	1.69	.69	.86	.59	.11	.21	1.66	.60	.11	.26
IN.	.37	.44	1.94	.80	.90	.68	.12	.25	1.85	.69	.13	.29

CAL YR 1986 TOTAL 76994 MEAN 211 MAX 3950 MIN 18 AC-FT 152700 CFSM .50 IN. 6.84
WTR YR 1987 TOTAL 95237 MEAN 261 MAX 3060 MIN 17 AC-FT 188900 CFSM .62 IN. 8.46

e Estimated.

08068520 SPRING CREEK AT SPRING, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: August 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
JAN 27...	0800	111	242	6.80	9.5	100	29	10.4	91	1.9	92	40
FEB 24...	1054	364	150	6.10	11.0	140	56	9.8	88	2.5	800	700
JUN 10...	1535	839	132	7.00	25.0	140	63	6.9	83	2.8	850	4900
JUN 12-16	0300	2550	81	--	--	--	--	--	--	--	--	--
AUG 10...	1000	24	505	7.50	27.0	7	5.6	5.9	74	1.3	120	130
SEP 28-29	1130	17	90	--	--	--	--	--	--	--	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 27...	48	5	14	3.1	28	2	2.3	43	13	36	0.20	15
FEB 24...	34	9	10	2.2	15	1	2.6	25	14	20	0.10	8.7
JUN 10...	33	3	10	1.9	12	0.9	2.8	30	13	15	0.10	7.5
JUN 12-16	25	5	7.3	1.6	6.2	0.6	2.8	20	8.3	9.9	<0.10	7.2
AUG 10...	79	0	24	4.6	69	4	3.9	97	18	80	0.30	18
SEP 28-29	23	1	6.5	1.6	9.5	0.9	3.2	22	10	9.2	0.20	5.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 27...	140	11	<1	0.770	0.030	0.800	0.190	0.81	1.0	0.530	12	<1
FEB 24...	88	49	<1	0.260	0.040	0.300	0.100	1.1	1.2	0.240	14	--
JUN 10...	80	103	31	0.250	0.050	0.300	0.120	2.0	2.1	0.270	15	--
JUN 12-16	55	--	--	--	0.020	<0.100	0.130	1.5	1.6	0.210	--	--
AUG 10...	280	20	7	2.26	0.040	2.30	0.110	1.1	1.2	1.60	6.3	2
SEP 28-29	59	--	--	0.180	0.020	0.200	0.080	1.0	1.1	0.210	--	--

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 27...	91	1	<10	2	260	<5	110	<0.1	<1	<1	7
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 12-16	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	86	<1	<10	2	33	<5	52	<0.1	<1	<1	4
SEP 28-29	--	--	--	--	--	--	--	--	--	--	--

08068520 SPRING CREEK AT SPRING, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
JAN 27...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 12-16	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--
SEP 28-29	--	--	--	--	--	--	--	--	--	--	--

08068720 CYPRESS CREEK AT KATY-HOCKLEY ROAD NEAR HOCKLEY, TX

LOCATION.--Lat 29°57'00", long 95°48'29", Harris County, Hydrologic Unit 12040102, on left bank at bridge on Katy-Hockley Road, 3.3 mi downstream from gage (station 08068700), 5.6 mi southeast of Hockley, and 6.3 mi upstream from station 08068740.

DRAINAGE AREA.--110 mi².

PERIOD OF RECORD.--June 1975 to July 1983, Feb. 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Concrete weir located 0.9 mi downstream from gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions and return flow for irrigation occur upstream from station. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years (water years 1975-82, 1985-87), 64.2 ft³/s (46,510 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,370 ft³/s Jan. 20, 1979 (gage height, 61.05 ft), but may have been exceeded during period of no record July 29 to Jan. 31, 1984; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in June 1960 reached a stage of 62.0 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge (estimated), 1,520 ft³/s June 15 at about 0400 hours (gage height, about 60.4 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	3.8	17	e40	8.5	e380	.36	.0	39	e13	8.5	9.3
2	.76	3.6	11	e32	8.4	188	.17	.0	6.5	e35	15	3.8
3	.64	5.8	8.0	e26	8.9	114	.18	.0	55	e200	13	.00
4	.45	8.7	5.7	e21	26	62	.13	.51	260	e180	10	.00
5	.37	26	4.5	e17	28	39	.06	4.7	446	e75	13	.00
6	1.2	44	3.5	13	28	24	.08	6.8	366	e25	15	.00
7	10	20	2.9	11	28	13	.35	7.1	205	e12	8.1	.00
8	1.1	20	2.5	11	26	8.4	.11	2.6	114	e100	7.5	.00
9	1.9	19	6.5	11	26	6.2	.06	2.1	215	184	10	.0
10	4.7	11	33	20	25	4.4	.07	28	e480	126	7.5	.1
11	2.1	6.4	30	17	25	4.1	.12	35	e600	68	6.1	.57
12	97	4.5	15	10	24	4.2	.07	3.8	e720	52	4.5	.70
13	192	3.8	8.6	8.1	23	4.0	.04	55	e980	33	6.4	.57
14	164	3.4	6.4	7.9	21	3.1	.03	43	e1390	21	2.0	.64
15	97	2.9	228	8.8	29	2.3	.04	17	e1480	30	.00	.70
16	73	3.5	e516	22	129	2.5	.02	3.9	e1230	18	.00	.26
17	44	3.7	e564	151	54	5.3	.01	10	e920	7.5	.00	.00
18	29	3.2	416	e480	20	31	.01	8.4	e700	6.2	.00	.00
19	17	2.7	e411	e670	12	13	.0	7.0	e400	6.5	.00	.00
20	8.6	2.8	e462	e470	12	5.9	.0	3.1	e200	10	.00	.00
21	7.6	2.3	238	185	146	3.3	.16	.0	e130	12	.00	.00
22	13	2.0	233	109	175	2.3	.65	.0	e90	9.6	.00	.00
23	33	3.1	e620	71	64	1.9	.28	.0	e60	8.9	.00	.00
24	68	9.8	e840	47	39	2.4	.0	.0	e35	13	.00	.00
25	48	163	e800	33	73	3.7	.0	.0	e30	9.3	.00	.00
26	26	239	e520	25	344	1.9	.0	.0	e25	8.5	.00	.00
27	18	133	199	18	e580	.84	.0	.0	e22	9.0	.00	.00
28	10	67	122	15	e580	.16	.0	.0	e20	10	.00	.00
29	8.0	41	87	14	---	.23	.0	2.1	e18	9.4	.00	11
30	6.2	28	e65	11	---	.42	.0	91	e16	13	.58	13
31	5.0	---	e50	9.8	---	.47	---	101	---	11	10	---
TOTAL	988.46	887.0	6525.6	2584.6	2562.8	932.02	3.00	432.11	11252.5	1315.9	137.18	40.64
MEAN	31.9	29.6	211	83.4	91.5	30.1	.10	13.9	375	42.4	4.43	1.35
MAX	192	239	840	670	580	380	.65	101	1480	200	15	13
MIN	.37	2.0	2.5	7.9	8.4	.16	.00	.00	6.5	6.2	.00	.00
AC-FT	1960	1760	12940	5130	5080	1850	6.0	857	22320	2610	272	81

CAL YR 1986 TOTAL 20519.57 MEAN 56.2 MAX 1300 MIN .00 AC-FT 40700
WTR YR 1987 TOTAL 27661.71 MEAN 75.8 MAX 1480 MIN .00 AC-FT 54870

e Estimated.

08068740 CYPRESS CREEK AT HOUSE AND HAHL ROAD NEAR CYPRESS, TX

LOCATION.--Lat 29°57'32", long 95°43'03", Harris County, Hydrologic Unit 12040102, on right bank at bridge on House and Hahl Road, 1.4 mi southwest of Cypress, and 6.3 mi downstream from gage (station 08068720).

DRAINAGE AREA.--131 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Stage discharge relationship affected by seasonal vegetal growth during most years. Considerable diversions and return flow from irrigation occur upstream from station, especially during period April through October.

AVERAGE DISCHARGE.--12 years, 83.2 ft³/s (60,280 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s Sept. 22, 1979 (gage height, 46.33 ft); no flow for many days (result of pumping for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1908, about 49 ft in 1937, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,620 ft³/s June 15 at 2400 hours (gage height, 45.30 ft); no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.0	4.7	25	40	12	517	.35	e.00	24	e16	5.2	5.5
2	e.90	3.5	23	31	12	259	.26	e.00	4.7	e40	7.3	7.7
3	e.75	5.9	12	26	12	115	.20	e.00	13	e240	8.6	e2.0
4	e.60	12	8.3	23	20	53	.56	.81	258	e220	5.6	e.50
5	e.50	37	6.0	20	23	32	.27	1.8	442	e90	6.0	e.30
6	.43	69	4.4	17	23	22	.21	1.6	453	e30	8.0	e.25
7	e12	30	3.4	15	23	13	.19	1.4	277	e15	5.3	e.20
8	e2.5	24	2.8	14	23	9.8	.29	.71	111	e150	e4.7	e.15
9	e2.0	22	13	14	22	7.4	.19	.07	203	e220	e5.0	e.12
10	e5.0	15	35	19	22	5.7	.20	5.9	521	e150	e4.5	e.10
11	e3.0	10	37	17	22	5.2	e.15	35	681	e85	e4.0	e.20
12	e150	6.8	18	13	21	4.7	e.12	1.0	949	e65	e3.5	e1.5
13	e280	4.9	12	11	20	4.6	e.10	28	1250	e35	e3.0	e1.2
14	e250	4.5	8.3	10	19	3.7	e.09	31	1550	28	e2.0	e1.2
15	e170	3.3	374	11	22	3.2	e.08	10	1610	24	e1.0	e1.3
16	e100	3.7	761	20	117	2.8	e.07	1.0	1590	18	e.50	e1.2
17	e60	3.6	723	154	60	8.3	e.06	3.3	1420	10	e.30	e.80
18	e40	2.9	577	519	21	24	e.05	3.1	1060	11	e.20	e.40
19	e25	2.2	526	731	14	14	e.04	2.0	534	14	e.15	e.30
20	e15	e1.8	554	603	15	5.9	e.03	2.4	252	13	e.12	e.25
21	e12	e1.6	367	251	114	3.7	e.20	2.6	157	15	e.10	e.20
22	e15	e1.4	309	118	199	2.4	e.60	e.60	109	13	e.08	e.15
23	e50	e1.2	866	74	68	2.1	e.30	e.30	70	12	e.06	e.12
24	94	e16	1010	48	38	2.4	e.15	e.25	45	13	e.05	e.10
25	69	e200	924	34	66	3.6	e.05	e.20	35	13	e.04	e.08
26	36	380	700	26	427	1.8	e.02	e.15	30	10	e.03	e.06
27	21	217	315	20	652	1.2	e.01	e.12	26	7.3	e.02	e.05
28	16	102	159	17	688	.55	e.00	e.10	24	7.0	e.01	e.05
29	12	60	101	16	---	.19	e.00	4.0	22	6.3	e.00	11
30	8.1	38	71	14	---	.42	e.00	52	e19	6.8	e3.0	22
31	6.0	---	53	13	---	.45	---	86	---	7.2	e5.2	---
TOTAL	1457.78	1284.0	8598.2	2939	2775	1129.11	4.84	275.41	13739.7	1584.6	83.56	58.98
MEAN	47.0	42.8	277	94.8	99.1	36.4	.16	8.88	458	51.1	2.70	1.97
MAX	280	380	1010	731	688	517	.60	86	1610	240	8.6	22
MIN	.43	1.2	2.8	10	12	.19	.00	.00	4.7	6.3	.00	.05
AC-FT	2890	2550	17050	5830	5500	2240	9.6	546	27250	3140	166	117

CAL YR 1986 TOTAL 25258.63 MEAN 69.2 MAX 1250 MIN .00 AC-FT 50100
WTR YR 1987 TOTAL 33929.87 MEAN 93.0 MAX 1610 MIN .00 AC-FT 67300

e Estimated.

08068740 CYPRESS CREEK AT HOUSE AND HAHL ROAD NEAR CYPRESS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: January 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 04...	0923	6.0	202	6.40	20.0	110	23	8.6	94	1.5	41
FEB 09...	0905	22	100	6.90	13.0	120	50	12.5	117	7.6	21
MAY 20...	0920	2.0	163	6.70	23.0	140	33	6.0	70	2.3	39
AUG 18...	0814	0.20	388	7.40	27.5	19	7.0	5.4	68	3.0	120

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 04...	3	12	2.7	21	1	7.2	38	13	28	0.20	11
FEB 09...	5	6.2	1.4	8.1	0.8	5.3	16	13	12	0.20	1.4
MAY 20...	1	11	2.8	15	1	5.8	38	22	16	0.20	10
AUG 18...	7	41	5.2	31	1	2.5	117	9.8	41	0.30	19

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 04...	120	28	<1	--	0.020	<0.100	0.030	0.97	1.0	0.170	13
FEB 09...	58	62	26	--	0.020	<0.100	0.010	3.5	3.5	0.120	17
MAY 20...	110	23	<1	0.530	0.070	0.600	0.100	1.9	2.0	0.390	12
AUG 18...	220	17	<1	--	<0.010	<0.100	0.040	1.1	1.1	0.080	6.1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)
NOV 04...	2	71	<1	<10	5	380	<5	10	<0.1	<1
FEB 09...	<1	46	1	<10	6	250	<5	5	<0.1	<1
MAY 20...	3	90	<1	<10	3	950	<5	39	<0.1	<1
AUG 18...	2	200	<1	20	5	40	15	81	0.1	<1

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
NOV 04...	<1	15	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
FEB 09...	<1	17	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY 20...	<1	15	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
AUG 18...	<1	9	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)
NOV 04...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	0.13	<0.01	<0.01
FEB 09...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
MAY 20...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
AUG 18...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01

08068740 CYPRESS CREEK AT HOUSE AND HAHL ROAD NEAR CYPRESS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
NOV 04...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	<0.01	<0.01
FEB 09...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	0.01	<0.01	<0.01
MAY 20...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	0.02	<0.01	<0.01
AUG 18...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	<0.01	<0.01

08068780 LITTLE CYPRESS CREEK NEAR CYPRESS, TX

LOCATION.--Lat 30°00'57", long 95°41'50", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Cypress-Rose Hill Road, 3.2 mi north of Cypress, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--41.0 mi².

PERIOD OF RECORD.--May 1982 to current year.

GAGE.--Water-stage and rainfall recorders and crest-stage gage. Datum of gage is 80.00 ft above National Geodetic Vertical Datum 1929, 1973 adjustment.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation or diversions. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--5 years, 22.8 ft³/s (7.55 in/yr), 16,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,400 ft³/s May 14, 1982, time unknown (gage height, about 79.5 ft); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	1500	504	74.79	June 13	1800	*1100	*77.45

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.37	2.6	3.5	2.5	e48	.09	.0	2.1	e.50	5.3	1.0
2	.32	.34	2.1	2.8	4.5	31	.09	.0	1.0	e10	4.1	.74
3	.27	.31	1.7	2.3	3.2	17	.08	.0	5.1	e60	1.6	.29
4	.21	.66	1.3	3.1	3.0	8.7	.08	.03	23	e30	.71	.10
5	.24	8.3	.85	2.3	2.5	5.6	.08	.08	11	e10	.39	.08
6	.31	3.2	.65	1.8	2.2	4.0	.74	.19	4.7	e35	.23	.05
7	.26	1.5	.57	1.9	2.0	6.2	1.3	.25	2.6	e240	e.10	e.04
8	.28	8.4	.57	2.0	1.9	3.2	.40	.21	1.8	e35	e.07	e.03
9	3.5	7.9	1.0	1.9	1.8	2.4	.26	2.0	130	e21	e.05	e.02
10	5.5	2.8	3.5	2.2	1.7	1.3	.18	38	143	e13	e.04	e.01
11	13	1.3	2.8	2.0	1.6	1.0	.16	8.0	238	e7.5	e.03	4.0
12	88	.88	1.7	1.5	1.7	.88	.12	5.0	334	e5.0	e.02	2.4
13	93	.72	1.2	1.2	1.6	.67	.09	19	959	e3.0	e.02	.65
14	53	.76	.92	1.1	1.5	.59	.06	5.8	e720	2.0	e.02	.46
15	25	.81	e180	1.3	52	.44	.05	2.6	e250	1.3	e.01	.37
16	9.3	.72	e300	3.9	44	.36	.05	1.3	e200	1.2	e.01	.24
17	5.0	.68	e69	129	15	8.4	.04	.96	e100	.84	e.01	.55
18	2.8	.56	128	382	8.2	11	.04	.95	e60	.98	e.00	1.0
19	1.5	.48	180	135	5.7	4.1	.02	.79	e30	.89	e.00	.38
20	1.2	.41	52	50	5.6	1.8	.01	.73	e20	.68	e.00	.19
21	1.1	.35	23	31	7.0	1.0	.0	.65	e14	.87	e.00	.13
22	1.3	.52	e131	19	e20	.60	.01	.64	e9.0	4.4	e.00	e.08
23	6.2	.60	e461	12	16	.47	.04	.68	e6.0	3.6	e.00	e.06
24	16	11	e277	8.9	12	.41	.05	4.6	e4.0	1.8	e.00	e.05
25	8.5	182	72	7.1	e20	.35	.04	1.3	e2.7	1.3	e.00	e.04
26	2.9	87	33	5.7	e240	.67	.02	.73	e2.0	1.1	e.00	e.04
27	1.4	21	19	4.6	e200	.57	.01	.51	e1.5	.74	e.00	e.03
28	.85	11	14	3.7	e82	.36	.0	.44	e1.1	.42	e.00	e.03
29	.82	5.9	11	3.4	---	.23	.0	e5.0	e.85	1.3	e.00	e.02
30	.58	3.4	7.7	3.1	---	.14	.0	25	e.65	4.0	e.00	e.02
31	.47	---	4.6	2.7	---	.10	---	7.1	---	6.0	.23	---
TOTAL	343.25	363.87	1983.76	832.0	759.2	161.54	4.11	132.54	3277.10	503.42	12.94	13.10
MEAN	11.1	12.1	64.0	26.8	27.1	5.21	.14	4.28	109	16.2	.42	.44
MAX	93	182	461	382	240	48	1.3	38	959	240	5.3	4.0
MIN	.21	.31	.57	1.1	1.5	.10	.00	.00	.65	.42	.00	.01
AC-FT	681	722	3930	1650	1510	320	8.2	263	6500	999	26	26
CFSM	.27	.30	1.56	.65	.66	.13	.0	.10	2.66	.40	.0	.0
IN.	.31	.33	1.80	.75	.69	.15	.0	.12	2.97	.46	.0	.0

CAL YR 1986 TOTAL 6323.99 MEAN 17.3 MAX 794 MIN .04 AC-FT 12540 CFSM .42 IN. 5.74
WTR YR 1987 TOTAL 8386.73 MEAN 23.0 MAX 959 MIN .00 AC-FT 16640 CFSM .56 IN. 7.61

e Estimated.

08068800 CYPRESS CREEK AT GRANT ROAD NEAR CYPRESS, TX

LOCATION.--Lat 29°58'24", long 95°35'54", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Grant Road and 6.0 mi east of Cypress.

DRAINAGE AREA.--214 mi².

PERIOD OF RECORD.--May 1982 (discharge measurements only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 80.00 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records fair except those for estimated daily discharges which are poor. Base flow sustained by effluent from urbanized areas and drainage from irrigated farming areas in the basin. Gage-height telemeter at station.

AVERAGE DISCHARGE.--5 years, 111 ft³/s (80,420 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s May 14, 1982 (gage height, 43.48 ft); minimum daily (estimated), 0.29 ft³/s Sept. 15, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s June 14 at 1400 hours (gage height, 39.82 ft); minimum daily (estimated), 1.0 ft³/s on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	9.0	44	59	14	796	e4.5	e1.4	53	19	11	e6.0
2	1.8	8.0	35	45	14	432	e2.5	e1.5	12	64	e8.5	e3.0
3	1.8	8.2	26	44	14	190	e2.0	e1.5	37	379	e7.0	e2.5
4	1.8	54	19	33	15	100	e1.8	18	257	356	e5.5	e2.2
5	9.3	61	15	29	20	58	e1.6	13	406	164	e4.5	e2.0
6	7.4	63	13	23	20	41	e1.5	17	518	69	e3.5	e1.7
7	3.7	42	11	19	21	27	e1.4	16	436	334	e3.0	e1.5
8	55	22	10	16	21	20	e1.4	42	222	275	e2.7	e1.3
9	27	35	23	25	21	15	e1.3	41	254	350	e2.4	e1.2
10	9.5	22	31	22	21	11	e1.3	58	679	246	e2.2	e1.2
11	37	14	57	24	20	10	e1.3	55	963	129	e2.0	8.5
12	559	11	30	18	20	e9.0	e1.3	18	1350	68	e1.8	e4.0
13	636	9.6	20	14	20	e8.0	e1.3	16	1670	47	e1.7	e1.5
14	482	9.2	16	12	19	e7.0	e1.2	62	2060	28	e1.6	e1.2
15	321	8.6	486	11	46	e6.0	e1.2	22	1740	24	e1.5	e5.5
16	187	8.1	1110	40	143	e5.0	e1.2	e8.0	1540	24	e1.4	e3.0
17	129	8.0	882	188	115	18	e1.2	e5.0	1370	14	e1.3	e1.5
18	85	7.6	756	744	40	36	e1.2	e4.0	1200	12	e1.2	e1.2
19	61	6.8	793	826	21	34	e1.1	e3.0	831	16	e1.2	e1.1
20	38	6.3	659	709	43	15	e1.1	e5.0	433	13	e1.2	e1.0
21	26	5.4	553	466	89	e8.5	e1.1	e4.0	240	14	e1.1	e1.0
22	30	5.4	520	195	245	e6.0	e1.1	e3.0	159	15	e1.1	e1.0
23	52	5.7	1310	117	132	e4.5	e1.1	e2.5	107	20	e1.1	e1.0
24	95	27	1390	75	66	e3.5	e1.2	e2.2	66	23	e1.0	e1.0
25	98	459	1010	53	90	e5.0	e1.2	e2.0	50	14	e1.0	e1.0
26	54	648	822	40	607	e4.0	e1.3	e1.9	41	11	e1.0	e1.0
27	29	N428	565	30	960	e3.0	e1.3	e1.8	33	e9.0	e2.0	e1.0
28	21	199	272	23	925	e2.5	e1.3	e1.8	27	e7.5	e1.5	e1.0
29	16	108	163	21	---	e2.2	e1.4	43	24	e6.0	e1.2	e1.0
30	13	71	111	19	---	e2.0	e1.4	61	23	e5.5	19	9.5
31	10	---	79	16	---	e4.5	---	117	---	11	22	---
TOTAL	3098.3	2369.9	11831	3956	3782	1883.7	43.8	647.6	16801	2767.0	117.2	69.6
MEAN	99.9	79.0	382	128	135	60.8	1.46	20.9	560	89.3	3.78	2.32
MAX	636	648	1390	826	960	796	4.5	117	2060	379	22	9.5
MIN	1.8	5.4	10	11	14	2.0	1.1	1.4	12	5.5	1.0	1.0
AC-FT	6150	4700	23470	7850	7500	3740	87	1280	33320	5490	232	138

CAL YR 1986 TOTAL 38143.5 MEAN 105 MAX 1760 MIN .94 AC-FT 75660
WTR YR 1987 TOTAL 47366.9 MEAN 130 MAX 2060 MIN 1.0 AC-FT 93950

e Estimated.

08068900 CYPRESS CREEK AT STUEBNER-AIRLINE ROAD NEAR WESTFIELD, TX

LOCATION.--Lat 30°00'23", long 95°30'42", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Stuebner-Airline Road, 1.3 mi upstream from Spring Gully, and 6.5 mi west of Westfield.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--June 1982 to current year (gage removed for bridge construction, June 1986 to January 1987).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 70.00 ft above National Geodetic Vertical Datum, 1973 adjustment.

REMARKS.--Records good. Extreme low water gage heights are not collected. Low flow is sustained by sewage effluent from urbanized areas and drainage from irrigated farm land. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 37.88 ft Oct. 25, 1984; minimum not determined.

EXTREMES FOR PERIOD FEBRUARY TO SEPTEMBER 1987.--Maximum gage height, 30.25 ft June 12 at 1800 hours; minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR FEBRUARY 1987 TO SEPTEMBER 1987

Feb. 20.....	253	May 27.....	13
Feb. 26.....	779	Sept. 9.....	8.7

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	15.41	22.95	15.52	---	17.12	15.98	15.97	16.28
2	---	---	---	---	---	21.39	15.51	---	16.30	20.67	15.95	16.03
3	---	---	---	---	---	19.08	15.50	---	19.19	20.15	15.97	16.02
4	---	---	---	---	---	17.46	15.49	---	19.03	20.09	15.94	16.00
5	---	---	---	---	---	16.71	16.50	---	19.68	18.87	15.99	15.90
6	---	---	---	---	15.65	16.24	16.73	17.91	20.33	24.11	15.87	15.89
7	---	---	---	---	15.69	16.06	16.00	16.97	20.29	21.19	15.90	15.89
8	---	---	---	---	15.68	15.88	15.70	20.57	19.50	21.13	15.89	16.04
9	---	---	---	---	15.66	---	15.63	21.57	24.03	23.61	15.91	16.09
10	---	---	---	---	15.65	---	15.62	20.81	22.50	20.59	16.30	15.95
11	---	---	---	---	15.65	---	15.57	16.87	27.50	18.40	16.02	16.05
12	---	---	---	---	15.63	---	15.57	16.76	30.25	17.10	15.89	16.49
13	---	---	---	---	15.62	---	15.57	16.11	29.02	16.55	15.85	16.43
14	---	---	---	---	15.60	---	15.53	16.75	28.90	16.35	15.87	15.95
15	---	---	---	---	19.00	---	15.57	16.53	28.86	15.99	15.82	15.86
16	---	---	---	---	17.55	---	15.54	16.10	27.21	16.07	15.81	18.67
17	---	---	---	---	17.75	---	15.52	15.94	27.37	16.07	15.82	16.75
18	---	---	---	---	16.80	---	15.56	15.79	27.47	15.91	15.85	16.08
19	---	---	---	---	16.35	---	15.54	15.76	24.93	16.13	15.83	16.05
20	---	---	---	---	18.40	---	15.56	15.94	21.83	16.09	15.83	15.93
21	---	---	---	---	---	---	---	15.80	19.04	16.03	15.83	15.95
22	---	---	---	---	---	---	---	15.77	17.78	16.01	15.81	15.87
23	---	---	---	---	---	---	---	15.69	17.13	16.02	15.81	15.87
24	---	---	---	---	17.40	---	---	15.68	16.58	16.31	15.81	15.85
25	---	---	---	---	20.90	---	---	15.87	16.19	16.10	15.81	15.84
26	---	---	---	---	22.95	15.53	---	15.87	15.90	16.17	15.81	15.87
27	---	---	---	---	e23.30	15.55	---	15.68	15.87	16.17	16.63	15.87
28	---	---	---	---	e23.10	15.55	---	15.69	15.77	15.97	16.35	17.94
29	---	---	---	---	---	15.53	---	19.01	15.88	15.89	15.93	16.27
30	---	---	---	---	---	15.48	---	18.29	16.90	15.88	18.91	16.13
31	---	---	---	---	---	15.50	---	17.20	---	15.97	17.58	---
MAX	---	---	---	---	---	---	---	---	30.25	24.11	18.91	18.67

e Estimated.

08069000 CYPRESS CREEK NEAR WESTFIELD, TX

LOCATION.--Lat 30°02'08", long 95°25'43", Harris County, Hydrologic Unit 12040102, on left bank at downstream side of downstream bridge on Interstate Highway 45 and U.S. Highway 75, 0.9 mi upstream from Senger Gully, 1.8 mi northwest of Westfield, 2.0 mi upstream from Missouri Pacific Railroad Co. bridge, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--285 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 63.89 ft above National Geodetic Vertical Datum of 1929; unadjusted for land-surface subsidence. Prior to Mar. 17, 1951, water-stage recorder at upstream side of bridge at datum 12.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No large diversions upstream from station. Low flow is maintained by sewage effluent. Channel below gage was rectified in 1950-51, 1975 and 1981.

AVERAGE DISCHARGE.--43 years, 163 ft³/s, (118,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s Oct. 8, 1949 (gage height, 33.44 ft) present datum, from rating curve extended above 11,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 34 ft, present datum, in May 1929 (discharge, 26,000 ft³/s), from information by local resident. Flood in November 1940 reached a stage of about 32 ft, present datum (discharge, 15,000 ft³/s), from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 12	1400	3,180	17.83	Dec. 23	0700	2,790	16.59
Dec. 15	1400	2,850	16.78	June 12	1845	*4,380	*21.39

Minimum daily discharge, 18 ft³/s Apr. 15, Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	29	76	90	41	983	22	27	e120	73	36	49
2	23	42	59	75	43	638	24	25	e70	168	36	30
3	23	42	56	197	39	274	20	28	e150	584	36	28
4	21	162	43	81	40	147	19	260	e400	518	36	27
5	33	176	36	64	44	98	32	75	e600	271	32	23
6	53	81	32	54	49	78	98	236	e700	571	30	22
7	31	87	30	50	49	65	30	106	e600	887	31	23
8	296	58	29	45	49	53	21	238	e350	633	31	23
9	210	51	185	110	49	46	22	299	e1000	1170	30	25
10	42	56	82	73	46	40	21	302	950	596	36	21
11	124	41	75	52	47	48	20	80	1580	255	44	42
12	2070	32	72	49	45	37	20	99	2930	132	30	48
13	1110	27	47	41	45	34	21	35	2710	93	29	57
14	530	27	42	37	44	33	20	62	2210	90	28	29
15	335	26	1590	35	207	32	18	61	2320	51	28	23
16	190	26	1450	181	125	34	20	39	2290	51	27	134
17	139	26	1200	624	159	159	20	32	1810	45	29	100
18	106	25	1200	842	86	74	21	25	2080	32	28	36
19	83	23	1010	1040	57	69	21	24	1310	38	27	32
20	70	25	826	899	319	51	22	35	708	43	27	22
21	52	23	660	659	114	36	21	26	319	41	27	22
22	114	21	1410	266	209	31	22	25	193	41	25	18
23	99	747	2410	146	200	28	23	e23	138	39	26	18
24	101	601	1830	106	146	26	23	e22	e100	61	27	18
25	117	865	1420	80	200	26	22	e21	e82	41	26	19
26	92	701	1080	66	1230	30	23	e20	65	42	25	20
27	64	542	790	56	1080	29	26	e20	55	42	43	21
28	48	269	381	49	1140	26	27	e20	46	34	54	386
29	41	140	203	45	---	23	26	e100	71	31	52	60
30	37	100	141	43	---	22	25	e120	112	29	230	24
31	31	---	112	40	---	22	---	e200	---	36	185	---
TOTAL	6309	5071	18577	6195	5902	3292	750	2685	26069	6738	1351	1400
MEAN	204	169	599	200	211	106	25.0	86.6	869	217	43.6	46.7
MAX	2070	865	2410	1040	1230	983	98	302	2930	1170	230	386
MIN	21	21	29	35	39	22	18	20	46	29	25	18
AC-FT	12510	10060	36850	12290	11710	6530	1490	5330	51710	13360	2680	2780

CAL YR 1986 TOTAL 63736 MEAN 175 MAX 2410 MIN 16 AC-FT 126400
WTR YR 1987 TOTAL 84339 MEAN 231 MAX 2930 MIN 18 AC-FT 167300

e Estimated.

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March 1959 to April 1964, October 1977 to June 1978, August 1983 to current year. Chemical, biochemical, and pesticide analyses: August 1983 to current year. Sediment analyses: October 1976 to September 1979. October 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
DEC												
14-19	0100	1090	99	--	--	--	--	--	--	--	--	--
15...	1320	2400	--	--	12.0	--	--	--	--	--	--	--
15...	2320	1600	--	--	12.0	--	--	--	--	--	--	--
16...	1119	1170	--	--	12.0	--	--	--	--	--	--	--
17...	0848	1050	--	--	12.0	--	--	--	--	--	--	--
18...	1307	1240	--	--	13.5	--	--	--	--	--	--	--
19...	1203	815	--	--	13.5	--	--	--	--	--	--	--
21...	1024	585	--	--	11.5	--	--	--	--	--	--	--
JAN												
17...	1403	1000	--	--	15.0	--	--	--	--	--	--	--
18...	0017	670	--	--	13.0	--	--	--	--	--	--	--
18...	1120	710	--	--	11.0	--	--	--	--	--	--	--
20...	0915	800	--	--	11.0	--	--	--	--	--	--	--
22...	0801	285	--	--	11.0	--	--	--	--	--	--	--
26...	1335	66	326	7.40	11.0	160	82	10.8	98	2.5	1300	880
FEB												
24...	0955	168	212	6.80	12.0	200	98	10.0	92	3.8	780	1700
FEB 25-MAR 01	1800	1060	115	--	--	220	120	--	--	--	--	--
JUN												
09...	1747	1460	--	--	23.5	--	--	--	--	--	--	--
10...	0906	810	--	--	23.5	--	--	--	--	--	--	--
10...	1435	1010	144	6.90	25.0	190	55	6.3	76	3.5	1200	6200
JUN												
11-16	0100	2320	82	--	--	--	--	--	--	--	--	--
11...	0822	805	--	--	24.5	--	--	--	--	--	--	--
11...	1530	1850	--	--	24.0	--	--	--	--	--	--	--
11...	2340	2020	--	--	25.5	--	--	--	--	--	--	--
12...	2330	3200	--	--	26.0	--	--	--	--	--	--	--
13...	1226	2000	--	--	27.0	--	--	--	--	--	--	--
14...	2331	2000	--	--	28.0	--	--	--	--	--	--	--
20...	2326	410	--	--	29.5	--	--	--	--	--	--	--
JUL												
07...	1721	620	--	--	27.0	--	--	--	--	--	--	--
08...	1012	440	--	--	25.5	--	--	--	--	--	--	--
09...	0906	1140	--	--	25.5	--	--	--	--	--	--	--
09...	1214	1380	--	--	25.5	--	--	--	--	--	--	--
09...	1707	1180	--	--	25.5	--	--	--	--	--	--	--
09...	2347	790	--	--	25.5	--	--	--	--	--	--	--
10...	0844	540	--	--	26.0	--	--	--	--	--	--	--
11...	0925	247	--	--	26.0	--	--	--	--	--	--	--
AUG												
10...	0820	31	708	8.30	28.0	17	7.3	5.5	70	2.3	9300	2000
SEP												
28-28	0900	632	173	--	--	--	--	--	--	--	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL 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)
DEC												
14-19	25	0	7.9	1.4	8.9	0.8	3.5	26	8.0	9.4	0.10	5.6
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
26...	59	0	18	3.4	39	2	5.6	71	17	44	0.20	13
FEB												
24...	43	0	13	2.5	23	2	4.8	45	20	21	0.20	8.5
FEB 25-MAR 01	31	5	9.4	1.9	9.2	0.7	3.6	26	14	11	0.10	6.0
JUN												
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	35	0	11	1.8	12	0.9	3.8	36	13	13	0.10	8.1
JUN												
11-16	25	2	7.2	1.6	5.9	0.5	3.2	23	11	6.3	0.10	6.9
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
07...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
10...	97	0	30	5.4	110	5	7.7	169	23	95	0.50	19
SEP												
28-28	42	0	13	2.4	9.5	0.7	9.7	46	14	13	0.30	3.9

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	SEDI-MENT, SUS-PENDED (MG/L)
DEC												
14-19	60	--	--	0.460	0.040	0.500	0.140	1.4	1.5	0.430	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	1890
15...	--	--	--	--	--	--	--	--	--	--	--	884
16...	--	--	--	--	--	--	--	--	--	--	--	917
17...	--	--	--	--	--	--	--	--	--	--	--	653
18...	--	--	--	--	--	--	--	--	--	--	--	840
19...	--	--	--	--	--	--	--	--	--	--	--	530
21...	--	--	--	--	--	--	--	--	--	--	--	225
JAN												
17...	--	--	--	--	--	--	--	--	--	--	--	2100
18...	--	--	--	--	--	--	--	--	--	--	--	470
18...	--	--	--	--	--	--	--	--	--	--	--	564
20...	--	--	--	--	--	--	--	--	--	--	--	367
22...	--	--	--	--	--	--	--	--	--	--	--	214
26...	180	82	20	3.14	0.060	3.20	0.380	1.6	2.0	2.10	14	--
FEB												
24...	120	105	10	1.63	0.070	1.70	0.240	1.4	1.6	1.10	13	--
FEB 25-MAR 01	71	216	30	0.340	0.060	0.400	0.230	2.1	2.3	0.450	13	--
JUN												
09...	--	--	--	--	--	--	--	--	--	--	--	1420
10...	--	--	--	--	--	--	--	--	--	--	--	832
10...	84	103	57	0.350	0.050	0.400	0.170	1.3	1.5	0.570	15	--
JUN												
11-16	56	--	--	0.170	0.030	0.200	0.110	1.4	1.5	0.370	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	566
11...	--	--	--	--	--	--	--	--	--	--	--	2380
11...	--	--	--	--	--	--	--	--	--	--	--	854
12...	--	--	--	--	--	--	--	--	--	--	--	602
13...	--	--	--	--	--	--	--	--	--	--	--	648
14...	--	--	--	--	--	--	--	--	--	--	--	721
20...	--	--	--	--	--	--	--	--	--	--	--	183
JUL												
07...	--	--	--	--	--	--	--	--	--	--	--	551
08...	--	--	--	--	--	--	--	--	--	--	--	262
09...	--	--	--	--	--	--	--	--	--	--	--	1660
09...	--	--	--	--	--	--	--	--	--	--	--	1180
09...	--	--	--	--	--	--	--	--	--	--	--	753
09...	--	--	--	--	--	--	--	--	--	--	--	474
10...	--	--	--	--	--	--	--	--	--	--	--	283
11...	--	--	--	--	--	--	--	--	--	--	--	122
AUG												
10...	390	18	2	6.08	0.120	6.20	0.170	1.2	1.4	5.50	8.8	--
SEP												
28-28	93	--	--	0.830	0.070	0.900	0.150	1.1	1.3	1.00	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	ARSENIC DISSOLVED (UG/L AS AS)
DEC											
14-19	--	--	--	--	--	--	--	--	--	--	--
15...	12200	15	19	22	27	33	48	71	98	100	--
15...	3820	17	18	21	23	28	36	65	96	100	--
16...	2900	11	12	14	15	21	32	57	97	100	--
17...	1850	9	10	11	14	18	29	57	94	100	--
18...	2810	14	15	17	26	31	37	63	97	100	--
19...	1170	12	13	15	16	21	33	50	95	100	--
21...	355	13	14	15	29	31	34	59	92	100	--
JAN											
17...	5670	13	15	17	23	31	47	75	97	100	--
18...	850	25	29	32	38	46	58	82	98	100	--
18...	1080	23	25	28	35	41	53	74	96	100	--
20...	793	14	15	18	19	24	33	34	94	100	--
22...	165	23	24	28	30	36	40	53	79	100	--
26...	--	--	--	--	--	--	--	--	--	--	2
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
FEB 25-MAR 01	--	--	--	--	--	--	--	--	--	--	--
JUN											
09...	5600	19	23	26	36	37	47	73	99	100	--
10...	1820	14	15	17	20	24	33	73	98	100	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11-16	--	--	--	--	--	--	--	--	--	--	--
11...	1230	9	10	14	18	19	27	59	96	100	--
11...	11900	11	12	14	18	24	37	56	96	100	--
11...	4660	17	18	20	23	30	35	56	98	100	--
12...	5200	20	21	24	29	35	45	68	96	100	--
13...	3500	10	11	13	15	21	28	59	94	100	--
14...	3890	9	10	13	16	21	30	57	96	100	--
20...	203	21	24	34	38	51	67	82	97	100	--
JUL											
07...	922	26	27	31	38	49	59	80	98	100	--
08...	311	20	21	25	29	36	51	66	94	100	--
09...	5110	13	14	16	20	26	40	66	95	100	--
09...	4400	18	19	23	26	32	43	67	96	100	--
09...	2400	19	20	23	25	31	42	70	98	100	--
09...	1010	15	16	19	21	27	37	59	96	100	--
10...	413	16	18	23	26	33	46	67	96	100	--
11...	81	26	34	36	43	52	61	69	90	100	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	5
SEP											
28-28	--	--	--	--	--	--	--	--	--	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
14-19	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
26...	84	<1	<10	5	210	<5	33	<0.1	<1	<1	17
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
FEB 25-MAR 01	--	--	--	--	--	--	--	--	--	--	--
JUN											
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11-16	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	100	<1	<10	5	20	<5	<10	0.1	<1	<1	20
SEP											
28-28	--	--	--	--	--	--	--	--	--	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
DEC											
14-19	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
26...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
FEB 25-MAR 01	--	--	--	--	--	--	--	--	--	--	--
JUN											
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11-16	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
SEP											
28-28	--	--	--	--	--	--	--	--	--	--	--

SAN JACINTO RIVER MAIN STEM

08069500 WEST FORK SAN JACINTO RIVER NEAR HUMBLE, TX

LOCATION.--Lat 30°01'38", long 95°15'27", Harris County, Hydrologic Unit 12040101, near left bank at service road bridge on U.S. Highway 59, 970 ft upstream from Texas and New Orleans Railroad Co. bridge, 0.5 mi downstream from Spring Creek, and 2.5 mi north of Humble.

DRAINAGE AREA.--1,741 mi².

PERIOD OF RECORD.--October 1928 to September 1954, October 1954 to current year (gage heights only). Annual maximum and minimum gage heights only for October 1954 to September 1966 (published with station 08072000 Lake Houston near Sheldon). Published as San Jacinto River near Humble prior to 1938.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 30.53 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1933, nonrecording gage at site 1,800 ft downstream at same datum. July 17, 1933 to Mar. 5, 1939, non-recording gage at present site and datum.

REMARKS.--Records good. Station discontinued as a streamflow station Sept. 30, 1954, due to backwater from Lake Houston. No large diversion above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--26 years (water years 1929-54), 1,097 ft³/s (794,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--1928-54: Maximum discharge, 187,000 ft³/s May 31, 1929, Nov. 25, 26, 1940; maximum gage height, 32.7 ft May 31, 1929, Nov. 26, 1940, present site and datum, both affected by backwater from East Fork San Jacinto River; minimum discharge, 11 ft³/s Aug. 31, Sept. 1, 2, 1951.
1954-86: Maximum gage height since first appreciable storage at Lake Houston, 25.15 ft Apr. 19, 1979; minimum since first appreciable storage at Lake Houston, 5.5 ft Dec. 12, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1865, occurred in September 1900, May 31, 1929, and Nov. 25, 26, 1940, and all reached about the same stage, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 19.65 ft June 13 at 0800 hours; minimum, not recorded.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.29	12.91	13.64	13.01	12.03	16.38	11.47	11.77	12.78	12.44	11.51	11.42
2	13.28	12.99	13.31	12.79	12.12	16.23	11.46	11.74	12.98	12.91	11.48	11.41
3	13.24	12.97	13.18	12.63	12.29	15.48	11.47	11.80	13.09	14.54	11.44	11.41
4	13.22	13.13	13.13	12.47	12.42	13.85	11.55	11.84	13.79	14.28	11.42	11.41
5	13.15	13.12	13.09	12.34	12.41	13.05	11.62	11.83	13.72	13.91	11.40	11.41
6	13.17	13.14	13.07	12.23	12.37	12.37	11.61	12.24	13.78	13.66	11.39	11.41
7	13.13	13.29	13.02	12.11	12.10	12.21	11.61	12.24	13.52	13.68	11.39	11.39
8	13.38	13.25	13.01	11.98	11.80	12.02	11.64	12.31	12.88	13.07	11.39	11.38
9	13.38	13.21	12.99	11.78	11.63	11.79	11.69	12.62	13.15	14.90	11.38	---
10	13.19	13.20	13.05	11.83	11.67	11.63	11.75	12.72	14.57	14.86	---	---
11	13.16	13.17	13.07	11.98	11.69	11.59	11.79	12.81	15.91	14.02	---	---
12	15.01	13.07	13.04	12.10	11.70	11.58	11.84	12.48	19.11	13.50	---	---
13	15.00	12.92	12.98	12.17	11.77	11.54	11.83	11.92	19.65	12.97	---	11.39
14	13.99	12.80	12.86	12.27	11.86	11.51	11.79	11.61	18.77	12.53	---	---
15	13.61	12.89	15.77	12.13	12.54	11.49	11.79	11.76	18.53	11.88	---	---
16	13.40	12.97	15.79	11.96	13.03	11.52	11.81	11.74	19.01	11.45	---	---
17	13.24	12.98	15.54	14.01	13.12	12.04	11.83	11.82	18.43	11.44	---	11.50
18	13.17	12.97	16.81	14.91	13.17	12.78	11.84	11.84	16.91	11.49	---	11.41
19	13.08	12.99	16.89	15.31	13.13	13.40	11.88	11.92	16.53	11.47	---	11.60
20	13.06	12.97	16.47	15.34	13.04	13.55	11.84	11.92	15.29	11.56	---	11.61
21	13.03	12.94	15.83	15.24	13.22	13.53	11.80	11.90	14.53	11.52	---	11.59
22	13.05	12.93	17.02	14.12	13.48	13.29	11.78	11.88	13.89	11.51	---	11.55
23	13.07	15.03	18.26	13.41	13.73	12.40	11.79	11.83	13.00	11.53	---	11.53
24	13.03	15.44	17.96	13.08	13.69	11.64	11.81	11.88	12.26	11.58	---	11.50
25	12.92	14.80	17.08	12.64	13.64	11.49	11.81	11.94	11.60	11.58	---	11.50
26	12.92	14.57	16.85	12.27	15.73	11.46	11.79	12.07	11.69	11.59	---	11.51
27	12.92	14.61	16.22	11.88	15.69	11.45	11.76	12.03	11.84	11.57	---	11.50
28	12.94	14.61	15.09	11.73	16.18	11.47	11.73	12.03	11.93	11.54	---	13.15
29	12.93	14.49	14.11	11.79	---	11.46	11.72	12.36	12.03	11.53	---	13.16
30	12.94	14.15	13.42	11.87	---	11.44	11.74	12.93	12.16	11.53	11.81	12.01
31	12.92	---	13.20	12.10	---	11.44	---	12.68	---	11.53	12.16	---
MAX	15.01	15.44	18.26	15.34	16.18	16.38	11.88	12.93	19.65	14.90	---	---

08070000 EAST FORK SAN JACINTO RIVER NEAR CLEVELAND, TX

LOCATION.--Lat 30°20'11", long 95°06'14", Liberty County, Hydrologic Unit 12040103, near left bank at downstream side of bridge on State Highway 105, 1,880 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi west of Cleveland, and 4.3 mi downstream from Winter Creek.

DRAINAGE AREA.--325 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 107.98 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1955, at site 1,800 ft upstream at datum 5.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There are no large diversions above station. Rain gage and gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 230 ft³/s (9.61 in/yr), 166,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft³/s Nov. 24, 1940, (gage height, 24.1 ft) present site and datum, from rating curve extended above 27,000 ft³/s; minimum daily, 3.0 ft³/s Aug. 23, 24, Sept. 27, 28, 1956. Maximum stage since at least 1900, that of Nov. 24, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 5, 1935, reached a stage of 23.6 ft, present site and datum, from information by local residents, discharge 53,500 ft³/s.

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)
June 12	1900	*2,300	*13.74				

Minimum discharge, 22 ft³/s Aug. 20-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	46	181	161	102	2030	87	42	458	159	34	40
2	48	43	145	146	130	1890	85	44	287	451	33	33
3	45	41	123	246	125	879	82	46	169	867	32	30
4	43	82	106	281	152	316	79	e63	169	777	31	29
5	43	93	95	366	128	233	77	e281	159	574	30	28
6	64	150	90	243	110	196	81	e123	390	214	29	27
7	49	170	85	183	99	175	83	e100	271	124	28	26
8	47	119	82	161	93	160	78	e162	100	176	27	26
9	48	252	166	152	87	147	77	e205	93	600	27	25
10	49	468	297	155	84	138	74	e222	290	767	26	25
11	47	290	396	150	80	139	71	e178	608	286	27	29
12	178	131	257	143	80	151	70	e149	1670	161	27	36
13	430	315	197	131	79	141	70	281	2030	114	27	38
14	462	288	158	126	80	135	70	213	1480	92	25	40
15	285	143	586	126	352	127	64	124	1060	80	24	34
16	149	105	1230	137	976	121	68	95	908	71	24	52
17	100	89	1320	273	920	188	73	76	364	66	23	129
18	79	80	1750	717	487	908	65	66	450	62	23	75
19	68	74	2070	932	202	1540	61	59	834	57	23	49
20	60	70	1800	973	215	1760	58	56	823	51	22	60
21	55	67	1770	543	369	621	57	52	556	47	22	45
22	54	63	1390	258	686	232	53	49	199	45	22	37
23	57	111	1410	196	1020	183	51	50	125	43	22	33
24	64	639	1600	166	803	162	49	47	162	41	22	30
25	61	1070	1840	149	372	201	48	56	766	43	22	29
26	56	1050	1750	137	1040	179	48	161	222	42	22	28
27	52	1000	665	132	1450	137	46	106	119	39	22	28
28	49	1150	302	124	1890	119	45	66	86	38	22	38
29	46	682	238	120	---	106	44	58	71	37	24	35
30	44	247	201	112	---	97	43	111	85	35	43	33
31	42	---	179	105	---	92	---	155	---	34	57	---
TOTAL	2928	9128	22479	7844	12211	13503	1957	3496	15004	6193	842	1167
MEAN	94.5	304	725	253	436	436	65.2	113	500	200	27.2	38.9
MAX	462	1150	2070	973	1890	2030	87	281	2030	867	57	129
MIN	42	41	82	105	79	92	43	42	71	34	22	25
AC-FT	5810	18110	44590	15560	24220	26780	3880	6930	29760	12280	1670	2310
CFSM	.29	.94	2.23	.78	1.34	1.34	.20	.35	1.54	.61	.08	.12
IN.	.34	1.04	2.57	.90	1.40	1.55	.22	.40	1.72	.71	.10	.13

CAL YR 1986 TOTAL 117976 MEAN 323 MAX 5790 MIN 25 AC-FT 234000 CFSM .99 IN. 13.5
WTR YR 1987 TOTAL 96752 MEAN 265 MAX 2070 MIN 22 AC-FT 191900 CFSM .82 IN. 11.1

e Estimated.

08070000 EAST FORK SAN JACINTO RIVER NEAR CLEVELAND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: September 1961 to April 1964, January 1968 to current year. Biochemical analyses: August 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
JAN												
27...	1220	132	231	7.20	10.0	50	13	11.0	98	1.4	56	120
FEB												
24...	1310	779	130	6.80	11.0	140	47	10.2	92	2.0	650	2700
JUN												
12...	1345	2090	80	6.30	23.0	140	50	6.0	70	4.1	4100	5500
AUG												
11...	0935	27	214	7.00	27.0	27	9.2	6.1	77	0.7	84	130

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
JAN											
27...	57	19	19	2.4	20	1	1.3	38	14	35	<0.10
FEB											
24...	37	14	12	1.6	11	0.8	2.1	23	11	19	<0.10
JUN											
12...	22	9	7.1	1.1	7.5	0.7	1.7	13	10	13	<0.10
AUG											
11...	45	15	14	2.4	23	2	1.5	30	6.4	41	0.10

DATE	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)	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)
JAN											
27...	15	130	10	9	<0.010	<0.100	0.030	0.67	0.70	0.020	5.3
FEB											
24...	8.9	79	61	6	0.030	<0.100	0.060	0.74	0.80	0.060	11
JUN											
12...	6.0	54	123	49	<0.030	<0.100	0.090	1.5	1.6	0.150	17
AUG											
11...	13	120	17	9	<0.010	<0.100	0.010	0.79	0.80	0.090	4.3

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX

LOCATION.--Lat 30°08'43", long 95°06'14", Montgomery County, Hydrologic Unit 12040103, on right bank at downstream side of bridge on Farm Road 1485, 1.0 mi upstream from Church House Gully, 5.5 mi east of New Caney, and 5.9 mi upstream from Caney Creek.

DRAINAGE AREA.--388 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1952-58, 1969-76, 1983-84. May 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 43.98 ft above National Geodetic Vertical Datum of 1929 (from Texas Highway Department bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are fair. There are no known diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft³/s June 11, 1986 (gage height, 21.66 ft); minimum, 23 ft³/s Sept. 4-6, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1973, reached a stage of 29.6 ft, from floodmark on left bank, identified by local resident. Flood in November 1940 may have been slightly higher.

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)
June 12	1700	*5,830	*20.07	No other peak greater than base discharge.			

Minimum discharge, 27 ft³/s Aug. 23-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	45	324	262	129	1990	117	56	185	273	e54	73
2	59	44	241	231	131	2000	113	55	417	309	e52	48
3	50	45	194	250	154	1750	108	55	284	686	e49	38
4	47	61	165	414	155	890	105	57	276	930	e47	35
5	44	238	143	391	173	391	101	240	197	806	e45	33
6	43	161	128	411	153	299	100	154	207	582	e44	32
7	56	178	119	303	133	255	101	126	383	291	e42	32
8	51	200	114	243	121	228	100	111	272	266	e41	31
9	49	148	115	219	113	208	96	163	191	1010	e39	31
10	49	283	293	219	106	192	94	264	607	1220	e38	31
11	50	424	331	205	101	183	91	203	828	902	e37	31
12	94	282	388	189	99	181	88	241	4240	392	e36	35
13	303	160	283	178	97	184	85	365	3980	241	e35	40
14	442	319	225	165	96	177	81	350	2560	179	e34	43
15	433	273	388	161	127	170	83	213	1660	147	e33	46
16	277	163	1090	164	427	163	81	145	1280	126	e32	46
17	166	121	1330	404	775	221	82	119	1290	111	30	62
18	115	105	1380	897	764	428	86	96	812	100	29	122
19	89	95	1880	849	424	846	79	84	688	92	29	81
20	74	86	1970	906	344	1320	75	76	868	82	29	54
21	65	78	1720	977	481	1500	72	73	854	85	29	56
22	60	74	1770	571	471	599	70	70	586	81	28	50
23	60	209	2360	298	648	280	66	68	289	75	27	42
24	61	671	1880	231	894	225	63	73	208	71	27	38
25	65	1250	1660	198	749	200	61	63	368	69	27	35
26	63	1300	1680	179	1290	225	60	71	725	67	27	33
27	58	1120	1630	164	1540	197	60	154	299	67	27	32
28	55	1010	796	159	1740	164	58	110	187	63	27	36
29	52	1060	424	151	---	145	57	81	150	64	27	54
30	49	731	349	145	---	133	56	78	164	e61	35	41
31	47	---	301	136	---	123	---	117	---	e58	66	---
TOTAL	3202	10934	25671	10270	12435	15867	2489	4131	25055	9506	1122	1361
MEAN	103	364	828	331	444	512	83.0	133	835	307	36.2	45.4
MAX	442	1300	2360	977	1740	2000	117	365	4240	1220	66	122
MIN	43	44	114	136	96	123	56	55	150	58	27	31
AC-FT	6350	21690	50920	20370	24660	31470	4940	8190	49700	18860	2230	2700

CAL YR 1986 TOTAL 135050 MEAN 370 MAX 6470 MIN 32 AC-FT 267900
WTR YR 1987 TOTAL 122043 MEAN 334 MAX 4240 MIN 27 AC-FT 242100

e Estimated.

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: August 1983 to current year. Pesticide analyses: August 1985 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1984 to current year.
WATER TEMPERATURE: June 1984 to current year.

INSTRUMENTATION.--Beginning June 1984, 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, 870 microsiemens May 7, 1985; minimum, 37 microsiemens June 12, 1987.
WATER TEMPERATURE: Maximum, 31.5°C July 30, 31, Aug 1, 1986; minimum, 5.5 °C Feb. 4, 5, Dec. 16, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 330 microsiemens May 10; minimum, 37 microsiemens June 12.
WATER TEMPERATURE: Maximum, 31.0°C Aug. 20, 21; minimum, 7.0°C Jan. 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
JAN 28...	0710	161	212	7.10	10.5	65	18	10.8	97	1.3	100	130
FEB 24...	0950	875	126	6.70	11.0	140	53	10.3	93	2.6	950	4000
FEB 26-MAR 05	0100	1480	102	--	--	160	40	--	--	--	--	--
JUN 11...	1020	786	94	6.60	23.5	140	67	7.5	88	3.0	3200	3800
JUN 12-17	0200	2700	63	--	--	--	--	--	--	--	--	--
AUG 11...	0800	39	230	7.10	27.0	47	15	6.0	76	0.6	120	150

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 28...	54	20	18	2.3	19	1	1.4	34	15	36	0.10	15
FEB 24...	36	15	12	1.5	9.9	0.7	2.0	21	12	20	<0.10	8.3
FEB 26-MAR 05	33	12	11	1.4	7.3	0.6	1.7	21	12	13	<0.10	9.2
JUN 11...	26	8	8.4	1.3	8.3	0.7	2.1	18	13	12	<0.10	6.8
JUN 12-17	20	5	6.5	0.97	4.7	0.5	1.8	15	7.0	8.0	<0.10	5.0
AUG 11...	44	10	14	2.3	23	2	1.7	34	8.4	39	0.20	13

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 28...	130	14	<1	--	<0.010	0.200	0.050	1.2	1.2	0.040	7.0	<1
FEB 24...	78	87	7	--	0.030	<0.100	0.070	0.83	0.90	0.080	14	--
FEB 26-MAR 05	68	56	24	--	0.030	<0.100	0.070	1.2	1.3	0.130	13	--
JUN 11...	63	113	41	0.060	0.040	0.100	0.090	1.8	1.9	0.140	18	--
JUN 12-17	43	--	--	--	0.010	<0.100	0.080	0.92	1.0	0.120	--	--
AUG 11...	120	14	<1	--	<0.010	0.200	0.020	1.3	1.3	0.130	4.9	<1

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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...	87	1	<10	1	150	<5	41	<0.1	<1	<1	6
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
FEB 26-MAR 05	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 12-17	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	79	<1	<10	2	200	<5	43	<0.1	<1	<1	8

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
JAN 28...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
FEB 26-MAR 05	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 12-17	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--	--

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	3202	166	102	884	27	231	12	108	43
NOV.	1986	10934	153	95	2810	24	716	12	359	40
DEC.	1986	25671	85	56	3870	11	786	9.7	675	25
JAN.	1987	10270	155	96	2670	24	675	12	346	41
FEB.	1987	12435	126	79	2670	19	640	11	376	34
MAR.	1987	15867	139	88	3750	21	906	12	526	38
APR.	1987	2489	262	148	996	51	344	6.7	45	56
MAY	1987	4131	198	118	1320	35	385	11	124	48
JUNE	1987	25055	103	67	4500	15	990	11	719	29
JULY	1987	9506	130	83	2120	19	495	12	314	36
AUG.	1987	1122	226	133	402	41	124	10	32	52
SEPT	1987	1361	182	111	408	30	111	13	46	46
TOTAL		122043	**	**	26400	**	6400	**	3670	**
WTD.AVG.		334	127	80	**	19	**	11	**	34

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	140	131	136	216	207	211	---	---	118	140	132	136
2	152	140	146	218	213	216	---	---	120	148	141	145
3	171	152	162	216	212	214	---	---	123	153	148	151
4	190	171	180	216	139	198	---	---	126	158	153	156
5	267	190	205	186	119	160	---	---	130	159	156	158
6	212	205	208	197	136	162	---	---	134	177	158	168
7	216	210	213	213	180	194	---	---	138	175	171	173
8	224	215	219	246	216	230	---	---	143	183	175	179
9	215	200	208	249	224	233	---	---	148	190	182	187
10	204	191	196	291	243	271	184	146	154	193	190	192
11	215	205	211	237	141	178	180	151	166	202	193	198
12	217	152	191	145	135	139	244	165	211	209	201	205
13	191	132	167	157	145	151	191	174	178	212	194	202
14	139	99	119	190	157	171	206	183	194	216	204	211
15	146	132	136	176	154	161	210	104	168	217	213	216
16	171	117	144	183	160	173	107	87	96	214	201	208
17	158	142	151	306	180	196	112	88	104	200	77	154
18	169	160	164	243	188	195	110	87	102	109	71	90
19	178	169	174	242	201	233	85	52	65	155	107	128
20	184	177	181	236	227	231	56	42	50	141	132	137
21	217	184	193	242	231	239	53	48	50	132	126	129
22	244	220	235	244	241	242	57	53	55	139	126	132
23	242	228	236	242	234	238	61	56	58	155	140	147
24	243	221	233	---	---	200	70	60	65	170	155	162
25	248	213	228	---	---	150	75	69	72	184	170	177
26	211	194	203	---	---	115	83	76	79	194	184	190
27	193	185	189	---	---	120	91	82	86	203	195	200
28	185	183	184	---	---	125	102	90	96	212	203	209
29	186	182	183	---	---	120	113	102	108	221	212	217
30	194	186	189	---	---	115	123	114	118	226	220	224
31	207	194	199	---	---	---	132	123	128	228	224	227
MONTH	267	99	187	306	119	186	244	42	116	228	71	174
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	233	227	231	120	118	119	---	---	215	266	263	264
2	235	230	232	123	118	121	---	---	225	266	263	265
3	242	233	238	131	123	126	---	---	235	266	259	263
4	241	227	237	146	133	139	---	---	240	262	254	258
5	225	203	213	149	146	147	---	---	245	260	159	223
6	265	219	244	---	---	155	---	---	248	176	158	167
7	270	260	266	---	---	180	254	251	253	176	167	172
8	260	243	252	---	---	190	255	253	254	175	120	163
9	243	240	241	---	---	200	256	252	254	194	175	185
10	241	237	239	---	---	209	256	250	252	330	196	255
11	237	233	234	---	---	213	253	249	251	289	190	251
12	234	230	232	---	---	220	262	253	257	276	211	240
13	235	232	233	---	---	229	267	262	266	171	122	135
14	236	233	235	---	---	232	271	268	269	189	130	154
15	236	213	227	---	---	240	271	269	271	138	129	132
16	224	103	179	---	---	243	278	273	276	164	138	149
17	115	73	95	---	---	210	279	277	278	186	164	174
18	69	59	62	---	---	185	285	277	282	195	180	187
19	78	62	70	---	---	155	281	274	278	207	194	199
20	84	76	80	---	---	110	283	272	275	214	208	212
21	88	74	79	---	---	105	305	284	297	220	213	216
22	106	89	98	---	---	107	308	304	306	228	219	223
23	126	107	118	---	---	108	304	292	297	228	225	227
24	131	114	125	---	---	110	292	288	290	231	224	227
25	118	109	113	---	---	118	289	284	285	227	218	222
26	119	97	109	---	---	135	284	280	282	240	227	234
27	113	99	106	---	---	155	284	276	280	235	196	224
28	119	113	117	---	---	170	277	272	274	310	194	247
29	---	---	---	---	---	185	273	269	271	193	179	184
30	---	---	---	---	---	195	270	265	268	201	181	190
31	---	---	---	---	---	200	---	---	---	229	203	216
MONTH	270	59	175	149	118	168	308	249	266	330	120	208

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	221	149	194	179	116	135	222	215	217	198	176	190
2	220	120	159	163	119	149	223	217	220	193	187	189
3	138	123	133	120	95	110	232	222	227	185	172	178
4	162	118	134	122	97	110	235	231	233	171	158	163
5	176	167	171	126	116	122	231	227	229	170	158	162
6	168	155	161	---	---	130	231	225	228	189	171	182
7	197	129	151	---	---	140	236	229	233	196	189	193
8	142	127	134	---	---	145	236	234	235	193	187	189
9	145	116	136	---	---	120	235	231	233	195	188	191
10	111	73	86	---	---	100	233	229	231	195	189	193
11	106	69	91	---	---	105	232	227	230	205	195	201
12	98	37	51	---	---	110	230	228	229	206	201	203
13	66	49	59	---	---	140	234	231	232	205	199	203
14	94	66	79	---	---	160	241	235	238	206	200	203
15	117	96	110	---	---	170	268	238	241	205	187	196
16	150	113	133	186	173	180	238	234	236	192	161	182
17	156	110	131	190	180	186	235	229	233	175	168	172
18	152	115	134	198	189	192	228	225	226	179	162	171
19	171	129	153	202	198	199	226	222	223	178	132	156
20	194	132	158	206	202	204	225	218	221	143	133	136
21	178	161	170	206	139	192	227	222	225	162	143	153
22	195	152	173	198	164	187	227	224	225	170	161	166
23	194	145	160	207	198	202	226	223	224	202	168	189
24	177	163	171	211	201	207	225	223	224	201	182	191
25	186	114	173	217	211	213	224	223	224	208	186	199
26	109	75	86	217	214	215	266	223	226	209	204	207
27	130	94	111	220	215	217	226	223	224	207	200	202
28	156	131	146	222	217	219	226	223	224	217	181	200
29	173	157	164	221	215	217	224	221	223	207	195	202
30	188	174	181	220	209	215	224	179	214	197	193	194
31	---	---	---	221	219	220	209	184	201	---	---	---
MONTH	221	37	136	222	95	168	268	179	227	217	132	185

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	28.0	26.0	27.0				---	---	---	11.0	10.0	10.5
2	28.0	26.0	27.0				---	---	---	10.5	9.5	10.0
3	29.5	26.5	27.5				---	---	---	11.0	10.0	10.5
4	28.5	27.0	27.5				---	---	---	10.5	10.0	10.5
5	28.0	26.5	27.5				---	---	---	10.0	9.0	9.5
6	27.0	25.0	26.0				---	---	---	10.0	9.5	9.5
7	25.0	24.0	24.5				---	---	---	11.0	10.0	10.5
8	24.0	23.0	23.0				---	---	---	12.5	11.0	12.0
9	23.5	22.5	23.0				---	---	---	13.5	12.5	13.0
10	23.5	22.0	22.5				14.0	13.0	13.5	13.0	11.5	12.5
11	22.5	21.5	22.0				13.0	11.5	12.0	11.5	10.0	11.0
12	22.0	20.0	21.0				11.5	10.5	11.0	10.5	9.5	10.0
13	20.0	18.0	19.0				10.5	10.0	10.5	10.5	9.5	10.0
14	20.0	18.0	19.0				10.5	10.0	10.5	11.0	10.0	10.5
15	19.5	18.5	19.0				12.0	10.5	11.0	12.0	11.0	11.5
16	19.5	17.5	18.5				12.5	12.0	12.0	13.0	12.0	12.5
17	19.5	17.5	18.5				13.0	12.5	12.5	13.0	12.5	13.0
18	20.0	17.5	18.5				13.0	13.0	13.0	13.0	11.5	12.0
19	20.0	17.5	19.0				13.0	12.5	12.5	11.5	10.5	10.5
20	20.5	17.5	19.0				12.5	12.0	12.0	10.0	9.0	9.5
21	18.5	17.5	18.0				12.0	11.5	12.0	9.0	8.0	8.5
22	---	---	---				11.5	11.0	11.0	8.5	8.0	8.0
23	---	---	---				11.0	10.5	10.5	8.5	7.0	8.0
24	---	---	---				10.5	10.0	10.5	10.0	8.0	9.0
25	---	---	---				10.5	10.0	10.0	10.5	9.0	9.5
26	---	---	---				10.5	10.0	10.5	11.0	9.0	10.0
27	---	---	---				10.5	10.5	10.5	11.5	9.5	10.5
28	---	---	---				11.0	10.0	10.5	13.0	10.5	11.5
29	---	---	---				11.5	10.5	11.0	14.5	12.0	13.5
30	---	---	---				11.5	11.0	11.0	15.5	13.5	14.5
31	---	---	---				11.5	10.5	11.0	15.0	13.5	14.0
MONTH	29.5	17.5	22.0				14.0	10.0	11.5	15.5	7.0	11.0

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

08070500 CANEY CREEK NEAR SPLENDORA, TX

LOCATION.--Lat 30°15'34", long 95°18'08", Montgomery County, Hydrologic Unit 12040103, on left bank at downstream side of bridge on Farm Road 2090, 4 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 8 mi west of Splendora.

DRAINAGE AREA.--105 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 118.44 ft above National Geodetic Vertical Datum of 1929. Prior to June 17, 1965, at site 170 ft upstream at datum 5.00 ft higher.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--44 years, 77.4 ft³/s (10.01 in/yr), 56,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s June 14, 1973 (gage height, 26.30 ft); minimum, 4.1 ft³/s Oct. 26, 1956, caused by construction upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, 27.0 ft in November 1940, present site and datum, from information by local resident. Flood in May 1935 reached a stage of 24.3 ft, present site and datum, from information by local resident.

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)
June 13	2400	*1,870	*13.23	No other peak greater than base discharge.			

Minimum discharge, 11 ft³/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	46	54	39	335	36	19	88	73	20	33
2	22	22	42	51	49	123	36	21	65	569	20	25
3	27	21	39	81	48	87	35	20	43	450	19	21
4	26	e25	38	143	43	71	33	24	353	132	18	20
5	26	101	37	83	40	62	33	27	274	76	18	19
6	26	76	35	64	37	56	36	43	71	60	18	21
7	27	42	34	58	36	52	39	91	51	62	17	18
8	26	125	35	55	35	50	36	74	43	153	17	17
9	26	102	42	54	34	48	33	110	82	301	16	17
10	26	49	174	59	33	46	32	73	314	179	17	17
11	25	38	84	53	33	46	32	39	408	88	17	18
12	73	41	59	50	33	54	31	65	661	62	17	21
13	274	49	51	49	33	48	30	117	1400	53	16	25
14	86	37	46	48	33	44	30	49	886	49	15	22
15	49	32	216	51	157	42	28	34	160	42	15	19
16	38	32	776	54	325	42	27	29	108	38	14	22
17	31	30	228	119	90	147	26	26	121	35	13	63
18	28	31	208	494	58	691	26	24	345	34	13	64
19	27	31	841	224	50	164	26	23	330	34	13	65
20	24	30	249	103	76	91	25	22	111	31	13	48
21	22	29	118	74	170	69	24	21	77	32	12	33
22	22	28	161	62	118	58	23	20	62	29	13	26
23	25	e220	748	54	70	53	23	19	53	28	13	23
24	28	e740	524	51	59	70	21	19	49	27	12	21
25	30	248	161	49	77	54	20	23	62	26	12	20
26	28	518	106	46	377	47	20	28	50	26	13	20
27	25	112	85	43	496	44	20	22	41	25	13	20
28	22	70	74	42	353	42	20	19	36	24	13	31
29	22	57	67	42	---	39	19	56	33	23	15	25
30	22	50	61	43	---	38	19	164	45	21	82	22
31	21	---	57	39	---	36	---	76	---	20	55	---
TOTAL	1178	3007	5442	2492	3002	2849	839	1397	6422	2802	579	816
MEAN	38.0	100	176	80.4	107	91.9	28.0	45.1	214	90.4	18.7	27.2
MAX	274	740	841	494	496	691	39	164	1400	569	82	65
MIN	21	21	34	39	33	36	19	19	33	20	12	17
AC-FT	2340	5960	10790	4940	5950	5650	1660	2770	12740	5560	1150	1620
CFSM	.36	.95	1.67	.77	1.02	.88	.27	.43	2.04	.86	.18	.26
IN.	.42	1.07	1.93	.88	1.06	1.01	.30	.49	2.28	.99	.21	.29

CAL YR 1986 TOTAL 30702 MEAN 84.1 MAX 1840 MIN 16 AC-FT 60900 CFSM .80 IN. 10.9
WTR YR 1987 TOTAL 30825 MEAN 84.5 MAX 1400 MIN 12 AC-FT 61140 CFSM .80 IN. 10.9

e Estimated.

08070500 CANEY CREEK NEAR SPLENDORA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses: October 1962 to April 1964. Chemical, biochemical, and pesticide analyses: August 1983 to current year. Sediment analyses: February 1966, April 1973 to March 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
DEC												
15-18	0030	360	119	--	--	--	--	--	--	--	--	--
JAN												
17-20	0600	289	148	--	--	--	--	--	--	--	--	--
27...	1050	43	165	7.40	10.0	30	7.0	10.7	95	1.8	60	48
FEB												
25...	1006	72	144	6.30	12.0	65	17	10.4	95	1.2	150	6400
JUN												
11...	0915	467	112	7.20	23.5	140	52	7.8	92	2.2	3300	3800
JUN												
12-14	0400	1010	108	--	--	--	--	--	--	--	--	--
AUG												
10...	1220	17	105	7.10	26.0	18	8.1	7.2	89	0.4	80	270

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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												
15-18	44	10	15	1.6	5.9	0.4	3.0	34	14	10	<0.10	9.9
JAN												
17-20	50	11	17	1.8	7.9	0.5	2.4	39	12	14	<0.10	9.5
27...	51	12	17	2.1	12	0.8	1.2	39	10	19	<0.10	15
FEB												
25...	45	12	15	1.9	11	0.7	1.6	33	12	17	<0.10	12
JUN												
11...	41	6	14	1.5	5.7	0.4	2.6	35	10	10	<0.10	10
JUN												
12-14	40	7	14	1.3	5.1	0.4	2.8	33	11	8.8	0.10	7.7
AUG												
10...	27	4	8.0	1.6	9.2	0.8	1.1	23	4.7	14	0.20	14

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
DEC												
15-18	80	--	--	0.160	0.040	0.200	0.050	1.5	1.5	0.060	--	--
JAN												
17-20	88	--	--	--	0.020	<0.100	0.060	2.1	2.2	0.180	--	--
27...	100	3	<1	--	<0.010	0.300	0.030	0.67	0.70	0.030	3.3	<1
FEB												
25...	90	24	2	0.190	0.010	0.200	0.040	0.66	0.70	0.040	6.6	--
JUN												
11...	75	93	37	--	0.030	<0.100	0.060	1.6	1.7	0.190	19	--
JUN												
12-14	71	--	--	0.580	0.020	0.600	0.040	1.8	1.8	0.290	--	--
AUG												
10...	67	17	10	--	<0.010	0.300	0.010	0.69	0.70	0.050	3.4	<1

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
15-18	--	--	--	--	--	--	--	--	--	--	--
JAN											
17-20	--	--	--	--	--	--	--	--	--	--	--
27...	69	<1	<10	1	310	<5	44	<0.1	<1	<1	4
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
JUN											
12-14	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	44	<1	30	1	320	<5	17	<0.1	<1	1	<3

08070500 CANEY CREEK NEAR SPLENDORA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
DEC 15-18	--	--	--	--	--	--	--	--	--	--	--
JAN 17-20	--	--	--	--	--	--	--	--	--	--	--
27...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB 25...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 12-14	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--

08071280 LUCE BAYOU ABOVE LAKE HOUSTON NEAR HUFFMAN, TX

LOCATION.--Lat 30°06'34", long 95°03'35", Liberty County, Hydrologic Unit 12040103, on left bank, in Tricontinental Pipeline Company right of way, 1.1 mi upstream from Key Gully, 3.1 mi east of Huffman-Cleveland Road, and 6.3 mi northeast of Huffman.

DRAINAGE AREA.--218 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, at site 2.2 mi downstream, water years, 1970, 1972, 1975; February to April 1984; discharge measurements only, May 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 39.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions above station for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s June 12, 1987 (gage height, 30.60 ft), no flow July 16-23, 1984.

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)
Nov. 27	0800	2,580	23.69	Feb. 28	1700	2,180	22.90
Dec. 19	0700	1,980	22.45	June 12	1800	*14,500	*30.60
Dec. 23	1200	2,550	23.63	July 10	1000	2,300	23.10

Minimum discharge, 0.21 ft³/s Sept. 25, result of pumping or regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	6.4	831	122	34	1940	5.9	2.0	3.9	74	2.8	e38
2	7.3	6.3	437	90	36	1540	5.4	1.0	5.1	110	2.4	16
3	6.4	8.4	206	129	38	1230	5.1	1.5	7.1	253	2.2	8.6
4	6.4	15	125	215	39	906	4.7	6.2	6.0	323	2.0	5.0
5	5.6	129	87	245	36	572	4.3	4.6	8.4	227	1.8	3.1
6	4.4	290	62	283	33	225	4.3	2.6	6.3	121	2.1	2.4
7	4.2	377	48	265	31	111	4.4	11	6.9	78	22	1.8
8	4.1	326	41	186	26	78	4.3	21	18	160	44	1.5
9	5.5	196	36	134	21	60	3.9	17	87	1210	37	1.7
10	8.0	134	33	141	18	47	5.6	8.3	499	2220	29	1.8
11	11	96	107	112	16	41	3.9	5.5	1280	1920	4.6	2.4
12	58	71	165	86	14	38	3.6	17	11100	1560	14	2.5
13	269	48	153	71	13	35	3.3	47	11500	1000	23	2.5
14	388	37	111	61	12	31	3.3	98	8020	493	15	2.6
15	401	31	292	57	15	28	3.0	82	4650	235	17	2.6
16	294	24	755	64	26	25	2.6	48	2800	103	17	3.9
17	140	19	869	275	94	37	2.4	32	2350	63	16	11
18	65	16	1450	799	117	130	2.4	22	2220	44	3.6	16
19	37	14	1960	865	95	223	4.0	18	1680	31	1.8	33
20	19	12	1820	916	138	203	2.0	10	1080	21	1.6	11
21	8.5	9.6	1590	963	347	125	2.0	26	730	20	1.6	8.5
22	5.8	8.5	1600	731	375	73	1.8	6.5	589	26	1.7	6.8
23	13	101	2470	376	405	49	1.6	15	439	13	2.4	2.7
24	37	703	2360	169	390	43	1.4	26	177	8.3	2.6	1.7
25	63	1810	2280	113	359	34	1.2	10	79	6.1	5.5	1.5
26	52	2400	1960	85	1300	26	1.1	15	76	5.1	5.1	1.6
27	38	2540	1520	68	1920	18	.96	9.6	128	4.5	2.2	1.1
28	18	2240	1100	56	2090	13	.88	6.1	188	4.2	1.7	1.1
29	13	1770	749	48	---	10	.84	4.5	177	3.4	5.2	4.3
30	10	1250	369	42	---	8.6	1.5	6.1	89	3.2	11	2.6
31	7.8	---	180	37	---	7.2	---	4.6	---	3.1	45	---
TOTAL	2008.4	14688.2	25766	7804	8038	7906.8	91.68	584.1	49999.7	10342.9	342.9	199.3
MEAN	64.8	490	831	252	287	255	3.06	18.8	1667	334	11.1	6.64
MAX	401	2540	2470	963	2090	1940	5.9	98	11500	2220	45	38
MIN	4.1	6.3	33	37	12	7.2	.84	1.0	3.9	3.1	1.6	1.1
AC-FT	3980	29130	51110	15480	15940	15680	182	1160	99170	20520	680	395
CFSM	.30	2.25	3.81	1.15	1.32	1.17	.0	.09	7.65	1.53	.05	.0
IN.	.34	2.51	4.40	1.33	1.37	1.35	.0	.10	8.53	1.76	.06	.0

CAL YR 1986 TOTAL 94961.58 MEAN 260 MAX 3810 MIN .04 AC-FT 188400 CFSM 1.19 IN. 16.2
WTR YR 1987 TOTAL 127771.36 MEAN 350 MAX 11500 MIN .84 AC-FT 253400 CFSM 1.61 IN. 21.8

e Estimated.

08071280 LUCE BAYOU ABOVE LAKE HOUSTON NEAR HUFFMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: February 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
JAN												
16-25	0600	563	86	--	--	--	--	--	--	--	--	--
29...	0830	48	138	5.40	12.0	120	36	9.2	86	2.5	60	80
FEB												
25...	1127	348	103	5.60	12.0	200	48	8.8	81	2.9	500	3500
JUN												
09-16	1300	5510	29	--	--	--	--	--	--	--	--	--
15...	1610	4150	37	5.80	27.0	130	6.2	4.5	56	2.5	120	350
AUG												
12...	0835	3.4	172	6.70	28.0	67	23	3.2	41	0.7	200	160

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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												
16-25	21	13	6.2	1.4	8.6	0.8	1.6	8	13	15	<0.10	4.3
29...	33	13	10	2.0	14	1	1.2	20	15	23	<0.10	6.8
FEB												
25...	24	16	6.8	1.6	11	1	1.6	8	13	19	<0.10	4.0
JUN												
09-16	8	3	2.4	0.47	2.8	0.5	1.1	5	6.0	3.5	<0.10	1.7
15...	11	6	3.1	0.76	2.0	0.3	1.4	5	6.5	3.7	<0.10	2.3
AUG												
12...	49	3	16	2.1	15	1	1.6	46	11	21	0.20	9.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN												
16-25	55	--	--	--	0.020	<0.100	0.070	1.0	1.1	0.190	--	--
29...	85	9	<1	--	0.020	<0.100	0.060	1.0	1.1	0.130	18	<1
FEB												
25...	62	36	6	--	0.040	<0.100	0.050	2.0	2.0	0.080	18	--
JUN												
09-16	21	--	--	--	<0.010	<0.100	0.050	1.2	1.3	0.140	--	--
15...	23	13	1	--	0.010	<0.100	0.040	1.4	1.4	0.050	16	--
AUG												
12...	100	12	1	0.190	0.010	0.200	0.020	0.98	1.0	0.110	9.7	1

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN											
16-25	--	--	--	--	--	--	--	--	--	--	--
29...	83	<1	<10	5	770	<5	72	<0.1	<1	<1	16
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
09-16	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	88	<1	20	1	300	<5	110	0.1	<1	<1	5

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
JAN											
16-25	--	--	--	--	--	--	--	--	--	--	--
29...	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
FEB											
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
09-16	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX

LOCATION.--Lat 29°54'58", long 95°08'28", Harris County, Hydrologic Unit 12040101, at intake structure on San Jacinto River near right bank 100 ft upstream from Lake Houston Dam, 4.0 mi north of Sheldon, 4.6 mi upstream from bridge on U.S. Highway 90, and 18 mi northeast of Houston.

DRAINAGE AREA.--2,828 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1954 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at dam is 0.70 ft below National Geodetic Vertical Datum of 1929; unadjusted for land-surface subsidence.

REMARKS.--The lake is formed by two earthfill embankment sections and a 3,160-foot-long concrete spillway midway between the embankment sections. The dam was completed and storage began Apr. 9, 1954. The spillway includes two tainter gates, 18.0 x 20.5 ft, that can be used for control of releases below gage heights of 44.5 ft and above 28.0 ft. In addition, there is a 36-inch-diameter sluice gate that is used for low-flow releases. Water is used for irrigation, municipal, and industrial supply in the Houston metropolitan area. 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	63.0	-
Design flood	57.0	-
Crest of spillway	44.5	146,700
Crest of tainter gates (sill)	28.0	22,800
Lowest gated outlet (invert)	22.0	6,180

COOPERATION.--The capacity table, furnished by the city of Houston, is based on a sedimentation study made in 1965. Records of diversions were furnished by the San Jacinto River Authority and the city of Houston.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 217,700 acre-ft Apr. 19, 1979 (gage height, 49.50 ft); minimum since first filling of lake in August 1954, 53,380 acre-ft Dec. 1, 1971 (gage height, 34.08 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 186,500 acre-ft June 13 at 1100 hours (gage height, 47.47 ft); minimum, 123,400 acre-ft Aug. 29 (gage height, 42.48 ft).

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

42.0	118,200	46.0	165,900
44.0	140,700	48.0	194,200

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157300	153300	158500	150400	142500	161500	135700	137200	150400	145700	136000	132000
2	156800	154500	157200	147800	143500	159300	136200	136900	152700	149600	135500	132400
3	156600	154000	156400	146100	145100	155500	136100	138000	154200	159200	135000	132100
4	156300	155900	155800	144400	146100	148500	136200	138700	157900	161400	134600	132000
5	156200	155700	155300	143300	146600	143200	137000	139900	158500	160200	134000	131600
6	156600	155100	154900	141700	144500	143400	137700	141600	153800	156000	133500	131000
7	156400	156200	154600	139900	139400	141400	138000	143400	147700	150600	133000	130800
8	158200	157100	154600	137900	137400	139000	138300	145400	140000	143900	132600	130300
9	156400	156800	154900	137800	137100	137600	138400	147700	134700	158800	132600	129700
10	155800	156200	154900	140100	137700	137200	138600	150500	141300	161400	131800	130600
11	156000	155100	154900	141800	138300	136700	138700	147300	153100	157200	131400	130100
12	161400	154900	154100	143400	138700	136200	139300	138600	183800	152100	130900	130100
13	161000	154200	152700	144700	139300	135400	139900	133800	184900	146100	130300	129600
14	159500	154900	151500	143600	139700	134700	139600	136400	177700	138900	129700	129200
15	158500	155100	160500	140600	142700	134200	139700	138000	172200	133000	129400	128900
16	157200	154900	164600	139000	147200	132700	139800	138700	171200	134000	128800	130300
17	156300	154500	163900	145800	150500	134300	139700	139100	166700	134500	128300	132100
18	155800	154600	166200	157100	152500	138700	139600	139600	164600	135000	127700	133500
19	155300	154500	167500	161700	150700	143800	139700	140000	161500	135000	127500	134700
20	154800	154200	165900	161700	149400	148200	139700	139900	158400	135700	127100	136200
21	154500	154000	163900	160100	149100	148300	139800	139800	155000	135800	126500	136700
22	154900	153700	169300	155400	149100	141700	139400	139700	150700	136000	125900	136800
23	155300	160800	172300	153800	150600	133300	139200	139700	143000	136100	125400	136300
24	154200	164900	169600	149900	152100	130800	139300	139800	136500	136500	125000	136100
25	153800	166400	167500	144100	154000	132600	139000	140000	134700	136700	124400	135700
26	154000	165500	165900	139300	161900	134000	138900	140200	138700	136800	124100	135400
27	154000	164900	163600	137400	161100	134200	138500	140000	139900	136800	124000	135400
28	154000	163800	160200	138400	161000	135000	138300	140200	141000	136700	123700	138000
29	154000	162900	157200	139700	---	136200	138000	142700	141600	136700	123900	141700
30	153800	160800	155000	140500	---	135000	137600	146700	143800	136400	127900	141900
31	153600	---	152800	141300	---	135400	---	148800	---	136200	131400	---
MAX	161400	166400	172300	161700	161900	161500	139900	150500	184900	161400	136000	141900
MIN	153600	153300	151500	137400	137100	130800	135700	133800	134700	133000	123700	128900
(†)	45.05	45.61	44.99	44.05	45.62	43.54	43.73	44.66	44.25	43.61	43.20	44.10
(ϕ)	-4300	+7200	-8000	-11500	+19700	-25600	+2200	+11200	-5000	-7600	-4800	+10500
(††)	12080	9810	9570	10810	9930	11550	12590	14450	13290	16110	21430	16110

CAL YR 1986 MAX 178500 MIN 139100 (ϕ) -1300 (††) 195410
WTR YR 1987 MAX 184900 MIN 123700 (Od) -16000 (††) 157730

(†) Gage height, in feet, at end of month.
(ϕ) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal and industrial use by city of Houston and San Jacinto River Authority.

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1961 to April 1964, December 1969 to current year. Biochemical analyses: August 1983 to current year. Pesticide analyses: May 1968 to August 1972.

295505095083101 - LAKE HOUSTON SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	1006	1.00	140	7.30	11.5	0.19	9.3
29...	1008	10.0	140	7.20	11.5	--	9.3
29...	1010	18.0	140	7.20	12.0	--	9.3
FEB							
26...	1020	1.00	170	7.60	13.0	0.25	9.5
26...	1022	10.0	175	7.60	12.5	--	9.4
26...	1024	19.0	180	7.60	12.5	--	9.4
MAY							
19...	0930	1.00	225	7.00	26.0	0.39	6.2
19...	0932	10.0	225	6.90	25.5	--	4.5
19...	0934	17.0	210	6.80	24.0	--	2.3
JUN							
11...	0944	1.00	235	7.20	26.0	0.52	6.5
11...	0946	10.0	235	7.10	26.0	--	6.3
11...	0948	17.0	235	7.10	26.0	--	6.0
25...	0855	1.00	115	6.60	30.0	0.42	4.7
25...	0857	10.0	115	6.60	29.5	--	3.8
25...	0859	17.0	115	6.50	28.5	--	0.8
JUL							
13...	1008	1.00	130	7.00	30.0	0.30	6.5
13...	1010	10.0	130	6.70	28.5	--	4.4
13...	1012	18.0	125	6.50	28.0	--	2.7
AUG							
19...	1356	1.00	120	8.20	33.5	0.38	8.9
19...	1358	5.00	120	7.10	30.5	--	5.7
19...	1400	16.0	120	7.00	30.0	--	3.4

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	84	--	0.300	--	--	1.3	0.150
29...	84	--	--	--	--	--	--
29...	85	--	0.300	--	--	2.3	0.180
FEB							
26...	90	--	0.400	--	--	0.90	0.220
26...	88	--	--	--	--	--	--
26...	88	--	0.400	--	--	0.80	0.210
MAY							
19...	76	--	<0.100	--	--	1.3	0.090
19...	55	--	--	--	--	--	--
19...	27	--	<0.100	--	--	0.90	0.120
JUN							
11...	80	--	<0.100	--	--	1.0	0.150
11...	77	--	--	--	--	--	--
11...	74	--	<0.100	--	--	2.3	0.150
25...	62	--	<0.100	--	--	1.6	0.140
25...	50	--	--	--	--	--	--
25...	10	--	<0.100	--	--	1.2	0.270
JUL							
13...	85	--	0.100	--	--	1.7	0.190
13...	56	--	--	--	--	--	--
13...	34	--	0.200	--	--	1.0	0.210
AUG							
19...	124	0.010	<0.100	0.140	1.4	1.5	0.220
19...	75	--	--	--	--	--	--
19...	45	0.020	<0.100	0.030	2.0	2.0	0.220

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	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)
JAN												
29...	0930	1.00	140	7.20	11.5	0.20	120	38	9.2	83	1.6	170
29...	0931	0.33	--	--	--	--	--	--	--	--	--	--
29...	0932	10.0	140	7.20	11.5	--	--	--	9.2	83	--	--
29...	0934	20.0	140	7.20	11.0	--	--	--	8.9	80	--	--
29...	0936	30.0	140	7.10	10.5	--	--	--	8.8	78	--	--
29...	0938	46.0	140	6.90	10.5	--	100	48	9.0	80	1.9	--
FEB												
26...	1000	1.00	175	7.70	12.5	0.23	--	--	9.5	89	--	--
26...	1001	0.38	--	--	--	--	--	--	--	--	--	--
26...	1002	10.0	175	7.70	12.5	--	--	--	9.4	88	--	--
26...	1004	20.0	180	7.70	12.5	--	--	--	9.4	88	--	--
26...	1006	30.0	180	7.80	12.5	--	--	--	9.4	88	--	--
26...	1008	46.0	180	7.80	12.5	--	--	--	9.3	87	--	--
MAY												
19...	0943	1.00	215	7.40	26.0	0.46	55	14	6.8	83	1.9	K1
19...	0944	0.76	--	--	--	--	--	--	--	--	--	--
19...	0945	2.00	215	7.30	26.0	--	--	--	6.7	82	--	--
19...	0947	4.00	215	7.20	26.0	--	--	--	6.4	78	--	--
19...	0949	6.00	215	7.10	25.5	--	--	--	5.2	63	--	--
19...	0951	8.00	215	7.00	24.5	--	--	--	3.8	45	--	--
19...	0953	10.0	215	7.00	24.5	--	--	--	3.4	41	--	--
19...	0955	20.0	210	7.00	24.0	--	--	--	2.0	24	--	--
19...	0957	30.0	205	7.00	22.5	--	--	--	0.7	8	--	--
19...	0959	42.0	200	7.00	21.5	--	45	20	0.5	6	2.0	--
JUN												
11...	0956	1.00	235	7.10	26.0	0.52	--	--	5.9	72	--	--
11...	0957	0.90	--	--	--	--	--	--	--	--	--	--
11...	0957	0.86	--	--	--	--	--	--	--	--	--	--
11...	0958	10.0	235	7.00	26.0	--	--	--	5.7	70	--	--
11...	1000	20.0	235	7.00	26.0	--	--	--	5.7	70	--	--
11...	1002	25.0	235	6.90	26.0	--	--	--	5.2	64	--	--
11...	1004	30.0	240	6.60	25.5	--	--	--	1.5	18	--	--
11...	1006	44.0	245	6.60	25.0	--	--	--	0	0	--	--
25...	0910	1.00	115	6.70	30.0	0.50	--	--	4.8	63	--	--
25...	0911	0.80	--	--	--	--	--	--	--	--	--	--
25...	0912	10.0	115	6.70	30.0	--	--	--	4.6	61	--	--
25...	0914	12.0	115	6.60	30.0	--	--	--	4.2	56	--	--
25...	0916	14.0	115	6.50	29.5	--	--	--	2.9	38	--	--
25...	0918	16.0	120	6.40	29.0	--	--	--	1.5	19	--	--
25...	0920	18.0	115	6.40	28.0	--	--	--	0.6	8	--	--
25...	0922	20.0	115	6.40	28.0	--	--	--	0.2	3	--	--
25...	0924	30.0	105	6.40	26.5	--	--	--	0	0	--	--
25...	0926	43.0	105	6.50	25.5	--	--	--	0	0	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
JAN												
29...	150	40	10	13	1.9	13	0.9	2.2	30	12	17	<0.10
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	40	10	13	1.9	13	0.9	2.2	30	11	19	<0.10
FEB												
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	K4	58	12	19	2.5	19	1	2.7	46	16	27	<0.10
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	57	11	19	2.4	16	1	2.6	46	5.0	27	0.10
JUN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
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08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (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)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
JAN												
29...	8.6	86	16	<1	0.300	0.310	0.40	1.6	0.176	0.122	14	--
29...	--	--	--	--	--	--	--	--	--	--	--	18.0
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	0.300	--	--	0.90	0.150	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	9.4	88	31	12	0.300	0.310	1.1	1.5	0.177	0.165	16	--
FEB												
26...	--	--	--	--	0.400	0.350	0.90	1.4	0.178	0.124	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	0.300	--	--	1.4	0.190	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	0.400	0.360	0.70	1.0	0.169	0.146	--	--
MAY												
19...	6.0	120	14	<1	<0.100	<0.100	0.80	1.0	0.112	0.064	7.8	--
19...	--	--	--	--	--	--	--	--	--	--	--	9.30
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	<0.100	--	--	1.3	0.170	--	--	--
19...	8.9	110	15	<1	<0.100	<0.100	0.90	1.5	0.260	0.187	10	--
JUN												
11...	--	--	--	--	<0.100	0.070	0.80	0.80	0.159	0.102	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	13.0
11...	--	--	--	--	--	--	--	--	--	--	--	13.0
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	<0.100	--	--	0.80	0.150	--	--	--
11...	--	--	--	--	0.200	--	--	1.0	0.170	--	--	--
11...	--	--	--	--	<0.100	0.300	1.5	1.6	0.192	0.164	--	--
25...	--	--	--	--	<0.100	<0.100	1.4	1.5	0.100	0.011	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	6.10
25...	--	--	--	--	<0.100	--	--	1.6	0.120	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	<0.100	--	--	1.2	0.200	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	<0.100	0.100	1.3	1.5	0.131	0.014	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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)
JAN												
29...	--	<1	59	<1	<10	4	81	<5	10	<0.1	<1	<1
29...	1.40	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	220	--	30	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	<1	76	<1	<10	9	190	<5	52	<0.1	<1	<1
FEB												
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
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26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	--	<1	84	<1	<10	4	46	<5	34	<0.1	<1	<1
19...	0.400	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
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19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	70	--	510	--	--	--
19...	--	4	88	<1	<10	3	220	<5	1300	<0.1	<1	<1
JUN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	0.600	--	--	--	--	--	--	--	--	--	--	--
11...	0.600	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
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11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	0.500	--	--	--	--	--	--	--	--	--	--	--
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08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
JAN												
29...	10	<0.10	<0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
29...	--	--	--	--	--	--	--	--	--	--	--	--
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29...	12	--	--	--	--	--	--	--	--	--	--	--
FEB												
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26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	10	<0.10	0.20	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
19...	--	--	--	--	--	--	--	--	--	--	--	--
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19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	12	--	--	--	--	--	--	--	--	--	--	--
JUN												
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DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	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)
JUL												
13...	1020	1.00	130	7.40	31.0	0.30	--	--	8.0	107	--	--
13...	1021	0.50	--	--	--	--	--	--	--	--	--	--
13...	1022	5.00	130	6.70	28.5	--	--	--	4.3	55	--	--
13...	1024	10.0	130	6.60	28.5	--	--	--	3.9	50	--	--
13...	1026	15.0	130	6.60	28.5	--	--	--	3.9	50	--	--
13...	1028	20.0	125	6.50	28.0	--	--	--	2.7	34	--	--
13...	1030	30.0	95	6.40	27.0	--	--	--	2.5	31	--	--
13...	1032	42.0	95	6.50	27.0	--	--	--	2.3	29	--	--
23...	1000	1.00	105	7.30	30.0	0.33	--	--	7.4	98	--	--
23...	1001	0.50	--	--	--	--	--	--	--	--	--	--
23...	1002	5.00	105	6.90	29.5	--	--	--	5.6	73	--	--
23...	1004	10.0	105	6.80	29.0	--	--	--	4.9	64	--	--
23...	1006	12.0	105	6.80	29.0	--	--	--	4.9	64	--	--
23...	1008	14.0	105	6.70	29.0	--	--	--	4.7	61	--	--
23...	1010	16.0	110	6.60	28.5	--	--	--	3.3	42	--	--
23...	1012	18.0	110	6.60	28.5	--	--	--	2.2	28	--	--
23...	1014	20.0	110	6.50	28.0	--	--	--	1.4	18	--	--
23...	1016	25.0	110	6.50	27.5	--	--	--	0	0	--	--
23...	1018	30.0	110	6.50	27.5	--	--	--	0	0	--	--
23...	1020	43.0	115	6.50	27.0	--	--	--	0	0	--	--
AUG												
06...	1038	1.00	115	7.10	31.0	0.39	--	--	5.7	76	--	--
06...	1039	0.60	--	--	--	--	--	--	--	--	--	--
06...	1040	4.00	115	6.90	30.5	--	--	--	5.0	66	--	--
06...	1042	7.00	115	6.80	30.0	--	--	--	3.5	46	--	--
06...	1044	10.0	115	6.80	29.5	--	--	--	3.1	40	--	--
06...	1046	14.0	115	6.80	29.5	--	--	--	3.0	39	--	--
06...	1048	17.0	115	6.70	29.5	--	--	--	2.0	26	--	--
06...	1050	20.0	115	6.70	29.0	--	--	--	1.4	18	--	--
06...	1052	25.0	120	6.70	29.0	--	--	--	0.5	6	--	--
06...	1054	30.0	120	6.70	29.0	--	--	--	0	0	--	--
06...	1056	41.0	125	6.80	28.5	--	--	--	0	0	--	--
19...	1408	1.00	120	8.40	34.0	0.46	68	16	8.6	121	2.3	K1
19...	1409	0.80	--	--	--	--	--	--	--	--	--	--
19...	1410	5.00	120	7.50	31.5	--	--	--	7.8	105	--	--
19...	1412	15.0	120	6.80	30.0	--	--	--	3.9	51	--	--
19...	1414	25.0	120	6.80	29.5	--	--	--	3.2	42	--	--
19...	1416	35.0	120	6.80	29.5	--	--	--	1.0	13	--	--
19...	1418	42.0	125	6.80	29.0	--	67	17	0	0	2.5	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
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AUG												
06...	--	--	--	--	--	--	--	--	--	--	--	--
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06...	--	--	--	--	--	--	--	--	--	--	--	--
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06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
19...	K1	34	4	11	1.6	9.9	0.8	2.2	30	18	11	0.20
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
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19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	40	7	13	1.8	9.3	0.7	2.2	33	17	12	0.20

DATE	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)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)
JUL											
13...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	0.200	0.160	--
23...	--	--	--	--	--	0.120	<0.010	0.010	<0.100	0.130	0.030
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	0.190	--	0.010	--	0.200	--	0.120
23...	--	--	--	--	0.080	--	0.020	--	0.100	--	0.160
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	0.010	0.020	<0.100	<0.100	0.470
AUG											
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.020	--	<0.100	--	0.090
06...	--	--	--	--	--	--	0.020	--	<0.100	--	0.130
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.480
19...	9.5	82	9	<1	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	0.020	--	<0.100	--	0.040
19...	--	--	--	--	0.080	--	0.020	--	0.100	--	0.080
19...	10	88	21	2	--	--	<0.010	<0.010	<0.100	<0.100	0.520

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	ARSENIC DIS-SOLVED (UG/L AS AS)
JUL											
13...	--	--	--	1.3	1.2	0.201	0.185	--	--	--	--
13...	--	--	--	--	--	--	--	--	20.0	1.50	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	0.40	1.0	0.201	<0.005	--	--	--	--
23...	--	1.4	--	0.80	1.4	0.170	0.090	--	--	--	--
23...	--	--	--	--	--	--	--	--	2.20	0.600	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	0.78	--	--	0.90	0.220	--	--	--	--	--
23...	--	0.64	--	--	0.80	0.270	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	1.2	--	--	1.7	0.640	0.520	--	--	--	--
AUG											
06...	0.060	--	1.5	1.6	1.6	0.220	0.270	--	--	--	--
06...	--	--	--	--	--	--	--	--	19.0	1.20	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	0.81	--	--	0.90	0.230	--	--	--	--	--
06...	--	1.1	--	--	1.2	0.270	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.520	1.2	1.4	1.9	1.7	0.600	0.590	--	--	--	--
19...	0.010	--	0.79	0.80	1.1	0.210	0.100	13	--	--	3
19...	--	--	--	--	--	--	--	--	6.10	0.600	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	0.76	--	--	0.80	0.210	--	--	--	--	--
19...	--	1.3	--	--	1.4	0.240	--	--	--	--	--
19...	0.440	0.48	0.76	1.2	1.0	0.500	0.290	13	--	--	5

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVLD (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
19...	48	<1	20	6	490	<5	50	<0.1	<1	<1	<3
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	630	--	220	--	--	--	--
19...	--	--	--	--	710	--	470	--	--	--	--
19...	76	<1	50	1	310	<5	1800	<0.1	<1	<1	3

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
SEP												
03...	0926	1.00	130	7.40	28.5	0.38	6.0	77	0.090	0.140	0.010	0.010
03...	0927	0.60	--	--	--	--	--	--	--	--	--	--
03...	0928	10.0	130	7.30	28.5	--	5.4	69	--	--	--	--
03...	0930	20.0	130	7.10	28.0	--	4.6	58	0.090	--	0.010	--
03...	0932	30.0	130	7.10	28.0	--	4.2	53	--	--	--	--
03...	0934	41.0	130	7.10	28.0	--	3.8	48	--	--	<0.010	<0.010

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)
SEP												
03...	0.100	0.150	0.050	0.060	0.65	0.54	0.60	0.70	0.140	0.150	--	--
03...	--	--	--	--	--	--	--	--	--	--	14.0	0.900
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	0.100	--	0.040	--	0.46	--	--	0.50	0.150	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	<0.100	<0.100	0.040	0.040	1.2	0.16	0.20	1.2	0.130	0.120	--	--

295527095074501 - LAKE HOUSTON SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	0918	1.00	140	6.80	12.0	0.19	9.3
29...	0920	10.0	140	6.80	12.0	--	9.2
29...	0922	24.0	140	6.80	11.0	--	8.6
FEB							
26...	0944	1.00	170	8.00	12.5	0.22	9.1
26...	0946	15.0	170	8.10	12.5	--	9.0
26...	0948	25.0	170	8.10	12.5	--	8.7
MAY							
19...	1030	1.00	210	7.20	25.0	0.35	4.6
19...	1032	10.0	210	7.20	24.0	--	2.9
19...	1034	20.0	205	7.20	23.0	--	1.3
19...	1036	28.0	205	7.30	22.5	--	0.6
JUN							
11...	1020	1.00	230	7.10	26.0	0.57	6.3
11...	1022	10.0	230	6.90	26.0	--	5.2
11...	1024	20.0	230	6.90	26.0	--	5.2
11...	1026	27.0	235	6.70	25.5	--	1.9
25...	0950	1.00	115	6.80	31.0	0.50	5.8
25...	0952	10.0	115	6.70	30.5	--	5.0
25...	0954	20.0	105	6.40	27.5	--	0.1
25...	0956	26.0	110	6.40	27.0	--	0
JUL							
13...	1050	1.00	130	7.50	31.0	0.30	7.7
13...	1052	5.00	130	6.90	29.5	--	5.0
13...	1054	10.0	125	6.80	28.5	--	3.0
13...	1056	20.0	120	6.90	27.5	--	2.1
13...	1058	26.0	120	6.90	27.5	--	2.0
AUG							
19...	1442	1.00	120	8.00	34.5	0.44	8.1
19...	1444	5.00	120	7.10	30.5	--	4.4
19...	1446	15.0	120	7.10	30.0	--	2.4
19...	1448	23.0	120	7.30	30.0	--	0.7

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295527095074501 - LAKE HOUSTON SITE AL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	85	--	0.300	--	--	1.1	0.150
29...	85	--	--	--	--	--	--
29...	77	--	0.300	--	--	1.2	0.170
FEB							
26...	85	--	0.400	--	--	1.4	0.180
26...	84	--	--	--	--	--	--
26...	81	--	0.400	--	--	0.90	0.180
MAY							
19...	55	--	<0.100	--	--	1.2	0.080
19...	34	--	--	--	--	--	--
19...	15	--	--	--	--	--	--
19...	7	--	<0.100	--	--	0.70	0.190
JUN							
11...	77	--	<0.100	--	--	1.4	0.110
11...	64	--	--	--	--	--	--
11...	64	--	--	--	--	--	--
11...	23	--	0.100	--	--	0.80	0.180
25...	78	--	<0.100	--	--	1.7	0.140
25...	67	--	--	--	--	--	--
25...	1	--	--	--	--	--	--
25...	0	--	<0.100	--	--	2.0	0.420
JUL							
13...	103	--	<0.100	--	--	1.1	0.210
13...	65	--	--	--	--	--	--
13...	38	--	--	--	--	--	--
13...	26	--	--	--	--	--	--
13...	25	--	0.200	--	--	1.0	0.270
AUG							
19...	114	0.010	<0.100	0.010	1.2	1.2	0.210
19...	58	--	--	--	--	--	--
19...	31	--	--	--	--	--	--
19...	9	0.020	<0.100	0.120	1.3	1.4	0.340

295708095092901 - LAKE HOUSTON SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1018	1.00	135	7.30	12.0	0.18	9.2	84
29...	1020	10.0	135	7.20	12.0	--	9.3	85
FEB								
26...	1108	1.00	195	7.50	12.5	0.21	9.3	87
26...	1110	12.0	200	7.50	12.0	--	9.4	87
MAY								
19...	1130	1.00	225	7.70	26.5	0.34	6.8	84
19...	1132	11.0	225	7.60	26.5	--	6.6	82
JUN								
11...	1120	1.00	210	7.10	26.0	0.40	6.4	78
11...	1122	11.0	210	7.10	26.0	--	6.1	75
25...	1126	1.00	125	6.80	31.0	0.44	4.8	65
25...	1128	5.00	125	6.70	30.0	--	3.6	48
25...	1130	10.0	125	6.50	29.5	--	1.4	18
JUL								
13...	1155	1.00	120	7.00	30.0	0.20	6.6	87
13...	1157	5.00	120	6.90	29.0	--	5.7	74
13...	1159	12.0	115	6.90	29.0	--	5.2	67
AUG								
19...	1344	1.00	120	7.40	31.0	0.42	6.2	83
19...	1346	5.00	120	7.40	30.5	--	5.3	70
19...	1348	8.00	120	7.40	30.5	--	5.3	70

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295702095091401 - LAKE HOUSTON SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1028	1.00	135	7.20	11.5	0.16	9.0	82
29...	1030	10.0	135	7.20	11.5	--	9.0	82
29...	1032	20.0	135	7.20	11.5	--	8.9	81
29...	1034	30.0	135	7.20	11.0	--	8.8	79
29...	1036	40.0	140	7.20	10.5	--	8.6	76
FEB								
26...	1052	1.00	180	7.50	12.5	0.24	9.0	84
26...	1054	10.0	180	7.50	12.5	--	9.0	84
26...	1056	20.0	180	7.50	12.5	--	9.0	84
26...	1058	30.0	180	7.50	12.5	--	9.1	85
26...	1100	40.0	180	7.60	12.5	--	9.2	86
MAY								
19...	1100	1.00	235	7.60	26.5	0.32	6.5	81
19...	1102	4.00	235	7.60	26.5	--	6.5	81
19...	1104	6.00	235	7.50	26.5	--	6.5	81
19...	1106	8.00	235	7.40	26.5	--	6.4	79
19...	1108	10.0	235	7.30	26.0	--	6.1	75
19...	1110	15.0	235	7.30	26.0	--	5.5	68
19...	1112	20.0	235	7.10	24.0	--	1.2	14
19...	1114	30.0	195	7.20	20.5	--	0.4	4
19...	1116	39.0	210	7.20	18.5	--	0.5	5
JUN								
11...	1056	1.00	220	7.10	26.0	0.33	6.1	75
11...	1058	5.00	220	7.00	26.0	--	5.9	72
11...	1100	10.0	220	7.00	26.0	--	5.5	67
11...	1102	20.0	225	6.90	26.0	--	5.5	67
11...	1104	25.0	225	6.90	26.0	--	5.3	65
11...	1106	30.0	230	6.80	24.5	--	0.6	7
11...	1108	39.0	235	6.90	19.5	--	0	0
25...	1102	1.00	120	6.70	30.5	0.40	4.7	63
25...	1104	5.00	120	6.70	30.0	--	4.3	57
25...	1106	8.00	120	6.60	30.0	--	3.6	48
25...	1108	10.0	125	6.60	29.5	--	2.6	34
25...	1110	12.0	125	6.50	29.5	--	1.7	22
25...	1112	14.0	130	6.50	29.0	--	0.8	10
25...	1114	16.0	130	6.50	28.5	--	0.4	5
25...	1116	18.0	125	6.50	28.0	--	0.1	1
25...	1118	20.0	125	6.50	28.0	--	0	0
25...	1120	30.0	115	6.50	27.0	--	0	0
25...	1122	38.0	140	6.70	24.0	--	0	0

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JUL								
13...	1134	1.00	120	6.90	29.5	0.24	6.4	83
13...	1136	5.00	115	6.70	29.0	--	5.2	67
13...	1138	10.0	115	6.60	28.5	--	4.9	63
13...	1140	15.0	95	6.50	27.5	--	2.9	36
13...	1142	20.0	100	6.60	27.5	--	2.6	33
13...	1144	30.0	100	6.60	27.0	--	2.1	26
13...	1146	39.0	105	6.60	27.0	--	1.8	22
23...	1040	1.00	100	7.20	31.0	0.29	7.4	99
23...	1042	5.00	100	6.80	30.0	--	5.5	73
23...	1044	10.0	100	6.70	29.5	--	4.2	55
23...	1046	12.0	100	6.60	29.0	--	3.6	47
23...	1048	14.0	100	6.60	29.0	--	2.7	35
23...	1050	16.0	100	6.60	29.0	--	2.5	32
23...	1052	18.0	100	6.50	28.5	--	1.1	14
23...	1054	20.0	100	6.50	28.5	--	0.8	10
23...	1056	25.0	100	6.50	28.0	--	0	0
23...	1058	30.0	100	6.50	27.5	--	0	0
23...	1100	37.0	115	6.50	26.5	--	0	0
AUG								
06...	1121	1.00	115	6.90	31.0	0.33	5.2	70
06...	1123	5.00	115	6.80	30.5	--	4.4	58
06...	1125	10.0	115	6.80	30.5	--	3.6	48
06...	1127	14.0	115	6.70	30.0	--	1.9	25
06...	1129	17.0	115	6.70	30.0	--	1.2	16
06...	1131	20.0	120	6.70	29.0	--	0	0
06...	1133	25.0	120	6.70	29.0	--	0	0
06...	1135	30.0	120	6.70	28.0	--	0	0
06...	1137	38.0	150	6.70	26.5	--	0	0
19...	1326	1.00	120	7.80	32.0	0.41	7.8	106
19...	1328	5.00	120	7.00	30.5	--	4.8	63
19...	1330	15.0	125	7.00	30.5	--	4.3	57
19...	1332	25.0	125	7.00	30.0	--	4.0	52
19...	1334	30.0	125	6.90	30.0	--	2.7	35
19...	1336	35.0	150	6.80	27.5	--	0	0
SEP								
03...	0948	1.00	140	7.20	28.0	0.31	5.4	68
03...	0950	10.0	140	7.20	28.0	--	5.3	67
03...	0952	20.0	140	7.30	28.0	--	5.6	71
03...	0954	30.0	140	7.30	28.0	--	5.6	71
03...	0956	38.0	140	7.20	28.0	--	5.2	66

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295656095090201 - LAKE HOUSTON SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1044	1.00	135	7.20	11.5	0.16	9.3	84
29...	1046	10.0	135	7.20	11.5	--	9.3	84
29...	1048	20.0	135	7.20	11.5	--	9.3	84
29...	1050	30.0	135	7.20	11.5	--	9.2	83
29...	1052	38.0	135	7.20	11.0	--	9.1	82
FEB								
26...	1036	1.00	180	7.60	12.5	0.24	9.4	88
26...	1038	10.0	180	7.60	12.5	--	9.4	88
26...	1040	20.0	180	7.60	12.5	--	9.4	88
26...	1042	30.0	180	7.60	12.5	--	9.4	88
26...	1044	42.0	180	7.60	12.5	--	9.4	88
MAY								
19...	1046	1.00	235	7.40	26.5	0.37	6.7	83
19...	1048	10.0	235	7.20	25.5	--	5.0	61
19...	1050	20.0	235	7.10	24.0	--	1.1	13
19...	1052	30.0	225	7.10	23.0	--	0.4	5
19...	1054	38.0	210	7.20	22.0	--	0.4	5
JUN								
11...	1038	1.00	235	7.20	26.5	0.43	6.8	84
11...	1040	10.0	230	6.90	26.0	--	5.5	67
11...	1042	20.0	225	6.80	26.0	--	5.2	64
11...	1044	25.0	230	6.80	26.0	--	4.4	54
11...	1046	30.0	235	6.70	26.0	--	3.4	42
11...	1048	39.0	245	6.70	25.5	--	0	0
25...	1010	1.00	120	6.70	30.5	0.46	4.9	65
25...	1012	10.0	120	6.60	30.0	--	4.1	54
25...	1014	15.0	125	6.40	28.5	--	0.8	10
25...	1016	20.0	125	6.40	28.0	--	0.1	1
25...	1018	30.0	110	6.40	26.5	--	0	0
25...	1020	39.0	110	6.40	26.5	--	0	0
JUL								
13...	1114	1.00	110	7.40	30.0	0.22	8.2	108
13...	1116	5.00	110	6.70	29.0	--	5.4	70
13...	1118	10.0	110	6.60	28.5	--	4.7	60
13...	1120	20.0	85	6.50	27.0	--	2.3	29
13...	1122	30.0	80	6.50	27.0	--	2.1	26
13...	1124	41.0	75	6.60	26.5	--	2.0	25
AUG								
19...	1310	1.00	120	7.90	32.0	0.42	7.8	106
19...	1312	5.00	120	7.20	30.5	--	5.4	71
19...	1314	10.0	120	7.20	30.5	--	5.0	66
19...	1316	20.0	125	7.30	30.0	--	4.8	63
19...	1318	34.0	125	7.30	30.0	--	4.8	63

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WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	1106	1.00	130	7.20	12.5	0.15	9.1
29...	1108	14.0	130	7.20	12.0	--	9.1
FEB							
26...	1140	1.00	145	7.50	12.0	0.12	9.3
26...	1142	10.0	170	7.50	12.0	--	9.3
26...	1144	17.0	180	7.60	12.0	--	9.4
MAY							
19...	1200	1.00	235	7.70	27.0	0.28	6.7
19...	1202	10.0	235	7.50	26.5	--	6.1
19...	1204	15.0	250	7.40	26.0	--	3.4
JUN							
11...	1250	1.00	190	7.10	25.5	0.21	6.4
11...	1252	10.0	195	7.00	25.5	--	6.0
11...	1254	15.0	200	7.00	25.5	--	6.0
25...	1202	1.00	155	7.30	32.0	0.39	6.8
25...	1204	5.00	140	6.80	30.5	--	4.3
25...	1206	14.0	165	6.60	29.5	--	1.6
JUL							
13...	1230	1.00	95	7.60	30.5	0.18	7.9
13...	1232	5.00	100	6.70	29.0	--	5.1
13...	1234	10.0	90	6.60	28.5	--	4.2
13...	1236	15.0	85	6.50	28.0	--	1.3
AUG							
19...	1220	1.00	125	7.50	32.0	0.33	6.7
19...	1222	5.00	130	7.30	31.0	--	5.2
19...	1224	13.0	130	7.30	30.5	--	4.7

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095075301 - LAKE HOUSTON SITE CR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	84	--	0.200	--	--	0.70	0.150
29...	84	--	0.200	--	--	1.6	0.170
FEB							
26...	86	--	0.200	--	--	0.90	0.120
26...	86	--	--	--	--	--	--
26...	87	--	0.300	--	--	1.1	0.170
MAY							
19...	84	--	<0.100	--	--	1.2	0.160
19...	76	--	--	--	--	--	--
19...	42	--	<0.100	--	--	1.5	0.200
JUN							
11...	78	--	0.200	--	--	1.3	0.300
11...	73	--	--	--	--	--	--
11...	73	--	0.200	--	--	0.90	0.330
25...	93	--	<0.100	--	--	1.8	0.160
25...	57	--	--	--	--	--	--
25...	21	--	<0.100	--	--	1.2	0.240
JUL							
13...	105	--	<0.100	--	--	2.3	0.380
13...	66	--	--	--	--	--	--
13...	54	--	--	--	--	--	--
13...	16	--	0.100	--	--	1.9	0.220
AUG							
19...	91	0.010	<0.100	0.010	1.4	1.4	0.220
19...	69	--	--	--	--	--	--
19...	62	0.020	<0.100	0.020	0.88	0.90	0.230

295902095074201 - LAKE HOUSTON SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)
JAN												
29...	1116	1.00	130	7.10	12.0	0.14	140	40	9.0	83	2.4	40
29...	1117	0.23	--	--	--	--	--	--	--	--	--	--
29...	1118	10.0	130	7.10	12.0	--	--	--	8.6	79	--	--
29...	1120	25.0	130	7.20	11.5	--	170	58	8.8	80	3.3	38
FEB												
26...	1150	1.00	195	7.50	12.5	0.14	--	--	9.1	85	--	--
26...	1151	0.23	--	--	--	--	--	--	--	--	--	--
26...	1152	10.0	200	7.40	12.0	--	--	--	9.1	84	--	--
26...	1154	20.0	200	7.40	12.0	--	--	--	9.4	87	--	--
26...	1156	31.0	200	7.40	12.0	--	--	--	9.3	86	--	--
MAY												
19...	1214	1.00	225	7.70	27.0	0.33	55	9.5	7.0	88	2.6	55
19...	1215	0.54	--	--	--	--	--	--	--	--	--	--
19...	1216	4.00	225	7.70	27.0	--	--	--	6.8	85	--	--
19...	1218	6.00	225	7.60	26.5	--	--	--	6.9	86	--	--
19...	1220	8.00	225	7.50	26.5	--	--	--	6.6	82	--	--
19...	1222	10.0	225	7.40	26.5	--	--	--	6.3	78	--	--
19...	1224	15.0	235	7.40	26.5	--	--	--	3.8	47	--	--
19...	1226	20.0	235	7.20	25.5	--	--	--	2.5	30	--	--
19...	1228	29.0	245	7.30	25.0	--	70	18	1.0	12	3.0	58
JUN												
11...	1304	1.00	200	7.00	25.5	0.16	--	--	5.9	72	--	--
11...	1305	0.26	--	--	--	--	--	--	--	--	--	--
11...	1306	10.0	200	7.00	25.5	--	--	--	5.8	70	--	--
11...	1308	20.0	195	6.90	25.5	--	--	--	5.6	68	--	--
11...	1310	29.0	180	6.90	25.0	--	--	--	4.8	58	--	--
25...	1215	1.00	145	7.30	32.0	0.42	--	--	6.8	93	--	--
25...	1216	0.70	--	--	--	--	--	--	--	--	--	--
25...	1217	5.00	135	6.80	30.5	--	--	--	4.6	61	--	--
25...	1219	8.00	135	6.70	30.5	--	--	--	3.4	45	--	--
25...	1221	10.0	135	6.60	30.5	--	--	--	3.1	41	--	--
25...	1223	12.0	135	6.60	30.0	--	--	--	2.7	36	--	--
25...	1225	14.0	135	6.50	29.5	--	--	--	1.4	18	--	--
25...	1227	16.0	130	6.50	29.0	--	--	--	1.0	13	--	--
25...	1229	18.0	125	6.50	29.0	--	--	--	0.9	12	--	--
25...	1231	20.0	125	6.50	29.0	--	--	--	0.5	6	--	--
25...	1233	29.0	110	6.50	28.5	--	--	--	0	0	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

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WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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											
29...	12	13	1.8	12	0.9	2.4	28	12	15	<0.10	7.9
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	13	12	1.9	14	1	2.6	25	18	21	<0.10	8.0
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	6	18	2.4	20	1	2.7	49	7.0	34	0.10	5.7
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	9	19	2.6	25	1	3.0	49	7.0	38	0.10	8.4
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

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, NO2+NO3 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)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN											
29...	81	21	16	0.200	1.2	0.160	15	--	--	280	62
29...	--	--	--	--	--	--	--	5.10	0.300	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	93	59	22	0.200	1.6	0.260	17	--	--	590	130
FEB											
26...	--	--	--	0.400	0.80	0.220	--	--	--	--	--
26...	--	--	--	--	--	--	--	16.0	0.800	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	0.400	0.60	0.230	--	--	--	--	--
MAY											
19...	120	17	2	<0.100	0.90	0.090	7.5	--	--	47	15
19...	--	--	--	--	--	--	--	19.0	0.800	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	130	27	3	0.200	1.5	0.270	7.9	--	--	190	260
JUN											
11...	--	--	--	0.200	1.5	0.300	--	--	--	--	--
11...	--	--	--	--	--	--	--	5.40	0.400	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	0.300	1.9	0.480	--	--	--	--	--
25...	--	--	--	<0.100	1.3	0.160	--	--	--	--	--
25...	--	--	--	--	--	--	--	24.0	2.70	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	1.1	0.170	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	1.3	0.190	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JUL										
13...	1244	1.00	80	7.30	30.5	0.16	--	--	7.8	103
13...	1245	0.30	--	--	--	--	--	--	--	--
13...	1246	5.00	80	6.50	29.0	--	--	--	5.1	66
13...	1248	10.0	80	6.40	28.5	--	--	--	4.9	63
13...	1250	15.0	70	6.30	28.0	--	--	--	2.8	36
13...	1252	20.0	55	6.40	27.0	--	--	--	2.2	27
13...	1254	30.0	60	6.50	27.0	--	--	--	1.5	19
23...	1120	1.00	105	7.20	31.0	0.26	--	--	7.0	94
23...	1121	0.40	--	--	--	--	--	--	--	--
23...	1122	3.00	105	7.00	30.5	--	--	--	6.7	89
23...	1124	5.00	105	6.60	29.5	--	--	--	4.0	52
23...	1126	7.00	105	6.60	29.5	--	--	--	3.9	51
23...	1128	10.0	105	6.60	29.0	--	--	--	2.6	34
23...	1130	12.0	105	6.50	29.0	--	--	--	2.6	34
23...	1132	14.0	100	6.50	29.0	--	--	--	1.9	25
23...	1134	16.0	100	6.50	29.0	--	--	--	1.6	21
23...	1136	18.0	100	6.50	29.0	--	--	--	1.4	18
23...	1138	20.0	100	6.50	29.0	--	--	--	0.9	12
23...	1140	25.0	100	6.50	28.5	--	--	--	0.3	4
23...	1142	28.0	100	6.50	28.0	--	--	--	0	0
AUG										
06...	1210	1.00	125	7.10	32.0	0.28	--	--	5.5	75
06...	1211	0.50	--	--	--	--	--	--	--	--
06...	1212	5.00	125	6.90	31.0	--	--	--	4.3	58
06...	1214	10.0	125	6.80	31.0	--	--	--	3.8	51
06...	1216	15.0	125	6.80	31.0	--	--	--	3.7	50
06...	1218	20.0	135	6.80	30.5	--	--	--	3.0	40
06...	1220	24.0	135	6.80	30.5	--	--	--	2.0	27
06...	1222	28.0	140	6.60	30.0	--	--	--	0	0
19...	1228	1.00	125	7.60	33.5	0.35	52	23	7.2	100
19...	1229	0.60	--	--	--	--	--	--	--	--
19...	1230	5.00	130	7.10	30.5	--	--	--	5.4	71
19...	1232	10.0	140	7.00	30.5	--	--	--	4.8	63
19...	1234	15.0	140	7.00	30.5	--	--	--	4.4	58
19...	1236	20.0	145	7.00	30.5	--	--	--	3.9	52
19...	1238	28.0	145	7.10	30.5	--	110	61	3.9	52
SEP										
03...	1006	1.00	200	7.40	28.0	0.22	--	--	5.7	72
03...	1007	0.40	--	--	--	--	--	--	--	--
03...	1008	10.0	200	7.30	27.5	--	--	--	5.2	65
03...	1010	20.0	210	7.20	27.5	--	--	--	4.0	50
03...	1012	28.0	275	7.20	26.5	--	--	--	1.7	21

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
JUL										
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
AUG										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
19...	2.2	34	3	11	1.5	11	0.9	2.0	31	16
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	1.7	53	20	17	2.5	19	1	2.6	33	16
SEP										
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	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)
JUL									
13...	--	--	--	--	--	--	--	--	<0.100
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	<0.100
23...	--	--	--	--	--	--	--	0.010	<0.100
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	0.020	<0.100
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	<0.010	<0.050
AUG									
06...	--	--	--	--	--	--	--	0.020	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	0.020	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	0.010	<0.100
19...	15	0.20	9.6	85	27	4	--	0.010	<0.100
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	19	0.20	19	120	46	7	--	0.020	<0.100
SEP									
03...	--	--	--	--	--	--	0.090	0.010	0.100
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	0.610	0.090	0.700

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL									
13...	--	--	2.0	0.250	--	--	--	--	--
13...	--	--	--	--	--	43.0	2.30	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	1.2	0.170	--	--	--	--	--
23...	0.030	1.5	1.5	0.190	--	--	--	--	--
23...	--	--	--	--	--	9.20	1.10	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	0.150	1.0	1.2	0.250	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	0.360	0.74	1.1	0.490	--	--	--	--	--
AUG									
06...	<0.010	--	1.2	0.250	--	--	--	--	--
06...	--	--	--	--	--	13.0	1.10	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	0.080	1.0	1.1	0.260	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	0.250	0.95	1.2	0.390	--	--	--	--	--
19...	0.020	0.78	0.80	0.220	13	--	--	130	36
19...	--	--	--	--	--	3.70	0.300	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	0.060	1.1	1.2	0.030	13	--	--	69	110
SEP									
03...	0.040	0.76	0.80	0.240	--	--	--	--	--
03...	--	--	--	--	--	13.0	0.800	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	0.320	1.1	1.4	0.570	--	--	--	--	--

295902095073001 - LAKE HOUSTON SITE CL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)
JAN							
29...	1140	1.00	130	7.20	12.5	0.15	9.2
29...	1142	13.0	130	7.20	12.5	--	9.1
FEB							
26...	1200	1.00	200	7.50	12.5	0.15	9.1
26...	1202	14.0	205	7.50	12.0	--	9.1
MAY							
19...	1242	1.00	235	7.80	27.0	0.28	7.1
19...	1244	11.0	235	7.50	27.0	--	5.6
JUN							
11...	1310	1.00	205	6.90	25.5	0.23	5.3
11...	1312	13.0	205	6.90	25.5	--	4.6
25...	1248	1.00	135	7.60	32.5	0.40	7.4
25...	1250	5.00	140	7.10	31.5	--	6.6
25...	1252	12.0	140	6.70	30.0	--	1.5
JUL							
13...	1304	1.00	105	7.20	30.0	0.17	7.3
13...	1306	5.00	110	6.50	29.0	--	4.6
13...	1308	13.0	70	6.50	28.5	--	1.1
AUG							
19...	1250	1.00	130	8.40	32.5	0.33	8.4
19...	1252	5.00	130	7.30	31.0	--	5.5
19...	1254	11.0	130	7.40	31.0	--	5.4

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095073001 - LAKE HOUSTON SITE CL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	85	--	0.200	--	--	0.60	0.170
29...	84	--	0.200	--	--	1.6	0.140
FEB							
26...	85	--	0.400	--	--	1.4	0.200
26...	84	--	0.400	--	--	0.80	0.220
MAY							
19...	89	--	<0.100	--	--	1.3	0.130
19...	70	--	<0.100	--	--	1.0	0.140
JUN							
11...	65	--	0.200	--	--	0.80	0.290
11...	56	--	0.200	--	--	0.50	0.320
25...	102	--	<0.100	--	--	1.8	0.240
25...	89	--	--	--	--	--	--
25...	20	--	<0.100	--	--	1.2	0.210
JUL							
13...	96	--	<0.100	--	--	2.1	0.240
13...	59	--	--	--	--	--	--
13...	14	--	<0.100	--	--	1.5	0.170
AUG							
19...	115	0.010	<0.100	<0.010	--	1.7	1.20
19...	73	--	--	--	--	--	--
19...	72	0.020	<0.100	0.010	1.1	1.1	0.220

300016095075601 - LAKE HOUSTON SITE DR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1204	1.00	135	7.20	12.5	0.15	9.2	85
29...	1206	10.0	135	7.20	12.5	--	9.1	84
29...	1208	21.0	135	7.20	12.5	--	9.2	85
FEB								
26...	1214	1.00	190	7.40	12.5	0.12	9.3	87
26...	1216	10.0	185	7.50	12.0	--	9.2	85
26...	1217	22.0	185	7.50	12.0	--	9.3	86
MAY								
19...	1256	1.00	245	7.90	27.5	0.28	7.1	90
19...	1258	10.0	245	7.70	27.0	--	6.6	83
19...	1300	19.0	250	7.70	26.5	--	5.4	67
JUN								
11...	1326	1.00	165	6.80	25.0	0.13	5.7	69
11...	1328	10.0	165	6.80	25.0	--	5.7	69
11...	1330	21.0	160	6.90	25.0	--	5.3	64
25...	1306	1.00	185	7.70	33.0	0.34	7.6	106
25...	1308	10.0	160	6.80	30.0	--	3.2	42
25...	1310	15.0	200	6.80	29.5	--	1.5	20
25...	1312	19.0	205	6.90	29.0	--	0	0
JUL								
13...	1315	1.00	105	6.70	30.5	0.13	5.4	72
13...	1317	5.00	95	6.60	29.0	--	4.8	62
13...	1319	10.0	90	6.50	28.5	--	4.1	53
13...	1321	15.0	70	6.40	27.5	--	1.6	20
13...	1323	21.0	95	6.50	26.5	--	0	0
AUG								
19...	1100	1.00	145	7.70	31.5	0.23	6.7	90
19...	1102	5.00	145	7.50	30.5	--	5.1	67
19...	1104	10.0	140	7.70	30.5	--	5.1	67
19...	1106	18.0	140	7.80	30.0	--	4.8	63

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300016095073401 - LAKE HOUSTON SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1214	1.00	135	7.20	12.5	0.15	9.1	84
29...	1216	10.0	135	7.20	12.5	--	9.1	84
29...	1218	26.0	135	7.20	12.0	--	9.1	84
FEB								
26...	1224	1.00	190	7.50	12.5	0.13	9.3	87
26...	1226	10.0	190	7.50	12.0	--	9.3	86
26...	1228	20.0	190	7.50	12.0	--	9.2	85
26...	1230	27.0	185	7.50	12.0	--	9.1	84
MAY								
19...	1310	1.00	245	8.10	27.5	0.32	7.4	93
19...	1312	4.00	245	8.10	27.5	--	7.4	93
19...	1314	6.00	245	8.00	27.5	--	7.3	92
19...	1316	8.00	245	7.80	27.5	--	7.0	88
19...	1318	10.0	245	7.70	27.0	--	6.7	84
19...	1320	15.0	250	7.60	27.0	--	5.9	74
19...	1322	23.0	255	7.50	26.0	--	1.6	20
JUN								
11...	1334	1.00	155	6.80	25.5	0.19	5.6	68
11...	1336	10.0	155	6.80	25.5	--	5.5	67
11...	1338	20.0	155	6.80	25.0	--	5.1	61
11...	1340	25.0	155	6.80	25.0	--	5.0	60
25...	1325	1.00	145	7.50	33.5	0.37	7.4	104
25...	1327	5.00	165	6.90	31.0	--	5.2	70
25...	1329	10.0	160	6.80	30.5	--	4.6	61
25...	1331	12.0	155	6.70	30.5	--	4.0	53
25...	1333	14.0	140	6.60	29.5	--	2.2	29
25...	1335	16.0	110	6.50	29.0	--	1.0	13
25...	1337	18.0	110	6.50	29.0	--	0.4	5
25...	1339	23.0	125	6.60	29.0	--	0	0
JUL								
13...	1334	1.00	95	6.60	30.5	0.15	5.7	76
13...	1336	5.00	95	6.50	29.0	--	4.8	62
13...	1338	10.0	90	6.40	28.5	--	4.4	56
13...	1340	15.0	65	6.20	27.5	--	3.0	38
13...	1342	24.0	55	6.10	27.0	--	1.9	24
23...	1226	1.00	105	6.80	30.0	0.18	5.3	70
23...	1228	5.00	105	6.70	29.5	--	5.1	67
23...	1230	10.0	105	6.70	29.5	--	4.1	54
23...	1232	14.0	105	6.60	29.0	--	3.0	39
23...	1234	17.0	105	6.50	29.0	--	2.1	27
23...	1236	20.0	100	6.50	29.0	--	0.9	12
23...	1238	23.0	100	6.50	28.5	--	0	0

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
AUG								
06...	1236	1.00	130	7.10	32.5	0.24	5.8	80
06...	1238	5.00	130	6.90	31.5	--	4.6	62
06...	1240	10.0	130	6.90	31.5	--	4.2	57
06...	1242	14.0	130	6.90	31.0	--	4.3	58
06...	1244	18.0	130	6.90	31.0	--	4.3	58
06...	1246	23.0	140	6.80	31.0	--	3.8	51
19...	1120	1.00	145	7.80	32.0	0.28	7.0	95
19...	1122	5.00	145	7.30	30.5	--	5.3	70
19...	1124	10.0	150	7.30	30.5	--	5.1	67
19...	1126	15.0	150	7.30	30.5	--	4.9	65
19...	1128	22.0	170	7.30	30.0	--	3.8	50
SEP								
03...	1024	1.00	215	7.40	28.0	0.24	5.4	68
03...	1026	10.0	220	7.40	27.5	--	5.0	63
03...	1028	23.0	265	7.20	27.0	--	2.0	25

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300016095072301 - LAKE HOUSTON SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
29...	1220	1.00	120	7.10	13.0	0.15	9.0	85
29...	1222	10.0	115	7.20	12.5	--	9.0	84
29...	1224	27.0	115	7.20	12.5	--	9.0	84
FEB								
26...	1238	1.00	190	7.40	12.0	0.14	9.2	85
26...	1240	10.0	190	7.40	12.0	--	9.1	84
26...	1242	20.0	190	7.40	12.0	--	9.1	84
26...	1244	30.0	190	7.50	12.0	--	9.3	86
MAY								
19...	1330	1.00	250	8.00	27.5	0.28	7.5	95
19...	1332	10.0	250	7.50	27.0	--	6.3	79
19...	1334	20.0	195	7.30	25.5	--	2.2	27
19...	1336	27.0	185	7.50	25.0	--	1.4	17
JUN								
11...	1344	1.00	150	6.70	25.5	0.23	5.6	68
11...	1346	10.0	150	6.70	25.5	--	5.4	65
11...	1348	20.0	170	6.70	25.5	--	5.0	61
11...	1350	29.0	170	6.70	25.0	--	5.0	60
25...	1350	1.00	125	7.70	34.0	0.38	7.6	107
25...	1352	10.0	160	6.70	30.5	--	4.8	64
25...	1354	15.0	100	6.40	29.5	--	1.2	16
25...	1356	20.0	100	6.40	29.0	--	0.7	9
25...	1358	28.0	100	6.50	29.0	--	0	0
JUL								
13...	1350	1.00	95	6.80	31.0	0.15	7.2	96
13...	1352	5.00	80	6.40	29.0	--	4.6	59
13...	1354	10.0	90	6.30	28.5	--	4.6	59
13...	1356	15.0	50	5.90	27.5	--	2.6	33
13...	1358	20.0	50	6.00	27.5	--	2.0	25
13...	1400	30.0	55	6.20	26.5	--	1.0	12
AUG								
19...	1138	1.00	145	7.80	32.0	0.28	7.4	100
19...	1140	5.00	145	7.10	30.5	--	4.7	62
19...	1142	10.0	145	7.10	30.5	--	4.3	57
19...	1144	15.0	150	7.10	30.5	--	4.3	57
19...	1146	20.0	155	7.10	30.0	--	3.5	46
19...	1148	27.0	155	7.10	30.0	--	3.4	45

300202095075701 - LAKE HOUSTON SITE ER

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	1422	1.00	115	6.90	14.0	0.19	8.9
29...	1424	11.0	110	6.90	13.5	--	8.9
FEB							
26...	1408	1.00	95	7.10	13.0	0.11	9.1
26...	1410	13.0	110	7.20	12.0	--	9.3
MAY							
19...	1556	1.00	225	8.20	28.0	0.24	7.7
19...	1558	5.00	225	8.10	28.0	--	7.7
19...	1600	11.0	225	8.00	27.5	--	7.4
JUN							
11...	1534	1.00	70	6.20	24.5	0.17	5.4
11...	1536	11.0	70	6.20	24.0	--	5.3
25...	1530	1.00	100	6.80	34.0	0.40	6.9
25...	1532	10.0	100	6.40	29.5	--	0.5
JUL							
13...	1528	1.00	70	6.20	32.0	0.16	6.3
13...	1530	5.00	55	5.90	28.5	--	3.5
13...	1532	11.0	55	6.00	28.5	--	2.7
AUG							
19...	0930	1.00	160	7.10	30.5	0.22	5.7
19...	0932	5.00	160	7.00	30.5	--	5.0
19...	0934	14.0	155	6.80	30.0	--	2.6

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300202095075701 - LAKE HOUSTON SITE ER--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	85	--	0.100	--	--	0.80	0.110
29...	85	--	0.100	--	--	0.90	0.090
FEB							
26...	86	--	<0.100	--	--	1.4	0.070
26...	86	--	<0.100	--	--	0.80	0.060
MAY							
19...	98	--	<0.100	--	--	1.6	0.190
19...	98	--	--	--	--	--	--
19...	93	--	<0.100	--	--	3.3	0.130
JUN							
11...	64	--	<0.100	--	--	0.90	0.090
11...	63	--	<0.100	--	--	1.4	0.090
25...	98	--	<0.100	--	--	1.4	0.080
25...	7	--	<0.100	--	--	1.3	0.240
JUL							
13...	86	--	<0.100	--	--	2.2	0.180
13...	45	--	--	--	--	--	--
13...	35	--	<0.100	--	--	1.1	0.090
AUG							
19...	76	0.020	<0.100	0.010	1.3	1.3	0.190
19...	66	--	--	--	--	--	--
19...	34	0.020	<0.100	0.090	1.1	1.2	0.190

300158095074601 - LAKE HOUSTON SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
JAN											
29...	1354	1.00	115	7.00	13.5	0.19	120	34	8.9	85	2.1
29...	1355	0.31	--	--	--	--	--	--	--	--	--
29...	1356	10.0	110	7.00	13.0	--	--	--	8.9	84	--
29...	1358	22.0	105	7.10	12.5	--	160	38	8.7	81	1.9
FEB											
26...	1354	1.00	85	7.20	12.5	0.08	--	--	9.2	86	--
26...	1355	0.13	--	--	--	--	--	--	--	--	--
26...	1356	10.0	85	7.20	12.5	--	--	--	9.3	87	--
26...	1358	23.0	95	7.30	12.5	--	--	--	9.3	87	--
MAY											
19...	1526	1.00	215	7.90	27.5	0.21	65	8.2	7.1	90	3.8
19...	1527	0.34	--	--	--	--	--	--	--	--	--
19...	1528	5.00	215	7.60	27.5	--	--	--	7.1	90	--
19...	1530	10.0	195	7.20	27.0	--	--	--	5.1	64	--
19...	1532	15.0	165	7.30	26.0	--	--	--	3.5	43	--
19...	1534	21.0	235	7.40	25.0	--	90	17	1.7	21	2.7
JUN											
11...	1522	1.00	70	6.20	24.0	0.18	--	--	5.1	60	--
11...	1523	0.30	--	--	--	--	--	--	--	--	--
11...	1524	10.0	70	6.20	24.0	--	--	--	5.3	63	--
11...	1526	22.0	70	6.30	24.0	--	--	--	5.4	64	--
25...	1516	1.00	100	6.80	32.5	0.41	--	--	7.2	99	--
25...	1517	0.70	--	--	--	--	--	--	--	--	--
25...	1518	10.0	100	6.30	29.5	--	--	--	1.7	22	--
25...	1520	20.0	85	6.30	29.0	--	--	--	1.6	21	--
JUL											
13...	1515	1.00	55	6.10	31.5	0.21	--	--	5.6	76	--
13...	1516	0.30	--	--	--	--	--	--	--	--	--
13...	1517	5.00	55	6.00	28.5	--	--	--	3.9	50	--
13...	1519	10.0	55	6.00	28.0	--	--	--	3.3	42	--
13...	1521	15.0	55	6.00	28.0	--	--	--	3.3	42	--
13...	1523	22.0	55	6.00	27.5	--	--	--	1.5	19	--
23...	1350	1.00	95	6.80	32.5	0.18	--	--	6.7	92	--
23...	1351	0.30	--	--	--	--	--	--	--	--	--
23...	1352	5.00	95	6.60	30.5	--	--	--	4.7	63	--
23...	1354	8.00	95	6.50	30.0	--	--	--	3.3	44	--
23...	1356	12.0	100	6.50	29.5	--	--	--	1.0	13	--
23...	1358	15.0	100	6.60	29.5	--	--	--	0.4	5	--
23...	1400	21.0	100	6.70	29.0	--	--	--	0	0	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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 NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN											
29...	32	48	32	12	10	1.7	11	0.9	1.7	20	10
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	31	13	9.6	1.7	9.8	0.8	1.8	18	11
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	K2	K10	49	8	16	2.3	21	1	2.5	41	6.0
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	50	4	16	2.5	25	2	2.5	46	8.0
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--

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, 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, NITRITE DIS-SOLVED (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)
JAN											
29...	21	<0.10	9.2	77	23	16	--	--	0.100	0.100	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	15	<0.10	9.3	70	26	18	--	--	<0.100	<0.100	--
FEB											
26...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
MAY											
19...	35	0.10	7.2	110	24	3	--	--	<0.100	<0.100	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	42	<0.10	8.2	130	45	4	--	--	0.100	0.120	--
JUN											
11...	--	--	--	--	--	--	--	--	<0.100	0.100	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	<0.100	0.100	--
25...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
JUL											
13...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
23...	--	--	--	--	--	--	0.020	<0.010	<0.100	<0.100	0.040
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	0.020	<0.010	<0.100	<0.100	0.250

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	ARSENIC DISSOLVED (UG/L AS AS)
JAN											
29...	--	--	--	0.70	1.0	0.078	0.031	16	--	--	<1
29...	--	--	--	--	--	--	--	--	3.30	0.200	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	1.1	1.5	0.073	0.048	17	--	--	<1
FEB											
26...	--	--	--	0.60	2.0	0.072	0.031	--	--	--	--
26...	--	--	--	--	--	--	--	--	0.400	<0.100	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	1.5	1.3	0.076	0.047	--	--	--	--
MAY											
19...	--	--	--	0.80	1.3	0.165	0.100	8.8	--	--	1
19...	--	--	--	--	--	--	--	--	38.0	2.60	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	0.50	0.80	0.125	0.031	9.8	--	--	1
JUN											
11...	--	--	--	0.90	0.90	0.094	0.034	--	--	--	--
11...	--	--	--	--	--	--	--	--	<0.100	<0.100	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	0.80	1.0	0.095	0.036	--	--	--	--
25...	--	--	--	1.1	1.4	0.095	0.036	--	--	--	--
25...	--	--	--	--	--	--	--	--	16.0	2.00	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	1.4	2.2	0.098	0.090	--	--	--	--
JUL											
13...	--	--	--	1.0	1.3	0.076	0.041	--	--	--	--
13...	--	--	--	--	--	--	--	--	6.30	0.800	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	1.4	1.3	0.120	0.092	--	--	--	--
23...	0.040	1.4	0.66	0.70	1.4	0.150	0.050	--	--	--	--
23...	--	--	--	--	--	--	--	--	3.80	0.400	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.170	1.2	0.83	1.0	1.4	0.250	0.090	--	--	--	--

DATE	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN											
29...	61	<1	<10	5	220	<5	52	<0.1	<1	<1	6
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	5	<1	<10	12	510	<5	59	<0.1	<1	<1	22
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	78	<1	<10	2	20	<5	53	<0.1	<1	<1	<3
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	76	<1	<10	6	150	<5	250	<0.1	<1	<1	8
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	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)
AUG												
06...	1346	1.00	150	7.00	32.5	0.20	--	--	4.5	62	--	--
06...	1347	0.30	--	--	--	--	--	--	--	--	--	--
06...	1348	5.00	150	7.00	31.5	--	--	--	3.7	50	--	--
06...	1350	10.0	150	7.10	31.5	--	--	--	3.4	46	--	--
06...	1352	15.0	150	7.20	31.0	--	--	--	3.3	44	--	--
06...	1354	20.0	150	7.20	31.0	--	--	--	3.0	40	--	--
19...	0900	1.00	155	7.10	30.5	0.22	72	48	5.5	73	2.6	K6
19...	0901	0.40	--	--	--	--	--	--	--	--	--	--
19...	0902	5.00	155	6.90	30.5	--	--	--	4.6	61	--	--
19...	0904	10.0	155	6.80	30.0	--	--	--	3.6	47	--	--
19...	0906	15.0	155	6.80	30.0	--	--	--	2.7	36	--	--
19...	0908	20.0	160	6.80	30.0	--	68	57	2.4	32	1.5	--
SEP												
03...	1118	1.00	175	7.40	29.0	0.18	--	--	5.9	76	--	--
03...	1119	0.30	--	--	--	--	--	--	--	--	--	--
03...	1120	10.0	175	7.00	27.0	--	--	--	4.0	50	--	--
03...	1122	20.0	150	6.60	27.0	--	--	--	1.1	14	--	--

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
AUG												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
19...	26	38	7	12	2.0	17	1	2.5	31	15	23	0.20
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	35	9	11	1.8	16	1	2.1	26	14	28	0.20
SEP												
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	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, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (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)
AUG											
06...	--	--	--	--	--	--	0.020	<0.010	<0.100	<0.100	0.020
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.020	<0.010	<0.100	<0.100	0.040
19...	12	100	37	4	--	--	0.020	<0.010	<0.100	<0.100	0.020
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	14	100	52	2	--	--	0.020	<0.010	<0.100	<0.100	0.110
SEP											
03...	--	--	--	--	--	--	0.010	<0.010	<0.100	<0.100	0.040
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	0.080	0.130	0.020	0.020	0.100	0.150	0.220

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	ARSENIC DISSOLVED (UG/L AS AS)
AUG											
06...	<0.010	1.4	--	0.70	1.4	0.200	0.100	--	--	--	--
06...	--	--	--	--	--	--	--	--	8.60	0.800	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.040	0.96	0.76	0.80	1.0	0.250	0.190	--	--	--	--
19...	0.040	1.2	1.2	1.2	1.2	0.210	0.120	11	--	--	2
19...	--	--	--	--	--	--	--	--	6.00	0.400	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	0.130	1.1	1.2	1.3	1.2	0.240	0.040	12	--	--	1
SEP											
03...	0.040	0.96	0.26	0.30	1.0	0.090	0.060	--	--	--	--
03...	--	--	--	--	--	--	--	--	35.0	2.50	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	0.190	0.68	0.31	0.50	0.90	0.150	0.100	--	--	--	--

DATE	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
AUG											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
19...	4	1	20	4	500	<5	35	<0.1	<1	<1	25
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	48	<1	30	1	620	<5	200	<0.1	<1	<1	9
SEP											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--

300156095074001 - LAKE HOUSTON SITE EL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	1344	1.00	115	7.30	14.0	0.18	9.1
29...	1346	12.0	115	7.50	14.0	--	9.1
FEB							
26...	1346	1.00	95	7.30	12.5	0.09	8.7
26...	1348	13.0	95	7.40	12.5	--	8.8
MAY							
19...	1516	1.00	195	7.90	27.5	0.24	7.1
19...	1518	10.0	195	7.80	27.5	--	6.3
JUN							
11...	1515	1.00	85	6.60	24.0	0.15	5.4
11...	1517	11.0	85	6.70	24.0	--	5.4
25...	1504	1.00	95	7.10	33.5	0.40	8.0
25...	1506	5.00	85	6.60	30.0	--	2.2
25...	1508	11.0	85	6.70	29.0	--	1.0
JUL							
13...	1500	1.00	55	6.30	32.5	0.26	6.4
13...	1502	5.00	55	6.20	28.5	--	4.2
13...	1504	12.0	55	6.40	28.0	--	1.8
AUG							
19...	0850	1.00	155	6.90	30.5	0.21	5.3
19...	0852	5.00	160	6.60	30.5	--	4.8
19...	0854	10.0	160	6.90	30.0	--	4.0

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300156095074001 - LAKE HOUSTON SITE EL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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							
29...	87	--	0.100	--	--	0.60	0.090
29...	87	--	0.100	--	--	0.70	0.110
FEB							
26...	81	--	<0.100	--	--	2.5	0.070
26...	82	--	<0.100	--	--	2.0	0.080
MAY							
19...	90	--	<0.100	--	--	1.4	0.140
19...	80	--	<0.100	--	--	1.7	0.190
JUN							
11...	64	--	0.100	--	--	1.2	0.090
11...	64	--	0.100	--	--	1.8	0.140
25...	112	--	<0.100	--	--	1.1	0.090
25...	29	--	--	--	--	--	--
25...	13	--	<0.100	--	--	1.5	0.140
JUL							
13...	88	--	<0.100	--	--	1.1	0.070
13...	54	--	--	--	--	--	--
13...	23	--	<0.100	--	--	1.2	0.100
AUG							
19...	70	0.020	<0.100	0.020	0.98	1.0	0.190
19...	64	--	--	--	--	--	--
19...	53	0.040	<0.100	0.070	1.1	1.2	0.010

300202095091701 - LAKE HOUSTON SITE FR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)
JAN							
29...	1244	1.00	230	7.20	15.5	0.11	9.2
29...	1246	9.00	230	7.10	15.5	--	9.2
FEB							
26...	1256	1.00	160	7.50	13.5	0.06	9.1
26...	1258	10.0	160	7.50	13.5	--	9.0
MAY							
19...	1354	1.00	300	7.70	28.5	0.11	5.7
19...	1356	5.00	305	7.50	28.0	--	4.4
19...	1358	9.00	330	7.20	26.0	--	0.3
JUN							
11...	1404	1.00	140	6.70	24.5	0.10	5.7
11...	1406	10.0	140	6.70	24.5	--	5.7
25...	1418	1.00	250	7.70	33.5	0.16	9.4
25...	1420	5.00	245	6.90	30.5	--	3.7
25...	1422	9.00	245	6.90	30.0	--	1.3
JUL							
13...	1420	1.00	155	7.20	33.0	0.14	7.8
13...	1422	4.00	160	6.70	30.0	--	4.8
13...	1424	8.00	160	6.70	30.0	--	4.1
AUG							
19...	1000	1.00	365	8.50	31.0	0.25	6.7
19...	1002	4.00	370	8.30	31.0	--	4.8
19...	1004	8.00	415	7.50	30.5	--	0

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300202095091701 - LAKE HOUSTON SITE FR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	91	--	0.700	--	--	0.90	0.490
29...	91	--	0.700	--	--	1.0	0.460
FEB							
26...	87	--	0.400	--	--	1.5	0.310
26...	86	--	0.400	--	--	1.7	0.310
MAY							
19...	73	--	0.500	--	--	1.8	0.680
19...	56	--	--	--	--	--	--
19...	4	--	<0.100	--	--	2.3	0.020
JUN							
11...	68	--	0.100	--	--	1.2	0.240
11...	68	--	0.100	--	--	1.2	0.230
25...	132	--	0.200	--	--	1.8	0.440
25...	49	--	--	--	--	--	--
25...	17	--	0.100	--	--	2.5	0.370
JUL							
13...	108	--	0.200	--	--	1.7	0.390
13...	63	--	--	--	--	--	--
13...	54	--	0.200	--	--	1.0	0.260
AUG							
19...	89	0.010	<0.100	0.010	1.7	1.7	0.040
19...	64	--	--	--	--	--	--
19...	0	0.010	<0.100	0.260	1.7	2.0	0.050

300209095091201 - LAKE HOUSTON SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	COLOR (PLATINUM-COBALT UNITS)	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)
JAN												
29...	1254	1.00	245	7.30	15.5	0.11	120	56	9.1	90	2.8	130
29...	1255	0.18	--	--	--	--	--	--	--	--	--	--
29...	1256	13.0	245	7.20	15.5	--	160	54	9.2	91	2.5	--
FEB												
26...	1316	1.00	160	7.50	13.5	0.06	--	--	9.0	86	--	--
26...	1317	0.10	--	--	--	--	--	--	--	--	--	--
26...	1318	14.0	160	7.50	13.0	--	--	--	9.1	86	--	--
MAR												
13...	1434	1.00	--	7.50	33.0	0.12	--	--	8.5	--	--	--
13...	1436	5.00	155	6.80	29.5	--	--	--	4.4	57	--	--
13...	1438	13.0	--	6.80	29.5	--	--	--	3.5	--	--	--
MAY												
19...	1410	1.00	300	8.10	28.5	0.09	90	17	6.7	86	5.7	K1
19...	1411	0.15	--	--	--	--	--	--	--	--	--	--
19...	1412	4.00	300	8.00	28.5	--	--	--	6.6	85	--	--
19...	1414	6.00	300	8.00	28.5	--	--	--	6.6	85	--	--
19...	1416	8.00	300	7.80	28.5	--	--	--	6.0	77	--	--
19...	1418	12.0	300	7.60	27.5	--	110	20	5.0	63	4.3	--
JUN												
11...	1412	1.00	135	6.70	24.5	0.12	--	--	5.8	69	--	--
11...	1413	0.20	--	--	--	--	--	--	--	--	--	--
11...	1414	13.0	140	6.70	24.5	--	--	--	5.8	69	--	--
25...	1430	1.00	250	7.30	32.5	0.15	--	--	7.6	105	--	--
25...	1431	0.20	--	--	--	--	--	--	--	--	--	--
25...	1432	5.00	245	7.20	30.5	--	--	--	5.1	68	--	--
25...	1434	12.0	245	6.90	30.0	--	--	--	1.0	13	--	--
JUL												
13...	1434	1.00	135	--	--	--	--	--	--	--	--	--
13...	1435	0.20	--	--	--	--	--	--	--	--	--	--
13...	1438	13.0	165	--	--	--	--	--	--	--	--	--
23...	1320	1.00	230	7.90	32.5	0.17	--	--	8.1	112	--	--
23...	1321	0.30	--	--	--	--	--	--	--	--	--	--
23...	1322	5.00	295	7.50	31.0	--	--	--	6.1	82	--	--
23...	1324	8.00	320	7.40	30.5	--	--	--	6.1	81	--	--
23...	1326	11.0	315	6.90	30.5	--	--	--	1.7	23	--	--
AUG												
06...	1320	1.00	340	8.50	33.5	0.24	--	--	7.0	98	--	--
06...	1321	0.40	--	--	--	--	--	--	--	--	--	--
06...	1322	4.00	340	8.20	32.5	--	--	--	5.3	73	--	--
06...	1324	8.00	300	7.80	32.0	--	--	--	3.8	52	--	--
06...	1326	12.0	300	7.80	32.0	--	--	--	3.7	50	--	--
19...	1015	1.00	345	8.70	31.5	0.26	58	26	7.7	104	5.2	K4
19...	1016	0.40	--	--	--	--	--	--	--	--	--	--
19...	1017	5.00	330	8.30	30.5	--	--	--	5.0	66	--	--
19...	1019	11.0	375	7.90	30.5	--	57	37	2.4	32	4.3	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN												
29...	84	62	14	20	2.8	25	1	3.4	48	14	35	0.10
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	59	11	19	2.7	26	2	3.5	48	15	34	0.10
FEB												
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	60	64	5	21	2.8	34	2	3.6	59	9.0	47	0.20
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	64	3	21	2.9	33	2	3.5	61	10	45	0.20
JUN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
19...	K1	67	0	22	3.0	43	2	3.7	75	11	51	0.30
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	74	0	24	3.4	48	3	3.9	84	11	56	0.30

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)
JAN											
29...	11	140	60	14	--	--	--	--	0.800	0.740	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	12	140	56	26	--	--	--	--	0.700	0.770	--
FEB											
26...	--	--	--	--	--	--	--	--	0.400	0.420	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	0.400	0.430	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	9.5	160	51	4	--	--	--	--	0.300	0.330	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	9.9	160	89	9	--	--	--	--	0.400	0.400	--
JUN											
11...	--	--	--	--	--	--	--	--	0.140	0.150	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	0.200	0.190	--
25...	--	--	--	--	--	--	--	--	0.200	0.330	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	0.100	0.210	--
JUL											
13...	--	--	--	--	--	--	--	--	0.200	0.160	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	0.200	0.220	--
23...	--	--	--	--	0.180	--	0.020	<0.010	0.200	0.160	0.040
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	0.300	0.290	0.040	0.020	0.340	0.310	0.390
AUG											
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.030
19...	14	190	53	5	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	13	210	58	6	--	--	0.010	<0.010	<0.100	<0.100	0.130

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN											
29...	--	--	--	0.50	1.3	0.507	0.266	13	--	--	1
29...	--	--	--	--	--	--	--	--	3.70	0.300	--
29...	--	--	--	0.60	1.4	0.332	0.250	13	--	--	1
FEB											
26...	--	--	--	0.70	1.6	0.224	0.053	--	--	--	--
26...	--	--	--	--	--	--	--	--	2.70	0.300	--
26...	--	--	--	1.7	1.8	0.367	0.262	--	--	--	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	0.90	1.6	0.580	0.320	9.7	--	--	3
19...	--	--	--	--	--	--	--	--	43.0	4.60	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	1.0	1.6	0.680	0.380	11	--	--	3
JUN											
11...	--	--	--	1.3	1.1	0.256	0.121	--	--	--	--
11...	--	--	--	--	--	--	--	--	1.00	<0.100	--
11...	--	--	--	1.0	1.2	0.290	0.126	--	--	--	--
25...	--	--	--	0.90	2.1	0.420	0.200	--	--	--	--
25...	--	--	--	--	--	--	--	--	23.0	2.70	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	1.3	1.6	0.022	0.015	--	--	--	--
JUL											
13...	--	--	--	1.0	0.70	0.410	0.210	--	--	--	--
13...	--	--	--	--	--	--	--	--	30.0	3.80	--
13...	--	--	--	1.2	1.5	0.440	0.320	--	--	--	--
23...	0.070	1.5	0.83	0.90	1.5	0.430	0.250	--	--	--	--
23...	--	--	--	--	--	--	--	--	19.0	1.70	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.400	1.6	0.80	1.2	2.0	0.610	0.290	--	--	--	--
AUG											
06...	0.010	--	1.3	1.3	1.8	0.660	0.540	--	--	--	--
06...	--	--	--	--	--	--	--	--	60.0	4.10	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.070	1.9	2.8	2.9	1.9	0.670	0.690	--	--	--	--
19...	<0.010	--	--	1.1	1.2	0.630	0.460	13	--	--	6
19...	--	--	--	--	--	--	--	--	32.0	1.70	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	0.230	1.4	4.1	4.3	1.5	0.640	0.450	13	--	--	6

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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...	79	1	<10	5	100	<5	35	<0.1	<1	<1	5
29...	--	--	--	--	--	--	--	--	--	--	--
29...	38	<1	<10	11	270	<5	36	<0.1	<1	<1	13
FEB											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	71	<1	<10	4	18	<5	5	<0.1	<1	<1	<3
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	77	<1	<10	4	14	<5	100	<0.1	<1	<1	<3
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
19...	64	<1	20	7	31	<5	3	0.4	<1	<1	<3
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	69	<1	<10	11	13	<5	57	0.1	<1	<1	<3

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
SEP												
03...	1046	1.00	275	7.50	27.5	0.09	5.3	67	0.640	0.640	0.060	0.050
03...	1047	0.20	--	--	--	--	--	--	--	--	--	--
03...	1048	5.00	275	7.50	27.0	--	4.4	55	--	--	--	--
03...	1050	12.0	275	7.40	27.0	--	3.9	49	0.640	--	0.060	--

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, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
SEP												
03...	0.700	0.690	0.120	0.100	1.3	0.70	0.80	1.4	0.780	0.580	--	--
03...	--	--	--	--	--	--	--	--	--	--	11.0	0.900
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	0.700	--	0.150	--	1.0	--	<0.20	1.2	0.870	0.610	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300214095090901 - LAKE HOUSTON SITE FL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
29...	1320	1.00	260	7.30	16.0	0.12	8.9
29...	1322	8.00	260	7.40	16.0	--	8.9
FEB							
26...	1326	1.00	155	7.40	13.5	0.08	8.9
26...	1328	10.0	175	7.40	13.0	--	9.1
MAY							
19...	1444	1.00	290	8.30	28.5	0.12	7.3
19...	1446	8.00	290	8.20	28.0	--	7.2
JUN							
11...	1420	1.00	145	6.70	24.5	0.12	5.5
11...	1422	9.00	145	6.70	24.5	--	5.4
25...	1446	1.00	245	7.70	32.0	0.15	8.8
25...	1448	8.00	245	7.10	30.5	--	3.0
JUL							
13...	1444	1.00	135	7.30	33.0	0.15	8.0
13...	1446	5.00	140	6.80	30.0	--	3.3
13...	1448	9.00	165	7.00	29.0	--	3.3
AUG							
19...	1044	1.00	350	8.70	31.5	0.25	7.1
19...	1046	4.00	340	8.40	31.0	--	5.1
19...	1048	8.00	320	7.90	31.0	--	3.4

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION)	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)
JAN							
29...	89	--	0.800	--	--	0.80	0.560
29...	89	--	0.800	--	--	2.3	0.480
FEB							
26...	85	--	0.500	--	--	1.6	0.360
26...	86	--	0.500	--	--	1.5	0.350
MAY							
19...	94	--	0.300	--	--	1.8	0.500
19...	92	--	0.200	--	--	1.6	0.480
JUN							
11...	65	--	0.200	--	--	1.3	0.360
11...	64	--	0.200	--	--	1.4	0.020
25...	120	--	<0.100	--	--	2.3	0.430
25...	40	--	0.200	--	--	2.3	0.480
JUL							
13...	111	--	0.200	--	--	2.1	0.380
13...	43	--	--	--	--	--	--
13...	43	--	0.200	--	--	1.9	0.330
AUG							
19...	96	0.010	<0.100	0.010	2.0	2.0	0.620
19...	68	--	--	--	--	--	--
19...	45	0.010	<0.100	0.010	2.1	2.1	0.610

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	0931
TOTAL CELLS/mL	3,690
NUMBER OF SPECIES	26
DEPTH COLLECTED (ft.)	0.33

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Dunaliella (?) sp.	170
Gloeocystis sp.	57
Golenkinia radiata	28
Oocystis sp.	28
Scenedesmus quadricauda	170
Tetrastrum staurogeniaeforme	454
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	284
Aphanocapsa elachista	170
Chroococcus multicoloratus	28
Dactylococcopsis acicularis	28
Dactylococcopsis fascicularis	28
Dactylococcopsis sp.	199
Microcystis marina ?	795
CRYPTOPHYTA (cryptomonads)	
Cryptomonas sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	146
Cyclotella stelligera	63
Melosira granulata	38
Melosira granulata var. *angustissima* f. spiralis	13
Melosira italica	114
Melosira lirata	705
Order Pennales	
Navicula circumtexta	5
Navicula minuscula	20
Navicula pupula	5
Nitzschia acicularis	25
Nitzschia palea	50
Nitzschia paleacea	10

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	1117
TOTAL CELLS/mL	6,048
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	0.23

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	57
Chodatella sp.	28
Dictyosphaerium ehrenbergianum	454
Dictyosphaerium pulchellum	369
Dunaliella (?) sp.	114
Gloeocystis sp.	57
Mesotaenium sp.	28
Oocystis sp.	57
Pteromonas sp.	85
Scenedesmus dimorphus	57
Scenedesmus quadricauda	114
Staurastrum sp.	28
Tetrastrum staurogeniaeforme	142
CHRYSOPHYTA (golden-brown algae)	
Dinobryon sp.	28
CYANOPHYTA (blue-green algae)	
Chroococcus multicoloratus	28
Dactylococcopsis fascicularis	170
Dactylococcopsis sp.	28
Microcystis marina ?	738
Synechococcus sp.	57
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	28
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	60
Cyclotella stelligera	7
Melosira ambigua	174
Melosira distans	54
Melosira granulata	40
Melosira granulata var. *angustissima*	94
Melosira granulata var. *angustissima* f. spiralis	54
Melosira italica	575
Melosira lirata	2067
Order Pennales	
Anomoeoneis sp.	8
Diploneis sp.	15
Navicula minuscula	8
Navicula mutica	15
Navicula pupula	8
Navicula texana	8
Navicula sp.	8
Nitzschia palea	91
Nitzschia paleacea	23
Nitzschia subacicularis	15

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	1355
TOTAL CELLS/mL	2,637
NUMBER OF SPECIES	23
DEPTH COLLECTED (ft.)	0.31

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	28
Binuclearia sp.	28
Dunaliella (?) sp.	142
Gloeocystis sp.	28
Pteromonas sp.	28
Pyramimonas sp.	85
CYANOPHYTA (blue-green algae)	
Chroococcus multicoloratus	85
Dactylococcopsis fascicularis	85
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	28
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	122
Cyclotella stelligera	43
Melosira granulata var. *angustissima* f. *spiralis*	28
Melosira italica	129
Melosira lirata	1666
Order Pennales	
Navicula circumtexta	4
Navicula minuscula	8
Navicula mutica	4
Navicula notha	4
Navicula pupula	32
Nitzschia palea	32
Nitzschia subacicularis	12
Pinnularia sp.	8
Surirella ovata	8

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	1255
TOTAL CELLS/mL	14,284
NUMBER OF SPECIES	56
DEPTH COLLECTED (ft.)	0.18

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *acicularis*	114
Ankistrodesmus falcatus var. *mirabilis*	28
Binuclearia sp.	170
Chlamydomonas sp.	114
Chlorococcum sp.	341
Chodatella quadriseta	28
Chodatella subsalsa	57
Dictyosphaerium pulchellum	57
Dunaliella (?) sp.	511
Dysmorphococcus sp.	28
Gloeocystis sp.	114
Golenkinia radiata	28
Oocystis sp.	142
Pteromonas sp.	28
Scenedesmus dimorphus	114
Scenedesmus quadricauda	170
Scenedesmus sp.	57
Staurastrum sp.	28
Tetraedron sp.	57
Tetrastrum staurogeniaeforme	114
CHRYSOPHYTA (golden-brown algae)	
Mallomonas sp.	85
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	312
Aphanocapsa elachista	540
Chroococcus multicoloratus	170
Chroococcus pallidus	312
Dactylococcopsis acicularis	57
Dactylococcopsis fascicularis	540
Dactylococcopsis sp.	57
Synechococcus lineare	28
Synechococcus sp.	57
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	28
Phacus sp.	28
Trachelomonas sp.	170
CRYPTOPHYTA (cryptomonads)	
Cryptomonas sp.	28
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	323
Cyclotella stelligera	76
Melosira ambigua	76
Melosira granulata var. *angustissima*	152
Melosira granulata var. *angustissima* f. *spiralis*	114
Melosira italica	1065
Melosira lirata	6900
Melosira sp.	38
Stephanodiscus sp.	57
Order Pennales	
Amphora ovalis	86
Diploneis sp.	43
Navicula circumtexta	43
Navicula grimmei	21
Navicula minuscula	21
Navicula mutica var. *cohnii*	43
Navicula sp.	43
Nitzschia acicularis	21
Nitzschia palea	172
Nitzschia paleacea	21
Nitzschia subacicularis	215
Nitzschia thermalis	21
Nitzschia sp.	21

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	2-26-87
Time	1001
TOTAL CELLS/mL	8,841
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	0.38

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	57
Chlamydomonas sp.	57
Chlorella sp.	568
Chodatella longiseta	57
Gloeocystis sp.	57
Oocystis sp.	568
Scenedesmus armatus	114
Scenedesmus quadricauda	114
Scenedesmus serratus	114
Tetrastrum heteracanthum	227
Treubaria sp.	57
CYANOPHYTA (blue-green algae)	
Aphanocapsa elachista	227
Aphanothece saxicola	341
Chroococcus limneticus	454
Dactylcoccopsis fascicularis	284
Dactylcoccopsis musicola	227
Dactylcoccopsis raphidioides	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	131
Cyclotella stelligera	33
Melosira ambigua	590
Melosira distans	131
Melosira italica	262
Melosira italica var. *tenuissima*	197
Melosira lirata	2523
Melosira sp.	131
Order Pennales	
Diploneis sp.	33
Nitzschia palea	66
Nitzschia subacicularis	1164

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	2-26-87
Time	1151
TOTAL CELLS/mL	17,724
NUMBER OF SPECIES	23
DEPTH COLLECTED (ft.)	0.23

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	114
Chlamydomonas sp. 1	341
Chlamydomonas sp. 2	341
Chlorella sp.	227
Chlorococcum sp.	114
Chodatella longiseta	114
Golenkinia radiata	170
Kirchneriella subsolitaria	1250
Mesotaenium sp.	57
Tetraedron trigonum	57
Tetrastrum heteracanthum	227
CYANOPHYTA (blue-green algae)	
Aphanocapsa elachista	1136
Chroococcus dispersus	114
Chroococcus multicoloratus	852
Dactylococcopsis acicularis	170
Dactylococcopsis fascicularis	284
Dactylococcopsis musicola	114
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Melosira italica	2420
Melosira lirata	8413
Stephanodiscus sp.	173
Order Pennales	
Nitzschia palea	461
Nitzschia subacicularis	461

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	2-26-87
Time	1355
TOTAL CELLS/mL	1,218
NUMBER OF SPECIES	20
DEPTH COLLECTED (ft.)	0.13

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas sp.	28
Chlorococcum sp.	28
Dictyosphaerium sp.	454
Gonium sp.	114
CYANOPHYTA (blue-green algae)	
Aphanocapsa elachista	454
Dactylococcopsis musicola	28
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Melosira varians	27
Order Pennales	
Caloneis bacillum	7
Eunotia sp.	3
Navicula grimmei ?	3
Navicula ilopangoensis	3
Navicula minuscula	10
Navicula notha	3
Nitzschia acicularis	7
Nitzschia obtusa var. *scalpelliformis*	7
Nitzschia palea	23
Nitzschia thermalis	3
Nitzschia sp.	10
Pinnularia sp.	3
Surirella ovalis var. *pyriformis*	3

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	2-26-87
Time	1317
TOTAL CELLS/mL	5,427
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	0.10

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas sp.	57
Scenedesmus dimorphus	227
CYANOPHYTA (blue-green algae)	
Anabaena sp.	682
Dactylococcopsis fascicularis	57
Oscillatoria geminata	1136
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Melosira granulata var. *angustissima* f. *spiralis*	65
Melosira italica	647
Melosira lirata	2079
Order Pennales	
Achnanthes microcephala	129
Anomoeoneis sp.	65
Navicula exigua	65
Navicula grimmei ?	32
Navicula symmetrica	32
Nitzschia palea	65
Nitzschia subacicularis	32

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	5-19-87
Time	0944
TOTAL CELLS/mL	132,404
NUMBER OF SPECIES	43
DEPTH COLLECTED (ft.)	0.76

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas sp.	114
Chlorococcum humicola	114
Chlorogonium sp.	114
Closterium sp.	57
Dictyosphaerium pulchellum	1590
Elakatothrix viridis	341
Euastrum sp.	114
Gloeocystis sp.	227
Kirchneriella lunaris	6589
Scenedesmus dimorphus	454
Scenedesmus serratus	227
Staurastrum sp.	114
Tetrastrum sp.	454
CHRYSOPHYTA (golden-brown algae)	
Chrysococcus sp.	114
Mallomonas sp.	114
CYANOPHYTA (blue-green algae)	
Anabaena circinalis	1818
Anabaena sp.	1818
Aphanocapsa delicatissima	80088
Aphanocapsa elachista	1931
Aphanothece nidulans	3749
Aphanothece saxicola	2158
Aphanothece stagnina	1363
Chroococcus dispersus	341
Chroococcus multicoloratus	1477
Dactylococcopsis acicularis	114
Dactylococcopsis fascicularis	114
Merismopedia tenuissima	2272
Microcystis sp.	1363
Oscillatoria angustissima	170
Synechococcus lineare	227
Synechococcus sp.	6475
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	57
Phacus orbicularis	114
Trachelomonas volvocina	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	341
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	1590
Cyclotella stelligera	2840
Melosira distans	682
Melosira granulata	1363
Melosira lirata	7838
Melosira sp.	341
Stephanodiscus dubius	795
Order Pennales	
Nitzschia paleacea	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	5-19-87
Time	1215
TOTAL CELLS/mL	491,888
NUMBER OF SPECIES	47
DEPTH COLLECTED (ft.)	0.54

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	682
Chlamydomonas sp. 1	114
Chlamydomonas sp. 2	227
Chlorococcum humicola	568
Crucigenia apiculata	1363
Dictyosphaerium pulchellum	1363
Franceia ovalis	341
Gloeocystis sp.	227
Kirchneriella lunaris	15563
Oocystis sp.	909
Pteromonas sp.	227
Scenedesmus armatus	795
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus dimorphus	341
Scenedesmus quadricauda	454
Scenedesmus serratus	795
Sphaerocystis schroeteri	795
Tetrastrum staurogeniaeforme	1363
Treubaria sp.	114
CHRYSOPHYTA (golden-brown algae)	
Chrysococcus sp.	227
CYANOPHYTA (blue-green algae)	
Anabaena circinalis	3635
Aphanocapsa delicatissima	170400
Aphanocapsa elachista	12723
Aphanothece saxicola	39987
Aphanothece stagnina	43168
Chroococcus multicoloratus	1704
Chroococcus sp.	909
Dactylococcopsis acicularis	227
Dactylococcopsis fascicularis	454
Dactylococcopsis smithii (?)	341
Merismopedia tenuissima	15677
Microcystis sp.	96560
Oscillatoria angustissima	454
Synechococcus lineare	1136
Synechococcus lineare var. *spirale*	454
Synechococcus sp.	3181
PYRRHOPHYTA (dinoflagellates)	
Peridinium sp.	341
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	455
Cyclotella stelligera	1250
Melosira granulata	27718
Melosira lirata	39078
Melosira sp.	568
Rhizoselenia eriensis	114
Stephanodiscus dubius	341
Stephanodiscus niagarae	114
Order Pennales	
Nitzschia paleacea	4090

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	5-19-87
Time	1527
TOTAL CELLS/mL	273,891
NUMBER OF SPECIES	48
DEPTH COLLECTED (ft.)	0.34

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Carteria sp. 1	114
Carteria sp. 2	227
Chlamydomonas sp.	114
Chlorococcum humicola	568
Chodatella quadriseta	114
Chodatella sp.	114
Franceia ovalis	114
Kirchneriella contorta	1818
Kirchneriella lunaris	3408
Mesotaenium sp.	341
Pteromonas sp.	227
Scenedesmus armatus	454
Scenedesmus bijuga	682
Scenedesmus quadricauda	227
Tetrastrum staurogeniaeforme	341
Treubaria sp.	114
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	72931
Aphanocapsa elachista	2726
Aphanothece nidulans	9542
Aphanothece saxicola	38170
Aphanothece stagnina	8406
Aphanothece sp.	36579
Chroococcus dispersus	2954
Chroococcus multicoloratus	2272
Chroococcus sp.	6362
Dactylococcopsis fascicularis	454
Dactylococcopsis smithii (?)	227
Merismopedia tenuissima	48166
Microcystis sp.	3635
Oscillatoria angustissima	1590
Oscillatoria sp.	454
Synechococcus lineare	454
Synechococcus lineare var. *spirale*	15677
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	227
Trachelomonas hispida	114
Trachelomonas volvocina	114
Trachelomonas sp.	114
CRYPTOPHYTA (cryptomonads)	
Cryptomonas sp.	454
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	8294
Cyclotella stelligera	227
Melosira distans	454
Melosira granulata	795
Melosira lirata	909
Melosira sp.	227
Rhizoselenia sp.	682
Stephanodiscus dubius	1136
Order Pennales	
Nitzschia acicularis	114
Nitzschia paleacea	454

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	5-19-87
Time	1411
TOTAL CELLS/mL	213,477
NUMBER OF SPECIES	44
DEPTH COLLECTED (ft.)	0.15

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	114
Ankistrodesmus falcatus	227
Ankistrodesmus falcatus var. *mirabilis*	114
Ankistrodesmus nannoselene	114
Chlamydomonas sp. 1	114
Chlamydomonas sp. 2	1818
Chlorococcum humicola	1136
Chodatella subsalsa	341
Dictyosphaerium pulchellum	1136
Gonium sp.	1363
Kirchneriella lunaris	7952
Kirchneriella obesa	682
Mesotaenium sp.	114
Oocystis sp.	114
Pandorina morum	1136
Pteromonas sp.	227
Scenedesmus armatus	454
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus brasiliensis	341
Scenedesmus opoliensis	227
Scenedesmus quadricauda	114
Scenedesmus sp.	909
Tetraedron minimum	114
CHRYSOPHYTA (golden-brown algae)	
Mallomonas sp.	114
CYANOPHYTA (blue-green algae)	
Anabaena circinalis	1363
Aphanocapsa delicatissima	46576
Aphanocapsa elachista	22947
Aphanothece saxicola	13178
Aphanothece stagnina	22512
Aphanothece sp.	18858
Chroococcus dispersus	1136
Dactylococcopsis smithii (?)	227
Merismopedia tenuissima	42941
Microcystis sp.	2499
Synechococcus aeruginosa	227
Synechococcus lineare var. *spirale*	3635
Synechococcus sp.	4771
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	341
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	10678
Melosira lirata	341
Rhizoselenia eriensis	114
Rhizoselenia sp.	341
Order Pennales	
Nitzschia palea	227
Nitzschia paleacea	1363

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	6-11-87
Time	0957
TOTAL CELLS/mL	183,605
NUMBER OF SPECIES	53
DEPTH COLLECTED (ft.)	0.86

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	227
Ankistrodesmus falcatus	114
Chlamydomonas sp. 1	227
Chlamydomonas sp. 2	114
Chlorococcum sp.	795
Crucigenia apiculata	1590
Elakatothrix sp.	227
Gloeocystis sp.	909
Golenkinia radiata	227
Kirchneriella lunaris var. *dianae*	7043
Pediastrum tetras	398
Polyedriopsis sp.	227
Pteromonas sp.	114
Scenedesmus armatus	454
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmu brasiliensis	454
Scenedesmus quadricauda	227
Schroederia setigera	57
Tetrastrum staurogeniaeforme	1363
Treubaria sp.	114
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	1704
Anabaenopsis circinalis	909
Aphanocapsa elicatissima	20402
Aphanocapsa elachista	10110
Aphanothece saxicola	8179
Aphanothece sp.	16018
Chroococcus pallidus	2954
Dactylococcopsis fascicularis	341
Lyngbya subtilis	568
Merismopedia punctata	3181
Merismopedia tenuissima	13859
Microcystis aeruginosa	4771
Microcystis sp.	36693
Oscillatoria angustissima	4544
Oscillatoria limnetica	3522
Oscillatoria subtilissima	1818
Oscillatoria sp.	682
Stigonema sp.	10565
Synechococcus lineare	2386
Synechococcus sp.	1477
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	11029
Melosira granulata	2426
Melosira italica	5735
Melosira lirata	1985
Stephanodiscus niagarae	114
Order Pennales	
Navicula sp.	114
Nitzschia acicularis	1103
Nitzschia fonticola	58
Nitzschia holsatica	454
Nitzschia subacicularis	114
Nitzschia sp.	227
Synedra delicatissima	114
Synedra sp.	341

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	6-11-87
Time	1305
TOTAL CELLS/mL	61,875
NUMBER OF SPECIES	31
DEPTH COLLECTED (ft.)	0.26

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	114
Ankistrodesmus falcatus	114
Carteria sp.	57
Mesotaenium sp.	114
Scenedesmus armatus	454
CYANOPHYTA (blue-green algae)	
Anabaena sp.	1818
Aphanizomenon flos-aquae	1363
Aphanocapsa delicatissima	7043
Aphanocapsa elachista	1136
Aphanothece saxicola	9770
Aphanothece sp.	2272
Chroococcus pallidus	1363
Dactylococcopsis acicularis	227
Dactylococcopsis fascicularis	341
Merismopedia punctata	1818
Merismopedia tenuissima	14541
Merismopedia sp.	1363
Oscillatoria angustissima	3181
Oscillatoria subtilissima	682
Synechococcus lineare	341
PYRRHOPHYTA (dinoflagellates)	
Peridinium sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	6349
Cyclotella stelligera	1645
Melosira distans	808
Melosira lirata	4040
Melosira sp.	346
Stephanodiscus tenuis	144
Order Pennales	
Anomoeoneis sp.	29
Nitzschia acicularis	115
Nitzschia palea	115
Nitzschia tryblionella	58

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	6-11-87
Time	1523
TOTAL CELLS/mL	5,906
NUMBER OF SPECIES	22
DEPTH COLLECTED (ft.)	0.30

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	28
Ankistrodesmus nannoselene	114
Carteria sp.	28
Chlorella sp.	85
Crucigenia apiculata	227
Mesotaenium sp.	28
Scenedesmus sp.	57
Schroederia setigera	28
Sphaerocystis schroeteri	114
CYANOPHYTA (blue-green algae)	
Anabaena sp.	568
Aphanocapsa delicatissima	795
Aphanothece saxicola	2414
Chroococcus dispersus	341
Lyngbya sp.	426
Oscillatoria subtilissima	57
Oscillatoria sp.	284
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	57
Cryptomonas erosa	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Melosira lirata	114
Order Pennales	
Anomoeoneis sp.	28
Nitzschia palea	28
Nitzschia sp.	28

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	6-11-87
Time	1413
TOTAL CELLS/mL	8,442
NUMBER OF SPECIES	33
DEPTH COLLECTED (ft.)	0.20

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Closterium sp.	57
Dictyosphaerium pulchellum	568
Scenedesmus acuminatus	227
Scenedesmus brasiliensis	114
CYANOPHYTA (blue-green algae)	
Anabaena sp.	1022
Chroococcus dispersus	227
Dactylococcopsis acicularis	57
Dactylococcopsis fascicularis	57
Oscillatoria angustissima	2840
Oscillatoria subtilissima	682
Raphidiopsis sp.	454
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	180
Cyclotella stelligera	100
Melosira distans	240
Melosira granulata	100
Melosira italica	240
Melosira lirata	480
Order Pennales	
Navicula circumtexta	20
Navicula halophila	40
Navicula lanceolata	20
Navicula minuscula	20
Navicula sabiniana	40
Navicula sp.	20
Neidium dubium	20
Nitzschia acicularis	40
Nitzschia communis	160
Nitzschia microcephala	20
Nitzschia palea	180
Nitzschia paleacea	20
Nitzschia sp.	20
Pinnularia sp.	60
Synedra rumpens	57
Synedra sp.	60

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	6-25-87
Time	0911
TOTAL CELLS/mL	374,535
NUMBER OF SPECIES	41
DEPTH COLLECTED (ft.)	0.82

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	682
Carteria sp.	227
Chlamydomonas sp.	227
Chlorococcum sp.	1136
Crucigenia apiculata	9542
Dictyosphaerium ehrenbergianum	2726
Dictyosphaerium pulchellum	11360
Franceia ovalis	682
Gloeocystis sp.	1363
Golenkinia radiata	227
Kirchneriella lunaris	13405
Micratinium pusillum	3181
Oocystis sp.	1818
Pteromonas sp.	114
Quadrigula chodatii	909
Treubaria sp.	454
Westella sp.	1363
CYANOPHYTA (blue-green algae)	
Anabaena phillippinensis?	3181
Aphanocapsa delicatissima	45667
Aphanothece nidulans	11360
Aphanothece saxicola	13632
Aphanothece sp.	43168
Chroococcus dispersus	227
Chroococcus limneticus	8179
Chroococcus multicoloratus	91334
Chroococcus pallidus	14995
Dactylococcopsis fascicularis	1590
Merismopedia tenuissima	8179
Microcystis aeruginosa	8406
Microcystis marina	12950
Microcystis sp.	38624
Oscillatoria limnetica	2726
Spirulina laxa	2726
Synechococcus lineare	2954
Synechococcus sp.	1590
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	454
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	5907
Cyclotella stelligera	909
Melosira granulata	1136
Melosira sp.	4998
Order Pennales	
Navicula arvensis	227

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	6-25-87
Time	1216
TOTAL CELLS/mL	296,835
NUMBER OF SPECIES	51
DEPTH COLLECTED (ft.)	0.69

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	227
Ankistrodesmus falcatus	454
Ankistrodesmus nannoselene	227
Carteria sp.	227
Chlamydomonas sp. 1	1136
Chlamydomonas sp. 2	227
Chlorella sp.	1363
Chlorococcum sp.	1363
Dictyosphaerium pulchellum	4090
Franceia ovalis	1136
Gloeocystis sp. 1	909
Gloeocystis sp. 2	682
Kirchneriella contorta	909
Kirchneriella lunaris	1590
Kirchneriella obesa	590
Mesotaenium sp.	909
Micratinium pusillum	2954
Polyedriopsis spinulosa	227
Scenedesmus armatus var. *bicaudatus*	454
Scenedesmus brasiliensis	909
Scenedesmus dimorphus	454
Scenedesmus quadricauda	454
Treubaria sp.	227
CHRYSOPHYTA (golden-brown algae)	
Mallomonas sp.	227
CYANOPHYTA (blue-green algae)	
Anabaenopsis phillippinensis?	7498
Aphanocapsa delicatissima	21584
Aphanocapsa elachista	42259
Aphanothece saxicola	55437
Aphanothece sp.	35443
Chroococcus multicoloratus	61117
Chroococcus pallidus	909
Coelosphaerium sp.	8179
Dactylococcopsis fascicularis	682
Lyngbya nana	3635
Merismopedia tenuissima	9088
Oscillatoria limnetica	682
Oscillatoria subtilissima	7498
Oscillatoria sp.	4090
Spirulina laxa	2726
Spirulina sp.	454
Synechococcus sp.	2499
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	454
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	227
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	1136
Cyclotella stelligera	2954
Melosira granulata	1136
Melosira lirata	1363
Melosira sp.	2045
Stephanodiscus sp.	454
Order Pennales	
Nitzschia acicularis	227
Nitzschia palea	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	6-25-87
Time	1517
TOTAL CELLS/mL	127,972
NUMBER OF SPECIES	44
DEPTH COLLECTED (ft.)	0.68

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	114
Carteria sp.	57
Chlamydomonas sp. 1	1363
Chlamydomonas sp. 2	114
Chlorococcum sp.	2272
Crucigenia apiculata	454
Dictyosphaerium pulchellum	1022
Dysmorphococcus sp.	341
Franceia ovalis	114
Gloeocystis sp. 1	1250
Gloeocystis sp. 2	909
Kirchneriella contorta	795
Kirchneriella lunaris	795
Mesotaenium sp.	568
Oocystis sp.	227
Scenedesmus brasiliensis	454
Scenedesmus serratus	227
Schroederia setigera	114
Tetraedron caudatum	114
Treubaria sp.	57
CHRYSOPHYTA (golden-brown algae)	
Ophiocytium sp.	114
CYANOPHYTA (blue-green algae)	
Anabaenopsis phillippinensis?	454
Aphanizomenon flos-aquae	682
Aphanocapsa delicatissima	4885
Aphanocapsa elachista	16131
Aphanothece saxicola	33171
Aphanothece sp.	23629
Chroococcus multicoloratus	1704
Dactylococcopsis fascicularis	1590
Dactylococcopsis raphidioides	114
Lyngbya nana	568
Merismopedia tenuissima	19085
Merismopedia sp.	1363
Microcystis marina	3976
Oscillatoria limnetica	454
Oscillatoria subtilissima	1136
Synechococcus lineare	3067
Synechococcus sp.	568
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas volvocina	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	1477
Melosira lirata	1704
Melosira sp.	454
Order Pennales	
Anomoeoneis sp.	57
Nitzschia palea	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	6-25-87
Time	1431
TOTAL CELLS/mL	115,307
NUMBER OF SPECIES	59
DEPTH COLLECTED (ft.)	0.24

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	227
Ankistrodesmus falcatus	227
Carteria sp.	114
Chlamydomonas sp.	114
Chlorococcum sp.	1250
Closterium sp.	114
Coelastrum sp.	909
Crucigenia apiculata	909
Crucigenia tetrapedia	454
Dictyosphaerium pulchellum	3408
Gloeocystis sp.	227
Kirchneriella contorta	114
Kirchneriella lunaris	341
Micratinium pusillum	1363
Nephrocytium limneticum	1818
Quadrigula chodatii	682
Scenedesmus abundans	454
Scenedesmus armatus	1250
Scenedesmus bijuga	227
Scenedesmus dimorphus	227
Scenedesmus quadricauda	1363
Scenedesmus serratus	454
Tetraedron minimum	227
Treubaria sp.	114
CHRYSOPHYTA (golden-brown algae)	
Ophiocytium sp.	114
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	5680
Anabaenopsis circularis	1818
Anabaenopsis phillippinensis?	1363
Aphanocapsa delicatissima	6362
Aphanocapsa elachista	454
Aphanothece saxicola	28173
Chroococcus dispersus	227
Chroococcus multicoloratus	1363
Chroococcus pallidus	1363
Dactylococcopsis fascicularis	341
Lyngbya nana	7043
Merismopedia punctata	1363
Merismopedia tenuissima	8861
Microcystis marina	15790
Oscillatoria limnetica	1590
Oscillatoria subtilissima	909
Oscillatoria sp.	1818
Spirulina laxa	454
Spirulina sp.	454
Synechococcus aeruginosa	227
Synechococcus lineare	2272
Synechococcus sp.	1818
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	227
Euglena sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	909
Cyclotella stelligera	341
Melosira granulata	3749
Melosira granulata var. *angustissima*	1136
Melosira granulata var. *angustissima* f. *spiralis*	909
Melosira sp.	114
Order Pennales	
Diploneis sp.	114
Nitzschia acicularis	227
Nitzschia longissima var. *reversa*	114
Nitzschia palea	909

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	7-13-87
Time	1021
TOTAL CELLS/mL	137,571
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	0.49

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	114
Chlamydomonas sp.	227
Chlorococcum sp.	114
Chodatella subsalsa	114
Kirchneriella lunaris	114
Scenedesmus dimorphus	454
Tetraedron trigonum	114
CYANOPHYTA (blue-green algae)	
Anabaenopsis phillippinensis ?	454
Aphanocapsa delicatissima	2272
Aphanocapsa yelachista	26355
Aphanothece saxicola	7270
Aphanothece sp.	45213
Chroococcus multicoloratus	3408
Chroococcus pallidus	1590
Merismopedia punctata	9997
Merismopedia tenuissima	5907
Microcystis marina	1818
Oscillatoria angustissima	2272
Oscillatoria limnetica	454
Synechococcus sp.	22720
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas hispida	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	454
Cryptomonas sp.	3976
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Chaetoceros sp.	341
Cyclotella meneghiniana	909
Melosira sp.	682
Order Pennales	
Nitzschia palea	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	7-13-87
Time	1245
TOTAL CELLS/mL	20,650
NUMBER OF SPECIES	32
DEPTH COLLECTED (ft.)	0.26

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Carteria sp.	227
Chlamydomonas sp. 1	341
Chlamydomonas sp. 2	341
Chlorococcum sp.	1590
Coccomonas sp.	114
Crucigenia apiculata	1363
Dictyosphaerium ehrenbergianum	682
Gloeocystis sp.	568
Kirchneriella lunaris	114
Pandorina morum	1363
Pteromonas sp.	227
Scenedesmus quadricauda	682
Tetraedron trigonum	114
CHRYSOPHYTA (golden-brown algae)	
Mallomonas sp.	454
CYANOPHYTA (blue-green algae)	
Aphanothece saxicola	1136
Chroococcus multicoloratus	3408
Dactylococcopsis fascicularis	114
Merismopedia tenuissima	1136
Microcystis sp.	852
Oscillatoria limnetica	1477
Synechococcus lineare	341
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	227
Trachelomonas gibberosa	114
Trachelomonas hispida	114
Trachelomonas horrida	114
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	568
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	1136
Melosira lirata	1363
Order Pennales	
Navicula arvensis	28
Nitzschia acicularis	114
Nitzschia subacicularis	114

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	7-13-87
Time	1516
TOTAL CELLS/mL	8,401
NUMBER OF SPECIES	24
DEPTH COLLECTED (ft.)	0.34

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	57
Ankistrodesmus falcatus	227
Chlamydomonas sp.	57
Chlorogonium sp.	57
Crucigenia tetrapedia	170
Dictyosphaerium ehrenbergianum	341
Dictyosphaerium pulchellum	1136
Elakatothrix viridis	57
Gloeocystis sp.	114
Kirchneriella lunaris	57
Nephrocytium limneticum	454
Scenedesmus abundans	227
Scenedesmus serratus	341
CYANOPHYTA (blue-green algae)	
Anabaenopsis phillippinensis?	170
Dactylococcopsis fascicularis	57
Dactylococcopsis rhaphidioides	57
Merismopedia tenuissima	795
Oscillatoria sp.	1022
Spirulina laxa	1704
Synechococcus lineare	114
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	51
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium palustre	454
CRYPTOPHYTA (cryptomonads)	
Cryptomonas sp.	625
BACILLARIOPHYTA (diatoms)	
Order Pennales	
Anomoeoneis sp.	57

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	7-13-87
Time	1435
TOTAL CELLS/mL	235,949
NUMBER OF SPECIES	52
DEPTH COLLECTED (ft.)	0.20

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Actinastrum hantzschii	2499
Ankistrodesmus convolutus	795
Ankistrodesmus nannoselene	227
Carteria sp.	114
Chlorococcum sp.	454
Chodatella subsalsa	341
Coelastrum sphaericum	909
Dictyosphaerium ehrenbergianum	1818
Dictyosphaerium pulchellum	5680
Gloeocystis sp. 1	4544
Gloeocystis sp. 2	1363
Kirchneriella contorta	114
Kirchneriella lunaris	1704
Kirchneriella obesa	227
Nephrocytium limneticum	682
Oocystis sp.	114
Scenedesmus armatus var. *bicaudatus*	454
Scenedesmus brasiliensis	909
Scenedesmus dimorphus	1818
Scenedesmus quadricauda	454
Scenedesmus serratus	227
Staurastrum sp.	114
Treubaria sp.	341
CHRYSOPHYTA (golden-brown algae)	
Ophiocytium sp.	227
CYANOPHYTA (blue-green algae)	
Anabaenopsis phillippinensis?	4998
Aphanocapsa delicatissima	17722
Aphanocapsa elachista	4544
Aphanothece saxicola	26810
Aphanothece sp.	29536
Chroococcus limneticus	10451
Chroococcus multicoloratus	48848
Chroococcus pallidus	5226
Chroococcus sp.	1363
Dactylococcopsis fascicularis	227
Merismopedia elegans	4090
Merismopedia punctata	9088
Merismopedia tenuissima	18176
Microcystis marina	12496
Oscillatoria limnetica	2726
Spirulina laxa	4090
Spirulina princeps	454
Synechococcus lineare	1363
Synechococcus sp.	454
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	454
Phacus lemmermannii	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	4090
Melosira islandica	454
Melosira sp.	1477
Order Pennales	
Hantzschia amphioxys	114
Nitzschia subacicularis	227
Synedra rumpens	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	1409
TOTAL CELLS/mL	352,159
NUMBER OF SPECIES	55
DEPTH COLLECTED (ft.)	0.76

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Actinastrum gracillimum	341
Ankistrodesmus convolutus	682
Ankistrodesmus nannoselene	454
Chlamydomonas sp.	114
Chodatella quadriseta	454
Chlorococcum sp.	1136
Chlorogonium sp.	454
Crucigenia quadrata	1590
Dictyosphaerium pulchellum	227
Dysmorphococcus sp.	227
Gloeocystis sp.	909
Kirchneriella lunaris	5453
Kirchneriella obesa	2726
Oocystis sp.	227
Pediastrum tetras	454
Polyedriopsis spinulsa	114
Pteromonas sp.	682
Scenedesmus bijuga	454
Scenedesmus denticulatus	454
Scenedesmus quadricauda	909
Schroederia setigera	114
Tetrastrum staurogeniaeforme	909
Treubaria triappendiculata	227
Wislouchiella sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensis ?	1363
Aphanocapsa delicatissima	1818
Aphanocapsa elachista	34534
Aphanothece nidulans	7270
Aphanothece saxicola	88154
Aphanothece sp.	74067
Chroococcus multicoloratus	5453
Chroococcus varius	454
Dactylococcopsis fascicularis	454
Merismopedia punctatum	30899
Merismopedia tenuissima	23629
Microcystis marina	16358
Oscillatoria angustissima	6362
Oscillatoria limnetica	4544
Oscillatoria subtilissima	5907
Oscillatoria sp.	2726
Synechococcus lineare	5453
Synechococcus sp.	1818
EUGLENOPHYTA (Euglenoids)	
Trachelomonas hispida	227
Trachelomonas volvocina	114
CRYPTOPHYTA (Cryptomonads)	
Chilomonas sp.	454
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	4632
Cyclotella pseudostelligera	842
Cyclotella glomerata ?	11538
Melosira distans	337
Melosira granulata var. *angustissima*	590
Melosira granulata var. *angustissima* f. *spiralis*	1095
Melosira lirata	1179
Stephanodiscus sp.	84
Order Pennales	
Anomoeoneis sp.	295
Navicula minuscula	84

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	1229
TOTAL CELLS/mL	90,598
NUMBER OF SPECIES	38
DEPTH COLLECTED (ft.)	0.58

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	114
Ankistrodesmus falcatus	227
Ankistrodesmus falcatus var. *mirabilis*	114
Chlorococcum sp.	114
Closterium sp.	114
Crucigenia sp.	568
Dictyosphaerium pulchellum	454
Kirchneriella contorta	341
Kirchneriella lunaris	1931
Kirchneriella obesa	1136
Pediastrum tetras	1363
Scenedesmus armatus var. *bicaudatus*	454
Scenedesmus sp.	909
CYANOPHYTA (Blue-green algae)	
Aphanocapsa elachista	4771
Aphanocapsa elachista var. *conferta*	2272
Aphanothece saxicola	17949
Aphanothece sp. 1	1136
Aphanothece sp. 2	11587
Chroococcus limneticus	341
Chroococcus multicoloratus	1818
Chroococcus varius	8520
Dactylococcopsis fascicularis	682
Merismopedia minimum	2045
Merismopedia tenuissima	1818
Microcystis marina	10338
Oscillatoria limnetica	227
Oscillatoria subtilissima	795
Oscillatoria sp.	6021
Synechococcus lineare	1477
EUGLENOPHYTA (Euglenoids)	
Trachelomonas hispida	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	518
Cyclotella glomerata ?	9114
Melosira granulata var. *angustissima* f. *spiralis*	341
Melosira lirata	207
Stephanodiscus hantzschii var. *pusilus*	155
Order Pennales	
Anomoeoneis sp.	414
Navicula minuscula	52
Nitzschia subacicularis	104

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	0901
TOTAL CELLS/mL	107,995
NUMBER OF SPECIES	47
DEPTH COLLECTED (ft.)	0.36

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	341
Ankistrodesmus falcatus	114
Carteria sp.	114
Chlamydomonas sp.	795
Chodatella subsalsa	114
Crucigenia tetrapedia	454
Dysmorphococcus sp.	795
Euastrum denticulatum	114
Gloeocystis sp.	454
Kirchneriella contorta	682
Kirchneriella lunaris	682
Kirchneriella obesa	114
Oocystis sp.	114
Pteromonas sp.	341
Scenedesmus brasiliensis	454
Scenedesmus denticulatus	227
Scenedesmus quadricauda	227
Scenedesmus sp.	909
Schroedèria setigera	57
Tetraedron caudatum	114
Treubaria triappendiculata	114
Wislouchiella sp.	57
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1818
Aphanothece saxicola	4090
Aphanothece sp.	795
Chroococcus dispersus	227
Chroococcus limneticus	227
Chroococcus multicoloratus	1818
Dactylococcopsis fascicularis	341
Gloeothece linearis	114
Lyngbya nana	170
Merismopedia elegans	454
Merismopedia minimum	63616
Merismopedia tenuissima	16358
Oscillatoria limnetica	3635
Oscillatoria subtilissima	795
Pseudanabaena catenata	568
Synechococcus lineare	227
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium sp.	57
Peridinium inconspicua	57
Peridinium sp.	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	2386
Cyclotella stelligera	114
Cyclotella glomerata ?	2158
Melosira lirata	227
Order Pennales	
Anomoeoneis sp.	114
Navicula minuscula	14
Navicula sp.	57
Nitzschia paleacea	114

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	1016
TOTAL CELLS/mL	1,859,911
NUMBER OF SPECIES	53
DEPTH COLLECTED (ft.)	0.42

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	568
Chlamydomonas sp.	1136
Chodatella subsalsa	1136
Chlorococcum sp.	3408
Chlorogonium sp.	568
Closterium sp.	568
Dysmorphococcus sp.	1136
Kirchneriella lunaris	36352
Kirchneriella obesa	13632
Micratinium pusillum	57
Nephrocytium agardhianum	6816
Scenedesmus armatus var. *bicaudatus*	4544
Scenedesmus quadricauda	1136
CYANOPHYTA (Blue-green algae)	
Aphanocapsa elachista	311264
Aphanotheca sp.	256736
Aphanothece saxicola	597536
Chroococcus dispersus	2272
Chroococcus limneticus	4544
Chroococcus varius	9088
Dactylococcopsis fascicularis	13632
Dactylococcopsis raphidioides	4544
Dactylococcopsis sp.	4544
Gloeocapsa sp.	9088
Lyngbya limnetica	181760
Merismopedia elegans	686
Merismopedia tenuissima	181760
Microcystis marina	81792
Microcystis sp.	22720
Oscillatoria angustissima	72704
Oscillatoria limnetica	118144
Oscillatoria sp.	4544
Pseudanabaena catenata	27264
Synechococcus sp.	4544
EUGLENOPHYTA (Euglenoids)	
Euglena acus	114
Euglena viridis	57
Trachelomonas hispida	1136
Trachelomonas volvocina	2272
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas sp.	2272
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	6248
Cyclotella pseudostelligera	161
Cyclotella stelligera	482
Cyclotella glomerata ?	18641
Melosira granulata var. *angustissima* f. *spiralis*	4544
Melosira lirata	161
Stephanodiscus hantzschii var. *pusilus*	1446
Stephanodiscus niagarae	114
Order Pennales	
Anomoeoneis sp.	1125
Navicula luzonensis	482
Navicula minuscula	1125
Navicula sp.	161
Nitzschia palea	321
Nitzschia paleacea	2089
Nitzschia subacicularis	321

08072050 SAN JACINTO RIVER NEAR SHELDON, TX

LOCATION.--Lat 29°52'34", long 95°05'37", Harris County, Hydrologic Unit 12040104, on left bank at U.S. Highway 90 bridge, 0.3 mi downstream from Southern Pacific Railway Co. bridge, 1.5 mi east of Sheldon, 4.6 mi downstream from Lake Houston, and 21 mi northeast of Houston.

DRAINAGE AREA.--2,879 mi².

PERIOD OF RECORD.--February 1970 to current year (elevations only prior to 1973, beginning 1973 gage heights only). Water-quality records.--Chemical and biochemical analyses: February 1970 to September 1972. Pesticide analyses: May 1971 to September 1972.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 0.69 ft below National Geodetic Vertical Datum of 1929, adjustment of 1973. Prior records unadjusted for land-surface subsidence.

REMARKS.--Records good except during periods of runoff. Gage heights reflect tidal fluctuations. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 20.12 ft June 15, 1973; minimum recorded elevation, -2.52 ft Oct. 28, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1875, 31.5 ft Nov. 26, 1940, at site 0.3 mi upstream at Southern Pacific Railway Co. bridge.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.90 ft June 13 at 1600 hours; minimum, -1.53 ft Mar. 30.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.43	1.93	2.79	1.03	---	.93	2.57	.58	2.80	1.42	---	---
2	3.78	2.16	3.17	1.30	2.38	-.30	2.68	.98	2.38	.52	---	---
3	4.14	2.77	3.52	1.47	1.55	-.40	3.71	.02	1.97	.46	---	---
4	3.50	1.91	3.83	2.15	2.70	.63	.08	-1.05	2.73	.79	---	---
5	3.00	1.41	3.83	.32	2.75	1.02	2.30	.08	2.83	1.28	---	---
6	2.94	.88	2.38	.80	2.89	1.06	2.68	1.77	2.83	.35	---	---
7	2.82	1.26	3.35	1.41	2.97	1.22	2.60	1.18	1.25	-1.03	---	---
8	3.25	1.54	3.02	1.19	2.92	1.19	2.52	.83	1.60	-.23	---	---
9	3.41	.93	2.79	.81	2.80	.79	2.63	.82	2.18	.11	---	---
10	2.78	1.21	2.82	.82	1.67	-.16	1.72	-.52	2.22	.57	---	---
11	3.45	1.50	2.59	1.01	2.12	.58	1.27	-.77	1.98	.35	---	---
12	3.63	1.50	2.43	1.28	1.77	-.10	1.57	-.58	1.80	.17	2.31	.42
13	2.57	1.38	1.42	-.70	2.19	.24	1.83	-.17	1.82	.18	---	---
14	2.81	1.35	2.78	.95	3.05	1.11	2.91	.76	2.38	.77	---	---
15	2.64	1.55	2.87	.91	3.27	1.90	2.90	.96	2.78	.13	---	---
16	2.92	1.48	2.96	1.26	3.46	2.29	2.80	1.23	1.30	-.34	3.88	---
17	2.93	1.36	2.92	.86	3.53	2.47	3.33	1.91	1.13	.11	3.87	2.64
18	2.87	1.01	2.78	.85	3.67	3.02	3.34	.37	1.62	-.08	3.38	1.93
19	2.75	1.06	2.65	.77	4.17	3.65	1.55	.41	2.94	.83	3.09	1.20
20	3.06	1.71	2.74	.56	4.45	3.42	2.35	1.55	3.07	1.51	3.18	1.24
21	3.23	1.89	2.83	1.18	4.02	2.86	2.57	1.80	2.13	.43	3.47	1.36
22	3.72	2.38	3.30	1.28	6.10	3.40	2.55	-.15	2.18	.37	3.95	1.76
23	3.83	2.12	3.15	1.83	7.77	6.10	1.99	-.15	2.60	.30	3.95	2.23
24	3.53	.80	3.79	1.90	6.95	5.53	2.45	.87	3.37	1.59	2.97	.44
25	2.04	.58	4.68	3.27	5.53	4.54	2.30	-.11	3.06	1.13	3.17	.73
26	2.26	.82	3.45	2.15	4.60	3.78	1.74	-.49	---	---	3.20	1.04
27	2.43	1.00	---	2.50	4.22	3.02	2.04	-.22	---	---	2.72	.90
28	2.73	1.22	---	---	3.65	1.63	1.93	.10	---	---	3.03	1.52
29	2.57	1.22	---	---	2.98	1.10	2.18	-.08	---	---	2.52	-.40
30	2.65	1.14	---	---	2.72	.50	1.94	-.35	---	---	-.10	-1.53
31	3.09	1.88	---	---	2.69	.67	2.34	.52	---	---	1.18	-1.40
MONTH	4.14	.58	---	---	---	-.40	3.71	-1.05	---	---	---	---

08072050 SAN JACINTO RIVER NEAR SHELDON, TX--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.02	-.38	2.47	-.03	3.02	.94	2.81	.95	1.81	.80	2.47	.81
2	1.89	.22	2.62	.40	2.98	1.08	2.42	.81	1.98	.42	2.77	.62
3	1.49	-.90	4.17	.92	2.84	.92	2.49	1.12	1.88	.28	2.56	.57
4	2.38	-.02	3.75	1.17	2.35	.89	2.55	1.49	1.94	.25	2.42	.39
5	2.27	.64	2.28	.61	2.46	1.12	2.60	1.47	2.14	.15	2.51	.35
6	1.82	-.13	2.16	.44	3.00	1.56	3.46	1.43	---	-.15	2.82	.63
7	1.55	-.32	2.27	.29	3.43	2.02	3.61	2.07	---	---	2.70	.85
8	1.47	-.30	1.93	.44	3.68	2.38	3.90	1.95	---	---	2.53	.91
9	1.65	-.25	2.17	.92	4.04	2.28	4.17	1.67	---	---	2.52	.96
10	1.91	.46	2.08	.83	4.05	2.11	4.39	2.84	---	---	2.52	.85
11	2.13	.48	---	.48	5.70	2.35	3.85	2.66	---	---	2.33	.60
12	2.43	1.30	2.71	1.15	10.90	5.60	3.40	1.82	---	---	2.18	.48
13	3.13	1.22	2.67	1.10	11.90	10.90	2.92	1.45	1.95	.67	2.35	.38
14	1.33	-.59	2.25	.11	11.65	9.50	2.59	.97	2.05	.55	2.32	.72
15	1.52	-.75	2.02	.03	9.50	7.20	2.40	1.08	1.93	.48	2.39	.87
16	1.55	-.53	1.96	-.26	7.65	6.03	2.30	.75	2.04	.30	2.82	1.00
17	2.28	-.35	2.46	-.16	7.68	5.83	2.56	1.09	2.02	.13	2.73	.87
18	2.27	.01	2.46	.38	6.05	4.85	2.65	.90	1.97	.07	2.46	.77
19	2.44	.16	2.70	.40	4.85	3.50	2.57	.90	1.89	.11	2.27	.67
20	2.32	.02	2.59	1.10	3.80	2.55	3.30	.87	1.97	-.02	2.43	.45
21	1.82	-.15	2.46	.94	3.39	2.00	3.14	1.30	2.13	.11	2.95	1.12
22	1.42	-.76	2.20	1.03	3.15	1.70	2.65	.86	1.93	.33	2.69	1.38
23	1.62	-.20	2.19	.83	3.15	1.51	2.90	.80	1.91	.06	2.64	.83
24	1.58	-.03	2.29	.80	2.89	1.31	3.61	1.12	2.34	.42	2.65	1.52
25	1.63	.38	2.65	.75	2.59	.45	3.25	1.27	2.43	1.03	2.65	1.15
26	1.71	.16	3.50	1.08	1.86	-.09	2.90	1.10	2.40	1.17	2.64	1.30
27	1.59	-.15	4.09	1.98	2.53	.02	2.60	.90	2.27	1.07	2.78	1.09
28	1.34	-.54	4.10	2.18	3.16	.93	2.24	.70	2.23	.59	3.42	1.52
29	1.62	-.62	3.70	1.80	3.38	1.45	2.09	.64	2.28	.84	3.09	.34
30	2.03	-.19	3.10	1.08	3.24	1.40	2.13	.70	2.32	.92	1.67	.10
31	---	---	3.10	.86	---	---	1.84	.87	2.48	.81	---	---
MONTH	3.13	-.90	---	-.26	11.90	-.09	4.39	.64	---	---	3.42	.10

08072300 BUFFALO BAYOU NEAR KATY, TX

LOCATION.--Lat 29°44'35", long 95°48'24", Fort Bend County, Hydrologic Unit 12040104, on left bank at bridge on county road, 2.5 mi downstream from confluence of Willow Fork and Cane Island Branch of Buffalo Bayou, and 3.1 mi southeast of Katy.

DRAINAGE AREA.--63.3 mi².

PERIOD OF RECORD.--July 1977 to current year.
Water-quality records: Chemical and biochemical analyses: June 1978 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 75.02 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment. Gage located at temporary site 250 ft upstream Jan. 18, 1985 to Sept. 30, 1985; all records adjusted to original site and datum.

REMARKS.--No estimated daily discharges. Records good. Stage discharge relationship affected by seasonal vegetal growths during most years. Several measurements of water temperature were obtained during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 51.2 ft³/s (37,090 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft³/s Sept. 20, 1979 (gage height, 37.54 ft); minimum daily estimated, 0.30 ft³/s Dec. 26-29, 1984 (result of regulation).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 15	1500	*2,150	*35.85	Feb. 26	0900	1,190	32.69
Dec. 23	0600	1,780	34.74	June 11	2200	1,540	34.54

Minimum daily discharge, 0.37 ft ³/s Nov.22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	8.9	19	19	6.7	113	1.3	8.0	25	4.6	7.7	43
2	5.4	6.3	12	15	5.4	50	1.2	4.3	8.2	13	24	20
3	3.0	9.2	8.3	16	4.5	36	1.3	5.5	143	89	11	9.7
4	2.0	91	7.4	16	3.9	25	1.3	94	228	52	6.6	5.7
5	2.2	137	6.1	9.7	3.1	16	3.5	97	160	30	7.1	3.7
6	3.4	62	4.6	13	2.8	9.5	3.1	100	96	20	8.7	3.0
7	2.7	34	3.9	26	2.4	6.2	2.6	146	52	21	9.7	2.5
8	17	20	3.8	10	2.4	4.9	2.2	51	55	20	6.6	2.2
9	26	11	5.5	15	2.0	3.8	2.2	147	182	24	4.8	1.9
10	16	7.7	27	14	2.0	3.3	1.8	71	280	16	4.7	1.6
11	13	4.1	22	9.2	1.9	3.4	2.0	33	531	11	5.8	6.4
12	542	2.5	14	7.8	2.4	2.9	2.0	15	1210	8.9	7.4	11
13	310	1.4	9.7	5.9	2.3	2.5	2.0	8.2	1140	5.2	6.1	8.1
14	146	2.0	14	4.9	2.9	2.1	1.9	4.6	652	3.9	3.4	6.1
15	78	1.2	1230	4.8	26	2.3	1.7	3.3	344	3.3	2.2	6.6
16	48	.69	973	40	13	1.9	1.8	148	212	2.9	2.1	6.5
17	44	.63	387	269	6.1	13	2.0	429	154	2.0	1.9	6.1
18	31	.67	401	311	3.6	7.1	1.7	109	141	3.0	1.5	6.7
19	19	.48	319	135	2.7	4.2	1.8	43	90	4.0	1.3	10
20	15	.47	168	74	33	3.0	2.6	23	52	5.3	1.4	5.0
21	25	.42	104	52	34	2.7	1.9	11	45	15	1.9	4.7
22	64	.37	496	48	19	2.6	4.7	5.2	31	18	2.4	3.5
23	103	.90	1400	40	10	2.5	3.5	3.0	15	8.2	2.2	3.0
24	92	72	597	41	46	2.2	4.6	1.9	11	8.3	2.9	2.2
25	65	395	275	36	99	1.9	5.7	1.4	9.4	8.0	3.8	1.3
26	46	172	163	15	962	1.9	3.8	1.4	7.2	5.4	2.7	1.4
27	28	95	107	17	424	1.9	5.4	1.1	5.6	8.9	3.9	.99
28	15	72	67	14	249	1.8	6.2	1.2	4.4	16	6.4	68
29	13	45	46	11	---	1.8	4.8	58	3.6	11	5.5	118
30	16	29	33	11	---	1.7	6.8	102	4.2	5.5	44	32
31	14	---	25	9.9	---	1.5	---	64	---	7.0	91	---
TOTAL	1807.5	1282.93	6948.3	1310.2	1972.1	332.6	87.4	1790.1	5891.6	450.4	290.7	400.89
MEAN	58.3	42.8	224	42.3	70.4	10.7	2.91	57.7	196	14.5	9.38	13.4
MAX	542	395	1400	311	962	113	6.8	429	1210	89	91	118
MIN	2.0	.37	3.8	4.8	1.9	1.5	1.2	1.1	3.6	2.0	1.3	.99
AC-FT	3590	2540	13780	2600	3910	660	173	3550	11690	893	577	795

CAL YR 1986 TOTAL 20057.61 MEAN 55.0 MAX 1460 MIN .37 AC-FT 39780
WTR YR 1987 TOTAL 22564.53 MEAN 61.8 MAX 1400 MIN .37 AC-FT 44760

08072500 BARKER RESERVOIR NEAR ADDICKS, TX

LOCATION.--Lat 29°46'11", long 95°38'49", Harris County, Hydrologic Unit 12040104, at dam on Buffalo Bayou, 45 ft upstream from reservoir outlet works, 1,160 ft upstream from Addicks-Howell county road, 1.1 mi south of Addicks, and 1.2 mi upstream from South Mayde Creek.

DRAINAGE AREA.--128 mi². Prior to August 1977, 134 mi². Basin boundary to change due to relocation of drainage ditches. During extreme floods, basin may receive and (or) lose runoff due to basin interchange.

PERIOD OF RECORD.--August 1945 to current year. On October 1973, the upper gage was converted to a flood-hydrograph partial-record station.
Water-quality records.--Chemical and biochemical analyses: June 1978 to September 1981.

GAGE.--Water-stage recorders. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence (since 1973). Prior to Oct 1, 1980, 0.33 ft below National Geodetic Vertical Datum of 1929, unadjusted for land-surface subsidence.

REMARKS.--The reservoir is formed by a rolled earthfill dam 72,900 ft long. The dam was completed Feb. 3, 1946, but was used as early as the spring of 1945 for flood control. The reservoir is operated for flood protection for the city of Houston. The controlled outlet works consist of five concrete conduits, 9 x 7 ft wide, each controlled by a vertical slide gate. U.S. Army Corps of Engineers 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	112.5	-
Ground elevation at ends of dam	106.0	209,000
Design flood	105.4	199,000
Crest of spillway (invert)	73.2	0

COOPERATION.--The capacity table, furnished by the U.S. Army Corps of Engineers, is based on extensive releveling survey made in 1974 using National Geodetic Vertical Datum, 1973 adjustment as base.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,200 acre-ft May 15, 1968 (gage height, 94.60 ft, former datum and former capacity table); minimum, reservoir was dry at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,660 acre-ft June 18 at 1200 hours to June 19 at 0900 hours (elevation, 91.34 ft); minimum, 0.09 acre-ft Feb. 9-12 (elevation, 73.55 ft).

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

73.2	0	78.4	14	81.6	193	86.0	3,980
75.8	1	79.2	22	82.2	331	87.0	6,000
76.3	2	79.8	32	83.0	671	88.5	10,100
76.9	4	80.4	49	84.0	1,370	90.2	16,520
77.6	8	81.0	100	85.0	2,430	91.4	23,060

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.19	6000.0	17850.0	.15	7100.00	.12	.12	1860	10390.0	.13	.50
2	.15	.28	5280.0	17030.0	.14	7350.00	.11	.13	1640	9820.0	.16	.38
3	.15	.24	4650.0	16240.0	.13	6970.00	.11	.13	1480	9540.0	.18	.22
4	.14	3.50	3890.0	15490.0	.11	4810.00	.11	.38	1490	8860.0	.16	.18
5	.14	128.00	3110.0	14780.0	.11	1950.00	.11	1.10	1520	8120.0	.14	.16
6	.19	347.00	2360.0	14050.0	.10	.50	.14	.87	1300	7040.0	.14	.15
7	.20	331.00	1640.0	13320.0	.10	.18	.13	4.60	1010	6480.0	.14	.14
8	.23	81.20	905.0	12610.0	.10	.15	.12	10.00	694	6820.0	.15	.14
9	.36	.32	201.0	12250.0	.09	.16	.12	29.60	1650	7330.0	.16	.14
10	.27	.23	.2	11580.0	.09	.14	.12	20.50	4100	7200.0	.16	.13
11	.22	.20	.3	10820.0	.09	.15	.12	.48	6750	6460.0	.15	.14
12	211.00	.18	.2	10070.0	.09	.13	.12	.29	11200	5700.0	.14	.18
13	2560.00	.17	.2	9360.0	.10	.12	.11	.22	15410	4590.0	.14	.17
14	4210.00	.16	.3	8810.0	.10	.11	.11	.19	18340	3440.0	.14	.16
15	4570.00	.16	640.0	7700.0	.43	.11	.11	.16	19720	2560.0	.14	.15
16	4330.00	.15	4610.0	7020.0	.25	.11	.11	.26	21140	2150.0	.13	.24
17	3870.00	.15	6940.0	7730.0	.20	.27	.11	12.30	22080	1760.0	.13	.18
18	3360.00	.14	9180.0	8430.0	.15	.19	.11	41.20	22660	1170.0	.13	.19
19	2710.00	.13	10620.0	8980.0	.13	.14	.11	38.10	22280	390.0	.13	.21
20	1700.00	.13	11300.0	8980.0	2.40	.15	.11	.85	21580	e26.7	.13	.19
21	784.00	.13	11620.0	8720.0	.50	.13	.12	.27	20710	e1.3	.13	.17
22	575.00	.13	14370.0	7460.0	.35	.12	.11	.21	19670	.4	.13	.15
23	983.00	.57	18440.0	5840.0	.28	.12	.11	.20	18390	.3	.13	.13
24	1310.00	221.00	20710.0	4330.0	3.60	.13	.11	.16	17120	.3	.13	.13
25	1350.00	1590.00	21450.0	3320.0	15.30	.13	.11	.14	15930	.3	.13	.13
26	1260.00	3420.00	21580.0	1280.0	1730.00	.13	.13	.14	14700	.2	.13	.13
27	470.00	4710.00	21330.0	.2	4810.00	.13	.12	.14	13510	.2	.13	.13
28	4.50	5540.00	20650.0	.3	6360.00	.12	.12	.14	12290	4.7	.14	.39
29	.22	6000.00	20100.0	.2	---	.12	.12	52.10	11130	.2	.15	.38
30	.21	6230.00	19460.0	.2	---	.12	.12	932.00	10790	.1	.21	.32
31	.19	---	18590.0	.2	---	.12	---	1670.00	---	.1	1.00	---
MAX	4570	6230	21580	17850	6360	7350	.14	1670	22660	10390	1.0	.50
MIN	.14	.13	.20	.20	.09	.11	.11	.12	694	.10	.13	.13

CAL YR 1986 MAX 21580 MIN .10
WTR YR 1987 MAX 22660 MIN .09

e Estimated.

08072730 BEAR CREEK NEAR BARKER, TX

LOCATION.--Lat 29°49'50", long 95°41'12", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Clay Road, 2.5 mi west of State Highway 6, and 4.1 mi upstream from mouth of Langham Creek.

DRAINAGE AREA.--19.8 mi².

PERIOD OF RECORD.--July 1977 to current year. Gage at temporary location 1,100 ft downstream Mar. 1, 1984, to Mar. 12, 1985.
Water-quality records.--Chemical and biochemical analyses: June 1978 to September 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment. Mar. 1, 1984 to Mar. 12, 1985, at site 1,100 ft downstream, same datum.

REMARKS.--Records fair except those below 2.0 ft³/s, those for period April through September, and those for estimated daily discharges, which are poor. Channel was rectified in 1981 and 1987 water years. Considerable diversions and return of irrigation water from area above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 21.5 ft³/s (15,580 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,060 ft³/s Aug. 31, 1981 (gage height, 15.86 ft); maximum gage height, 16.72 ft Sept. 20, 1979, occurred prior to channel rectifications; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 15	2200	449	11.40	Dec. 23	0700	*451	*11.41

Minimum, no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	e1.5	8.1	4.7	e.60	60	e.01	2.1	13	e.40	e.20	e10
2	.23	e1.0	5.0	3.4	e.40	30	e.04	.55	18	e20	e.10	e3.0
3	.14	e.70	3.3	3.7	e.30	14	e.02	.05	86	e25	e.05	e1.5
4	.13	32	2.5	4.0	e.25	7.2	e.02	50	95	e12	e.00	e.80
5	9.2	35	1.3	2.1	e.20	4.0	e.01	44	47	e7.0	.00	e.50
6	3.0	21	.69	2.1	.16	2.6	.06	45	25	e4.0	e5.0	e.30
7	.26	e9.0	.67	.70	.17	1.8	e.02	35	6.8	e10	e2.5	e.20
8	19	e5.0	.60	.70	.14	1.1	e.02	27	15	e30	e1.5	e.10
9	13	e3.0	1.3	3.0	.10	.89	e.02	33	120	e70	e5.0	e.05
10	3.0	e1.5	1.7	1.4	.09	1.4	e.02	39	154	e20	e2.5	e.00
11	7.3	e.80	2.0	.76	.10	.99	e.01	10	166	e10	e1.0	e.00
12	e173	e.40	.64	.53	.08	.94	e.01	4.9	225	e5.0	e.50	e.00
13	e236	e.25	.32	.53	.08	.53	e.02	1.2	213	e3.3	e.25	e.00
14	77	e.20	4.0	.64	.08	.32	e.01	.32	150	e2.0	e.15	.00
15	38	e.40	233	.53	14	.36	e.01	.06	110	e1.3	e.05	e8.0
16	23	.19	340	19	1.6	.36	e.01	6.3	e110	e.80	e.00	e2.0
17	17	e.12	159	58	.69	13	e.01	14	e104	e.60	e.00	e1.0
18	21	e.10	126	100	.18	4.0	e.01	1.5	e50	e.40	e.00	e.50
19	13	e.10	120	56	.19	.98	e.01	1.5	e22	e.25	e.00	e.30
20	10	e.05	76	25	55	.54	e.01	.85	e14	e1.0	e.00	e.20
21	9.4	e.10	44	14	11	.32	e.01	1.2	e9.0	e5.0	e.00	e.10
22	14	e.05	149	11	3.1	.13	e.01	2.6	e6.5	e4.0	e.00	e.05
23	12	e9.5	405	9.2	1.6	.09	e.01	1.4	e4.5	e2.0	e.00	e.00
24	12	35	230	6.9	16	.10	e.02	.26	e3.0	e15	e.00	e.00
25	9.8	150	124	6.0	35	.09	e.03	e.05	e2.0	e20	e.00	e.00
26	7.9	111	73	6.1	180	.03	e.02	e.05	e1.5	e8.0	e.00	e.00
27	4.4	52	42	17	150	.03	e.01	.03	e1.0	e3.0	e.00	e.00
28	7.8	31	24	29	105	e.02	.26	.67	e.75	e1.5	e.00	e50
29	8.2	17	16	7.3	---	e.02	.08	39	e.60	e.80	e.00	e20
30	5.1	11	10	e3.0	---	e.02	e.08	46	e.50	e.50	e12	e10
31	2.5	---	7.2	e1.0	---	e.02	---	21	---	e.30	e20	---
TOTAL	756.48	528.96	2210.32	397.29	576.11	145.88	.88	428.59	1773.15	283.15	50.80	108.60
MEAN	24.4	17.6	71.3	12.8	20.6	4.71	.03	13.8	59.1	9.13	1.64	3.62
MAX	236	150	405	100	180	60	.26	50	225	70	20	50
MIN	.12	.05	.32	.53	.08	.02	.01	.03	.50	.25	.00	.00
AC-FT	1500	1050	4380	788	1140	289	1.7	850	3520	562	101	215

CAL YR 1986 TOTAL 7970.54 MEAN 21.8 MAX 434 MIN .01 AC-FT 15810
WTR YR 1987 TOTAL 7260.16 MEAN 19.9 MAX 405 MIN .00 AC-FT 14400

e Estimated.

08073000 ADDICKS RESERVOIR NEAR ADDICKS, TX

LOCATION.--Lat 29°47'28", long 95°37'24", Harris County, Hydrologic Unit 12040104, at dam on South Mayde Creek, 65 ft upstream from reservoir outlet works, 2,700 ft upstream from U.S. Highway 90, 1.2 mi east of Addicks, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--129 mi². Prior to Aug. 1, 1977, 133 mi². Basin boundary change to relocation of drainage ditches. During extreme floods, basin may receive and (or) lose runoff due to basin interchange.

PERIOD OF RECORD.--June 1948 to current year. In October 1973, the upper gages were converted to flood-hydrograph partial-record stations.
Water-quality records.--Chemical and biochemical analyses: June 1978 to September 1981.

GAGE.--Water-stage recorders. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence (since 1973). Prior to Oct. 1, 1980 datum of gage was National Geodetic Vertical Datum of 1929, unadjusted for land-surface subsidence that occurred prior to that date.

REMARKS.--The reservoir is formed by a rolled earthfill dam 61,166 ft long. The dam was completed in December 1948. The reservoir is operated for flood protection for the city of Houston. The outlet works consist of five concrete conduits 8 x 6 ft wide, each controlled by a vertical slide gate. Runoff in excess of maximum design capacity will be discharged around both ends of dam. 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	121.6	-
Design flood	112.7	212,500
Ground elevation at ends of dam	112.0	200,800
Crest of spillway (invert)	71.0	0

COOPERATION.--The capacity table, furnished by the U.S. Army Corps of Engineers, was based on extensive releveling survey in 1974, using National Geodetic Vertical Datum, 1973 adjustment.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 37,460 acre-ft May 15, 1968 (elevation, 100.02 ft, former datum and former capacity table); minimum, reservoir was dry at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1935 reached a stage of 89.9 ft, former datum, at bridge on U.S. Highway 90, 2,700 ft downstream from gage, from information by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,470 acre-ft June 18 at 1200 hours (elevation, 94.87 ft); minimum, 0.34 acre-ft on many days (elevation, 71.65).

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

71.1	0	77.2	54	83.0	598	92.0	9,940
73.6	2	78.0	85	84.5	1,030	94.0	16,680
75.1	8	79.0	134	86.0	1,680	95.0	21,080
75.7	16	80.0	202	88.0	3,190		
76.4	30	81.5	351	90.0	5,710		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.38	4060.0	12800.0	.46	3670.00	.38	.34	676.0	7410.00	.44	.68
2	.40	1.00	3170.0	12060.0	.46	1590.00	.37	.40	206.0	7130.00	.44	.49
3	.39	.47	2080.0	11370.0	.44	1.50	.38	.38	90.5	7130.00	.44	.44
4	.38	143.00	1040.0	10640.0	.45	1.00	.37	80.60	504.0	6560.00	.43	.43
5	.44	592.00	334.0	9650.0	.45	.69	.38	158.00	498.0	5790.00	.42	.41
6	1.00	475.00	21.2	8540.0	.45	.50	.89	78.80	118.0	4790.00	.45	.41
7	.48	191.00	.6	7390.0	.44	.44	.48	92.30	1.0	4130.00	.43	.41
8	2.30	.91	.6	6380.0	.44	.41	.38	49.70	32.4	4630.00	.48	.42
9	43.40	.69	.6	5430.0	.44	.39	.37	58.40	1070.0	5640.00	.51	.41
10	.96	.56	.6	4430.0	.44	.38	.38	1.10	4390.0	5810.00	.45	.42
11	.59	.51	.6	3350.0	.44	.50	.37	1.00	6920.0	5220.00	.43	.48
12	838.00	.48	.6	2240.0	.44	.41	.39	.46	11740.0	4480.00	.41	.44
13	4280.00	.45	.5	1450.0	.44	.38	.39	.40	15720.0	3730.00	.41	.48
14	5140.00	.44	.6	1480.0	.44	.36	.38	.36	18320.0	2960.00	.40	.44
15	4650.00	.41	987.0	1310.0	25.10	.36	.34	.35	19410.0	2400.00	.40	.44
16	3890.00	.43	4880.0	1420.0	.69	.36	.35	.50	19550.0	1790.00	.39	.43
17	2920.00	.45	5980.0	2160.0	.49	3.00	.34	.73	20330.0	795.00	.39	1.00
18	1890.00	.43	7150.0	3470.0	.46	.74	.34	.39	20330.0	181.00	.39	.48
19	912.00	.46	8020.0	3940.0	.45	.47	.35	.35	19820.0	.52	.39	.47
20	209.00	.45	8090.0	3970.0	142.00	.43	.34	.43	19150.0	.47	.39	.44
21	e.89	.44	7790.0	3750.0	130.00	.38	.36	.38	18360.0	.59	.39	.43
22	132.00	.43	9540.0	2860.0	1.30	.38	.34	.36	17350.0	.42	.41	.42
23	454.00	20.20	14290.0	1470.0	.90	.40	.35	.38	16080.0	.52	.41	.41
24	464.00	506.00	16480.0	498.0	59.10	.38	.35	.39	14730.0	13.40	.41	.41
25	205.00	1950.00	16810.0	129.0	91.40	.36	.41	.38	13410.0	29.50	.41	.41
26	1.80	3030.00	16680.0	.7	2400.00	.37	.38	.38	12120.0	.80	.41	.41
27	e.69	3470.00	16240.0	.6	4720.00	.36	.41	.38	10810.0	.52	.41	.41
28	e.59	4020.00	15680.0	1.1	4990.00	.38	.34	.37	9540.0	.41	.41	54.70
29	e.50	4250.00	14990.0	.5	---	.37	16.60	262.00	8330.0	.38	.42	.82
30	e.45	4370.00	14250.0	.5	---	.38	.38	869.00	7890.0	.44	.44	.46
31	.41	---	13510.0	.5	---	.38	---	1070.00	---	.44	1.20	---
MAX	5140	4370	16810	12800	4990	3670	16	1070	20330	7410	1.2	54
MIN	.38	.38	.50	.50	.44	.36	.34	.34	1.0	.38	.39	.41

CAL YR 1986 MAX 16810 MIN .36
WTR YR 1987 MAX 20330 MIN .34

e Estimated.

SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX

LOCATION.--Lat 29°45'42", long 95°36'20", Harris County, Hydrologic Unit 12040104, near right bank at bridge on Dairy-Ashford Road over rectified channel, 1.8 mi downstream from South Mayde Creek, and 2.6 mi southeast of Addicks.

DRAINAGE AREA.--293 mi², unadjusted for basin boundary changes.

PERIOD OF RECORD.--August 1945 to current year.
Water-quality records.--Chemical analyses: October 1962 to March 1963. Chemical, biochemical, and pesticide analyses: August 1970 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.40 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment; records unadjusted to land-surface subsidence. Prior to Feb. 2, 1948, water-stage recorder at bridge on natural channel 1,200 ft to right at same datum. Feb. 2 to May 21, 1948, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges include backwater affected days. Records good except those for estimated daily discharges, which are poor. Flood flow regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) 3.2 and 3.0 mi upstream, respectively (total capacity 315,900 acre-ft). Extreme low flow is sustained by drainage from irrigated lands, and minor sewage effluent.

AVERAGE DISCHARGE.--42 years, 216 ft³/s (156,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s Aug. 29, 1945 (gage height, 81.23 ft), former site; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 85.6 ft in December 1935, adjusted to former site from floodmark 0.5 mi downstream, on basis of slope of flood of Aug. 29, 1945, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft³/s June 9 at 1100 hours (gage height, 64.92 ft); minimum daily, 19 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	47	348	804	55	1160	27	25	265	447	29	144
2	31	81	783	795	47	1200	28	25	438	642	49	77
3	31	101	859	803	42	1280	27	28	435	435	40	45
4	29	250	820	790	38	1120	31	144	458	773	32	33
5	34	547	716	869	36	1290	32	366	556	758	28	27
6	83	581	543	968	34	1100	41	433	709	e850	30	25
7	54	550	354	962	33	173	42	395	498	e850	28	25
8	62	445	311	943	31	80	28	452	447	e120	30	25
9	233	217	298	993	33	58	25	526	1090	e400	34	25
10	170	69	239	928	30	48	24	403	345	327	33	53
11	69	50	63	901	30	52	29	268	e550	756	28	27
12	451	44	65	879	31	53	30	127	e860	749	26	63
13	253	37	55	756	32	43	27	68	581	793	25	30
14	396	35	70	306	33	39	28	50	323	852	23	29
15	856	35	e650	505	275	48	25	40	530	686	23	25
16	907	35	439	884	e247	41	28	144	1050	378	23	25
17	876	33	775	e480	e75	121	26	205	666	622	23	69
18	838	30	587	251	e34	143	26	255	801	560	21	45
19	795	30	434	451	e31	59	27	261	889	457	21	35
20	787	31	673	482	e450	42	27	230	871	275	20	33
21	563	30	639	573	e450	35	27	94	859	140	20	28
22	333	29	e780	942	e400	31	28	57	900	87	21	25
23	81	e540	e710	1510	e140	32	27	73	1180	111	25	23
24	186	e480	651	1290	314	31	29	43	1200	368	27	21
25	401	e310	1010	785	e500	28	30	33	1170	327	28	22
26	325	431	933	862	e770	27	35	30	1160	132	29	20
27	305	487	886	847	301	27	35	27	1150	51	28	19
28	354	75	853	134	560	27	34	25	1140	33	29	e190
29	96	52	832	94	---	28	31	265	1110	51	38	159
30	56	43	824	59	---	28	31	58	846	35	55	59
31	51	---	813	54	---	27	---	50	---	31	143	---
TOTAL	9740	5725	18013	21900	5052	8471	885	5200	23077	13096	1009	1426
MEAN	314	191	581	706	180	273	29.5	168	769	422	32.5	47.5
MAX	907	581	1010	1510	770	1290	42	526	1200	852	143	190
MIN	29	29	55	54	30	27	24	25	265	31	20	19
AC-FT	19320	11360	35730	43440	10020	16800	1760	10310	45770	25980	2000	2830

CAL YR 1986 TOTAL 71117 MEAN 195 MAX 1120 MIN 20 AC-FT 141100
WTR YR 1987 TOTAL 113594 MEAN 311 MAX 1510 MIN 19 AC-FT 225300

e Estimated.

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX

LOCATION.--Lat 29°45'43", long 95°33'27", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on West Belt Drive in west Houston, 100 ft downstream from Rummel Creek, 3.5 mi downstream from station 08073500, and 3.7 mi upstream from station 08073700.

DRAINAGE AREA.--307 mi², unadjusted for basin boundary changes.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorders and crest-stage gage. Datum of gage is 0.67 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--No estimated daily discharges. Records fair. Stage discharge relationship affected by seasonal vegetal growth during most years. High water flow is a combination of regulated flow from Barker and Addicks Reservoirs (08072500 and 08073000, located 10.1 and 10.3 mi upstream, respectively) and runoff from highly urbanized area below these reservoirs. Low flow is mostly sustained by sewage effluent. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years, 316 ft³/s (228,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,350 ft³/s Aug. 31, 1981 (gage height, 64.58 ft); minimum daily, 25 ft³/s Nov. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,590 ft³/s Nov. 23 at 1700 hours (gage height, 54.99 ft); minimum daily, 39 ft³/s Apr. 15, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	101	313	886	112	1080	56	54	239	421	75	219
2	69	170	778	870	85	1100	53	52	454	783	104	158
3	69	170	888	900	77	1210	50	60	484	416	104	113
4	68	409	850	878	67	1050	52	171	467	782	84	86
5	79	584	770	928	61	1230	65	355	537	762	85	71
6	144	609	587	1040	65	1080	97	481	691	872	90	64
7	122	585	411	1030	64	261	79	398	536	876	79	64
8	140	496	352	1030	62	142	58	498	496	154	84	65
9	284	288	345	1130	55	105	54	523	1310	471	96	62
10	248	134	305	1020	52	83	52	427	584	314	93	127
11	172	110	125	992	53	101	56	289	998	747	83	85
12	754	95	121	972	54	90	62	167	1590	742	76	133
13	519	82	100	899	54	72	57	101	829	766	74	88
14	404	76	108	426	54	62	42	76	370	824	72	83
15	862	73	1190	522	255	78	39	67	471	730	68	72
16	925	73	471	1100	225	73	43	285	1070	385	70	82
17	899	69	819	921	110	171	44	240	658	637	68	144
18	862	65	815	304	72	194	42	281	930	581	63	129
19	819	66	449	510	65	100	41	282	900	496	61	112
20	801	66	728	517	434	68	41	260	882	334	59	95
21	645	64	677	621	439	58	40	135	868	345	61	83
22	582	62	1290	879	331	55	39	94	880	158	58	73
23	211	978	1220	1530	170	93	41	118	1160	268	65	66
24	226	997	652	1410	388	64	41	73	1200	510	68	63
25	449	615	1070	854	655	53	42	59	1160	371	65	62
26	385	425	996	877	1340	53	43	54	1160	216	67	60
27	348	640	946	966	343	51	45	53	1140	127	66	60
28	407	165	914	175	481	51	74	50	1160	93	70	501
29	163	120	899	145	---	55	51	445	1140	107	111	336
30	118	98	892	106	---	56	62	112	1040	98	142	170
31	108	---	905	88	---	54	---	92	---	84	221	---
TOTAL	11958	8485	20986	24526	6223	8993	1561	6352	25404	14470	2582	3526
MEAN	386	283	677	791	222	290	52.0	205	847	467	83.3	118
MAX	925	997	1290	1530	1340	1230	97	523	1590	876	221	501
MIN	68	62	100	88	52	51	39	50	239	84	58	60
AC-FT	23720	16830	41630	48650	12340	17840	3100	12600	50390	28700	5120	6990

CAL YR 1986 TOTAL 94103 MEAN 258 MAX 1310 MIN 41 AC-FT 186700
WTR YR 1987 TOTAL 135066 MEAN 370 MAX 1590 MIN 39 AC-FT 267900

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: June 1978 to current year. Chemical and biochemical analyses: June 1978 to August 1986. Pesticide analyses: June 1978 to March 1983. Sediment analyses: May 1979 to August 1986.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to September 1981.
WATER TEMPERATURES: June 1979 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 922 microsiemens June 25, 1979; minimum daily, 78 microsiemens Aug. 31, 1981.
WATER TEMPERATURE: Maximum daily, 30.5°C July 1, 1978; minimum daily, 1.0°C Nov. 27, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV 05...	0935	570	177	6.80	20.5	220	320	8.6	95	1.8	45
FEB 10...	0914	51	852	7.90	16.5	8	15	9.5	96	0.4	--
MAY 18...	1106	287	249	6.90	24.5	110	29	6.8	81	5.8	--
AUG 18...	1034	65	865	7.70	29.0	13	8.0	6.2	81	5.0	160

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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...	0	14	2.4	17	1	4.0	49	14	14	0.20	7.1
FEB 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	0	44	11	120	4	6.8	212	33	110	0.60	23

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...	100	360	42	0.460	0.140	0.600	0.330	1.1	1.4	0.570	12
FEB 10...	--	31	6	3.32	0.080	3.40	5.80	12	18	4.70	10
MAY 18...	--	159	15	0.700	0.100	0.800	0.920	2.0	2.9	1.30	10
AUG 18...	480	20	2	2.57	0.230	2.80	2.00	1.4	3.4	--	5.9

08073700 BUFFALO BAYOU AT PINEY POINT, TX

LOCATION.--Lat 29°44'48", long 95°31'24", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Piney Point Road, village of Piney Point, 3.7 mi downstream from Rummel Creek, 7.2 mi downstream from gage near Addicks (station 08073500), and 12.5 mi upstream from gage at Houston (station 08074000).

DRAINAGE AREA.--317 mi².

PERIOD OF RECORD.--October 1963 to September 1976 and October 1984 to current year. October 1976 to September 30, 1984 (gage heights only).
Water-quality records.--Chemical, biochemical and pesticide analyses: October 1970 to September, 1978.

GAGE.--Water-stage recorder. Datum of gage is 1.35 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records good except those for October through January, which are fair and those for estimated daily discharges, which are poor. High water flow is a combination of regulated flow from Barker and Addicks Reservoirs (stations 08072500 and 08073000, located 14.0 and 13.8 mi upstream from gage respectively) and runoff from highly urbanized area below these reservoirs. Low flow is mostly sustained by sewage effluent. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years (water years 1964-76, 1985-87), 279 ft³/s (202,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (estimated), 5,700 ft³/s Aug. 31, 1981 (gage height, 57.20 ft, from floodmark); minimum daily, 6.0 ft³/s Dec. 6, 7, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,510 ft³/s June 11 at 2100 hours (gage height, 48.50 ft); minimum daily, 50 ft³/s Apr. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	114	291	916	133	1100	64	73	208	398	81	218
2	85	204	780	879	109	1120	64	68	460	843	102	164
3	79	190	899	900	83	1230	63	73	490	410	108	118
4	78	501	863	870	76	1100	63	186	476	803	90	90
5	81	687	784	905	72	1260	75	369	519	774	86	79
6	138	686	613	1030	70	1140	113	532	727	850	96	75
7	126	673	474	1010	69	357	89	449	579	947	83	74
8	154	612	403	1000	69	133	72	530	514	183	85	75
9	249	362	407	1110	69	102	67	539	1390	740	94	73
10	208	164	367	998	66	86	64	476	761	289	94	149
11	211	140	173	974	64	100	64	292	1000	751	87	125
12	871	127	133	956	67	93	72	176	1890	756	81	134
13	673	118	116	905	66	82	67	106	1010	768	79	96
14	371	107	148	455	67	73	65	84	371	832	77	88
15	885	99	1380	462	252	83	e60	75	401	782	75	79
16	958	98	556	1100	248	82	e56	395	1050	368	77	107
17	934	93	833	1080	119	178	e57	257	652	648	74	138
18	902	90	918	355	91	197	e55	262	989	588	74	139
19	860	90	460	550	85	117	e53	269	897	516	71	126
20	831	90	780	552	425	88	e51	255	878	353	70	97
21	724	91	739	658	421	79	e50	146	864	476	70	87
22	711	87	1450	838	332	73	e50	93	862	179	70	79
23	277	979	1490	1470	165	108	e51	121	1110	278	73	74
24	233	1240	654	1410	363	75	e52	80	1170	594	75	72
25	467	779	1090	891	586	68	e52	69	1140	384	72	71
26	417	422	968	864	1500	67	e52	64	1130	234	73	71
27	349	731	906	1000	361	67	e52	63	1120	132	73	71
28	454	212	889	230	424	67	83	60	1110	99	73	521
29	192	159	867	159	---	68	70	526	1100	100	107	340
30	128	126	841	115	---	70	72	151	1110	110	147	172
31	120	---	895	111	---	65	---	94	---	88	233	---
TOTAL	12855	10071	22167	24753	6452	9528	1918	6933	25978	15273	2750	3802
MEAN	415	336	715	798	230	307	63.9	224	866	493	88.7	127
MAX	958	1240	1490	1470	1500	1260	113	539	1890	947	233	521
MIN	78	87	116	111	64	65	50	60	208	88	70	71
AC-FT	25500	19980	43970	49100	12800	18900	3800	13750	51530	30290	5450	7540

CAL YR 1986 TOTAL 98896 MEAN 271 MAX 1490 MIN 51 AC-FT 196200
WTR YR 1987 TOTAL 142480 MEAN 390 MAX 1890 MIN 50 AC-FT 282600

e Estimated.

08074000 BUFFALO BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°45'36", long 95°24'30", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Shepherd Drive in Houston and 0.8 mi upstream from Waugh Drive.

DRAINAGE AREA.--358 mi², unadjusted for basin boundary changes.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to September 1957, October 1957 to December 1961 (high-water records and discharge measurements), January 1962 to September 1975, October 1975 to current year (high-water records and discharge measurements).

REVISED RECORDS.--WSP 1732: Drainage area (former site).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.36 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment; records unadjusted for land-surface subsidence. Prior to June 19, 1936, nonrecording gage, and June 19, 1936 to Jan. 16, 1962, water-stage recorder at site 0.8 mi downstream at 4.08-foot lower datum. Jan. 17, 1962 to Sept. 30, 1973, auxiliary water-stage recorder 0.8 mi downstream. Water-stage recorder at Main Street (station 08074600) used as auxiliary gage after Sept. 30, 1973.

REMARKS.--No estimated daily discharges. Records fair. Although floodflows are regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) located 26.3 and 26.8 mi upstream, respectively, flood peaks from the urbanized areas below these reservoirs are often independent of the regulation. Discharge is computed using a stage-fall-discharge relationship for all storms that produce peak discharges above 1,500 ft³/s. Discharges below 1,000 ft³/s are computed or estimated following designated storm periods only. Low flow is mostly sustained by sewage effluent from Houston suburbs. Gage heights are affected by tides, backwater from Whiteoak Bayou, and other streams. Gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years (water years 1936-44) unregulated, 272 ft³/s, 197,100 acre-ft/yr; 26 years (water years 1944-57, 1962-75) regulated, 274 ft³/s, 198,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s Aug. 30, 1945 (gage height, 28.82 ft), at site 0.8 mi downstream at present datum; minimum daily, 1.3 ft³/s May 24, 1939, Nov. 5, 1950, occurred prior to urban development and accompanying sewage effluent releases.

EXTREMES OUTSIDE PERIOD OF RECORD.--All flood data at site 0.8 mi downstream at present datum. Maximum gage height since at least 1835, 49.0 ft Dec. 9, 1935 (discharge, 40,000 ft³/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (discharge, 19,000 ft³/s), at bridge on Capitol Avenue, affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,270 ft³/s July 9 at 1100 hours (gage height, 19.71 ft); minimum discharge not determined (affected by tides).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1090	---	---	---	810	---	---
2	---	---	---	---	---	1240	---	---	---	1270	---	---
3	---	---	---	---	---	1390	---	---	---	523	---	---
4	---	1010	---	---	---	1280	---	---	---	---	---	---
5	---	940	---	---	---	1380	---	---	---	---	---	---
6	---	---	---	---	---	1360	---	---	---	---	---	---
7	---	---	---	---	---	730	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	1580	2740	---	---
10	---	---	---	---	---	---	---	---	1640	462	---	---
11	---	---	---	---	---	---	---	---	1620	---	---	---
12	1380	---	---	---	---	---	---	---	4000	---	---	---
13	1310	---	---	---	---	---	---	---	2310	---	---	---
14	530	---	150	---	---	---	---	---	538	---	---	---
15	---	---	2600	350	---	---	---	---	---	---	---	---
16	---	---	1070	1290	---	---	---	475	1080	---	---	---
17	---	---	850	1950	---	---	---	620	809	---	---	---
18	---	---	1440	710	---	---	---	---	1470	---	---	---
19	---	---	530	---	---	---	---	---	---	---	---	---
20	---	---	770	---	---	---	---	---	---	---	---	---
21	---	---	730	---	---	---	---	---	---	---	---	---
22	1070	---	2360	650	---	---	---	---	---	---	---	---
23	460	1390	3360	1360	---	---	---	---	---	---	---	---
24	---	2840	710	1540	---	---	---	---	---	---	---	---
25	---	1560	1080	1010	710	---	---	---	---	---	---	---
26	---	380	1070	---	3170	---	---	---	---	---	---	---
27	---	---	1000	---	680	---	---	---	---	---	---	---
28	---	---	940	---	420	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	524	---	---	---	---
30	---	---	---	---	---	---	---	489	1610	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

WTR YR 1987 TOTAL - MEAN - MAX - MIN - AC-FT

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°51'31", long 95°29'09", Harris County, Hydrologic Unit 12040104, over a 60-inch storm sewer in the center median at Bingle Road and 3,000 ft north of the station Cole Creek at Deihl Road, Houston (08074150).

DRAINAGE AREA.--0.21 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1980 to current year.

GAGE.--Flood-hydrograph, rainfall recorder, and crest-stage gage. Datum of gage is arbitrary.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the reports "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, pending better rating definition; maximum gage height, 13.97 ft Aug. 31, 1981, recorded pressure head in the access pipe and exceeds gage height for full pipe flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base gage height of 11.00 ft and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 23	1400	(a)	*b12.41	No other peak greater than base gage-height.			

a Discharge not determined; pending better rating definition.
b Recorded pressure head; gage height for full pipe flow exceeded.

Minimum daily discharge not determined.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1980 to September 1987 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT											
21-22	2300	3.1	116	--	--	10	1.8	--	--	3.0	--
FEB											
15-15	0200	3.7	120	--	--	23	18	--	--	--	--
MAY											
07-07	1720	8.5	103	--	--	35	5.0	--	--	4.7	--
SEP											
10-10	1800	5.1	99	--	--	13	12	--	--	--	--
25...	0900	0.14	1960	7.10	26.0	8	2.7	2.1	26	7.6	580

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
21-22	--	--	--	--	--	--	--	--	--	--	--
FEB											
15-15	--	42	2	15	1.1	7.0	0.5	1.8	40	10	7.1
MAY											
07-07	--	44	3	16	0.86	4.1	0.3	1.4	41	10	2.3
SEP											
10-10	--	--	--	--	--	--	--	--	--	--	--
25...	150	--	--	--	--	--	--	--	--	--	--

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)	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)
OCT											
21-22	--	--	--	4	1	0.270	0.030	0.300	0.030	0.67	0.70
FEB											
15-15	<0.10	2.9	69	54	14	0.380	0.020	0.400	0.220	2.2	2.4
MAY											
07-07	<0.10	3.2	62	46	36	0.640	0.060	0.700	0.080	1.3	1.4
SEP											
10-10	--	--	--	21	7	0.630	0.070	0.700	0.140	0.76	0.90
25...	--	--	--	5	<1	--	0.010	<0.100	0.010	0.29	0.30

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX--Continued
(Flood-hydrograph partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
OCT											
21-22	0.030	6.7	--	--	--	--	--	--	--	--	--
FEB											
15-15	0.030	9.3	--	--	--	--	--	--	--	--	--
MAY											
07-07	0.100	12	--	--	--	--	--	--	--	--	--
SEP											
10-10	0.100	16	--	--	--	--	--	--	--	--	--
25...	0.060	8.9	2	480	<1	<10	3	18	5	130	<0.1

DATE	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
OCT											
21-22	--	--	--	--	--	--	--	--	--	--	--
FEB											
15-15	--	--	--	--	--	--	--	--	--	--	--
MAY											
07-07	--	--	--	--	--	--	--	--	--	--	--
SEP											
10-10	--	--	--	--	--	--	--	--	--	--	--
25...	<1	1	31	<0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°48'15", long 95°26'04", Harris County, Hydrologic Unit 12040104, over a 54-inch storm sewer 30 ft north of the intersection of Lazybrook Street and West T. C. Jester Boulevard, Houston.

DRAINAGE AREA.--0.13 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Flood-hydrograph and rainfall recorder. Datum of gage is 0.10 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Peak discharge records good. Additional storm rainfall-runoff data for this site for water years 1979-84 can be obtained from the reports "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 119 ft³/s represents full storm sewer discharge and usually occurs many times annually (gage height, 58.09 ft).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 85 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 23	1420	*56	*56.88	No other peak greater than base discharge.			

Minimum discharge not determined.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: March 1980 to September 1987 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV 23-23	1230	6.0	63	--	--	95	51	--	--	7.0	--
JUN 06-06	1800	2.1	291	--	--	34	--	--	--	7.3	--
SEP 10-10	1800	1.5	216	--	--	28	17	--	--	--	--
25...	1014	0.04	483	7.80	24.0	27	1.2	4.7	56	5.5	970

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 23-23	--	--	--	--	--	--	--	--	--	--	--
JUN 06-06	--	52	1	18	1.8	34	2	3.4	51	19	47
SEP 10-10	--	--	--	--	--	--	--	--	--	--	--
25...	900	110	0	37	3.9	60	3	6.7	149	30	39

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)	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)
NOV 23-23	--	--	--	150	46	0.080	0.020	0.100	0.080	1.9	2.0
JUN 06-06	0.10	4.5	160	110	29	0.180	0.020	0.200	1.20	2.4	3.6
SEP 10-10	--	--	--	44	20	0.100	0.100	0.200	1.30	4.7	6.0
25...	0.30	14	280	3	<1	1.66	0.140	1.80	1.40	1.7	3.1

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
NOV 23-23	0.480	16	--	--	--	--	--	--	--	--	--
JUN 06-06	0.900	21	--	--	--	--	--	--	--	--	--
SEP 10-10	1.00	30	--	--	--	--	--	--	--	--	--
25...	1.70	12	5	99	<1	<10	15	53	<5	2	<0.1

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX--Continued
(Flood-hydrograph partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
NOV											
23-23	--	--	--	--	--	--	--	--	--	--	--
JUN											
06-06	--	--	--	--	--	--	--	--	--	--	--
SEP											
10-10	--	--	--	--	--	--	--	--	--	--	--
25...	2	<1	84	<0.10	0.70	<0.10	<0.1	<0.1	<0.10	<0.10	<0.1

08074500 WHITEOAK BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°46'30", long 95°23'49", Harris County, Hydrologic Unit 12040104, at downstream side of downstream bridge on Heights Boulevard in Houston, 560 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.4 mi upstream from Little Whiteoak Bayou, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--86.3 mi². Prior to Oct. 1, 1976, 84.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year (October 1965 to September 1966, monthly discharge only).

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 7.35 ft below National Geodetic Vertical Datum of 1929; unadjusted for land-surface subsidence. Prior to June 17, 1936, nonrecording gage, and June 17, 1936, to Apr. 28, 1965, water-stage recorder at site 480 ft upstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Low flow is partly sustained by industrial waste. No diversion above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 88.4 ft³/s (64,050 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s Mar. 20, 1972 (gage height, 43.50 ft); maximum gage height, 43.60 ft Nov. 13, 1961; no flow for many days during 1965 water year (result of construction dams).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1919, 51.5 ft Dec. 9, 1935, prior to channel rectification, present site and datum (discharge, 14,750 ft³/s), furnished by the engineer for Harris County. The flood of May 31, 1929, reached a stage of 47.0 + 0.5 ft, prior to channel rectification, present site and datum (discharge, 9,360 ft³/s), computed on basis of current-meter measurement at stage 1.0 ft below crest, furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 23	1700	*7,660	32.04	June 11	1530	6,760	30.81
Dec. 15	1300	4,730	27.79	June 12	1700	4,450	27.34
Dec. 23	0130	5,430	28.87	July 9	about 0700	7,490	31.82
Feb. 26	0430	4,960	28.15				

Minimum daily discharge, 30 ft³/s Sept. 24, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	41	80	e110	85	121	33	41	38	311	44	51
2	41	218	64	e110	56	81	34	46	36	293	39	38
3	41	91	53	e160	43	67	34	48	399	e195	39	38
4	40	676	49	e100	47	58	34	317	687	49	39	38
5	135	316	49	e80	51	51	41	171	201	38	40	37
6	161	86	46	e90	49	52	162	396	91	100	39	38
7	54	59	47	e80	48	50	42	383	66	156	55	36
8	323	53	50	e100	48	46	36	201	74	512	88	39
9	334	46	82	e220	45	45	35	161	718	e2100	48	48
10	68	44	62	e100	42	45	34	110	628	e180	45	110
11	167	43	56	e80	41	105	36	45	2200	e63	40	87
12	1590	45	52	e70	44	50	34	e140	2140	51	39	195
13	912	44	44	e60	45	45	36	e80	847	43	39	107
14	270	43	133	e100	43	43	34	e45	278	49	40	46
15	113	40	2010	49	392	43	33	e40	157	41	39	42
16	56	43	540	454	60	71	33	e120	116	42	38	220
17	54	42	224	1090	42	277	34	e70	144	40	34	e200
18	43	46	787	401	39	82	34	e40	445	39	40	42
19	41	48	333	183	e43	44	34	e40	85	50	36	e39
20	40	40	181	126	e500	49	36	e70	54	195	34	36
21	39	39	135	95	158	53	35	41	47	e180	34	33
22	509	41	1770	68	83	53	35	37	47	366	37	31
23	284	2130	e2350	53	59	160	36	349	42	e430	35	31
24	160	1440	e500	53	330	45	37	67	41	e460	35	30
25	64	1150	e300	48	461	41	36	37	41	173	37	31
26	50	288	e220	47	2110	40	40	35	40	61	58	30
27	48	296	e190	45	337	39	40	34	39	48	75	32
28	45	202	e160	44	269	37	47	34	37	46	49	e200
29	43	130	e140	46	---	38	41	319	42	43	38	62
30	41	95	e130	44	---	37	41	258	312	43	225	33
31	41	---	e120	42	---	34	---	56	---	42	244	---
TOTAL	5850	7875	10957	4348	5570	2002	1217	3831	10092	6439	1722	2000
MEAN	189	262	353	140	199	64.6	40.6	124	336	208	55.5	66.7
MAX	1590	2130	2350	1090	2110	277	162	396	2200	2100	244	220
MIN	39	39	44	42	39	34	33	34	36	38	34	30
AC-FT	11600	15620	21730	8620	11050	3970	2410	7600	20020	12770	3420	3970

CAL YR 1986 TOTAL 60970 MEAN 167 MAX 2350 MIN 30 AC-FT 120900
WTR YR 1987 TOTAL 61903 MEAN 170 MAX 2350 MIN 30 AC-FT 122800

e Estimated.

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1968 to current year. Pesticide analyses: February 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
FEB												
17...	1135	46	838	7.80	14.5	18	80	10.0	98	6.0	20000	11000
26...	1025	1730	155	6.70	14.0	110	78	11.6	112	5.8	38000	93000
APR												
28...	0943	41	938	7.80	23.5	14	2.5	12.4	145	3.4	720	500
JUN												
10...	1750	587	220	8.00	25.0	80	--	7.0	89	4.3	3700	5100
JUL												
14...	0945	37	856	7.90	29.0	12	0.80	10.0	129	1.8	20000	550

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB												
17...	220	0	67	13	91	3	5.3	236	32	100	0.40	20
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	200	0	62	12	120	4	5.9	258	30	120	0.60	24
JUN												
10...	67	0	22	3.0	16	0.9	3.8	77	11	14	0.20	11
JUL												
14...	--	--	--	--	--	--	--	--	--	--	--	--

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
FEB												
17...	470	148	16	4.47	0.130	4.60	0.670	2.0	2.7	0.140	7.2	9
26...	--	154	13	0.260	0.040	0.300	0.260	1.1	1.4	0.440	11	--
APR												
28...	530	8	6	3.52	0.180	3.70	0.190	1.1	1.3	3.70	7.8	10
JUN												
10...	130	39	18	0.560	0.040	0.600	0.130	0.97	1.1	0.660	12	--
JUL												
14...	--	6	<1	3.49	0.110	3.60	0.070	1.1	1.2	4.10	4.8	12

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
17...	260	2	<10	2	25	<5	92	0.2	1	<1	26
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	230	2	<10	6	10	<5	31	<0.1	1	<1	15
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	260	<1	30	10	6	<5	8	<0.1	<1	<1	11

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
FEB											
17...	<0.10	0.40	<0.10	<2.0	0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	<0.10	0.40	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	<0.10	0.10	<0.10	--	0.2	<0.1	<0.10	--	--	0.10	<0.1

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX

LOCATION.--Lat 29°45'54", long 95°21'32", Harris County, Hydrologic Unit 12040104, on left bank at mouth of Whiteoak Bayou at upstream side of Main Street viaduct in Houston and 3.2 mi downstream from station 08074000.

DRAINAGE AREA.--469 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1962 to current year. (Gage removed for bridge repairs Apr. 5, 1982, to Dec. 2, 1983).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.47 ft below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers), 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records good. Most days are influenced by tidal fluctuations. Gage heights during rises reflect releases from Barker and Addicks Reservoirs (stations 08072500 and 08073000, respectively) or runoff from urban areas. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.6 ft June 13, 1973; minimum recorded, -3.5 ft Jan. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1835, 38.5 ft Dec. 9, 1935, present site and datum, unadjusted for land-surface subsidence.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.5 ft July 9 at 0900 hours; minimum, 0.4 ft Feb. 7, Mar. 30, 31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.9	3.4	4.3	2.6	4.6	2.1	4.1	2.2	4.3	2.9	3.3	2.3
2	5.2	3.6	5.1	3.1	3.9	1.4	4.1	2.6	3.8	2.1	4.1	2.6
3	5.5	4.2	5.0	3.1	3.3	1.5	5.4	1.5	3.6	2.1	4.1	3.0
4	5.0	3.4	10.0	4.1	4.4	2.4	2.0	.8	4.5	2.4	3.9	2.6
5	4.5	3.0	6.3	2.0	4.4	2.8	3.9	2.0	4.4	2.9	4.2	2.6
6	4.4	2.5	4.0	2.4	4.6	2.8	4.3	3.4	3.9	1.9	4.7	2.6
7	4.5	2.8	5.0	3.0	4.6	2.8	4.1	2.9	2.8	.4	4.7	2.8
8	4.9	3.2	4.6	2.7	4.5	2.7	4.2	2.5	3.2	1.3	4.5	2.4
9	4.9	2.5	4.2	2.4	4.3	2.4	4.2	2.6	3.8	1.7	3.8	1.8
10	4.3	2.7	4.4	3.2	3.4	1.4	3.6	1.4	3.8	2.2	3.7	1.6
11	5.1	2.8	4.2	2.5	3.5	1.8	3.0	1.2	3.7	2.0	3.7	2.2
12	8.3	3.1	4.1	2.8	3.2	1.4	3.1	1.2	3.4	1.8	3.8	2.0
13	6.0	3.4	2.2	.9	3.7	1.7	3.4	1.7	3.4	1.9	3.9	2.1
14	4.2	2.9	4.3	2.6	4.6	2.5	4.3	2.2	4.0	2.4	4.2	3.1
15	4.1	3.0	4.5	2.6	11.9	4.5	4.3	2.4	4.8	1.7	4.2	3.2
16	4.4	3.1	4.6	2.9	6.7	2.2	5.0	3.5	2.8	1.4	5.3	3.4
17	4.5	3.1	4.3	2.5	4.0	2.4	8.8	4.2	2.8	1.7	5.5	4.1
18	4.3	2.7	4.2	2.5	6.4	3.9	5.8	1.3	3.4	1.5	4.8	3.5
19	4.3	2.8	4.2	2.3	4.1	2.0	2.3	1.2	4.5	2.3	4.6	2.8
20	4.6	4.3	4.3	2.2	3.8	2.4	3.2	2.3	4.6	3.0	4.7	2.7
21	4.9	3.6	4.2	2.9	4.1	2.7	3.7	2.5	3.7	1.7	4.8	2.8
22	5.8	4.4	4.9	2.8	13.3	4.2	3.7	1.1	3.9	1.4	5.2	2.7
23	5.3	3.7	13.3	3.8	14.0	3.4	3.8	1.7	4.1	1.6	5.2	3.1
24	5.0	2.3	10.0	5.0	3.9	2.4	4.1	2.6	5.1	3.2	3.8	---
25	3.7	2.2	7.5	3.3	4.1	3.1	3.8	1.3	8.9	2.6	4.7	2.3
26	3.8	2.4	3.9	2.1	4.2	2.9	3.2	.9	12.8	5.1	4.8	2.7
27	4.0	2.9	4.2	2.8	4.3	2.7	3.6	2.8	5.1	3.2	4.2	2.4
28	4.3	2.9	4.2	2.6	4.2	1.9	3.7	1.7	5.3	1.9	4.5	3.2
29	4.1	2.8	4.4	2.5	4.2	2.3	3.7	1.4	---	---	4.2	1.4
30	4.2	2.8	4.5	2.4	4.1	1.9	3.3	1.3	---	---	1.6	.4
31	4.6	3.5	---	---	4.3	2.3	3.8	2.1	---	---	2.8	.4
MONTH	8.30	2.20	13.30	.90	14.00	1.40	8.80	.80	12.80	.40	5.50	---

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.5	1.3	4.0	1.7	4.5	2.5	8.9	2.6	3.4	2.5	4.2	2.4
2	3.4	1.8	4.3	2.1	4.6	2.7	7.5	2.8	3.6	2.0	4.4	2.3
3	3.2	.8	5.7	2.6	5.0	2.6	4.3	3.0	3.6	1.9	4.2	2.2
4	3.9	1.6	4.6	2.8	4.8	2.8	4.0	2.8	3.6	1.7	3.9	2.1
5	3.9	2.3	3.9	2.3	4.1	2.7	4.1	2.8	3.7	1.7	4.1	2.1
6	3.3	1.7	4.3	2.2	4.4	3.1	5.2	2.8	3.8	1.4	4.3	2.4
7	3.2	1.3	4.7	2.1	4.9	3.2	5.3	3.1	3.9	1.6	4.2	2.5
8	3.0	1.4	3.8	2.3	5.1	3.4	6.0	3.0	4.4	1.9	4.3	2.5
9	3.2	1.4	3.9	2.8	8.5	3.5	15.5	2.8	4.7	2.3	4.1	2.5
10	3.6	2.0	3.7	2.6	6.1	4.4	4.9	3.1	3.9	2.5	4.4	2.3
11	3.6	2.2	4.0	2.3	14.2	3.4	4.8	2.8	3.5	1.9	3.8	2.2
12	3.9	2.8	4.4	2.3	13.3	7.3	4.6	2.7	3.3	1.9	3.7	2.1
13	4.7	2.8	4.0	2.2	9.5	3.9	4.2	2.5	3.4	2.3	4.0	.9
14	2.9	1.0	3.9	1.8	4.3	2.5	4.7	2.1	3.5	2.2	3.9	2.4
15	3.0	1.0	3.7	1.7	4.3	2.2	4.8	2.3	3.5	2.0	4.1	2.6
16	3.1	1.1	4.3	1.3	4.9	2.6	3.8	2.5	3.5	1.9	4.7	2.7
17	3.8	1.4	4.1	1.7	5.0	2.8	4.1	2.8	3.6	1.8	4.4	2.5
18	3.8	1.6	3.9	1.9	6.3	3.4	4.3	2.6	3.5	1.6	5.1	2.5
19	3.9	1.7	4.3	2.1	4.1	3.1	4.1	2.6	3.5	1.7	3.9	2.4
20	3.8	1.7	4.2	2.6	4.5	2.9	4.9	2.6	3.7	1.7	4.1	2.1
21	3.3	1.5	4.0	2.5	4.4	3.0	5.2	3.0	3.7	1.9	4.6	2.8
22	3.1	.9	3.9	2.7	4.4	2.6	4.9	2.7	3.5	1.9	3.9	2.8
23	3.2	1.5	4.6	2.5	4.4	2.6	4.4	2.6	3.6	1.8	4.2	2.6
24	3.2	1.5	3.9	2.4	4.3	2.6	5.6	3.0	4.0	2.0	4.1	2.7
25	3.2	2.0	4.2	2.4	4.0	2.2	4.8	3.1	4.0	2.7	4.1	2.7
26	3.2	1.8	5.2	2.6	3.7	1.9	4.4	2.8	4.1	2.7	4.2	2.9
27	3.1	1.5	5.6	3.5	4.4	2.2	4.1	2.5	4.0	2.6	4.4	2.4
28	3.0	1.2	5.6	3.8	4.9	2.9	3.8	2.3	3.9	2.2	5.5	3.7
29	3.2	1.1	5.7	3.5	5.1	3.4	3.7	2.2	4.0	2.5	4.8	2.0
30	3.6	1.5	4.7	2.9	8.4	3.2	3.7	2.3	4.6	2.6	3.3	1.8
31	---	---	4.7	2.5	---	---	3.4	2.5	4.4	2.4	---	---
MONTH	4.70	.80	5.70	1.30	14.20	1.90	15.50	2.10	4.70	1.40	5.50	.90

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1986 to current year.
WATER TEMPERATURE: April 1986 to current year.
DISSOLVED OXYGEN: April 1986 to current year.

INSTRUMENTATION.--Since April 1986, a four-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrumentation.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,360 microsiemens Sept. 16; minimum, 102 microsiemens Oct. 8, July 9.
WATER TEMPERATURE: Maximum, 31.5°C Aug. 27.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	620	478	540	745	549	632	729	490	573	165	144	157
2	706	549	613	925	290	500	588	365	463	169	144	159
3	704	602	654	424	345	382	358	199	275	---	---	---
4	761	674	721	463	345	403	215	198	207	---	---	---
5	816	400	693	336	196	254	226	207	212	161	142	154
6	776	540	699	227	196	211	232	219	225	156	135	144
7	761	604	675	227	208	220	252	221	241	160	128	145
8	643	102	479	243	204	221	294	134	268	153	131	143
9	518	353	442	604	220	316	331	263	299	219	159	172
10	446	308	365	369	275	313	379	316	347	177	146	159
11	420	326	359	565	212	423	430	336	379	165	146	156
12	396	265	333	588	494	542	666	408	488	178	156	168
13	254	206	220	682	554	609	722	584	653	203	184	191
14	308	204	243	722	573	647	743	439	637	258	203	227
15	322	149	225	800	627	695	485	126	249	329	229	261
16	173	157	167	816	659	722	257	147	193	315	126	206
17	188	157	172	808	674	731	290	151	206	200	139	166
18	188	165	177	824	690	756	178	164	171	---	---	---
19	188	173	186	831	706	758	271	173	222	---	---	---
20	220	180	200	855	737	798	---	---	---	---	---	---
21	220	204	212	894	792	832	---	---	---	257	223	234
22	282	173	226	910	776	831	---	---	---	---	---	---
23	329	196	247	---	---	---	---	---	---	---	---	---
24	384	298	337	---	---	---	---	---	---	---	---	---
25	525	306	373	---	---	---	---	---	---	---	---	---
26	353	306	328	---	---	---	---	---	---	---	---	---
27	353	298	333	382	211	261	---	---	---	---	---	---
28	376	300	327	322	214	265	---	---	---	322	225	262
29	392	298	342	525	329	414	---	---	---	---	---	---
30	690	392	474	661	442	550	---	---	---	---	---	---
31	745	478	600	---	---	---	168	143	159	---	---	---
MONTH	816	102	386	925	196	511	743	126	323	329	126	183

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	300	135	199	914	831	876	---	---	---
2	771	612	632	168	151	159	907	829	869	918	856	887
3	710	588	622	225	160	168	961	827	895	1160	831	914
4	830	626	720	212	165	178	889	840	864	893	479	739
5	846	734	782	178	149	161	914	833	889	597	381	506
6	---	---	---	200	138	164	894	628	777	359	287	332
7	---	---	---	280	201	230	735	617	673	337	141	281
8	---	---	---	473	275	360	792	603	688	314	235	274
9	---	---	---	774	502	574	865	759	795	321	228	280
10	---	---	---	820	542	670	889	765	812	297	244	277
11	---	---	---	752	628	658	939	841	881	320	270	293
12	---	---	---	795	650	704	892	851	866	368	279	323
13	---	---	---	921	659	790	914	861	891	456	339	397
14	---	---	---	874	681	757	955	200	683	565	459	507
15	---	---	---	871	686	773	917	218	700	713	514	617
16	---	---	---	878	776	825	994	211	727	729	179	544
17	---	---	---	812	463	681	956	206	760	338	191	252
18	---	---	---	526	225	434	967	856	918	486	342	401
19	---	---	---	541	434	494	978	853	903	614	327	471
20	706	371	509	586	471	539	939	862	898	489	358	402
21	370	261	349	674	563	628	912	201	753	693	367	537
22	336	255	302	794	659	719	976	464	828	814	703	763
23	484	332	421	766	588	695	963	860	913	822	258	634
24	608	315	428	725	535	641	989	900	935	600	483	540
25	382	210	351	720	436	607	979	908	934	669	607	645
26	196	139	157	824	621	716	1000	915	947	682	608	646
27	280	180	235	869	742	817	952	203	903	774	642	709
28	309	262	286	906	818	864	1340	951	1090	818	722	785
29	---	---	---	883	328	724	---	---	---	828	217	648
30	---	---	---	450	236	271	---	---	---	283	192	237
31	---	---	---	927	256	691	---	---	---	411	290	362
MONTH	846	139	446	927	135	545	1340	200	845	1160	141	507

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	635	427	540	392	126	208	756	686	725	---	---	---
2	661	268	378	223	113	180	795	745	765	---	---	---
3	297	268	282	303	186	228	798	764	787	832	606	759
4	315	227	268	394	209	248	854	775	826	910	723	850
5	253	218	236	230	212	223	924	859	895	971	848	927
6	247	213	229	271	210	245	924	885	908	1080	949	1020
7	265	225	236	283	202	232	1120	862	976	1060	988	1040
8	298	236	275	384	120	224	1150	928	972	---	---	---
9	399	280	330	284	102	155	1050	916	985	960	868	923
10	467	401	440	369	157	240	935	769	840	905	725	836
11	444	300	382	465	236	312	1220	847	1030	719	540	633
12	293	179	233	243	224	237	1100	956	1000	798	703	759
13	198	135	170	244	226	237	1100	913	970	839	802	820
14	253	201	234	245	223	232	1120	878	975	934	464	762
15	321	240	278	249	234	238	1260	871	1020	1210	845	1070
16	334	169	219	369	242	284	1190	885	1030	1360	711	1000
17	263	175	194	396	245	293	968	822	898	1040	742	901
18	250	158	185	296	256	275	900	824	845	917	719	882
19	212	164	179	314	281	303	917	826	845	903	730	813
20	178	165	174	382	302	340	881	828	856	918	903	913
21	185	163	173	406	226	340	890	826	851	899	825	861
22	182	168	175	333	185	232	893	836	852	820	805	816
23	183	153	167	432	226	327	870	836	850	814	804	810
24	173	157	163	489	250	352	1020	835	872	805	765	788
25	172	154	163	428	293	363	1200	1010	1100	824	752	796
26	174	154	165	644	437	541	1260	1100	1180	---	---	---
27	189	156	167	732	651	697	1260	444	1110	---	---	---
28	185	159	168	762	732	744	948	326	718	---	---	---
29	175	164	169	780	763	771	886	393	683	408	238	313
30	199	117	169	766	685	729	932	796	871	416	316	357
31	---	---	---	782	647	709	---	---	---	---	---	---
MONTH	661	117	238	782	102	346	1260	326	908	1360	238	819

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	29.5	28.5	29.0	22.5	21.0	21.5	18.0	15.0	16.0	12.0	12.0	12.0
2	29.5	28.5	29.0	22.5	21.0	22.0	16.5	15.0	15.5	12.5	12.0	12.0
3	29.0	28.5	29.0	22.5	22.0	22.0	15.0	13.0	14.0	---	---	---
4	29.5	28.5	29.0	22.5	22.0	22.5	13.5	13.0	13.5	---	---	---
5	30.0	28.5	29.0	22.0	20.5	21.5	14.0	13.0	13.5	12.0	11.5	11.5
6	29.0	27.0	28.0	20.5	18.5	19.5	14.5	13.0	14.0	12.5	11.5	12.0
7	27.0	25.0	26.0	19.5	17.5	19.0	15.5	14.0	15.0	13.0	12.5	12.5
8	25.5	24.5	25.0	21.5	19.5	20.5	17.0	15.5	16.0	13.0	12.5	13.0
9	26.5	25.0	25.5	23.0	21.5	22.5	17.5	17.0	17.5	14.5	13.0	13.5
10	26.0	24.0	25.0	23.0	22.5	22.5	17.0	15.0	16.0	14.0	12.5	13.0
11	25.5	24.5	24.5	23.0	21.0	22.0	15.0	13.5	14.0	12.5	11.5	12.0
12	24.5	21.5	23.5	21.0	20.0	20.5	13.5	12.5	13.0	12.0	11.5	11.5
13	21.5	17.5	19.5	19.5	16.5	18.0	13.5	13.0	13.0	12.5	12.0	12.0
14	19.0	17.0	18.0	16.5	15.5	15.5	13.5	12.5	13.0	13.0	12.0	12.5
15	19.5	18.5	19.0	17.0	15.5	16.0	14.5	13.5	14.0	14.5	13.0	13.5
16	19.0	18.0	19.0	19.5	16.5	18.0	15.0	14.0	14.5	14.5	13.5	14.0
17	19.5	18.5	19.0	22.0	18.5	20.0	15.5	14.5	15.0	14.0	13.5	14.0
18	20.0	18.5	19.5	23.5	21.5	22.0	15.5	15.0	15.0	---	---	---
19	20.0	19.0	19.5	23.5	22.0	22.5	15.0	14.5	14.5	---	---	---
20	20.5	19.5	20.0	24.0	22.5	23.5	---	---	---	---	---	---
21	21.0	19.5	20.5	24.0	21.5	22.5	---	---	---	11.0	10.0	10.5
22	22.0	20.5	21.0	22.5	21.0	21.5	---	---	---	---	---	---
23	23.0	22.0	22.0	---	---	---	---	---	---	---	---	---
24	23.5	22.5	23.0	---	---	---	---	---	---	---	---	---
25	23.0	22.0	22.5	---	---	---	---	---	---	---	---	---
26	22.0	21.0	21.5	---	---	---	---	---	---	---	---	---
27	21.5	20.5	21.0	16.5	14.5	15.0	---	---	---	---	---	---
28	21.5	20.0	21.0	15.0	14.5	15.0	---	---	---	14.5	12.0	13.0
29	22.0	20.0	20.5	15.0	14.5	15.0	---	---	---	---	---	---
30	22.5	21.0	21.5	17.0	15.0	16.0	---	---	---	---	---	---
31	22.5	20.5	21.0	---	---	---	12.5	12.0	12.5	---	---	---
MONTH	30.0	17.0	23.0	24.0	14.5	20.0	18.0	12.0	14.5	14.5	10.0	12.5

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

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

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.9	1.0	2.3	6.7	3.1	4.5	8.6	5.7	6.9	9.9	8.4	8.7
2	4.5	.5	1.9	6.7	3.6	5.3	7.6	6.2	7.1	9.8	8.3	8.5
3	1.5	.2	.7	5.1	3.1	4.0	8.4	7.7	8.0	---	---	---
4	4.9	.5	1.4	4.9	2.7	3.4	9.0	8.3	8.5	---	---	---
5	6.2	.5	2.1	3.3	2.9	3.1	9.9	8.4	9.0	9.5	8.6	8.9
6	2.3	.2	.9	3.6	2.7	3.1	9.8	8.5	8.9	9.1	8.3	8.6
7	2.1	.4	1.4	3.2	2.1	2.6	9.9	8.2	8.9	8.2	8.0	8.1
8	2.9	1.3	1.9	2.1	1.6	1.8	9.4	7.4	8.0	8.0	7.7	7.9
9	2.2	1.4	1.7	2.1	1.5	1.7	7.6	7.0	7.2	7.7	6.9	7.3
10	4.6	2.0	2.9	3.5	2.0	2.8	8.8	7.0	7.7	9.1	6.9	7.8
11	4.1	2.0	3.1	4.2	3.0	3.3	9.4	7.4	8.3	9.1	8.0	8.3
12	5.4	2.0	4.4	4.3	2.0	3.5	9.2	7.4	8.5	8.5	8.2	8.4
13	7.1	4.1	6.0	5.8	4.3	5.1	9.4	7.5	8.4	9.7	8.1	8.5
14	7.5	5.0	6.3	6.0	5.0	5.3	8.8	7.1	7.7	8.9	7.3	7.7
15	7.2	5.6	6.4	7.5	5.1	5.5	10.0	7.2	8.3	7.6	6.4	7.1
16	7.7	6.9	7.2	6.8	4.5	5.2	8.6	7.4	7.9	9.1	6.8	7.8
17	7.8	6.9	7.3	5.8	3.1	4.0	9.6	7.4	8.2	8.9	7.0	7.9
18	8.2	7.0	7.2	4.9	2.0	2.9	9.0	7.8	8.2	---	---	---
19	8.2	6.8	7.1	3.9	2.0	2.7	9.1	8.2	8.7	---	---	---
20	7.1	6.7	6.9	4.0	1.0	1.9	---	---	---	---	---	---
21	7.1	6.7	7.0	2.2	1.4	1.8	---	---	---	10.1	8.6	9.3
22	7.1	6.1	6.6	4.0	1.1	2.1	---	---	---	---	---	---
23	7.9	5.1	6.0	---	---	---	---	---	---	---	---	---
24	6.3	4.2	5.2	---	---	---	---	---	---	---	---	---
25	7.5	4.2	5.8	---	---	---	---	---	---	---	---	---
26	7.1	6.6	6.8	7.3	6.8	7.0	---	---	---	---	---	---
27	7.8	6.2	6.8	9.4	6.9	8.2	---	---	---	---	---	---
28	7.2	6.3	6.7	9.3	7.1	7.9	---	---	---	8.9	7.6	8.4
29	7.5	6.0	6.6	8.8	7.1	7.8	---	---	---	---	---	---
30	7.8	3.5	5.6	8.8	7.0	8.0	---	---	---	---	---	---
31	7.5	1.6	3.7	---	---	---	10.0	8.4	8.6	---	---	---
MONTH	8.2	.2	4.7	9.4	1.0	4.2	10.0	5.7	8.2	10.1	6.4	8.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	2.8	1.0	2.0	---	---	---
2	7.5	4.7	5.2	---	---	---	3.6	1.9	2.7	2.6	1.0	1.6
3	5.1	2.8	3.8	---	---	---	---	---	---	3.2	.8	1.6
4	4.9	2.9	3.6	---	---	---	---	---	---	3.5	1.0	1.7
5	4.9	3.6	4.0	---	---	---	---	---	---	2.2	1.1	1.3
6	---	---	---	---	---	---	---	---	---	3.4	1.8	2.5
7	---	---	---	---	---	---	---	---	---	6.2	2.5	3.6
8	---	---	---	---	---	---	---	---	---	4.6	3.2	4.0
9	---	---	---	---	---	---	---	---	---	4.6	2.6	3.6
10	---	---	---	---	---	---	---	---	---	4.9	3.2	4.0
11	---	---	---	---	---	---	---	---	---	4.8	4.1	4.4
12	---	---	---	---	---	---	3.8	1.9	2.6	4.5	3.3	3.9
13	---	---	---	---	---	---	3.0	1.5	2.2	3.2	1.5	2.3
14	---	---	---	---	---	---	4.6	1.3	2.4	2.1	.7	1.4
15	---	---	---	---	---	---	3.2	.7	2.2	2.4	.4	1.1
16	---	---	---	---	---	---	5.1	.9	2.6	4.8	.8	2.4
17	---	---	---	---	---	---	2.3	1.0	1.6	4.3	2.1	3.0
18	---	---	---	---	---	---	5.3	1.2	2.5	4.0	2.2	3.5
19	---	---	---	---	---	---	4.7	1.9	2.9	4.1	3.3	3.8
20	---	---	---	---	---	---	4.7	2.9	3.7	3.7	3.2	3.4
21	---	---	---	---	---	---	5.9	3.0	3.9	3.1	2.2	2.7
22	---	---	---	---	---	---	5.8	1.1	3.2	2.6	1.5	1.8
23	---	---	---	---	---	---	5.3	2.5	3.2	4.4	.6	2.0
24	---	---	---	---	---	---	3.8	2.1	2.8	2.3	1.0	1.7
25	---	---	---	---	---	---	5.6	1.8	2.9	2.5	.8	1.3
26	---	---	---	---	---	---	4.0	1.9	2.8	3.4	.8	1.5
27	---	---	---	---	---	---	3.5	2.1	2.8	3.9	1.2	1.9
28	---	---	---	---	---	---	3.1	1.5	2.4	4.2	.9	2.0
29	---	---	---	---	---	---	---	---	---	4.7	.9	2.6
30	---	---	---	---	---	---	---	---	---	5.7	4.0	4.9
31	---	---	---	6.1	1.8	3.0	---	---	---	3.9	2.2	3.0
MONTH	7.5	2.8	4.2	6.1	1.8	3.0	5.9	.7	2.7	6.2	.4	2.6

08074600 BUFFALO BAYOU AT MAIN STREET, HOUSTON, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.0	1.1	2.2	5.8	1.4	2.5	5.7	2.2	3.5	4.6	3.0	4.0
2	5.3	2.5	4.4	5.6	2.2	3.2	6.3	2.6	4.0	4.2	3.8	4.1
3	5.6	3.8	5.1	3.0	2.0	2.6	---	---	---	3.8	3.1	3.4
4	---	---	---	3.2	1.3	2.8	---	---	---	3.7	2.6	3.1
5	---	---	---	3.3	3.0	3.1	---	---	---	4.0	2.1	3.0
6	---	---	---	5.0	2.9	3.3	---	---	---	3.6	2.2	3.0
7	---	---	---	3.2	2.8	3.0	---	---	---	3.6	2.2	3.0
8	---	---	---	7.1	2.9	4.1	---	---	---	3.9	2.9	3.4
9	5.8	4.3	4.9	8.9	4.0	6.7	---	---	---	3.2	.8	2.2
10	5.5	5.1	5.3	6.5	3.3	4.7	---	---	---	3.6	1.1	2.4
11	6.7	4.4	5.3	5.0	3.1	4.4	---	---	---	3.8	.7	2.0
12	6.1	5.3	5.5	5.0	4.8	4.9	---	---	---	3.6	.3	1.3
13	5.4	4.4	4.8	5.2	4.3	4.7	---	---	---	3.6	2.5	3.0
14	4.6	4.2	4.4	4.9	4.3	4.5	---	---	---	3.4	2.1	2.6
15	4.6	4.0	4.3	4.6	4.1	4.4	---	---	---	3.3	2.6	2.9
16	5.3	4.0	4.9	4.3	3.0	3.8	---	---	---	3.8	.8	2.7
17	5.5	4.0	4.9	4.3	2.9	3.8	---	---	---	3.2	.8	1.7
18	8.5	5.1	5.9	4.1	3.5	3.9	4.8	2.0	3.5	3.9	.9	1.9
19	6.1	5.0	5.6	4.2	2.9	3.7	4.5	2.7	3.3	3.3	.8	2.2
20	5.1	4.4	4.7	4.2	3.2	3.7	3.3	2.6	2.9	2.1	.7	1.2
21	4.5	4.1	4.3	4.8	2.6	3.4	4.3	2.3	2.9	2.9	1.6	2.2
22	4.0	3.8	3.9	4.7	3.0	3.7	3.6	1.8	2.6	2.7	1.8	2.3
23	5.6	3.6	4.6	4.3	2.8	3.2	3.5	2.2	2.8	4.1	2.1	2.9
24	4.9	3.9	4.5	4.1	2.9	3.5	3.6	2.6	3.2	3.6	2.1	2.8
25	4.1	3.4	3.7	4.1	3.3	3.7	3.5	2.0	2.9	3.8	2.3	2.9
26	3.7	3.0	3.3	4.0	2.8	3.7	5.3	2.0	2.9	3.5	.2	2.5
27	3.3	2.9	3.2	3.7	2.4	3.1	6.8	1.7	3.4	3.7	.3	1.7
28	3.4	2.8	3.1	3.4	2.0	2.7	6.3	2.5	3.7	4.9	.9	3.5
29	3.1	2.7	2.9	3.1	1.9	2.5	5.1	1.1	2.2	5.2	3.5	4.7
30	6.2	1.8	3.3	6.0	2.3	3.2	5.0	1.9	3.2	5.7	4.9	5.2
31	---	---	---	3.8	1.3	2.5	3.2	2.4	2.8	---	---	---
MONTH	8.5	1.1	4.4	8.9	1.3	3.7	6.8	1.1	3.1	5.7	.2	2.8

08074700 BUFFALO BAYOU AT 69TH STREET, HOUSTON, TX

LOCATION.--Lat 29°45'15", long 95°17'51", Harris County, Hydrologic Unit 12040104, on left bank at end of remaining segment of 69th Street in Houston, 0.15 mi south of Clinton Drive, 1.1 mi upstream from Turning Basin, 2.8 mi upstream from Brays Bayou, and 4.8 mi downstream from Whiteoak Bayou.

DRAINAGE AREA.--476 mi².

PERIOD OF RECORD.--April 1961 to May 1984, May 1985 to Dec. 18, 1985 (discontinued).
Water-quality records.--Chemical, biochemical, and pesticide analyses: May 1971 to September 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1.73 ft below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers), 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records good. Only very large storms or hurricane surge produce gage heights above normal tidal fluctuations.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.6 ft Aug. 18, 1983, result of Hurricane Alicia; minimum, -3.5 ft Jan. 13, 1964.

EXTREMES FOR PERIOD OCTOBER 1986 TO DECEMBER 1986.--Maximum gage height recorded, 5.8 ft Oct. 3 at 0800 hours; minimum, 1.3 ft Nov. 13.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO DECEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.1	3.7	4.6	3.0	4.9	2.5	---	---	---	---	---	---
2	5.4	3.9	5.0	3.2	4.0	1.5	---	---	---	---	---	---
3	5.8	4.4	5.3	3.3	3.9	1.6	---	---	---	---	---	---
4	4.9	3.7	5.6	4.1	4.6	2.6	---	---	---	---	---	---
5	4.8	3.3	5.7	2.2	4.6	2.9	---	---	---	---	---	---
6	4.6	2.8	4.3	2.7	4.8	3.0	---	---	---	---	---	---
7	4.7	3.1	5.3	3.2	4.9	3.2	---	---	---	---	---	---
8	5.3	3.3	4.9	3.0	4.8	3.1	---	---	---	---	---	---
9	5.3	2.8	4.6	2.7	4.7	2.7	---	---	---	---	---	---
10	4.6	3.0	4.7	2.9	3.7	1.8	---	---	---	---	---	---
11	5.2	3.3	4.5	2.8	4.0	2.3	---	---	---	---	---	---
12	5.7	2.9	4.3	3.1	3.6	1.8	---	---	---	---	---	---
13	4.2	2.8	3.3	1.3	4.1	2.2	---	---	---	---	---	---
14	4.4	2.8	4.6	2.9	4.9	3.0	---	---	---	---	---	---
15	4.3	3.2	4.7	2.8	5.6	4.1	---	---	---	---	---	---
16	4.7	3.2	4.8	3.1	4.8	2.5	---	---	---	---	---	---
17	4.7	3.2	4.5	2.7	4.3	2.6	---	---	---	---	---	---
18	4.6	2.9	4.4	2.7	4.4	2.8	---	---	---	---	---	---
19	4.4	3.0	4.4	2.7	---	---	---	---	---	---	---	---
20	4.9	3.5	4.6	2.5	---	---	---	---	---	---	---	---
21	5.2	3.7	4.7	3.2	---	---	---	---	---	---	---	---
22	5.6	4.2	5.2	3.2	---	---	---	---	---	---	---	---
23	5.6	3.9	5.2	4.0	---	---	---	---	---	---	---	---
24	5.3	2.6	5.3	3.7	---	---	---	---	---	---	---	---
25	3.9	2.5	5.7	3.0	---	---	---	---	---	---	---	---
26	4.1	2.7	4.1	2.4	---	---	---	---	---	---	---	---
27	4.3	3.0	4.3	3.2	---	---	---	---	---	---	---	---
28	4.6	3.1	4.4	2.9	---	---	---	---	---	---	---	---
29	4.4	3.1	4.7	2.8	---	---	---	---	---	---	---	---
30	4.4	3.1	4.8	2.7	---	---	---	---	---	---	---	---
31	4.9	3.8	---	---	---	---	---	---	---	---	---	---
MONTH	5.80	2.50	5.70	1.30	---	---	---	---	---	---	---	---

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX

LOCATION.--Lat 29°44'57", long 95°17'27", Harris County, Hydrologic Unit 12040104, on left bank at Wharf No. 5 at end of private road, 1.0 mi downstream from station 08074700, 1.8 mi upstream from Brays Bayou and 4.9 mi east of downtown Houston.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--January 1987 to September 1987.

GAGE.--Data logger, float operated encoder and pressure transducer. Datum of gage is National Geodetic Vertical Datum of 1929, 1978 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records fair. Only very large storms or hurricane surge produces elevations above normal tidal fluctuations. Gage-height telemeter at station.

EXTREMES FOR PERIOD JANUARY TO SEPTEMBER 1987.--Maximum elevation, 4.5 ft June 11, 12; minimum, -1.8 ft Mar. 30.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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	---	---	---	---	---	---	---	---	---	1.8	-.3	.7
24	---	---	---	---	---	---	---	---	---	1.9	.1	1.2
25	---	---	---	---	---	---	---	---	---	1.5	-.7	.4
26	---	---	---	---	---	---	---	---	---	1.5	-1.3	.2
27	---	---	---	---	---	---	---	---	---	1.8	-.7	.9
28	---	---	---	---	---	---	---	---	---	1.7	-.5	.8
29	---	---	---	---	---	---	---	---	---	1.8	-.7	.8
30	---	---	---	---	---	---	---	---	---	1.6	-.7	.6
31	---	---	---	---	---	---	---	---	---	2.0	.2	1.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.3	1.0	1.8	1.1	-.4	.5	1.5	-.4	.7	2.1	-.1	1.1
2	1.9	.1	.9	1.9	.2	.9	1.1	.1	.7	2.3	.3	1.4
3	1.7	.3	1.0	1.5	.7	1.1	1.3	-.6	.4	3.9	.7	2.0
4	2.3	.7	1.5	1.4	.3	1.0	2.0	.0	1.0	2.5	1.1	1.9
5	2.4	1.0	1.8	1.9	.5	1.2	1.9	.6	1.4	1.9	.4	1.2
6	1.9	.1	.9	2.3	.3	1.3	1.4	-.2	.7	2.0	.2	1.1
7	1.0	-1.5	-.3	2.7	.7	1.7	1.2	-.7	.4	2.0	.1	1.0
8	1.2	-.8	.5	2.3	.4	1.3	1.0	-.8	.3	1.7	.3	.9
9	2.2	-.3	1.0	1.7	-.3	.8	1.0	-.8	.3	1.9	.7	1.2
10	2.2	.1	1.3	1.7	-.4	.7	1.4	-.2	.6	1.6	.6	1.1
11	1.6	-.2	.8	1.9	.4	1.3	1.4	-.1	.7	1.8	.3	1.2
12	---	---	---	1.9	.0	1.2	1.7	.7	1.2	2.2	.3	1.4
13	---	---	---	1.9	.0	1.2	2.4	.7	1.5	2.0	.4	1.2
14	---	---	---	2.4	1.0	1.8	.8	-1.2	.0	1.8	-.3	1.0
15	---	---	---	2.2	1.0	1.7	.8	-.9	.2	1.6	-.3	.8
16	---	---	---	3.1	1.3	2.3	.8	-.8	.2	1.7	-.7	.7
17	---	---	---	3.2	1.9	2.5	1.4	-.6	.6	2.0	-.4	.9
18	---	---	---	2.6	1.2	1.9	1.4	-.3	.7	2.0	-.1	1.1
19	---	---	---	2.3	.9	1.8	1.5	-.3	.7	2.3	.1	1.2
20	---	---	---	2.4	.8	1.7	3.0	-.1	2.2	2.1	.7	1.4
21	---	---	---	2.5	.8	1.8	2.5	1.0	2.0	2.0	.5	1.3
22	---	---	---	3.0	.7	1.9	2.1	-1.2	.4	1.7	.7	1.2
23	---	---	---	2.8	1.0	2.0	1.4	-.7	.5	1.7	.5	1.3
24	---	---	---	2.3	.1	1.5	1.3	-.1	.7	1.9	.4	1.3
25	---	---	---	2.7	.2	1.6	1.5	.4	.9	2.2	.5	1.6
26	3.4	1.1	2.3	2.5	.5	1.9	1.5	.1	.8	3.1	.7	2.2
27	2.5	.8	2.0	2.2	.3	1.4	1.3	-.2	.6	3.5	1.5	2.7
28	2.9	-.4	1.2	2.5	.8	1.8	1.0	-.6	.4	3.6	1.9	2.9
29	---	---	---	1.6	-.3	.6	1.3	-.7	.5	3.3	1.3	2.3
30	---	---	---	-.4	-1.8	-1.0	1.7	-.3	.9	2.7	.7	1.8
31	---	---	---	.9	-1.1	.0	---	---	---	2.7	.5	1.7
MONTH	---	---	---	3.2	-1.8	1.34	3.0	-1.2	.74	3.9	-.7	1.42

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2.5	.6	1.6	3.0	.5	1.4	1.4	.5	1.0	2.2	.4	1.5
2	2.5	.7	1.7	2.4	.4	1.3	1.6	.0	.9	2.4	.3	1.6
3	2.3	.6	1.6	1.9	.9	1.5	1.5	-.1	.9	2.2	.2	1.4
4	1.8	.5	1.2	2.0	.7	1.5	1.6	-.2	1.0	2.0	.1	1.3
5	2.0	.7	1.3	2.0	.8	1.6	1.7	-.2	1.0	2.1	.1	1.5
6	2.3	1.1	1.5	2.4	.6	1.8	1.8	-.5	1.1	2.3	.3	1.6
7	2.8	1.1	2.1	3.0	1.1	2.1	1.9	-.4	1.1	2.2	.5	1.5
8	3.0	1.5	2.4	3.2	.8	2.2	2.4	-.1	1.4	1.9	.5	1.2
9	3.5	1.4	2.5	4.0	.7	2.3	2.5	.3	1.6	1.9	.5	1.0
10	3.4	1.2	2.6	2.9	.8	2.0	1.9	.5	1.4	2.0	.3	1.1
11	4.5	1.3	2.9	2.8	.6	1.9	1.5	.0	.9	1.7	.2	1.1
12	4.5	1.9	3.1	2.5	.5	1.8	1.3	-.1	.7	1.7	.0	1.0
13	2.8	1.4	2.2	2.2	.4	1.4	1.4	.3	.9	2.0	.0	1.1
14	2.3	.3	1.5	1.6	-.1	.9	1.6	.2	.9	1.9	.4	1.3
15	2.2	.1	1.5	1.7	.0	1.0	1.4	.1	.9	2.0	.7	1.5
16	2.5	.3	1.5	1.9	.5	1.2	1.6	-.1	1.0	2.4	.7	1.7
17	2.2	.6	1.4	2.1	.8	1.5	1.6	-.2	.9	2.3	.4	1.5
18	2.5	.7	1.4	2.3	.5	1.6	1.5	-.2	.9	2.0	.5	1.5
19	1.9	.9	1.3	2.1	.6	1.5	1.5	-.2	.8	1.9	.4	1.1
20	2.3	.8	1.6	2.9	.7	2.1	1.7	-.3	.9	2.1	.1	1.3
21	2.2	.7	1.6	2.8	.9	2.0	1.7	-.2	1.0	2.5	.8	1.8
22	2.2	.5	1.6	2.2	.5	1.6	1.5	-.1	.9	1.9	.8	1.3
23	2.3	.4	1.6	2.5	.5	1.8	1.5	-.2	.9	2.2	.5	1.3
24	2.1	.2	1.4	3.2	.8	2.1	2.0	.0	1.2	2.1	.7	1.5
25	1.7	-.2	1.0	2.7	.9	2.0	1.9	.6	1.5	2.1	.7	1.5
26	1.5	-.5	.7	2.4	.8	1.8	2.0	.7	1.5	2.2	.9	1.6
27	2.2	-.2	1.2	2.1	.6	1.5	1.7	.7	1.2	2.4	.6	1.8
28	2.8	.6	1.8	1.8	.4	1.2	1.7	.3	.9	3.1	1.2	2.3
29	3.0	1.1	2.2	1.7	.3	1.1	1.8	.6	1.2	2.7	.0	1.4
30	3.1	1.0	1.8	1.7	.4	1.1	2.0	.4	1.5	1.3	-.2	.7
31	---	---	---	1.5	.6	1.0	2.3	.5	1.5	---	---	---
MONTH	4.5	-.5	1.73	4.0	-.1	1.61	2.5	-.5	1.08	3.1	-.2	1.40

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

LOCATION.--Lat 29°44'57", long 95°17'27", Harris County, Hydrologic Unit 12040104, on west bank at Wharf #5, at end of private road, 1.0 mi downstream from station 08074700 Buffalo Bayou at 69th Street in Houston, 1.8 mi upstream from Brays Bayou, and 4.9 mi east of downtown Houston.

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1986 to current year.
WATER TEMPERATURE: April 1986 to current year.
DISSOLVED OXYGEN: April 1986 to current year.

INSTRUMENTATION.--Beginning April 1986, a three-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Water-quality monitor data was collected from a fixed-point intake located approximately 6.5 ft. below National Geodetic Vertical Datum of 1929. The fixed-point intake was raised to 5.5 ft. below same datum on Jan. 22, 1987. Dissolved oxygen data are not corrected for salinity.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 20,000 microsiemens Sept. 6, 1987; minimum, 140 microsiemens July 9, 1987.
WATER TEMPERATURE: Maximum, 33.5°C July 3, 1987; minimum, 10.0°C Jan. 24, 1987.
DISSOLVED OXYGEN: Maximum, 11.3 mg/L Jan. 23, 1987; minimum, 0.0 mg/L on several days during 1987 water year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 20,000 microsiemens Sept. 6; minimum, 140 microsiemens July 9.
WATER TEMPERATURE: Maximum, 32.5°C on several days during August; minimum, 10.0°C Jan. 24.
DISSOLVED OXYGEN: Maximum, 11.3 mg/L Jan. 23; minimum, 0.0 mg/L on many days during the year.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	5020	2510	4040	8860	6060	7590	6900	2300	4040	1210	381	590
2	6820	3690	5390	9250	2120	5280	6870	3390	5200	889	278	582
3	6180	2380	4680	4940	2430	2990	4820	1680	3060	1320	571	834
4	6350	3530	4620	5180	392	2760	3940	1120	2700	1100	567	779
5	6270	3920	4410	1180	392	601	3320	1370	2190	1060	440	697
6	7580	4840	5680	3060	863	1520	2750	1180	1920	987	361	553
7	8230	4310	6310	2430	1020	1570	2420	972	1690	923	337	595
8	7370	3060	5080	2740	1490	2200	3830	1730	2700	1350	469	799
9	3760	2160	3170	3920	2670	3310	4670	2670	3670	1600	449	764
10	7360	2260	5050	5650	314	4440	7460	3100	4450	4480	625	1350
11	11400	3260	7070	8630	5020	6190	8120	3350	4890	2400	713	1330
12	4960	520	2180	9330	6060	7560	8600	5930	7230	7280	700	1730
13	1650	392	772	---	---	---	8220	5370	6840	3240	1090	1850
14	1020	471	624	---	---	---	7810	5910	6860	2810	1160	1820
15	2120	471	982	12300	10300	11300	6340	526	2470	3380	2110	2520
16	2040	863	1410	12900	11500	12100	406	180	251	3340	479	1530
17	1960	863	1430	14700	11400	12700	1280	280	481	1000	195	494
18	3060	1250	1740	14200	11500	12700	1020	240	443	923	230	371
19	2510	1180	1800	13500	10400	12300	480	300	368	1300	493	802
20	2740	1720	2110	13700	11300	12600	520	400	473	2580	767	1050
21	3370	1250	2170	13700	11900	12800	920	360	533	2030	728	1190
22	2670	471	1540	13600	11400	12400	920	200	491	3660	1210	1690
23	1330	392	742	11700	471	7660	---	---	---	3910	547	1120
24	2590	1330	1990	1020	392	716	---	---	---	2510	557	900
25	4000	2510	2990	784	361	650	280	215	252	2880	908	1640
26	4940	2820	4010	850	381	520	260	200	235	7700	1050	2780
27	6590	4080	5260	938	576	730	332	225	248	3920	972	2100
28	6350	3690	5230	1830	586	1060	821	278	394	6090	1200	2430
29	7690	3370	5680	3940	1240	2190	811	288	431	8500	2570	5270
30	9330	5650	7350	3440	2190	2710	943	288	507	10200	5120	8160
31	10400	6820	8040	---	---	---	781	308	460	10500	5190	8240
MONTH	11400	392	3660	14700	314	5760	8600	180	2260	10500	195	1820

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9670	4760	7460	552	361	483	8620	5010	7140	16300	11300	14400
2	8780	4750	7010	780	269	462	8180	4480	6590	16100	10500	13300
3	9010	5830	7730	650	303	448	8730	4540	6860	16100	9710	13000
4	9330	6770	8260	601	308	431	8440	4380	6950	14500	7060	11500
5	9210	6870	8270	557	342	433	7080	4030	6100	10700	4270	7380
6	10200	8050	9020	762	293	463	8600	2440	4950	8970	4020	6390
7	10800	5220	9070	1690	396	727	10800	3560	6550	6680	1200	3150
8	10800	7970	9770	5460	1210	2620	12500	4540	8780	5140	864	2660
9	11700	8080	10400	8190	2650	5290	13400	6900	10200	5550	1740	2860
10	11800	7480	10200	9850	3700	6370	13100	7330	10000	7190	1710	3250
11	11400	6930	9400	11500	5000	8320	12000	7470	9900	7800	2780	5390
12	11000	6080	9690	10700	5540	7830	12900	6860	9550	7600	2360	5230
13	11300	6590	9520	10400	5450	7810	12900	9230	11800	13400	4040	8470
14	11000	7270	9400	10300	5710	7760	13900	7100	10600	11300	4000	7930
15	9380	2540	5850	10300	5980	7790	13900	8500	12000	12000	4900	9530
16	10300	3730	7000	9110	6620	7960	14200	7420	11800	11600	3320	8280
17	10900	6320	8670	8280	3270	6000	14800	7770	12100	6640	800	2450
18	11800	7630	10200	8040	3140	5630	13900	8120	11200	5660	1460	3020
19	15100	7630	10900	7350	3710	5840	13600	7450	10800	5140	1540	3270
20	11100	1530	5510	7460	3960	5680	12300	8950	10400	4740	2140	3170
21	9430	991	4200	7430	4440	6050	---	---	---	3920	1580	2710
22	13300	3260	7770	7060	3720	5740	14600	9800	12500	6820	3200	4480
23	11400	3330	7290	7990	3380	5520	14400	10100	12900	8000	1000	4850
24	11100	3050	6770	8140	3520	6000	15400	11600	13400	5700	1100	3510
25	5620	1160	2850	7730	3970	6490	15800	12700	14500	6180	1500	3470
26	1450	151	567	8200	3980	6750	16100	12600	14300	7640	3560	5410
27	280	151	226	7750	3900	6200	16900	10600	14200	9340	3680	7180
28	625	274	383	7470	4260	5980	16400	11100	14200	8500	5580	7090
29	---	---	---	8270	3720	5460	17500	9330	14600	9820	1300	6420
30	---	---	---	7760	3740	5250	17700	9950	14200	3840	1060	1970
31	---	---	---	8860	3840	7130	---	---	---	3580	1880	2670
MONTH	15100	151	7260	11500	269	5000	17700	2440	10700	16300	800	5950
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5380	2040	3790	1340	260	536	2820	1740	2210	12000	7280	10300
2	4400	1580	2580	980	200	468	4280	2400	3030	14900	7760	12600
3	---	---	---	580	260	394	4440	2500	3450	15900	5340	14000
4	---	---	---	800	380	501	6280	2460	4690	17900	11600	15400
5	---	---	---	760	400	465	7060	3560	5090	19400	12100	16900
6	---	---	---	560	360	455	7740	3720	6000	20000	10700	17000
7	---	---	---	720	360	425	10400	3560	7410	19300	12600	16900
8	---	---	---	520	340	415	8460	3520	6680	19900	9820	15900
9	3540	360	1470	460	140	240	11900	3600	8590	16600	8160	13000
10	540	280	399	280	180	206	12000	5700	9550	15000	7540	10800
11	1020	220	493	420	260	302	12700	6760	10300	10500	4220	7050
12	220	180	203	420	360	387	12400	6820	9610	10100	6620	8630
13	260	180	213	440	340	390	14100	8880	11100	11400	2800	6700
14	340	240	284	380	340	365	18100	8040	13100	12500	4000	7580
15	440	280	328	400	340	370	15600	9200	12600	10200	4840	6920
16	440	360	400	440	360	388	15500	10200	12900	13600	4860	9260
17	400	320	353	480	400	436	17100	11400	13800	7300	2880	4830
18	340	260	293	1200	500	705	15200	10500	13500	---	---	---
19	300	260	287	1140	520	770	15700	10700	14000	---	---	---
20	320	260	295	1700	520	1070	15700	10700	13600	---	---	---
21	300	280	295	800	400	624	14800	10200	12800	---	---	---
22	320	280	301	960	420	623	14800	10300	13200	---	---	---
23	320	280	303	800	380	503	15300	9000	13000	---	---	---
24	300	260	285	920	380	558	---	---	---	---	---	---
25	300	260	271	720	340	479	---	---	---	---	---	---
26	440	260	298	1260	400	730	18500	13900	16100	---	---	---
27	540	360	449	1980	600	1310	18700	9880	16500	---	---	---
28	1600	460	840	2300	920	1730	17400	11400	14700	---	---	---
29	3540	460	1100	2500	1060	1970	16400	12400	14800	---	---	---
30	1260	320	694	2380	1280	1960	16800	5800	12300	---	---	---
31	---	---	---	2920	1280	2010	10900	3580	7820	---	---	---
MONTH	5380	180	676	2920	140	703	18700	1740	10400	20000	2800	11400

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.0	26.0	26.5	28.5	26.5	28.0	31.0	29.0	30.0	30.0	29.0	30.0
2	27.5	26.5	27.0	28.0	26.0	27.0	31.5	29.5	30.0	30.5	29.5	30.0
3	---	---	---	29.0	26.5	27.5	31.5	30.0	30.5	30.5	27.0	30.0
4	---	---	---	30.0	28.0	29.0	31.0	28.5	30.5	30.0	30.0	30.0
5	---	---	---	30.5	29.0	29.5	---	---	---	30.5	30.0	30.0
6	---	---	---	30.5	29.5	29.5	31.5	29.5	30.5	30.5	30.0	30.0
7	---	---	---	30.0	29.0	29.5	32.5	30.0	31.5	30.5	29.5	30.0
8	---	---	---	29.0	28.0	29.0	32.5	29.5	31.0	30.5	29.5	30.0
9	27.0	25.0	26.0	28.5	24.0	25.5	32.0	30.0	31.0	31.0	29.0	30.0
10	25.5	25.0	25.0	27.0	25.0	26.0	---	---	---	31.5	29.0	30.0
11	26.0	25.5	25.5	29.0	26.5	27.5	32.0	29.5	30.5	30.5	29.0	29.5
12	26.0	25.5	26.0	30.0	28.0	29.0	---	---	---	29.5	28.5	29.0
13	27.5	26.0	26.5	30.0	28.5	29.5	32.0	30.5	31.0	30.0	28.0	29.0
14	28.5	27.5	27.5	30.5	29.0	29.5	32.0	29.5	31.0	31.0	29.0	29.5
15	29.0	28.0	28.0	30.0	29.5	30.0	32.5	30.0	31.5	30.0	29.0	29.5
16	30.5	29.0	29.5	30.5	29.5	30.0	32.5	30.5	31.5	30.0	29.0	29.5
17	29.5	28.5	29.0	30.0	30.0	30.0	32.0	31.0	31.5	30.5	29.0	29.5
18	29.0	27.5	28.0	31.0	29.5	30.0	32.0	31.5	31.5	---	---	---
19	29.0	27.5	28.5	31.0	29.5	30.0	32.5	31.5	32.0	---	---	---
20	30.0	28.5	29.0	30.5	29.5	30.0	32.5	32.0	32.0	---	---	---
21	29.5	29.0	29.5	30.0	29.0	29.5	32.5	32.0	32.0	---	---	---
22	30.0	29.0	29.5	29.5	28.5	29.0	32.5	31.5	32.0	---	---	---
23	30.5	29.0	29.5	29.0	28.0	28.5	32.5	32.0	32.0	---	---	---
24	29.5	29.0	29.5	29.5	28.0	28.5	---	---	---	---	---	---
25	30.0	29.5	29.5	29.0	27.0	28.5	---	---	---	---	---	---
26	30.0	29.5	30.0	29.5	27.0	28.5	32.0	31.5	31.5	---	---	---
27	30.5	29.0	30.0	29.5	26.5	29.0	32.0	31.0	31.5	---	---	---
28	30.0	29.0	29.5	30.5	28.5	29.5	32.0	31.0	31.5	---	---	---
29	30.0	28.0	29.0	30.0	28.5	29.0	31.5	31.0	31.5	---	---	---
30	29.5	27.0	28.0	30.0	28.5	29.5	31.5	29.5	31.0	---	---	---
31	---	---	---	30.0	28.0	29.5	30.0	28.5	29.5	---	---	---
MONTH	30.5	25.0	28.0	31.0	24.0	29.0	32.5	28.5	31.0	31.5	27.0	29.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.4	2.0	2.7	4.2	2.0	3.3	6.0	3.9	4.9	8.6	7.7	8.2
2	2.9	1.9	2.4	5.0	3.3	4.3	5.7	4.4	4.9	8.9	8.0	8.5
3	3.5	2.1	2.7	4.9	.2	4.0	7.6	5.7	6.8	8.4	7.9	8.2
4	3.7	2.1	3.0	5.8	1.8	3.6	8.3	6.5	7.3	8.6	8.1	8.3
5	3.5	2.0	2.9	5.6	2.1	4.8	7.8	6.9	7.4	8.4	7.8	8.2
6	2.8	1.7	2.3	3.5	.2	1.8	8.1	6.9	7.5	8.8	7.6	8.4
7	2.7	1.7	2.3	2.1	.3	1.1	8.0	6.8	7.5	8.6	8.1	8.4
8	2.6	1.4	2.0	.5	.5	.5	7.5	6.5	7.0	8.4	8.1	8.3
9	2.8	1.6	2.2	.0	.0	.0	6.6	5.3	6.0	8.2	7.4	8.0
10	2.5	1.7	2.1	.0	.0	.0	6.3	4.2	5.6	7.8	6.9	7.5
11	2.6	.7	1.7	---	---	---	6.0	3.4	5.1	8.1	7.3	7.7
12	5.2	2.4	3.7	---	---	---	4.8	3.9	4.2	7.9	7.2	7.6
13	6.6	4.8	5.4	---	---	---	5.3	4.1	4.6	8.1	7.4	7.7
14	7.1	6.3	6.7	---	---	---	4.7	3.4	4.1	8.6	7.7	8.2
15	6.7	4.9	5.9	.9	.1	.5	8.1	4.4	6.6	7.9	6.7	7.5
16	6.0	5.3	5.5	1.0	.4	.7	9.0	8.0	8.6	8.2	6.5	7.4
17	6.1	5.2	5.6	1.3	.6	.9	8.8	7.0	8.1	8.9	7.9	8.4
18	6.0	5.0	5.5	1.5	.6	1.1	8.6	7.3	8.3	8.8	8.2	8.6
19	6.0	5.3	5.6	.9	.1	.5	8.5	7.8	8.2	8.5	7.4	8.1
20	6.6	5.2	5.8	.2	.1	.1	8.0	7.5	7.7	8.3	6.9	7.8
21	6.7	5.6	6.2	.3	.1	.2	8.6	7.3	8.0	8.4	7.4	8.0
22	6.4	5.7	6.2	.3	.1	.2	9.3	7.4	8.3	10.6	7.8	8.5
23	6.0	5.2	5.6	.9	.1	.3	---	---	---	11.3	8.8	10.0
24	5.2	4.3	4.7	2.0	.9	1.4	---	---	---	10.1	9.3	9.9
25	4.5	3.6	4.1	4.7	1.6	2.7	9.4	9.0	9.2	10.0	9.1	9.7
26	4.9	3.2	3.9	7.5	5.0	6.7	9.2	8.9	9.1	9.8	7.3	9.0
27	4.6	3.8	4.3	7.5	6.5	6.8	9.0	8.6	8.9	9.8	8.2	9.1
28	4.9	3.9	4.4	7.8	6.3	7.2	8.8	7.9	8.5	9.4	6.9	8.7
29	4.9	3.7	4.3	7.0	4.6	6.1	8.8	7.7	8.4	8.0	5.1	6.9
30	4.5	3.2	4.0	6.2	5.0	5.6	8.7	7.7	8.3	6.4	4.5	5.3
31	4.2	2.9	3.7	---	---	---	8.7	7.7	8.3	6.3	4.2	5.0
MONTH	7.1	.7	4.1	7.8	.0	2.5	9.4	3.4	7.2	11.3	4.2	8.1

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.9	4.2	4.9	7.0	5.5	6.0	3.3	.7	1.7	2.5	.7	1.6
2	5.3	4.0	4.5	7.3	6.1	6.8	3.3	.5	1.8	2.8	.8	1.9
3	4.7	3.5	3.8	6.9	6.4	6.7	2.2	.3	1.3	2.9	.2	1.5
4	3.8	2.9	3.4	6.9	6.3	6.6	2.5	.5	1.4	2.1	1.2	1.7
5	4.5	2.3	3.3	7.0	6.4	6.7	3.5	1.8	2.5	1.2	.0	.3
6	2.9	1.8	2.3	7.1	6.5	6.8	3.2	1.8	2.4	1.2	.0	.4
7	3.1	1.4	2.2	6.9	5.5	6.6	3.3	1.8	2.6	2.7	.7	1.8
8	3.7	1.9	2.5	6.3	3.7	5.1	3.5	.2	2.3	2.3	1.3	1.9
9	2.9	2.1	2.5	4.9	3.0	4.0	3.3	.0	1.7	2.0	1.4	1.7
10	2.9	2.3	2.6	4.0	2.3	3.3	3.5	.0	2.0	2.4	.8	1.8
11	3.6	2.3	2.7	3.6	1.6	2.7	3.8	2.0	2.8	2.5	.3	1.8
12	2.8	1.7	2.1	3.2	1.1	2.2	5.4	2.0	3.4	2.4	1.1	1.7
13	2.1	1.3	1.8	3.4	1.2	1.8	4.1	2.1	2.8	1.8	.3	1.0
14	2.9	1.4	1.9	3.1	.7	1.9	3.5	1.2	2.6	2.3	.2	.8
15	3.5	1.3	2.1	2.8	.9	2.1	3.5	1.0	2.1	1.9	.1	.7
16	3.4	1.2	2.1	3.3	1.5	2.4	3.8	.6	2.0	1.6	.1	.8
17	2.3	.4	1.3	3.6	1.4	2.8	3.5	.9	2.5	2.5	.2	1.2
18	1.6	.5	1.0	3.1	.9	1.9	4.4	2.1	3.4	2.2	.1	1.0
19	2.4	.8	1.6	2.1	.5	1.2	4.7	2.2	3.6	1.7	.3	1.1
20	6.8	1.8	3.9	2.1	.3	.9	9.0	2.4	3.9	2.4	.9	1.6
21	7.5	2.7	5.5	2.1	.2	.8	---	---	---	2.3	.7	1.5
22	5.9	1.4	3.9	2.1	.7	1.3	2.9	.3	1.5	2.4	.4	1.3
23	6.4	2.1	4.5	3.2	.1	1.7	---	---	---	1.5	.1	1.0
24	5.9	3.2	4.6	2.4	.1	1.1	2.4	.3	1.2	1.9	.3	1.3
25	7.2	4.9	6.0	2.5	.4	1.1	1.8	.7	1.1	2.0	.4	1.1
26	8.0	6.9	7.6	2.0	.1	.9	2.7	.7	1.6	3.8	.2	1.8
27	7.9	7.1	7.5	2.1	.2	.9	4.0	.5	2.1	3.7	1.4	2.6
28	7.3	5.6	6.6	3.1	.2	1.4	3.9	.8	2.1	3.8	1.7	2.7
29	---	---	---	3.3	.2	1.8	3.5	.4	1.6	4.1	.9	2.0
30	---	---	---	3.4	1.4	2.7	2.9	.3	1.7	2.6	1.1	1.7
31	---	---	---	4.3	.6	1.9	---	---	---	2.9	1.4	2.2
MONTH	8.0	.4	3.5	7.3	.1	3.0	9.0	.0	2.2	4.1	.0	1.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.0	.9	2.1	4.5	1.9	2.8	3.6	.9	1.8	1.5	.0	.4
2	3.0	1.9	2.3	5.3	3.2	4.0	3.4	.4	1.8	1.6	.1	.3
3	---	---	---	4.7	3.4	3.9	3.9	.5	2.1	4.8	.0	.5
4	---	---	---	3.4	1.7	2.6	3.5	.3	1.6	1.4	.1	.3
5	---	---	---	2.9	1.5	2.3	2.7	.4	1.5	1.0	.1	.3
6	---	---	---	2.6	1.6	2.0	3.3	.3	1.3	2.3	.0	.5
7	---	---	---	2.5	1.3	1.9	4.0	.4	1.6	1.5	.0	.4
8	---	---	---	3.0	.9	1.5	4.4	.7	2.2	2.9	.0	1.1
9	5.5	2.0	3.8	4.4	1.3	3.6	4.5	.4	1.6	2.9	.5	1.8
10	5.6	4.8	5.3	5.4	4.2	4.5	2.6	.4	1.1	3.6	.9	2.4
11	5.6	4.3	5.0	4.8	3.3	4.1	2.9	.4	1.2	2.6	.1	1.8
12	6.2	5.5	5.9	4.5	2.3	3.2	4.2	.4	1.8	1.7	.0	.9
13	6.0	5.4	5.8	3.9	2.6	3.3	3.0	.6	1.9	2.4	.1	1.3
14	5.3	4.2	4.8	3.4	2.4	2.9	3.0	.4	1.8	2.9	.0	1.4
15	4.6	2.8	3.7	3.2	2.3	2.8	2.7	.9	2.0	3.3	.8	2.0
16	3.9	2.7	3.4	3.3	1.0	1.7	3.1	.8	2.0	3.2	.1	1.4
17	5.2	1.9	3.0	3.1	1.2	2.3	3.3	.4	2.0	1.8	.7	1.2
18	4.9	3.2	4.2	4.6	1.3	2.6	3.2	.8	1.7	---	---	---
19	4.3	2.9	3.6	3.6	1.3	2.3	2.7	.3	1.2	---	---	---
20	4.2	3.1	3.6	2.9	.3	1.7	3.2	.2	1.4	---	---	---
21	4.3	2.8	3.6	3.0	.9	2.0	3.6	.3	1.8	---	---	---
22	4.0	2.7	3.4	1.7	.0	.9	3.3	.1	1.5	---	---	---
23	3.8	2.0	2.6	3.3	.0	.5	3.4	.0	1.5	---	---	---
24	3.9	2.1	3.0	2.8	.4	1.5	---	---	---	---	---	---
25	3.8	1.9	3.0	3.1	1.7	2.4	---	---	---	---	---	---
26	3.1	1.5	2.5	2.6	1.1	1.7	2.2	.4	1.1	---	---	---
27	3.2	1.6	2.4	2.3	.2	1.1	3.3	.2	.8	---	---	---
28	3.2	1.4	2.2	2.5	.0	.7	1.6	.1	.6	---	---	---
29	3.7	1.5	2.7	1.6	.0	.4	.5	.0	.1	---	---	---
30	4.5	2.7	3.4	1.5	.3	.7	1.2	.0	.2	---	---	---
31	---	---	---	2.6	.5	1.5	1.7	.0	.5	---	---	---
MONTH	6.2	.9	3.6	5.4	.0	2.2	4.5	.0	1.4	4.8	.0	1.1

08075000 BRAYS BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°41'49", long 95°24'43", Harris County, Hydrologic Unit 12040104, near right bank at downstream side of Main Street Bridge in southwest Houston, 1.6 mi upstream from Harris Gully, and 11.6 mi upstream from Buffalo Bayou.

DRAINAGE AREA.--94.9 mi². Prior to October 1976, 88.4 mi². Changes due to drainage ditch relocations.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.16 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence. Prior to June 20, 1936, nonrecording gage, and June 20, 1936, to Nov. 25, 1959, water-stage recorder at site 0.8 mi downstream at same datum.

REMARKS.--No estimated daily discharge. Records good. No diversion above station. Low flow is mostly sewage effluent from Houston suburbs. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 134 ft³/s (97,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s June 15, 1976, and Sept. 19, 1983 (gage height, 52.13 ft); minimum daily, 0.1 ft³/s Oct. 11, 12, 1937, Mar. 14, Apr. 1, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1911, 56.0 ft in June 1919 before channel rectification, former site, from information by engineer for city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,300 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 4	1615	12,700	41.78	June 9	1300	10,100	39.64
Nov. 23	1715	8,830	38.49	June 11	1900	12,000	41.23
Dec. 15	1145	10,300	39.84	June 12	1730	*22,400	*48.35
Dec. 23	0030	12,600	41.69	July 9	0830	19,800	46.73
Feb. 26	0230	10,800	40.28				

Minimum daily discharge, 85 ft³/s Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	97	136	121	163	173	105	123	119	424	110	124
2	108	524	117	122	150	146	113	124	111	432	110	101
3	108	192	111	175	116	133	111	126	236	222	116	93
4	106	2710	105	127	109	128	122	288	401	125	112	92
5	125	596	104	121	100	123	113	178	312	112	115	90
6	216	174	93	121	97	123	151	391	164	126	111	93
7	141	133	98	118	98	125	122	381	210	159	116	94
8	335	118	105	124	103	123	108	597	265	253	123	105
9	202	131	147	203	98	118	111	600	3640	5340	175	97
10	125	103	131	135	100	115	111	480	1260	434	182	245
11	452	104	134	119	97	154	113	174	3500	188	122	528
12	2130	99	113	114	98	119	112	258	8040	144	115	206
13	1440	115	103	116	94	116	115	159	1840	133	113	187
14	341	102	355	153	100	118	104	110	461	124	110	112
15	151	90	3880	127	414	116	105	105	321	118	111	107
16	119	102	621	647	129	127	111	1100	339	118	108	292
17	116	102	274	2440	108	341	122	386	744	118	112	215
18	95	95	1710	489	94	133	117	133	940	114	110	190
19	92	93	422	219	114	115	108	109	232	111	101	202
20	91	93	213	156	528	116	112	116	159	205	106	110
21	90	85	167	154	168	117	118	105	142	731	101	102
22	949	117	3720	138	132	115	119	100	145	314	107	97
23	609	2450	3400	128	120	146	114	565	130	147	112	94
24	301	2340	413	126	596	120	117	203	123	167	129	92
25	143	1800	223	124	1080	107	116	116	118	183	123	92
26	116	346	168	121	4130	101	118	107	108	116	136	94
27	112	363	148	115	453	92	121	101	111	114	137	114
28	99	295	135	119	334	95	120	100	108	114	122	802
29	95	174	134	118	---	94	120	800	110	117	421	255
30	93	148	127	115	---	88	123	383	600	148	343	105
31	89	---	125	106	---	88	---	144	---	115	300	---
TOTAL	9296	13891	17732	7311	9923	3925	3472	8662	24989	11266	4409	5130
MEAN	300	463	572	236	354	127	116	279	833	363	142	171
MAX	2130	2710	3880	2440	4130	341	151	1100	8040	5340	421	802
MIN	89	85	93	106	94	88	104	100	108	111	101	90
AC-FT	18440	27550	35170	14500	19680	7790	6890	17180	49570	22350	8750	10180

CAL YR 1986 TOTAL 94503 MEAN 259 MAX 3880 MIN 85 AC-FT 187400
WTR YR 1987 TOTAL 120006 MEAN 329 MAX 8040 MIN 85 AC-FT 238000

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Pesticide analyses: November 1969 to August 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
FEB												
19...	1105	71	820	8.00	17.0	12	7.5	11.4	117	5.7	K2	K1
26...	1323	1900	179	6.50	14.0	100	60	10.8	104	6.3	130	9300
APR												
28...	1243	137	820	8.20	27.5	15	15	18.2	229	1.4	K2	K1
JUN												
10...	1510	1080	250	7.70	24.0	100	--	7.2	85	2.4	K6	520
JUL												
14...	1325	134	785	8.30	30.0	9	1.5	17.2	226	4.2	K1	K1

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB												
19...	160	0	49	9.7	110	4	6.1	225	38	96	0.50	24
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	150	0	45	9.1	110	4	6.3	232	38	95	0.50	23
JUN												
10...	79	0	24	4.7	18	0.9	3.8	87	15	16	0.20	12
JUL												
14...	--	--	--	--	--	--	--	--	--	--	--	--

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
FEB												
19...	470	9	5	3.41	0.890	4.30	2.10	2.4	4.5	2.40	7.7	3
26...	--	101	9	0.350	0.050	0.400	0.380	0.92	1.3	0.710	9.7	--
APR												
28...	470	40	15	3.43	0.770	4.20	1.30	1.6	2.9	2.40	5.6	3
JUN												
10...	150	60	7	0.420	0.180	0.600	0.390	2.7	3.1	0.590	12	--
JUL												
14...	--	10	5	2.22	0.980	3.20	1.20	2.1	3.3	1.50	6.7	4

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
19...	160	1	<10	5	21	<5	33	<0.1	2	<1	31
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	140	<1	<10	6	7	<5	19	<0.1	1	<1	30
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	160	<1	20	11	<3	<5	13	<0.1	<1	<1	17

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
FEB											
19...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	<0.10	0.20	<0.10	<2.0	0.2	<0.1	<0.10	<2.0	<2.0	0.50	<0.1
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	<0.10	<0.10	<0.10	--	0.2	<0.1	<0.10	--	--	0.10	<0.1

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX

LOCATION.--Lat 29°37'07", long 95°26'45", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Hiram Clarke Street in southwest Houston, 12.7 mi upstream from gage Sims Bayou at Houston, and 19.7 mi upstream from mouth.

DRAINAGE AREA.--20.2 mi².

PERIOD OF RECORD.--August 1964 to current year (discharge measurements and supplemental peak discharges only Dec. 6, 1978, to Aug. 31, 1979).
Water-quality records.--Chemical, biochemical, and pesticide analyses: October 1970 to September 1985.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence.

REMARKS.--No estimated daily discharges. Records fair. Channel bed was lowered 5 to 6 ft during rectification in 1978. Stage discharge relationship is affected by seasonal vegetal growth during most years. No known diversion above station. Low flow is partly sustained by sewage effluent from Houston suburbs. Records furnished by Houston Lighting and Power Co. show that during the current year about 67 acre-ft of ground water was used for cooling purposes then released to the Bayou about 200 ft upstream from this station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--22 years (water years 1965-78, 1980-87), 30.4 ft³/s (22,020 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,660 ft³/s Sept 19, 1983 (elevation, 54.50 ft); maximum elevation, 57.12 ft June 15, 1976, occurred prior to 1978 channel rectification; minimum daily discharge, 1.5 ft³/s July 26, 1965.

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

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Nov. 4	1900	1,120	44.10	June 9	1245	1,410	45.95
Dec. 15	1200	2,000	46.85	June 11	2015	1,470	46.16
Dec. 22	2400	2,390	47.98	June 12	1745	*3,490	*51.79
Jan. 17	1045	1,610	45.47	July 9	0700	2,300	49.23
Feb. 26	0300	2,640	48.51				

Minimum daily discharge, 8.1 ft³/s Oct. 1, Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	10	16	15	19	32	12	9.8	13	24	10	13
2	8.6	85	14	14	22	22	12	9.8	12	35	9.6	13
3	8.3	27	14	14	18	18	12	9.9	16	29	10	10
4	9.1	319	13	14	20	18	12	21	15	16	11	12
5	8.9	197	13	12	19	17	12	13	27	14	11	11
6	9.2	30	13	12	18	17	14	17	14	13	10	11
7	8.7	19	12	13	18	18	13	29	22	14	10	11
8	30	16	12	14	18	19	14	32	25	22	10	11
9	35	13	12	14	18	17	11	18	577	773	10	11
10	10	12	12	14	17	16	11	15	216	100	9.2	15
11	27	12	13	14	17	18	12	12	452	30	8.8	18
12	455	12	12	14	17	17	11	88	1450	19	8.8	12
13	406	12	12	13	17	16	11	66	456	15	8.5	11
14	83	13	32	17	17	15	10	14	68	14	9.2	11
15	21	12	816	15	52	15	9.8	11	32	13	9.2	11
16	12	13	160	88	15	14	10	59	51	13	8.4	72
17	11	12	43	639	13	23	9.4	50	194	14	8.2	42
18	11	11	344	152	13	17	10	15	70	14	8.1	21
19	11	11	103	45	13	13	11	13	32	14	8.4	20
20	10	11	37	27	79	13	11	11	23	24	9.0	14
21	11	11	24	25	23	13	10	9.9	21	18	8.6	13
22	60	13	924	24	16	12	10	9.1	19	14	9.1	13
23	107	212	796	21	15	15	10	129	17	12	9.0	11
24	40	518	92	21	119	14	9.8	85	16	12	9.2	11
25	16	462	38	21	264	12	10	22	15	12	9.0	12
26	13	71	25	21	1140	12	11	16	15	12	9.1	12
27	11	44	20	19	118	12	10	14	15	11	8.7	22
28	9.9	49	18	20	68	14	10	13	15	9.4	8.8	202
29	11	23	15	19	---	13	9.5	39	14	9.4	26	49
30	11	18	15	19	---	13	10	50	34	11	35	19
31	11	---	14	20	---	13	---	15	---	11	31	---
TOTAL	1483.8	2268	3684	1390	2203	498	328.5	915.5	3946	1341.8	350.9	714
MEAN	47.9	75.6	119	44.8	78.7	16.1	10.9	29.5	132	43.3	11.3	23.8
MAX	455	518	924	639	1140	32	14	129	1450	773	35	202
MIN	8.1	10	12	12	13	12	9.4	9.1	12	9.4	8.1	10
AC-FT	2940	4500	7310	2760	4370	988	652	1820	7830	2660	696	1420

CAL YR 1986 TOTAL 13193.3 MEAN 36.1 MAX 924 MIN 8.1 AC-FT 26170
WTR YR 1987 TOTAL 19123.5 MEAN 52.4 MAX 1450 MIN 8.1 AC-FT 37930

08075500 SIMS BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°40'27", long 95°17'21", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on State Highway 35 in southeast Houston and 7.0 mi upstream from mouth.

DRAINAGE AREA.--63.0 mi². Prior to Oct. 1, 1976, 64.0 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1922: 1960. 1975(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.09 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--No estimated daily discharges. Records good. Low flow is largely sustained by sewage effluent from Houston suburbs and from industrial wastes. Stage discharge relationship is affected by seasonal vegetal growth during most years. Gage-height telemetry at station.

AVERAGE DISCHARGE.--35 years, 88.8 ft³/s (64,340 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s Aug. 18, 1983, Hurricane Alica (gage height, 33.23 ft); minimum daily, 0.9 ft³/s Aug. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 15	1600	3,400	23.66	June 11	2400	2,880	21.77
Dec. 23	0330	4,430	25.78	June 12	2130	*7,400	*29.33
Jan. 17	1500	2,740	22.12	July 9	1200	6,740	28.58
Feb. 26	0530	4,740	26.32				

Minimum daily discharge, 30 ft³/s Apr. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	44	63	51	47	124	44	63	51	330	56	67
2	45	459	59	47	52	82	48	55	55	418	50	57
3	50	155	57	103	44	69	47	49	66	177	51	55
4	47	398	55	56	45	63	33	114	52	63	52	51
5	50	620	53	48	43	60	30	75	66	48	56	46
6	51	125	49	53	40	54	35	136	57	90	57	44
7	54	78	47	49	39	54	48	122	47	737	53	42
8	72	64	47	53	39	52	52	127	74	600	85	52
9	102	66	53	55	38	52	59	101	851	3720	53	53
10	57	52	52	52	40	59	56	68	657	761	53	53
11	92	52	58	48	31	57	56	56	862	168	54	58
12	956	46	49	47	45	54	53	86	3460	92	51	66
13	946	54	48	47	52	48	52	201	2570	101	50	50
14	301	53	83	65	51	52	58	65	317	79	55	54
15	85	47	1780	53	155	54	54	206	129	68	55	52
16	54	48	746	308	68	55	53	132	104	62	48	172
17	47	46	203	1430	52	97	51	173	336	67	49	276
18	44	47	916	612	48	66	50	68	288	59	56	83
19	43	44	477	171	46	56	54	64	106	55	57	85
20	42	42	161	95	148	54	61	56	78	105	64	60
21	41	41	92	79	97	52	57	53	72	101	58	53
22	110	50	1600	72	60	51	59	46	62	75	60	59
23	249	564	2540	58	50	59	59	84	65	71	47	52
24	160	1320	406	55	247	59	58	238	63	60	50	62
25	65	1710	164	50	411	53	57	60	65	60	49	53
26	46	322	99	48	2810	51	34	45	71	57	47	61
27	44	166	77	49	482	55	32	45	58	52	51	63
28	42	179	66	48	253	52	49	53	53	55	65	342
29	43	97	58	47	---	52	46	92	55	55	65	240
30	45	73	56	39	---	49	62	134	380	56	204	77
31	45	---	52	36	---	49	---	63	---	57	176	---
TOTAL	4073	7062	10266	4024	5533	1844	1507	2930	11170	8499	1977	2538
MEAN	131	235	331	130	198	59.5	50.2	94.5	372	274	63.8	84.6
MAX	956	1710	2540	1430	2810	124	62	238	3460	3720	204	342
MIN	41	41	47	36	31	48	30	45	47	48	47	42
AC-FT	8080	14010	20360	7980	10970	3660	2990	5810	22160	16860	3920	5030

CAL YR 1986 TOTAL 47108 MEAN 129 MAX 3100 MIN 32 AC-FT 93440
WTR YR 1987 TOTAL 61423 MEAN 168 MAX 3720 MIN 30 AC-FT 121800

08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
FEB												
19...	0935	43	1190	8.00	15.5	16	6.5	8.8	87	6.6	170	26
26...	1203	2960	149	6.80	14.0	110	66	10.2	99	7.5	12000	140000
APR												
28...	1143	54	1300	7.40	26.0	18	28	5.6	69	4.0	2600	2800
JUN												
10...	1555	697	310	7.80	25.0	85	--	6.4	77	5.3	11000	22000
JUL												
14...	1145	79	735	7.30	29.0	18	20	4.2	54	4.2	7700	2600

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB												
19...	170	0	49	11	180	6	7.2	223	170	130	1.0	20
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	190	29	55	13	190	6	8.8	162	180	180	0.80	18
JUN												
10...	75	0	24	3.7	34	2	3.5	75	29	35	0.20	13
JUL												
14...	--	--	--	--	--	--	--	--	--	--	--	--

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
FEB												
19...	700	30	6	1.94	0.260	2.20	3.50	1.1	4.6	2.20	8.6	3
26...	--	102	4	0.150	0.050	0.200	0.130	0.77	0.90	0.250	8.7	--
APR												
28...	740	55	16	10.6	0.380	11.0	0.470	1.9	2.4	2.40	5.3	3
JUN												
10...	190	96	25	0.440	0.060	0.500	0.320	5.8	6.1	0.530	12	--
JUL												
14...	--	52	46	3.17	0.730	3.90	0.390	1.3	1.7	0.920	9.5	4

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
19...	110	1	<10	4	16	<5	270	<0.1	<1	<1	30
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	120	<1	<10	4	6	<5	180	<0.1	<1	<1	48
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	120	<1	<10	11	15	<5	23	<0.1	<1	<1	11

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
FEB											
19...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	<0.10	0.70	<0.10	--	0.2	<0.1	<0.10	--	--	<0.10	<0.1

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX

LOCATION.--Lat 29°40'35", long 95°14'37", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge at Forest Oaks Street in southeast Houston, 0.8 mi upstream from mouth of Berry Creek, and 1.7 mi upstream from Sims Bayou.

DRAINAGE AREA.--10.7 mi². Prior to Oct. 1, 1973, 11.1 mi². Oct. 1, 1976, to Dec. 31, 1977, 10.1 mi². Drainage ditch relocations resulted in drainage area changes.

PERIOD OF RECORD.--October 1967 to current year (stage only beginning October 1982). October 1966 to September 1982 operated as partial discharge or flood-hydrograph partial-record station. April 1964 to September 1966 operated as a daily discharge station.
Water-quality records.--Chemical, biochemical, and pesticide analyses: October 1968 to September 1981. Water temperatures: April 1964 to September 1981.

REVISED RECORDS.--WDR TX-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.72 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment prior to Oct. 1, 1982, auxiliary water-stage recorder 0.8 mi downstream at same datum. June 25, 1964 to Jan. 11, 1965, auxiliary nonrecording gage 0.8 mi downstream at same datum.

REMARKS.--Records good. Low stages affected by tidal surge. Rises sometimes affected by backwater from Sims Bayou. The reports "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan area," for the water years 1965-82 contain additional storm runoff data for this station. Gage-height telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s June 9, 1975; maximum gage height, 23.85 ft Sept. 20, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.80 ft June 12 at 1700 hours; minimum, 3.57 ft Dec. 10.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.21	5.03	5.62	4.09	5.90	3.73	5.40	3.75	5.58	4.29	4.42	3.85
2	6.50	5.15	12.11	5.47	5.02	3.67	5.50	3.82	5.08	3.77	5.07	3.76
3	6.80	5.83	7.17	4.66	4.82	3.60	6.55	3.85	4.88	3.68	4.97	3.89
4	6.45	4.99	10.63	5.62	5.54	3.66	3.85	3.72	5.68	3.82	4.93	3.83
5	5.96	4.75	8.43	4.91	5.62	3.96	5.13	3.76	5.65	4.18	5.17	3.83
6	5.80	4.32	5.43	4.21	5.82	4.03	5.45	4.56	5.67	3.70	---	3.80
7	5.75	4.47	6.26	4.41	5.86	4.14	5.35	4.07	4.08	3.63	---	---
8	9.58	5.42	5.84	4.12	5.75	4.11	5.38	3.87	4.40	3.58	---	---
9	6.62	4.25	5.56	3.81	5.60	3.82	5.45	3.92	5.09	3.63	---	---
10	5.69	4.28	5.62	3.98	4.71	3.57	4.64	3.78	5.07	3.73	---	---
11	7.65	4.37	5.48	4.36	4.95	3.69	4.31	3.71	4.82	3.68	5.05	3.92
12	14.21	5.98	5.31	4.41	4.62	3.63	4.40	3.77	4.63	3.67	5.15	3.85
13	12.66	8.99	5.67	3.96	5.03	3.59	4.73	3.81	4.58	3.63	---	---
14	8.99	5.12	5.55	4.02	6.01	4.05	5.70	4.04	5.10	3.80	---	---
15	5.50	4.54	5.71	3.96	11.64	5.83	5.71	3.92	5.80	3.81	---	---
16	5.72	4.36	5.78	4.16	7.56	4.40	7.85	5.01	4.06	3.64	6.57	---
17	5.72	4.30	5.60	3.81	5.52	4.00	11.06	5.46	3.93	3.63	6.70	5.50
18	5.70	4.05	5.45	3.84	8.60	5.52	7.08	4.30	4.60	3.64	6.08	5.06
19	5.59	4.07	5.41	3.79	7.99	4.18	4.30	3.97	5.92	3.71	5.78	4.35
20	5.84	4.58	5.58	3.68	5.13	3.98	4.52	3.90	5.90	4.27	5.95	4.23
21	6.09	4.84	5.60	4.24	5.50	4.11	4.95	3.93	5.04	3.70	6.05	4.33
22	7.04	5.80	6.12	4.19	12.00	5.50	4.99	3.85	4.93	3.83	6.45	4.22
23	7.99	6.05	14.65	5.03	12.18	5.00	4.82	3.78	5.39	3.66	6.35	4.71
24	7.21	4.00	13.04	6.92	5.04	4.24	5.04	3.75	6.25	5.39	---	---
25	4.96	3.75	12.28	5.27	5.33	4.21	4.85	3.70	11.65	4.20	---	---
26	5.15	3.86	5.28	4.08	5.43	4.02	4.46	3.81	13.60	6.30	---	---
27	5.28	4.20	5.46	4.28	5.52	3.92	4.85	3.75	6.30	4.68	5.54	4.06
28	5.60	4.22	5.38	4.19	5.38	3.75	4.85	3.73	6.17	4.05	5.78	4.59
29	5.36	4.21	5.66	3.98	5.48	3.77	5.02	3.76	---	---	5.55	3.73
30	5.45	4.18	5.83	3.84	5.32	3.75	4.70	3.76	---	---	3.73	3.64
31	5.89	4.80	---	---	5.53	3.75	5.09	3.79	---	---	4.12	3.67
MONTH	14.21	3.75	14.65	3.68	12.18	3.57	11.06	3.70	13.60	3.58	---	---

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.80	3.67	5.19	3.72	5.70	4.01	10.09	4.18	4.70	3.94	5.50	4.00
2	4.74	3.68	5.37	3.80	5.77	4.10	9.45	4.75	4.90	3.90	5.73	3.95
3	4.45	3.69	6.90	3.99	5.60	4.18	6.42	4.48	4.90	3.88	5.55	3.95
4	5.19	3.65	6.35	4.53	5.10	3.98	5.34	4.18	4.95	3.87	5.35	3.96
5	5.17	3.83	5.67	4.01	5.30	4.09	5.40	4.24	5.05	3.86	5.57	4.02
6	4.75	3.72	7.93	3.88	5.52	4.50	6.14	4.24	5.10	3.86	5.74	4.02
7	4.52	3.67	8.57	4.29	6.11	4.45	11.73	4.60	5.20	3.85	5.48	3.93
8	4.44	3.68	6.51	4.22	6.32	4.95	6.98	5.35	5.70	3.85	5.40	3.95
9	4.47	3.69	5.40	4.42	14.45	4.90	11.48	4.79	6.00	3.90	5.27	3.94
10	4.80	3.77	5.82	4.16	8.90	5.95	6.40	4.60	5.29	4.00	5.42	3.92
11	4.86	3.88	5.09	4.25	9.35	5.26	6.05	4.10	4.85	3.85	5.22	3.92
12	5.13	4.42	5.29	3.95	15.80	7.25	5.85	4.00	4.65	3.83	5.10	4.06
13	5.77	4.44	5.69	4.57	10.69	5.05	5.45	3.93	4.75	3.86	5.35	3.92
14	4.56	3.67	5.11	3.83	5.59	4.30	4.95	3.90	4.85	3.90	5.19	3.91
15	4.33	3.65	11.71	3.81	5.49	4.03	5.05	3.88	4.75	3.91	5.40	4.04
16	4.37	3.71	10.40	4.93	5.74	4.03	5.10	3.88	4.90	3.90	6.14	4.04
17	5.03	3.70	5.42	4.34	6.92	4.75	5.35	4.05	4.95	3.90	5.70	4.07
18	4.98	3.73	5.19	3.97	7.24	4.64	5.60	3.98	4.85	3.91	5.40	4.06
19	5.09	3.68	5.48	3.92	5.14	4.32	5.36	3.98	4.90	3.90	5.30	4.05
20	5.01	3.70	5.37	4.09	5.60	4.26	6.30	4.00	5.00	3.89	5.44	3.98
21	4.58	3.77	5.18	4.06	6.00	5.39	6.14	4.20	5.00	3.91	5.84	4.14
22	4.30	3.69	4.40	4.09	5.83	5.08	5.55	3.97	4.85	3.89	5.30	4.10
23	4.40	3.78	10.80	4.00	5.53	4.02	5.85	3.92	4.90	3.88	5.58	3.95
24	4.35	3.82	5.98	4.46	5.45	3.94	6.45	4.05	5.25	3.90	5.55	4.12
25	4.50	3.87	5.46	4.10	5.06	3.89	6.04	4.19	5.30	4.02	5.45	4.05
26	---	3.80	6.30	4.18	4.77	3.89	5.75	4.09	5.45	4.10	5.45	4.25
27	4.41	3.81	6.75	4.93	5.51	3.90	5.50	3.90	5.00	4.00	5.70	3.98
28	4.17	3.75	6.80	5.24	6.03	3.92	5.15	3.90	5.09	3.89	6.52	4.67
29	4.35	3.80	6.56	5.07	6.27	4.39	5.00	3.87	5.15	3.94	6.15	3.97
30	4.78	3.80	5.95	4.60	8.07	4.16	4.95	3.90	6.00	4.25	4.70	3.95
31	---	---	5.93	4.09	---	---	4.70	3.95	5.80	4.09	---	---
MONTH	---	3.65	11.71	3.72	15.80	3.89	11.73	3.87	6.00	3.83	6.52	3.91

08075730 VINCE BAYOU AT PASADENA, TX

LOCATION.--Lat 29°41'40", long 95°12'58", Harris County, Hydrologic Unit 12040104, on right bank of concrete lined channel at end of West Ellaine Avenue in Pasadena and 2.4 mi upstream from mouth.

DRAINAGE AREA.--7.32 mi². Prior to Jan. 1, 1978, 8.21 mi². Jan. 1 to Sept. 30, 1978, 7.61 mi². Drainage area revisions due to drainage ditch changes.

PERIOD OF RECORD.--October 1971 to current year.
Water-quality records.--Chemical, biochemical and pesticide analyses: May 1971 to September 1973 and October 1976 to July 1979.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.54 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence (levels by the U.S. Army Corps of Engineers).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Low flow is sustained by sewage effluent. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years, 17.0 ft³/s (12,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft³/s May 3, 1981 (gage height, 18.30 ft); no flow Aug. 5, 6, 18, 1972, and July 28, 1986.

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)
Oct. 12	1115	1,420	13.23	Feb. 26	0145	1,660	13.71
Nov. 23	1715	2,220	14.72	June 9	1210	2,330	14.91
Nov. 24	2200	1,700	13.79	June 12	1715	*2,750	*15.59

Minimum daily discharge, 0.08 ft³/s Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.97	1.1	1.3	2.3	1.3	1.1	1.2	1.6	199	.30	2.0
2	.42	169	.69	1.7	2.0	1.1	1.3	1.1	1.1	125	.24	1.2
3	2.4	4.3	.59	30	1.1	.82	1.3	2.3	5.8	26	.26	1.1
4	1.2	83	.81	1.7	1.2	.79	1.1	26	1.3	2.7	.31	1.1
5	.68	10	.88	e1.6	1.1	.83	1.1	1.3	1.8	1.6	.43	1.1
6	.93	4.7	.88	1.1	1.1	.93	2.1	43	1.8	7.3	.29	1.1
7	.66	2.8	.88	1.2	1.5	.97	1.2	38	5.6	247	.30	.93
8	53	1.0	.88	1.4	1.7	1.0	1.1	19	24	40	.34	.87
9	3.2	1.5	3.1	2.2	1.4	1.1	1.2	38	431	162	3.8	1.2
10	1.3	2.6	2.2	2.2	1.2	1.1	1.2	44	225	9.8	.86	.98
11	34	2.3	1.2	e2.5	1.1	2.7	1.3	3.8	267	2.5	.14	1.1
12	451	1.5	e1.4	e4.3	1.2	1.4	1.3	5.1	865	1.5	.09	4.9
13	291	1.7	e1.4	e3.3	1.2	1.3	1.4	4.2	93	.99	.08	1.5
14	17	1.1	e3.6	7.3	1.2	1.2	1.6	1.4	6.2	.65	.09	.85
15	2.5	1.1	e180	1.7	16	1.1	1.6	106	44	3.0	.09	5.2
16	.98	1.3	e17	90	1.7	1.4	1.5	43	6.9	8.6	.12	32
17	.62	1.7	3.8	e190	1.4	24	1.4	7.4	15	.88	.09	6.7
18	.41	1.7	e90	e20	1.2	1.3	1.3	1.5	69	.34	.13	10
19	.35	1.7	e14	e3.8	2.9	.79	1.2	1.2	2.7	.34	.16	8.3
20	.33	1.1	3.8	e2.3	24	.63	1.2	1.3	1.1	1.7	.16	2.1
21	.37	1.2	e2.7	e1.7	12	.57	1.2	1.2	.88	5.2	.33	1.4
22	13	2.3	e340	e2.3	3.5	.66	1.2	1.1	.79	1.5	.41	1.2
23	36	391	e130	e2.5	1.6	.96	1.2	26	.79	.94	.20	1.5
24	9.0	442	e6.5	2.3	34	1.1	1.2	1.5	.79	.45	.35	1.3
25	1.7	73	3.8	e1.7	157	1.2	1.1	.70	.97	.45	.25	1.4
26	.95	7.5	2.2	e1.3	364	1.4	1.1	.70	1.1	.36	3.0	1.5
27	.79	13	2.0	e1.3	8.3	1.4	1.1	1.8	.88	.37	2.1	1.5
28	.79	4.7	2.0	e1.4	11	1.3	1.2	1.2	.70	.45	1.1	43
29	.83	1.4	e2.0	e2.0	---	1.0	1.0	139	1.1	.38	.22	4.0
30	1.1	1.2	e1.3	1.7	---	1.0	3.0	8.5	159	.45	36	1.4
31	.97	---	e1.1	1.6	---	1.2	---	1.5	---	.55	11	---
TOTAL	927.89	1232.37	821.81	389.4	657.9	57.55	39.8	572.00	2235.90	852.00	63.24	142.43
MEAN	29.9	41.1	26.5	12.6	23.5	1.86	1.33	18.5	74.5	27.5	2.04	4.75
MAX	451	442	340	190	364	24	3.0	139	865	247	36	43
MIN	.33	.97	.59	1.1	1.1	.57	1.0	.70	.70	.34	.08	.85
AC-FT	1840	2440	1630	772	1300	114	79	1130	4430	1690	125	283

CAL YR 1986 TOTAL 6881.83 MEAN 18.9 MAX 451 MIN .00 AC-FT 13650
WTR YR 1987 TOTAL 7992.20 MEAN 21.9 MAX 865 MIN .08 AC-FT 15850

e Estimated.

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX

LOCATION.--Lat 29°47'35", long 95°16'04", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of downstream service road bridge of Interstate Highway 610 in northeast Houston and 8.8 mi upstream from mouth.

DRAINAGE AREA.--15.8 mi². Prior to Oct. 1, 1973, 16.8 mi². Oct. 1, 1973, to Sept. 30, 1978, 14.7 mi². Changes due to storm sewer relocations.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1973, published as "U.S. Highway 90-A, Houston".

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence. Prior to Oct. 1, 1972, water-stage recorder at site 1,800 ft upstream at same datum.

REMARKS.--Records good. Low flow is largely maintained by sewage and industrial effluent. The stage discharge relationship is affected by seasonal vegetal growth during most years. Recording rain gage at station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--23 years, 24.1 ft³/s (17,460 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft³/s Aug. 18, 1983 (elevation, 39.16 ft); maximum gage height, 39.28 ft June 15, 1976; minimum daily discharge, 0.88 ft³/s Aug. 24, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1000 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 4	1930	1,030	31.63	June 11	1730	1,790	35.40
Dec. 15	1330	1,060	31.55	July 9	1030	*2,610	*38.01
Dec. 23	0200	1,640	33.93				

Minimum daily discharge, 3.2 ft³/s on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.8	13	8.4	11	15	4.6	6.2	3.5	206	18	6.0
2	5.8	147	11	7.5	13	13	4.6	4.8	3.5	366	7.6	5.2
3	6.4	36	10	12	8.2	10	4.6	4.1	4.7	209	6.6	5.0
4	5.4	295	9.9	7.8	8.8	9.4	4.7	16	3.7	21	6.7	4.6
5	9.3	175	9.6	7.3	7.4	8.7	4.6	6.0	3.4	13	6.3	4.5
6	6.0	26	9.1	7.2	7.3	8.3	12	5.4	3.2	15	6.5	4.5
7	7.2	17	9.0	7.0	7.1	8.0	5.0	8.1	6.7	75	13	4.4
8	31	13	9.2	6.6	6.7	7.7	4.6	20	21	45	33	4.3
9	16	11	15	12	6.6	7.5	4.3	9.4	285	1140	15	5.6
10	8.2	9.4	11	8.2	6.6	7.7	4.1	6.3	78	143	9.0	11
11	26	8.7	11	6.6	6.6	11	4.0	4.0	614	27	6.8	13
12	263	8.7	9.5	6.4	6.4	8.0	3.9	23	e660	16	6.2	5.7
13	199	8.9	8.9	6.5	6.6	7.3	3.9	12	e190	16	5.9	5.2
14	47	8.9	19	9.5	6.4	7.1	3.8	4.5	25	13	5.6	4.5
15	17	8.2	446	9.0	30	7.0	3.6	4.1	13	11	5.5	4.5
16	11	8.5	92	39	8.8	7.2	3.6	4.0	45	13	5.3	56
17	9.1	7.9	31	229	7.1	18	3.9	5.2	57	12	5.2	35
18	7.9	7.9	102	60	6.3	7.7	4.1	3.8	132	9.5	5.0	73
19	7.1	7.8	41	23	7.2	6.2	3.9	3.6	18	8.5	4.9	64
20	6.8	7.3	21	14	29	5.8	3.5	3.7	11	22	4.8	11
21	6.5	6.6	16	13	11	5.7	3.5	3.5	9.1	62	4.8	10
22	26	8.7	390	11	9.0	5.5	3.9	3.3	11	31	4.8	8.3
23	31	111	665	10	8.0	5.4	3.6	6.9	7.4	33	4.7	5.8
24	17	191	58	9.7	28	5.1	3.4	5.7	6.5	14	4.6	5.6
25	9.9	276	22	9.2	63	4.8	3.6	3.4	6.3	9.9	4.5	5.3
26	8.3	40	16	8.7	461	4.7	3.4	3.2	5.9	8.7	5.2	5.2
27	7.3	28	13	8.4	50	4.7	4.1	3.2	5.6	7.9	4.9	5.0
28	6.9	24	11	8.4	33	4.5	3.3	3.2	5.3	7.4	7.9	18
29	6.6	16	10	8.1	---	4.8	3.3	19	5.2	7.0	9.5	8.9
30	6.2	14	9.3	7.9	---	5.5	3.6	11	159	6.5	19	5.8
31	6.1	---	8.7	7.4	---	4.8	---	4.3	---	16	17	---
TOTAL	827.0	1533.3	2107.2	588.8	860.1	236.1	127.0	220.9	2399.0	2584.4	263.8	404.9
MEAN	26.7	51.1	68.0	19.0	30.7	7.62	4.23	7.13	80.0	83.4	8.51	13.5
MAX	263	295	665	229	461	18	12	23	660	1140	33	73
MIN	5.4	5.8	8.7	6.4	6.3	4.5	3.3	3.2	3.2	6.5	4.5	4.3
AC-FT	1640	3040	4180	1170	1710	468	252	438	4760	5130	523	803

CAL YR 1986 TOTAL 11241.7 MEAN 30.8 MAX 665 MIN 3.3 AC-FT 22300
WTR YR 1987 TOTAL 12152.4 MEAN 33.3 MAX 1140 MIN 3.2 AC-FT 24100

e Estimated.

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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 23-26	0600	197	236	--	--	55	76	--	--	--	--	--
JAN 17-19	0600	145	201	--	--	76	72	--	--	--	--	--
FEB 17...	1004	7.1	820	7.30	13.0	28	6.5	6.0	57	16	290	330
JUN 09-10	0900	345	171	--	--	34	56	--	--	6.7	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 23-26	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17-19	73	6	24	3.1	11	0.6	2.4	67	18	10	0.20	5.9
FEB 17...	230	0	67	15	81	2	5.3	253	67	71	0.70	13
JUN 09-10	67	11	23	2.3	6.0	0.3	2.8	56	19	5.2	0.20	4.6

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV 23-26	--	152	42	0.600	0.100	0.700	0.210	1.8	2.0	0.650	16	--
JAN 17-19	110	108	<18	0.430	0.070	0.500	0.320	1.8	2.1	0.560	13	--
FEB 17...	470	19	9	0.480	0.320	0.800	4.50	7.5	12	1.90	14	5
JUN 09-10	97	169	77	0.920	0.080	1.00	0.270	0.13	0.40	0.490	11	--

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 23-26	--	--	--	--	--	--	--	--	--	--	--
JAN 17-19	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	130	1	30	5	94	<5	290	<0.1	<1	<1	34
JUN 09-10	--	--	--	--	--	--	--	--	--	--	--

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
NOV 23-26	--	--	--	--	--	--	--	--	--	--	--
JAN 17-19	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	<0.10	0.30	<0.10	<2.0	0.1	<0.1	<0.10	<2.0	<2.0	<0.10	<0.1
JUN 09-10	--	--	--	--	--	--	--	--	--	--	--

08075900 GREENS BAYOU AT U.S. HIGHWAY 75 NEAR HOUSTON, TX

LOCATION.--Lat 29°57'24", long 95°25'04", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of U.S. Highway 75 access road bridge, 9.0 mi upstream from station 08076000, and 21 mi upstream from Halls Bayou.

DRAINAGE AREA.--36.1 mi². Prior to October 1973, 34.8 mi².

PERIOD OF RECORD.--August 1965 to current year (discharge measurements and supplemental peak discharges only, Oct. 1, 1980, to Mar. 26, 1981).

REVISED RECORDS.--WDR TX-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence.

REMARKS.--No estimated daily discharges. Records good. Stage discharge relationship is affected by seasonal vegetal growth during most years. Channel was rectified (widened and bed lowered about 2 ft) in 1980-81. Records furnished by Houston Lighting and Power Co. show that about 1,970 acre-ft of ground water used for cooling purposes was released to Bayou about 8 mi upstream from station during the current year. No known diversion above station. Several observations of water temperature were obtained during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--21 years (water years 1966-80, 1982-1987), 36.2 ft³/s (26,230 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s Oct. 25, 1984 (elevation, 87.37 ft); maximum elevation, 91.09 ft Feb. 21, 1969, occurred prior to 1980-81 channel rectification; minimum daily discharge, 0.16 ft³/s Oct. 21, 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Nov. 23	1930	*2,490	*82.75	June 12	1800	2,160	81.77
June 11	1530	1,980	81.43				

Minimum daily discharge, 13 ft³/s for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	13	22	20	21	36	14	15	14	22	15	21
2	16	25	20	20	21	26	13	16	14	72	15	15
3	17	20	18	44	18	21	14	20	63	62	14	14
4	16	117	18	24	18	19	14	126	117	19	14	15
5	65	51	17	20	19	17	17	43	26	16	14	15
6	43	20	16	19	19	16	39	115	15	27	14	14
7	23	17	17	18	19	16	16	56	40	50	18	14
8	154	17	18	18	18	16	15	39	39	46	22	15
9	99	16	32	54	17	16	15	104	361	190	19	15
10	25	15	22	27	17	18	14	84	144	44	22	14
11	46	14	20	21	17	22	14	22	515	21	21	25
12	643	14	20	20	16	17	14	59	720	17	15	40
13	214	14	17	19	16	15	14	22	273	16	15	29
14	66	15	21	19	17	15	14	15	80	18	15	18
15	28	17	516	18	77	14	13	14	44	16	14	15
16	19	16	150	100	22	16	14	16	60	16	13	80
17	17	14	55	263	17	72	15	19	53	15	14	61
18	15	13	197	116	16	22	14	16	130	15	15	23
19	15	14	95	49	18	16	13	15	37	14	14	22
20	17	14	45	33	196	15	14	18	24	16	15	16
21	15	14	30	28	48	14	14	17	21	19	15	16
22	81	13	424	25	29	14	14	15	18	16	14	15
23	50	502	598	22	23	27	14	34	17	15	15	13
24	37	511	124	21	64	14	13	18	19	15	15	13
25	19	335	57	22	89	14	13	14	18	15	14	13
26	17	87	37	21	448	13	13	14	15	20	15	13
27	15	52	30	20	88	13	13	14	16	17	15	13
28	14	42	25	20	93	13	14	14	15	14	16	120
29	14	28	23	19	---	13	14	57	30	14	16	35
30	14	24	22	19	---	13	15	47	29	13	60	16
31	14	---	21	19	---	13	---	18	---	15	54	---
TOTAL	1846	2064	2727	1158	1481	586	447	1096	2967	885	567	748
MEAN	59.5	68.8	88.0	37.4	52.9	18.9	14.9	35.4	98.9	28.5	18.3	24.9
MAX	643	511	598	263	448	72	39	126	720	190	60	120
MIN	14	13	16	18	16	13	13	14	14	13	13	13
AC-FT	3660	4090	5410	2300	2940	1160	887	2170	5890	1760	1120	1480

CAL YR 1986 TOTAL 15647 MEAN 42.9 MAX 643 MIN 11 AC-FT 31040
WTR YR 1987 TOTAL 16572 MEAN 45.4 MAX 720 MIN 13 AC-FT 32870

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX

LOCATION.--Lat 29°55'05", long 95°18'24", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on U.S. Highway 59 access road, 10.5 mi northeast of Houston, 12.0 mi upstream from Halls Bayou, and 23.4 mi upstream from mouth.

DRAINAGE AREA.--69.6 mi². Prior to Oct. 1, 1973, 72.7 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.-- Records fair except those for estimated daily discharges, which are poor. Channel was rectified during water years 1974-75. No known diversion above station. Low flow is sustained by Houston Lighting and Power Company effluent, which is obtained from ground-water sources. Gage-height telemeter at station.

AVERAGE DISCHARGE.--35 years, 65.8 ft³/s (47,670 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s Oct. 25, 1984 (gage height, 66.00 ft); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 12	1300	2,390	57.17	Feb. 26	0530	2,650	57.99
Nov. 23	1930	3,650	*60.08	June 9	1600	2,590	57.01
Dec. 15	1400	2,540	57.65	June 11	1800	*3,920	59.74
Dec. 23	0500	2,520	57.69	June 12	2030	2,720	57.40

Minimum daily discharge, 17 ft³/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	25	38	39	38	116	32	26	30	e80	26	37
2	28	64	32	36	42	75	30	27	27	e170	22	24
3	28	51	29	109	30	58	28	36	108	e220	22	20
4	26	297	27	56	28	48	29	221	331	e60	22	21
5	119	203	26	39	27	42	31	135	79	e40	22	20
6	217	49	25	36	28	40	107	251	34	e150	22	19
7	214	37	24	33	27	38	42	201	87	e250	26	17
8	404	35	25	33	25	37	31	86	124	e170	31	18
9	292	32	43	119	24	37	30	250	1100	e1180	28	20
10	48	31	38	70	23	38	29	384	664	192	31	43
11	58	29	32	41	25	54	27	56	1330	61	34	56
12	1170	28	31	39	24	40	28	145	2150	38	25	72
13	689	28	23	37	23	35	28	71	986	32	23	58
14	175	29	35	47	23	33	28	36	220	35	22	27
15	68	31	1230	40	197	33	25	32	108	35	21	21
16	42	34	456	296	42	37	26	36	338	32	20	197
17	35	30	140	862	25	196	28	44	e140	33	20	193
18	31	28	569	424	23	66	25	36	e340	29	22	57
19	28	28	277	136	27	40	25	32	e100	27	21	58
20	30	30	115	80	498	37	25	34	e60	45	22	26
21	30	28	70	55	138	34	26	36	e80	63	22	23
22	192	28	1150	49	64	34	26	32	e50	40	21	21
23	141	1040	1560	40	42	72	25	52	e40	28	21	20
24	97	1490	366	37	175	39	25	53	e45	44	21	19
25	46	1030	159	36	221	32	23	28	e40	34	22	20
26	31	228	97	34	1580	32	22	28	e35	44	21	19
27	29	128	72	33	330	32	23	30	e37	42	21	19
28	27	100	58	31	283	30	24	30	e35	26	21	354
29	26	58	50	30	---	29	25	142	e60	24	21	100
30	27	44	46	29	---	30	25	144	e220	23	161	32
31	26	---	42	28	---	30	---	42	---	23	177	---
TOTAL	4402	5293	6885	2974	4032	1494	898	2756	8998	3270	1011	1631
MEAN	142	176	222	95.9	144	48.2	29.9	88.9	300	105	32.6	54.4
MAX	1170	1490	1560	862	1580	196	107	384	2150	1180	177	354
MIN	26	25	23	28	23	29	22	26	27	23	20	17
AC-FT	8730	10500	13660	5900	8000	2960	1780	5470	17850	6490	2010	3240

CAL YR 1986 TOTAL 38785 MEAN 106 MAX 1700 MIN 19 AC-FT 76930
WTR YR 1987 TOTAL 43644 MEAN 120 MAX 2150 MIN 17 AC-FT 86570

e Estimated.

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Pesticide analyses: February 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	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)
FEB												
17...	0804	26	642	7.60	13.0	16	20	8.6	81	5.8	3800	500
26...	0904	2210	126	6.20	13.5	140	110	10.0	96	5.4	8700	52000
APR												
28...	0735	25	892	7.70	23.0	12	35	6.9	80	4.5	750	800
JUN												
10...	1705	680	190	7.70	25.0	90	--	6.2	75	4.6	12000	9700
JUL												
14...	0805	33	774	8.20	29.5	8	19	6.2	80	2.7	2100	620

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB												
17...	150	0	49	7.6	73	3	5.0	173	26	78	0.30	16
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	180	0	57	9.3	110	4	7.0	216	46	120	0.40	24
JUN												
10...	64	0	21	2.7	12	0.7	3.1	70	11	11	0.10	9.8
JUL												
14...	--	--	--	--	--	--	--	--	--	--	--	--

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)	ARSENIC DIS-SOLVED (UG/L AS AS)
FEB												
17...	360	40	7	3.15	0.250	3.40	0.350	1.3	1.7	1.90	6.6	5
26...	--	215	19	0.140	0.060	0.200	0.170	1.3	1.5	0.340	9.4	--
APR												
28...	500	70	11	4.88	0.320	5.20	0.340	1.4	1.7	4.20	4.7	10
JUN												
10...	110	87	26	0.360	0.040	0.400	0.130	1.1	1.2	0.490	11	--
JUL												
14...	--	57	28	3.40	0.100	3.50	0.070	1.2	1.3	3.20	6.2	7

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
17...	240	1	<10	4	16	<5	84	<0.1	<1	<1	22
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	250	2	<10	6	10	<5	83	<0.1	<1	<1	12
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	270	<1	<10	11	6	<5	16	<0.1	<1	<1	7

DATE	AME-TRYNE TOTAL	ATRA-ZINE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	PRO-PAZINE TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)
FEB											
17...	<0.10	0.40	<0.10	<2.0	0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	<0.10	0.40	<0.10	<2.0	0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	<0.10	<0.10	<0.10	--	0.2	<0.1	<0.10	--	--	0.10	<0.1

08076500 HALLS BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°51'42", long 95°20'05", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Jensen Drive in northeast section of Houston and 11.0 mi upstream from mouth.

DRAINAGE AREA.--27.6 mi². Oct. 1, 1973, to Sept. 30, 1977, 28.3 mi². Prior to Oct. 1, 1973, 24.7 mi². Changes were result of drainage ditch extensions or relocations.

PERIOD OF RECORD.--October 1952 to current year.
Water-quality records.--Chemical, biochemical and pesticide analyses: October 1968 to September 1984.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--No estimated daily discharges. Records fair. Stage discharge relationship is affected by seasonal vegetal growth during most years. No known diversion above station. Low flow is sustained by sewage effluent from Houston suburbs. Gage-height telemeter at station.

AVERAGE DISCHARGE.--35 years, 29.9 ft³/s (21,660 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,670 ft³/s Oct. 25, 1984 (gage height, 62.42 ft, from peak mark); no flow at times prior to 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 23	1900	1,780	57.67	June 11	1730	*2,400	*59.14
Dec. 15	1330	1,500	56.39	July 9	1000	1,810	57.76
Feb. 26	0500	1,800	57.21				

Minimum daily discharge, 6.7 ft³/s Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.7	21	18	19	45	9.4	10	15	49	18	14
2	12	37	19	17	20	27	9.5	11	8.8	110	11	9.1
3	10	18	22	44	14	22	9.3	11	53	94	9.8	8.3
4	9.8	147	21	22	13	20	9.6	28	79	17	9.7	7.8
5	10	83	20	19	12	18	10	48	16	12	9.6	7.4
6	36	18	19	18	11	17	30	52	11	14	10	7.9
7	16	15	18	17	11	16	13	44	20	20	14	7.3
8	68	13	19	16	11	15	9.5	16	29	59	26	8.1
9	57	12	23	45	11	15	10	15	444	693	19	8.6
10	13	12	21	30	10	14	9.8	22	241	100	11	40
11	21	11	20	19	9.8	20	9.6	13	777	22	9.9	21
12	321	10	19	17	9.8	15	10	49	714	14	9.3	34
13	238	9.6	18	17	9.3	14	10	22	258	13	8.7	13
14	63	9.5	26	23	9.6	13	9.4	10	61	12	8.6	8.1
15	21	9.6	616	20	98	13	9.4	10	29	12	8.2	7.6
16	15	10	168	118	19	13	9.5	10	44	12	8.3	67
17	13	11	56	427	11	64	9.6	15	30	10	7.9	26
18	13	10	267	153	12	22	9.8	10	76	14	8.0	19
19	12	10	107	52	16	14	9.8	9.8	25	19	7.9	42
20	11	9.8	45	34	163	13	9.6	9.8	16	42	8.1	8.8
21	11	9.6	33	27	53	12	9.8	10	14	84	7.7	7.8
22	79	9.7	537	24	34	12	9.7	10	15	28	7.6	6.8
23	51	480	608	21	24	31	9.8	14	12	12	7.7	6.8
24	32	551	126	20	84	16	9.3	21	12	80	8.1	6.8
25	16	414	54	20	120	12	9.6	11	11	46	7.6	6.7
26	13	89	38	18	835	11	9.9	12	11	15	8.2	6.8
27	12	52	31	17	142	10	10	11	11	14	7.8	7.3
28	11	45	24	17	105	9.7	11	11	10	11	7.8	94
29	10	30	23	16	---	9.7	10	34	19	9.8	7.5	15
30	10	25	20	15	---	9.8	10	31	166	9.4	73	6.9
31	10	---	20	14	---	9.3	---	12	---	13	59	---
TOTAL	1227.8	2170.5	3059	1335	1886.5	552.5	315.9	592.6	3227.8	1660.2	425.0	529.9
MEAN	39.6	72.3	98.7	43.1	67.4	17.8	10.5	19.1	108	53.6	13.7	17.7
MAX	321	551	616	427	835	64	30	52	777	693	73	94
MIN	9.8	9.5	18	14	9.3	9.3	9.3	9.8	8.8	9.4	7.5	6.7
AC-FT	2440	4310	6070	2650	3740	1100	627	1180	6400	3290	843	1050

CAL YR 1986 TOTAL 16126.8 MEAN 44.2 MAX 835 MIN 7.5 AC-FT 31990
WTR YR 1987 TOTAL 16982.6 MEAN 46.5 MAX 835 MIN 6.7 AC-FT 33680

08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX

LOCATION.--Lat 29°50'13", long 95°13'59", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of Ley Road Bridge in northeast Houston and 300 ft downstream from mouth of Halls Bayou.

DRAINAGE AREA.--182 mi².

PERIOD OF RECORD.--November 1962 to December 1964, May to September 1971 (discharge measurements only), October 1971 to current year.
Water-quality records:--Chemical, biochemical, and pesticide analyses: October 1970 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 2.13 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--No estimated daily discharges except during days affected by tides (usually below 1,000 ft³/s). Records fair. Discharges for days with peak discharges below 2,000 ft³/s are not computed. Estimates for days affected by tides are made only during storm periods that produce peak discharges greater than 2,000 ft³/s. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s June 13, 1973 (gage height, 34.27 ft); minimum not determined (affected by tides).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,200 ft³/s and maximum (*)

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 24	0400	6,440	22.42	Feb. 26	1100	7,210	23.39
Dec. 15	2000	5,800	21.57	June 12	0200	*11,500	*28.30
Dec. 23	0900	7,260	23.45	July 9	1500	10,100	26.84

Minimum discharge not determined (affected by tides).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e420	---	---	---	e740	---	---
2	---	---	---	---	---	e110	---	---	---	e960	---	---
3	---	---	---	---	---	---	---	---	---	1170	---	---
4	---	e910	---	---	---	---	---	---	---	e260	---	---
5	---	1120	---	---	---	---	---	---	---	---	---	---
6	---	e180	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	e120	---	---	---
9	---	---	---	---	---	---	---	---	1910	6110	---	---
10	---	---	---	---	---	---	---	---	2480	2830	---	---
11	---	---	---	---	---	---	---	---	3970	e560	---	---
12	2040	---	---	---	---	---	---	---	9810	e270	---	---
13	2250	---	---	---	---	---	---	---	4840	---	---	---
14	e850	---	---	---	---	---	---	---	e860	---	---	---
15	e200	---	2820	---	---	---	---	---	e320	---	---	---
16	---	---	2370	e640	---	---	---	---	---	---	---	---
17	---	---	e650	2210	---	---	---	---	---	---	---	---
18	---	---	1390	1840	---	---	---	---	---	---	---	---
19	---	---	1070	e530	---	---	---	---	---	---	---	---
20	---	---	e320	e140	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	2840	---	---	---	---	---	---	---	---	---
23	---	1330	6000	---	---	---	---	---	---	---	---	---
24	---	4900	1500	---	e420	---	---	---	---	---	---	---
25	---	3350	e620	---	e730	---	---	---	---	---	---	---
26	---	e980	e190	---	5290	---	---	---	---	---	---	---
27	---	e300	---	---	1600	---	---	---	---	---	---	---
28	---	---	---	---	e990	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	e140	---	---	---
30	---	---	---	---	---	---	---	---	e980	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

08077000 CLEAR CREEK NEAR PEARLAND, TX

LOCATION.--Lat 29°35'50", long 95°17'11", Harris-Brazoria County line, Hydrologic Unit 12040204, on left bank at downstream side of bridge on State Highway 35, 0.7 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi upstream from Hickory Slough, 2.3 mi north of Pearland, and about 30 mi upstream from head of Clear Lake.

DRAINAGE AREA.--38.8 mi².

PERIOD OF RECORD.--July to October 1944, March to October 1946, April 1947 to December 1959, March 1963 to current year. Discharge for some high-water periods in 1944 and 1946 published in WSP 1392.

REVISED RECORDS.--WSP 1392: 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 26.58 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment; prior records unadjusted for land-surface subsidence. Prior to June 9, 1948, nonrecording gage, and June 9, 1948 to Apr. 22, 1952, water-stage recorder at same site and datum 5.80 ft higher.

REMARKS.--No estimated daily discharges. Records good. During most years, the stage discharge relationship is affected by seasonal vegetal growth. A small amount of the drainage area is currently irrigated with water from the Brazos River. Low flow from April to October is largely drainage from these irrigated areas. Many small diversions are made for irrigation above station. Several observations of water temperature were made during the current year.

AVERAGE DISCHARGE.--36 years (water years 1948-59, 1964-87), 37.6 ft³/s (27,240 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s Mar. 18, 1957; maximum gage height, 18.57 ft July 26, 1979; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1960, stage and discharge unknown, may have exceeded that of Mar. 18, 1957. Channel was rectified in 1933, 1952, 1968, and 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 25	0800	976	15.77	Feb. 26	1100	1,220	15.72
Dec. 15	1900	804	12.72	June 13	0700	830	14.63
Dec. 18	1900	678	11.34	July 7	2200	804	14.38
Dec. 23	0800	*1,240	15.93	July 9	2400	1,000	*16.20
Jan. 17	1900	810	12.23				

Minimum daily discharge, 0.79 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.0	26	12	6.4	140	3.6	5.1	11	80	13	38
2	1.3	54	18	9.7	6.5	49	3.6	5.0	6.7	250	13	19
3	1.0	32	12	21	7.4	26	3.5	9.7	6.4	123	14	8.9
4	.83	25	9.2	18	6.6	17	3.5	15	6.6	38	14	6.9
5	.79	56	7.4	13	6.3	12	3.4	16	6.8	23	16	5.8
6	1.3	29	6.4	11	6.1	9.4	3.5	20	7.3	28	20	5.0
7	2.3	22	6.0	9.3	5.7	8.0	3.6	33	12	311	15	4.5
8	6.7	16	5.6	8.9	5.1	7.5	3.5	17	11	620	22	4.4
9	6.6	11	5.7	8.8	4.9	7.1	3.6	9.6	65	797	15	4.0
10	3.5	7.7	5.8	8.4	5.0	6.7	3.7	6.8	197	901	16	3.9
11	5.6	5.7	6.6	7.8	5.2	7.0	3.6	4.8	192	337	17	3.7
12	165	4.9	6.1	6.8	5.1	6.5	3.8	4.2	448	90	16	3.7
13	348	4.4	5.2	6.6	5.1	6.2	3.9	31	811	39	14	4.1
14	251	4.3	9.4	9.0	4.8	6.2	5.0	19	631	27	12	4.2
15	85	3.9	451	9.0	12	5.8	4.7	10	326	17	12	4.3
16	33	3.7	605	132	7.2	6.0	4.4	13	161	15	15	15
17	15	3.6	305	483	6.1	8.7	4.4	39	72	13	16	104
18	8.1	3.5	465	605	5.2	7.6	5.6	16	66	11	14	66
19	5.2	3.5	497	285	5.6	6.4	8.6	8.2	39	10	12	34
20	4.1	3.4	242	109	9.9	5.8	7.2	5.0	24	15	11	20
21	3.5	3.2	107	52	9.1	5.7	6.7	4.0	17	16	8.6	11
22	6.3	4.0	543	38	10	4.9	10	5.5	14	17	8.3	6.9
23	36	152	1210	25	8.2	4.9	9.4	5.8	15	16	7.1	5.5
24	50	596	858	18	37	4.8	4.8	13	12	14	6.7	5.6
25	25	918	359	15	101	4.5	4.1	9.0	13	16	8.0	5.3
26	13	510	140	11	1130	4.4	4.2	8.3	12	16	8.0	5.0
27	7.8	206	61	9.3	822	4.3	6.9	9.6	10	17	7.1	5.3
28	5.2	118	35	8.8	371	4.4	7.9	9.5	10	21	9.8	47
29	4.3	64	23	8.4	---	4.1	9.9	7.4	11	21	7.1	194
30	3.6	37	17	7.4	---	4.0	11	14	42	20	47	109
31	3.3	---	14	7.8	---	3.6	---	12	---	15	73	---
TOTAL	1103.92	2904.8	6061.4	1974.0	2614.5	398.5	161.6	385.5	3255.8	3934	487.7	754.0
MEAN	35.6	96.8	196	63.7	93.4	12.9	5.39	12.4	109	127	15.7	25.1
MAX	348	918	1210	605	1130	140	11	39	811	901	73	194
MIN	.79	3.0	5.2	6.6	4.8	3.6	3.4	4.0	6.4	10	6.7	3.7
AC-FT	2190	5760	12020	3920	5190	790	321	765	6460	7800	967	1500

CAL YR 1986 TOTAL 17242.44 MEAN 47.2 MAX 1210 MIN .79 AC-FT 34200
WTR YR 1987 TOTAL 24035.58 MEAN 65.9 MAX 1210 MIN .79 AC-FT 47670

08077650 MOSES LAKE-GALVESTON BAY NEAR TEXAS CITY, TX

LOCATION.--Lat 29°26'50", long 94°55'12", Galveston County, Hydrologic Unit 12040204, on right side of gate abutment of Texas City Flood Control Dike, one orifice located upstream and one downstream, at mouth of Moses Lake, and 4.5 mi north of Texas City.

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

GAGE.--Duplex water-stage recorder and crest-stage gages. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county engineer, Galveston County), 1978 adjustment. Prior to May 19, 1983, datum of gage was 0.49 ft below National Geodetic Vertical Datum of 1929, 1973 adjustment. Prior records unadjusted for land-surface subsidence.

REMARKS.--Records good. Moses Lake is connected to Galveston Bay by gated opening through levee. These gates are open during periods of normal tide and are closed during periods of high tide and hurricane surge. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (Moses Lake), 4.4 ft Sept. 20, 1979; minimum, -4.2 ft Feb. 28, 1983. Maximum elevation (Galveston Bay), about 10.0 ft (Hurricane Alicia) Aug. 18, 1983; minimum, about -4.2 ft Feb. 28, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (Moses Lake), 2.7 ft Dec. 23 at 0600 hours; minimum, -1.8 ft Mar. 31. Maximum elevation (Galveston Bay), 2.7 ft Mar. 17 at 1200 hours; minimum, -1.8 ft Mar. 30, 31.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN
1	1.8	1.8	.9	1.6	1.6	.4	1.9	1.9	.0	1.4	1.3	-.3
2	2.0	2.0	.9	1.8	1.9	.7	1.2	1.1	-1.2	1.1	1.4	-.2
3	2.1	2.2	1.4	1.9	1.9	.6	.3	.6	-1.3	2.0	2.0	-.7
4	2.0	1.8	.9	2.2	2.4	.5	1.2	1.2	-.2	-.1	-.7	-1.7
5	1.6	1.6	.6	1.8	2.3	-.5	1.5	1.4	.0	.8	1.0	-.8
6	1.6	1.6	.4	1.3	1.2	-.2	1.6	1.5	.2	1.2	1.2	.6
7	1.8	1.7	.6	2.0	2.0	.5	1.7	1.6	.3	1.1	1.1	.3
8	2.1	2.1	.7	1.7	1.7	.2	1.4	1.3	.3	1.1	1.2	-.9
9	2.2	2.2	.3	1.4	1.4	.0	1.3	1.3	.2	1.3	1.2	.2
10	1.7	1.7	.2	1.6	1.5	.5	.7	.8	-.4	.9	.6	-.8
11	2.1	2.2	.8	1.6	1.6	.4	.5	.8	-.2	.1	.1	-1.3
12	2.2	2.5	.4	1.2	1.2	.6	.1	.6	-.8	.1	.2	-1.3
13	1.4	1.4	.1	1.0	.8	-.7	.8	1.0	-.8	.4	.5	-.6
14	1.3	1.3	.1	1.3	1.4	.2	1.6	1.6	.3	1.0	1.4	.0
15	1.2	1.2	.7	1.5	1.6	.2	1.8	1.7	.6	1.6	1.6	.1
16	1.4	1.4	.7	1.7	1.7	.3	1.4	1.3	-.4	1.4	1.4	.3
17	1.4	1.4	.6	1.5	1.5	.0	1.0	1.0	-.4	1.6	1.7	.9
18	1.4	1.3	.3	1.4	1.4	.0	1.2	1.2	.0	1.8	1.7	-.8
19	1.5	1.4	.3	1.4	1.4	.0	1.1	1.0	-.5	-.3	-.5	-1.5
20	1.8	1.8	.8	1.5	1.5	.0	.9	.9	-.2	.4	.4	-.5
21	2.1	2.0	.9	1.4	1.6	.5	1.2	1.2	.2	.7	.6	.0
22	2.4	2.4	1.3	2.0	1.9	.3	2.6	2.1	.9	.8	.7	-1.2
23	1.8	2.4	1.2	1.7	1.7	.3	2.7	2.2	-.2	.5	.6	-1.4
24	1.6	2.4	.0	1.5	1.8	.6	.7	.9	-.4	.8	.8	-.3
25	.9	.9	-.3	1.9	1.8	.0	1.1	1.0	-.2	.8	.7	-1.2
26	1.2	1.2	.2	.6	.6	-.4	1.3	1.2	.2	-.1	.4	-1.5
27	1.3	1.3	.4	1.1	1.0	.4	1.3	1.3	.1	.4	.7	-.7
28	1.4	1.4	.4	1.3	1.3	.4	1.3	1.3	-.4	.8	.8	-1.0
29	1.2	1.2	.5	1.4	1.4	.2	1.4	1.4	-.2	.7	.7	-1.0
30	1.2	1.2	.5	1.5	1.8	.1	1.3	1.3	-.5	.8	.7	-.9
31	1.6	1.5	1.0	---	---	---	1.4	1.4	.0	.6	.8	-.4
MONTH	2.4	2.5	-.3	2.2	2.4	-.7	2.7	2.2	-1.3	2.0	2.0	-1.7

08077650 MOSES LAKE-GALVESTON BAY NEAR TEXAS CITY, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN
1	1.5	1.5	.3	.1	.1	-.7	.5	.5	-1.0	.7	.7	-.8
2	.9	.9	-.2	.5	.5	-.3	.7	.8	-.5	1.0	1.0	-.4
3	.6	.5	-.2	.6	.6	.1	.3	.3	-1.4	1.6	2.1	.0
4	1.4	1.4	.2	.8	.7	-.3	.8	.8	-.8	1.4	1.4	.6
5	1.5	1.5	.6	1.1	1.1	-.3	1.1	1.1	.0	1.2	1.0	-.1
6	1.5	1.4	-.3	1.2	1.2	-.2	1.1	.5	-.6	.8	.8	-.2
7	.1	.1	-1.0	1.9	1.9	.3	.4	.2	-.8	.6	.6	-.3
8	.3	.4	-1.0	1.8	1.5	.1	.3	.3	-.8	.6	.5	-.2
9	.8	.9	-.6	1.0	1.0	-.4	.2	.2	-.9	.7	.7	.1
10	.9	.9	-.4	1.0	.9	-.4	.3	.3	-.6	.4	.4	-.1
11	.8	.8	-.7	1.0	1.0	.0	.4	.4	-.4	.7	.7	-.2
12	.7	.7	-.7	1.0	.9	-.3	.8	.8	.3	.9	.9	-.2
13	.6	.6	-.6	.9	.9	-.3	1.4	1.5	.2	1.0	1.0	-.6
14	.8	.8	-.3	1.2	1.2	.4	.7	.2	-1.1	.9	.9	-.6
15	1.4	1.3	-.3	1.3	1.3	.6	.3	.3	-1.2	.7	.7	-.7
16	.0	-.1	-.9	1.8	1.8	.1	.3	.2	-1.1	.6	.6	-1.0
17	.0	-.1	-.5	2.0	2.7	1.7	.7	.7	-.9	.8	.8	-.8
18	.2	.2	-.7	1.8	1.8	.9	.7	.7	-.7	.8	.8	-.5
19	1.5	1.5	-.1	1.7	1.6	.5	.8	.8	-.7	1.1	1.1	-.4
20	1.6	1.4	.4	1.8	1.8	.3	.7	.7	-.6	1.1	1.0	-.1
21	1.1	1.1	-.4	1.7	1.7	.4	.6	.4	-.8	.8	.8	.2
22	1.1	.9	-.5	2.0	2.1	.4	.4	.1	-1.2	.7	.6	.2
23	.9	1.4	-.4	2.1	1.9	.8	.2	.2	-.8	.8	.8	.1
24	1.8	1.7	.8	1.6	1.6	.0	.2	.2	-.6	.9	.9	.0
25	1.8	1.8	.1	1.7	1.9	.2	.3	.2	-.3	1.2	1.2	-.1
26	2.1	2.1	.9	1.9	1.9	.6	.2	.2	-.5	1.7	1.7	.1
27	1.7	1.7	.6	1.8	1.8	.2	.2	.2	-.9	2.1	2.2	.6
28	1.7	1.8	-.2	1.5	1.4	.8	.1	.1	-1.1	2.3	2.2	.8
29	---	---	---	1.5	1.6	-.5	.2	.2	-1.2	2.1	2.6	.7
30	---	---	---	-.1	-.5	-1.8	.5	.5	-.9	1.7	1.7	.1
31	---	---	---	.0	.0	-1.8	---	---	---	1.5	1.5	.2
MONTH	2.1	2.1	-1.0	2.1	2.7	-1.8	1.4	1.5	-1.4	2.3	2.6	-1.0

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN	MOSES LAKE MAX	GALV. BAY MAX	GALV. BAY MIN
1	1.3	1.3	.0	1.0	1.0	.0	.6	.6	-.2	1.5	1.4	.0
2	1.4	1.3	.1	1.0	1.2	-.2	.7	.7	-.6	1.6	1.6	-.1
3	1.3	1.3	.3	1.0	1.0	.2	.7	.7	-.6	1.4	1.4	-.3
4	1.2	1.1	.2	.9	.9	.1	.8	.8	-.7	1.3	1.2	-.2
5	1.1	1.1	.3	1.0	1.0	.0	.8	.9	-.8	1.4	1.4	-.2
6	1.2	1.1	.7	1.4	1.4	.0	.9	1.0	-.8	1.5	1.4	.0
7	1.6	1.5	.9	1.8	1.7	.1	1.0	1.0	-.8	1.2	1.1	.2
8	2.2	2.2	.9	1.9	1.9	.3	1.2	1.2	-.5	.8	.8	.2
9	2.0	2.2	.9	1.8	1.8	.2	1.6	1.6	-.2	.7	.7	.0
10	1.8	2.5	.8	1.8	1.8	.1	1.2	1.1	.1	.7	.9	-.3
11	1.8	2.5	.9	1.7	1.7	.1	.5	.6	-.4	.9	.8	-.2
12	1.7	2.4	.9	1.5	1.5	.0	.3	.3	-.5	.9	.8	-.4
13	1.5	2.0	.5	1.3	1.3	.0	.3	.3	-.3	1.0	1.0	-.6
14	1.4	1.3	-.2	.7	.7	-.3	.4	.4	-.3	1.1	1.0	-.3
15	1.3	1.5	-.2	.7	.7	-.2	.6	.6	-.6	1.1	1.1	-.2
16	1.3	1.7	-.2	.6	.6	.1	.7	.7	-.7	1.3	1.2	.0
17	1.2	1.2	.0	.9	.9	.1	.6	.6	-.8	1.3	1.3	-.1
18	1.0	1.3	.2	1.2	1.2	.1	.7	.7	-.6	1.2	1.2	.0
19	.6	.6	.3	1.2	1.3	.2	.7	.7	-.6	1.0	1.0	-.3
20	1.1	1.1	.0	1.9	1.9	.6	.7	.8	-.5	1.2	1.0	-.4
21	1.2	1.3	-.1	1.8	1.8	.2	.8	.8	-.5	1.6	1.4	.3
22	1.3	1.3	-.1	1.4	1.4	.0	.7	.7	-.4	1.3	1.1	.5
23	1.4	1.4	-.1	1.6	1.7	.1	.7	.7	-.5	1.3	1.2	.3
24	1.2	1.2	-.3	1.9	1.8	.3	.9	.9	-.3	1.3	1.1	.4
25	.8	.9	-.5	1.7	1.7	.6	1.0	1.0	.1	1.2	1.1	.2
26	.7	.7	-.8	1.5	1.5	.5	.9	.9	.3	1.3	1.3	.2
27	1.3	1.2	-.6	1.2	1.2	.3	.7	.7	.2	1.7	1.6	-.1
28	1.6	1.6	.2	1.0	1.0	.2	.6	.6	.0	2.0	1.9	.7
29	1.7	1.7	.6	.8	.8	.0	.7	.8	.1	1.4	1.7	-.2
30	1.5	1.5	.3	.8	.8	.1	1.2	1.1	.3	1.0	.9	-.6
31	---	---	---	.6	.6	.0	1.4	1.5	.0	---	---	---
MONTH	2.2	2.5	-.8	1.9	1.9	-.3	1.6	1.6	-.8	2.0	1.9	-.6

08077690 HIGHLAND BAYOU DIVERSION CHANNEL NEAR HITCHCOCK, TX

LOCATION.--Lat 29°21'20", long 95°02'22", Galveston County, Hydrologic Unit 12040204, at downstream side of bridge on State Highway 6, 1.1 mi west of Hitchcock, and 7 mi upstream from mouth.

DRAINAGE AREA.--Not determinable.

PERIOD OF RECORD.--June 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records good. This channel drains the headwaters of Highland Bayou. There is an earthern dam about 2,000 ft upstream from former gage on the natural channel. This dam diverts flood waters into the diversion channel and has a 24-inch uncontrolled outlet for maintaining base flow in the natural channel. Records prior to June 1982 were collected at gage on natural channel (station 08077700).

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 9.21 ft Aug. 18, 1983 (Hurricane Alicia), minimum (estimated), -2.8 ft Oct. 30, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2.92 ft Nov. 25 at 0100 hours; minimum, -2.13 ft Jan. 4.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.16	.33	.93	-.16	1.30	-.38	.74	-.75	.78	.00	-.41	-1.30
2	1.28	.36	1.31	.22	.45	-1.54	1.13	-.66	.02	-.73	-.10	-1.10
3	1.59	.86	1.61	.16	.10	-1.52	1.40	-1.13	-.03	-.88	-.01	-.67
4	1.00	.32	1.74	.47	.62	-.63	-1.05	-2.13	.71	-.55	.13	-.88
5	.84	.02	1.34	-.80	.78	-.37	.32	-1.08	.97	.06	.46	-1.00
6	.79	-.34	.77	-.59	.91	-.15	.55	.04	1.06	-.93	.57	-.75
7	1.29	-.07	1.41	.03	1.00	-.06	.40	-.20	-.45	-1.95	1.16	-.31
8	1.47	.17	1.06	-.29	.67	-.18	.59	-.59	-.35	-1.48	.59	-.33
9	1.47	-.18	.75	-.49	.65	-.19	.63	-.30	.36	-1.27	.28	-1.03
10	.95	-.05	.93	.28	.48	-.68	.05	-1.41	.13	-.85	.28	-1.21
11	1.43	.42	.85	-.09	.51	-.35	-.49	-1.77	.03	-.95	.47	-.50
12	1.58	.09	.59	-.04	.16	-1.35	-.47	-1.57	.02	-1.15	.28	-.77
13	.92	-.32	.22	-.59	.42	-1.09	-.08	-1.40	-.09	-1.07	.22	-.81
14	.77	-.20	.75	-.26	1.20	-.11	.94	-.59	.32	-.73	.46	-.13
15	.62	.10	.98	-.25	1.29	.26	.99	-.40	1.01	-1.10	.69	.05
16	.81	.08	.95	-.12	.65	-.74	.84	.01	-.60	-1.60	1.27	.17
17	.78	.05	.72	-.40	.34	-.79	1.29	.68	-.47	-1.15	1.88	.85
18	.74	-.19	.79	-.44	.57	-.47	1.20	-1.08	-.29	-1.30	1.08	.07
19	.82	-.11	.76	-.42	.47	-.96	-1.10	-1.93	.88	-.79	1.02	-.19
20	1.32	.46	.88	-.60	.41	-.72	-.16	-1.10	.70	.04	1.17	-.29
21	1.53	.58	1.15	.06	.82	-.20	.37	-.25	.44	-.79	1.08	-.11
22	1.69	.89	1.43	-.01	2.63	.96	.25	-1.56	.15	-1.06	1.51	-.24
23	1.69	.90	1.87	.38	2.44	-.20	-.19	-1.93	.95	-1.55	1.35	.26
24	1.78	-.27	2.89	.21	.25	-.80	.17	-.98	1.22	-.14	.83	-.53
25	.49	-.62	2.92	-.31	.36	-.28	.00	-1.80	1.49	-.45	1.24	-.42
26	.48	-.32	.09	-.96	.59	-.43	-.33	-2.10	1.44	.10	1.24	.12
27	.56	-.07	.56	-.03	.58	-.42	.02	-1.35	1.05	-.04	1.14	-.14
28	.74	-.15	.96	.13	.74	-.96	.08	-1.24	1.19	-1.14	.85	.07
29	.48	-.09	1.00	-.13	.79	-.76	-.01	-1.34	---	---	.59	-.99
30	.56	.05	1.13	-.38	.74	-1.05	.05	-1.37	---	---	-.51	-1.80
31	.99	.43	---	---	.82	-.75	.40	-.75	---	---	-.74	-2.04
MONTH	1.78	-.62	2.92	-.96	2.63	-1.54	1.40	-2.13	1.49	-1.95	1.88	-2.04

WATER YEAR 1987 MAXIMUM 2.92 MINIMUM -2.13

08077690 HIGHLAND BAYOU DIVERSION CHANNEL NEAR HITCHCOCK, TX--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	-.26	-1.49	-.23	-.83	.73	-.47	.49	-.49	-.04	-.64	.83	-.28
2	-.19	-1.07	-.12	-.62	.74	-.50	.34	-.64	-.13	-.95	.90	-.50
3	-.33	-1.45	.73	-.23	.61	-.53	.43	-.36	.04	-1.07	.72	-.74
4	-.24	-1.23	.71	.39	.38	-.48	.25	-.53	.10	-1.05	.56	-.76
5	.07	-.66	.54	-.13	.65	-.30	.39	-.47	.14	-1.19	.75	-.67
6	.01	-.83	.20	-.27	.59	.00	.65	-.47	.27	-1.19	.90	-.52
7	-.36	-1.35	.08	-.41	1.16	.30	1.04	-.28	.43	-1.15	.64	-.43
8	-.70	-1.29	-.03	-.46	1.48	.34	1.55	-.39	.64	-1.03	.30	-.48
9	-.81	-1.35	.00	-.43	1.76	.10	1.21	-.45	.92	-.75	.20	-.52
10	-.83	-.90	-.07	-.81	1.66	.15	1.23	-.38	.62	-.52	.28	-.67
11	-.67	-.83	.12	-.87	1.82	.20	1.14	-.44	-.16	-.89	.15	-.74
12	-.39	-.66	.26	-.93	1.67	.08	.93	-.44	-.25	-1.08	.16	-1.16
13	-.01	-.39	.34	-.96	1.08	-.33	.68	-.53	-.19	-.80	.49	-.94
14	-.04	-.98	.30	-1.16	.81	-.88	.26	-.87	-.25	-.97	.40	-.70
15	-.57	-1.33	.10	-1.31	.73	-.88	.04	-.79	-.10	-1.08	.40	-.57
16	-.47	-1.25	.20	-1.46	.74	-.81	.16	-.58	-.02	-1.17	.60	-.67
17	.09	-1.15	.35	-1.51	.41	-.55	.32	-.45	-.04	-1.29	.54	-.63
18	.00	-1.10	.13	-1.11	.30	-.52	.47	-.48	-.01	-1.18	.43	-.69
19	-.05	-1.14	.45	-1.13	.01	-.68	.59	-.26	.02	-1.10	.42	-.82
20	-.14	-.78	.35	-.60	.49	-.48	1.27	.03	.10	-1.03	.45	-.87
21	-.15	-.80	.17	-.43	.56	-.65	1.33	-.23	.18	-1.02	.89	-.18
22	-.54	-1.22	.08	-.60	.64	-.56	.82	-.44	.11	-.99	.52	.00
23	-.75	-1.08	.27	-.62	.76	-.59	1.02	-.38	.12	-1.09	.53	-.19
24	-.66	-1.16	.26	-.68	.61	-.75	1.32	-.18	.34	-.79	.39	-.03
25	-.48	-.98	.52	-.60	.38	-1.14	1.18	-.05	.43	-.43	.32	-.09
26	-.57	-1.06	1.05	-.55	.18	-1.39	.92	-.12	.25	-.28	.49	-.12
27	-.62	-1.18	1.46	-.02	.78	-1.13	.66	-.34	.03	-.41	.85	-.26
28	-.64	-1.42	1.65	.32	1.04	-.39	.52	-.54	-.11	-.62	1.36	.18
29	-.68	-1.63	1.56	.33	1.17	-.07	.27	-.62	.50	-.61	1.13	-.86
30	-.61	-1.20	1.06	-.20	.81	-.19	.08	-.55	.44	-.47	.55	-.80
31	---	---	.89	-.36	---	---	-.04	-.53	.92	-.41	---	---
MONTH	.09	-1.63	1.65	-1.51	1.82	-1.39	1.55	-.87	.92	-1.29	1.36	-1.16

WATER YEAR 1987 MAXIMUM 2.92 MINIMUM -2.13

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX

LOCATION.--Lat 29°22'09", long 95°19'14", Brazoria County, Hydrologic Unit 12040204, on right bank 800 ft downstream from bridge on Farm Road 1462, 5.9 mi southwest of Alvin, and 6.9 mi upstream from State Highway 35.

DRAINAGE AREA.--87.7 mi². During extreme flooding, overflow from about 11 mi² of the Mustang Bayou drainage basin enters the Chocolate Bayou basin upstream from gage.

PERIOD OF RECORD.--August to October 1944 and March to December 1946 (low-water records during irrigation season), January 1947 to February 1958, March 1958 to February 1959 (discharge measurements only), March 1959 to current year.
Water-quality records.--Chemical and biochemical analyses: May 1971 to September 1985. Pesticide analyses: May 1971 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 10.31 ft above National Geodetic Vertical Datum of 1929. Prior to May 3, 1959, nonrecording gage or water-stage recorders located at various sites from 900 to 1,400 ft upstream and at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Stage discharge relationship is affected by seasonal vegetal growth during most years. Large area of riceland above station is irrigated with water from the Brazos River. Low flow from April to October is largely drainage from these irrigated lands. Diversions for irrigation occur above station.

AVERAGE DISCHARGE.--38 years (water years 1948-57, 1960-87), 108 ft³/s (78,250 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s July 26, 1979 (gage height, 23.88 ft); no flow at times. Flood of Oct. 8, 1949, reached a stage of 21.80 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1939, reached a stage of 22.9 ft, former site and present datum, adjusted from floodmark 1,700 ft to right and 550 ft upstream from present gage, on basis of slope of flood of Oct. 8, 1949, from information by local residents.

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)
Nov. 25	1500	*1,490	*14.69	Feb. 27	0600	1,460	14.55
Dec. 24	0200	1,400	14.17				

Minimum daily discharge, 2.5 ft³/s Apr. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	11	89	30	15	215	5.0	17	35	165	46	59
2	9.3	14	58	24	14	108	4.2	31	21	114	47	38
3	7.2	28	38	32	15	67	3.6	30	15	100	48	26
4	13	35	27	29	14	43	3.2	22	18	70	51	17
5	13	139	21	24	12	29	4.3	33	41	49	53	14
6	21	87	17	21	11	21	5.2	33	42	40	52	16
7	26	58	15	19	8.5	18	5.9	70	42	78	53	18
8	28	45	13	18	7.1	16	6.6	59	53	277	50	17
9	100	30	12	18	7.0	15	3.4	38	529	826	53	20
10	63	20	11	16	7.0	14	2.5	42	881	918	66	16
11	36	15	12	14	6.7	13	2.6	24	660	455	75	17
12	257	11	13	12	6.5	12	10	11	488	160	68	19
13	752	9.2	12	11	6.5	11	11	9.0	774	84	61	20
14	712	8.0	12	20	6.5	9.7	10	12	485	60	54	16
15	343	7.2	348	26	21	9.0	11	8.5	186	62	48	12
16	120	6.9	825	569	18	8.7	7.2	20	93	68	41	10
17	61	6.7	440	827	12	11	8.8	82	63	69	39	11
18	35	6.6	434	942	9.4	12	14	36	58	63	39	13
19	26	6.2	599	439	8.1	9.9	11	13	47	57	39	17
20	19	5.2	322	168	8.0	9.1	9.8	7.7	40	65	44	15
21	13	4.1	162	106	8.8	7.7	14	5.7	38	111	38	15
22	24	3.7	512	88	8.2	9.5	8.1	6.4	35	136	36	15
23	232	72	1290	61	8.8	8.5	5.6	9.9	28	102	35	13
24	407	785	1330	43	41	8.8	4.0	18	30	79	30	10
25	178	1450	708	33	152	7.7	7.1	16	31	80	30	9.5
26	82	1310	207	26	1210	7.5	13	9.2	33	69	34	9.1
27	42	699	125	21	1400	9.8	17	6.4	34	62	34	11
28	24	380	84	18	807	11	16	8.6	41	59	35	40
29	16	227	62	16	---	9.1	17	19	46	50	31	59
30	14	135	48	15	---	10	16	56	108	44	34	44
31	13	---	38	14	---	7.4	---	54	---	47	59	---
TOTAL	3695.9	5614.8	7884	3700	3849.1	748.4	257.1	807.4	4995	4619	1423	616.6
MEAN	119	187	254	119	137	24.1	8.57	26.0	166	149	45.9	20.6
MAX	752	1450	1330	942	1400	215	17	82	881	918	75	59
MIN	7.2	3.7	11	11	6.5	7.4	2.5	5.7	15	40	30	9.1
AC-FT	7330	11140	15640	7340	7630	1480	510	1600	9910	9160	2820	1220

CAL YR 1986 TOTAL 33133.7 MEAN 90.8 MAX 1450 MIN 1.9 AC-FT 65720
WTR YR 1987 TOTAL 38210.2 MEAN 105 MAX 1450 MIN 2.5 AC-FT 75790

08079575 NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR POST, TX

LOCATION.--Lat 33°14'52", long 101°20'24", Garza County, Hydrologic Unit 12050003, at right upstream end of bridge on Farm Road 651 and 4.4 mi northeast of Post.

DRAINAGE AREA.--438 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 26, 27, Nov. 8, 9, 11, and Jan. 18. Records fair. No known diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Oct. 2, 1986 (gage height, 9.10 ft, from floodmarks), on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 2	2230	*4,500	a*9.10	May 28	1200	3,450	a8.21
Oct. 3	0930	2,420	a7.44				

a From floodmark

Minimum daily discharge, 3.4 ft³/s May 18, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	24	11	19	22	34	8.0	5.6	38	144	16	26
2	1390	22	15	21	28	30	8.0	5.0	34	114	16	26
3	1600	24	19	21	26	34	6.3	5.0	22	66	16	21
4	268	477	19	26	26	38	15	5.0	21	44	16	24
5	76	226	21	28	29	34	14	5.0	24	36	16	78
6	64	114	21	19	30	30	7.1	7.1	19	26	14	80
7	58	70	22	19	24	28	16	5.6	15	22	14	30
8	45	47	28	24	22	22	16	5.6	19	22	14	40
9	36	34	24	21	24	21	12	9.0	22	18	14	53
10	30	26	19	19	28	21	12	8.0	16	19	12	40
11	26	19	19	21	25	24	15	5.6	28	21	71	47
12	21	15	19	24	22	22	12	5.0	50	22	15	45
13	26	14	21	22	21	21	9.0	4.4	26	260	12	38
14	28	12	21	24	24	26	14	23	22	337	12	58
15	28	11	19	24	22	26	16	11	21	317	11	64
16	28	10	21	21	28	19	15	6.3	26	111	10	158
17	24	11	19	19	26	18	9.0	4.4	18	770	9.0	78
18	21	12	19	12	24	22	11	3.4	24	891	8.0	38
19	18	10	19	14	26	19	10	5.0	15	371	7.1	38
20	26	10	19	14	32	21	8.0	7.1	15	269	4.4	38
21	26	14	19	19	32	19	9.0	7.1	12	92	3.4	32
22	28	16	21	22	36	18	10	15	10	55	5.6	36
23	39	14	21	21	36	15	14	70	10	47	7.1	34
24	47	12	19	26	38	24	8.0	36	10	43	9.0	12
25	45	16	11	26	38	22	8.0	32	9.0	40	55	11
26	40	19	15	24	43	32	8.0	21	7.1	43	192	12
27	36	21	16	26	58	26	7.1	438	9.0	36	121	12
28	33	18	14	26	40	18	5.6	1070	10	28	106	10
29	26	15	18	26	---	26	5.0	196	30	22	103	8.0
30	21	14	22	30	---	21	4.4	79	219	19	83	8.0
31	21	---	22	22	---	12	---	55	---	55	55	---
TOTAL	4385	1347	593	680	830	743	312.5	2155.2	801.1	4360	1047.6	1195.0
MEAN	141	44.9	19.1	21.9	29.6	24.0	10.4	69.5	26.7	141	33.8	39.8
MAX	1600	477	28	30	58	38	16	1070	219	891	192	158
MIN	18	10	11	12	21	12	4.4	3.4	7.1	18	3.4	8.0
AC-FT	8700	2670	1180	1350	1650	1470	620	4270	1590	8650	2080	2370

CAL YR 1986 TOTAL 17746.9 MEAN 48.6 MAX 1720 MIN .00 AC-FT 35200
WTR YR 1987 TOTAL 18449.4 MEAN 50.5 MAX 1600 MIN 3.4 AC-FT 36590

08079575 NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR POST, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical 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 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, 9,870 microsiemens May 10, 1987; minimum daily, 385 microsiemens Aug. 15, 1986.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 13, 1987; minimum daily, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,870 microsiemens May 10; minimum daily 1,040 microsiemens May 29.
WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 13; minimum daily, 3.0°C Dec. 12, Jan. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
28...	1020	32	2400	15.5	530	210	72	85	310
DEC									
16...	1020	23	2550	7.0	550	200	72	89	350
FEB									
11...	1000	24	2810	9.0	630	250	87	100	400
APR									
07...	1015	17	3120	7.5	700	280	97	110	430
JUN									
02...	1135	39	2680	26.0	580	240	73	97	370
JUL									
21...	1050	71	2150	25.5	460	180	60	75	260

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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								
28...	6	18	318	360	380	3.5	17	1400
DEC								
16...	7	20	344	410	430	3.8	17	1600
FEB								
11...	7	20	374	420	490	8.9	20	1800
APR								
07...	7	21	420	500	540	5.2	19	2000
JUN								
02...	7	21	346	400	480	4.4	20	1700
JUL								
21...	5	20	282	290	350	4.0	18	1200

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	4385	896	535	6330	160	1840	120	1380	210
NOV.	1986	1347	1660	1000	3650	280	1030	240	867	380
DEC.	1986	593	2520	1550	2470	420	678	390	632	560
JAN.	1987	680	2650	1630	3000	440	815	420	779	590
FEB.	1987	830	2680	1650	3700	450	1010	430	967	590
MAR.	1987	743	2940	1820	3660	490	977	490	989	640
APR.	1987	312.5	3190	1990	1680	520	442	550	468	690
MAY	1987	2155.2	1430	857	4990	250	1430	190	1120	330
JUNE	1987	801.1	2150	1320	2860	360	782	340	735	480
JULY	1987	4360	1380	826	9720	240	2800	190	2180	320
AUG.	1987	1047.6	2020	1230	3480	340	970	300	853	460
SEPT	1987	1195.0	1890	1140	3680	320	1050	270	860	430
TOTAL		18449.4	**	**	49200	**	13800	**	11800	**
WTD.AVG.		51	1630	988	**	280	**	240	**	370

08079575 NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR POST, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	2610	2680	2600	2670	2660	3120	3410	2710	1550	3000	2060
2	440	2650	2530	2630	2710	2710	3210	3480	2720	2300	3010	2070
3	410	2560	2550	2680	2690	2740	3200	3470	2750	2440	3000	2100
4	1310	750	2620	2520	2710	2770	3180	3470	2800	2500	3000	2080
5	1740	1510	2670	2620	2480	2810	3070	3410	2800	2580	3000	1860
6	2150	1870	2700	2700	2660	2870	3170	3330	2790	2630	2770	1610
7	2270	2110	2670	2720	2630	2890	3150	3280	2850	2700	3080	1800
8	2330	2260	2530	2700	2650	2900	3120	3350	2690	2790	3110	1860
9	2370	2410	2600	2730	2690	2900	3150	3290	2740	2910	3000	1920
10	2380	2470	2510	2690	2730	2920	3140	3300	2920	2900	3050	1970
11	2420	2490	2490	2620	2760	2950	3110	3390	2850	2790	2440	1960
12	2260	2500	2500	2570	2730	2930	3180	3410	2320	2780	3000	1920
13	2110	2560	2500	2620	2760	2950	3290	3430	2570	960	3030	1930
14	2210	2660	2530	2670	2720	2970	3220	1020	2710	850	3070	1510
15	2310	2690	2550	2650	2760	2970	2990	2320	2770	910	2960	1860
16	2340	2730	2530	2640	2650	2960	2930	3080	2640	2000	3060	1720
17	2330	2720	2510	2620	2690	3000	3140	3070	2790	1250	3120	1820
18	2360	2690	2430	2840	2740	2960	3190	3420	2860	720	3050	1870
19	2420	2650	2660	2600	2580	2870	3300	3140	2730	1360	3010	1950
20	2380	2730	2390	2580	2630	3000	3340	3070	2720	1570	3310	2020
21	2360	2680	2310	2710	2780	3060	3250	3130	3000	2060	3280	2060
22	2370	2620	2530	2700	2700	3070	3230	3020	3070	2190	3110	2030
23	1850	2630	2430	2630	2670	3170	3310	2080	3160	2440	3010	2100
24	1860	2610	2130	2700	2650	3010	3350	1910	3250	2480	2930	2230
25	2240	2670	2280	2640	2710	3840	3300	2400	3270	2450	1900	2270
26	2370	2620	2390	2630	2610	2890	3310	2530	3250	2430	1250	2360
27	2360	2560	2470	2650	2750	2990	3370	1240	3310	2440	1480	2380
28	2380	2600	2520	2670	2670	3080	3390	1070	3250	2560	1740	2420
29	2440	2630	2550	2700	---	3010	3470	1510	1030	2690	1770	2420
30	2470	2640	2570	2640	---	3030	3440	1970	750	2780	1830	2480
31	2550	---	2640	2690	---	3040	---	2540	---	2810	2070	---
MEAN	2100	2460	2520	2660	2690	2970	3220	2790	2740	2190	2720	2020

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	15.0	7.0	4.0	11.0	14.0	18.5	24.0	25.0	31.0	29.0	31.0
2	21.0	10.5	9.0	9.5	15.0	14.0	11.0	24.0	27.0	30.0	35.0	28.0
3	23.0	11.0	11.0	9.0	14.5	16.0	16.0	19.0	24.0	29.5	24.0	31.0
4	20.0	11.0	6.5	10.0	15.0	20.0	10.0	22.0	25.0	23.0	26.0	25.5
5	17.0	14.0	9.5	9.0	13.0	16.0	9.0	26.0	28.0	25.0	36.0	22.0
6	20.0	16.0	10.0	3.5	8.0	20.0	13.0	22.0	---	33.0	36.0	23.0
7	20.0	17.0	14.0	7.0	16.0	8.0	13.0	13.0	22.0	31.0	35.0	21.5
8	24.5	14.0	10.0	3.0	8.0	13.0	20.0	29.0	24.5	30.0	30.0	27.0
9	20.0	10.0	5.0	3.0	11.0	8.0	23.0	21.0	22.0	31.0	26.0	29.0
10	18.0	12.0	3.0	3.5	16.0	8.0	25.0	20.0	29.0	31.0	30.0	29.0
11	18.0	4.5	4.0	4.0	18.0	16.0	17.0	30.0	29.0	24.0	30.0	30.0
12	---	8.0	10.0	12.5	15.5	18.0	15.0	29.0	29.0	30.5	29.0	29.0
13	17.0	5.0	10.0	12.0	19.0	14.0	12.0	26.0	25.0	24.0	33.0	21.0
14	19.0	12.0	8.0	10.0	13.0	10.0	15.0	18.0	23.0	26.0	---	21.0
15	24.0	13.0	9.5	3.5	9.5	20.0	6.5	30.0	27.5	29.0	38.0	24.0
16	19.0	13.0	9.0	1.0	7.0	13.0	29.0	19.0	27.0	24.0	31.0	27.0
17	21.0	13.0	7.0	.0	7.5	11.0	21.0	25.0	30.0	28.0	26.0	29.0
18	16.0	13.0	6.0	.0	9.0	19.5	22.0	30.0	32.0	28.0	26.5	20.0
19	16.0	15.0	9.0	1.0	5.0	15.0	28.0	18.0	32.5	24.0	35.0	21.0
20	17.0	14.0	6.0	2.0	6.0	22.0	23.0	28.0	32.5	29.0	27.0	20.5
21	17.0	15.0	7.5	3.0	5.0	12.5	17.0	31.0	29.5	27.0	32.0	24.0
22	21.0	14.0	5.0	5.0	8.0	16.5	26.0	21.0	31.0	28.0	25.0	27.0
23	19.0	8.0	9.0	8.5	9.0	8.0	27.0	17.0	32.0	27.0	20.0	25.0
24	20.5	8.0	7.5	8.5	10.0	13.0	25.0	19.0	29.0	26.0	29.0	27.0
25	14.0	10.0	9.0	6.0	9.0	9.5	18.0	19.0	30.0	26.0	26.0	26.5
26	19.0	9.0	6.0	11.5	10.5	7.0	22.0	25.0	27.0	25.0	25.0	30.0
27	19.0	6.0	6.5	12.0	11.0	4.0	28.0	22.0	28.0	25.0	25.0	22.0
28	22.0	8.0	7.0	12.0	10.0	8.0	29.0	16.0	29.0	27.0	25.0	24.5
29	19.0	10.0	10.0	12.5	---	3.0	22.0	21.0	22.0	25.0	26.0	20.0
30	19.0	11.0	9.0	14.0	---	10.0	24.0	18.0	27.0	26.0	22.0	25.0
31	20.0	---	8.0	10.0	---	19.0	---	21.0	---	28.0	22.0	---
MEAN	19.5	11.5	8.0	7.0	11.0	13.0	19.5	22.5	27.5	27.5	28.5	25.5

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX

LOCATION.--Lat 33°02'18", long 101°11'50", Garza County, Hydrologic Unit 12050004, on right bank at downstream side of bridge on U.S. Highway 84 at Justiceburg, 250 ft downstream from Panhandle and Santa Fe Railroad, and at mile 143.4 measured from confluence with Salt Fork Brazos River at mile 923.2 on the Brazos River.

DRAINAGE AREA.--1,466 mi², of which 1,222 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1961 to current year. Prior to October 1963, published as Sand Creek or South Fork Double Mountain Fork Brazos River at Justiceburg.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,222.47 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1, 2, 10, Oct. 13 to Nov. 3, Nov. 10 to Dec. 1, Jan. 11-30, Feb. 15-20, Mar. 15-25, Mar. 29 to Apr. 6, and Sept. 12, 13. Records poor.

AVERAGE DISCHARGE.--25 years (water years 1963-87), 28.4 ft³/s (1.58 in/yr), 20,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s May 6, 1969 (gage height, 19.8 ft, from floodmarks); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, 25.8 ft in 1914 and 22.2 ft in September 1955, from information by local resident. Flood in July 1961 reached a stage of 18.2 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 4	0400	3,060	a8.50	May 29	2300	*13,300	*a12.70
May 28	1300	11,500	a12.20				

a From floodmarks.

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.1	.24	1.4	1.0	3.2	.50	.00	49	47	.00	.00
2	2.5	1.1	.18	1.3	4.0	2.7	.25	.00	30	7.7	.00	.00
3	441	1.3	.14	1.3	2.2	2.4	.15	.00	22	2.4	.00	.00
4	31	646	.10	1.3	1.4	2.2	.05	.00	22	1.6	.00	.00
5	531	33	.37	1.3	1.1	1.8	.10	.00	22	.30	.00	.00
6	220	9.4	1.0	1.3	23	1.6	.15	.00	20	.07	.00	.00
7	24	6.4	1.4	1.3	6.8	1.3	.18	.00	14	.05	.00	.00
8	10	4.1	1.8	1.6	3.8	1.3	.14	.00	14	.00	.00	.00
9	6.4	4.1	1.8	2.4	2.4	1.3	.10	.00	14	.00	.00	.00
10	5.2	3.8	1.6	2.2	2.0	1.3	.07	.00	20	.00	.00	.00
11	12	3.5	1.1	2.0	1.8	1.1	.01	.00	41	.00	.00	.00
12	9.4	3.2	.86	1.8	1.6	1.0	.00	.00	79	.00	.00	1.0
13	8.3	2.9	1.0	1.6	1.4	.86	.00	.00	35	34	.00	1.0
14	6.8	2.7	1.0	1.4	1.3	.74	.00	.00	22	12	.00	114
15	5.5	2.7	1.3	1.4	1.1	.65	.00	.00	15	148	.00	57
16	4.4	2.4	1.4	1.3	1.0	.50	.00	.00	59	16	.00	3.5
17	3.5	2.2	1.4	1.0	.75	.50	.00	.00	7.7	190	.00	.97
18	2.7	2.0	34	.50	.75	.40	.00	.00	1.6	108	.00	.30
19	2.2	4.3	10	.50	.50	.40	.00	.00	.73	257	.00	.00
20	1.8	3.2	2.4	1.0	.50	.30	.00	.00	.62	13	.00	.00
21	1.6	2.4	2.2	2.0	10	.25	.19	.00	.30	2.6	.00	.00
22	18	2.2	45	2.0	2.0	.25	.03	.00	.10	.62	.00	.00
23	3.5	1.6	30	1.5	1.0	.20	.01	277	.05	.05	.00	.00
24	1.6	1.3	5.2	1.0	3.5	.20	.00	32	.00	.00	.00	.00
25	1.3	1.0	2.2	1.0	4.4	.30	.00	6.4	.00	.00	.00	.00
26	1.3	.74	1.6	1.0	4.1	16	.00	4.4	.00	.00	.00	.00
27	1.3	.63	1.4	1.0	138	7.3	.00	326	.00	.00	.00	.00
28	1.3	.53	1.4	1.0	12	1.8	.00	2590	.00	.00	.00	.00
29	1.3	.44	1.8	1.0	---	1.5	.00	1240	.00	.00	.00	.00
30	1.3	.30	1.6	1.0	---	1.0	.00	1880	543	.00	.00	.00
31	1.1	---	1.6	1.0	---	.75	---	84	---	.00	.00	---
TOTAL	1363.3	750.54	157.09	41.40	233.40	55.10	1.93	6439.80	1032.10	840.39	.00	177.77
MEAN	44.0	25.0	5.07	1.34	8.34	1.78	.06	208	34.4	27.1	.00	5.93
MAX	531	646	45	2.4	138	16	.50	2590	543	257	.00	114
MIN	1.1	.30	.10	.50	.50	.20	.00	.00	.00	.00	.00	.00
AC-FT	2700	1490	312	82	463	109	3.8	12770	2050	1670	.0	353
CFSM	.0	.0	.0	.0	.0	.0	.0	.14	.0	.0	.00	.0
IN.	.0	.0	.0	.0	.0	.0	.0	.16	.0	.0	.00	.0

CAL YR 1986	TOTAL	13189.71	MEAN	36.1	MAX	5710	MIN	.00	AC-FT	26160	CFSM	.02	IN.	.33
WTR YR 1987	TOTAL	11092.77	MEAN	30.4	MAX	2590	MIN	.00	AC-FT	22000	CFSM	.02	IN.	.28

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses: December 1964 to September 1975, October 1975 to current year. Sediment analyses: June 1977 to June 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURES: October 1975 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, 26,800 microsiemens Mar. 5, 1982; minimum daily, 370 microsiemens Oct. 20, 1983.
WATER TEMPERATURES: Minimum daily, 32.5°C July 4, 1978; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily 17,300 microsiemens Apr. 23; minimum daily 395 microsiemens May 30.
WATER TEMPERATURE: Maximum daily 26.0°C June 23; minimum daily, 1.0 °C Jan. 20, 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
28...	0815	1.3	7130	11.5	530	340	130	50	1300
DEC									
16...	0825	1.5	6000	7.0	450	250	100	48	1100
FEB									
11...	0805	1.7	5930	6.5	550	360	120	62	1100
APR									
07...	0900	0.16	12000	6.5	910	670	200	99	2300
JUN									
02...	0850	31	2400	20.0	340	180	83	32	380

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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								
28...	25	7.1	195	360	2100	1.3	11	4100
DEC								
16...	23	7.0	193	390	1700	1.6	10	3500
FEB								
11...	21	8.6	198	460	1600	1.9	12	3500
APR								
07...	34	10	238	560	3700	1.3	11	7000
JUN								
02...	9	9.2	164	240	540	1.4	1.3	1400

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	1363.3	2510	1460	5360	770	2840	76	280	150
NOV.	1986	750.54	1060	609	1230	320	654	31	62	62
DEC.	1986	157.09	2440	1410	599	750	318	73	31	140
JAN.	1987	41.40	4680	2730	305	1400	162	150	16	280
FEB.	1987	233.40	2280	1320	833	700	442	68	43	140
MAR.	1987	55.10	4440	2590	385	1400	205	140	21	270
APR.	1987	1.93	11000	6570	34	3500	18	410	2.1	*
MAY	1987	6439.80	638	365	6340	190	3350	17	304	36
JUNE	1987	1032.10	1790	1040	2890	550	1530	53	146	110
JULY	1987	840.39	1080	620	1410	330	745	31	70	62
AUG.	1987	0.00	*	*	0.00	*	0.00	*	0.00	*
SEPT	1987	177.77	1250	718	344	380	182	36	17	72
TOTAL		11092.82	**	**	19700	**	10400	**	993	**
WTD.AVG.		30	1140	659	**	350	**	33	**	67

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8980	9600	8680	4660	8150	3200	7940	---	1860	950		---
2	7700	8850	9270	4270	4340	3860	9450	---	2420	1740		---
3	4870	8740	9450	3550	5550	4300	8640	---	3000	2990		---
4	1620	650	9670	2890	6490	4500	12200	---	3490	4590		---
5	1030	1120	8590	3140	6610	4720	12500	---	4060	7240		---
6	585	2190	6780	3430	3200	5000	13900	---	4510	11900		---
7	1650	3040	6260	3680	3920	5010	12100	---	5050	13200		---
8	2730	3500	5770	3210	4670	5400	12800	---	5740	---		---
9	3430	3860	5350	3140	5270	5670	13200	---	5430	---		---
10	3790	4390	4980	4210	5870	5830	14300	---	4150	---		---
11	3360	4940	5830	3890	5890	5950	15000	---	2700	---		---
12	3730	5430	6770	3660	6010	5730	---	---	900	---		11500
13	4280	5960	6610	3470	6220	5830	---	---	2880	5690		11800
14	4720	5040	6520	4990	6[illegible]0	5900	---	---	4360	1640		1220
15	4850	4020	6070	6080	7610	6010	---	---	5520	884		825
16	5160	4530	5920	6390	8340	6800	---	---	1580	1100		1610
17	5580	5080	6140	6680	9210	7180	---	---	1940	850		3630
18	6310	5500	1500	7040	6600	7830	---	---	3240	1390		9650
19	6600	7680	2230	7490	7370	8000	---	---	5690	512		---
20	6620	3570	3520	7170	7440	8910	---	---	6700	1230		---
21	6320	4590	4210	5260	2200	11900	13100	---	7100	2480		---
22	3150	5640	1620	4100	3710	12200	16000	---	8820	3700		---
23	3340	5750	1730	4410	4280	14400	17300	1570	9160	4670		---
24	3910	5710	2750	4660	3400	11900	---	1160	---	---		---
25	4400	5690	3650	4840	3200	12200	---	2700	---	---		---
26	5240	5680	4110	5370	4000	3500	---	4330	---	---		---
27	6060	6290	4260	5640	1220	2890	---	1100	---	---		---
28	6680	6860	4530	5710	1480	3500	---	540	---	---		---
29	7950	7470	4510	6100	---	4200	---	810	---	---		---
30	8340	8040	4740	7270	---	6860	---	395	863	---		---
31	8550	---	4920	8230	---	7380	---	1140	---	---		---
MEAN	4890	5310	5390	4990	5330	6660	12700	1530	4220	3710		5750

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

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

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX
(National stream-quality accounting network)

LOCATION.--Lat 33°00'29", long 100°10'49", Stonewall County, Hydrologic Unit 12050004, on right bank at downstream side of bridge on U.S. Highway 83, 0.3 mi downstream from Hitson Creek, 10 mi south of Aspermont, and at mile 34.5 measured from confluence with Salt Fork Brazos River which is at mile 923.2 on the Brazos River.

DRAINAGE AREA.--8,796 mi², of which 6,932 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1923 to September 1934, June 1939 to current year.

REVISED RECORDS.--WSP 733: 1927(M). WRD TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,624.79 ft above National Geodetic Vertical Datum of 1929. Dec. 3, 1923, to Sept. 30, 1934, nonrecording gage at site 90 ft downstream at datum 2.0 ft higher, and June 8, 1939, to Aug. 12, 1972, water-stage recorder at present site and datum 2.0 ft higher.

REMARKS.--Records fair except those for estimated daily discharges which are poor. There are small diversions above station for oilfield operations.

AVERAGE DISCHARGE.--58 years (water years 1925-34, 1940-87), 162 ft³/s (1.18 in/yr), 117,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 91,400 ft³/s Sept. 26, 1955 (gage height, 29.5 ft present datum); no flow at times most years.
Maximum stage since at least 1899, that of Sept. 26, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	1400	*20,800	a*15.92	No other peak greater than base discharge.			

a Observed.

Minimum daily discharge, 4.4 ft³/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	551	123	61	e84	53	476	55	16	1240	143	44	43
2	1430	121	59	e77	55	306	58	16	843	424	39	40
3	1550	119	58	e70	54	231	50	15	571	486	35	40
4	4700	126	57	65	51	171	41	14	396	272	31	40
5	2710	851	57	88	338	151	42	14	275	175	27	37
6	2690	645	57	64	323	128	49	13	196	99	26	32
7	1510	406	58	62	177	112	50	13	165	82	22	29
8	669	324	58	66	126	102	48	12	140	59	20	22
9	486	235	59	68	104	94	42	12	130	47	17	20
10	410	180	61	66	92	86	39	11	123	37	17	51
11	442	140	59	66	90	84	35	11	137	30	16	45
12	427	119	64	64	86	81	35	11	150	25	14	40
13	284	98	64	61	83	76	33	10	106	26	14	48
14	254	96	66	58	81	73	30	51	e754	24	12	475
15	231	96	59	57	77	77	27	69	e254	25	11	293
16	206	94	64	57	74	74	25	20	e228	750	12	640
17	187	92	79	57	73	71	23	23	e275	953	e13	416
18	165	84	128	55	73	71	23	27	529	495	e8.8	217
19	143	76	121	55	77	70	23	30	283	1020	e8.4	130
20	130	73	130	54	98	68	22	22	321	1090	e7.6	102
21	184	68	180	54	116	65	24	19	128	916	e6.6	73
22	213	62	168	58	128	64	28	18	96	503	e5.7	55
23	239	64	145	59	128	64	27	513	83	294	e5.3	42
24	243	65	135	55	154	62	26	1280	74	203	e4.7	34
25	159	65	165	57	162	75	23	552	112	143	4.4	28
26	181	81	196	58	183	77	23	226	73	105	51	24
27	187	73	162	58	206	77	20	123	61	84	70	79
28	188	66	e145	57	213	71	19	1530	51	70	41	37
29	177	65	e126	55	---	68	17	13200	58	62	27	21
30	112	62	e110	53	---	76	17	3340	202	55	19	18
31	130	---	e96	50	---	77	---	2150	---	49	88	---
TOTAL	21188	4769	3047	1908	3475	3378	974	23361	8054	8746	717.5	3171
MEAN	683	159	98.3	61.5	124	109	32.5	754	268	282	23.1	106
MAX	4700	851	196	88	338	476	58	13200	1240	1090	88	640
MIN	112	62	57	50	51	62	17	10	51	24	4.4	18
AC-FT	42030	9460	6040	3780	6890	6700	1930	46340	15980	17350	1420	6290
CFSM	.08	.0	.0	.0	.0	.0	.0	.09	.0	.0	.0	.0
IN.	.09	.0	.0	.0	.0	.0	.0	.10	.0	.0	.0	.0

CAL YR 1986 TOTAL 85515.9 MEAN 234 MAX 7760 MIN .50 AC-FT 169600 CFSM .00 IN. .36
WTR YR 1987 TOTAL 82788.4 MEAN 227 MAX 13200 MIN 4.4 AC-FT 164200 CFSM .00 IN. .35

e Estimated.

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1948 to November 1951, September 1956 to September 1977. Chemical and biochemical analyses: June 1978 to current year. Sediment analyses: September 1944 to November 1951, June 1978 to current year. Pesticide analyses: March to June 1979.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1948 to November 1951, September 1956 to current year.
WATER TEMPERATURE: November 1949 to November 1951, September 1956 to current year.
SUSPENDED-SEDIMENT DISCHARGE: November 1949 to September 1951.

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, 13,100 microsiemens July 29, 1980; minimum daily, 720 microsiemens Oct. 18, 1985
WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 1966; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,870 microsiemens May 10; minimum daily, 1,040 microsiemens May 29.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 13; minimum daily, 3.0°C Dec. 12, Jan. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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												
29...	1500	168	4730	7.90	19.0	220	12.4	142	3.7	660	200	1100
JAN												
28...	1030	76	5440	7.80	7.0	16	12.5	111	0.5	73	77	1200
FEB												
25...	1345	112	4920	8.10	10.0	33	12.0	114	1.6	52	100	1200
APR												
15...	1015	39	8250	8.00	13.0	8.5	11.4	118	2.5	30	K8	1800
JUN												
10...	0920	104	4860	8.00	23.0	82	11.0	138	1.6	480	140	1100
18...	1120	1080	1250	--	21.5	--	--	--	--	--	--	520
AUG												
19...	0930	13	8340	7.70	27.5	12	11.1	152	--	460	190	2000

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT												
29...	970	280	100	670	9	11	147	1000	930	1.4	11	3190
JAN												
28...	970	280	110	760	10	11	179	1000	1200	1.4	10	3730
FEB												
25...	1000	280	120	670	9	11	179	1200	960	1.1	7.8	3500
APR												
15...	1700	490	140	1200	13	13	148	1700	1900	1.0	11	5870
JUN												
10...	920	280	87	700	10	10	145	920	1100	1.2	13	3360
18...	440	170	23	66	1	5.5	80	410	120	0.40	8.1	--
AUG												
19...	1900	560	140	1100	11	14	124	1700	1900	0.80	14	6030

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)
OCT												
29...	3100	<0.010	<0.100	0.060	0.090	0.74	0.80	0.150	<0.010	<0.010	--	364
JAN												
28...	3500	<0.010	0.370	0.090	0.080	0.61	0.70	<0.010	<0.010	<0.010	--	42
FEB												
25...	3400	<0.010	0.310	0.060	0.090	0.64	0.70	<0.010	<0.010	<0.010	--	172
APR												
15...	5500	<0.010	0.190	0.210	0.200	0.69	0.90	0.020	0.010	0.010	0.03	38
JUN												
10...	3200	<0.010	<0.100	0.100	0.090	0.70	0.80	0.170	0.010	<0.010	--	477
18...	850	--	--	--	--	--	--	--	--	--	--	--
AUG												
19...	5500	<0.010	<0.100	0.110	0.070	0.69	0.80	0.190	0.020	0.010	0.03	71

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUMINUM, DISSOLVED (UG/L AS AL)	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)
OCT 29...	165	79	10	4	200	<10	<1	<1	<1	3	20
JAN 28...	8.6	99	--	--	--	--	--	--	--	--	--
FEB 25...	52	99	<10	3	<100	<10	<1	<1	<1	3	20
APR 15...	4.0	92	--	--	--	--	--	--	--	--	--
JUN 10...	134	35	<10	5	100	<10	2	1	<1	1	20
18...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	2.5	95	<10	3	200	<10	2	<1	<1	1	40

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 29...	<5	130	10	0.3	10	5	1	<1	6600	<10	10
JAN 28...	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	<5	150	20	<0.1	6	3	2	<1	7000	<150	10
APR 15...	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	<5	120	20	0.6	<1	2	1	<1	6900	<25	<10
18...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<5	160	320	0.3	4	3	1	<1	10000	13	20

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROSIEMENS)	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.	1986	21188	2110	1350	77100	390	22500	440	25300	470
NOV.	1986	4769	3240	2110	27100	650	8350	670	8660	740
DEC.	1986	3047	4960	3260	26800	1000	8490	1000	8420	1200
JAN.	1987	1908	5700	3760	19400	1200	6250	1200	6030	1300
FEB.	1987	3475	5200	3420	32100	1100	10300	1100	10000	1200
MAR.	1987	3378	5090	3350	30600	1100	9800	1000	9550	1200
APR.	1987	974	7490	5050	13300	1700	4540	1500	3990	1800
MAY	1987	23361	1440	918	57900	260	16500	300	19200	320
JUNE	1987	8054	3000	1940	42100	580	12700	620	13600	680
JULY	1987	8746	2470	1580	37400	470	11000	520	12200	550
AUG.	1987	717.5	5510	3660	7100	1200	2330	1100	2190	1300
SEPT	1987	3171	2790	1800	15400	540	4610	580	4980	630
TOTAL		82788.5	**	**	386000	**	117000	**	124000	**
WTD.AVG.		227	2670	1730	**	530	**	560	**	610

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	5360	6000	4980	5750	3740	5150	9130	1320	4750	5380	3940
2	2100	5660	6280	5330	6330	3270	5060	9390	1660	4000	5450	6050
3	1800	5740	6160	5280	6280	3120	6260	9590	2150	2640	6100	6330
4	1200	5720	6260	5500	6000	3370	6640	9720	2580	2390	6720	5190
5	1380	1240	6240	5490	3250	3890	6750	9800	3130	2380	6680	5190
6	1420	1700	6350	5640	3600	4470	6840	9770	3660	3240	7230	5550
7	1610	1760	6340	5710	4150	4870	7260	9780	4400	3320	7240	5800
8	1970	1830	6380	5730	4890	5240	7250	9760	4420	4060	7520	6300
9	2280	2660	6240	5740	5340	5460	7290	9730	4740	4790	7540	7070
10	2920	2680	6150	5910	5800	5730	7360	9870	4950	5520	7580	8130
11	3050	3180	6060	5780	6010	5900	7450	9850	5010	6310	7770	4500
12	3500	3630	6090	5800	5970	6030	7670	9840	4800	6840	7950	4000
13	3560	4070	6130	5820	6060	6170	7680	9860	4820	6850	8260	4520
14	3830	4420	5940	5920	6500	6340	8260	6660	3000	7340	8300	1820
15	4440	4870	5830	6090	6510	6490	8270	6000	2820	7480	8510	2870
16	4490	4950	5910	6100	6620	6570	8280	6180	2900	4250	8530	2170
17	4500	5020	5820	6060	6580	6640	8420	6130	3070	2150	8490	1940
18	4690	5050	5290	5970	6610	6910	8540	6680	1460	1930	8430	1700
19	4950	5160	5440	5900	6380	6640	8610	6310	4040	1900	8270	1750
20	4970	5220	5320	6190	6470	6560	8900	7590	3600	1460	8190	2040
21	4550	5540	4000	6240	6120	6810	8270	8750	4950	1450	8040	2410
22	4430	5530	4210	5980	6000	6950	8680	8830	5660	1550	7990	3000
23	4360	5620	4530	5800	5680	7120	8760	3910	5710	1670	7960	3390
24	4300	5650	4780	5640	5480	7260	8890	1890	6030	1930	7960	3810
25	4490	5470	4220	5180	4940	6710	8870	2370	5330	2380	7940	4210
26	4310	5750	3780	5190	5210	6340	8800	2460	6280	3010	4000	5070
27	3000	6200	3510	5360	5140	6320	8750	2640	6880	3340	3710	2970
28	4300	5940	3670	5490	4960	7010	8740	1900	7250	3960	2570	4460
29	4690	5890	4120	5780	---	7300	8900	1040	7330	4300	3060	5030
30	4960	5900	4440	5970	---	5740	9150	1250	4310	4640	3690	5340
31	5120	---	4710	5810	---	5080	---	1310	---	5180	2870	---
MEAN	3520	4580	5360	5720	5670	5810	7860	6710	4280	3770	6770	4220

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	19.0	6.0	10.0	16.0	14.0	14.0	22.0	24.0	25.0	33.0	25.0
2	23.0	13.0	6.0	9.0	11.0	16.0	---	22.0	25.0	33.0	32.0	34.0
3	24.0	12.0	6.0	8.0	13.0	15.0	20.0	22.0	24.0	28.0	26.0	25.0
4	21.0	14.0	6.0	9.0	11.0	17.0	16.0	25.0	20.0	29.0	27.0	25.0
5	---	11.0	9.0	12.0	---	16.0	15.0	27.0	21.0	27.0	26.0	23.0
6	16.0	12.0	10.0	13.0	6.0	18.0	16.0	27.0	24.0	30.0	27.0	30.0
7	17.0	14.0	9.0	7.0	11.0	18.0	15.0	20.0	27.0	28.0	29.0	30.0
8	18.0	14.0	9.0	6.0	14.0	19.0	17.0	23.0	25.0	28.0	29.0	30.0
9	21.0	12.0	7.0	6.0	7.0	10.0	21.0	22.0	26.0	27.0	25.0	30.0
10	20.0	11.0	4.0	9.0	11.0	7.0	24.0	21.0	24.0	28.0	29.0	24.0
11	20.0	7.0	4.0	8.0	12.0	10.0	25.0	23.0	23.0	30.0	29.0	24.0
12	11.0	9.0	3.0	10.0	12.0	19.0	16.0	26.0	25.0	32.0	27.0	23.0
13	16.0	---	---	6.0	14.0	17.0	20.0	27.0	35.0	18.0	36.0	29.0
14	12.0	6.0	10.0	8.0	13.0	18.0	22.0	22.0	29.0	28.0	31.0	28.0
15	16.0	9.0	11.0	6.0	9.0	23.0	25.0	29.0	32.0	27.0	33.0	27.0
16	22.0	16.0	11.0	4.0	8.0	20.0	28.0	31.0	26.0	26.0	28.0	27.0
17	17.0	17.0	7.0	---	9.0	16.0	23.0	30.0	28.0	24.0	---	28.0
18	19.0	12.0	8.0	3.0	6.0	12.0	25.0	25.0	27.0	26.0	---	22.0
19	17.0	12.0	6.0	5.0	6.0	15.0	26.0	23.0	29.0	31.0	---	26.0
20	16.0	11.0	7.0	4.0	5.0	18.0	24.0	31.0	24.0	26.0	---	27.0
21	16.0	12.0	7.0	5.0	6.0	17.0	15.0	34.0	32.0	26.0	---	27.0
22	17.0	10.0	6.0	7.0	15.0	24.0	---	---	31.0	26.0	---	27.0
23	18.0	12.0	7.0	9.0	12.0	12.0	---	18.0	25.0	24.0	---	28.0
24	16.0	8.0	7.0	8.0	11.0	14.0	22.0	20.0	29.0	27.0	---	---
25	16.0	13.0	10.0	8.0	9.0	18.0	17.0	25.0	26.0	26.0	25.0	29.0
26	17.0	6.0	8.0	6.0	11.0	9.0	17.0	23.0	26.0	32.0	25.0	---
27	16.0	5.0	7.0	11.0	17.0	14.0	19.0	25.0	25.0	25.0	32.0	28.0
28	15.0	7.0	8.0	9.0	11.0	12.0	20.0	19.0	33.0	28.0	---	26.0
29	16.0	10.0	8.0	10.0	---	6.0	21.0	19.0	25.0	28.0	---	26.0
30	17.0	12.0	6.0	9.0	---	10.0	21.0	20.0	23.0	27.0	---	19.0
31	19.0	---	6.0	10.0	---	10.0	---	20.0	---	34.0	26.0	---
MEAN	17.5	11.0	7.5	8.0	10.5	15.0	20.0	24.0	26.5	27.5	29.0	26.5

08080950 DUCK CREEK NEAR GIRARD, TX

LOCATION.--Lat 33°21'22", long 100°42'17", Kent County, Hydrologic Unit 12050007, near right bank at downstream side of bridge on Farm Road 643, 2.5 mi west of Girard, and 10.7 mi upstream from mouth.

DRAINAGE AREA.--431 mi², of which 152 mi² probably is noncontributing.

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

REVISED RECORDS.--WDR TX-72-1: 1971. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,006.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. There are several small diversions upstream from gage. Flow is affected at times by discharge from the flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 24,710 acre-ft. These structures control runoff from 108 mi². Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 8.72 ft³/s (6,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s June 4, 1974 (gage height, 15.22 ft); maximum gage height 15.77 ft May 21, 1987; no flow at times in 1966, 1969, 1971, 1974, and 1980-84.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902 occurred in March or April 1918 (stage and discharge unknown); the second highest stage, 19.8 ft in September 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,640 ft³/s Oct. 2 at 0700 hours (gage height, 15.77 ft); minimum daily, 0.35 ft³/s, May 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	19	7.7	6.9	6.0	22	5.0	1.9	378	7.4	3.1	2.0
2	2660	17	7.4	6.6	8.2	15	4.8	1.8	216	5.4	2.9	1.7
3	1780	17	7.0	6.6	7.1	11	4.6	1.7	109	4.7	2.6	1.5
4	765	25	6.2	5.8	6.7	7.5	4.4	1.6	76	3.9	2.3	1.3
5	468	28	6.2	5.8	7.1	6.0	5.0	1.5	63	3.3	2.2	9.6
6	391	24	6.8	5.7	6.9	6.6	5.4	1.4	57	3.0	2.2	29
7	283	21	8.0	5.5	6.2	6.5	5.4	1.4	41	2.7	2.0	8.5
8	224	19	9.3	6.2	5.9	6.4	5.7	1.4	34	2.5	1.9	4.0
9	190	17	12	7.2	5.9	6.2	5.5	1.3	31	2.3	1.7	4.9
10	174	15	8.6	6.2	5.8	5.8	5.3	1.0	30	2.2	1.7	4.7
11	134	14	7.6	5.5	6.3	5.7	5.3	.89	40	2.1	1.7	2.5
12	189	13	7.2	5.4	6.8	5.9	5.1	.77	30	2.0	1.6	16
13	93	12	6.6	5.7	6.9	6.1	5.0	.75	28	24	1.5	29
14	70	13	6.6	6.0	7.4	6.5	4.6	.69	23	15	162	92
15	59	13	6.7	6.0	7.9	6.3	4.5	.57	18	65	145	64
16	49	13	6.6	5.3	7.7	5.8	4.8	.54	15	51	2.8	23
17	36	13	7.0	5.3	6.8	5.9	5.2	.50	14	74	2.2	29
18	31	11	13	5.4	6.6	5.6	5.2	.43	14	46	1.9	71
19	27	12	17	5.4	7.4	5.4	4.9	.54	12	24	1.8	7.8
20	25	12	14	7.5	9.2	6.2	5.0	.54	10	26	4.0	6.3
21	27	11	12	8.5	10	5.5	5.3	.35	9.1	22	2.1	5.2
22	43	11	13	8.0	12	5.1	5.1	1.2	8.0	18	1.5	4.6
23	67	9.7	15	6.9	11	5.6	5.3	280	6.9	15	1.3	4.1
24	38	8.9	14	7.2	13	5.7	5.4	67	6.0	12	1.2	3.7
25	32	9.4	12	6.6	15	4.9	5.0	28	5.6	8.5	1.3	3.5
26	28	9.2	10	5.6	16	9.1	4.5	12	5.1	6.8	2.1	3.2
27	25	8.4	8.9	5.3	27	11	4.3	1210	4.6	5.9	10	3.0
28	23	8.1	8.2	5.3	32	10	4.1	2280	4.3	5.2	7.7	2.9
29	22	8.0	7.8	5.3	---	6.6	3.0	2160	6.9	4.4	3.9	2.7
30	20	8.0	7.4	4.8	---	5.3	2.0	762	26	3.7	2.8	2.5
31	20	---	7.2	4.6	---	4.8	---	484	---	3.4	2.2	---
TOTAL	8328	419.7	287.0	188.1	274.8	226.0	144.7	7305.77	1321.5	471.4	383.2	443.2
MEAN	269	14.0	9.26	6.07	9.81	7.29	4.82	236	44.0	15.2	12.4	14.8
MAX	2660	28	17	8.5	32	22	5.7	2280	378	74	162	92
MIN	20	8.0	6.2	4.6	5.8	4.8	2.0	.35	4.3	2.0	1.2	1.3
AC-FT	16520	832	569	373	545	448	287	14490	2620	935	760	879

CAL YR 1986	TOTAL	13241.87	MEAN	36.3	MAX	2660	MIN	.10	AC-FT 26270
WTR YR 1987	TOTAL	19793.14	MEAN	.54	MAX	2660	MIN	.35	AC-FT 39260

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX
(National stream-quality accounting network)

LOCATION.--Lat 33°20'02", long 100°14'16", Stonewall County, Hydrologic Unit 12050007, on left bank at downstream side of bridge on U.S. Highway 83, 5.5 mi downstream from Salt Croton Creek, 13.2 mi north of Aspermont, and at mile 27.3 measured from confluence with Double Mountain Fork Brazos River which is at mile 923.2 on the Brazos River.

DRAINAGE AREA.--5,130 mi², of which 2,634 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1923 to August 1925, June 1939 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,588.70 ft above National Geodetic Vertical Datum of 1929. Dec. 5, 1923, to Aug. 29, 1925, nonrecording gage at site 6.7 mi downstream at different datum. June 15, 1939, to July 13, 1972, water-stage recorder at present site. July 14, 1972, to July 14, 1975, at site 0.1 mi upstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are no large diversion above Station. Some regulation by White River Reservoir (capacity, 44,900 acre-ft), 106 mi upstream.

AVERAGE DISCHARGE.--48 years (water years 1940-87), 109 ft³/s (78,970 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,200 ft³/s Sept. 25, 1955 (gage height, 14.92 ft), from rating curve extended above 29,000 ft³/s; no flow at times most years.
Maximum stage since at least 1900, that of Sept. 25, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1913 reached a stage of 14.4 ft, and flood in November 1934 reached a stage of 13.7 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 30	0100	*12,400	*8.60	No other peak greater than base discharge.			

Minimum daily discharge, 3.7 ft³/s May 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	866	106	50	48	24	160	42	9.2	992	432	31	22
2	2290	96	38	44	31	191	36	8.3	776	414	29	16
3	5340	93	44	38	27	159	32	7.1	624	199	26	13
4	5470	97	40	34	27	118	26	6.5	506	130	23	11
5	2040	443	42	34	76	85	29	5.9	390	88	20	9.2
6	1930	386	42	31	109	78	36	5.4	318	58	19	8.5
7	1260	243	42	27	78	73	34	5.6	264	58	16	10
8	829	196	44	40	56	73	32	5.4	215	24	14	17
9	686	180	44	46	48	71	29	5.3	187	17	12	34
10	612	175	38	36	46	58	29	4.9	195	16	13	42
11	594	150	42	29	42	50	24	4.4	243	13	12	42
12	593	140	44	27	40	56	22	4.0	221	13	11	52
13	638	122	42	38	36	48	17	3.7	351	13	11	176
14	502	119	42	26	38	42	16	4.3	460	21	9.2	162
15	397	110	42	31	38	42	19	9.1	285	112	7.8	183
16	346	97	42	32	36	48	20	26	187	612	18	196
17	288	87	42	32	36	46	19	16	146	799	158	146
18	248	83	54	36	34	50	19	16	142	671	57	216
19	211	79	54	40	34	40	17	50	129	437	27	121
20	185	84	61	38	50	38	16	16	123	227	13	93
21	321	76	e63	38	56	38	18	9.4	80	236	11	78
22	225	71	83	44	52	36	23	90	73	219	8.5	56
23	303	66	83	36	52	29	23	655	71	191	4.9	44
24	352	58	73	34	66	32	18	303	63	149	4.4	40
25	632	68	e73	32	88	34	15	357	58	127	5.4	38
26	368	78	88	32	95	66	14	234	54	106	19	26
27	266	59	76	31	118	90	13	567	46	98	89	17
28	219	62	61	26	118	58	12	5350	38	78	90	14
29	173	63	58	27	---	44	11	e7460	36	68	67	14
30	153	e61	56	19	---	42	10	e5890	91	52	26	12
31	121	---	52	23	---	50	---	1300	---	46	24	---
TOTAL	28458	3748	1655	1049	1551	2045	671	22428.5	7364	5724	876.2	1908.7
MEAN	918	125	53.4	33.8	55.4	66.0	22.4	723	245	185	28.3	63.6
MAX	5470	443	88	48	118	191	42	7460	992	799	158	216
MIN	121	58	38	19	24	29	10	3.7	36	13	4.4	8.5
AC-FT	56450	7430	3280	2080	3080	4060	1330	44490	14610	11350	1740	3790

CAL YR 1986 TOTAL 63560.5 MEAN 174 MAX 5470 MIN .48 AC-FT 126100
WTR YR 1987 TOTAL 77478.3 MEAN 212 MAX 7460 MIN 3.7 AC-FT 153700

e Estimated

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1941 to October 1951, October 1956 to September 1974. Chemical and biochemical analyses: October 1974 to current year. Pesticide analyses: March to September 1979. Sediment analyses: June 1961 to September 1965, October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1948 to October 1951, October 1956 to September 1982.
WATER TEMPERATURE: October 1948 to October 1951, October 1956 to September 1982.

INSTRUMENTATION.--Specific conductance was recorded continuously from January 1969 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 173,000 microsiemens Apr. 12, 1974; minimum daily, 1,690 microsiemens July 8, 1960.
WATER TEMPERATURE: Maximum daily, 38.0°C Aug. 2, 1973; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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 29...	1045	180	11200	8.20	15.5	390	11.5	125	2.5	260	560	1100
FEB 25...	1020	73	34500	8.00	9.5	6.5	10.0	106	1.8	160	67	2300
JUN 10...	1300	187	14300	8.10	26.0	88	9.7	133	1.6	420	560	1400
AUG 19...	1315	98	12500	8.20	29.5	24	10.2	147	--	88	140	1100

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT 29...	970	300	95	2100	28	10	173	990	3300	0.90	9.3	7130
FEB 25...	2200	600	200	7400	69	22	148	2000	12000	0.50	8.0	23500
JUN 10...	1300	370	120	2700	32	13	140	1300	4200	0.80	11	9390
AUG 19...	1000	300	82	2400	33	12	83	1300	3400	0.50	8.6	7800

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT 29...	6900	--	<0.010	0.280	0.080	0.100	0.52	0.60	0.030	0.030	<0.010	--
FEB 25...	22000	0.380	0.010	0.390	0.320	0.350	0.48	0.80	<0.010	<0.010	<0.010	--
JUN 10...	8800	--	<0.010	<0.100	0.150	0.140	0.85	1.0	0.160	0.010	<0.010	--
AUG 19...	7600	--	<0.010	0.260	0.050	0.070	0.65	0.70	0.050	0.060	0.050	0.15

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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)
OCT 29...	511	248	96	<10	3	300	<10	<1	<1	<1	<1	50
FEB 25...	61	12	62	20	<1	<100	10	<1	<1	<1	<1	110
JUN 10...	258	130	87	<100	5	200	<10	2	1	<1	1	40
AUG 19...	55	15	93	<10	3	100	<10	5	<1	<1	2	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	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 29...	<5	90	20	<0.1	7	<1	2	<1	4900	<33	30
FEB 25...	<5	140	50	<0.1	3	<1	2	<1	12000	<500	30
JUN 10...	<5	100	20	0.4	<1	<1	2	<1	6700	<50	20
AUG 19...	<5	70	30	1.8	2	2	4	<1	5500	37	10

08082500 BRAZOS RIVER AT SEYMOUR, TX

LOCATION.--Lat 33°34'51", long 99°16'02", Baylor County, Hydrologic Unit 12060101, on left bank at downstream side of bridge on U.S. Highways 277 and 283, 0.8 mi upstream from Wichita Valley Railway bridge, 1.0 mi southwest of courthouse in Seymour, and at mile 847.4.

DRAINAGE AREA.--15,538 mi², approximately, of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1923 to current year.

REVISED RECORDS.--WSP 808: 1924-29. WSP 1312: 1933. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,238.97 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 6, 1972, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. There are small diversions upstream from station for irrigation and oilfield operation. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950. Gage-height telemeter at station via Sutron Data Collection Platform.

AVERAGE DISCHARGE.--63 years (water years 1925-87), 378 ft³/s (273,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,400 ft³/s Oct. 16, 1926 (gage height, 17.16 ft, from floodmark, present datum), from rating curve extended above 48,000 ft³/s on basis of slope-area measurement of 95,400 ft³/s; maximum gage height, 23.00 ft, present datum, Sept. 28, 1955 (discharge, 71,200 ft³/s); no flow at times.
Since 1906, the maximum stage was that of Sept. 28, 1955, and maximum discharge was that of Oct. 16, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1906 reached about the same stage as the flood in 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 5	14 30	14,000	11.25	May 30	2100	*21,900	*14.95

Minimum discharge, 44 ft³/s May 14, 15, 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	619	499	251	273	178	538	217	76	6360	1030	171	136
2	2540	439	242	257	174	491	188	73	3450	689	153	116
3	4850	406	233	251	171	589	187	67	2290	695	135	95
4	7780	864	222	221	167	634	181	63	1990	861	121	98
5	12000	638	216	202	626	546	170	60	1450	962	122	76
6	7970	481	223	197	999	461	165	56	1190	678	103	69
7	5670	1300	259	187	1050	402	165	57	1000	489	91	66
8	3100	1050	241	193	763	365	166	55	881	366	80	63
9	2700	776	230	219	567	330	162	52	816	296	74	58
10	2750	655	223	194	451	302	155	49	790	249	68	57
11	2000	540	218	190	383	283	147	47	822	206	70	55
12	1810	480	212	189	314	276	137	45	881	177	68	77
13	1580	417	206	179	283	273	125	43	841	210	64	342
14	1350	399	203	174	282	266	114	42	771	182	63	317
15	1180	385	185	165	274	254	108	51	733	153	58	295
16	1010	371	177	160	284	269	107	48	971	175	59	240
17	839	358	200	156	287	1150	105	47	922	514	75	437
18	750	335	275	156	263	555	101	45	736	919	184	383
19	671	325	253	167	255	357	99	78	691	1310	174	494
20	597	316	246	160	252	309	97	121	2900	928	117	392
21	704	306	265	169	253	279	103	91	2430	1160	115	303
22	1780	295	302	205	269	257	105	136	1800	1090	92	217
23	1290	278	306	195	278	246	103	1440	1300	982	73	193
24	1450	266	319	192	295	213	106	3090	975	728	110	156
25	1350	332	338	179	288	198	103	2460	811	553	63	131
26	1730	446	324	178	316	244	99	2590	624	444	76	110
27	1420	315	319	178	449	309	96	1940	495	366	337	101
28	1090	310	322	177	633	290	91	7800	406	307	606	98
29	833	290	322	173	---	241	85	17100	389	258	328	88
30	692	268	318	165	---	240	79	20700	964	219	222	79
31	574	---	298	159	---	227	---	16000	---	192	184	---
TOTAL	74679	14140	7948	5860	10804	11394	3866	74522	40679	17388	4256	5342
MEAN	2409	471	256	189	386	368	129	2404	1356	561	137	178
MAX	12000	1300	338	273	1050	1150	217	20700	6360	1310	606	494
MIN	574	266	177	156	167	198	79	42	389	153	58	55
AC-FT	148100	28050	15760	11620	21430	22600	7670	147800	80690	34490	8440	10600

CAL YR 1986 TOTAL 206433 MEAN 566 MAX 12000 MIN 3.5 AC-FT 409500
WTR YR 1987 TOTAL 270878 MEAN 742 MAX 20700 MIN 42 AC-FT 537300

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: August 1942 to current year. Chemical and biochemical analyses: October 1974 to September 1977. Sediment analyses: October 1974 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1959 to current year.
WATER TEMPERATUES: August 1959 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, 80,400 microsiemens May 24, 1971; minimum daily, 559 microsiemens May 22, 1979.
WATER TEMPERATURES (1959-84): Maximum daily, 38.0°C Aug. 1, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 17,900 microsiemens May 1; minimum daily, 1,340 microsiemens Oct. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
06...	1050	8000	1550	7.60	18.0	390	300	120	22
JAN									
05...	0955	203	11200	7.90	4.0	1500	1300	370	130
FEB									
17...	1015	291	9760	7.90	6.0	1600	1400	400	140
MAR									
30...	1010	239	12000	7.80	3.0	1800	1600	460	160

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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									
06...	180	4	6.2	93	340	240	0.50	9.0	970
JAN									
05...	2000	24	13	166	1300	3200	1.0	10	7100
FEB									
17...	1700	19	10	177	1400	2700	0.70	7.0	6500
MAR									
30...	2100	22	12	170	860	3600	0.70	7.3	7300

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	74679	3100	1900	384000	780	158200	410	83500	470
NOV.	1986	14140	6890	4300	164000	1800	69900	870	33300	990
DEC.	1986	7948	11700	7490	161000	3300	71100	1400	29600	*
JAN.	1987	5860	12500	8020	127000	3600	56500	1500	23000	*
FEB.	1987	10804	9880	6260	183000	2700	79700	1200	34800	1400
MAR.	1987	11394	9200	5820	179000	2500	78100	1100	34300	1300
APR.	1987	3866	14200	9160	95600	4100	43100	1600	16700	*
MAY	1987	74522	2360	1450	292000	600	120200	320	63500	360
JUNE	1987	40679	4560	2830	311000	1200	131000	590	64600	670
JULY	1987	17388	6050	3780	177000	1600	75400	770	36100	880
AUG.	1987	4256	8380	5290	60800	2300	26300	1000	11800	1200
SEPT	1987	5342	8280	5220	75200	2300	32500	1000	14700	1200
TOTAL		270878	**	**	2209000	**	942000	**	446000	**
WTD.AVG.		742	4830	3020	**	1300	**	610	**	700

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4090	6710	11400	10000	11700	8680	14500	17900	1830	9500	7130	10900
2	5160	6760	12400	10600	12900	10300	13800	17600	2350	11700	7790	11500
3	4420	6940	12200	10600	13200	11600	13600	16500	2920	11500	8450	12100
4	2330	4280	12100	11200	13700	8500	13100	16500	3540	7550	9780	11400
5	1340	6460	12300	11800	10100	7860	12900	16400	4160	6160	10000	11500
6	1630	7030	12000	10800	8550	7430	12500	16200	4760	5100	10300	11700
7	2110	6200	11500	11500	7570	7810	12100	15900	5460	6260	10500	11800
8	2120	5810	12000	12100	7840	7820	12400	15900	6690	6460	11200	11800
9	2440	4750	11800	11400	8250	8650	12800	15800	7380	6570	11300	12600
10	2770	4330	11800	11800	8660	9430	13100	15700	8220	7530	11500	12700
11	3060	4630	12700	11000	8140	10100	13200	15800	8190	8640	11200	12700
12	3390	5170	13300	11900	8880	10700	15100	15800	7840	9730	12000	12000
13	3650	5730	14300	12600	9670	11000	15100	15700	7930	8940	12300	7820
14	4130	7220	14100	13300	12300	11300	15100	15500	8380	9070	12800	6970
15	5090	6610	14000	13500	12000	11500	15300	15200	9890	11100	12900	7050
16	4810	7160	13800	13500	10100	11000	15100	15200	7450	10100	13100	7670
17	5190	7680	13200	13900	9760	4010	15100	15400	7080	8620	11900	10200
18	5730	8470	12100	14300	10400	3340	15200	15500	6400	5180	9650	11400
19	6300	9320	11200	14000	11000	7500	15400	11200	6950	4500	6910	5430
20	6780	9360	11500	13500	11500	11800	15400	9940	2340	5860	8100	5070
21	5980	9810	11500	12400	11600	11900	14900	10200	2550	3990	10500	4840
22	3280	10100	11600	12700	11500	12000	14400	11700	2400	3130	13200	6360
23	3340	10400	11100	12000	11400	12000	14600	4880	3000	2620	14100	7770
24	4070	10700	10900	12800	12000	12200	14800	3750	4880	3000	7230	7440
25	4940	8560	10400	14300	13100	12400	14800	4240	6290	3290	10100	6890
26	5260	7290	10900	14500	13700	11200	14900	2480	8490	4240	11000	7840
27	5540	8450	11300	14600	11600	10100	14900	3220	10000	4280	7250	8590
28	5550	9750	11100	14700	7720	11000	15400	1840	10400	4250	5330	8630
29	5900	10500	10600	14800	---	12100	16300	2180	10600	5010	4030	9250
30	6500	10500	10300	13800	---	12800	17100	1700	9980	5590	4510	9870
31	6650	---	9600	13000	---	15400	---	1700	---	7090	10600	---
MEAN	4310	7560	11900	12700	10700	10100	14400	11500	6280	6660	9890	9390

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.0	---	10.0	---	14.0	10.0	---	---	26.0	---	33.0	---
2	25.0	---	10.0	10.0	14.0	9.0	14.0	25.0	---	---	---	---
3	25.0	---	10.0	7.5	---	6.0	18.0	28.0	26.0	30.0	37.0	30.0
4	23.0	15.0	10.0	8.0	---	---	10.0	28.0	---	38.0	38.0	28.0
5	20.0	16.0	---	10.0	---	---	---	30.0	25.0	35.0	---	---
6	18.0	18.0	12.0	12.0	---	16.0	---	27.0	26.0	33.0	---	---
7	20.0	20.0	---	---	7.0	16.0	16.0	28.0	25.0	---	40.0	29.0
8	20.0	18.0	15.0	7.0	---	18.0	---	---	28.0	35.0	40.0	29.0
9	---	---	5.0	---	---	---	21.0	24.0	27.0	33.0	---	31.0
10	20.0	15.0	5.0	4.0	13.0	11.0	24.0	24.0	27.0	30.0	---	31.0
11	---	10.0	7.0	8.0	18.0	---	17.0	32.0	27.0	32.0	33.0	32.0
12	---	---	---	---	18.0	15.0	17.0	---	---	35.0	---	28.0
13	15.0	4.0	7.0	9.0	18.0	17.0	16.0	30.0	27.0	24.0	---	28.0
14	14.0	5.0	9.0	12.0	17.0	14.0	17.0	28.0	---	35.0	---	---
15	18.0	10.0	---	---	17.0	---	25.0	30.0	---	34.0	---	---
16	18.0	18.0	11.0	3.0	---	15.0	25.0	28.0	33.0	26.0	---	30.0
17	20.0	---	---	---	10.0	---	27.0	---	33.0	35.0	---	29.0
18	20.0	15.0	9.0	---	10.0	12.0	22.0	32.0	30.0	30.0	33.0	---
19	20.0	16.0	9.0	---	---	---	20.0	24.0	30.0	---	33.0	20.0
20	22.0	11.0	11.0	---	7.0	22.0	26.0	---	22.0	30.0	28.0	---
21	---	15.0	---	.0	7.0	19.0	26.0	33.0	29.0	33.0	29.0	25.0
22	20.0	13.0	8.0	.0	7.0	---	---	25.0	27.0	30.0	34.0	---
23	25.0	11.0	11.0	2.0	12.0	---	27.0	24.0	30.0	30.0	---	26.0
24	---	---	---	2.0	---	15.0	25.0	---	31.0	33.0	23.0	25.0
25	15.0	11.0	---	7.0	---	---	---	26.0	28.0	33.0	31.0	25.0
26	---	10.0	12.0	---	10.0	13.0	---	27.0	---	33.0	28.0	28.0
27	20.0	---	---	---	10.0	13.0	---	25.0	25.0	33.0	---	28.0
28	23.0	12.0	---	---	14.0	12.0	---	16.0	25.0	35.0	26.0	23.0
29	20.0	9.5	---	10.0	---	---	---	23.0	27.0	35.0	---	24.0
30	20.0	9.0	10.0	---	---	11.0	---	23.0	24.0	34.0	25.0	25.0
31	22.0	---	10.0	9.0	---	15.0	---	26.0	---	35.0	23.0	---
MEAN	20.5	13.0	9.5	6.5	12.5	14.0	20.5	26.5	27.5	32.5	31.5	27.5

08082700 MILLERS CREEK NEAR MUNDAY, TX

LOCATION.--Lat 33°19'45", long 99°27'53", Throckmorton County, Hydrologic Unit 12060101, near right bank at downstream side of bridge on Farm Road 1720, 12.7 mi southeast of Munday, and 24.6 mi upstream from mouth.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--July 1963 to current year.
Water-quality records.--Sediment records: October 1976 to September 1978.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,350 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. There are known diversions upstream from station.

AVERAGE DISCHARGE.--24 years (water years 1964-87), 7.55 ft³/s (0.99 in/yr), 5,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s Aug. 4, 1978 (gage height, 17.53 ft); no flow most of time.
Maximum stage since 1930, 18.0 ft in October 1962, from information by local resident.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1883 occurred June 13, 1930, and exceeded 18.0 ft.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 10	1130	862	12.93	Mar. 17	1100	252	6.38
Oct. 24	1100	1,860	13.74	May 24	0730	344	7.99
Nov. 5	0800	218	5.86	May 29	1830	*2,410	*14.03
Feb. 6	1330	537	10.73	June 21	0330	549	10.87

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e2.7	1.9	.39	.52	62	e1.8	.05	32	e2.2	e.00	.00
2	.00	e2.3	1.3	.29	.41	38	e1.8	.05	14	e21	e.00	.00
3	.23	e2.0	.83	.25	.32	18	e1.7	.05	6.6	8.8	e.00	.00
4	1.2	e50	.55	.19	.31	9.2	e1.5	.05	e4.3	e5.0	e.00	.00
5	7.8	146	.38	.17	74	5.6	e1.4	.05	e3.2	e4.2	.00	.00
6	87	19	.29	.18	477	4.1	e1.2	.05	e2.5	e3.6	.00	.00
7	160	8.1	.39	.17	205	3.1	e1.1	.06	e1.7	e3.1	.00	.00
8	29	5.0	.31	.15	50	2.6	e.95	.06	e1.1	e2.6	.00	.00
9	21	e3.7	.21	2.6	27	2.3	e.81	.06	1.0	e2.2	.00	.00
10	656	e3.3	.21	3.2	14	2.2	e.72	.06	1.0	e1.7	.00	.00
11	214	e3.0	.18	2.3	8.4	2.2	e.60	.06	.98	e1.3	.00	.00
12	20	e2.8	.18	2.1	5.8	2.1	e.52	.06	1.1	e.92	.00	.00
13	9.4	e2.6	.16	2.3	4.5	2.1	e.42	.06	1.0	e.64	.00	.00
14	5.5	e2.4	.15	1.9	3.5	2.1	e.35	.06	.98	e.42	.00	.00
15	3.8	e2.3	.15	1.3	2.9	2.1	e.28	.07	.98	e.23	.00	.00
16	2.8	e2.0	.13	.94	2.4	2.1	e.22	.07	.98	e.12	.00	.00
17	2.3	e1.7	.13	.79	2.0	144	e.17	.08	.98	e.05	.00	.00
18	e1.6	e1.3	2.6	.73	1.7	52	e.15	.07	.98	e.01	.00	.00
19	e1.0	e1.1	2.9	.68	1.6	14	e.11	.06	.98	e.00	.00	.00
20	e.60	e.80	3.3	.76	1.6	6.0	e.09	.06	181	e.00	.00	.00
21	2.7	e.60	3.0	1.6	1.6	3.7	.11	.06	383	e.00	.00	.00
22	13	e.40	3.2	2.3	1.7	2.7	.11	1.3	102	e.00	.00	.00
23	172	e.26	3.3	2.0	2.2	2.4	.09	78	32	e.00	.00	.00
24	1100	e.14	3.4	1.9	2.3	2.2	.08	318	12	e.00	.00	.00
25	305	4.3	3.0	1.8	2.3	2.1	.11	158	6.0	e.00	.00	.00
26	28	10	2.4	1.4	6.2	1.7	.10	39	e4.7	e.00	.00	.00
27	11	11	2.0	1.1	31	2.2	.09	14	e4.1	e.00	.00	.00
28	6.3	4.9	1.6	1.0	50	3.6	.07	107	e3.5	e.00	.00	.00
29	4.5	3.2	1.2	.81	---	2.7	.06	1320	e3.0	e.00	.00	.00
30	3.6	2.5	.82	.61	---	2.0	.06	704	e2.6	e.00	.00	.00
31	e3.1	---	.58	.45	---	e1.8	---	94	---	e.00	.00	---
TOTAL	2872.43	299.40	40.75	36.36	980.26	402.9	16.77	2834.55	810.26	58.09	.00	.00
MEAN	92.7	9.98	1.31	1.17	35.0	13.0	.56	91.4	27.0	1.87	.00	.00
MAX	1100	146	3.4	3.2	477	144	1.8	1320	383	21	.00	.00
MIN	.00	.14	.13	.15	.31	1.7	.06	.05	.98	.00	.00	.00
AC-FT	5700	594	81	72	1940	799	33	5620	1610	115	.0	.0

CAL YR 1986 TOTAL 3501.12 MEAN 9.59 MAX 1100 MIN .00 AC-FT 6940
WTR YR 1987 TOTAL 8351.69 MEAN 22.9 MAX 1320 MIN .00 AC-FT 16570

e Estimated.

08082800 MILLERS CREEK RESERVOIR NEAR BOMARTON, TX

LOCATION.--Lat 33°24'32", long 99°23'19", Baylor County, Hydrologic Unit 12060101, at intake tower on left bank of Millers Creek, 1.1 mi upstream from dam, 7.1 mi southeast of Bomarton, and 13.2 mi upstream from mouth.

DRAINAGE AREA.--240 mi².

PERIOD OF RECORD.--August 1974 to current year.
Water-quality records.--Chemical analyses: October 1975 to September 1984.

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 an earthfill dam 9,250 ft long. The dam was completed in 1974 and storage began in July 1974. Dead storage, 1,240 acre-ft below elevation, 1,303.4 ft. The reservoir is used for municipal and industrial water supply. The uncontrolled spillway is an open cut 3,000 ft wide located on left bank about 800 ft upstream from levee. The service spillway is an uncontrolled morning-glory-type drop inlet, 16.5 ft square, that discharges through a 5.0-foot-square concrete conduit. Low-flow releases are made by valves in the outlet vault of the drop inlet. 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	1,355.0	-
Crest of spillway	1,340.1	49,080
Crest of spillway	1,334.4	32,230
Lowest gated outlet (invert)	1,305.0	1,660
Dead storage	1,303.4	1,240

COOPERATION.--The area-capacity tables, prepared from data of Sept. 17, 1965, were provided by Freese and Nichols, Inc., Consulting Engineers. Record of diversions provided by North Central Texas Municipal Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,850 acre-ft June 26, 1982 (elevation, 1,341.42 ft); minimum contents were below dead storage elevation prior to Apr. 20, 1977, and July 17 to Aug. 3, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,710 acre-ft June 21 at 1700 hours (elevation, 1,335.76 ft); minimum, 13,080 acre-feet Oct. 1 (elevation, 1,322.94 ft).

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

1,322.0	12,080	1,330.0	22,950
1,324.0	14,270	1,332.0	26,800
1,326.0	16,760	1,334.0	31,240
1,328.0	19,630	1,336.0	36,340

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13100	20990	22090	22120	22210	25880	26680	26100	33490	33190	31590	29900
2	13140	20940	22070	22140	22210	26060	26740	26080	33360	33120	31510	29880
3	13200	20940	22060	22210	22210	26100	26760	26000	33220	33020	31440	29850
4	13240	21260	22040	22140	22210	26120	26720	25940	33120	32990	31440	29760
5	13360	21810	22060	22210	22530	26140	26700	25890	33040	32870	31290	29720
6	13680	21990	22070	22180	23970	26140	26700	25840	32970	32770	31290	29720
7	14170	22020	22060	22190	24900	26140	26720	25800	32870	32600	31190	29670
8	14390	22010	22040	22210	25080	26120	26720	25800	32870	32520	31100	29650
9	14450	21990	22040	22190	25160	26040	26680	25780	32800	32430	31010	29620
10	15440	21920	22000	22210	25260	26020	26680	25720	32770	32350	30990	29530
11	16490	21900	22000	22160	25270	26020	26680	25680	32720	32280	30960	29510
12	16610	21810	22000	22180	25280	26000	26700	25630	32720	32150	30870	29580
13	16670	21800	21900	22180	25280	26020	26520	25580	32800	32180	30780	29740
14	16680	21810	22040	22180	25270	26040	26520	25530	32750	32130	30780	29760
15	16670	21830	22040	22110	25220	26020	26500	25520	32670	32100	30690	29760
16	16660	21810	21970	22090	25210	26160	26520	25500	32600	32600	30620	29720
17	16660	21800	21990	22130	25200	26660	26480	25480	32650	32650	30570	29740
18	16630	21760	21990	22140	25180	26950	26500	25420	32500	32550	30570	29580
19	16620	21810	22000	22160	25200	27010	26460	25480	32450	32470	30480	29580
20	16600	21780	21970	22140	25220	27030	26440	25460	34760	32380	30390	29460
21	16700	21780	21970	22160	25220	26990	26380	25440	35680	32300	30290	29480
22	16770	21750	21970	22160	25240	27060	26400	25460	35390	32280	30200	29440
23	17240	21710	21970	22180	25220	26910	26400	25920	34950	32200	30110	29390
24	19420	21640	22040	22170	25280	26890	26340	26660	34600	32130	30080	29350
25	20810	21900	22040	22180	25280	26910	26340	27200	34210	32080	30020	29300
26	21020	21990	22040	22180	25360	26970	26320	27310	33920	31980	30060	29250
27	21050	22090	22070	22210	25540	27010	26300	27340	33690	31930	30080	29230
28	21090	22120	22110	22210	25660	26890	26240	28260	33490	31860	30060	29160
29	21070	22160	22110	22190	---	26800	26220	30960	33390	31810	30060	29140
30	21050	22120	22110	22180	---	26820	26170	33240	33290	31710	29990	29070
31	21020	---	22120	22190	---	26840	---	33520	---	31610	29950	---
MAX	21090	22160	22120	22210	25660	27060	26760	33520	35680	33190	31590	29900
MIN	13100	20940	21900	22090	22210	25880	26170	25420	32450	31610	29950	29070
(†)	1328.87	1329.52	1329.52	1329.56	1331.43	1332.02	1331.69	1334.92	1334.83	1334.15	1333.44	1333.06
(ϕ)	+7940	+1100	0	+70	+3470	+1180	-670	+7350	-230	-1680	-1660	-880

CAL YR 1986 MAX 22160 MIN 13080 (ϕ) +6600
WTR YR 1987 MAX 35680 MIN 13100 (ϕ) +15990

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

08083100 CLEAR FORK BRAZOS RIVER NEAR ROBY, TX

LOCATION.--Lat 32°47'15", long 100°23'18", Fisher County, Hydrologic Unit 12060102, on right bank at downstream side of pile bent of bridge on State Highway 70, 3.0 mi north of Roby, 3.2 mi upstream from Cottonwood Creek, and 255.7 mi upstream from mouth.

DRAINAGE AREA.--228 mi².

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,885.09 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. There are several small diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1963-87), 11.0 ft³/s (0.52 in/yr), 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s Oct. 18, 1965 (gage height, 21.48 ft); maximum gage height, 21.52 ft Sept. 19, 1969; no flow at times in 1963-67.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since the 1890's, about 22 ft in May and June 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 6	1230	*1,470	*14.31	May 29	1700	314	9.11

Minimum daily discharge, 2.4 ft³/s Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	21	15	13	13	27	16	8.9	9.2	7.8	4.1	3.6
2	8.8	20	14	13	16	22	16	8.6	7.2	7.2	4.0	3.5
3	134	20	14	13	15	21	15	8.1	6.4	7.0	4.0	3.5
4	284	21	14	13	14	20	15	7.5	6.2	6.7	3.9	3.5
5	742	21	14	13	52	20	16	7.2	6.3	6.6	3.9	3.5
6	997	20	14	13	60	20	15	6.8	6.2	6.5	3.9	3.5
7	299	19	14	13	29	21	16	6.4	6.2	6.4	3.9	3.5
8	95	19	15	12	20	21	16	6.1	6.3	6.3	3.9	3.5
9	66	18	14	13	18	21	15	5.9	6.5	6.3	3.8	3.4
10	54	18	13	13	17	20	15	5.7	6.9	6.2	4.0	3.4
11	84	18	13	13	17	19	15	5.3	7.0	6.1	3.9	3.4
12	107	17	13	12	17	19	15	4.9	8.4	6.1	5.9	3.5
13	57	17	13	12	16	20	14	4.7	71	6.1	3.9	3.5
14	47	17	13	13	17	20	13	8.1	18	6.0	3.8	17
15	41	18	13	13	17	21	13	7.9	9.1	6.1	3.7	3.8
16	36	18	13	13	16	21	13	4.6	7.9	12	3.7	3.7
17	35	18	13	13	16	21	13	4.3	7.9	21	3.6	2.9
18	33	17	19	13	15	20	13	4.2	7.8	4.8	3.6	2.7
19	31	17	30	13	17	19	13	4.1	7.8	4.6	3.5	2.7
20	30	16	19	13	22	18	12	4.0	7.7	4.5	3.5	2.6
21	31	16	17	14	32	18	12	4.1	7.6	4.4	3.5	2.6
22	32	16	22	13	30	18	12	3.7	7.4	4.4	3.5	2.5
23	33	16	27	13	25	18	13	37	7.3	4.3	3.5	2.5
24	30	15	20	13	23	18	12	66	7.2	4.3	3.4	2.5
25	30	16	18	13	26	16	11	18	7.3	4.2	3.4	2.5
26	27	17	16	12	27	18	11	7.1	7.1	4.2	4.0	2.5
27	25	16	15	12	45	24	10	5.0	7.0	4.2	3.8	2.5
28	24	15	14	12	37	21	9.9	33	6.9	4.2	3.5	2.4
29	23	15	14	12	---	17	9.6	221	7.3	4.2	3.8	2.4
30	22	15	14	12	---	15	9.2	57	7.7	4.2	3.7	2.4
31	22	---	13	12	---	15	---	16	---	4.1	4.4	---
TOTAL	3488.2	527	490	395	669	609	398.7	591.2	292.8	191.0	119.0	105.5
MEAN	113	17.6	15.8	12.7	23.9	19.6	13.3	19.1	9.76	6.16	3.84	3.52
MAX	997	21	30	14	60	27	16	221	71	21	5.9	17
MIN	8.4	15	13	12	13	15	9.2	3.7	6.2	4.1	3.4	2.4
AC-FT	6920	1050	972	783	1330	1210	791	1170	581	379	236	209
CFSM	.49	.08	.07	.06	.10	.09	.06	.08	.0	.0	.0	.0
IN.	.57	.09	.08	.06	.11	.10	.07	.10	.0	.0	.0	.0

CAL YR 1986 TOTAL 11019.0 MEAN 30.2 MAX 1950 MIN 1.2 AC-FT 21860 CFSM .13 IN. 1.80
WTR YR 1987 TOTAL 7876.3 MEAN 21.6 MAX 997 MIN 2.4 AC-FT 15620 CFSM .09 IN. 1.29

08083240 CLEAR FORK BRAZOS RIVER AT HAWLEY, TX

LOCATION.--Lat 32°35'53", long 99°48'53", Jones County, Hydrologic Unit 12060102, on right bank 90 ft upstream from upstream bridge on U.S. Highways 83 and 277, 0.8 mi south of Hawley, 7.4 mi upstream from Mulberry Creek, and 188.6 mi upstream from mouth.

DRAINAGE AREA.--1,416 mi².

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,612.45 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1973, at datum 0.80 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Lake Sweetwater (capacity, 11,900 acre-ft) is located on a tributary upstream from gage.

AVERAGE DISCHARGE.--20 years, 59.8 ft³/s (43,320 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft³/s Sept. 30, 1980 (gage height, 21.07 ft, present datum); no flow July 30, 31, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1915, occurred in 1932; second highest stage in 1957, 25.0 ft, present datum, 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)
Oct. 7	1500	*7,300	*20.53	May 30	0200	1,260	12.93
Feb. 7	0900	1,890	14.33				

Minimum daily discharge, 8.5 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	112	80	65	74	225	80	47	272	86	23	16
2	73	110	78	65	73	193	77	44	160	115	23	15
3	82	107	78	63	70	157	76	42	130	76	22	15
4	202	129	77	63	72	142	75	42	117	57	20	15
5	1570	110	75	63	155	135	72	42	109	49	20	14
6	4550	108	73	62	1010	129	73	41	100	42	20	10
7	6970	107	75	61	1680	127	74	40	89	39	17	8.7
8	5840	102	75	61	810	126	72	40	81	36	17	8.7
9	2070	99	76	65	289	125	72	39	80	33	16	8.7
10	924	96	76	72	211	121	72	38	85	30	18	8.7
11	542	92	75	107	182	118	72	36	88	29	19	8.5
12	560	90	75	94	165	115	73	34	99	27	18	11
13	724	89	75	79	152	113	73	34	129	27	20	11
14	768	88	74	76	145	111	70	33	177	27	33	25
15	325	87	75	74	144	110	67	63	182	26	24	73
16	258	87	75	74	138	112	64	52	122	26	20	136
17	223	87	76	75	129	112	63	49	98	31	17	67
18	204	87	94	77	121	110	61	39	101	36	15	41
19	185	86	119	79	116	109	60	34	110	52	14	30
20	170	84	151	81	117	102	60	67	118	32	12	26
21	159	83	131	82	125	97	63	49	80	24	11	26
22	155	83	112	86	158	94	63	50	66	20	9.7	22
23	154	81	109	88	178	92	58	344	60	18	9.6	20
24	167	80	128	87	164	90	57	351	55	21	9.6	19
25	155	85	119	83	149	95	57	443	50	25	9.6	18
26	159	87	101	80	148	92	52	338	48	25	10	17
27	141	86	78	78	157	90	50	171	47	25	10	15
28	135	89	72	74	217	92	52	178	45	25	13	60
29	126	85	68	71	---	100	51	1070	53	25	15	29
30	120	82	67	69	---	98	49	1050	113	25	16	18
31	116	---	66	69	---	87	---	622	---	24	18	---
TOTAL	27901	2798	2703	2323	7149	3619	1958	5522	3064	1133	519.5	792.3
MEAN	900	93.3	87.2	74.9	255	117	65.3	178	102	36.5	16.8	26.4
MAX	6970	129	151	107	1680	225	80	1070	272	115	33	136
MIN	73	80	66	61	70	87	49	33	45	18	9.6	8.5
AC-FT	55340	5550	5360	4610	14180	7180	3880	10950	6080	2250	1030	1570

CAL YR 1986 TOTAL 60113.3 MEAN 165 MAX 6970 MIN .17 AC-FT 119200
WTR YR 1987 TOTAL 59481.8 MEAN 163 MAX 6970 MIN 8.5 AC-FT 118000

08083245 MULBERRY CREEK NEAR HAWLEY, TX

LOCATION.--Lat 32°34'04", long 99°47'32", Jones County, Hydrologic Unit 12060102, on right bank at downstream side of downstream bridge on U.S. Highways 83 and 277, 3.3 mi south of Hawley, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--205 mi².

PERIOD OF RECORD.--December 1967 to current year.
Water-quality records: Chemical analyses: December 1967 to September 1983.

REVISED RECORDS.--WRD TX-74-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,615.98 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 3-7, Oct. 16-20, Nov. 11-24, Nov. 30 to Dec. 4. Records fair. No known diversions above station.

AVERAGE DISCHARGE.--19 years (water years 1969-87), 10.5 ft³/s (0.70 in/yr), 7,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s May 28, 1980 (gage height, 16.00 ft); no flow at times most years.
Maximum stage since 1932, that of May 28, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1957 reached a stage of about 16.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 6	1500	*2,550	a*14.68	June 12	1430	450	8.69
May 24	1430	1,090	12.45	June 19	1730	1,020	12.28
May 29	0630	1,180	12.77				

a From floodmark.

Minimum daily discharge, 0.15 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	6.7	7.4	7.6	8.6	53	11	6.1	34	23	2.8	2.4
2	.15	6.7	7.2	7.5	13	28	11	6.4	23	16	2.4	1.1
3	26	6.7	6.8	7.5	13	21	11	5.8	19	13	2.2	.85
4	224	46	6.5	7.2	9.6	17	9.8	6.6	19	11	2.0	.75
5	716	39	6.2	6.9	17	15	9.9	5.6	14	9.2	1.9	.59
6	2070	17	7.0	6.7	208	14	11	5.0	11	8.4	1.8	.53
7	819	10	7.6	6.5	101	13	11	4.8	9.5	8.0	1.6	8.6
8	86	8.1	7.4	6.4	40	13	11	4.7	8.8	7.6	1.5	3.9
9	44	6.9	7.1	8.2	24	13	11	4.6	11	7.2	1.4	1.7
10	31	6.3	6.3	9.4	18	12	10	4.5	54	6.9	1.8	.85
11	29	6.0	5.9	8.5	16	12	10	4.3	52	6.6	1.4	.61
12	32	6.0	5.8	7.6	14	12	9.4	4.3	263	6.4	1.2	4.9
13	22	6.0	5.7	7.2	13	11	8.8	3.9	106	7.8	1.0	1.3
14	17	5.9	5.7	7.1	13	11	8.1	5.7	128	7.0	1.2	23
15	14	5.9	6.2	6.7	13	11	7.7	5.2	38	7.2	1.2	50
16	12	5.8	6.3	6.5	12	14	7.6	5.3	23	7.0	1.1	20
17	11	5.8	6.7	6.9	11	107	7.6	4.5	18	23	.90	2.4
18	11	5.7	102	7.7	10	52	7.6	3.9	130	12	.76	1.5
19	10	5.7	89	8.0	10	22	7.3	4.2	709	7.8	.70	5.5
20	9.2	5.6	28	10	12	17	7.4	4.9	84	6.3	.57	6.7
21	8.2	5.6	17	11	23	14	9.0	22	38	5.4	.41	1.9
22	8.2	5.5	20	9.5	28	13	9.5	9.3	27	5.0	.41	1.1
23	8.7	5.5	25	8.6	22	13	14	443	21	4.7	.41	.94
24	8.7	5.5	20	8.1	18	13	11	979	18	4.5	.41	.82
25	9.1	34	15	7.7	19	12	8.5	206	16	4.4	.41	.72
26	8.0	39	12	9.2	23	13	7.7	70	14	4.1	.44	.72
27	7.5	21	10	7.4	37	14	7.1	26	13	3.9	.47	.76
28	7.2	12	9.1	6.7	70	14	6.6	189	12	3.7	.46	140
29	6.8	8.9	8.5	6.7	---	13	6.3	1050	13	3.5	.46	15
30	6.7	8.0	8.3	6.3	---	11	6.1	322	24	3.3	.86	3.5
31	6.7	---	8.0	6.1	---	11	---	59	---	3.0	9.6	---
TOTAL	4269.32	356.8	483.7	237.4	816.2	609	274.0	3475.6	1950.3	246.9	43.77	302.64
MEAN	138	11.9	15.6	7.66	29.1	19.6	9.13	112	65.0	7.96	1.41	10.1
MAX	2070	46	102	11	208	107	14	1050	709	23	9.6	140
MIN	.15	5.5	5.7	6.1	8.6	11	6.1	3.9	8.8	3.0	.41	.53
AC-FT	8470	708	959	471	1620	1210	543	6890	3870	490	87	600
CFSM	.67	.06	.08	.0	.14	.10	.0	.55	.32	.0	.0	.0
IN.	.77	.06	.09	.0	.15	.11	.0	.63	.35	.0	.0	.05

CAL YR 1986 TOTAL 9252.35 MEAN 25.3 MAX 2070 MIN .00 AC-FT 18350 CFSM .12 IN. 1.68
WTR YR 1987 TOTAL 13065.52 MEAN 35.8 MAX 2070 MIN .15 AC-FT 25920 CFSM .17 IN. 2.37

08084000 CLEAR FORK BRAZOS RIVER AT NUGENT, TX

LOCATION.--Lat 32°41'24", long 99°40'09", Jones County, Hydrologic Unit 12060102, on right bank 33 ft downstream from bridge on Farm Road 600 at Nugent, 2 mi downstream from Elm Creek, 4 mi upstream from Deadman Creek, and 167.8 mi upstream from mouth.

DRAINAGE AREA.--2,199 mi².

PERIOD OF RECORD.--February 1924 to current year.
Water-quality records.--Chemical analyses: August 1948 to September 1953. Chemical and biochemical analyses: February 1968 to September 1981.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,531.91 ft above National Geodetic Vertical Datum of 1929 (levels by Brazos River Authority). Prior to Dec. 12, 1933, nonrecording gage at site 575 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow is affected by four upstream reservoirs with a total capacity of 103,600 acre-ft. There are numerous diversions above station for municipal supply and oilfield operation that materially affect streamflow.

AVERAGE DISCHARGE.--14 years (water years 1925-38) prior to completion of Fort Phantom Hill Reservoir, 186 ft³/s (134,800 acre-ft/yr); 49 years (water years 1939-87) partially regulated, 84.3 ft³/s (61,080 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 47,000 ft³/s Sept. 8, 1932 (gage height, 27.05 ft), site then in use, from rating curve extended above 25,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 30 ft in 1876; floods in 1900 and May 1923 reached stages of 24 and 24.5 ft, respectively, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft³/s Oct. 7 at 0530 hours (gage height, 19.25 ft); minimum, 14 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	163	199	176	128	774	141	62	977	139	29	30
2	37	152	172	177	158	639	115	58	546	153	29	23
3	117	147	154	165	166	483	125	55	386	138	28	20
4	392	325	141	147	168	398	118	50	331	99	27	20
5	1510	285	134	146	170	345	112	52	291	82	26	20
6	6710	247	128	143	899	306	115	48	255	71	25	18
7	9950	222	142	125	1900	280	117	47	221	62	24	17
8	8180	187	123	123	1820	262	115	46	194	58	22	24
9	5070	169	111	137	583	246	114	46	183	53	22	20
10	2260	157	102	142	430	231	115	45	200	49	23	18
11	1280	133	97	161	356	226	118	45	236	46	24	16
12	1070	130	94	190	315	213	121	45	346	45	24	20
13	1090	108	88	158	288	202	119	42	392	45	22	24
14	1190	113	86	137	278	211	115	95	390	45	32	33
15	776	112	84	123	256	200	113	377	353	45	29	63
16	565	111	81	119	246	369	110	91	248	46	26	151
17	476	108	83	121	229	1380	106	64	185	52	23	105
18	416	106	334	127	215	1180	105	55	189	59	20	45
19	372	102	661	129	199	810	103	48	585	62	19	31
20	334	98	615	131	212	588	99	53	701	57	19	28
21	309	94	511	136	239	423	100	85	210	44	18	26
22	296	91	432	135	279	356	103	68	157	39	17	23
23	282	88	416	139	326	344	98	1110	134	37	16	19
24	301	83	418	134	315	259	90	1580	116	36	16	17
25	267	216	394	126	296	231	84	1460	100	35	16	17
26	276	411	343	123	312	221	79	885	91	33	16	16
27	241	390	302	119	366	212	74	538	83	33	20	16
28	214	330	266	110	633	184	69	700	77	31	18	85
29	203	280	237	106	---	163	68	2800	74	31	20	123
30	181	241	213	99	---	166	65	3080	168	30	23	30
31	173	---	194	100	---	155	---	1590	---	30	38	---
TOTAL	44579	5399	7355	4204	11782	12057	3126	15320	8419	1785	711	1098
MEAN	1438	180	237	136	421	389	104	494	281	57.6	22.9	36.6
MAX	9950	411	661	190	1900	1380	141	3080	977	153	38	151
MIN	37	83	81	99	128	155	65	42	74	30	16	16
AC-FT	88420	10710	14590	8340	23370	23920	6200	30390	16700	3540	1410	2180

CAL YR 1986	TOTAL	76361	MEAN	209	MAX	9950	MIN	1.1	AC-FT	151500
WTR YR 1987	TOTAL	115835	MEAN	317	MAX	9950	MIN	16	AC-FT	229800

08084100 DEADMAN CREEK NEAR NUGENT, TX
(Reconnaissance partial-record station)

LOCATION.--Lat 32°40'36", long 99°37'00", Jones County, Hydrologic Unit 12060102, at low-water crossing on county road, 3.2 mi east of Nugent, and 4.4 mi upstream from Clear Fork Brazos River.

DRAINAGE AREA.--168 mi² .

PERIOD OF RECORD.--Periodic discharge measurements: October 1967 to current year. Chemical and biochemical analyses: October 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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 NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 30...	1700	25	1480	8.30	21.0	14.8	174	5.9	290	150
JAN 28...	1530	39	1620	7.30	12.0	15.2	150	2.9	400	220
FEB 26...	0915	90	1760	7.80	12.5	11.0	110	5.6	450	230
APR 16...	0920	36	2030	7.60	17.0	7.5	83	12	460	250
JUN 11...	0900	55	1610	8.10	23.5	8.5	106	4.1	390	170
AUG 18...	1550	8.4	1860	8.20	29.0	12.1	168	2.6	340	180

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 WH WAT TOTAL 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 30...	58	36	180	5	13	145	190	240	0.90	12
JAN 28...	95	39	170	4	6.5	175	150	290	0.70	7.6
FEB 26...	110	42	180	4	6.4	215	160	330	0.80	9.3
APR 16...	100	52	240	5	9.0	214	220	390	0.90	11
JUN 11...	90	40	170	4	7.0	216	160	290	0.80	13
AUG 18...	69	40	240	6	13	161	230	310	1.7	36

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MERCURY DIS-SOLVED (UG/L AS HG)
OCT 30...	820	0.00	0.330	0.100	0.050	2.4	2.4	0.090	--	--
JAN 28...	860	6.77	0.030	6.80	0.070	2.6	2.7	3.20	--	0.4
FEB 26...	970	1.66	0.140	1.80	2.70	0.90	3.6	2.60	13	--
APR 16...	1200	2.37	0.730	3.10	5.40	8.6	14	0.900	--	--
JUN 11...	900	5.35	0.150	5.50	0.120	1.9	2.0	2.60	--	--
AUG 18...	1000	4.57	0.030	4.60	0.020	1.3	1.3	0.180	--	--

08084800 CALIFORNIA CREEK NEAR STAMFORD, TX

LOCATION.--Lat 32°55'51", long 99°38'32", Jones County, Hydrologic Unit 12060103, near right bank at downstream side of bridge on Farm Road 142, 9 mi east of Stamford, and 19.4 mi upstream from Paint Creek.

DRAINAGE AREA.--478 mi².

PERIOD OF RECORD.--October 1962 to current year.
Water-quality records.--Specific conductance: October 1962 to September 1979. Water temperature: October 1962 to September 1979.

REVISED RECORDS.--WSP 2122: 1965. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharge. Records good except for periods computed from wire-weight readings, which are poor. There are three small diversions upstream from station.

AVERAGE DISCHARGE.--25 years, 35.0 ft³/s (0.99 in/yr), 25,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s Aug. 4, 1978 (gage height, 31.00 ft, from floodmark), from rating curve extended above 21.0 ft on basis of field discharge estimates of peak flows; no flow at times. Maximum stage since at least 1897, that of Aug. 4, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1962, reached a stage of 29.6 ft, from floodmark; flood of July 1961 (stage unknown) was third highest. Other large floods are reported to have occurred in June 1909, June 24, 1915, and May 1957; flood of September 1962 reached a stage of 28.1 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*).

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 7	2130	*5,450	*26.35	May 29	0530	1,500	18.81
Oct. 12	0200	811	15.12	June 30	1200	866	15.47
Feb. 7	1800	504	12.91				

Minimum discharge, 0.42 ft³/s Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	34	14	18	16	59	17	5.3	275	187	4.4	3.2
2	3.6	34	14	18	18	51	15	4.8	88	57	4.1	2.7
3	26	32	13	16	18	43	14	4.3	55	33	3.6	2.5
4	82	127	13	18	18	38	14	3.6	43	24	2.6	2.3
5	696	94	13	17	42	34	14	3.3	36	18	2.0	2.0
6	2910	47	12	16	171	32	14	4.0	30	16	1.9	2.0
7	4360	38	13	16	405	30	15	5.9	24	16	1.6	2.4
8	3330	35	13	16	324	28	14	6.3	18	16	2.2	1.9
9	598	33	13	21	144	27	14	6.2	16	18	1.7	2.3
10	252	30	13	32	76	26	23	4.4	17	19	1.4	2.1
11	423	30	12	30	56	24	14	3.8	19	12	1.4	1.8
12	668	29	12	26	49	23	12	3.9	16	10	2.5	2.6
13	378	28	12	24	42	22	12	4.1	24	13	1.9	2.7
14	233	27	12	21	39	22	11	4.2	27	14	2.0	19
15	128	26	12	20	36	24	11	12	16	8.9	1.9	103
16	79	25	12	19	33	26	10	15	14	10	1.1	72
17	61	24	13	18	30	30	10	12	13	12	.86	36
18	54	23	37	18	27	27	7.6	10	25	8.5	.74	19
19	49	22	37	18	26	26	6.4	6.3	273	8.1	.52	10
20	45	20	40	18	27	23	6.5	5.1	250	8.9	.56	6.2
21	42	18	34	19	30	22	7.0	13	352	7.8	1.8	4.2
22	42	17	33	23	35	22	6.7	15	223	6.3	.72	3.3
23	70	14	33	21	35	20	6.9	69	67	4.1	.60	2.8
24	54	13	34	20	38	21	6.7	186	40	4.7	.64	2.5
25	54	25	33	19	36	21	6.5	102	31	3.6	.60	2.2
26	74	24	31	19	43	19	7.2	47	25	4.1	.74	1.8
27	51	20	29	18	44	20	6.7	33	24	5.3	1.1	1.9
28	43	21	27	17	65	22	6.5	288	24	7.4	.90	1.7
29	39	18	24	17	---	25	6.2	1320	28	6.3	.92	1.8
30	37	15	21	17	---	21	5.7	1210	593	5.3	1.6	1.8
31	35	---	19	16	---	19	---	645	---	5.0	4.2	---
TOTAL	14920.3	943	648	606	1923	847	320.6	4052.5	2686	569.3	52.80	319.7
MEAN	481	31.4	20.9	19.5	68.7	27.3	10.7	131	89.5	18.4	1.70	10.7
MAX	4360	127	40	32	405	59	23	1320	593	187	4.4	103
MIN	3.6	13	12	16	16	19	5.7	3.3	13	3.6	.52	1.7
AC-FT	29590	1870	1290	1200	3810	1680	636	8040	5330	1130	105	634

CAL YR 1986 TOTAL 22055.22 MEAN 60.4 MAX 4360 MIN .12 AC-FT 43750
WTR YR 1987 TOTAL 27888.03 MEAN 76.4 MAX 4360 MIN .52 AC-FT 55320

08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX

LOCATION.--Lat 32°56'04", long 99°13'27", Shackelford County, Hydrologic Unit 12060104, on right bank just downstream from pier of bridge on old Fort Griffin-Throckmorton Road, 0.4 mi northeast of Fort Griffin, 1.0 mi upstream from bridge on U.S. Highway 283, 1.7 mi upstream from Mill Creek, and 74.6 mi upstream from mouth.

DRAINAGE AREA.--3,988 mi².

PERIOD OF RECORD.--December 1923 to current year.

REVISED RECORDS.--WSP 1392: 1949. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,174.09 ft above National Geodetic Vertical Datum of 1929. Prior to June 23, 1932, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There are diversions upstream from station for irrigation, municipal supply, and for oilfield operation that materially affect low flow. Gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years (water years 1925-87), 227 ft³/s (164,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149,000 ft³/s Aug. 4, 1978 (gage height, 38.88 ft, from floodmark), from rating curve extended above 33,600 ft³/s on basis of contracted-opening and flow-over-road measurement of peak flow; no flow at times.
Maximum stage since 1876, that of Aug. 4, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1900 reached a stage of 38.0 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s and maximum (*).

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 9	1230	*14,300	*26.16	May 30	1400	8,580	23.09
Mar. 18	0200	3,960	12.65				

Minimum discharge, 17 ft³/s Aug. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	419	369	355	241	1530	296	107	3590	849	48	37
2	142	384	308	331	269	1410	269	104	2020	605	47	43
3	139	359	274	314	306	1170	246	106	1400	341	50	52
4	150	482	281	306	337	970	221	108	1080	283	49	43
5	661	1100	268	286	332	829	218	96	936	229	48	34
6	3990	886	260	277	704	728	226	96	754	184	47	29
7	8050	585	262	269	1610	646	221	95	639	163	43	24
8	11000	459	266	257	2730	591	217	95	534	146	42	22
9	13800	388	270	278	2730	543	212	94	442	e135	40	24
10	12100	342	250	312	1230	499	200	96	413	e132	40	29
11	5870	308	232	333	934	473	190	93	407	e130	43	28
12	3120	280	222	327	791	459	188	91	448	e127	37	36
13	2560	254	218	336	697	443	183	93	415	e125	37	48
14	2410	237	213	322	624	426	172	89	920	e122	38	58
15	1990	234	209	295	582	414	165	89	584	e120	37	80
16	1470	233	209	281	537	499	163	1050	548	e119	33	97
17	1080	229	211	271	492	1790	161	751	436	138	29	227
18	902	223	292	277	465	2930	155	323	332	136	26	236
19	762	214	529	282	437	1700	146	203	282	134	27	174
20	666	209	1010	292	429	1260	142	158	1150	130	23	121
21	591	206	869	299	453	977	140	133	1780	115	22	94
22	565	206	760	317	493	795	139	125	970	117	19	72
23	621	202	713	316	535	677	145	170	597	100	17	64
24	1690	199	701	312	598	632	146	1830	370	89	20	60
25	1200	243	664	305	631	548	140	2280	284	79	20	53
26	831	371	620	291	710	481	137	1960	240	67	21	51
27	775	814	545	280	800	451	130	1160	208	62	24	46
28	674	623	487	272	1270	415	120	982	181	59	25	42
29	574	500	442	266	---	373	115	3240	162	59	22	40
30	510	428	404	241	---	320	109	8050	165	57	21	41
31	459	---	376	229	---	302	---	6520	---	54	34	---
TOTAL	79553	11617	12734	9129	21967	25281	5312	30387	22287	5206	1029	2005
MEAN	2566	387	411	294	785	816	177	980	743	168	33.2	66.8
MAX	13800	1100	1010	355	2730	2930	296	8050	3590	849	50	236
MIN	139	199	209	229	241	302	109	89	162	54	17	22
AC-FT	157800	23040	25260	18110	43570	50140	10540	60270	44210	10330	2040	3980

CAL YR 1986 TOTAL 141878 MEAN 389 MAX 13800 MIN .67 AC-FT 281400
WTR YR 1987 TOTAL 226507 MEAN 621 MAX 13800 MIN 17 AC-FT 449300

e Estimated.

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX

LOCATION (REVISED).--Lat 32°42'27", long 99°16'29", Shackelford County, Hydrologic Unit 12060105, on left bank at downstream side of bridge on State Highway 6, 1.7 mi southeast of Albany, and 2.0 mi upstream from Salt Prong Hubbard Creek.

DRAINAGE AREA.--39.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,340.54 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No diversion above station.

AVERAGE DISCHARGE.--24 years (water years 1964-87), 6.56 ft³/s (2.27 in/yr), 4,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s Aug. 4, 1978 (gage height, 23.3 ft, from floodmarks), from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of 4,570 ft³/s, contracted-opening measurement of 9,520 ft³/s, and computation of flow-through-culvert, contracted-opening, and flow-over-road determination of 103,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood information begins in 1940. Floods of June 10, 1940, and July 18, 1953, reached stages of about 21 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 5	1930	*2,760	*9.01	Dec. 18	0700	323	4.11
Oct. 9	1930	1,000	5.84	Feb. 26	1500	260	3.91
Oct. 24	0030	163	3.55	Feb. 28	0430	780	5.32
Nov. 4	0930	266	3.93	Mar. 17	0100	569	4.81
Nov. 25	1630	254	3.89	May 28	2400	266	3.93

Minimum daily discharge, 0.27 ft³/s Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	3.2	10	12	37	76	10	2.5	5.1	1.6	.47	.42
2	.27	2.5	9.6	12	18	53	9.0	2.4	3.8	1.5	.46	.42
3	9.9	2.3	8.9	10	14	41	8.5	2.2	3.3	1.4	.45	.42
4	85	100	8.7	9.9	12	33	8.3	2.2	3.3	1.3	.42	.42
5	516	23	8.7	9.8	13	28	8.3	2.1	2.7	1.2	.46	.41
6	269	13	8.7	9.2	46	26	8.5	2.0	2.4	1.2	.46	.37
7	52	11	11	8.7	23	25	8.7	1.9	2.3	1.1	.46	.37
8	33	9.7	12	8.0	18	24	8.4	1.7	2.0	.98	.47	.37
9	188	8.2	9.4	28	16	23	7.7	1.7	1.9	.97	.44	.37
10	111	6.8	7.9	16	16	21	7.0	1.7	1.9	.97	.40	.34
11	46	5.6	6.8	12	15	20	6.6	1.7	8.6	.97	.38	.34
12	24	5.2	6.6	10	15	19	6.2	1.6	15	.97	.42	.39
13	18	4.2	6.4	9.9	14	18	5.0	1.7	11	1.3	.76	.42
14	15	3.8	5.9	9.2	14	17	4.3	9.7	4.2	1.2	1.2	.51
15	12	3.8	5.9	9.0	13	16	4.3	24	3.0	.97	.76	1.4
16	10	3.5	5.8	8.7	13	23	4.3	9.4	2.4	1.6	.60	.90
17	8.9	3.1	6.0	8.9	12	184	4.3	4.0	2.3	3.9	.51	.57
18	7.2	2.7	140	9.8	12	31	4.2	3.0	2.0	1.1	.49	.47
19	5.6	2.3	45	11	11	23	3.7	2.7	2.1	.91	.46	.46
20	4.2	2.0	25	16	16	22	3.5	2.7	6.0	.89	.45	.46
21	3.5	1.9	21	14	29	19	5.7	2.3	3.7	.82	.42	.46
22	3.7	1.9	43	12	36	18	6.5	2.1	2.5	.81	.42	.46
23	48	2.5	32	11	21	15	5.4	9.5	2.0	.75	.42	.44
24	61	2.1	23	10	55	14	4.0	10	1.6	.74	.42	.42
25	15	95	20	9.6	36	14	3.6	9.8	1.4	.74	.41	.44
26	11	44	18	9.0	124	16	3.2	5.1	1.4	.74	.35	.42
27	9.2	17	16	8.7	85	19	2.9	3.6	1.4	.62	.34	.42
28	7.1	14	15	8.7	315	15	2.9	43	1.3	.61	.39	.42
29	4.9	13	14	8.1	---	12	2.7	69	1.2	.59	.42	.42
30	4.5	12	14	6.8	---	11	2.5	14	7.0	.51	.42	.42
31	3.7	---	13	6.2	---	11	---	7.4	---	.50	.42	---
TOTAL	1586.94	419.3	577.3	332.2	1049	887	170.2	256.7	108.8	33.46	14.95	14.15
MEAN	51.2	14.0	18.6	10.7	37.5	28.6	5.67	8.28	3.63	1.08	.48	.47
MAX	516	100	140	28	315	184	10	69	15	3.9	1.2	1.4
MIN	.27	1.9	5.8	6.2	11	11	2.5	1.6	1.2	.50	.34	.34
AC-FT	3150	832	1150	659	2080	1760	338	509	216	66	30	28
CFSM	1.30	.36	.47	.27	.95	.73	.14	.21	.09	.0	.0	.0
IN.	1.50	.40	.55	.31	.99	.84	.16	.24	.10	.0	.0	.0

CAL YR 1986 TOTAL 3121.45 MEAN 8.55 MAX 516 MIN .05 AC-FT 6190 CFSM .22 IN. 2.95
WTR YR 1987 TOTAL 5449.93 MEAN 14.9 MAX 516 MIN .27 AC-FT 10810 CFSM .38 IN. 5.16

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1961 to current year. Sediment analyses: January 1966 to November 1974.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1962 to current year.
WATER TEMPERATURES: November 1962 to current year.

INSTRUMENTATION.--From 1970 to 1975, specific conductance was continuously recorded 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, 9,750 microsiemens Sept. 28-30, 1968; minimum measured daily, 408 microsiemens Sept. 16, 1974; minimum estimated daily, 149 microsiemens Aug. 4, 1978.
WATER TEMPERATURES: Maximum daily, 36.0°C June 5, 1980; minimum daily, 0.0°C Jan. 12, 1963, Jan. 29, 1966.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,450 microsiemens Sept. 11; minimum daily, 866 microsiemens Oct. 6.
WATER TEMPERATURE: Maximum daily, 34.0°C Aug. 9; minimum daily, 7.0°C Jan. 19-21, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
07...	1120	51	1330	19.0	290	150	90	17	140
DEC									
04...	1135	8.7	3160	9.5	620	420	170	48	410
JAN									
21...	0915	15	3570	5.0	800	620	220	61	450
MAR									
05...	0850	29	2480	12.0	560	330	160	39	280
APR									
30...	0915	2.4	4020	21.0	830	620	220	68	500
JUL									
30...	1055	0.53	3900	27.5	800	610	210	67	470

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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								
07...	4	4.3	141	30	310	0.20	14	690
DEC								
04...	7	2.7	198	79	860	0.30	8.4	1700
JAN								
21...	7	2.2	180	88	1000	0.30	8.1	1900
MAR								
05...	5	2.5	228	69	600	0.40	8.8	1300
APR								
30...	8	3.0	206	120	1100	0.20	11	2100
JUL								
30...	7	3.2	189	150	1100	0.40	14	2100

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	1586.94	1480	818	3500	420	1800	47	200	320
NOV.	1986	419.3	2580	1420	1610	740	841	81	91	560
DEC.	1986	577.3	2570	1420	2210	740	1160	81	126	560
JAN.	1987	332.2	3350	1850	1660	980	880	100	94	740
FEB.	1987	1049	2360	1300	3690	680	1920	74	210	520
MAR.	1987	887	2400	1320	3170	690	1650	75	180	520
APR.	1987	170.2	3730	2060	946	1100	505	120	53	830
MAY	1987	256.7	2640	1460	1010	770	531	83	57	580
JUNE	1987	108.8	3280	1810	532	960	282	100	30	730
JULY	1987	33.46	3700	2040	185	1100	98	120	10	820
AUG.	1987	14.95	4240	2340	95	1300	51	130	5.3	950
SEPT	1987	14.15	4370	2410	92	1300	50	140	5.2	980
TOTAL		5450.00	**	**	18700	**	9770	**	1060	**
WTD.AVG.		15	2300	1270	**	660	**	72	**	500

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3630	3130	3090	3060	2460	2040	3460	4070	2850	3140	4090	4340
2	3690	3220	3050	3190	3010	2210	3470	4050	2960	3080	4130	4420
3	3570	3300	3040	3230	3280	2370	3510	4090	3190	3100	4200	4400
4	1480	2300	3170	3250	3310	2390	3530	4120	3350	3120	4080	4400
5	980	1900	3210	3290	3490	2490	3550	4180	3360	3450	4140	4320
6	866	2250	3200	3360	3230	2590	3580	4200	3600	3950	4170	4340
7	1390	2540	3240	3370	2910	2720	3610	4220	3690	3790	4200	4330
8	1750	2930	3250	3460	2900	2820	3630	4210	3760	3650	4160	4370
9	1890	2940	3390	3250	2980	2830	3640	4200	3630	3960	4210	4390
10	2070	2980	3410	2860	3080	2930	3660	4260	3860	4000	4210	4420
11	2150	3110	3420	3110	3320	2960	3900	4310	3670	4040	4280	4450
12	2070	3200	3480	3200	3220	2940	3870	4210	2350	4090	4280	4410
13	2310	3220	3500	3190	3250	3090	3890	4300	2690	4020	4280	4390
14	2510	3330	3510	3230	3260	3160	4030	2870	3580	4100	4190	4420
15	2660	3400	3520	3290	3290	3230	4000	1600	3720	4150	4280	4410
16	2780	3460	3480	3350	3340	3220	4010	2460	3790	3800	4240	4420
17	2860	3510	3610	3430	3380	1300	4020	2710	3860	3950	4230	4350
18	3130	3530	1800	3420	3420	2020	4030	2870	3940	3860	4210	4340
19	3190	3520	1820	3410	3470	2180	4020	2960	3910	3670	4260	4290
20	3200	3540	2270	3600	3190	2510	4040	3220	3920	3540	4270	4360
21	3160	3580	2690	3580	3010	2780	3630	3470	3400	3490	4310	4320
22	2980	3490	2710	3590	2620	2850	3580	3710	3270	3480	4300	4340
23	1940	3420	2800	3430	2890	3040	3980	3700	3280	3500	4310	4320
24	1860	3440	2710	3590	2730	3080	3940	3510	3660	3540	4310	4320
25	2250	2410	2640	3610	2590	3160	3580	3540	3640	3500	4390	4310
26	2370	2570	2600	3580	1800	3270	3700	3660	3480	3540	4320	4330
27	2500	2790	2760	3610	1770	3360	3910	3750	3810	3740	4350	4350
28	2630	2800	2920	3640	1680	3260	3960	2470	3850	3830	4330	4340
29	2770	2810	3010	3690	---	3590	4000	2010	3830	3930	4280	4320
30	2910	2950	3060	3420	---	3550	4050	2120	3370	3920	4300	4370
31	3030	---	3130	3110	---	3420	---	2670	---	4020	4310	---
MEAN	2470	3050	3020	3370	2960	2820	3790	3470	3510	3710	4250	4360

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	18.0	14.0	10.0	---	15.0	16.0	25.0	26.0	31.0	31.0	27.0
2	---	---	15.0	11.0	15.0	---	12.0	27.0	25.0	30.0	32.0	27.0
3	25.0	19.0	15.0	10.0	16.0	14.0	14.0	---	---	---	31.0	28.0
4	24.0	16.0	14.0	---	15.0	15.0	14.0	25.0	27.0	32.0	22.0	26.0
5	20.0	16.0	14.0	---	13.0	16.0	15.0	25.0	26.0	31.0	27.0	29.0
6	18.0	15.0	12.0	12.0	10.0	17.0	14.0	24.0	26.0	30.0	32.0	---
7	20.0	18.0	---	10.0	11.0	---	15.0	24.0	---	31.0	---	28.0
8	19.0	17.0	13.0	11.0	12.0	16.0	---	---	27.0	31.0	---	27.0
9	22.0	16.0	11.0	10.0	12.0	14.0	18.0	27.0	25.0	30.0	34.0	26.0
10	18.0	15.0	10.0	---	14.0	12.0	17.0	---	26.0	31.0	30.0	27.0
11	---	16.0	10.0	---	12.0	14.0	17.0	26.0	25.0	---	31.0	---
12	15.0	10.0	11.0	11.0	17.0	15.0	---	27.0	27.0	---	31.0	26.0
13	17.0	9.0	---	10.0	17.0	16.0	18.0	25.0	---	26.0	27.0	27.0
14	18.0	10.0	---	12.0	---	---	20.0	24.0	30.0	29.0	32.0	26.0
15	20.0	14.0	12.0	10.0	13.0	16.0	22.0	23.0	31.0	30.0	32.0	26.0
16	21.0	15.0	12.0	8.0	12.0	17.0	---	24.0	31.0	26.0	30.0	28.0
17	22.0	16.0	13.0	8.0	11.0	14.0	25.0	26.0	---	28.0	32.0	24.0
18	21.0	---	9.0	---	12.0	16.0	26.0	28.0	30.0	27.0	32.0	23.0
19	22.0	16.0	10.0	7.0	10.0	17.0	26.0	26.0	30.0	---	30.0	23.0
20	21.0	17.0	---	7.0	10.0	17.0	26.0	28.0	29.0	30.0	31.0	27.0
21	---	15.0	10.0	7.0	---	---	18.0	---	29.0	30.0	29.0	26.0
22	20.0	---	9.0	8.0	---	20.0	22.0	26.0	30.0	30.0	---	26.0
23	20.0	17.0	12.0	7.0	10.0	17.0	25.0	24.0	31.0	30.0	30.0	27.0
24	20.0	14.0	12.0	11.0	12.0	15.0	---	---	31.0	30.0	31.0	27.0
25	20.0	14.0	10.0	12.0	12.0	14.0	26.0	---	29.0	31.0	30.0	27.0
26	---	15.0	11.0	13.0	10.0	---	---	25.0	30.0	31.0	27.0	---
27	22.0	14.0	12.0	14.0	12.0	14.0	27.0	24.0	29.0	32.0	25.0	26.0
28	22.0	---	---	14.0	13.0	16.0	26.0	---	---	32.0	---	---
29	22.0	14.0	10.0	14.0	---	14.0	27.0	22.0	30.0	32.0	---	27.0
30	---	14.0	12.0	---	---	16.0	24.0	22.0	32.0	31.5	---	24.0
31	20.0	---	11.0	13.0	---	14.0	---	24.0	---	32.0	25.0	---
MEAN	20.5	15.0	11.5	10.5	12.5	15.5	20.5	25.0	28.5	30.0	30.0	26.5

08086212 HUBBARD CREEK BELOW ALBANY, TX

LOCATION.--Lat 32°43'58", long 99°08'25", Shackelford County, Hydrologic Unit 12060105, on left bank 0.5 mi downstream from Salt Prong Hubbard Creek, 2.8 mi upstream from Newcomb Creek, 4.5 mi upstream from U.S. Highway 180, 9.1 mi east of Albany, 22.6 mi upstream from Hubbard Creek Reservoir, and 35.2 mi upstream from mouth.

DRAINAGE AREA.--613 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,184.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 12, 1968, water-stage recorder at site 2.1 mi downstream at datum 7.63 ft lower.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--21 years, 64.9 ft³/s (1.44 in/yr), 47,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330,000 ft³/s Aug. 4, 1978 (gage height, 41.41 ft, from floodmark), from rating curve extended above 110 ft³/s on basis of step-backwater method and computation of flow-through-culverts, contracted-openings, and flow-over-road determination of 330,000 ft³/s at site 4.5 mi downstream; no flow for many days.

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)
Oct. 6	0300	*8,580	*18.62	May 15	0730	5,360	15.05
Dec. 18	1800	2,210	9.97	May 29	0700	2,170	9.91
Feb. 28	1230	3,170	11.75				

Minimum discharge, no flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	6.6	40	46	93	685	39	7.1	91	17	1.2	.00
2	.03	6.5	33	42	191	342	35	6.5	65	14	1.0	.00
3	.72	6.2	29	38	112	254	34	7.9	54	14	.82	.00
4	471	257	25	37	77	206	31	6.9	48	9.4	.66	.00
5	1250	244	24	33	64	174	30	6.2	42	7.8	.46	.00
6	4220	90	23	32	120	150	30	6.1	37	6.7	.35	.00
7	314	50	24	31	168	130	30	5.8	31	6.2	.24	.00
8	130	35	25	30	119	114	30	5.6	28	5.8	.16	.00
9	109	27	26	38	91	101	29	5.6	27	5.2	.04	.00
10	311	22	23	57	75	89	28	5.3	27	4.5	.00	.00
11	109	18	22	44	68	83	27	5.1	48	4.0	.01	.00
12	61	17	22	40	63	81	26	4.7	134	3.8	.00	.00
13	43	14	21	36	57	77	22	4.5	213	5.2	13	.00
14	32	13	21	33	54	74	20	95	135	8.7	47	.13
15	24	12	22	32	55	72	18	2370	78	8.7	9.2	3.4
16	19	11	22	30	53	81	16	370	54	7.3	4.0	3.1
17	15	11	25	31	48	377	16	123	40	7.3	2.1	1.9
18	12	9.9	990	34	44	233	16	66	33	9.2	1.4	1.2
19	11	9.2	566	36	42	141	14	46	37	7.6	.89	.89
20	9.3	8.3	242	45	50	103	14	47	93	6.0	.62	.68
21	7.8	7.7	165	61	92	85	16	42	57	5.2	.26	.37
22	7.2	7.1	164	62	205	74	19	36	35	3.9	.04	.20
23	7.2	6.9	188	56	189	68	20	157	26	3.5	.00	.07
24	62	6.9	147	48	248	66	16	245	21	3.0	.00	.01
25	31	58	115	43	258	55	13	247	17	2.8	.00	.00
26	22	451	93	39	434	52	12	108	15	2.4	.00	.00
27	18	175	77	35	598	57	12	63	13	1.9	.00	.00
28	14	95	67	33	1950	59	11	207	10	1.7	.00	.00
29	12	65	60	31	---	50	9.6	1320	9.7	1.5	.00	.00
30	9.6	49	55	30	---	43	8.5	294	11	1.4	.00	.00
31	7.4	---	50	27	---	41	---	147	---	1.3	.00	---
TOTAL	7339.33	1789.3	3406	1210	5618	4217	642.1	6060.3	1529.7	187.0	83.45	11.95
MEAN	237	59.6	110	39.0	201	136	21.4	195	51.0	6.03	2.69	.40
MAX	4220	451	990	62	1950	685	39	2370	213	17	47	3.4
MIN	.03	6.2	21	27	42	41	8.5	4.5	9.7	1.3	.00	.00
AC-FT	14560	3550	6760	2400	11140	8360	1270	12020	3030	371	166	24
CFSM	.39	.10	.18	.06	.33	.22	.0	.32	.08	.0	.0	.0
IN.	.45	.11	.21	.07	.34	.26	.0	.37	.09	.0	.0	.0

CAL YR 1986 TOTAL 18394.52 MEAN 50.4 MAX 4220 MIN .00 AC-FT 36490 CFSM .08 IN. 1.12
WTR YR 1987 TOTAL 32094.00 MEAN 87.9 MAX 4220 MIN .00 AC-FT 63660 CFSM .14 IN. 1.95

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to current year.
WATER TEMPERATURE: October 1966 to current year.

INSTRUMENTATION.--Since December 1970, specific conductance was continuously recorded at this station. Since March 1982, specific conductance and water temperature are continuously recorded 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, 21,200 microsiemens Feb. 15, 21, 1978; minimum measured, 180 microsiemens Oct. 27, 1984, May 13, 1985 and Oct. 6, 1986; minimum estimated, 129 microsiemens Aug. 4, 1978.
WATER TEMPERATURE (1966-80, 1983-87): Maximum, 37.5°C July 20, 1986; minimum, 0.0°C Dec. 11, 1972, Jan. 8, 10, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 4,040 microsiemens Sept. 14; minimum, 180 microsiemens Oct. 6.
WATER TEMPERATURE: Maximum, 34.0°C Aug. 4, 9; minimum, 3.0°C Jan. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
30...	1455	9.5	1760	21.5	360	230	100	27	200
DEC									
04...	1230	25	1150	8.0	280	150	82	19	120
JAN									
21...	1015	59	2070	4.5	520	340	140	42	230
MAR									
05...	0955	178	1250	12.0	340	150	97	24	120
APR									
30...	1020	9.1	2470	23.0	610	430	160	50	270
JUL									
30...	1145	1.4	2680	30.0	530	380	130	49	330

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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...	5	4.5	135	68	430	0.40	6.0	920
DEC								
04...	3	4.2	135	52	250	0.30	7.5	620
JAN								
21...	5	3.2	179	100	510	0.40	4.9	1100
MAR								
05...	3	4.0	190	59	260	0.30	9.0	690
APR								
30...	5	4.2	171	140	620	0.30	2.6	1300
JUL								
30...	6	5.0	144	150	710	0.30	11	1500

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	7339.33	508	273	5400	140	2680	29	567	110
NOV.	1986	1789.3	1390	749	3620	370	1810	76	368	300
DEC.	1986	3406	1320	713	6550	360	3270	73	668	280
JAN.	1987	1210	2170	1190	3870	600	1960	120	379	460
FEB.	1987	5618	1550	838	12700	420	6380	84	1280	330
MAR.	1987	4217	1360	735	8370	370	4180	75	851	290
APR.	1987	642.1	2210	1200	2090	610	1050	120	204	470
MAY	1987	6060.3	876	471	7700	230	3830	49	802	190
JUNE	1987	1529.7	1370	738	3050	370	1520	75	311	290
JULY	1987	187.0	2240	1220	618	620	312	120	60	480
AUG.	1987	83.45	2220	1210	273	610	138	120	27	470
SEPT	1987	11.95	2700	1480	48	750	24	140	4.6	570
TOTAL		32094.13	**	**	54300	**	27200	**	5520	**
WTD.AVG.		88	1160	627	**	310	**	64	**	250

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	1980	1860	1900	2380	2240	2310	1800	904	1320	2240	1420	1650
2	2000	1900	1950	2420	2340	2370	1320	842	998	2060	1440	1710
3	2400	1660	2020	2420	2330	2390	1700	942	1210	2370	1510	1980
4	2500	340	1370	2330	974	1740	1450	986	1110	1730	1370	1450
5	920	320	709	1450	973	1210	1450	1010	1190	2230	1550	1850
6	300	180	245	1030	812	925	1710	1290	1410	2230	1670	1890
7	380	300	347	1290	871	971	1810	1530	1640	2710	1710	2210
8	480	380	439	1250	889	1100	2050	1670	1880	1950	1510	1760
9	1580	460	582	2090	1090	1610	2370	1510	2020	2630	1870	2190
10	1700	600	773	1890	867	1180	2130	1310	1790	2670	1980	2330
11	660	540	600	1890	1030	1630	1470	1180	1270	2080	1620	1800
12	740	680	720	1860	865	1220	1460	1180	1250	2180	1720	1900
13	840	640	721	1740	1440	1670	2040	1400	1620	2220	1720	2040
14	1100	700	872	1500	1080	1230	2040	1620	1840	2500	2040	2210
15	1380	760	1010	1200	1140	1170	1920	1480	1660	2860	2400	2670
16	1460	660	983	1300	1120	1150	1840	1460	1630	2600	2100	2330
17	1480	820	1150	1500	1180	1270	2800	1580	2040	2520	2140	2320
18	1520	1300	1400	2160	1580	1930	2740	805	1720	2510	1930	2200
19	1540	1320	1440	2240	2100	2170	946	765	846	2250	1870	2000
20	1600	1440	1530	2140	1940	2040	907	848	881	2850	2030	2410
21	1680	1580	1640	2070	1950	2050	889	848	863	2550	2050	2190
22	1700	1660	1680	1950	1710	1830	1030	810	951	2390	2070	2240
23	2040	1680	1800	2430	1890	2230	1250	1010	1110	2330	2050	2170
24	2660	2020	2380	2530	2430	2470	1350	1290	1320	2830	2190	2440
25	2660	2080	2380	2430	1470	2230	1390	1330	1360	2670	2270	2420
26	2080	1900	2030	1810	1170	1470	1540	1230	1410	2930	2290	2440
27	2040	1460	1740	1250	1010	1120	1460	1220	1390	2590	2310	2410
28	2040	1420	1690	1010	947	989	1500	1420	1450	2790	2490	2620
29	2080	1780	1940	1240	826	983	1940	1480	1620	2870	2610	2730
30	2180	1880	2070	1820	865	1220	1620	1420	1490	2790	2490	2650
31	---	---	2130	---	---	---	2320	1340	1700	2570	2290	2410
MONTH	2660	180	1360	2530	812	1600	2800	765	1420	2930	1370	2180

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2740	2160	2590	834	734	786	2150	1690	1910	2590	2490	2540
2	2320	1920	2060	973	833	898	2170	2030	2130	2630	2530	2570
3	2040	1800	1890	1110	973	1030	2110	1750	1920	2650	2540	2600
4	2160	1860	1990	1190	1090	1150	2190	1970	2070	2720	2520	2600
5	2420	2180	2310	1310	1210	1260	2270	2070	2170	2740	2540	2630
6	2360	2080	2230	1390	1290	1340	2250	1990	2130	2740	2500	2610
7	2140	1840	1950	1450	1370	1410	2330	1930	2110	2820	2660	2730
8	2160	1900	2010	1530	1430	1480	2290	1930	2050	2800	2660	2760
9	2100	1800	1910	1630	1490	1540	2240	1860	2040	2680	2580	2650
10	2140	1880	2020	1620	1550	1580	2380	2100	2220	2720	2560	2630
11	2060	1700	1880	1660	1600	1620	2280	2080	2200	2750	2530	2640
12	2080	1800	1920	1760	1560	1650	2300	2080	2200	2870	2670	2760
13	2020	1620	1850	1780	1580	1700	2400	2260	2320	2870	1970	2740
14	2120	1740	1880	1800	1680	1750	2460	2240	2380	2730	1830	2430
15	2340	1780	2040	1860	1640	1770	2440	2040	2200	1410	310	753
16	2000	1760	1860	1920	1520	1810	2320	2060	2210	848	489	659
17	2260	1660	1950	2200	1600	1800	2440	2180	2330	1170	867	943
18	2240	1660	1840	1800	1260	1470	2460	2180	2370	1360	1170	1290
19	2460	1800	2020	1560	1460	1500	2480	2360	2410	1300	1160	1220
20	2560	1940	2230	1720	1600	1650	2500	2340	2450	1240	1060	1130
21	2280	2000	2140	1680	1560	1620	2600	2400	2540	1160	981	1080
22	2420	2020	2130	1580	1520	1560	2440	2300	2360	1320	1000	1120
23	2400	2040	2210	1660	1560	1600	2420	2240	2330	1340	898	1090
24	2520	1920	2290	1740	1440	1650	2550	2290	2420	1380	837	1010
25	1860	1550	1740	1770	1600	1670	2510	2250	2390	1300	977	1180
26	1830	1430	1580	1830	1650	1730	2470	2290	2370	1210	1090	1150
27	1450	1070	1280	1870	1690	1740	2530	2350	2430	1310	1090	1180
28	1190	714	934	1950	1850	1890	2530	2390	2460	1350	651	1120
29	---	---	---	1910	1850	1880	2490	2370	2420	811	631	715
30	---	---	---	1970	1810	1890	---	---	2500	849	730	813
31	---	---	---	2190	1750	1940	---	---	---	887	788	840
MONTH	2740	714	1950	2200	734	1560	2600	1690	2270	2870	310	1750
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1010	866	915	2120	1780	1980	2840	2740	2790	---	---	---
2	1100	806	957	2040	1920	1980	2900	2760	2840	---	---	---
3	1120	1040	1080	2060	1980	2020	2980	2820	2910	---	---	---
4	1240	1020	1070	2140	1980	2040	3100	2860	3010	---	---	---
5	1220	961	1090	2160	2100	2140	3220	2960	3100	---	---	---
6	1300	1000	1180	2200	2140	2170	3220	3000	3110	---	---	---
7	1300	1060	1210	2260	2180	2230	3340	3000	3170	---	---	---
8	1420	1160	1310	2280	2160	2240	3440	3040	3240	---	---	---
9	1500	1250	1400	2340	2180	2270	3660	3160	3360	---	---	---
10	1530	1330	1420	2380	2260	2320	---	---	---	---	---	---
11	1630	973	1450	2460	2240	2360	3660	3280	3430	---	---	---
12	1690	1150	1320	2500	2360	2450	---	---	---	---	---	---
13	1870	1190	1500	2520	2340	2400	3960	2670	3300	---	---	---
14	1430	1250	1340	2460	2240	2380	2430	1490	1930	4040	2400	3520
15	1370	1310	1340	2400	2240	2320	2050	1890	1970	3420	2520	2830
16	1470	1350	1400	2340	2220	2270	2070	1970	2020	2680	2560	2620
17	1570	1450	1500	2420	2280	2340	2070	1950	2030	2680	2560	2620
18	1610	1550	1570	2460	2380	2430	2110	1970	2060	2640	2540	2580
19	---	---	1610	2420	2320	2380	2190	2070	2120	2700	2620	2660
20	1580	1060	1450	2340	2240	2310	2250	2130	2180	2720	2600	2680
21	1560	1420	1510	2380	2280	2320	2330	2190	2240	2780	2680	2730
22	1680	1580	1620	2420	2240	2340	2430	2270	2330	2840	2720	2780
23	1700	1640	1680	2420	2260	2350	---	---	---	2860	2760	2820
24	1760	1680	1720	2480	2340	2400	---	---	---	2940	2840	2870
25	1780	1680	1740	2520	2380	2450	---	---	---	---	---	---
26	1820	1680	1770	2580	2440	2500	---	---	---	---	---	---
27	1840	1700	1780	2660	2460	2540	---	---	---	---	---	---
28	1940	1860	1890	2680	2540	2620	---	---	---	---	---	---
29	2000	1880	1950	2780	2620	2690	---	---	---	---	---	---
30	2080	1920	2020	2750	2660	2700	---	---	---	---	---	---
31	---	---	---	2780	2600	2730	---	---	---	---	---	---
MONTH	2080	806	1460	2780	1780	2340	3960	1490	2660	4040	2400	2790

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.5	25.0	26.0	21.5	18.5	20.0	11.0	9.5	10.5	9.0	7.0	8.0
2	27.0	25.0	26.0	20.0	17.0	18.5	11.0	9.0	10.0	8.5	7.0	7.5
3	28.0	24.5	26.0	19.0	16.5	18.0	11.5	9.0	10.0	8.5	7.0	8.0
4	26.0	22.0	24.0	18.5	17.0	18.0	9.5	9.0	9.0	9.0	6.5	7.5
5	23.0	18.5	21.5	17.0	16.0	16.5	10.0	8.0	9.0	8.5	6.5	7.5
6	18.5	17.5	18.0	16.5	15.5	16.0	10.5	9.0	9.5	9.5	7.0	8.5
7	19.0	18.0	18.5	18.0	15.5	16.5	13.0	10.5	11.5	9.0	8.0	8.5
8	20.0	18.5	19.5	18.0	16.0	17.0	11.5	10.5	11.5	8.0	7.5	8.0
9	22.5	20.0	20.5	18.0	15.5	17.0	11.0	9.5	10.5	9.5	7.5	8.5
10	22.5	21.0	21.5	16.5	14.5	15.5	9.5	8.0	9.0	9.0	7.0	8.0
11	22.5	21.0	22.0	15.5	13.0	14.0	8.0	7.0	8.0	8.5	6.5	7.5
12	20.5	17.5	18.5	13.5	10.5	12.5	9.0	6.0	7.5	9.0	6.0	7.5
13	18.5	16.5	17.5	10.5	8.5	9.0	8.0	6.0	7.0	8.0	7.0	7.5
14	18.5	16.0	17.5	10.5	8.5	9.0	8.5	7.0	8.0	10.0	7.5	8.5
15	19.5	16.5	18.0	11.0	9.0	10.0	9.5	8.5	9.0	9.0	8.0	8.5
16	20.5	17.0	18.5	13.5	10.5	12.0	10.0	9.0	9.5	8.0	6.5	7.5
17	21.5	17.5	19.5	16.5	12.0	14.0	10.5	9.5	10.0	6.5	4.0	5.5
18	22.0	19.0	20.5	14.5	13.0	14.0	9.5	9.0	9.5	5.0	3.5	4.5
19	22.5	19.0	20.5	15.5	12.5	13.5	8.5	8.0	8.5	5.5	3.0	4.0
20	22.0	18.5	20.5	16.0	12.5	14.0	8.5	8.0	8.5	5.5	3.5	4.5
21	20.5	19.5	20.0	15.5	12.0	14.0	8.5	8.0	8.5	6.0	4.0	5.0
22	22.0	19.5	20.5	17.0	13.0	15.0	8.5	8.0	8.5	6.0	4.0	5.0
23	21.5	20.5	21.0	14.5	12.5	13.5	8.5	8.0	8.5	6.0	4.0	5.0
24	21.5	20.0	20.5	12.5	11.0	11.5	8.5	7.5	8.5	7.0	5.0	6.0
25	20.5	19.0	20.0	11.5	10.5	11.0	8.5	8.5	8.5	7.5	5.5	6.5
26	21.5	18.5	19.5	11.0	9.5	10.0	9.0	8.0	8.5	8.0	5.5	6.5
27	21.0	18.0	19.5	10.0	9.0	9.5	9.5	8.0	8.5	9.5	6.5	7.5
28	21.0	17.5	19.5	9.5	9.0	9.5	9.0	7.0	8.0	10.0	7.0	8.5
29	22.0	18.0	20.0	11.0	9.0	10.0	9.5	8.0	8.5	11.5	9.0	9.5
30	21.0	18.5	19.5	11.5	8.5	10.5	9.5	7.5	8.5	11.0	8.5	9.5
31	---	---	---	---	---	---	9.5	7.0	8.5	11.5	9.5	10.5
MONTH	28.0	16.0	20.5	21.5	8.5	13.5	13.0	6.0	9.0	11.5	3.0	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	11.0	11.5	11.5	10.5	11.0	15.0	11.0	13.0	24.0	22.0	23.0
2	13.0	11.0	12.5	12.5	11.0	11.5	14.0	11.5	12.5	26.5	20.5	23.5
3	13.0	12.0	12.5	13.5	11.5	12.5	15.5	10.5	13.0	---	---	23.5
4	14.0	12.5	13.5	14.0	11.5	13.0	15.0	12.0	13.5	26.0	21.5	24.0
5	13.5	12.5	13.0	14.0	12.0	13.5	13.5	12.5	12.5	27.0	21.5	24.5
6	12.5	10.0	11.0	15.0	13.0	14.0	14.5	12.0	13.0	26.0	22.0	24.0
7	10.5	9.5	10.0	15.5	14.0	14.5	14.5	12.0	13.5	24.0	21.5	22.5
8	10.5	9.5	10.0	16.0	14.5	15.0	16.0	12.0	14.5	26.0	20.5	23.5
9	11.0	10.0	10.5	15.0	13.5	14.5	18.0	14.0	16.0	27.0	21.0	24.0
10	12.5	9.5	11.0	13.5	12.5	13.0	18.5	15.5	17.0	28.0	22.5	25.0
11	14.0	10.5	12.0	14.0	11.5	13.0	21.0	16.5	19.0	28.0	23.0	25.5
12	14.5	11.5	13.0	14.0	12.0	13.0	21.5	18.0	20.0	27.0	23.5	25.5
13	15.0	12.5	13.5	14.5	12.0	13.0	20.5	17.0	18.5	28.5	23.0	25.5
14	15.0	13.5	14.5	15.5	13.0	14.5	17.5	15.5	16.5	25.5	22.0	24.0
15	14.5	12.5	13.5	17.0	14.5	15.5	22.0	15.5	18.0	21.5	19.5	21.0
16	12.0	10.5	11.5	17.0	16.0	16.5	22.5	16.5	20.0	23.5	21.5	22.5
17	10.5	9.5	10.0	16.5	15.0	15.5	25.0	18.5	21.5	26.0	23.0	24.5
18	11.5	9.0	10.0	16.0	14.5	15.5	24.5	20.0	22.5	28.0	25.0	26.0
19	10.0	9.0	9.5	15.5	14.5	15.0	25.0	21.0	23.0	25.5	24.0	24.5
20	9.0	7.5	8.5	17.5	15.0	16.0	25.5	21.5	23.5	26.5	23.5	25.0
21	8.0	7.5	8.0	18.5	16.5	17.5	21.5	18.5	19.5	29.0	24.0	26.5
22	9.0	7.5	8.5	19.5	17.5	18.5	22.0	17.5	20.0	29.5	25.0	26.5
23	9.5	8.0	9.0	18.5	15.5	17.0	22.5	18.5	21.0	25.5	23.0	24.5
24	10.0	9.0	9.5	16.0	14.5	15.0	24.0	19.5	21.5	24.5	23.5	24.0
25	10.5	10.0	10.0	14.5	13.5	14.5	25.0	20.0	22.5	26.0	24.0	25.0
26	11.0	10.0	10.5	14.0	13.0	13.5	25.5	21.0	23.5	26.0	25.0	25.5
27	12.5	11.0	11.5	15.5	12.5	14.0	26.0	21.5	23.5	25.5	24.5	25.0
28	12.5	11.5	12.0	15.0	13.5	14.5	26.5	21.0	23.5	24.5	21.0	23.5
29	---	---	---	13.0	9.5	11.5	26.0	21.5	24.0	21.5	20.0	20.5
30	---	---	---	11.0	8.0	9.5	---	---	---	23.5	21.5	22.5
31	---	---	---	12.5	8.5	10.5	---	---	---	24.5	23.0	23.5
MONTH	15.0	7.5	11.0	19.5	8.0	14.0	26.5	10.5	18.5	29.5	19.5	24.0

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX

LOCATION.--Lat 32°38'54", long 99°00'15", Stephens County, Hydrologic Unit 12060105, on left bank 600 ft downstream from Battle Creek, 1.6 mi upstream from bridge on Farm Road 576, 9.8 mi southwest of Breckenridge, and about 14.6 mi upstream from Hubbard Creek Dam.

DRAINAGE AREA.--280 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1962 to current year. Prior to October 1975, published as "near Breckenridge."

REVISED RECORDS.--WDR TX-76-2: Drainage area at former site.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,185.83 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at site 1.6 mi downstream at datum 7.41 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--25 years (water years 1963-87), 27.9 ft³/s (1.35 in/yr), 20,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,000 ft³/s Oct. 13, 1981 (gage height, 28.60 ft, from floodmark), from field estimate, based on 2-section slope-area determination of peak flow; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to information from State Department of Highways and Public Transportation, the floods of May 16, 1949, July 20, 1953, and Apr. 29, 1957, each reached a stage of 24.6 ft.

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)
Oct. 6	0400	*4,200	*19.58	May 20	0500	2,010	12.01
Feb. 28	0830	2,160	12.64	May 29	0200	2,670	14.62
May 15	1100	3,700	18.28				

Minimum discharge, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	2.1	1.4	2.7	226	e3.8	.55	21	e4.2	.10	.14
2	.00	.03	1.4	1.1	19	76	e3.4	.49	12	e5.4	.07	.06
3	.00	.04	1.0	.89	14	35	e3.1	.37	9.0	e5.4	.05	.04
4	671	337	.69	.78	5.8	19	e2.8	.29	7.3	e3.8	.05	.04
5	545	124	.60	.69	3.5	13	e2.5	.24	5.4	e3.4	.04	.04
6	2020	35	.69	.60	22	12	e2.3	.21	4.6	e2.8	.03	4.3
7	99	15	.78	.52	34	11	e2.0	.19	3.8	e2.3	.03	3.9
8	17	6.6	.69	.52	16	e11	e2.0	.17	3.4	e2.0	.02	.12
9	3.6	3.1	.60	2.0	7.3	e10	e1.8	.15	3.4	e1.4	.02	.05
10	.94	2.1	.60	8.1	4.6	e9.5	e1.4	.14	3.4	e1.1	.71	.03
11	.38	2.1	.60	3.8	3.4	e9.0	e1.3	.12	121	e.60	.06	.02
12	.10	1.7	.60	2.3	2.5	e8.4	e1.0	.09	170	e.34	.11	.24
13	.04	1.3	.60	2.0	2.3	e7.8	e.89	.08	103	e1.8	70	.19
14	.00	1.2	.78	1.3	1.8	e7.3	e.78	57	23	e18	11	.09
15	.00	1.0	1.0	1.1	1.8	e6.8	e.60	2220	11	e8.2	.19	2.7
16	.00	.93	1.0	1.0	1.9	e6.3	e.60	267	6.8	e3.1	.06	.31
17	.00	.89	1.8	1.1	1.7	e89	e.69	54	4.6	e6.3	.04	.08
18	.00	.89	651	1.4	1.4	e49	e.78	30	14	e22	.03	.05
19	.00	.89	200	1.6	1.2	e35	e.78	25	13	e12	.03	.05
20	.00	1.0	64	2.4	2.8	e32	e.89	780	e183	e7.8	.03	.04
21	.00	.97	27	10	18	e29	e.89	109	e23	e3.8	.03	.02
22	.00	.92	142	9.4	83	e25	e1.0	34	e6.8	e1.6	.04	.01
23	.00	.93	89	6.1	43	e21	e1.0	54	e5.8	e1.1	.04	.00
24	.00	.93	39	3.9	23	e19	e.89	297	e5.0	e.89	.05	.00
25	.00	211	19	2.9	19	e16	e.89	163	e4.6	e.60	.05	.00
26	.00	136	11	2.2	102	e13	e.89	56	e4.2	e.40	.05	.00
27	.00	36	5.8	1.7	122	e12	e.79	23	e3.8	e.29	.10	.01
28	.00	11	3.8	1.4	1280	e9.5	e.78	291	e3.8	e.15	.07	.02
29	.01	5.6	2.8	1.2	---	e7.8	e.69	1220	e3.8	e.06	.07	.02
30	.03	4.3	2.3	.95	---	e6.8	.60	135	e3.4	.04	.16	.02
31	.03	---	1.8	.87	---	e5.0	---	48	---	.12	2.2	---
TOTAL	3357.13	942.45	1274.03	75.22	1839.7	837.2	41.83	5866.09	786.9	120.99	85.53	12.59
MEAN	108	31.4	41.1	2.43	65.7	27.0	1.39	189	26.2	3.90	2.76	.42
MAX	2020	337	651	10	1280	226	3.8	2220	183	22	70	4.3
MIN	.00	.03	.60	.52	1.2	5.0	.60	.08	3.4	.04	.02	.00
AC-FT	6660	1870	2530	149	3650	1660	83	11640	1560	240	170	25
CFSM	.39	.11	.15	.0	.23	.10	.0	.68	.09	.0	.0	.0
IN.	.45	.13	.17	.0	.24	.11	.0	.78	.10	.0	.0	.0

CAL YR 1986 TOTAL 9684.51 MEAN 26.5 MAX 2020 MIN .00 AC-FT 19210 CFSM .09 IN. 1.29
WTR YR 1987 TOTAL 15239.48 MEAN 41.8 MAX 2220 MIN .00 AC-FT 30230 CFSM .15 IN. 2.02

e Estimated.

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1975 to current year.
WATER TEMPERATURE: November 1975 to current year.

INSTRUMENTATION.--Since December 1970, specific conductance was continuously recorded at this station. Since March 1982, specific conductance and water temperature are continuously recorded at this station.

REMARKS.--When maximum and minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemica 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. Prior to November 1975, this station was formerly published as 08086300 Big Sandy Creek near Breckenridge.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 28,700 microsiemens Apr. 5, 10, 1976; minimum daily, 59 microsiemens Nov. 21, 1963.
WATER TEMPERATURE: Maximum, 37.0°C Aug. 9, 1987; minimum, 0.0°C Jan. 9, 10, 1977 and Dec. 2, 3, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 20,200 microsiemens May 14; minimum, 207 microsiemens June 20.
WATER TEMPERATURE: Maximum, 37.0°C Aug. 9; minimum, 4.0°C Jan. 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 30...	1220	0.03	5240	21.0	1000	920	310	63	740
DEC 04...	1725	0.73	1880	9.5	380	270	120	20	230
JAN 21...	1515	13	2240	7.0	490	370	150	28	260
MAR 05...	1330	12	1300	15.5	300	160	91	17	140
APR 30...	1445	0.60	6030	29.0	1200	990	340	74	830
JUL 30...	1610	0.03	8490	34.0	1200	1100	340	86	1300

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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...	10	6.0	118	270	1600	0.30	3.1	3100
DEC 04...	5	5.1	112	96	450	0.20	6.7	1000
JAN 21...	5	4.2	124	110	590	0.20	4.8	1200
MAR 05...	4	5.1	133	67	290	0.20	9.4	700
APR 30...	11	6.6	166	290	1900	0.30	4.5	3500
JUL 30...	17	5.7	130	480	2400	0.30	7.5	4700

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	3357.13	640	348	3160	190	1700	27	248	110
NOV.	1986	942.45	2030	1120	2850	610	1540	87	222	360
DEC.	1986	1274.03	1130	620	2130	330	1150	49	167	200
JAN.	1987	75.22	2780	1550	314	840	170	120	24	490
FEB.	1987	1839.7	1290	712	3540	380	1910	55	275	230
MAR.	1987	837.2	2420	1350	3060	730	1660	100	237	430
APR.	1987	41.83	7150	4150	468	2300	255	320	36	1300
MAY	1987	5866.09	1310	722	11400	390	6180	56	893	230
JUNE	1987	786.9	1750	965	2050	520	1110	75	160	310
JULY	1987	120.99	5230	2980	974	1600	529	230	75	940
AUG.	1987	85.53	2760	1540	355	830	192	120	28	490
SEPT	1987	12.59	6780	3910	133	2100	72	300	10	1200
TOTAL		15239.66	**	**	30500	**	16500	**	2370	**
WTD.AVG.		42	1340	740	**	400	**	58	**	240

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	---	---	---	5910	5470	5640	---	---	2210	---	---	1640
2	---	---	---	6060	5710	5900	---	---	2270	---	---	1770
3	---	---	---	6250	6040	6130	---	---	2330	---	---	1850
4	1130	671	869	7590	948	2250	---	---	2360	---	---	2010
5	673	614	657	1330	1290	1320	2550	2250	2380	---	---	2240
6	614	535	562	---	---	1500	3170	2520	2810	---	---	2510
7	599	576	586	---	---	1760	3190	2880	3070	---	---	2780
8	622	599	610	---	---	2000	3280	2560	2940	---	---	3010
9	704	622	650	---	---	2270	3520	3170	3300	---	---	2740
10	827	685	756	---	---	2560	4160	2980	3760	---	---	2090
11	930	827	876	---	---	2780	4170	2770	3250	---	---	2160
12	973	930	950	---	---	3100	4410	3840	4200	---	---	2290
13	995	954	980	---	---	3270	4190	3440	3860	---	---	2520
14	---	---	---	---	---	3550	5010	3680	4280	---	---	2760
15	---	---	---	---	---	3760	4170	3540	3780	---	---	3020
16	---	---	---	---	---	4010	3980	3710	3830	---	---	3430
17	---	---	---	---	---	4250	4780	3320	4160	---	---	3310
18	---	---	---	---	---	4470	4990	753	1320	---	---	3270
19	---	---	---	---	---	4740	815	767	783	---	---	3190
20	---	---	---	---	---	4990	841	797	823	---	---	3020
21	---	---	---	---	---	5250	888	843	863	2460	2240	2270
22	---	---	---	---	---	5470	1070	869	906	3140	2460	2670
23	---	---	---	---	---	5730	960	915	935	4080	3220	3850
24	---	---	---	---	---	5960	1000	942	973	4080	3610	3920
25	---	---	---	2150	1970	2030	1030	988	1010	3610	3210	3380
26	---	---	---	2150	1960	2050	---	---	1080	3250	3070	3160
27	---	---	---	1960	1880	1910	---	---	1210	3210	3010	3100
28	---	---	---	---	---	2010	---	---	1260	3310	3170	3210
29	---	---	5390	---	---	2090	---	---	1330	3530	3270	3370
30	---	---	5290	---	---	2150	---	---	1400	3660	3380	3510
31	5610	5360	5490	---	---	---	---	---	1550	3820	3660	3730
MONTH	5610	535	1820	7590	948	3500	5010	753	2270	4080	2240	2830

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4520	3680	4270	710	648	678	6910	6630	6820	6970	6320	6650
2	4280	3580	3940	---	---	771	7200	6910	7080	6970	6480	6770
3	4420	4260	4350	1030	872	945	7160	6830	7030	7800	6890	7310
4	4220	3610	3910	1230	1030	1120	7500	7100	7370	8240	7550	7880
5	3590	3370	3440	---	---	1320	7530	7450	7490	8660	7940	8270
6	3430	2290	3100	1730	1470	1580	7450	7220	7360	9020	8370	8630
7	4430	2030	2580	1970	1730	1830	7470	7170	7350	9380	8770	8990
8	4510	4390	4460	2220	1980	2080	7440	7010	7270	9610	9150	9370
9	4450	4250	4350	2420	2200	2300	7570	7270	7360	9570	9090	9420
10	4270	4060	4150	2650	2450	2540	7770	7420	7680	9630	9160	9490
11	4060	3900	3990	2810	2630	2690	8030	7520	7820	9850	9260	9580
12	4000	3860	3940	3000	2810	2890	8620	8120	8510	10100	9580	9830
13	3980	3920	3940	3300	3000	3110	8750	8420	8590	10200	9600	9980
14	3960	3900	3930	3560	3300	3420	8650	8430	8540	20200	2320	7750
15	---	---	3810	3650	3490	3560	8670	8020	8390	3290	761	1600
16	3730	3680	3720	3840	3600	3670	8860	8240	8650	922	765	818
17	---	---	3650	---	---	2980	9100	8550	8850	1140	922	1030
18	3730	3490	3640	3610	3520	3550	9240	8950	9120	1360	1140	1250
19	3730	3650	3670	3730	3570	3640	9330	8900	9150	1490	1330	1420
20	3890	3610	3730	4070	3750	3920	9420	9040	9220	1140	980	1050
21	3610	3180	3530	4240	4030	4100	9360	5880	7360	---	---	940
22	3700	2160	2830	4460	4240	4300	5880	5140	5440	1350	1230	1280
23	3680	3460	3600	4750	4450	4610	5150	4980	5060	1400	1330	1370
24	3460	3040	3250	4930	4600	4710	5010	4820	4900	---	---	920
25	3020	2700	2840	5020	4840	4910	5000	4720	4830	---	---	870
26	2700	1140	2000	5060	4980	5020	5180	4870	4980	---	---	1450
27	2180	986	1850	5550	5070	5210	5490	4960	5140	---	---	2020
28	966	487	640	6010	5570	5720	5750	5260	5420	---	---	1550
29	---	---	---	6200	6000	6070	6040	5680	5800	---	---	860
30	---	---	---	6420	6010	6190	---	---	6110	---	---	1280
31	---	---	---	6640	6110	6400	---	---	---	---	---	1630
MONTH	4520	487	3470	6640	648	3410	9420	4720	7160	20200	761	4560
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	1880	3090	2730	2910	8990	8580	8750			4980
2	---	---	2190	3640	3110	3340	9210	8770	8950			5470
3	---	---	2940	4010	3640	3840	9440	8940	9150			6070
4	---	---	3320	4440	3990	4180	9770	9220	9450			6410
5	---	---	3770	4750	4460	4590	9980	9430	9640			7300
6	---	---	4090	5180	4770	5000	10100	9320	9750			6270
7	---	---	4470	5670	5120	5480	10300	9810	10000			6230
8	---	---	4720	6140	5560	5900	10500	10100	10200			6940
9	---	---	4960	6390	5990	6210	10800	10200	10500			7260
10	---	---	5010	6560	6180	6360	11000	4100	9070			8040
11	---	---	2860	6810	6130	6550	4320	3940	4140			8770
12	---	---	1880	6960	6480	6740	4670	4280	4500			8330
13	---	---	1470	6870	6180	6530	4330	699	2890			8650
14	---	---	1530	6180	5890	6080	1030	780	882			8940
15	---	---	1690	5870	5460	5670	1230	1030	1140			7730
16	---	---	1880	5440	5010	5230	---	---	1620			7960
17	2120	1870	1950	5010	4700	4870	---	---	2020			8230
18	2070	926	1830	4830	4620	4690	---	---	2510			8540
19	---	---	1990	5600	4790	5150	---	---	3390			8720
20	1910	207	706	6810	5400	5980	---	---	4070			9040
21	498	284	420	7120	6340	6690	---	---	5020			9330
22	664	414	530	7230	6710	6950	---	---	4990			9560
23	1010	663	834	7420	6940	7140	---	---	5120			---
24	1340	1030	1180	7730	6950	7420	---	---	5050			---
25	1710	1360	1530	7940	7400	7660	---	---	5270			---
26	2080	1710	1870	8050	7590	7800	---	---	5450			---
27	2470	2060	2200	8180	7600	7930	---	---	4640			9620
28	2740	2410	2530	8250	7970	8080	---	---	5060			9750
29	3070	2760	2870	8500	7980	8200	---	---	5720			9940
30	3190	2990	3130	8570	8170	8420	---	---	4870			10000
31	---	---	---	8720	8250	8510	---	---	4090			
MONTH	3190	207	2410	8720	2730	6130	11000	699	5740			8000

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	24.0	20.0	22.0	12.5	10.0	11.0	10.5	7.5	9.0
2	---	---	---	22.0	18.5	20.0	14.5	8.0	11.0	9.5	7.0	8.5
3	---	---	---	20.5	18.0	19.0	13.5	8.5	10.5	10.5	8.0	9.0
4	24.0	21.5	22.5	21.0	19.0	20.0	10.5	8.5	9.5	10.5	7.0	8.5
5	21.0	17.0	20.5	19.0	18.0	18.5	12.0	9.0	10.5	10.5	7.5	9.0
6	17.0	16.0	16.5	18.5	17.0	18.0	13.0	10.5	11.5	12.5	8.5	10.5
7	17.5	16.5	17.0	20.5	17.5	19.0	17.0	13.0	14.5	11.0	10.0	10.5
8	19.5	18.0	18.5	20.5	18.0	19.0	14.0	11.5	12.5	10.0	9.5	9.5
9	21.0	19.0	20.0	19.5	16.5	17.5	12.0	8.5	10.5	12.0	9.0	10.5
10	22.0	19.5	20.5	17.5	14.0	16.5	8.0	6.0	7.5	10.5	8.5	9.5
11	23.0	19.0	21.0	16.0	10.5	13.0	8.5	5.5	7.5	10.0	7.0	8.5
12	18.5	14.0	15.5	14.0	8.5	12.0	11.0	6.0	8.5	11.0	7.5	9.0
13	19.0	12.5	15.0	---	---	---	9.5	4.5	7.5	10.5	8.5	9.5
14	---	---	---	12.5	7.5	10.0	11.0	8.5	10.0	13.0	9.5	11.0
15	---	---	---	15.0	10.5	13.0	12.5	11.0	11.5	11.5	10.0	10.5
16	---	---	---	18.0	14.5	16.0	12.5	11.5	12.0	10.0	7.5	9.0
17	---	---	---	19.5	14.5	17.0	13.5	12.0	12.5	7.5	5.0	6.5
18	---	---	---	17.5	15.5	16.5	12.0	9.5	10.0	6.5	5.0	5.5
19	---	---	---	17.0	13.5	15.5	9.5	8.5	9.0	8.0	4.5	6.0
20	---	---	---	17.5	13.5	15.5	9.5	8.0	9.0	8.5	5.5	7.0
21	---	---	---	16.5	11.5	14.0	10.0	9.5	9.5	7.5	6.0	6.5
22	---	---	---	18.5	14.0	16.0	10.0	9.0	9.5	7.5	4.5	6.0
23	---	---	---	15.0	12.0	13.5	10.0	9.0	9.0	8.0	4.0	6.0
24	---	---	---	11.5	10.0	11.0	9.5	8.5	9.0	10.0	6.5	7.5
25	---	---	---	11.5	10.5	10.5	10.0	9.0	9.5	9.0	5.5	7.0
26	---	---	---	11.0	10.5	10.5	11.0	9.0	10.0	10.0	6.0	7.5
27	---	---	---	11.5	10.0	11.0	10.0	8.0	9.0	11.5	6.5	9.0
28	---	---	---	12.0	9.5	11.0	10.0	8.0	9.0	13.0	7.5	10.0
29	21.0	15.0	17.5	14.0	9.5	11.5	11.5	9.0	10.0	15.5	10.5	12.5
30	24.0	15.5	19.5	15.5	10.5	12.5	10.5	8.0	9.5	14.0	8.0	11.0
31	23.0	20.0	21.5	---	---	---	10.5	7.5	9.0	13.5	9.0	11.5
MONTH	24.0	12.5	19.0	24.0	7.5	15.0	17.0	4.5	10.0	15.5	4.0	9.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.5	12.0	13.5	13.0	11.0	12.0	21.0	13.0	17.0	28.5	22.0	24.5
2	14.5	11.0	13.0	13.5	10.5	12.0	18.5	13.5	16.0	31.0	22.5	26.0
3	15.5	12.0	13.5	15.0	11.5	13.0	20.0	11.0	15.5	29.5	24.0	26.5
4	15.5	12.5	14.0	16.0	11.5	13.5	20.5	13.5	17.0	29.5	20.5	25.0
5	15.0	11.5	13.5	17.0	11.0	14.0	16.0	14.5	15.0	32.5	21.5	26.5
6	11.0	9.0	10.0	18.0	11.5	15.0	18.5	13.5	16.0	32.0	22.5	26.5
7	12.0	8.5	10.0	18.5	12.5	15.5	19.0	13.0	16.0	28.0	22.5	25.0
8	13.0	9.5	11.0	19.0	13.0	16.0	21.5	13.5	17.5	31.5	21.5	26.0
9	12.0	8.5	10.5	16.5	13.5	15.0	23.5	15.5	19.5	30.5	21.5	26.0
10	13.5	10.0	11.5	14.0	11.5	12.5	26.0	18.0	22.0	32.0	23.0	27.0
11	16.0	11.5	13.5	17.0	11.0	13.5	27.0	18.5	22.5	32.0	24.0	27.5
12	16.0	12.5	14.5	16.0	11.0	13.5	28.0	21.0	24.0	31.5	24.5	28.0
13	17.0	13.5	15.0	18.5	11.5	15.0	25.5	19.5	23.0	30.5	24.5	27.5
14	17.5	14.5	15.5	20.5	13.5	17.0	23.5	16.0	20.0	27.0	25.0	26.0
15	15.0	11.5	13.5	21.5	16.0	18.5	27.0	15.5	21.0	25.0	21.0	23.0
16	11.0	10.0	10.5	21.0	18.0	19.0	29.0	18.5	23.5	26.5	23.0	24.5
17	10.5	8.5	9.5	19.5	16.0	17.5	31.0	20.5	25.5	29.0	24.5	26.5
18	12.5	6.5	9.5	19.5	15.0	17.0	30.5	22.5	26.5	31.0	26.5	28.5
19	10.5	8.5	9.5	18.5	15.0	17.0	31.5	24.0	27.5	27.5	25.0	26.5
20	8.5	6.5	7.5	22.0	16.0	19.0	32.0	24.5	28.0	26.0	22.5	24.5
21	9.0	7.5	8.5	23.5	18.5	21.0	25.5	21.0	22.5	28.5	25.5	27.0
22	10.5	8.0	9.5	23.5	19.0	21.0	24.5	20.5	22.5	29.5	27.0	28.0
23	11.0	8.0	9.5	20.5	14.5	18.0	26.5	20.5	23.5	28.0	25.5	26.5
24	11.0	10.5	10.5	19.5	12.5	15.5	29.0	21.5	25.0	26.5	25.5	26.0
25	11.0	10.5	10.5	16.0	13.0	15.0	30.5	22.0	26.0	26.5	25.5	26.0
26	11.5	10.5	11.0	15.0	13.5	14.5	31.0	22.5	27.0	27.0	26.5	26.5
27	13.5	12.0	12.5	20.5	12.5	16.5	31.5	23.0	27.5	26.5	26.0	26.5
28	13.0	11.5	12.5	20.0	15.0	17.0	32.5	23.5	28.0	26.0	24.0	25.5
29	---	---	---	14.0	9.5	12.0	32.0	24.0	28.0	24.5	22.5	23.5
30	---	---	---	14.5	8.0	11.0	29.5	24.0	26.5	27.5	24.0	25.5
31	---	---	---	18.5	10.0	14.0	---	---	---	27.5	26.0	27.0
MONTH	17.5	6.5	11.5	23.5	8.0	15.5	32.5	11.0	22.5	32.5	20.5	26.0

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.0	26.0	28.0	32.5	26.5	29.5	35.0	29.0	32.0	29.5	24.5	26.5
2	31.0	27.0	28.5	32.5	28.5	30.0	35.5	29.0	32.0	29.0	24.0	26.5
3	28.5	26.5	27.5	34.5	28.0	31.0	35.5	29.5	32.5	28.0	24.0	26.0
4	31.5	25.0	28.0	34.0	28.5	31.0	36.0	29.5	32.5	27.5	24.5	26.0
5	32.5	25.5	29.0	32.5	27.5	30.0	36.5	30.0	33.0	28.5	25.0	26.5
6	33.5	26.5	30.0	35.0	27.5	31.0	36.0	30.0	33.0	27.0	25.5	26.5
7	32.5	27.5	30.0	35.5	28.0	31.5	35.5	30.0	33.0	27.5	24.5	26.0
8	32.5	28.0	30.0	35.0	28.0	31.5	36.0	30.0	33.0	28.5	24.5	26.5
9	29.5	28.5	29.0	34.5	28.0	31.0	37.0	30.0	33.0	28.0	25.0	26.5
10	33.0	28.0	30.0	33.5	27.0	30.0	35.5	28.0	31.5	27.5	25.5	27.0
11	31.5	29.0	29.5	34.5	27.0	31.0	34.5	27.5	30.0	28.5	25.0	26.5
12	31.0	29.5	30.0	32.0	28.0	30.0	32.5	27.5	29.5	27.0	25.0	26.0
13	31.5	29.5	30.5	29.0	25.0	27.0	34.5	27.0	28.5	29.0	25.0	27.0
14	32.0	30.0	31.0	32.0	24.0	27.5	30.0	27.0	28.0	28.0	26.0	27.0
15	33.0	30.5	32.0	35.5	25.5	30.0	32.5	28.0	30.0	27.0	25.5	26.0
16	33.5	31.0	32.0	30.0	26.5	28.0	32.5	28.5	30.5	28.0	25.0	26.5
17	36.0	31.0	33.0	33.0	26.0	28.5	32.5	29.0	30.5	29.0	25.0	27.0
18	33.0	27.0	30.0	35.0	27.0	30.5	32.5	29.0	31.0	27.5	24.5	26.0
19	34.0	28.0	30.0	36.5	27.5	31.5	32.5	29.0	31.0	26.5	23.0	24.5
20	28.5	23.0	26.0	36.0	27.5	31.5	32.0	29.0	30.5	26.5	23.0	25.0
21	30.5	27.0	28.5	34.5	27.5	31.0	32.0	29.0	30.5	26.0	23.0	24.5
22	31.0	27.0	29.0	35.5	27.0	31.0	32.5	29.0	30.5	25.5	22.5	24.0
23	33.5	27.5	30.0	35.5	28.0	31.5	31.5	28.5	30.0	---	---	---
24	34.5	28.5	31.0	36.0	28.0	31.5	30.5	28.0	29.5	---	---	---
25	35.0	28.0	31.0	35.5	28.0	31.5	31.0	28.0	29.5	---	---	---
26	33.0	26.5	30.0	35.5	27.5	31.0	30.5	28.5	29.5	---	---	---
27	33.0	26.0	29.5	35.0	27.5	31.0	29.5	26.5	28.0	26.0	23.5	24.5
28	33.5	26.5	29.5	35.0	28.0	31.0	26.0	25.0	25.5	26.5	24.5	25.5
29	32.0	26.5	29.0	35.0	28.0	31.5	27.5	24.5	26.0	25.5	23.5	24.5
30	30.0	26.0	28.0	35.0	28.5	31.5	29.5	25.5	27.0	24.5	21.5	23.0
31	---	---	---	35.0	28.5	31.5	27.0	25.5	26.0	---	---	---
MONTH	36.0	23.0	29.5	36.5	24.0	30.5	37.0	24.5	30.0	29.5	21.5	26.0

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX

LOCATION.--Lat 32°49'53", long 98°58'03", Stephens County, Hydrologic Unit 12060105, on left bank just upstream from dam on Hubbard Creek, 1.4 mi upstream from U.S. Highway 183, 6.5 mi northwest of Breckenridge, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--1,085 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

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

REMARKS.--The reservoir is formed by a rolled earthfill dam 5,630 ft long. There are two additional levees, the north and south, making an overall length of 3.5 mi. Storage began September 1962 and the dam was completed in December 1962. The emergency spillway is a 2,000-foot-wide cut through natural ground near the left end of dam. The service spillway is a partially controlled morning-glory type, with 12 lift gates designed to discharge 30,000 ft³/s with a 17.5-foot head through a 22.0-foot-diameter concrete conduit. The dam is the property of the West Central Texas Municipal Water District. 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	1,208.0	-
Crest of emergency spillway	1,194.0	515,800
Top of gates	1,185.1	350,900
Top of conservation pool	1,183.0	317,800
Crest of spillway	1,176.6	230,100
Sill of gate	1,138.0	5,580
Lowest gated outlet (invert)	1,136.0	3,470

COOPERATION.--The diversions and capacity table were furnished by the West Central Texas Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 441,200 acre-ft Oct. 14, 1981, for several hours (elevation, 1,190.22 ft); minimum since normal operating level was reached in May 1969, 157,400 acre-ft Oct. 1, 1984 (elevation, 1,169.89 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 304,300 acre-ft June 26 (elevation, 1,182.10 ft); minimum, 200,100 acre-ft Oct. 2 (elevation, 1,174.04 ft).

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

1,174.0	199,700	1,179.0	260,700
1,175.0	211,000	1,181.0	288,300
1,177.0	235,000	1,183.0	317,800

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200900	220800	225100	234500	236800	257300	262900	261500	293900	302600	293600	285900
2	200100	220300	225200	235600	237100	258200	262200	261200	293800	302600	293300	284500
3	201300	220600	225200	234400	237500	258700	262500	261000	293600	302600	293000	284200
4	204000	222900	225000	234600	238100	259400	262300	260700	293300	302600	292900	283900
5	208800	223500	225400	235200	238400	259400	262500	260200	293300	301600	292700	283500
6	221300	224400	225500	234100	238300	259900	262700	260000	293200	301400	292500	283200
7	222100	224100	225600	234100	239200	260000	262600	259800	293300	301000	291900	283100
8	222200	223900	225600	234500	239000	259900	262700	259900	293000	300300	291300	282800
9	222200	223600	225200	235200	239000	259500	262900	259900	293600	300100	290700	283100
10	222900	223400	225100	234700	239300	259400	262900	259900	292600	299400	290100	282400
11	222800	223500	225500	235100	239300	259800	262600	259900	297200	299100	290400	282200
12	222200	222300	225700	235100	239700	259900	262700	259600	298700	298800	290300	282500
13	222300	222300	225700	235200	239900	260400	261600	259600	299400	298500	290100	283200
14	222200	222300	225800	235500	239700	261200	261500	260000	299900	298100	290300	283500
15	222000	222300	225700	234900	239300	260400	261500	273700	299900	297800	290300	284600
16	222000	222300	225700	234400	239200	261800	261900	275600	299900	299000	289400	284700
17	222000	222300	226100	235500	239200	264300	261900	275900	300000	299100	289100	284300
18	221800	222600	229900	235600	239200	262900	261800	276100	299700	298400	288800	283900
19	221600	222200	231800	235400	239000	263300	261800	277700	300000	298100	288400	283800
20	221600	222000	232300	236400	239800	263300	261600	279300	304000	297700	288100	283600
21	221600	222200	232600	235500	240200	263500	262500	279600	304000	297500	287700	282900
22	221800	222000	232900	235400	240700	264300	262700	279700	303800	297100	287500	282800
23	222200	221800	233600	235600	241900	263400	263000	280000	303800	297200	286700	282500
24	222100	221800	233900	235400	242300	263500	262200	281200	304000	296700	286600	282500
25	222000	223800	234000	235700	243100	263300	262300	282200	304000	296500	286300	282500
26	221800	225000	234300	235700	245200	263400	261900	282400	304300	295800	285400	281900
27	221800	225100	234400	235900	248700	263800	261800	282500	303700	295400	285200	282100
28	221600	225500	234500	235900	255600	262900	262000	286100	303200	295100	284900	281500
29	221500	225500	234700	235900	---	262300	261800	292000	302800	294300	284900	281200
30	221500	225500	234700	235700	---	262600	261500	293500	303100	294300	285000	280800
31	220900	---	234600	236500	---	262900	---	293900	---	294100	286000	---
MAX	222900	225500	234700	236500	255600	264300	263000	293900	304300	302600	293600	285900
MIN	200100	220300	225000	234100	236800	257300	261500	259600	292600	294100	284900	280800
(†)	1175.84	1176.22	1176.97	1177.12	1178.61	1179.16	1179.06	1181.39	1182.02	1181.40	1180.84	1180.47
(ϕ)	+19700	+4600	+9100	+1900	+19100	+7300	-1400	+32400	+9200	-9000	-8100	-5200

CAL YR 1986 MAX 234700 MIN 199500 (ϕ) +19200
WTR YR 1987 MAX 304300 MIN 200100 (ϕ) +79600

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

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1963 to current year.

324932098575101 - HUBBARD CR RES SITE P01

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
14...	1215	1.00	914	8.10	9.0	1.10	10.1	93	210
14...	1217	10.0	914	8.10	8.5	--	10.1	92	--
14...	1219	20.0	914	8.10	8.5	--	10.1	92	--
14...	1221	30.0	914	8.10	8.5	--	10.1	92	--
14...	1223	40.0	914	8.10	8.5	--	10.1	92	--
14...	1225	50.0	914	8.10	8.5	--	10.0	91	--
14...	1227	60.0	914	8.00	8.5	--	10.0	91	210
AUG									
11...	1430	1.00	960	8.20	31.5	2.70	6.9	99	240
11...	1432	10.0	960	8.20	30.5	--	6.9	98	--
11...	1434	20.0	960	8.00	29.5	--	5.8	81	--
11...	1436	30.0	963	7.60	27.5	--	2.0	27	--
11...	1438	40.0	964	7.60	25.5	--	0.5	6	--
11...	1440	50.0	995	7.60	21.5	--	0.5	6	--
11...	1442	62.0	995	7.60	20.5	--	0.5	6	230

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
14...	120	61	15	86	3	7.0	99	42	200
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	120	61	15	85	3	6.9	98	42	200
AUG									
11...	140	70	17	95	3	6.5	103	42	200
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	99	64	17	95	3	6.2	131	36	200

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)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
14...	0.40	4.5	480	<0.100	0.80	0.020	9	<1
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
14...	--	--	--	<0.100	0.30	0.020	<10	<10
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
14...	--	4.5	470	<0.100	0.60	0.030	9	3
AUG								
11...	0.10	7.6	500	<0.100	0.40	0.010	670	1500
11...	--	--	--	--	--	--	--	--
11...	--	--	--	<0.100	0.20	0.010	<10	10
11...	--	--	--	<0.100	<0.20	0.010	<10	50
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	--	4.7	500	<0.100	1.0	0.030	4	4

324649099000501 - HUBBARD CR RES SITE P09

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
14...	1520	1.00	914	8.00	8.0	0.90	10.1	90	210
14...	1522	10.0	914	8.00	8.0	--	10.1	90	--
14...	1524	20.0	914	8.00	8.0	--	10.1	90	--
14...	1526	30.0	914	8.00	8.0	--	10.1	90	--
14...	1528	41.0	914	8.00	8.0	--	10.0	90	210
AUG									
11...	1715	1.00	956	8.30	30.0	1.50	6.9	97	220
11...	1717	10.0	956	8.20	29.5	--	6.8	95	--
11...	1719	20.0	958	8.00	28.5	--	5.2	71	--
11...	1721	30.0	966	7.60	27.0	--	1.8	24	--
11...	1723	44.0	978	7.60	24.5	--	0.5	6	230

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324649099000501 - HUBBARD CR RES SITE P09--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
14...	110	60	15	82	3	6.9	99	41
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
14...	110	60	15	83	3	6.9	98	43
AUG								
11...	120	62	17	92	3	6.5	107	41
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	110	66	17	93	3	6.2	126	37

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
14...	200	4.4	470	<0.100	0.70	0.010	7	2
14...	--	--	--	--	--	--	--	--
14...	--	--	--	<0.100	0.40	0.020	<10	<10
14...	--	--	--	--	--	--	--	--
14...	200	4.4	470	<0.100	0.50	0.010	8	2
AUG								
11...	200	4.9	490	<0.100	0.50	0.010	10	5
11...	--	--	--	--	--	--	--	--
11...	--	--	--	<0.100	0.90	0.020	20	40
11...	--	--	--	<0.100	0.80	0.020	<10	400
11...	200	6.8	500	<0.100	0.50	0.010	59	2300

324606099000201 - HUBBARD CR RES SITE P10

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
14...	1155	1.00	900	8.00	8.0	10.1	90
14...	1157	10.0	900	8.00	8.0	10.1	90
14...	1159	20.0	900	8.00	8.0	10.1	90
14...	1201	29.0	900	8.00	8.0	10.1	90
AUG							
11...	1410	1.00	960	8.20	31.5	6.7	97
11...	1412	10.0	960	8.00	30.0	6.7	94
11...	1414	20.0	962	7.60	28.5	3.1	42
11...	1416	33.0	962	7.60	28.0	0.9	12

324514099010201 - HUBBARD CR RES SITE P11

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
14...	1550	1.00	875	8.00	8.0	10.2	91
14...	1552	10.0	873	8.00	8.0	10.2	91
14...	1554	22.0	872	8.00	8.0	10.2	91
AUG							
11...	1745	1.00	958	8.20	30.0	6.6	93
11...	1747	10.0	960	8.10	29.5	6.4	89
11...	1749	20.0	963	7.60	27.5	1.9	26
11...	1751	26.0	965	7.60	27.5	0.9	12

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324301099001701 - HUBBARD CR RES SITE P12

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
14...	1620	1.00	665	7.90	9.0	0.20	9.8	90	170
14...	1622	10.0	668	7.80	9.0	--	9.7	89	170
AUG									
11...	1805	1.00	979	8.10	30.5	0.70	6.2	88	230
11...	1807	14.0	986	7.50	28.0	--	0.6	8	230

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
14...	74	52	8.9	54	2	5.0	93	29
14...	75	52	9.4	57	2	5.2	94	30
AUG								
11...	110	65	16	92	3	6.6	116	39
11...	120	67	16	92	3	6.6	118	39

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
14...	130	5.7	340	0.200	0.80	0.060	63	10
14...	130	5.7	350	0.200	1.1	0.060	67	10
AUG								
11...	200	5.5	490	<0.100	0.50	0.020	14	32
11...	210	5.9	510	<0.100	0.90	0.050	46	710

324949098594301 - HUBBARD CR RES SITE P13

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
14...	1245	1.00	920	8.10	8.5	10.1	92
14...	1247	10.0	920	8.10	8.5	10.1	92
14...	1249	20.0	923	8.10	8.5	10.1	92
14...	1251	30.0	920	8.10	8.5	10.1	92
14...	1253	40.0	920	8.10	8.0	10.1	90
14...	1255	50.0	920	8.10	8.0	10.1	90
14...	1257	57.0	919	8.10	8.0	9.9	89
AUG							
11...	1500	1.00	963	8.30	31.5	6.8	98
11...	1502	10.0	963	8.30	30.5	6.8	96
11...	1504	20.0	968	7.90	29.5	5.7	79
11...	1506	30.0	968	7.60	28.0	1.7	23
11...	1508	40.0	968	7.60	25.5	0.5	6
11...	1510	50.0	995	7.60	22.0	0.5	6
11...	1512	60.0	998	7.60	21.0	0.5	6

324802099021601 - HUBBARD CR RES SITE P15

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
14...	1320	1.00	943	8.00	8.5	10.2	92
14...	1322	10.0	943	8.00	8.5	10.1	92
14...	1324	20.0	948	8.00	8.0	10.1	90
14...	1326	28.0	950	8.00	8.0	10.1	90
AUG							
11...	1530	1.00	960	8.30	32.0	6.7	97
11...	1532	10.0	960	8.20	30.0	6.7	94
11...	1534	20.0	963	7.70	29.0	3.9	54
11...	1536	30.0	979	7.60	28.0	0.9	12
11...	1538	36.0	979	7.60	27.5	0.4	5

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324653099032401 - HUBBARD CR RES SITE P16

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
14...	1350	1.00	980	8.10	8.5	0.50	10.3	93	230
14...	1352	10.0	983	8.10	8.5	--	10.2	92	--
14...	1354	19.0	981	8.10	8.5	--	10.2	92	240
AUG									
11...	1550	1.00	986	8.20	31.5	1.00	6.6	95	230
11...	1552	10.0	979	7.70	29.5	--	3.9	54	--
11...	1554	22.0	1090	7.70	28.5	--	0.4	5	240

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
14...	120	66	16	90	3	6.5	108	44
14...	--	--	--	--	--	--	--	--
14...	130	67	17	91	3	6.5	108	44
AUG								
11...	120	64	17	95	3	6.6	110	42
11...	--	--	--	--	--	--	--	--
11...	120	68	18	100	3	6.5	121	42

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
14...	210	4.6	500	<0.100	0.80	0.040	15	3
14...	--	--	--	<0.100	0.70	0.030	<10	<10
14...	220	4.6	510	<0.100	0.50	0.030	8	3
AUG								
11...	210	5.2	510	<0.100	0.60	0.020	7	3
11...	--	--	--	<0.100	0.80	0.050	<10	20
11...	210	6.1	520	<0.100	1.1	0.040	21	300

324608099042101 - HUBBARD CR RES SITE P17

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
14...	1410	1.00	1750	8.10	8.5	10.2	93
14...	1412	10.0	1840	8.00	8.0	9.9	89
14...	1414	18.0	1900	8.00	8.0	9.7	87
AUG							
11...	1615	1.00	1060	8.20	31.0	6.0	86
11...	1617	10.0	1060	7.60	29.0	0.6	8
11...	1619	20.0	1330	7.60	27.5	0.4	5

324541099053601 - HUBBARD CR RES SITE P18

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
14...	1430	1.00	2010	8.10	9.0	0.80	10.5	97	500
14...	1432	10.0	2010	8.10	8.5	--	10.4	95	--
14...	1434	15.0	2160	8.00	8.0	--	10.0	90	540
AUG									
11...	1635	1.00	1390	8.30	31.0	0.60	7.8	112	320
11...	1637	10.0	1510	7.60	29.5	--	0.9	13	--
11...	1639	18.0	1850	7.60	29.0	--	0.4	6	420

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324541099053601 - HUBBARD CR RES SITE P18--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN								
14...	320	140	37	220	4	3.4	185	87
14...	--	--	--	--	--	--	--	--
14...	350	150	39	220	4	3.4	187	84
AUG								
11...	180	89	24	140	4	6.5	143	66
11...	--	--	--	--	--	--	--	--
11...	260	110	35	210	5	2.9	157	95

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN								
14...	480	6.0	1100	0.100	0.40	0.030	<10	10
14...	--	--	--	<0.100	0.20	0.030	<10	10
14...	530	5.6	1100	<0.100	0.70	0.020	<10	10
AUG								
11...	300	8.1	720	<0.100	0.70	0.030	140	200
11...	--	--	--	<0.100	1.0	0.060	30	290
11...	450	12	1000	<0.100	1.1	0.100	1600	1400

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX

LOCATION.--Lat 33°01'27", long 98°38'37", Young County, Hydrologic Unit 12060201, on left bank 225 ft downstream from bridge on State Highway 67, 1.8 mi downstream from Clear Fork Brazos River, 2.0 mi northeast of South Bend, and at mile 758.2.

DRAINAGE AREA.--22,673 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WRD TX-74-1: 1973. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,002.98 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 23, 1939, nonrecording gage at site 255 ft upstream; and Feb. 23, 1939, to Mar. 9, 1961, water-stage recorder at site 225 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. There are many small diversions upstream from station for municipal supply and oilfield operations. For statement regarding regulation by Soil Conservation Service floodwater retarding structures, see station 0808950. Gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 833 ft³/s (603,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,400 ft³/s May 4, 1941 (gage height, 27.35 ft); maximum gage height, 41.50 ft Aug. 6, 1978, from floodmark; no flow at times.
Maximum stage since 1938, that of Aug. 6, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1876 reached a stage of 36.2 ft, from information by State Department of Highways and Public Transportation and U.S. Army Corps of Engineers. Flood of Sept. 24, 1900, reached a stage of 29.5 ft, and flood of June 16, 1930, reached a stage of 35.5 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 7	1400	13,400	19.70	June 2	1100	*22,800	*24.32
Oct. 11	1500	13,700	19.89				

Minimum discharge, 93.0 ft³/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2630	1060	827	727	548	5240	667	229	20400	791	333	334
2	4950	950	745	694	681	3250	628	214	21900	1810	307	264
3	3030	873	673	640	627	2380	605	205	10800	1500	289	219
4	6670	1230	618	608	577	1930	557	196	4410	1100	273	194
5	7920	1380	587	596	570	1730	530	187	3370	1030	258	180
6	10400	2090	565	562	690	1550	533	185	2840	1080	246	165
7	13000	1590	561	538	2130	1380	514	179	2420	1060	233	164
8	11800	1190	546	529	2690	1240	490	179	2130	842	226	144
9	10600	1540	590	650	3400	1110	476	176	1960	709	208	133
10	11700	1270	562	749	3270	1020	457	173	1770	598	195	110
11	13400	1060	534	806	1790	947	438	169	2410	527	193	99
12	12600	948	514	692	1320	877	414	164	2810	476	186	134
13	7400	860	492	633	1120	845	394	159	1930	485	180	152
14	4280	794	479	610	993	817	372	163	1830	445	170	148
15	3520	733	470	587	912	783	359	195	1870	408	155	297
16	3190	694	459	544	852	761	340	196	1480	402	144	444
17	2530	665	455	533	809	1710	326	726	1380	396	135	321
18	2000	633	587	534	779	3870	309	783	1610	398	125	354
19	1740	617	883	524	754	4310	299	402	1630	604	120	514
20	1540	593	1010	521	760	2400	286	400	1870	991	126	508
21	1370	573	1290	569	758	1670	299	344	5460	1100	190	510
22	1300	563	1150	587	784	1350	304	258	5310	941	176	419
23	1790	541	1060	602	817	1160	291	307	3330	1070	148	358
24	2050	528	1030	647	965	1020	277	776	2380	1000	139	288
25	2720	780	1010	642	1080	943	277	4540	1810	874	119	256
26	2490	1360	998	616	1480	878	268	4220	1430	701	106	231
27	2000	1650	979	575	2530	805	259	4210	1220	589	126	211
28	2000	1440	900	537	4380	792	251	3160	1020	510	109	192
29	1700	1120	833	506	---	820	240	9790	892	449	161	180
30	1390	931	804	493	---	788	228	13000	819	402	424	162
31	1190	---	780	468	---	708	---	16600	---	364	459	---
TOTAL	154900	30256	22991	18519	38066	49084	11688	62485	114491	23652	6259	7685
MEAN	4997	1009	742	597	1359	1583	390	2016	3816	763	202	256
MAX	13400	2090	1290	806	4380	5240	667	16600	21900	1810	459	514
MIN	1190	528	455	468	548	708	228	159	819	364	106	99
AC-FT	307200	60010	45600	36730	75500	97360	23180	123900	227100	46910	12410	15240

CAL YR 1986 TOTAL 380059 MEAN 1041 MAX 13400 MIN 21 AC-FT 753800
WTR YR 1987 TOTAL 540076 MEAN 1480 MAX 21900 MIN 99 AC-FT 1071000

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1941 to March 1948, May 1965 to current year. Chemical and biochemical analyses: November 1977 to current year. Pesticide analyses: March 1968 to April 1982. Sediment analyses: May to September 1962, November 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1942 to March 1948, November 1977 to September 1981.
WATER TEMPERATURE: November 1977 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 14,000 microsiemens Dec. 4, 1979; minimum daily, 350 microsiemens Aug. 6, 1978.
WATER TEMPERATURE: Maximum daily, 36.0°C July 18, 20-23, Aug. 17, 1981; minimum daily, 0.0°C Jan. 10, 11, 18, 21, Feb. 18, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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 13...	1045	864	4000	7.90	5.5	2400	10.5	86	1.2	2200	2200	740
JAN 08...	1045	524	6500	8.40	7.0	22	11.3	99	1.8	K4	240	1100
MAR 06...	0945	1790	6680	8.00	12.0	60	10.2	100	1.0	--	--	1000
MAY 19...	1330	380	5860	7.90	25.0	32	9.0	116	3.3	260	260	1400
JUL 09...	1015	789	4500	8.00	27.0	2.1	6.2	82	0.3	720	140	800
AUG 27...	1025	126	7340	7.80	26.0	39	6.8	89	0.9	K2100	270	1000

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 13...	590	190	63	630	10	7.0	146	630	860	0.70	8.0	2530
JAN 08...	890	260	110	1000	14	9.0	210	950	1600	0.60	9.0	4110
MAR 06...	820	240	99	1100	16	9.3	192	820	1700	0.50	7.3	4260
MAY 19...	1200	310	150	800	10	8.9	172	1200	1300	0.50	3.8	4040
JUL 09...	690	220	61	640	10	8.7	110	590	1000	0.60	11	2800
AUG 27...	880	250	91	1300	18	14	128	1000	1800	0.60	11	4770

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 13...	2500	--	<0.010	0.820	0.060	0.070	0.34	0.40	0.470	0.080	0.050	0.15
JAN 08...	4100	--	<0.010	0.850	0.110	0.090	0.89	1.0	0.110	0.090	0.090	0.28
MAR 06...	4100	--	<0.010	0.880	0.160	0.080	1.3	1.5	0.240	0.100	0.090	0.28
MAY 19...	3900	--	<0.010	<0.100	0.130	0.090	1.2	1.3	0.180	0.040	<0.010	--
JUL 09...	2600	0.530	0.020	0.550	0.100	0.110	0.90	1.0	0.820	0.120	0.080	0.25
AUG 27...	4500	--	<0.010	<0.100	0.070	0.060	--	<0.20	0.110	0.020	<0.010	--

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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)
NOV 13...	2660	6210	100	20	3	100	<10	<1	<1	<1	5	<10
JAN 08...	59	83	98	--	--	--	--	--	--	--	--	--
MAR 06...	122	590	92	10	1	200	<10	<1	<1	1	2	20
MAY 19...	65	67	93	<10	2	140	<0.5	<3	<1	<1	1	7
JUL 09...	1680	3580	100	--	--	--	--	--	--	--	--	--
AUG 27...	88	30	88	320	2	100	<10	<1	3	1	1	230

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	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											
13...	<5	70	10	<0 1	9	3	2	<1	3600	10	10
JAN											
08...	--	--	--	-	--	--	--	--	--	--	--
MAR											
06...	<5	80	20	<0.1	1	4	2	<1	4900	<100	10
MAY											
19...	<5	130	20	0,2	4	3	2	<1	6300	<10	10
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
AUG											
27...	<5	90	80	0.4	3	<1	1	<1	4600	44	20

08088300 BRIAR CREEK NEAR GRAHAM, TX

LOCATION.--Lat 33°12'43", long 98°37'06", Young County, Hydrologic Unit 12060201, near right bank at downstream side of bridge on Farm Road 1769, 3.7 mi upstream from mouth, and 7.0 mi northwest of Graham.

DRAINAGE AREA.--24.2 mi².

PERIOD OF RECORD.--April 1958 to current year. Prior to October 1965, published as Oak Creek near Graham.

REVISED RECORDS.--WSP 2122: 1962. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharge. Records fair. No diversions upstream from station.

AVERAGE DISCHARGE.--29 years (water years 1959-87), 3.99 ft³/s (2.24 in/yr), 2,890 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,230 ft³/s Sept. 18, 1986 (gage height 13.52 ft); maximum gage-height, 13.54 ft May 22, 1982; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 15.2 ft in September 1955. Flood in May 1957 reached a stage of 15.0 ft, from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 1	1530	*1,480	*11.17	Feb. 28	1330	481	7.44
Oct. 3	1700	219	4.41	May 28	1930	449	7.09
Nov. 25	2230	218	4.37	June 12	1500	271	5.02

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	487	.07	.64	.26	26	40	.32	.10	1.2	.04	.00	.00
2	72	.06	.43	.22	18	9.1	.30	.10	.58	.05	.00	.00
3	132	.05	.31	.20	4.6	4.2	.28	.07	.34	.05	.00	.00
4	79	83	.31	.15	2.2	2.5	.28	.05	.25	.05	.00	.00
5	64	28	.26	.15	1.5	1.9	.28	.04	.17	.03	.00	.00
6	76	4.9	.24	.15	4.1	1.5	.28	.03	.13	.01	.00	.00
7	14	2.2	.61	.15	2.8	1.3	.28	.05	.11	.00	.00	.00
8	4.4	1.1	.64	.31	1.9	1.1	.28	.12	.10	.00	.00	.00
9	2.4	.53	.51	39	1.2	.96	.28	.08	.12	.00	.00	.00
10	1.5	.37	.35	17	.92	.82	.28	.07	.13	.00	.00	.00
11	1.0	.26	.36	4.0	.75	.74	.28	.05	26	.00	.00	.00
12	1.4	.24	.32	2.0	.58	.67	.28	.04	154	.00	.00	.00
13	1.0	.19	.24	1.6	.52	.61	.24	.03	59	.02	.00	.00
14	.60	.15	.22	.97	.49	.58	.19	.02	5.4	.02	.00	.30
15	.40	.15	.21	.70	.72	.58	.18	.01	1.6	.00	.00	9.8
16	.29	.15	.21	.57	.57	1.0	.18	.01	.61	.00	.00	9.4
17	.23	.15	.27	.53	.38	32	.18	.00	.29	.00	.00	.81
18	.20	.15	42	.87	.30	6.5	.18	.00	83	.00	.00	.06
19	.15	.15	22	3.1	.28	2.2	.18	.00	18	.00	.00	.00
20	.12	.15	5.5	13	3.3	1.3	.15	.00	31	.00	.00	.00
21	.11	.15	2.9	9.3	14	.93	.18	.00	7.1	.00	.00	.00
22	1.0	.15	3.0	5.6	9.4	.72	.22	1.9	1.5	.00	.00	.00
23	.74	.15	2.8	3.1	3.8	.69	.22	15	.58	.00	.00	.00
24	.53	.15	1.9	1.9	28	.58	.17	5.8	.28	.00	.00	.00
25	.36	116	1.3	1.2	18	.48	.13	2.8	.14	.00	.00	.00
26	.26	65	.96	.83	123	.50	.11	.49	.09	.00	.00	.00
27	.19	8.4	.73	.67	71	.55	.11	.13	.06	.00	.00	.00
28	.16	3.0	.53	.56	273	.54	.09	129	.05	.00	.00	.00
29	.12	1.7	.43	.46	---	.36	.09	219	.04	.00	.00	.00
30	.11	1.0	.36	.33	---	.32	.09	13	.04	.00	.00	.00
31	.08	---	.32	.27	---	.32	---	2.7	---	.00	.00	---
TOTAL	941.35	317.72	90.86	109.15	611.31	115.55	6.31	390.69	391.91	.27	.00	20.37
MEAN	30.4	10.6	2.93	3.52	21.8	3.73	.21	12.6	13.1	.01	.00	.68
MAX	487	116	42	39	273	40	.32	219	154	.05	.00	9.8
MIN	.08	.05	.21	.15	.28	.32	.09	.00	.04	.00	.00	.00
AC-FT	1870	630	180	216	1210	229	13	775	777	.5	.0	40

CAL YR 1986	TOTAL	3016.74	MEAN	8.27	MAX	750	MIN	.00	AC-FT	5980
WTR YR 1987	TOTAL	2995.45	MEAN	8.21	MAX	487	MIN	.00	AC-FT	5940

08088400 LAKE GRAHAM NEAR GRAHAM, TX

LOCATION.--Lat 33°08'04", long 98°36'48", Young County, Hydrologic Unit 12060201, near left end of earthen dam on Salt Creek, 2.2 mi northwest of Graham, 5 mi downstream from Briar Creek, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--March 1958 to September 1963 (unpublished record), October 1963 to current year. Prior to October 1965, monthend contents only.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.3(ft above National Geodetic Vertical datum of 1929. Prior to October 1963, nonrecording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 5,000 ft long. Lake Graham was connected with Lake Eddleman in 1959 by a cut channel at a gage height of 1,050.0 ft. Deliberate impoundment began Apr. 28, 1958, and dam was completed in July 1958. The uncontrolled emergency spillway is a 1,050-foot-wide cut at the right end of dam. The spillway is designed to discharge 136,500 ft³/s at a gage height of 1,087.5 ft. The dam is the property of the city of Graham and was built to impound water for municipal and industrial uses. In addition, water is used by the Texas Electric Service Co. for operation of their steam generating powerplant. The capacity table is based on an original survey of Lake Eddleman in 1928 and a Salt Creek survey of 1953. 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	1,092.0	-
Crest of spillway	1,075.0	53,680
Bottom of interconnecting channel	1,050.0	8,670
Lowest gated outlet (invert)	1,050.0	8,670

COOPERATION.--Capacity table was provided by Freese, Nichols, and Endress, Consulting Engineers. Record of diversions provided by the city of Graham.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 61,120 acre-ft Apr. 30, 1970 (gage height, 1,077.77 ft); minimum, 28,760 acre-ft Sept. 30, 1979 (gage height, 1,064.09 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,110 acre-ft Oct. 1 at 2400 hours (gage height, 1,077.40 ft); minimum, 48,810 acre-ft Sept. 30 (gage height, 1,073.06 ft).

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

1,072.0	46,220	1,076.0	56,290
1,074.0	51,140	1,078.0	61,780

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60110	53840	54410	54020	54680	56240	53800	53250	55400	54120	52130	49530
2	57690	53730	54310	53970	54850	55350	53620	53220	55190	54050	52000	49480
3	57210	53710	54250	53940	54720	54930	53610	53200	54980	53990	51950	49400
4	56990	54960	54220	53890	54620	54700	53580	53120	54800	53890	51850	49300
5	56480	54910	54180	53890	54570	54540	53580	53070	54700	53840	51770	49230
6	56640	54720	54200	53890	54440	54440	53580	52990	54650	53730	51700	49210
7	55840	54590	54250	53840	54380	54360	53570	52990	54570	53600	51550	49210
8	55340	54520	54220	53940	54310	54280	53600	52940	54460	53550	51470	49110
9	55030	54360	54180	54460	54250	54160	53580	52920	54590	53450	51340	49030
10	54780	54240	54100	54540	54230	54070	53550	52890	54570	53380	51290	48930
11	54670	54100	54050	54460	54200	54020	53550	52870	55610	53300	51190	48860
12	54490	53990	54040	54410	54150	54020	53550	52840	56080	53250	51170	49060
13	54380	53860	54020	54330	54120	53970	53500	52790	55950	53380	51070	49080
14	54330	53860	54020	54310	54110	53990	53400	52710	55530	53320	51020	49300
15	54290	53890	54020	54200	54060	53990	53400	52740	55270	53220	50920	49450
16	54200	53860	54020	54120	53980	54160	53400	52690	55040	53220	50790	49450
17	54180	53860	54100	54200	53910	54720	53400	52640	54830	53170	50690	49430
18	54100	53800	54520	54120	53890	54650	53380	52560	55270	53150	50590	49350
19	54050	53810	54750	54150	53840	54570	53300	52640	55220	53070	50500	49300
20	53990	53740	54650	54180	53990	54460	53280	52640	55400	52990	50370	49230
21	53990	53730	54630	54230	54120	54380	53270	52560	55220	52970	50270	49210
22	54200	53760	54520	54200	54150	54280	53320	52590	55040	52890	50150	49130
23	54330	53730	54440	54250	54080	54200	53350	52790	54910	52840	50050	49110
24	54230	53680	54410	54200	54380	54100	53320	52790	54780	52740	49970	49080
25	54130	55220	54360	54170	54540	54050	53300	52770	54620	52660	49880	49030
26	54100	55870	54270	54120	55740	54020	53250	52690	54520	52590	49780	48960
27	54050	55320	54230	54120	56000	54040	53250	52640	54360	52490	49780	48910
28	53990	54980	54160	54100	57340	53940	53200	54540	54250	52410	49730	48930
29	53990	54750	54120	54050	---	53850	53170	56590	54250	52360	49680	48880
30	53940	54640	54070	53990	---	53720	53100	56160	54200	52280	49600	48810
31	53860	---	54050	54020	---	53730	---	55690	---	52180	49600	---
MAX	60110	55870	54750	54540	57340	56240	53800	56590	56080	54120	52130	49530
MIN	53860	53680	54020	53840	53840	53720	53100	52560	54200	52180	49600	48810
(†)	1075.07	1075.37	1075.14	1075.13	1076.39	1075.02	1074.77	1075.77	1075.20	1074.41	1073.38	1073.06
(ϕ)	-550	+780	-590	-30	+3320	-3610	-630	+2590	-1490	-2020	-2580	-790

CAL YR 1986 MAX 60110 MIN 47440 (ϕ) +3730
WTR YR 1987 MAX 60110 MIN 48810 (ϕ) -5600

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

08088450 BIG CEDAR CREEK NEAR IVAN, TX

LOCATION.--Lat 32°49'39", long 98°43'25", Stephens County, Hydrologic Unit 12060201, on left bank at downstream side of bridge on Farm Road 717, 3.2 mi south of Ivan, 8.2 mi northwest of Caddo, and 11.6 mi northeast of Breckenridge.

DRAINAGE AREA.--97.0 mi².

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--22 years (water years 1966-87), 12.2 ft³/s (1.71 in/yr), 8,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,700 ft³/s Oct. 13, 1981 (gage height, 32.50 ft), from rating curve extended above 30,100 ft³/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge 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)
Feb. 28	0700	*1,330	*12.47	No other peak greater than base discharge.			

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.15	.39	.34	1.3	60	.62	8.5	7.2	.33	.00	.00
2	.08	.15	.37	.30	2.6	23	.33	2.6	4.9	.21	.00	.00
3	.11	.15	.30	.25	1.7	14	.22	.67	3.4	.20	.00	.01
4	60	42	.25	.22	.91	11	.21	.07	2.7	.13	.00	.01
5	127	20	.25	.19	.74	8.9	.21	.00	1.8	.04	.00	.01
6	296	4.3	.25	.19	8.3	7.6	.23	.00	1.4	.00	.00	.01
7	24	.92	.28	.19	10	6.6	.25	.00	.91	.00	.00	.02
8	6.5	.57	.32	.19	4.4	5.7	.25	.00	1.0	.00	.00	.02
9	1.4	.43	.32	.50	1.6	5.1	.20	.00	29	.00	.00	.03
10	.70	.33	.29	.75	.98	4.5	.10	.00	12	.00	.00	.03
11	.42	.31	.25	.89	.80	3.9	.11	.00	27	.00	.00	.03
12	.28	.25	.28	.69	.68	3.4	.17	.00	61	.00	.00	.03
13	.22	.25	.25	.49	.57	3.1	.18	.00	22	.00	.00	.03
14	.18	.24	.25	.38	.57	3.0	.09	.00	8.6	.00	.00	.03
15	.15	.25	.25	.32	.62	2.8	.05	69	5.3	.00	.00	.03
16	.15	.25	.25	.32	.51	2.9	.06	26	3.2	.00	.00	.03
17	.15	.25	.39	.37	.44	19	.06	5.3	1.9	.00	.00	.03
18	.15	.29	152	.57	.39	12	.01	1.9	1.7	.00	.00	.03
19	.19	.33	41	1.1	.35	6.1	.00	1.9	1.5	.00	.00	.03
20	.19	.39	13	10	.71	4.3	.04	58	111	.00	.00	.03
21	.15	.39	6.6	6.4	17	3.2	2.3	10	50	.00	.00	.03
22	.19	.43	19	2.8	72	2.6	.65	3.6	12	.00	.00	.03
23	.19	.47	16	1.2	23	2.2	.45	1.3	6.5	.00	.00	.03
24	.19	.47	8.1	.94	21	1.8	.17	9.9	4.1	.00	.00	.03
25	.19	19	3.4	.75	18	1.4	.05	12	2.7	.00	.00	.03
26	.19	23	1.3	.61	155	1.3	.01	5.8	1.6	.00	.00	.03
27	.18	8.0	.95	.48	80	1.4	.00	2.4	.96	.00	.00	.03
28	.15	1.9	.74	.40	666	1.4	.00	92	.72	.00	.00	.03
29	.15	.85	.60	.35	---	1.2	.00	290	.47	.00	.00	.03
30	.15	.55	.47	.30	---	1.0	.00	31	.54	.00	.00	.03
31	.15	---	.44	.25	---	.84	---	12	---	.00	.00	---
TOTAL	519.86	126.87	268.54	32.73	1090.17	225.24	7.02	643.94	387.10	.91	.00	.74
MEAN	16.8	4.23	8.66	1.06	38.9	7.27	.23	20.8	12.9	.03	.00	.02
MAX	296	42	152	10	666	60	2.3	290	111	.33	.00	.03
MIN	.08	.15	.25	.19	.35	.84	.00	.00	.47	.00	.00	.00
AC-FT	1030	252	533	65	2160	447	14	1280	768	1.8	.0	1.5

CAL YR 1986 TOTAL 2421.95 MEAN 6.64 MAX 329 MIN .00 AC-FT 4800
WTR YR 1987 TOTAL 3303.09 MEAN 9.05 MAX 666 MIN .00 AC-FT 6550

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX

LOCATION.--Lat 32°52'20", long 98°25'32", Palo Pinto County, Hydrologic Unit 12060201, at Morris Sheppard Dam on the Brazos River, 2.6 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and at mile 687.5.

DRAINAGE AREA.--23,596 mi², approximately, of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1941 to current year. Prior to October 1977, published as Possum Kingdom Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.10 ft National Geodetic Vertical Datum of 1929 (levels by Brazos River Authority). Prior to Mar. 19, 1968, mercury U-tube in powerhouse at present site and datum.

REMARKS.--The lake is formed by reinforced concrete dam, Ambursen-type, massive buttress with flat-slab deck, a controlled spillway, two bulkhead sections, and an earthen-dike section. Total length of dam is 2,740 ft long. The dam was completed and storage began Mar. 21, 1941. The spillway has nine roof-weir gates (modified bear-trap type) that are 73.66 by 13 ft each and are designed to discharge about 100,000 ft³/s at a gage height of 1,000.0 ft. The outlet works consist of one controlled 54-inch-diameter conduit. Water is used for power development, irrigation, municipal, industrial, and recreational purposes. Two generators located in the powerhouse at dam can produce 22,500 kilowatts at a 1,000-foot gage height. Eleven major reservoirs, with a combined capacity of 607,800 acre-ft, largely regulate the inflow. The capacity curve is based on recomputation of a survey made in 1974. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950. Gage-height telemeter at station since Jan. 13, 1981. 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	1,024.0	-
Design flood (top of gates)	1,000.0	570,200
Crest of spillway	987.0	383,300
Invert of penstock	911.5	4,560
Lowest gated outlet (invert of 54-inch conduit)	874.8	0

COOPERATION.--Capacity table 3-C provided by the Brazos River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 743,700 acre-ft Oct. 5, 1941 (gage height, 1,001.0 ft); maximum gage height 1,003.60 ft Oct. 13, 1981; minimum observed, 273,000 acre-ft Feb. 19 to Mar. 17, 1953 (gage height, 967.0 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 564,100 acre-ft Oct. 4 at 1000 hours (gage height, 999.65 ft); minimum, 373,200 acre-ft Sept. 12 (gage height, 986.13 ft).

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

986.0	371,700	994.0	474,100
988.0	395,100	996.0	504,000
990.0	419,800	998.0	536,000
992.0	446,100	1,000.0	570,200

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548100	554000	550300	545900	540200	559200	543700	380700	434700	380400	381000	375400
2	555100	550600	548800	544400	541700	552800	540400	380600	448200	381400	381100	373900
3	560100	548300	548800	543100	543600	555400	531600	380600	454900	383100	381200	374300
4	552800	548100	549100	542000	545400	555100	515800	380900	447900	380700	381700	374500
5	557800	546200	548800	540500	547300	553500	502000	380900	435600	381000	381700	374600
6	560300	547100	549300	540500	547100	551800	489600	381200	424200	381000	381100	374700
7	558200	547400	548900	539900	550600	549100	478800	381000	415000	380700	381100	374900
8	559400	546800	547100	539500	553800	546800	469100	380900	407700	380900	381100	374300
9	558200	546400	545900	538400	557000	544700	457400	381000	402600	381200	381200	373300
10	555600	546800	544900	537500	557700	543700	444800	381200	398200	381800	381600	373300
11	554400	545700	545900	537800	559600	542900	434600	381200	395600	381000	381700	373300
12	554900	544100	545600	538000	560100	542200	426000	381400	396800	379700	381700	374300
13	553800	543100	544600	536300	559600	541000	418500	381400	395800	380400	381300	374300
14	551000	544200	545600	536800	559100	539900	412400	381100	393300	379900	380600	374700
15	547100	546200	545400	535800	558900	541200	407300	380500	390300	381200	379500	374700
16	553800	547400	546200	535000	557500	541200	403100	381200	387500	380500	378800	374300
17	556100	546400	546900	534400	555800	541900	399200	380700	384100	381300	378800	373800
18	557100	546200	547100	532600	554500	544100	395900	380900	382700	381100	378300	374100
19	558700	545400	546600	533600	553100	549600	392500	382400	380600	381700	378100	374800
20	558400	544200	546100	533400	553700	554000	389900	380200	382400	381600	377700	375500
21	557100	543100	547600	534200	552800	555600	388400	381200	381700	381800	377500	376200
22	556300	544100	547400	534700	552300	555600	386100	380700	385900	382100	377500	376800
23	553700	543100	546900	536200	551100	555200	384000	380200	389100	381700	376700	377500
24	552100	541000	547800	536800	552000	554000	381700	380500	389000	381700	376900	376600
25	551100	543100	548900	536300	553300	552800	381300	381400	387500	381800	377400	376900
26	554400	544200	548800	536000	556100	551500	380700	384200	384600	381300	376200	377200
27	553000	547600	547400	536700	556800	550800	380900	386000	381300	381100	376200	377200
28	555600	549600	547900	538000	556800	549600	380700	392300	380400	381100	376000	378100
29	556500	550400	548400	538700	---	547300	380700	396600	380900	381200	375100	377800
30	556300	550800	547400	538900	---	545100	380400	405500	380500	381100	375100	377700
31	557500	---	547400	538900	---	544200	---	418800	---	381600	376200	---
MAX	560300	554000	550300	545900	560100	559200	543700	418800	454900	383100	381700	378100
MIN	547100	541000	544600	532600	540200	539900	380400	380200	380400	379700	375100	373300
(†)	999.27	998.88	998.68	998.17	999.23	998.49	986.75	989.94	986.76	986.85	986.39	986.52
(ϕ)	+9200	-6700	-3400	-8500	+17900	-12600	-163800	+38400	-38300	-1100	-5400	+1500

CAL YR 1986 MAX 567800 MIN 489700 (ϕ) -170600
WTR YR 1987 MAX 560300 MIN 373300 (ϕ) +26800

(†) Gage height, in feet, at end of month.
(ϕ) Change in contents, in acre-feet.

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March 1962 to September 1977. Chemical and biochemical analyses: February 1978 to current year.

325208098254201 - POSSUM KINGDOM LK SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1220	1.00	2550	8.10	10.5	10.1	95
13...	1222	10.0	2550	8.10	10.0	9.9	92
13...	1224	20.0	2550	8.10	10.0	9.7	90
13...	1226	30.0	2550	8.00	10.0	9.6	89
13...	1228	40.0	2550	8.00	10.0	9.4	87
13...	1230	50.0	2550	8.00	10.0	9.3	86
13...	1232	60.0	2910	7.80	10.0	6.5	60
MAY							
19...	1300	1.00	2640	8.50	24.5	7.9	100
19...	1302	10.0	2640	8.50	23.5	7.9	98
19...	1304	20.0	2640	8.00	17.0	5.8	63
19...	1306	30.0	2640	7.90	14.5	5.8	60
19...	1308	40.0	2650	7.80	14.0	5.4	55
19...	1310	51.0	2740	7.80	13.5	3.8	38
AUG							
12...	1200	1.00	2170	8.40	30.5	7.2	102
12...	1202	10.0	2180	8.30	30.0	7.2	101
12...	1204	20.0	2180	7.60	28.5	3.0	41
12...	1206	30.0	2280	7.50	27.0	0.5	7
12...	1208	40.0	2370	7.50	25.5	0.5	6
12...	1210	50.0	2580	7.50	24.0	0.5	6
12...	1212	63.0	3080	7.50	23.5	0.5	6

325218098254101 - POSSUM KINGDOM LK SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
13...	1140	1.00	2550	8.10	10.5	3.70	10.1	95	500
13...	1142	10.0	2550	8.10	10.0	--	10.0	93	--
13...	1144	20.0	2550	8.10	10.0	--	9.8	91	--
13...	1146	30.0	2550	8.00	10.0	--	9.6	89	--
13...	1148	40.0	2550	8.00	10.0	--	9.3	86	--
13...	1150	50.0	2550	8.00	10.0	--	9.3	86	--
13...	1152	60.0	3140	7.80	10.0	--	4.7	44	--
13...	1154	70.0	3550	7.80	9.5	--	5.1	47	--
13...	1156	80.0	3650	7.90	9.5	--	6.1	56	--
13...	1158	90.0	3780	7.90	9.5	--	5.6	52	--
13...	1200	95.0	3810	7.90	9.5	--	5.7	52	760
MAY									
19...	1220	1.00	2650	8.50	25.0	2.60	7.8	100	530
19...	1222	10.0	2650	8.50	24.5	--	7.6	96	--
19...	1224	20.0	2650	8.00	18.0	--	5.8	65	--
19...	1226	30.0	2650	7.90	14.5	--	5.8	60	--
19...	1228	40.0	2680	7.80	14.0	--	5.0	51	--
19...	1230	50.0	2750	7.70	13.5	--	3.8	38	--
19...	1232	60.0	3200	7.60	13.0	--	0.6	6	--
19...	1233	70.0	3740	7.60	13.5	--	0.6	6	--
19...	1234	80.0	3900	7.50	13.5	--	0.6	6	--
19...	1236	87.0	4530	7.40	14.0	--	0.6	6	810
AUG									
12...	1130	1.00	2170	8.40	30.5	1.90	7.2	102	440
12...	1132	10.0	2170	8.30	30.0	--	6.9	96	--
12...	1134	20.0	2170	7.50	28.5	--	2.2	30	--
12...	1136	30.0	2240	7.50	27.0	--	0.5	7	--
12...	1138	40.0	2340	7.50	25.5	--	0.5	6	--
12...	1140	50.0	2490	7.50	24.0	--	0.5	6	--
12...	1142	60.0	2980	7.50	23.5	--	0.5	6	--
12...	1144	70.0	3380	7.50	22.0	--	0.5	6	--
12...	1146	80.0	3550	7.50	20.5	--	0.5	6	--
12...	1148	87.0	5210	7.50	20.0	--	0.5	6	830

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325218098254101 - POSSUM KINGDOM LK SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
13...	390	140	36	340	7	7.3	107	360	520
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	610	190	69	530	9	7.8	149	570	890
MAY									
19...	420	140	45	390	8	7.2	113	400	600
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	650	190	82	680	11	8.0	164	670	1100
AUG									
12...	350	120	35	270	6	13	92	350	430
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	650	220	67	840	13	8.9	176	640	1300

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)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
13...	0.50	6.9	1500	0.300	0.60	0.030	20	<10
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	0.300	0.70	0.030	<10	<10
13...	--	--	--	0.500	0.90	0.060	<10	<10
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	7.8	2400	0.600	0.70	0.080	<10	20
MAY								
19...	0.40	4.9	1700	<0.100	0.80	0.020	10	<10
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	0.300	0.80	0.040	20	20
19...	--	--	--	0.400	0.60	0.060	20	210
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	7.2	2800	<0.100	2.1	0.590	240	710
AUG								
12...	0.40	8.0	1300	<0.100	0.90	0.010	<10	<10
12...	--	--	--	<0.100	1.1	0.010	<10	<10
12...	--	--	--	<0.100	1.0	0.020	30	90
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	5.0	3200	<0.100	2.2	0.390	50	340

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325250098275301 - POSSUM KINGDOM LK SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1115	1.00	2510	8.10	10.0	10.3	95
13...	1117	10.0	2520	8.10	9.5	10.1	92
13...	1119	20.0	2520	8.10	9.5	9.9	91
13...	1121	30.0	2520	8.00	9.5	9.8	90
13...	1123	40.0	2530	8.00	9.5	9.7	89
13...	1125	50.0	2540	8.00	9.5	9.7	89
13...	1127	57.0	2540	8.00	9.5	9.7	89
MAY							
19...	1130	1.00	2670	8.50	25.0	7.9	101
19...	1132	10.0	2670	8.50	24.5	7.8	99
19...	1134	20.0	2720	8.00	20.0	5.0	58
19...	1136	30.0	2700	7.80	16.0	3.9	42
19...	1138	43.0	2710	7.80	15.0	4.0	42
AUG							
12...	1110	1.00	2190	8.40	30.5	7.0	99
12...	1112	10.0	2190	8.30	30.0	6.8	95
12...	1114	20.0	2300	7.60	28.5	1.2	16
12...	1116	30.0	2730	7.60	27.5	0.5	7
12...	1118	40.0	2800	7.60	26.5	0.5	7
12...	1120	50.0	2630	7.60	25.0	0.5	6

325256098275301 - POSSUM KINGDOM LK SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1055	1.00	2530	8.10	9.5	10.0	92
13...	1057	10.0	2530	8.10	9.5	9.9	91
13...	1059	20.0	2530	8.10	9.5	9.9	91
13...	1101	30.0	2530	8.10	9.5	9.9	91
13...	1103	40.0	2540	8.10	9.5	9.8	90
13...	1105	50.0	2540	8.00	9.5	9.7	89
13...	1107	60.0	2900	7.90	9.5	7.3	67
13...	1109	70.0	3500	7.90	9.0	6.9	63
13...	1111	80.0	3700	8.00	9.0	6.8	62
13...	1113	88.0	3860	8.00	9.0	7.0	64
MAY							
19...	1105	1.00	2660	8.50	25.0	8.0	102
19...	1107	10.0	2660	8.50	24.5	7.9	100
19...	1109	20.0	2670	8.00	20.5	5.4	63
19...	1111	30.0	2670	7.80	15.5	4.4	46
19...	1113	40.0	2730	7.80	14.5	4.3	44
19...	1115	50.0	2880	7.70	14.0	3.5	36
19...	1117	60.0	3190	7.60	14.0	0.8	8
19...	1119	70.0	3700	7.60	14.5	0.6	6
19...	1121	80.0	4260	7.50	15.0	0.6	6
AUG							
12...	1045	1.00	2180	8.40	30.5	6.9	97
12...	1047	10.0	2180	8.30	30.5	6.6	93
12...	1049	20.0	2300	7.60	28.5	1.2	16
12...	1051	30.0	2690	7.50	27.0	0.5	7
12...	1053	40.0	2740	7.50	26.0	0.5	7
12...	1055	50.0	2590	7.50	24.0	0.5	6
12...	1057	60.0	2970	7.50	23.5	0.5	6
12...	1059	70.0	3370	7.50	22.5	0.5	6
12...	1101	80.0	4470	7.50	22.5	0.5	6

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325129098311801 - POSSUM KINGDOM LK SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1015	1.00	2360	8.20	9.0	10.8	98
13...	1017	10.0	2360	8.20	9.0	10.8	98
13...	1019	20.0	2360	8.20	9.0	10.8	98
13...	1021	30.0	2360	8.20	9.0	10.6	96
13...	1023	40.0	2400	8.20	9.0	10.3	93
13...	1025	50.0	2540	8.20	9.0	9.7	88
13...	1027	60.0	3410	8.10	8.5	8.9	80
13...	1029	70.0	4030	8.10	8.5	8.0	72
13...	1031	76.0	4050	8.10	8.5	7.8	70
MAY							
19...	1023	1.00	2820	8.40	24.0	7.2	90
19...	1025	10.0	2870	8.20	23.0	6.5	80
19...	1027	20.0	3120	7.60	20.0	1.5	17
19...	1029	30.0	3040	7.60	16.0	1.5	16
19...	1031	40.0	3020	7.60	15.0	2.2	23
19...	1033	50.0	3180	7.60	15.0	1.1	12
19...	1035	63.0	3700	7.60	15.5	0.6	6
AUG							
12...	1005	1.00	2390	8.40	30.0	6.4	90
12...	1007	10.0	2390	8.30	30.0	6.0	84
12...	1009	20.0	2500	7.60	29.0	1.7	23
12...	1011	30.0	2950	7.50	27.5	0.5	7
12...	1013	40.0	3350	7.50	27.0	0.5	7
12...	1015	50.0	3410	7.50	25.5	0.5	6
12...	1017	63.0	4190	7.50	25.5	0.5	6

325327098314001 - POSSUM KINGDOM LK SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
13...	0935	1.00	2350	8.30	8.5	2.30	10.8	96	460
13...	0937	10.0	2350	8.30	8.5	--	10.7	96	--
13...	0939	20.0	2360	8.30	8.5	--	10.6	95	--
13...	0941	30.0	2370	8.30	8.5	--	10.5	94	--
13...	0943	40.0	2380	8.30	8.5	--	10.4	93	--
13...	0945	50.0	2580	8.30	8.0	--	10.4	92	--
13...	0947	60.0	3380	8.30	8.5	--	9.7	87	--
13...	0949	66.0	3760	8.20	8.5	--	9.2	83	700
MAY									
19...	0945	1.00	2810	8.40	25.0	1.50	7.2	92	550
19...	0947	10.0	2820	8.40	25.0	--	7.2	92	--
19...	0949	20.0	3840	7.50	22.0	--	1.4	17	--
19...	0951	30.0	3540	7.50	17.5	--	1.2	13	--
19...	0953	40.0	3280	7.50	16.0	--	1.2	13	--
19...	0955	50.0	3310	7.50	16.0	--	1.2	13	--
19...	0957	58.0	3600	7.50	16.0	--	1.1	12	700
AUG									
12...	0930	1.00	2400	8.40	30.5	1.70	6.4	90	460
12...	0932	10.0	2400	8.30	30.0	--	6.2	87	--
12...	0934	20.0	2790	7.60	29.5	--	0.5	7	--
12...	0936	30.0	3350	7.60	28.0	--	0.5	7	--
12...	0938	40.0	3910	7.60	27.5	--	0.5	7	--
12...	0940	50.0	4100	7.60	27.0	--	0.5	7	--
12...	0942	56.0	4530	7.60	27.0	--	0.5	7	750

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325327098314001 - POSSUM KINGDOM LK SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN								
13...	360	130	33	310	7	7.0	105	300
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	560	180	60	550	9	7.7	140	550
MAY								
19...	440	140	49	410	8	7.1	116	420
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	550	170	66	550	9	7.6	148	540
AUG								
12...	370	120	39	320	7	7.3	87	370
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	610	200	61	690	11	8.5	138	580

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
JAN								
13...	480	6.3	1300	0.100	0.80	0.020	<10	<10
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	0.100	0.50	0.020	<10	<10
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	840	6.7	2300	0.200	1.3	0.060	<10	20
MAY								
19...	660	4.4	1800	<0.100	1.0	0.020	20	<10
19...	--	--	--	<0.100	1.0	0.020	20	<10
19...	--	--	--	<0.100	1.0	0.070	20	190
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	900	6.2	2300	<0.100	2.0	0.250	80	600
AUG								
12...	500	9.1	1400	<0.100	0.70	0.020	<10	<10
12...	--	--	--	<0.100	1.0	0.020	20	10
12...	--	--	--	<0.100	1.5	0.040	20	10
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
12...	1100	2.7	2700	<0.100	1.6	0.150	70	240

325347098265701 - POSSUM KINGDOM LK SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)
JAN							
13...	1430	1.00	2370	8.40	9.0	11.7	106
13...	1432	10.0	2370	8.40	9.0	11.5	104
13...	1434	20.0	2390	8.30	8.5	11.2	100
13...	1436	30.0	2500	8.30	8.0	10.8	95
13...	1438	40.0	3290	8.50	8.0	11.5	102
13...	1440	51.0	4350	8.50	8.0	12.0	107
MAY							
20...	0940	1.00	3310	8.20	24.0	5.6	70
20...	0942	10.0	3310	8.20	24.0	5.4	68
20...	0944	20.0	4560	7.50	24.0	0.6	8
20...	0946	30.0	4560	7.50	20.5	0.5	6
20...	0948	38.0	4340	7.50	19.5	0.5	6
AUG							
12...	1440	1.00	2590	8.40	31.0	6.8	97
12...	1442	10.0	2590	8.30	31.0	6.6	94
12...	1444	20.0	2900	7.60	30.0	1.0	14
12...	1446	30.0	3460	7.50	29.5	0.4	6
12...	1448	39.0	4350	7.50	29.0	0.4	6

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325557098264401 - POSSUM KINGDOM LK SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1455	1.00	2440	8.40	8.5	12.1	108
13...	1457	10.0	2480	8.40	8.5	11.6	104
13...	1459	20.0	2600	8.40	8.0	11.2	99
13...	1501	30.0	3740	8.50	7.5	13.0	114
13...	1503	37.0	5000	8.50	7.5	14.1	124
MAY							
20...	1005	1.00	3660	8.30	25.0	5.7	73
20...	1007	10.0	3660	8.30	25.0	5.7	73
20...	1009	20.0	3790	8.20	25.0	5.2	67
20...	1011	25.0	5700	7.70	25.5	2.4	31
AUG							
12...	1530	1.00	2690	8.50	31.0	7.0	100
12...	1532	10.0	2790	8.20	30.5	5.9	83
12...	1534	24.0	4040	7.70	30.5	1.1	16

325715098250501 - POSSUM KINGDOM LK SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
13...	1515	1.00	2520	8.40	8.5	1.10	13.5	121	510
13...	1517	10.0	2770	8.40	8.0	--	12.3	109	--
13...	1519	20.0	3110	8.40	7.5	--	13.4	117	--
13...	1521	28.0	5070	8.40	8.0	--	15.9	142	950
MAY									
20...	1035	1.00	4040	8.30	25.5	0.50	6.2	80	750
20...	1037	10.0	4040	8.20	25.0	--	5.6	72	--
20...	1039	16.0	4840	7.90	23.5	--	3.7	46	1100
AUG									
12...	1515	1.00	2950	8.50	31.5	0.50	7.5	108	510
12...	1517	10.0	3320	8.20	31.0	--	5.9	84	--
12...	1519	16.0	3960	8.00	31.0	--	4.4	63	640

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
13...	400	140	38	330	7	7.2	111	360
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	780	230	91	700	10	8.0	166	730
MAY								
20...	630	180	73	590	10	7.9	120	620
20...	--	--	--	--	--	--	--	--
20...	920	240	110	700	10	8.5	136	990
AUG								
12...	430	130	45	410	8	7.7	75	440
12...	--	--	--	--	--	--	--	--
12...	570	160	59	610	11	8.9	75	570

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
13...	550	6.1	1500	<0.100	1.2	0.070	<10	<10
13...	--	--	--	<0.100	0.70	0.040	<10	<10
13...	--	--	--	<0.100	0.70	0.050	<10	<10
13...	1200	6.3	3100	0.300	0.80	0.080	20	30
MAY								
20...	990	3.2	2500	<0.100	1.1	0.060	30	<10
20...	--	--	--	<0.100	0.90	0.070	20	10
20...	1100	3.5	3200	<0.100	1.5	0.210	20	80
AUG								
12...	630	2.7	1700	<0.100	0.80	0.040	<10	<10
12...	--	--	--	<0.100	1.2	0.050	<10	<10
12...	930	1.9	2400	<0.100	1.1	0.040	<10	50

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325047098291201 - POSSUM KINGDOM LK SITE P03

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1255	1.00	2390	8.20	10.0	10.7	99
13...	1257	10.0	2440	8.10	9.5	10.0	92
13...	1259	20.0	2450	8.10	9.5	9.8	90
13...	1301	30.0	2460	8.10	9.5	9.8	90
13...	1303	40.0	2480	8.10	9.5	9.7	89
13...	1305	50.0	2500	8.10	9.5	9.3	85
13...	1307	60.0	3010	7.60	10.0	4.5	42
MAY							
19...	1330	1.00	2760	8.40	23.0	7.5	92
19...	1332	10.0	2760	8.20	22.0	6.5	78
19...	1334	20.0	2710	7.60	16.5	2.0	22
19...	1336	30.0	2750	7.70	14.5	3.2	33
19...	1338	40.0	2810	7.60	14.5	2.4	25
AUG							
12...	1305	1.00	2280	8.20	31.0	6.4	91
12...	1307	10.0	2330	7.80	29.5	4.0	55
12...	1309	20.0	2380	7.50	28.5	0.5	7
12...	1311	30.0	2760	7.50	27.0	0.5	7
12...	1313	40.0	2880	7.50	25.5	0.5	6
12...	1315	48.0	2820	7.50	25.5	0.5	6

325125098323701 - POSSUM KINGDOM LK SITE P05

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1330	1.00	2200	8.10	9.0	10.3	93
13...	1332	10.0	2280	8.00	9.0	9.8	89
13...	1334	20.0	2320	8.00	9.0	9.6	87
13...	1336	27.0	2340	8.00	9.0	9.6	87
MAY							
19...	1405	1.00	2780	8.10	23.0	6.2	76
19...	1407	14.0	2800	8.00	22.5	5.3	65
AUG							
12...	1345	1.00	2460	8.00	30.0	5.9	83
12...	1347	10.0	2460	7.70	29.5	3.3	46
12...	1349	17.0	2470	7.50	29.5	0.9	12

325301098342901 - POSSUM KINGDOM LK SITE P07

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1355	1.00	2200	8.20	9.0	10.8	98
13...	1357	10.0	2280	8.20	9.0	10.5	95
13...	1359	20.0	2310	8.10	9.0	10.3	93
13...	1401	30.0	2320	8.10	9.0	10.1	91
13...	1403	40.0	2360	8.10	9.0	9.7	88
13...	1405	50.0	2840	7.60	9.5	4.7	43
13...	1407	61.0	3780	7.40	10.5	1.1	10
MAY							
19...	1425	1.00	2890	8.40	25.5	7.6	98
19...	1427	10.0	2890	8.40	24.5	7.5	95
19...	1429	20.0	2890	7.50	20.5	1.1	13
19...	1431	30.0	2850	7.60	15.5	0.7	7
19...	1433	40.0	2850	7.60	15.0	0.7	7
19...	1435	50.0	2930	7.60	15.5	0.7	7
AUG							
12...	1410	1.00	2270	8.40	31.0	6.9	98
12...	1412	10.0	2270	7.80	30.0	4.3	60
12...	1414	20.0	2350	7.50	29.0	0.5	7
12...	1416	30.0	2600	7.50	26.5	0.5	7
12...	1418	40.0	2600	7.50	25.0	0.5	6
12...	1420	48.0	2600	7.50	25.0	0.5	6

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325915098243001 - POSSUM KINGDOM LK SITE P09

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
13...	1535	1.00	2740	8.40	8.5	14.1	126
13...	1537	10.0	2850	8.40	8.0	12.8	113
13...	1539	20.0	3920	8.40	8.5	7.9	71
13...	1541	28.0	4710	8.40	8.5	10.8	97

325725098280301 - POSSUM KINGDOM LK SITE P10

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
13...	1600	1.00	5000	8.40	8.0	0.90	17.0	152	950
13...	1602	4.50	5000	8.40	8.0	--	16.9	151	970

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
13...	780	220	97	760	11	7.7	171	710
13...	800	230	96	740	11	8.0	170	740

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
13...	1300	5.9	3200	0.400	0.90	0.090	20	30
13...	1300	5.9	3200	0.400	1.1	0.090	20	30

08088600 BRAZOS RIVER AT MORRIS SHEPPARD DAM NEAR GRAFORD, TX

LOCATION.--Lat 32°52'00", long 98°26'00", Palo Pinto County, Hydrologic Unit 12060201, immediately below Morris Sheppard Dam (formerly Possum Kingdom Dam), 2.6 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and 20 mi upstream from gaging station near Palo Pinto.

DRAINAGE AREA.--27,190 mi², of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: May 1941 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1942 to current year.
WATER TEMPERATURE: October 1949 to September 1955, October 1965 to current year.

REMARKS.--Discharges are computed on the basis of releases from Possum Kingdom Lake. 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, 6,110 microsiemens Feb. 20, 1961; minimum daily, 494 microsiemens May 4, 1957.
WATER TEMPERATURE (1949-55, 1965-85): Maximum daily, 28.0°C Aug. 19, Sept. 1, 28, 1983, and June 19, 20, 1984; minimum daily, 6.5°C Jan. 20, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,800 microsiemens July 9; minimum daily, 2,050 microsiemens Jan. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
MAR 03...	1715	2960	3100	8.20	9.0	580	470	150	49
APR 21...	1400	1660	3020	7.90	13.0	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 03...	430	8	6.5	105	450	700	0.40	6.2	1900
APR 21...	--	--	--	121	--	--	--	--	--

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	186564	2860	1670	843000	660	333800	340	172200	490
NOV.	1986	38778	2430	1420	148000	550	57700	290	30200	430
DEC.	1986	30636	2440	1420	117000	550	45700	290	23900	430
JAN.	1987	26026	2600	1520	107000	600	41900	310	21800	460
FEB.	1987	51088	2490	1450	200000	570	78100	300	40800	440
MAR.	1987	68378	2530	1480	272000	580	106400	300	55500	450
APR.	1987	101769	2700	1580	433000	620	170400	320	88400	470
MAY	1987	28686	2960	1730	134000	690	53500	360	27500	510
JUNE	1987	151845	2950	1730	709000	690	282000	350	145100	510
JULY	1987	20219	3320	1960	107000	790	43200	400	21900	560
AUG.	1987	4730	2470	1440	18400	560	7190	290	3750	430
SEPT	1987	5510	2480	1450	21500	560	8390	290	4380	440
TOTAL		714229	**	**	3111000	**	1228000	**	635000	**
WTD.AVG.		1957	2760	1610	**	640	**	330	**	480

08088600 BRAZOS RIVER AT MORRIS SHEPPARD DAM NEAR GRAFORD, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3090	2500	2510	2500	2560	2390	2610	3350	2880	2320	3320	2420
2	3090	2490	2390	2510	2550	2300	2580	3350	3010	3500	3310	2450
3	3070	2490	2410	2500	2540	2620	2620	3310	3010	3510	3350	2410
4	3050	2400	2410	2420	2540	2620	2640	3420	3020	3520	3340	2450
5	3050	2400	2410	2560	2560	2610	2650	3380	3020	3510	3340	2450
6	2960	2400	2410	3370	2570	2610	2670	3380	3030	3470	2180	2480
7	2940	2400	2400	3300	2540	2610	2650	3420	3040	3490	2190	2610
8	2940	2460	2400	2560	2540	2610	2650	3580	3020	3490	2190	2480
9	2940	2400	2420	2560	2540	2600	2660	3590	3040	3800	2170	2480
10	2900	2410	2430	2570	2560	2600	2700	3570	2990	3780	2170	2520
11	2820	2410	2430	2570	2560	2600	2700	3490	2990	3740	2200	2500
12	2780	2410	2430	2590	2550	2600	2710	3570	3000	3520	2200	2500
13	2770	2450	2430	2580	2540	2600	2670	3480	2850	3430	2200	2510
14	2760	2450	2430	2580	2560	2580	2710	3590	2790	3470	2200	2500
15	2760	2450	2430	2590	2560	2580	2730	3500	2790	3490	2210	2500
16	2790	2450	2430	2590	2560	2610	2750	3640	2790	3270	2210	2510
17	2750	2440	2430	2600	2550	2570	2750	3530	2840	3530	2220	2520
18	2730	2440	2440	2600	2550	2560	2770	3530	2890	3520	2220	2600
19	2730	2450	2440	2610	2600	2560	2770	3460	2820	3480	2220	2600
20	2680	2400	2450	2050	2590	2560	2780	2830	2790	3440	2230	2600
21	2680	2400	2440	2440	2590	2570	2780	3450	2830	3430	3350	2600
22	2680	2430	2440	2590	2590	2570	2770	3390	2830	3430	3500	2600
23	2680	2440	2470	2740	2590	2680	2780	3390	2850	3430	2260	2600
24	2610	2420	2450	2600	2610	2580	2850	3450	2850	3420	2260	2470
25	2560	2420	2450	2590	2600	2580	3430	3480	2850	3380	2260	2600
26	2560	2430	2460	2590	2600	2580	3410	2910	2860	2320	2400	2700
27	2560	2430	2460	2590	2500	2580	3400	2840	2860	2270	2410	2600
28	2530	2430	2450	2590	2300	2600	3400	2800	3000	2250	2410	2650
29	2500	2430	2450	2600	---	2590	3410	2730	3440	3280	2340	2680
30	2470	2430	2450	2600	---	2610	3390	2730	2340	3330	2400	2690
31	2750	---	2470	2600	---	2610	---	2770	---	3350	2400	---
MEAN	2780	2430	2440	2600	2550	2580	2850	3320	2910	3330	2510	2540

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	17.0	12.0	13.5	22.0	14.5	---	19.0	25.0	---	28.0
2	---	---	17.0	14.0	13.0	---	13.0	---	---	---	23.0	27.0
3	---	---	17.0	16.0	14.0	11.0	---	16.5	---	---	23.0	26.0
4	26.5	---	---	14.0	14.0	---	17.5	17.0	20.0	22.0	---	---
5	---	---	---	14.0	12.0	11.0	18.0	17.0	---	22.0	---	27.0
6	---	---	16.0	17.0	13.0	---	16.0	---	21.0	22.0	27.0	26.5
7	25.0	---	16.5	---	12.0	---	13.0	17.0	21.0	21.5	---	26.5
8	25.0	19.5	---	12.0	---	11.5	---	---	21.0	21.5	28.0	26.0
9	---	19.5	16.5	---	13.0	---	15.0	14.5	21.0	20.0	28.0	26.5
10	---	20.0	16.5	---	14.0	---	16.0	14.5	21.0	22.0	28.0	27.0
11	26.0	21.0	---	---	13.0	---	---	14.0	23.0	21.5	28.0	27.0
12	25.0	---	---	13.0	14.0	---	15.0	18.0	---	23.0	28.5	29.0
13	25.0	---	14.5	12.0	14.0	---	15.0	---	---	23.0	28.0	26.5
14	25.0	---	14.0	---	12.0	13.0	15.0	---	23.0	23.0	30.0	26.0
15	23.0	---	14.0	14.0	---	13.0	15.0	---	---	23.0	29.5	26.0
16	23.5	---	14.0	13.0	---	15.5	16.0	14.0	22.0	23.0	29.0	26.0
17	---	---	14.0	10.5	13.0	---	17.0	18.0	---	23.0	29.0	26.5
18	24.0	18.0	15.0	---	13.0	13.5	---	---	23.0	25.0	---	---
19	---	18.0	16.0	10.0	12.0	---	17.5	16.0	19.0	23.0	---	---
20	---	18.0	14.0	9.5	14.0	---	17.5	18.0	22.0	---	29.0	---
21	22.0	---	14.0	---	---	---	18.0	18.0	---	23.0	22.0	---
22	---	19.0	14.0	11.0	---	14.5	16.5	---	---	23.0	23.0	25.0
23	24.0	18.5	18.0	14.0	---	15.0	16.0	17.0	---	24.0	28.0	25.0
24	---	18.0	14.0	---	---	16.0	---	---	---	22.0	29.0	25.0
25	---	18.0	14.0	12.0	---	15.0	17.0	17.0	---	23.0	---	---
26	---	16.0	15.0	11.5	---	---	16.0	18.0	18.0	---	---	25.0
27	23.0	---	13.5	12.0	---	---	16.0	19.0	---	26.0	---	25.0
28	22.0	---	---	12.0	---	14.5	---	---	---	22.0	---	25.0
29	20.0	---	18.0	12.0	---	16.0	17.0	---	22.0	22.0	---	25.0
30	20.0	17.0	14.0	13.0	---	14.0	17.0	20.0	25.0	23.0	---	25.0
31	22.0	---	18.0	14.0	---	14.0	---	---	---	---	---	---
MEAN	23.5	18.5	15.5	12.5	13.0	14.5	16.0	17.0	21.5	23.0	27.0	26.0

08089000 BRAZOS RIVER NEAR PALO PINTO, TX

LOCATION.--Lat 32°51'45", long 98°18'08", Palo Pinto County, Hydrologic Unit 12060201, on right bank 100 ft upstream from bridge on Farm Road 4, 300 ft downstream from Dark Valley Creek, 6.5 mi north of Palo Pinto, and at mile 667.3.

DRAINAGE AREA.--23,811 mi², of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--January 1924 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Mineral Wells" 1924-33.

REVISED RECORDS.--WSP 1512: 1924-25, 1929, 1932-34. WSP 1712: 1935-36, 1937-38(M), 1939, 1940(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 831.23 ft above National Geodetic Vertical datum of 1929. Prior to Nov. 15, 1933, nonrecording gage at site 19 mi downstream at datum 38.19 ft lower.

REMARKS.--Records good. No estimated discharge. Since 1941, flow largely regulated by Possum Kingdom Lake (station 08088500) 20 mi upstream. There were several observations of water temperature made during the water year.

AVERAGE DISCHARGE.--16 years (water years 1925-40) prior to completion of Possum Kingdom Lake, 1,262 ft³/s (914,300 acre-ft/yr); 47 years (water years 1941-87) regulated, 936 ft³/s (678,100 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s June 16, 1930, at site 19 mi downstream from Mineral Wells (gage height, 30 ft, present site and datum); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage occurred in 1876, from data by U.S. Army Corps of Engineers, and was several feet higher than the flood of June 16, 1930, which reached a stage of about 30 ft and was the highest since at least 1876.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,100 ft³/s Oct. 4 at 2200 hours (gage height, 12.87 ft); minimum daily, 27 ft³/s Sept. 8, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	2200	1010	1270	429	9930	1550	304	6910	836	73	33
2	1320	2910	1200	1440	154	8980	1550	285	11600	797	652	537
3	4100	2060	912	1300	223	5300	2740	323	16100	126	87	883
4	10600	3010	946	1410	94	3400	10200	207	16800	2710	57	55
5	13200	2120	798	1330	79	3340	8930	186	14400	966	54	30
6	7700	1950	709	1100	347	3300	7800	93	11600	769	51	29
7	14800	1910	870	952	830	3260	6880	57	9100	683	261	28
8	14700	1810	977	1200	272	3240	6140	179	7300	1030	74	27
9	14700	1650	1540	1230	1570	2780	6280	389	6120	1070	51	352
10	14500	1620	855	1440	1630	1640	8070	89	5400	622	48	458
11	14300	1500	971	1120	4330	1570	6660	46	5450	123	46	82
12	14300	1720	141	1030	1610	1560	5560	38	6330	1020	45	48
13	14300	1260	755	1370	1590	1560	4780	35	5300	996	45	44
14	10500	1180	1090	1200	1590	1560	4110	196	4640	183	45	245
15	9550	136	153	673	1610	1040	3530	414	4180	543	344	86
16	1280	74	702	893	1580	1090	3060	550	3810	108	390	43
17	921	170	149	1630	1570	1210	2700	79	3550	329	576	411
18	1500	1130	1820	1430	1560	1540	2410	382	3560	91	59	560
19	1170	1010	1810	1410	1570	1450	2170	304	3430	258	41	83
20	1830	1140	2020	696	1640	1580	1980	2220	1780	80	40	40
21	1950	1090	1090	608	1750	1600	1880	267	3450	486	39	30
22	1990	945	1900	382	1780	1590	1760	72	3360	507	35	27
23	2930	535	2140	314	1670	1590	1660	695	3500	836	33	27
24	2910	1200	1550	254	1730	1590	1620	626	3660	983	202	28
25	2920	1140	587	748	1270	1560	788	377	3630	888	47	648
26	1440	953	1010	972	2160	1570	532	1430	3480	482	35	90
27	2600	1080	1720	903	2580	1560	594	3300	3280	877	190	41
28	1330	486	1700	290	15200	1560	298	5740	2790	595	54	34
29	1240	1360	746	114	---	1550	334	5860	322	384	33	33
30	1690	1110	749	298	---	1550	229	4300	1170	293	357	30
31	1300	---	1270	641	---	1550	---	4960	---	310	58	---
TOTAL	187624	40459	33890	29648	52418	76600	106795	34003	176002	19981	4122	5062
MEAN	6052	1349	1093	956	1872	2471	3560	1097	5867	645	133	169
MAX	14800	3010	2140	1630	15200	9930	10200	5860	16800	2710	652	883
MIN	53	74	141	114	79	1040	229	35	322	80	33	27
AC-FT	372200	80250	67220	58810	104000	151900	211800	67440	349100	39630	8180	10040

CAL YR 1986 TOTAL 423490 MEAN 1160 MAX 14800 MIN 17 AC-FT 840000
WTR YR 1987 TOTAL 766604 MEAN 2100 MAX 16800 MIN 27 AC-FT 1521000

08090800 BRAZOS RIVER NEAR DENNIS, TX

LOCATION.--Lat 32°36'56", long 97°55'32", Parker County, Hydrologic Unit 12060201, on right bank at downstream side of highway embankment of bridge on Farm Road 1189, 0.2 mi south of Dennis, 1.0 mi upstream from Patrick Creek, and at mile 589.98.

DRAINAGE AREA.--25,237 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 697.67 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench marks).

REMARKS.--No estimated daily discharge. Records good. Flow is largely regulated by releases from Possum Kingdom Lake (station 08085000) and by Lake Palo Pinto (station 08090300). Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 13,840 acre-ft. These structures control runoff from 53.0 mi² in the East Keechi and Pollard Creeks drainage basins. There are many diversions above station for irrigation, municipal supply, and oilfield operations. Gage-height telemeter at station.
Palo Pinto (station 08090300). Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 13,840 acre-ft. These structures control runoff from 53.0 mi² in the East Keechi and Pollard Creeks drainage basins. There are many diversions above station for irrigation, municipal supply, and oilfield operations. Gage-height telemeter at station.

AVERAGE DISCHARGE.--19 years (water years 1969-87), 1,000 ft³/s (724,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96,600 ft³/s Oct. 14, 1981 (gage height, 31.85 ft, from floodmarks); minimum, 0.87 ft³/s Aug. 2, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1930, 31.8 ft in May 1957, from floodmark, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,500 ft³/s May 29 at 2400 hours (gage height, 17.10 ft); minimum daily, 37 ft³/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	309	1810	1370	1070	177	16500	1720	332	4970	923	362	264
2	157	1340	1200	1410	623	9010	1840	254	5770	1470	367	282
3	98	2770	1150	1260	410	7720	1720	260	9950	999	266	160
4	1880	2380	1290	1470	198	7750	2020	324	15300	705	470	534
5	8010	2610	909	1410	170	3690	7630	305	16000	1080	282	560
6	12200	2350	1000	1240	170	3530	8070	202	13300	2150	172	301
7	6310	2020	713	1340	167	3430	7000	154	10600	1020	130	189
8	12900	2030	693	1080	415	3230	6240	135	8420	757	104	137
9	13200	1850	977	1270	546	3230	5630	100	7420	1110	85	88
10	13100	1810	1500	1480	664	3010	5430	69	6050	1130	189	65
11	12900	1740	1240	1370	1330	1980	7300	224	5560	832	139	72
12	12800	1850	1120	1420	3280	1910	6220	141	9400	623	100	371
13	12800	1660	733	1150	1790	1910	5210	80	9610	362	83	287
14	12700	1680	426	1230	1640	1890	4450	46	6470	937	65	200
15	9900	1410	1080	1390	1670	1790	3850	40	4930	469	54	137
16	8440	797	726	1020	1670	1680	3400	150	4140	318	46	102
17	2920	383	357	1030	1600	1290	3030	879	3720	478	69	175
18	1430	246	658	1600	1590	1670	2750	651	3460	323	409	133
19	1930	564	1180	1740	1590	1730	2510	263	3520	347	443	211
20	1910	801	2170	1700	1920	1670	2300	345	3370	277	238	437
21	1630	1150	1770	822	2150	1820	2210	1190	2630	263	142	266
22	2180	1190	1640	1000	2140	1850	2070	1670	3020	234	96	156
23	2160	1120	1310	672	2060	1800	1930	478	3290	357	73	104
24	2650	857	2050	469	1980	1830	1780	347	3240	651	60	76
25	2910	1130	1750	314	2060	1840	1710	1060	3320	911	46	60
26	2900	1680	1280	318	2230	1780	1470	999	3270	880	37	49
27	2420	1220	773	916	2960	1780	655	672	3160	613	84	220
28	1770	1120	1410	1050	9230	1750	562	2680	3020	654	121	258
29	2340	879	1990	746	---	1350	539	15400	2890	776	88	156
30	1480	809	1170	357	---	1510	313	12100	1510	503	144	100
31	1430	---	815	170	---	1730	---	5170	---	425	183	---
TOTAL	169764	43256	36450	33514	46430	97660	101559	46720	181310	22577	5147	6150
MEAN	5476	1442	1176	1081	1658	3150	3385	1507	6044	728	166	205
MAX	13200	2770	2170	1740	9230	16500	8070	15400	16000	2150	470	560
MIN	98	246	357	170	167	1290	313	40	1510	234	37	49
AC-FT	336700	85800	72300	66480	92090	193700	201400	92670	359600	44780	10210	12200

CAL YR 1986 TOTAL 432982 MEAN 1186 MAX 13200 MIN 13 AC-FT 858800
WTR YR 1987 TOTAL 790537 MEAN 2166 MAX 16500 MIN 37 AC-FT 1568000

08090800 BRAZOS RIVER NEAR DENNIS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1970 to current year.
WATER TEMPERTURE: October 1970 to current year.

REMARKS.--Mean monthly and annual concentratiions and loads for selected chemical constituents have been computed using the daily (or continuous) records of speciific 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, 5,410 microsiemens Apr. 18, 1984; minimum daily, 200 microsiemens Oct. 13, 1981.
WATER TEMPERATURE: Maximum daily, 38.5°C July 26, 1976; minimum daily, 0.0°C on many days during winter months 1977-79.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,970 microsiemens May 15; minimum daily, 807 microsiemens Feb. 28.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 9, 17; minimum daily, 5.0°C Jan. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT								
08...	1429	13400	2980	430	340	120	31	440
APR								
15...	1440	3570	2740	520	410	140	42	370
JUN								
03...	1400	10100	2840	560	430	140	50	390
JUL								
22...	1325	241	2860	540	410	140	46	390
SEP								
16...	1230	123	2800	530	430	140	45	420

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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								
08...	10	7.1	84	350	660	0.40	6.3	1700
APR								
15...	7	6.8	114	400	580	0.40	5.1	1600
JUN								
03...	7	7.0	122	400	610	2.9	6.0	1700
JUL								
22...	8	7.2	133	410	600	0.40	6.8	1700
SEP								
16...	8	8.2	102	420	660	0.40	5.8	1800

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	169764	2900	1690	776000	680	309800	340	155500	500
NOV.	1986	43256	2390	1390	163000	550	63800	280	32700	430
DEC.	1986	36450	2500	1460	144000	580	56600	290	28900	440
JAN.	1987	33514	2890	1690	153000	680	61100	340	30700	500
FEB.	1987	46430	2410	1410	177000	560	70000	280	35400	420
MAR.	1987	97660	2570	1500	396000	590	156700	300	79400	450
APR.	1987	101559	2750	1610	440000	640	174700	320	88200	480
MAY	1987	46720	1680	982	124000	380	47800	200	24900	310
JUNE	1987	181310	2710	1590	776000	630	308400	320	155500	470
JULY	1987	22577	2940	1720	105000	690	41900	340	21000	510
AUG.	1987	5147	2990	1750	24300	700	9750	350	4870	520
SEPT	1987	6150	2940	1720	28600	690	11400	340	5730	510
TOTAL		790537	**	**	3306000	**	1312000	**	663000	**
WTD.AVG.		2166	2650	1550	**	610	**	310	**	460

08090800 BRAZOS RIVER NEAR DENNIS, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3340	2520	2450	2820	2790	1660	2680	2950	2410	2730	2920	2700
2	3400	2520	2540	2860	2870	2360	2880	2970	2740	2860	2910	2970
3	3320	2470	2550	2970	2830	2240	2800	2980	2850	2940	2900	3000
4	3280	2380	2570	3060	2830	2570	2850	2720	2880	2940	2940	2910
5	3520	2340	2570	3130	2770	2550	2710	2810	3010	2980	2930	2990
6	2860	2260	2540	3170	2550	2860	2700	3000	3130	3020	2930	3040
7	2840	2320	2530	3110	2490	2930	2720	2950	3120	2950	2950	3030
8	2960	2380	2510	3050	2510	1980	2700	2990	3040	2960	2070	3010
9	3020	2440	2490	2920	2650	3000	2710	3010	2920	2970	2980	2990
10	2970	2430	2580	2980	2430	3030	2710	2990	2840	2990	2970	2980
11	2920	2390	2700	3050	2740	3000	2710	3040	2690	3010	2990	2930
12	2880	2420	2670	2820	2840	2980	2700	3110	1470	3030	2950	2980
13	2870	2470	2690	2930	2950	2970	2720	3070	1630	2990	2910	2840
14	2830	2500	2670	2950	2960	3000	2750	3080	1940	3000	2930	2800
15	2780	2490	2670	2980	3240	2990	2750	3970	2420	2840	2950	2810
16	2800	2500	2720	3050	3300	2990	2740	3000	2630	2850	2970	2850
17	2810	2550	2650	2970	3310	2870	2740	1720	2760	2900	3000	2800
18	2850	2600	2150	2680	3300	2830	2780	2410	2890	2850	3090	2800
19	2890	2640	1370	2820	3280	2860	2790	2370	2810	2830	3100	2750
20	2900	2600	2000	2740	2960	2770	2750	2250	2890	2820	3140	2990
21	2880	2560	2190	2670	2790	2830	2780	2900	2450	2840	3170	2940
22	2820	2440	2360	2830	2980	2900	2760	2780	2730	2890	3190	2950
23	2730	2420	2540	2700	2740	2940	2840	2630	2820	2920	3210	2980
24	2710	2380	2560	2680	2690	3010	2880	2440	2980	2940	3220	2960
25	2710	1920	2650	2500	2710	3000	2930	2140	2970	3050	3210	2970
26	2560	1950	2620	2520	2140	2980	2940	2040	2960	2970	3220	2980
27	2560	2260	2630	2640	1970	2880	2950	2130	2930	2930	3130	3080
28	2600	2370	2590	2500	807	2910	2950	3100	2950	2930	3210	3090
29	2630	2340	2760	2900	---	2920	2990	1330	3000	2930	3170	3140
30	2640	2310	2880	2900	---	2940	3020	846	2960	2910	3060	3120
31	2640	---	2870	2900	---	2960	---	2090	---	2920	2940	---
MEAN	2890	2410	2520	2860	2730	2830	2800	2640	2730	2930	3010	2950

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	21.0	11.0	10.0	15.0	11.0	16.0	23.0	26.0	32.0	---	29.0
2	28.0	18.5	11.0	10.0	15.0	13.0	13.0	---	27.0	28.0	34.0	30.0
3	28.0	19.0	10.0	9.0	15.0	11.0	15.0	20.0	22.0	30.0	34.0	28.0
4	26.0	19.0	11.0	9.0	16.0	13.0	15.0	28.0	22.0	32.0	35.0	25.0
5	23.0	17.0	12.0	9.0	14.0	14.0	13.0	27.0	23.0	31.0	34.0	27.0
6	22.0	17.0	12.0	10.0	10.0	15.0	13.0	28.0	23.0	31.0	35.0	26.0
7	22.0	17.5	15.0	11.0	12.0	14.0	13.0	24.0	25.0	31.0	35.0	24.0
8	24.0	17.5	---	10.0	12.0	14.0	14.0	25.0	25.0	32.0	32.0	31.0
9	24.0	18.0	10.0	10.0	10.0	13.0	15.0	26.0	23.0	31.0	36.0	32.0
10	24.0	17.0	9.0	9.0	12.0	12.0	15.0	29.0	24.0	30.0	33.0	30.0
11	24.0	15.0	9.0	9.0	15.0	14.0	17.0	28.0	25.0	31.0	33.0	31.0
12	21.0	12.0	10.0	10.0	---	13.0	18.0	27.0	25.0	31.0	34.0	28.0
13	20.0	8.5	9.0	9.0	16.0	14.0	18.0	30.0	25.0	30.0	29.0	31.0
14	23.0	9.0	10.0	11.0	16.0	15.0	16.0	27.0	27.0	30.0	35.0	30.0
15	22.0	12.0	10.0	10.0	14.0	17.0	17.0	26.0	27.0	28.0	32.0	29.0
16	22.0	14.5	11.0	8.0	13.0	17.0	18.0	28.0	29.0	29.0	35.0	32.0
17	22.0	17.0	11.0	6.0	9.0	17.0	20.0	27.0	29.0	30.0	36.0	30.0
18	22.0	18.0	9.0	5.0	9.0	17.0	22.0	30.0	28.0	32.0	33.0	26.0
19	22.0	15.0	10.0	6.0	9.0	17.0	23.0	27.0	29.0	33.0	33.0	27.0
20	22.0	16.0	10.0	6.0	7.0	15.0	24.0	27.0	26.0	33.0	29.0	28.0
21	20.0	15.0	10.0	8.0	8.0	20.0	20.0	29.0	28.0	33.0	32.0	28.0
22	20.0	17.0	9.0	7.0	10.0	20.0	20.0	30.0	30.0	34.0	28.0	27.0
23	22.0	15.0	10.0	7.0	10.0	16.0	22.0	30.0	29.0	34.0	34.0	28.0
24	21.0	11.5	10.0	10.0	10.0	15.0	---	27.0	30.0	33.0	33.0	29.0
25	20.0	10.5	10.0	9.0	10.0	14.0	23.0	28.0	30.0	32.0	32.0	29.0
26	20.0	11.0	11.0	9.0	11.0	13.0	25.0	27.0	29.0	32.0	33.0	26.0
27	20.0	12.0	11.0	10.0	11.0	15.0	27.0	28.0	30.0	30.0	26.0	27.0
28	20.0	12.0	10.0	12.0	12.0	14.0	28.0	25.0	28.0	34.0	26.0	27.0
29	20.0	---	11.0	14.0	---	10.0	28.0	20.0	27.0	33.0	26.0	26.0
30	---	12.0	12.0	13.0	---	10.0	27.0	21.0	28.0	31.0	29.0	27.0
31	22.0	---	11.0	12.0	---	15.0	---	23.0	---	33.0	27.0	---
MEAN	22.5	15.0	10.5	9.5	12.0	14.5	19.0	26.5	26.5	31.5	32.0	28.5

08090900 LAKE GRANBURY NEAR GRANBURY, TX

LOCATION.--Lat 32°22'27", long 97°41'20", Hood County, Hydrologic Unit 12060201, at right end of spillway of DeCordova Bend Dam on Brazos River, 2.6 mi upstream from Fall Creek, 7.5 mi southeast of Granbury, and at mile 542.5.

DRAINAGE AREA.--25,679 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.11 ft below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--The lake is formed by an Ambursen-type concrete and earthfill dam 2,256 ft long, including a 932-foot concrete spillway. The dam was completed on Aug. 30, 1969, and deliberate impoundment began Sept. 15, 1969. The spillway consists of sixteen 36- by 35-foot tainter gates and two 7- by 8-foot sluice gates. The outflow from the sluice gates discharges into a bay where it is then controlled by two 4- by 4.5-foot sluice gates with inverts at 625.8 ft. Stage telemeter at station. Flow is affected at times by discharge from the flood-detention pools of 12 floodwater retarding structures with a combined detention capacity of 13,940 acre-ft. These structures control runoff from 53.9 mi² in the East Keechi, Kickapoo, and Ruckers Creeks drainage basins. The lake was built by the Brazos River Authority for the conservation of water for irrigation, municipal, and industrial uses. Water is diverted from the lake for municipal, domestic, irrigation, and industrial uses by several lakeside developers, or residents. Water is also diverted into Squaw Creek Reservoir. The city of Granbury returns sewage effluent into Lake Granbury. 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	706.5	
Top of tainter gates (design flood)	693.0	153,500
Crest of spillway	658.0	15,440
Lowest gated outlet (invert)	640.0	2,200

COOPERATION.--The capacity curve, based on data prepared by the Ambursen Engineering Corporation, was provided by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 158,800 acre-ft Mar. 27, 1977 (elevation, 693.60 ft); minimum since first filling in October 1969, 97,600 acre-ft Aug. 9, 1978 (elevation, 685.28 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 153,100 acre-ft Jan. 3 at 1000 hours (elevation, 692.95 ft); minimum, 128,400 acre-ft Oct. 7 (elevation, 689.89 ft).

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

689.0	121,900
691.0	136,900
693.0	153,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149500	148800	150900	150000	149900	147200	148700	149800	144800	146800	147900	146900
2	148300	147800	150300	150500	150000	140300	149200	149500	146000	148100	147700	147200
3	146200	149300	149400	150300	150000	139700	146000	149600	145800	147800	147500	147300
4	144500	150300	149000	150000	149400	145100	137500	150200	147500	147200	148100	147700
5	141600	148300	149000	150500	149700	146900	137000	149700	147900	147500	148500	148900
6	137500	147600	149100	150000	149400	147700	138500	149400	146700	150300	148600	149300
7	128600	147300	149300	149700	149400	148100	138300	149400	145400	149600	148500	149400
8	134500	147600	149400	149700	150200	148300	137900	149500	147200	148800	148300	150000
9	137300	147400	149200	149700	148700	148500	138700	149400	145800	148600	148200	150000
10	137300	148800	149400	149400	145900	148300	136800	149400	147200	148200	148300	148900
11	138700	149700	148300	148600	145300	147300	138100	149400	147100	148200	148200	148800
12	138900	150200	148300	149300	145700	147700	140700	149500	149700	147900	147900	149500
13	139600	149200	148100	149800	145100	147800	146000	149500	146200	146800	147800	149500
14	140600	149200	147600	150600	145200	148200	148400	149400	144100	146600	147300	150000
15	139900	148800	148100	150000	144400	147800	150000	149200	144500	147800	147100	149700
16	145800	149100	148800	148800	144700	147300	150700	148500	145700	147200	146800	149100
17	148300	149200	148800	148900	144200	146600	150500	149900	148700	147800	146700	149300
18	147400	148800	149500	149900	143800	146900	149200	150000	149400	148100	146700	148800
19	147100	148300	148900	150400	144000	148100	148500	150000	148500	148100	147600	147300
20	147000	148800	150500	149000	145600	148800	150200	149200	147900	148200	147800	148100
21	146900	148900	149500	148500	145300	147600	149400	150000	146700	148200	147700	148400
22	147500	149500	148700	149300	145300	146700	149100	150600	146700	148500	147600	148400
23	146700	149600	147300	150300	146100	147400	149300	148300	149400	148800	147500	148400
24	146200	149500	148400	150700	146300	146900	149100	148700	150000	149100	147100	148300
25	146700	149400	149000	149500	146700	147400	148800	148700	150000	149700	146800	148200
26	147200	149800	148400	148500	146500	148300	148800	148800	150300	149600	146900	148000
27	147600	149200	146500	148400	146100	148100	149000	148500	150200	149400	147100	147800
28	147500	148300	146600	148400	146100	148200	148300	151700	149600	148600	146800	148600
29	150400	147200	149000	148900	---	147800	149500	148300	149200	148400	146700	148600
30	149500	148500	149900	149700	---	147000	150000	144900	147200	148200	146700	148400
31	148800	---	150000	150100	---	147700	---	144300	---	148200	146800	---
MAX	150400	150300	150900	150700	150200	148800	150700	151700	150300	150300	148600	150000
MIN	128600	147200	146500	148400	143800	139700	136800	144300	144100	146600	146700	146900
(†)	692.45	692.42	692.59	692.61	692.13	692.32	692.59	691.92	692.26	692.38	692.22	692.41
(ϕ)	-400	-300	+1500	+100	-4000	+1600	+2300	-5700	+2900	+1000	-1400	+1600

CAL YR 1986 MAX 151100 MIN 128600 (ϕ) -300
WTR YR 1987 MAX 151700 MIN 128600 (ϕ) -800

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

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1970 to current year.

322227097412101 - LAKE GRANBURY SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
30...	1035	1.00	2400	8.70	9.5	1.80	11.0	98	460
30...	1037	10.0	2400	8.70	9.5	--	10.9	97	--
30...	1039	20.0	2400	8.70	9.5	--	10.7	96	--
30...	1041	30.0	2400	8.60	9.5	--	10.4	93	--
30...	1043	40.0	2460	8.50	9.0	--	10.1	89	--
30...	1045	50.0	2580	8.50	8.5	--	9.7	85	--
30...	1047	65.0	2610	8.50	8.5	--	10.2	89	510
APR									
23...	0905	1.00	2710	8.60	19.5	1.50	10.1	113	520
23...	0907	10.0	2710	8.60	19.5	--	10.1	113	--
23...	0909	20.0	2710	8.50	19.0	--	9.3	103	--
23...	0911	30.0	2710	8.30	17.5	--	7.9	85	--
23...	0913	40.0	2720	8.10	16.5	--	6.4	67	--
23...	0915	50.0	2730	8.00	16.0	--	5.9	62	--
23...	0917	60.0	2780	7.90	15.0	--	4.7	48	--
23...	0919	66.0	2790	7.70	14.5	--	2.4	24	550
AUG									
25...	0815	1.00	2660	8.10	29.5	1.60	6.5	88	510
25...	0817	10.0	2660	8.10	29.5	--	6.4	87	--
25...	0819	20.0	2660	8.00	29.5	--	6.3	85	--
25...	0821	25.0	2640	7.70	29.5	--	4.4	60	--
25...	0823	30.0	2600	7.30	28.5	--	0	0	--
25...	0825	40.0	2660	7.20	27.5	--	0	0	--
25...	0827	50.0	2720	7.20	27.0	--	0	0	--
25...	0829	64.0	2770	7.10	24.5	--	0	0	540

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
30...	340	130	33	330	7	6.5	121	330	510
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	370	140	38	350	7	6.5	135	370	550
APR									
23...	390	140	41	380	8	6.8	125	400	600
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	410	150	42	380	7	6.6	136	390	580
AUG									
25...	410	130	46	390	8	7.2	105	390	560
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	340	140	46	370	7	6.9	195	330	530

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322227097412101 - LAKE GRANBURY SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
30...	0.40	5.9	1400	<0.100	1.4	0.010	<10	<10
30...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
30...	--	--	--	<0.100	0.80	0.010	20	<10
30...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
30...	--	6.0	1500	0.100	0.90	0.010	20	10
APR								
23...	0.40	4.1	1600	<0.100	1.1	0.020	20	<10
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	<0.100	0.40	0.020	20	<10
23...	--	--	--	--	--	--	--	--
23...	--	--	--	<0.100	0.60	0.020	20	10
23...	--	--	--	--	--	--	--	--
23...	--	5.3	1600	<0.100	0.80	0.020	20	100
AUG								
25...	0.40	6.7	1600	<0.100	0.60	0.010	<10	10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	0.30	0.010	<10	30
25...	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	0.30	0.040	30	150
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	13	1600	<0.100	3.1	<0.010	70	1900

322231097412001 - LAKE GRANBURY SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	1015	1.00	2420	8.70	9.5	10.8	97
30...	1017	10.0	2420	8.70	9.5	10.8	97
30...	1019	20.0	2420	8.70	9.5	10.7	96
30...	1021	30.0	2420	8.60	9.0	10.5	93
30...	1023	40.0	2480	8.40	8.5	10.1	88
30...	1025	47.0	2540	8.30	8.5	10.0	87
APR							
23...	0840	1.00	2720	8.60	19.5	10.2	114
23...	0842	10.0	2720	8.60	19.5	10.1	113
23...	0844	20.0	2720	8.60	19.0	9.6	107
23...	0846	30.0	2730	8.30	17.5	7.3	79
23...	0848	40.0	2740	8.10	16.5	6.7	71
23...	0850	50.0	2760	8.00	15.5	6.3	65
23...	0852	55.0	2760	8.00	15.5	6.0	62
AUG							
25...	0755	1.00	2650	8.10	29.5	6.8	92
25...	0757	10.0	2650	8.10	29.5	6.8	92
25...	0759	20.0	2650	8.00	29.5	6.8	92
25...	0800	30.0	2600	7.20	28.5	0	0
25...	0802	40.0	2670	7.20	27.5	0	0
25...	0804	50.0	2710	7.10	27.0	0	0
25...	0806	56.0	2730	7.10	26.5	0	0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322341097420601 - LAKE GRANBURY SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	0925	1.0	2430	8.60	10.0	10.1	91
30...	0927	10.0	2430	8.60	9.5	10.1	90
30...	0929	20.0	2430	8.50	9.5	9.9	89
30...	0931	30.0	2430	8.40	8.5	9.5	83
30...	0933	40.0	2600	8.40	8.0	9.5	82
30...	0935	50.0	2680	8.40	8.0	9.5	82
30...	0937	62.0	2680	8.40	7.5	9.5	81
APR							
23...	1000	1.00	2710	8.60	19.5	10.2	114
23...	1002	10.0	2710	8.50	19.0	9.9	110
23...	1004	20.0	2710	8.50	19.0	8.9	99
23...	1006	30.0	2720	8.40	18.0	8.1	88
23...	1008	40.0	2720	8.00	16.5	6.2	65
23...	1010	50.0	2720	8.00	16.5	5.5	58
23...	1012	61.0	2780	7.70	15.0	2.9	30
AUG							
25...	0910	1.00	2690	8.10	30.5	6.4	88
25...	0912	10.0	2690	8.00	30.5	6.0	83
25...	0914	20.0	2670	7.70	30.0	3.7	51
25...	0916	25.0	2640	7.50	29.5	2.9	39
25...	0918	30.0	2620	7.30	29.0	0	0
25...	0920	40.0	2670	7.30	28.0	0	0
25...	0922	50.0	2730	7.30	27.0	0	0
25...	0924	61.0	2780	7.30	26.5	0	0

322337097415401 - LAKE GRANBURY SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	0947	1.00	2430	8.60	10.0	10.3	93
30...	0949	10.0	2430	8.60	9.5	10.1	90
30...	0951	20.0	2430	8.50	9.5	9.9	89
30...	0953	30.0	2430	8.40	9.0	9.6	85
30...	0955	43.0	2590	8.30	8.0	9.5	82
APR							
23...	1020	1.00	2710	8.50	19.5	10.2	114
23...	1022	10.0	2710	8.50	19.5	10.0	112
23...	1024	20.0	2710	8.50	19.0	9.7	108
23...	1026	29.0	2710	8.40	18.5	8.3	91
AUG							
25...	0925	1.00	2670	8.10	30.5	6.2	85
25...	0927	10.0	2670	8.00	30.5	6.1	84
25...	0929	20.0	2670	7.70	30.0	4.2	57
25...	0931	30.0	2620	7.30	29.0	0	0
25...	0933	43.0	2690	7.30	27.5	0	0

322345097421901 - LAKE GRANBURY SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	0855	1.00	2400	8.60	10.0	10.1	92
30...	0857	10.0	2400	8.60	9.5	10.0	90
30...	0859	20.0	2400	8.50	9.5	9.7	87
30...	0901	30.0	2430	8.30	8.5	9.3	81
30...	0902	38.0	2520	8.20	8.5	9.1	80
APR							
23...	0945	1.00	2710	8.60	19.5	10.1	113
23...	0947	10.0	2710	8.60	19.5	9.9	111
23...	0949	20.0	2710	8.50	19.0	9.0	100
23...	0951	30.0	2710	8.30	18.0	7.8	85
23...	0953	37.0	2710	8.10	17.5	6.3	68
AUG							
25...	0855	1.00	2670	8.10	30.5	6.3	87
25...	0857	10.0	2670	8.00	30.5	6.3	87
25...	0859	20.0	2670	7.60	30.0	3.4	46
25...	0900	32.0	2640	7.40	28.5	0	0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322537097414501 - LAKE GRANBURY SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
29...	1605	1.00	2090	8.70	12.0	10.1	97
29...	1607	15.0	2370	8.60	10.0	9.7	89
APR							
23...	1040	1.00	2690	8.40	19.0	9.5	105
23...	1042	10.0	2690	8.40	19.0	9.3	103
23...	1044	15.0	2690	8.40	19.0	8.8	98
AUG							
25...	0940	1.00	2720	8.20	31.5	6.9	97
25...	0942	10.0	2720	8.20	31.5	6.4	90
25...	0944	15.0	2720	8.10	31.0	6.2	86

322422097423901 - LAKE GRANBURY SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	0810	1.00	2460	8.50	11.0	10.0	93
30...	0812	10.0	2460	8.50	10.5	9.9	91
30...	0814	20.0	2460	8.40	10.0	9.9	90
30...	0816	30.0	2620	8.30	8.0	9.9	86
30...	0818	40.0	2730	8.30	7.5	10.0	86
30...	0820	50.0	2730	8.30	7.5	10.0	86
30...	0822	57.0	2730	8.20	7.5	10.0	86
APR							
23...	1110	1.00	2700	8.40	20.5	9.7	111
23...	1112	10.0	2700	8.40	20.0	9.5	108
23...	1114	20.0	2700	8.30	19.0	8.3	92
23...	1116	30.0	2710	8.00	16.5	5.9	62
23...	1118	40.0	2710	8.00	16.0	5.7	59
23...	1120	50.0	2720	7.90	16.0	5.3	56
23...	1122	56.0	2740	7.70	15.5	3.6	37
AUG							
25...	1005	1.00	2700	8.00	32.0	6.2	88
25...	1007	10.0	2700	7.60	31.0	3.7	51
25...	1009	15.0	2720	7.40	30.5	1.4	19
25...	1011	20.0	2730	7.30	30.0	0.1	1
25...	1013	25.0	2730	7.30	29.5	0	0
25...	1015	30.0	2730	7.30	29.0	0	0
25...	1017	40.0	2730	7.30	28.0	0	0
25...	1019	55.0	2780	7.30	26.5	0	0

322437097423901 - LAKE GRANBURY SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
23...	1100	1.00	2700	8.50	20.0	9.7	110
23...	1102	10.0	2700	8.40	20.0	9.5	108
23...	1104	20.0	2700	8.30	19.0	8.1	90
23...	1106	32.0	2700	8.00	16.5	5.6	59
AUG							
25...	1020	1.00	2690	7.90	32.0	5.8	82
25...	1022	10.0	2690	7.60	31.0	3.3	46
25...	1024	18.0	2720	7.50	30.5	0.8	11

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322458097443101 - LAKE GRANBURY SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
29...	1530	1.00	2480	8.70	12.0	10.8	103
29...	1532	10.0	2480	8.60	11.0	10.7	100
29...	1534	20.0	2650	8.50	9.5	10.4	94
29...	1536	30.0	2710	8.50	8.0	10.4	91
29...	1538	40.0	2730	8.50	8.0	10.5	92
29...	1540	51.0	2730	8.50	8.0	10.4	91
APR							
23...	1130	1.00	2700	8.40	21.0	9.6	111
23...	1132	10.0	2700	8.40	20.5	9.5	109
23...	1134	20.0	2700	8.30	19.0	8.4	93
23...	1136	30.0	2700	8.00	16.5	6.0	63
23...	1138	40.0	2700	7.90	16.0	5.4	56
23...	1140	50.0	2700	7.80	16.0	4.1	43
AUG							
25...	1030	1.00	2700	8.10	32.0	6.4	90
25...	1032	10.0	2700	8.00	32.0	6.2	88
25...	1034	20.0	2730	7.40	30.0	1.2	16
25...	1036	25.0	2750	7.30	30.0	0.3	4
25...	1038	30.0	2750	7.30	29.0	0	0
25...	1040	40.0	2720	7.30	28.0	0	0
25...	1042	51.0	2770	7.30	26.5	0	0

322619097463301 - LAKE GRANBURY SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
29...	1430	1.00	2560	8.70	11.5	1.10	11.5	109	510
29...	1432	10.0	2580	8.60	11.0	--	11.4	107	--
29...	1434	20.0	2620	8.50	10.0	--	11.4	104	--
29...	1436	30.0	2720	8.30	8.5	--	11.2	99	--
29...	1438	40.0	2720	8.20	8.5	--	10.8	95	520
APR									
23...	1155	1.00	2710	8.40	21.5	1.10	8.8	103	520
23...	1157	10.0	2710	8.30	20.5	--	7.9	90	--
23...	1159	20.0	2710	8.00	18.5	--	6.8	75	--
23...	1201	30.0	2710	7.90	17.0	--	5.5	59	--
23...	1203	40.0	2710	7.80	17.0	--	4.0	43	520
AUG									
25...	1057	1.00	2700	8.30	31.5	1.10	8.4	118	480
25...	1059	10.0	2700	8.20	31.0	--	7.5	104	--
25...	1101	20.0	2740	7.70	30.5	--	4.0	55	--
25...	1103	30.0	2790	7.50	30.0	--	1.1	15	--
25...	1105	35.0	2790	7.50	30.0	--	0.7	10	--
25...	1107	39.0	2790	7.50	29.5	--	0	0	490

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
29...	370	140	38	350	7	6.8	133	370
29...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
29...	390	140	42	380	7	6.7	135	390
APR								
23...	400	140	42	380	7	6.8	123	400
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	390	140	41	370	7	6.6	130	400
AUG								
25...	390	120	45	370	8	7.2	98	400
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	380	120	46	370	8	7.3	105	410

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322619097463301 - LAKE GRANBURY SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
29...	560	5.3	1500	<0.100	1.5	0.020	20	<10
29...	--	--	--	--	--	--	--	--
29...	--	--	--	<0.100	0.80	0.010	20	<10
29...	--	--	--	<0.100	1.1	0.010	<10	<10
29...	590	4.7	1600	0.100	1.1	0.030	20	<10
APR								
23...	600	4.3	1600	<0.100	1.0	0.020	20	<10
23...	--	--	--	--	--	--	--	--
23...	--	--	--	<0.100	0.50	0.020	20	<10
23...	--	--	--	--	--	--	--	--
23...	580	5.8	1600	<0.100	1.4	0.030	20	130
AUG								
25...	500	7.2	1500	<0.100	1.7	0.030	<10	<10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	0.30	0.030	<10	10
25...	--	--	--	<0.100	1.1	0.070	<10	100
25...	--	--	--	--	--	--	--	--
25...	500	9.8	1500	<0.100	1.1	0.110	40	460

322703097451401 - LAKE GRANBURY SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
30...	1250	1.00	2720	8.80	10.0	11.3	103
30...	1252	13.0	2770	8.60	9.0	10.9	97
APR							
23...	1320	1.00	2690	8.30	22.5	9.2	110
23...	1322	10.0	2690	8.10	20.5	7.1	81
23...	1324	14.0	2690	8.00	20.5	6.4	73
AUG							
25...	1225	1.00	2700	8.40	31.0	8.5	118
25...	1227	13.0	2700	8.20	30.5	7.0	96

322834097470801 - LAKE GRANBURY SITE HC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)
JAN							
30...	1330	1.00	2700	8.80	10.5	0.90	11.1
30...	1332	10.0	2700	8.70	9.5	--	11.0
30...	1334	20.0	2700	8.70	9.0	--	10.7
30...	1336	31.0	2760	8.50	7.5	--	10.3
APR							
23...	1340	1.00	2730	8.30	22.5	0.50	8.4
23...	1342	10.0	2730	8.20	20.5	--	7.4
23...	1344	20.0	2730	8.20	20.0	--	6.4
23...	1346	25.0	2710	7.70	18.5	--	3.7
23...	1348	32.0	2710	7.60	18.0	--	3.0
AUG							
25...	1240	1.00	2720	8.30	31.0	0.60	8.5
25...	1242	10.0	2750	8.00	30.0	--	6.4
25...	1244	20.0	2810	7.60	30.0	--	3.0
25...	1246	25.0	2860	7.40	30.0	--	0.6
25...	1248	31.0	2860	7.40	29.5	--	0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322834097470801 - LAKE GRANBURY SITE HC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN						
30...	102	0.100	1.0	0.020	<10	<10
30...	99	--	--	--	--	--
30...	95	0.100	1.6	0.010	20	<10
30...	88	0.200	0.80	0.020	20	<10
APR						
23...	100	<0.100	0.80	0.020	20	<10
23...	85	--	--	--	--	--
23...	73	<0.100	0.60	0.030	20	<10
23...	41	--	--	--	--	--
23...	33	<0.100	0.90	0.020	20	260
AUG						
25...	118	<0.100	1.1	0.050	<10	10
25...	87	--	--	--	--	--
25...	41	<0.100	1.3	0.060	<10	180
25...	8	--	--	--	--	--
25...	0	<0.100	1.3	0.120	20	1000

322819097483201 - LAKE GRANBURY SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
30...	1345	1.00	2600	8.80	11.0	10.9	101
30...	1347	10.0	2630	8.70	9.5	10.4	93
30...	1349	17.0	2680	8.50	8.0	8.9	77
APR							
23...	1405	1.00	2720	8.30	23.0	8.9	107
23...	1407	10.0	2640	8.20	20.5	8.1	93
23...	1409	16.0	2600	7.90	19.5	5.2	58
AUG							
25...	1300	1.00	2760	8.20	30.5	7.6	105
25...	1302	10.0	2760	8.00	29.5	5.8	79
25...	1304	16.0	2760	8.00	29.5	5.3	72

323318097480101 - LAKE GRANBURY SITE JC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
30...	1420	1.00	2490	8.80	12.0	10.7	102
30...	1422	10.0	2490	8.80	11.0	10.7	99
30...	1424	22.0	2460	8.60	9.5	10.6	95
APR							
23...	1445	1.00	2730	8.40	22.5	9.7	116
23...	1447	10.0	2730	8.40	20.0	9.5	108
23...	1449	22.0	2730	8.40	19.5	8.8	99
AUG							
25...	1320	1.00	2960	7.80	31.5	6.4	90
25...	1322	5.00	2990	7.50	31.0	4.1	57
25...	1324	10.0	2990	7.30	30.5	0	0
25...	1326	15.0	2940	7.50	30.0	2.7	37
25...	1328	21.0	2940	7.50	29.5	0.9	12

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

323435097492001 - LAKE GRANBURY SITE KC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
30...	1500	1.00	2490	8.80	13.0	1.00	10.4	101	510
30...	1502	13.0	2460	8.80	11.5	--	10.4	98	510
APR									
23...	1500	1.00	2740	8.50	20.5	0.80	9.9	114	560
23...	1502	5.00	2740	8.50	20.0	--	10.0	114	--
23...	1504	12.0	2740	8.50	20.0	--	10.0	114	560
AUG									
25...	1355	1.00	3080	8.30	32.5	0.50	9.7	138	530
25...	1357	5.00	3080	8.00	31.0	--	6.5	90	--
25...	1359	10.0	3080	7.40	31.0	--	3.5	49	--
25...	1401	14.0	3080	7.40	31.0	--	1.5	21	530

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
30...	360	140	39	330	7	5.8	153	350
30...	360	140	39	330	7	5.8	153	350
APR								
23...	420	150	44	380	7	6.6	131	410
23...	--	--	--	--	--	--	--	--
23...	430	150	44	380	7	6.5	128	400
AUG								
25...	450	130	51	430	8	8.4	80	480
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	450	130	50	440	9	8.3	84	470

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
30...	530	3.7	1500	<0.100	0.60	0.020	20	20
30...	530	3.7	1500	<0.100	0.70	0.020	20	20
APR								
23...	590	3.8	1700	<0.100	0.80	0.020	20	20
23...	--	--	--	--	--	--	--	--
23...	590	3.7	1700	<0.100	0.90	0.020	20	20
AUG								
25...	640	7.2	1800	<0.100	1.3	0.080	20	30
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	650	8.2	1800	<0.100	1.1	0.100	40	200

08091000 BRAZOS RIVER NEAR GLEN ROSE, TX

LOCATION.--Lat 32°16'18", long 97°39'48", Somervell County, Hydrologic Unit 12060201, at downstream side of bridge on U.S. Highway 67, 600 ft downstream from Georges Creek, 4.1 mi upstream from Paluxy River, 6 mi northeast of Glen Rose, and at mile 511.2.

DRAINAGE AREA.--25,818 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1058: 1932. WSP 1512: 1946-47, 1949. WSP 1712: 1928(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 567.82 ft above National Geodetic Vertical Datum of 1929. Prior to May 7, 1931, nonrecording gage at site 2.5 mi downstream at same datum. May 7, 1931, to Sept. 30, 1957, water-stage recorder at site 2.4 mi downstream at same datum, used as supplementary gage Oct. 1, 1957, to Apr. 1, 1959. Apr. 27, 1950, to Sept. 30, 1957, water-stage recorder, present gage, used as supplementary gage.

REMARKS.--No estimated daily discharges. Records good. Since September 1969, flow largely regulated by Lake Granbury (station 08090900) 31 mi upstream. There are many diversions above station for irrigation, municipal supply, and oilfield operation.

AVERAGE DISCHARGE.--46 years (water years 1924-69) prior to regulation by Lake Granbury, 1,567 ft³/s (1,135,000 acre-ft/yr); 18 years (water years 1970-87) regulated, 1,039 ft³/s (752,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,600 ft³/s May 18, 1935 (gage height, 23.68 ft, site then in use, from floodmarks); maximum gage height, 35.19 ft, present site, Oct. 15, 1981; no flow at times prior to construction of Morris Sheppard Dam (1941) on the Brazos River forming Possum Kingdom Lake, and on July 14, 1984. Maximum stage since at least 1876, that of Oct. 15, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 reached a stage of 27 ft, and flood in May 1922 reached a stage of 29.5 ft, each at site 2.4 mi downstream, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,900 ft³/s May 29 at 2100 hours (gage height, 17.25 ft); minimum daily, 8.5 ft³/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	1820	234	836	162	16800	1290	144	5170	2300	387	30
2	103	1810	61	834	847	18700	1340	846	5110	420	381	30
3	558	1810	1290	955	552	10300	2180	452	7520	1220	372	30
4	1670	2050	1460	1760	844	6110	5220	2090	11900	1040	255	29
5	4250	3140	977	1760	520	3680	6630	865	15500	904	78	29
6	15200	3020	827	1150	152	3360	7840	144	15300	514	52	27
7	14700	2660	899	1660	558	3460	7800	533	13600	1140	31	23
8	7630	1990	967	1590	225	3450	7600	383	8820	1260	25	20
9	10800	1980	812	1130	134	3440	5720	210	8920	869	20	18
10	13000	1860	794	1850	2440	3420	6500	289	8370	888	27	18
11	12800	914	1530	1830	2030	3290	6670	185	8440	1100	31	408
12	12100	1600	1670	1710	2630	2480	6380	240	8400	843	31	172
13	12000	1680	857	911	2950	1690	4340	314	16400	839	44	85
14	12100	1680	840	900	1980	1760	3060	172	11200	846	38	409
15	12100	1680	860	1030	1980	1780	3410	675	7130	850	28	145
16	9200	1030	446	2190	1980	2520	3400	1660	4270	853	20	52
17	2870	783	680	1650	1960	2630	3420	623	3880	577	24	193
18	2090	245	486	1290	1950	1930	3410	153	2580	335	22	79
19	1840	590	1690	1150	1950	1180	3320	1310	4260	248	16	648
20	1810	408	1160	2370	1590	1160	2170	1210	4280	235	11	491
21	1730	615	2230	2160	2640	2000	2180	392	4220	231	9.6	108
22	1190	798	2350	1160	2640	2590	2760	537	3810	161	8.8	52
23	2610	793	2380	293	2570	2110	2060	2430	2130	65	8.5	37
24	2630	859	1870	287	2200	2070	2050	1720	2620	46	29	29
25	2620	1580	1770	798	2750	2030	2060	1110	3460	201	51	24
26	2620	1510	1760	945	2600	1330	2020	1050	3370	676	35	19
27	2630	1460	1760	953	4480	1890	1270	1070	3370	773	35	15
28	2400	1460	1640	962	7330	2100	1210	1160	3370	773	46	15
29	1010	1460	858	1040	---	2110	908	12100	3380	773	53	14
30	1630	1340	838	645	---	2110	255	19300	3680	785	41	24
31	1820	---	840	118	---	2050	---	9750	---	566	35	---
TOTAL	169774	44625	36836	37917	54644	115530	108473	63117	204460	22331	2244.9	3273
MEAN	5477	1487	1188	1223	1952	3727	3616	2036	6815	720	72.4	109
MAX	15200	3140	2380	2370	7330	18700	7840	19300	16400	2300	387	648
MIN	63	245	61	118	134	1160	255	144	2130	46	8.5	14
AC-FT	336700	88510	73060	75210	108400	229200	215200	125200	405500	44290	4450	6490

CAL YR 1986 TOTAL 475160.9 MEAN 1302 MAX 15200 MIN 7.9 AC-FT 942500
WTR YR 1987 TOTAL 863224.7 MEAN 2365 MAX 19300 MIN 8.5 AC-FT 1712000

08091000 BRAZOS RIVER NEAR GLEN ROSE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: August to November 1946. Chemical and biochemical analyses: October 1980 to June 1987.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 30...	1045	1510	2800	8.00	17.0	3	2.4	8.6	91	0.9	420
JAN 29...	1430	690	2010	8.20	14.0	5	1.6	12.0	120	1.1	410
MAR 17...	1515	2240	1900	8.00	16.0	6	5.5	10.1	107	0.1	390
MAY 06...	1430	40	1970	7.70	25.0	9	2.0	8.4	105	1.1	430
JUN 24...	1445	2320	2280	8.10	29.5	15	3.5	8.5	116	2.3	430
AUG 13...	1150	44	2720	8.10	31.0	4	0.70	6.8	96	0.9	530

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 30...	330	120	30	420	9	7.4	89	360	640	0.40	5.8
JAN 29...	270	120	27	260	6	5.6	140	270	400	0.40	4.9
MAR 17...	270	110	28	240	5	5.3	123	260	380	0.40	6.8
MAY 06...	280	120	31	250	5	5.3	143	260	390	0.40	6.2
JUN 24...	310	110	37	270	6	6.3	116	300	430	0.40	7.0
AUG 13...	430	130	50	400	8	7.8	100	360	700	0.40	9.1

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, 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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 30...	1600	27	2	<0.010	<0.100	0.030	0.37	0.40	0.020	4.0	--
JAN 29...	1200	<1	<1	<0.010	0.200	0.030	0.97	1.0	<0.010	2.9	<1
MAR 17...	1100	17	15	<0.010	0.200	0.080	0.52	0.60	0.020	4.6	--
MAY 06...	1100	4	4	0.010	<0.100	0.120	1.1	1.2	0.010	4.5	1
JUN 24...	1200	5	<1	0.010	<0.100	0.080	0.32	0.40	0.040	5.5	1
AUG 13...	1700	5	1	<0.010	<0.100	0.040	0.26	0.30	0.050	4.3	--

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 30...	--	--	--	--	--	--	--	--	--	--	--
JAN 29...	200	<1	<10	<1	<10	<5	10	<0.1	<1	<1	<10
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	100	<1	<10	2	<10	<5	40	0.2	<1	<1	<10
JUN 24...	100	3	<10	<1	<10	<5	<10	0.1	<1	<1	20
AUG 13...	--	--	--	--	--	--	--	--	--	--	--

08091730 SQUAW CREEK RESERVOIR NEAR GLEN ROSE, TX

LOCATION.--Lat 32°18'00", long 97°47'12", Somervell County, Hydrologic Unit 12060202, on upstream side of intake structure near power house, 1.8 mi upstream from dam, 3.9 mi north of Glen Rose, and 6.1 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi².

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

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

REMARKS.--The reservoir is formed by a rolled earthfill dam 4,360 ft long. Deliberate impoundment began in February 1977, and the dam was completed in June 1977. The flood-control outlet works consist of an ungated 100-foot-long concrete ogee spillway located at right end of dam. The low-flow outlet works consist of a concrete outlet tower with three 4- by 6-foot slide gates and a 6- by 6-foot slide gate, which feed into a 6-foot inside diameter concrete conduit that extends through the dam. During the year, water was diverted by pipeline from Lake Granbury into this reservoir. 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	796.0	228,100
Crest of spillway	783.0	178,100
Crest of spillway (normal operating level)	775.0	151,100
Invert of slide gate (No. 1)	764.0	117,300
Invert of slide gate (No. 2)	715.0	24,670
Invert of slide gate (No. 3)	666.5	380
Lowest gated outlet (invert)	653.0	0

COOPERATION.--The capacity table, provided by Texas Utilities Services, Inc., was prepared by Freese and Nichols, Inc., Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 156,900 acre-ft June 12, 1987 (elevation, 776.80 ft); minimum since initial filling of reservoir on May 3, 1979, 142,700 acre-ft May 20, 1983 (elevation, 772.44 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 156,900 acre-ft June 12 at 2400 hours (elevation, 776.80 ft); minimum, 146,300 acre-ft Sept. 30 (elevation, 773.58 ft).

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

773.0	144,500	775.0	151,000	777.0	157,600
774.0	147,700	776.0	154,200	778.0	160,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150500	149700	148800	149500	149900	153300	151400	150700	153700	151900	149800	147500
2	150400	149700	148800	149500	149900	153100	151300	150700	153400	151800	149700	147500
3	150400	149700	148800	149400	149900	153000	151300	150700	153200	151800	149700	147400
4	150400	149700	148800	149400	149900	152800	151200	151300	153000	151700	149600	147300
5	150500	149700	148700	149500	150000	152700	151300	151300	152800	151600	149500	147300
6	150700	149600	148800	149500	150000	152600	151300	151200	152700	151500	149400	147200
7	150700	149600	148800	149500	150000	152500	151200	151200	152500	151400	149400	147200
8	150700	149600	148800	149600	150000	152400	151300	151200	152400	151300	149200	147200
9	150700	149500	148800	149800	150000	152300	151300	151200	152500	151200	149200	147100
10	150700	149700	148700	149700	150000	152200	151200	151100	153300	151200	149100	147000
11	150700	149500	148900	149700	150000	152100	151200	151100	153600	151100	149000	147000
12	150500	149400	148900	149700	150000	152100	151300	151100	156900	151000	149000	147100
13	150400	149300	148900	149700	150000	152000	151100	151100	156300	151000	148900	147200
14	150400	149200	148900	149700	150100	151900	151000	151000	155500	150900	148800	147100
15	150300	149200	149000	149700	150200	151900	151000	153800	156400	150800	148700	147100
16	150300	149200	149000	149700	150200	152100	151000	153600	154200	150800	148600	147100
17	150200	149200	149100	149900	150100	152100	151000	153300	153800	150800	148500	147100
18	150100	149000	149300	149900	150100	152100	151000	153100	153500	150700	148400	147200
19	150100	149000	149300	150000	150300	152000	151000	153300	153200	150700	148300	147200
20	150000	149000	149300	149900	150800	152000	151000	153200	153000	150600	148200	147100
21	150000	149000	149400	149900	150900	152000	150900	152900	152800	150600	148200	147000
22	150100	149000	149600	149900	151000	151900	150900	152700	152600	150500	148100	146900
23	150100	149000	149600	149900	151000	151800	150900	152500	152400	150500	148000	146900
24	150000	148900	149600	149800	151200	151700	150900	152900	152300	150400	148000	146800
25	150000	149200	149600	149800	151300	151700	150900	152800	152200	150300	147800	146700
26	149900	149100	149600	149800	152100	151700	150900	152600	152100	150200	147700	146700
27	149900	149100	149600	149800	152400	151700	150900	152400	152000	150100	147900	146600
28	149800	149000	149600	149900	153400	151600	150800	153800	151800	150100	147800	146600
29	149800	149000	149600	149800	---	151500	150800	154900	152000	150000	147700	146500
30	149800	149000	149600	149800	---	151400	150700	154500	152000	149900	147700	146300
31	149800	---	149500	149800	---	151400	---	154000	---	149900	147600	---
MAX	150700	149700	149600	150000	153400	153300	151400	154900	156900	151900	149800	147500
MIN	149800	148900	148700	149400	149900	151400	150700	150700	151800	149900	147600	146300
(†)	774.64	774.39	774.56	774.66	775.75	775.14	774.92	775.94	775.32	774.67	773.97	773.58
(ϕ)	-800	-800	+500	+300	+3600	-2000	-700	+3300	-2000	-2100	-2300	-1300

CAL YR 1986 MAX 153000 MIN 145000 (ϕ) +2300
WTR YR 1987 MAX 156900 MIN 146300 (d) -4300

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

08091750 SQUAW CREEK NEAR GLEN ROSE, TX

LOCATION.--Lat 32°16'12", long 97°43'56", Somervell County, Hydrologic Unit 12060202, on left bank at downstream side of highway embankment 25 ft left of left end of bridge on State Highway 144, 2.1 mi upstream from mouth, 2.5 mi downstream from Squaw Creek Dam, and 2.8 mi northeast of Glen Rose.

DRAINAGE AREA.--70.3 mi².

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 599.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No known diversions between Squaw Creek Reservoir and this station. Flow regulated since Feb. 15, 1977, by Squaw Creek Reservoir. During the year, low flows were sustained by releases from pipeline used to divert water from Lake Granbury (station 08090900) to Squaw Creek Reservoir (station 08091730). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1977-87) 9.67 ft³/s (7,010 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,030 ft³/s Apr. 8, 1975 (gage height, 11.90 ft), from rating curve extended above 1,000 ft³/s on basis of velocity-area study; minimum, 0.02 ft³/s Aug. 28, 29, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1934, about 20.5 ft in May 1957, from information by State Department of Highways and Public Transportation (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,230 ft³/s June 12 at 1815 hours (gage height, 7.42 ft); minimum, 1.7 ft³/s Apr. 26 to May 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.3	7.2	5.7	6.3	238	2.8	1.7	211	31	4.6	4.2
2	4.3	4.3	5.2	5.7	6.6	210	6.5	1.7	162	26	4.5	4.2
3	4.3	4.3	4.9	9.4	6.3	183	3.7	1.7	139	22	4.6	4.3
4	4.6	5.0	4.9	5.3	6.1	160	3.1	3.7	122	17	4.5	3.7
5	4.7	7.0	4.6	5.3	6.1	142	3.1	2.0	101	12	4.2	3.9
6	6.8	4.5	4.6	5.3	6.6	125	4.1	2.1	83	9.5	4.2	4.0
7	5.3	4.3	4.9	5.1	7.0	111	3.7	2.3	66	8.0	4.3	4.0
8	5.1	4.3	4.9	4.9	6.4	98	3.2	2.2	52	7.2	4.3	4.2
9	5.3	4.3	4.9	9.2	6.1	89	2.9	2.1	51	7.0	4.2	4.3
10	5.3	4.5	4.9	7.1	6.1	79	3.7	2.1	90	6.9	4.3	4.3
11	5.3	5.2	5.0	6.2	6.1	64	2.8	2.1	179	6.9	4.3	4.3
12	8.3	5.3	5.8	6.1	6.0	54	2.7	2.1	553	7.0	4.3	5.4
13	5.7	4.9	5.3	6.1	5.7	48	15	2.1	952	7.0	4.2	6.2
14	5.3	4.9	5.3	6.1	5.6	41	27	2.1	590	7.0	4.2	5.1
15	4.9	4.9	5.3	5.5	13	38	2.5	138	377	6.7	4.3	4.6
16	4.6	4.9	5.3	5.3	10	35	1.9	264	261	6.1	4.3	4.1
17	4.6	4.9	5.0	6.7	6.4	63	1.9	218	207	6.5	4.3	4.0
18	4.6	4.8	8.9	15	5.7	62	1.9	174	175	6.5	4.4	4.8
19	4.6	4.6	5.3	7.4	5.5	45	1.9	162	141	7.2	4.3	4.2
20	4.6	4.6	5.3	7.0	21	39	1.9	179	118	7.2	4.3	4.0
21	4.5	4.6	5.3	7.0	8.0	36	2.4	147	100	6.4	4.3	3.9
22	4.3	4.6	5.5	7.6	8.4	35	2.2	119	82	5.4	4.2	3.1
23	4.3	4.8	7.2	6.8	6.7	62	1.9	97	65	5.2	3.9	2.9
24	4.6	5.0	6.1	6.8	10	38	1.9	124	59	5.3	4.2	2.9
25	4.9	9.0	6.1	8.9	7.2	19	1.9	122	52	5.3	4.0	2.9
26	4.9	5.2	6.1	7.0	36	17	1.8	96	39	5.2	4.0	2.7
27	4.9	4.5	6.1	6.9	75	14	1.7	71	27	5.3	4.9	2.7
28	4.8	4.9	6.1	6.5	253	16	1.7	79	19	5.3	4.9	2.7
29	4.6	4.9	5.8	6.2	---	19	1.7	381	14	5.3	4.6	2.7
30	4.5	4.9	5.7	5.2	---	21	1.7	354	35	5.1	4.6	2.7
31	4.3	---	5.7	4.9	---	4.2	---	273	---	4.6	4.3	---
TOTAL	153.1	148.2	173.2	208.2	552.9	2205.2	115.2	3028.0	5122	273.1	134.5	117.0
MEAN	4.94	4.94	5.59	6.72	19.7	71.1	3.84	97.7	171	8.81	4.34	3.90
MAX	8.3	9.0	8.9	15	253	238	27	381	952	31	4.9	6.2
MIN	4.3	4.3	4.6	4.9	5.5	4.2	1.7	1.7	14	4.6	3.9	2.7
AC-FT	304	294	344	413	1100	4370	228	6010	10160	542	267	232

CAL YR 1986 TOTAL 3826.3 MEAN 10.5 MAX 151 MIN 2.6 AC-FT 7590
WTR YR 1987 TOTAL 12230.5 MEAN 33.5 MAX 952 MIN 1.7 AC-FT 24260

08092500 LAKE WHITNEY NEAR WHITNEY, TX

LOCATION.--Lat 31°51'55", long 97°22'18", Bosque County, Hydrologic Unit 12060202, on State Highway 22, in intake structure of Whitney Dam on Brazos River, 2.4 mi upstream from Coon Creek, 3.5 mi upstream from Iron Creek, 7.4 mi southwest of Whitney, and at mile 442.4.

DRAINAGE AREA.--27,189 mi², approximately, of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1951 to current year. Prior to October 1970, published as Whitney Reservoir. Prior to October 1980, published as Whitney Lake.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

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

REMARKS.--The lake is formed by a concrete-gravity and rolled earthfill dam 17,695 ft long, including spillway. The dam was completed in April 1951, and deliberate impoundment began Dec. 10, 1951. Concrete spillway is 680 ft long and includes 17 tainter gates 38.0 by 40.0 ft each. Outlet works are comprised of 16 gate-operated conduits that are 5.0- by 9.0 ft each. The space between elevations 522.0 and 571.0 ft is reserved for flood-control storage. At maximum design elevation of 573.0 ft the spillway is designed to discharge 684,000 ft³/s. Capacity table is based on a survey made in April and May 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	584.0	-
Design flood	573.0	2,100,000
Top of gates	571.0	1,999,500
Crest of spillway (sill of gates)	533.0	627,100
Top of conservation pool (top of designated power storage)	522.0	411,100
Lowest controlled outlet (invert)	448.83	4,270

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,980,000 acre-ft May 29, 1957 (elevation, 570.25 ft); minimum daily since power pool elevation first reached in April 1954, 250,200 acre-ft Nov. 1, 1956 (elevation 509.52 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 789,100 acre-ft June 17 at 2400 hours (elevation, 539.35 ft); minimum, 542,000 acre-ft Sept. 30 at 2400 hours (elevation, 529.20 ft).

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

529.0	537,800	535.0	627,100	540.0	807,300
532.0	603,900	538.0	752,700		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	630100	637700	642500	637900	647100	703800	632700	630400	720500	662800	618300	565800
2	626600	636500	638400	636500	643900	735400	631300	629900	713300	658400	616600	562700
3	626400	634800	635500	637000	642000	747900	630400	629200	704100	652500	615300	561600
4	626400	636700	634400	637200	639100	737800	633900	633200	701500	646300	614300	560300
5	625900	636700	633200	639100	638600	725100	632500	636000	704800	640800	613200	559000
6	650300	637900	633400	638400	636200	709500	641500	635500	709000	635500	611300	557500
7	672600	640800	634100	637400	632000	690000	657400	635300	710000	632500	609900	559900
8	673800	641000	634800	637000	629200	670600	660800	635500	704600	631500	607400	558600
9	674300	640100	633400	637700	626900	659800	661600	634800	700200	632000	606000	556800
10	676300	643400	632500	637400	629400	655400	661100	634400	698100	629400	604800	555500
11	679900	637700	632000	636500	630800	652200	656900	632900	705600	629700	603400	555100
12	678200	639300	632000	637900	631800	647300	653900	631500	724600	630400	601600	555100
13	674500	636200	632000	640500	633600	642000	651200	629900	752700	628500	599300	554000
14	674100	636000	632900	643000	634600	639800	643900	628500	770300	627800	597400	553300
15	672800	637900	633600	645400	635500	636000	642500	629700	782300	627800	595400	552400
16	669600	637900	632700	650500	634400	640100	640800	632900	786100	629400	592600	551600
17	660600	637700	631500	656400	633200	642700	640100	632900	789100	629700	590400	550700
18	655900	637000	632000	659800	632700	642700	640300	631300	782600	629700	588400	552700
19	650300	635100	632500	662500	632900	639600	640100	631500	767600	628000	586100	552400
20	644400	634400	632900	665000	636700	637200	641300	632900	760000	627100	584100	552900
21	641000	633400	634400	666900	638600	637200	639800	633200	744600	624800	582400	552000
22	640300	636000	639300	665000	640300	636500	640100	632200	726600	624800	580600	550500
23	646800	637900	642000	663000	642000	639300	640500	633600	702300	623100	577900	549200
24	648300	637000	643400	660800	644400	638600	640100	643200	678000	622200	575700	547300
25	648800	639800	644400	657600	646100	638600	639100	645100	666900	620800	573500	546200
26	649800	640100	644200	657600	652000	637200	637900	643900	664000	619200	571100	546000
27	649500	640800	644600	658600	660800	636200	636200	637900	660800	619200	572900	545600
28	647800	641500	644200	655900	675300	638600	633600	635800	656900	619200	570500	545400
29	643900	642500	643200	655200	---	637900	631100	667700	655200	619200	568500	543700
30	639600	644600	641500	653700	---	635300	629900	699900	660100	619200	567600	542000
31	638200	---	639800	649300	---	635100	---	719200	---	618700	567800	---
MAX	679900	644600	644600	666900	675300	747900	661600	719200	789100	662800	618300	565800
MIN	625900	633400	631500	636500	626900	635100	629900	628500	655200	618700	567600	542000
(†)	533.47	533.74	533.54	533.93	534.99	533.34	533.12	536.72	534.37	532.64	530.39	529.20
(ϕ)	+5700	+6400	-4800	+9500	+26000	-40200	-5200	+89300	-59100	-41400	-50900	-25800

CAL YR 1986 MAX 679900 MIN 504100 (ϕ) +71100
WTR YR 1987 MAX 789100 MIN 542000 (ϕ) -90500

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

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March 1960 to current year. Chemical and biochemical analyses: September 1970 to August 1987.

315203097222601 - LAKE WHITNEY SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
FEB											
04...	1105	1.00	2310	8.40	10.0	1.90	10.6	96	<1	<1	390
04...	1106	3.15	--	--	--	--	--	--	--	--	--
04...	1107	10.0	2310	8.40	10.0	--	10.4	94	--	--	--
04...	1109	20.0	2330	8.40	9.5	--	10.2	91	--	--	--
04...	1111	30.0	2330	8.30	9.5	--	10.1	91	--	--	--
04...	1113	40.0	2330	8.30	9.5	--	9.9	89	--	--	--
04...	1115	50.0	2330	8.20	9.0	--	9.7	86	--	--	--
04...	1117	60.0	2330	8.20	9.0	--	9.5	84	--	--	--
04...	1119	70.0	2330	8.20	8.5	--	9.6	84	--	--	--
04...	1121	80.0	2330	8.20	8.5	--	9.4	82	--	--	--
04...	1123	90.0	2330	8.20	8.5	--	9.1	80	--	--	--
04...	1125	101	2330	8.10	8.5	--	8.8	77	--	--	390
APR											
22...	0950	1.00	2160	8.40	17.0	2.20	8.6	91	<1	K1	420
22...	0951	3.60	--	--	--	--	--	--	--	--	--
22...	0952	10.0	2170	8.40	17.0	--	8.6	91	--	--	--
22...	0954	20.0	2170	8.40	17.0	--	8.6	91	--	--	--
22...	0956	30.0	2170	8.40	17.0	--	8.6	91	--	--	--
22...	0958	40.0	2170	8.40	17.0	--	8.5	90	--	--	--
22...	1000	50.0	2170	8.40	17.0	--	8.5	90	--	--	--
22...	1002	60.0	2170	8.40	16.5	--	8.5	89	--	--	--
22...	1004	70.0	2190	8.20	15.0	--	7.3	74	--	--	--
22...	1006	80.0	2190	8.10	14.5	--	6.9	69	--	--	--
22...	1008	90.0	2190	8.10	14.5	--	6.5	65	--	--	--
22...	1010	100	2190	8.00	14.0	--	6.1	60	--	--	410
AUG											
26...	0900	1.00	1960	7.80	28.5	2.40	4.6	61	K3	K1	380
26...	0902	10.0	1960	7.70	28.5	--	4.5	59	--	--	--
26...	0904	20.0	1960	7.60	28.5	--	3.5	46	--	--	--
26...	0906	30.0	1960	7.40	28.5	--	0.8	11	--	--	--
26...	0908	35.0	1960	7.40	28.5	--	0.3	4	--	--	--
26...	0910	40.0	1950	7.30	28.0	--	0	0	--	--	--
26...	0912	50.0	1950	7.30	27.0	--	0	0	--	--	--
26...	0914	60.0	1970	7.30	26.5	--	0	0	--	--	--
26...	0916	70.0	2040	7.20	25.5	--	0	0	--	--	--
26...	0918	80.0	2070	7.20	24.5	--	0	0	--	--	--
26...	0920	93.0	2140	7.20	23.0	--	0	0	--	--	440

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB										
04...	280	110	27	330	8	6.8	110	320	530	0.40
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	270	110	27	330	8	6.9	113	330	520	--
APR										
22...	290	120	29	290	6	5.7	131	280	460	0.40
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	280	120	28	290	6	5.7	132	280	460	--
AUG										
26...	250	100	31	250	6	5.2	126	270	400	0.30
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	270	120	35	290	6	5.5	171	260	430	--

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

315203097222601 - LAKE WHITNEY SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB										
04...	5.6	1400	<0.010	<0.100	0.060	0.54	0.60	0.200	20	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.120	0.58	0.70	<0.010	<10	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	6.2	1400	<0.010	<0.100	0.220	0.48	0.70	0.010	20	30
APR										
22...	4.9	1300	<0.010	<0.100	0.050	0.45	0.50	0.010	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	<0.100	0.050	0.55	0.60	0.020	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	0.010	<0.100	0.070	0.43	0.50	0.020	20	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	5.6	1300	0.010	<0.100	0.160	0.44	0.60	0.020	20	10
AUG										
26...	7.3	1100	<0.010	<0.100	0.030	0.77	0.80	0.020	<3	10
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	<0.010	<0.100	0.050	0.45	0.50	0.020	<10	40
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	<0.010	<0.100	0.040	0.56	0.60	0.020	20	<10
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	12	1300	<0.010	<0.100	1.80	0.50	2.3	0.520	100	1500

315214097222001 - LAKE WHITNEY SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
04...	1040	1.00	2330	8.40	10.0	11.3	103
04...	1042	10.0	2330	8.30	9.5	10.8	97
04...	1044	20.0	2330	8.30	9.5	10.7	96
04...	1046	30.0	2330	8.30	9.0	10.5	93
04...	1048	40.0	2330	8.20	9.0	10.2	90
04...	1050	55.0	2330	8.10	8.5	9.8	86
APR							
22...	0922	1.00	2170	8.40	17.0	8.8	93
22...	0924	10.0	2170	8.40	17.0	8.8	93
22...	0926	20.0	2170	8.40	17.0	8.8	93
22...	0928	30.0	2170	8.40	17.0	8.7	92
22...	0930	40.0	2170	8.30	17.0	8.7	92
22...	0932	50.0	2170	8.30	16.5	8.7	91
AUG							
26...	0835	1.00	1970	7.80	28.5	5.0	66
26...	0837	10.0	1970	7.80	28.5	4.9	65
26...	0839	20.0	1970	7.70	28.5	4.8	63
26...	0841	30.0	1950	7.30	28.5	1.0	13
26...	0843	40.0	1950	7.20	28.0	0.1	1
26...	0845	52.0	1950	7.20	27.0	0.1	1

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

315432097234601 - LAKE WHITNEY SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
04...	1310	1.00	2300	8.50	11.0	10.9	101
04...	1312	10.0	2300	8.50	10.0	10.8	98
04...	1314	20.0	2310	8.40	10.0	10.4	94
04...	1316	30.0	2310	8.40	10.0	10.4	94
04...	1318	40.0	2310	8.40	9.5	10.0	90
04...	1320	50.0	2310	8.30	9.5	9.7	87
04...	1322	60.0	2310	8.30	9.0	9.5	84
04...	1324	70.0	2310	8.20	9.0	9.3	82
04...	1326	80.0	2310	8.20	9.0	8.6	76
04...	1328	93.0	2300	8.20	9.0	8.7	77
APR							
22...	1205	1.00	2170	8.40	18.0	8.4	90
22...	1207	10.0	2170	8.40	18.0	8.4	90
22...	1209	20.0	2170	8.40	17.5	8.2	87
22...	1211	30.0	2170	8.30	17.0	8.2	86
22...	1213	40.0	2170	8.30	16.0	8.2	85
22...	1215	50.0	2170	8.20	15.5	7.7	79
22...	1217	60.0	2170	8.20	15.5	7.5	77
22...	1219	70.0	2170	8.20	15.5	7.4	76
22...	1221	80.0	2170	8.20	15.5	7.4	76
22...	1223	90.0	2170	8.10	14.5	6.4	64
AUG							
26...	1040	1.00	2000	8.10	29.5	6.0	81
26...	1042	10.0	2000	8.00	29.5	5.7	77
26...	1044	20.0	2000	7.90	29.0	5.5	73
26...	1046	30.0	2000	7.50	29.0	1.0	13
26...	1048	40.0	1960	7.50	28.5	0.8	11
26...	1050	50.0	1960	7.40	27.5	0	0
26...	1052	60.0	1980	7.30	26.5	0	0
26...	1054	70.0	2020	7.30	26.0	0	0
26...	1056	86.0	2130	7.30	23.5	0	0

315722097240201 - LAKE WHITNEY SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
FEB										
04...	1405	1.00	2300	8.50	13.0	1.90	10.8	105	<1	K1
04...	1407	10.0	2300	8.50	11.0	--	10.9	102	--	--
04...	1409	20.0	2290	8.40	10.5	--	10.4	96	--	--
04...	1411	30.0	2260	8.40	10.0	--	10.0	91	--	--
04...	1413	40.0	2260	8.40	10.0	--	9.7	88	--	--
04...	1415	50.0	2270	8.30	9.5	--	9.2	83	--	--
04...	1417	60.0	2260	8.30	9.0	--	9.0	80	--	--
04...	1419	70.0	2270	8.20	9.0	--	8.6	76	--	--
04...	1421	80.0	2270	8.10	8.5	--	7.8	69	--	--
APR										
22...	1300	1.00	2200	8.40	19.5	1.30	8.4	93	<1	K1
22...	1302	10.0	2200	8.40	19.5	--	8.3	92	--	--
22...	1304	20.0	2200	8.40	18.5	--	8.1	88	--	--
22...	1306	30.0	2200	8.20	17.0	--	7.6	80	--	--
22...	1308	40.0	2200	8.10	16.0	--	6.7	69	--	--
22...	1310	50.0	2200	8.10	15.5	--	6.5	66	--	--
22...	1312	60.0	2200	8.10	15.5	--	6.3	64	--	--
22...	1314	70.0	2200	8.00	15.5	--	6.0	61	--	--
22...	1316	80.0	2200	8.00	15.0	--	5.6	57	--	--
AUG										
26...	1115	1.00	1990	8.20	30.0	1.20	6.4	87	<1	<1
26...	1117	10.0	1990	8.10	30.0	--	6.0	81	--	--
26...	1119	20.0	1990	8.10	30.0	--	5.9	80	--	--
26...	1121	30.0	2010	7.80	30.0	--	4.3	58	--	--
26...	1123	40.0	2030	7.50	29.5	--	1.6	22	--	--
26...	1125	45.0	2020	7.50	29.5	--	0.7	9	--	--
26...	1127	50.0	2020	7.40	29.0	--	0	0	--	--
26...	1129	60.0	1990	7.40	28.0	--	0	0	--	--
26...	1131	70.0	2000	7.30	27.0	--	0	0	--	--
26...	1133	75.0	2030	7.30	26.0	--	0	0	--	--

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

315722097240201 - LAKE WHITNEY SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB										
04...	390	270	110	27	330	8	6.6	112	320	520
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	380	260	110	26	330	8	6.2	121	320	510
APR										
22...	460	320	130	32	290	6	5.8	140	300	470
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	420	290	120	30	290	6	5.7	137	290	460
AUG										
26...	380	260	100	31	260	6	5.4	121	280	370
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	440	270	120	33	270	6	5.2	161	250	390

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)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB										
04...	5.5	1400	<0.010	<0.100	0.050	0.35	0.40	0.150	<10	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.070	0.83	0.90	0.610	<10	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	6.0	1400	<0.010	<0.100	0.160	0.64	0.80	0.050	20	20
APR										
22...	5.0	1300	<0.010	<0.100	0.030	0.77	0.80	0.030	20	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	<0.100	0.040	1.1	1.1	0.020	20	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	<0.100	0.090	0.71	0.80	0.020	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	5.6	1300	0.010	<0.100	0.130	0.57	0.70	0.020	20	10
AUG										
26...	7.5	1100	<0.010	<0.100	0.040	0.56	0.60	0.030	<3	38
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	0.010	<0.100	0.110	1.1	1.2	0.040	<10	70
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	<0.010	<0.100	0.270	0.43	0.70	0.050	<10	750
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	11	1200	<0.010	<0.100	1.50	0.60	2.1	0.270	110	1400

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

320122097260901 - LAKE WHITNEY SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
04...	1540	1.00	2100	8.60	12.0	1.00	11.7	112
04...	1542	10.0	2100	8.70	11.0	--	11.9	111
04...	1544	20.0	2110	8.60	10.0	--	11.1	101
04...	1546	30.0	2160	8.40	9.5	--	9.4	85
04...	1548	40.0	2190	8.30	9.0	--	8.7	77
04...	1550	50.0	2200	8.20	8.5	--	7.9	69
04...	1552	56.0	2200	8.20	8.5	--	7.8	69
APR								
22...	1435	1.00	2440	8.30	21.0	0.88	8.0	92
22...	1437	10.0	2470	8.30	20.0	--	7.4	83
22...	1439	20.0	2470	8.20	20.0	--	7.2	81
22...	1441	30.0	2550	8.00	17.5	--	5.5	59
22...	1443	40.0	2600	7.90	17.0	--	5.0	53
22...	1445	50.0	2620	7.90	17.0	--	4.8	51
22...	1447	55.0	2620	7.90	17.0	--	4.6	49
AUG								
26...	1230	1.00	2000	8.20	30.5	1.00	7.2	98
26...	1232	10.0	2000	8.20	30.5	--	7.1	97
26...	1234	20.0	2020	8.10	30.0	--	6.7	91
26...	1236	30.0	2020	8.00	30.0	--	6.3	85
26...	1238	40.0	2020	7.90	30.0	--	6.2	84
26...	1240	52.0	2070	7.50	29.5	--	3.5	47

DATE	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)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
04...	<0.010	<0.100	0.060	0.54	0.60	0.080	<10	<10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	<0.010	<0.100	0.080	0.62	0.70	0.040	<10	10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	<0.010	<0.100	0.130	0.57	0.70	0.010	<10	20
APR								
22...	<0.010	<0.100	0.030	0.87	0.90	0.020	20	<10
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	<0.010	<0.100	0.090	0.51	0.60	0.020	20	<10
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	0.010	<0.100	0.110	0.99	1.1	0.020	20	40
AUG								
26...	<0.010	<0.100	0.030	0.57	0.60	0.050	<10	10
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.040	0.86	0.90	0.050	<10	20
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.230	0.57	0.80	0.080	40	1600

315907097222801 - LAKE WHITNEY SITE P07

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
04...	1500	1.00	2270	8.40	12.5	1.80	10.8	104
04...	1502	10.0	2270	8.40	11.0	--	10.8	101
04...	1504	20.0	2270	8.40	10.0	--	10.3	94
04...	1506	30.0	2270	8.30	10.0	--	10.0	91
04...	1508	40.0	2270	8.20	9.5	--	9.3	84
04...	1510	50.0	2280	8.20	9.5	--	8.7	78
APR								
22...	1350	1.00	2150	8.40	20.0	1.80	8.5	96
22...	1352	10.0	2150	8.40	20.0	--	8.5	96
22...	1354	20.0	2230	8.30	19.0	--	7.6	84
22...	1356	30.0	2280	8.20	17.5	--	6.7	72
22...	1358	40.0	2220	8.00	16.0	--	5.7	59
22...	1400	50.0	2220	8.00	15.5	--	5.0	51
AUG								
26...	1150	1.00	1990	8.10	30.5	1.40	7.1	97
26...	1152	10.0	1990	8.10	30.5	--	7.0	96
26...	1154	20.0	1990	7.90	30.5	--	5.6	77
26...	1156	35.0	1990	7.50	30.0	--	1.2	16
26...	1158	30.0	1990	7.50	30.0	--	1.1	15
26...	1200	40.0	1990	7.40	29.5	--	0.1	1
26...	1202	47.0	2000	7.50	29.0	--	0.1	1

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

315907097222801 - LAKE WHITNEY SITE P07--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB								
04...	<0.010	<0.100	0.030	0.67	0.70	0.030	<10	<10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	<0.010	<0.100	0.030	0.47	0.50	0.020	<10	<10
04...	--	--	--	--	--	--	--	--
04...	<0.010	<0.100	0.110	0.49	0.60	0.030	<10	10
APR								
22...	<0.010	<0.100	0.030	0.47	0.50	0.020	20	<10
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	<0.010	<0.100	0.070	0.43	0.50	0.020	<10	<10
22...	--	--	--	--	--	--	--	--
22...	<0.010	<0.100	0.120	0.48	0.60	0.020	20	60
AUG								
26...	<0.010	<0.100	0.030	1.3	1.3	0.020	<10	<10
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.050	0.45	0.50	0.030	<10	10
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.300	1.0	1.3	0.060	30	630

320401097291301 - LAKE WHITNEY SITE P11

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
FEB										
04...	1630	1.00	1940	8.60	14.0	0.50	12.0	120	<1	K1
04...	1631	.90	--	--	--	--	--	--	--	--
04...	1632	10.0	1900	8.60	12.5	--	12.6	121	--	--
04...	1634	20.0	1970	8.30	11.0	--	9.7	90	--	--
04...	1636	28.0	2010	8.10	10.0	--	7.5	68	--	--
APR										
22...	1525	1.00	2650	8.20	21.5	0.82	8.2	95	K2	<1
22...	1526	1.40	--	--	--	--	--	--	--	--
22...	1527	10.0	2650	8.20	20.5	--	7.5	85	--	--
22...	1529	20.0	2650	8.00	20.0	--	5.7	64	--	--
22...	1531	27.0	2650	7.80	18.5	--	3.7	40	--	--
AUG										
26...	1320	1.00	2150	8.00	31.0	0.20	6.5	90	K2	<1
26...	1322	10.0	2150	7.80	30.5	--	5.7	78	--	--
26...	1324	22.0	2180	7.60	30.5	--	3.5	48	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB										
04...	380	240	110	25	250	6	5.8	139	280	400
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	410	270	120	27	270	6	5.8	144	300	420
APR										
22...	510	380	140	40	370	7	6.2	134	390	580
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	510	370	140	40	350	7	6.1	140	380	560
AUG										
26...	460	340	120	38	310	7	5.9	115	300	530
26...	--	--	--	--	--	--	--	--	--	--
26...	460	340	120	38	290	6	5.5	116	300	450

08092500 LAKE WHITNEY NEAR WHITNEY, TX--Continued

320401097291301 - LAKE WHITNEY SITE P11--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB										
04...	4.3	1200	<0.010	<0.100	0.040	0.76	0.80	0.020	8	10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.020	0.38	0.40	0.020	<10	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	5.6	1200	<0.010	0.100	0.080	0.36	0.44	0.050	20	10
APR										
22...	4.0	1600	<0.010	<0.100	0.040	0.46	0.50	0.020	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	<0.100	0.040	0.46	0.50	0.020	<10	<10
22...	--	--	<0.010	<0.100	0.080	0.42	0.50	0.020	20	<10
22...	0.5	1600	0.010	<0.100	0.130	0.47	0.60	0.030	20	40
AUG										
26...	9.4	1400	<0.010	<0.100	0.040	0.96	1.0	0.060	<10	<10
26...	--	--	<0.010	<0.100	0.050	0.85	0.90	0.070	<10	20
26...	9.8	1300	<0.010	<0.100	0.110	0.89	1.0	0.090	30	170

315500097204001 - LAKE WHITNEY SITE P15

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB								
04...	1235	1.00	2310	8.60	13.0	1.20	11.5	112
04...	1237	10.0	2310	8.50	11.5	--	11.2	105
04...	1239	24.0	2310	8.30	10.5	--	9.9	91
APR								
22...	1125	1.00	2170	8.30	16.5	1.60	8.3	87
22...	1127	10.0	2170	8.30	16.0	--	8.2	85
22...	1129	20.0	2170	8.30	16.0	--	8.2	85
22...	1131	25.0	2170	8.30	16.0	--	8.1	84
AUG								
26...	1005	1.00	1980	8.20	29.5	1.30	7.0	94
26...	1007	10.0	1980	8.20	29.5	--	6.9	93
26...	1009	21.0	1980	8.10	29.0	--	6.2	83

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB								
04...	<0.010	<0.100	0.060	0.44	0.50	0.050	<10	<10
04...	<0.010	<0.100	0.050	0.45	0.50	0.190	<10	<10
04...	<0.010	<0.100	0.030	0.27	0.30	0.020	<10	<10
APR								
22...	<0.010	<0.100	0.040	0.56	0.60	0.020	<10	<10
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	<0.010	<0.100	0.070	0.53	0.60	0.020	20	<10
AUG								
26...	<0.010	<0.100	0.030	0.57	0.60	0.030	<10	<10
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.040	0.46	0.50	0.060	20	10

Lake Whitney AC (315203097222601)

Phytoplankton Analyses October 1986 to September 1987

Date	2-4-87
Time	1106
TOTAL CELLS/mL	100,726
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *mirabilis*	57
Ankistrodesmus nannoselene	170
Chlamydomonas sp.	114
Chlorococcum sp.	1363
Crucigenia tetrapedia	9315
Mesotaenium sp.	2954
Oocystis sp.	511
Scenedesmus bijuga	227
Scenedesmus quadricauda	227
Scenedesmus serratus	341
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	1136
Aphanothece saxicola	3749
Aphanothece sp.	4885
Chroococcus dispersus	3522
Dactylococcopsis fascicularis	284
Gomphosphaeria sp.	909
Synechococcus sp.	67706
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	454
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella kutzingiana	17
Cyclotella meneghiniana	58
Cyclotella sp.	2566
Stephanodiscus niagarae	23
Stephanodiscus sp.	23
Order Pennales	
Diploneis sp.	78
Navicula arvensis	5
Navicula minuscula	14
Nitzschia acicularis	9
Nitzschia palea	9

Lake Whitney P11 (320401097291301)

Phytoplankton Analyses October 1986 to September 1987

Date	2-4-87
Time	1631
TOTAL CELLS/mL	54,826
NUMBER OF SPECIES	46
DEPTH COLLECTED (ft.)	

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	114
Chlamydomonas sp. 1	454
Chlamydomonas sp. 2	454
Chlorococcum sp.	227
Chodatella longiseta	114
Coelastrum sp.	454
Crucigenia sp.	114
Dictyosphaerium pulchellum	1363
Dunaliella ? sp.	568
Kirchneriella lunaris	454
Mesotaenium sp.	57
Oocystis sp.	114
Scenedesmus quadricauda	227
Tetraedron trigonum	114
Tetrastrum heteracanthum	454
CHRYSOPHYTA (golden-brown algae)	
Kephyrion sp.	341
CYANOPHYTA (blue-green algae)	
Anabaena sp.	454
Aphanocapsa delicatissima	6362
Aphanothece saxicola	6362
Chroococcus dispersus	2045
Chroococcus multicoloratus	1363
Chroococcus pallidus	1363
Chroococcus varius	2272
Dactylococcopsis fascicularis	1250
Dactylococcopsis smithii ?	114
Oscillatoria subtilissima	568
Synechococcus sp.	13859
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	114
Euglena sp.	227
Trachelomonas volvocina	114
Trachelomonas sp.	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	10110
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	80
Cyclotella sp.	423
Rhizosolenia longiseta	795
Stephanodiscus hantzschii var. *pusilus*	107
Stephanodiscus niagarae	27
Order Pennales	
Diploneis sp.	324
Navicula minuscula	22
Nitzschia acicularis	108
Nitzschia palea	86
Nitzschia paleacea	367
Nitzschia thermalis	65
Surirella ovalis var. *pyriformis*	22
Synedra fasciculata	43
Synedra ulna	43

Lake Whitney AC (315203097222601)

Phytoplankton Analyses October 1986 to September 1987

Date	4-22-87
Time	0951
TOTAL CELLS/mL	18,075
NUMBER OF SPECIES	20
DEPTH COLLECTED (ft.)	3.6

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlorella sp.	1363
Chlorococcum humicola	682
Crucigenia tetrapedia	909
Kirchneriella sp.	454
Mesotaenium sp.	1363
Scenedesmus bijuga	226
Scenedesmus quadricauda	454
Tetrastrum heteracanthum	454
CYANOPHYTA (blue-green algae)	
Aphanothece saxicola	9088
Chroococcus dispersus	795
Chroococcus pallidus	568
Dactylococcopsis acicularis	114
Dactylococcopsis fascicularis	341
Synechococcus sp.	341
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	682
Cyclotella stelligera	28
Stephanodiscus dubius	114
Order Pennales	
Navicula cryptocephala	14
Navicula heufleri	57
Nitzschia palea	28

Lake Whitney P-11 (320401097291301)

Phytoplankton Analyses October 1986 to September 1987

Date	4-22-87
Time	1526
TOTAL CELLS/mL	267,328
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	1.4

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	682
Ankistrodesmus falcatus var. *mirabilis*	114
Ankistrodesmus nannoselene	114
Carteria sp.	114
Chlamydomonas sp.	341
Chlorella sp.	1590
Crucigenia quadrata	454
Kirchneriella lunaris	2045
Kirchneriella sp.	114
Mesotaenium sp.	3522
Oocystis lacustris	114
Oocystis sp.	1477
Scenedesmus bijuga	114
Scenedesmus quadricauda	1590
Tetraedron minimum	454
CHRYSOPHYTA (golden-brown algae)	
Kephyrion sp.	114
CYANOPHYTA (blue-green algae)	
Anabaena sp.	28
Aphanocapsa delicatissima	17722
Aphanothece saxicola	143136
Chroococcus multicoloratus	227
Chroococcus pallidus	12269
Dactylococcopsis acicularis	341
Dactylococcopsis fascicularis	4544
Oscillatoria subtilissima	341
Synechococcus sp.	70886
EUGLENOPHYTA (euglenoid algae)	
Phacus lemmermannii	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Rhizosolenia longiseta	3744
Stephanodiscus dubius	795
Order Pennales	
Diploneis sp.	114
Nitzschia palea	114

Lake Whitney AC (315203097222601)

Phytoplankton Analyses October 1986 to September 1987

Date	8-26-87
Time	0901
TOTAL CELLS/mL	231,859
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	4.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	227
Chlamydomonas sp. 1	114
Chlamydomonas sp. 2	57
Chlorococcum sp.	114
Coelastrum	227
Cosmarium sp.	341
Crucigenia tetrapedia	454
Gloeocystis sp.	341
Planktosphaeria sp.	3067
Scenedesmus serratus	227
Scenedesmus sp.	454
Tetraedron minimum	341
CYANOPHYTA (Blue-green algae)	
Anabaenopsis circularis	1590
Anabaenopsis phillippinensis	14541
Aphanocapsa delicatissima	19994
Aphanothece sp.	20562
Chroococcus limneticus	682
Chroococcus multicoloratus	2840
Chroococcus pallidus	682
Chroococcus varius	7270
Dactylococcopsis fascicularis	3976
Lyngbya limnetica	66683
Merismopedia sp.	2954
Microcystis marina	5680
Oscillatoria angustissima	18176
Oscillatoria limnetica	11587
Oscillatoria subtilissima	29763
Pseudanabaena catenata	16018
Synechococcus lineare	454
Synechococcus sp.	114
Synechocystis sp.	341
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Chaetoceros sp.	795
Cyclotella meneghiniana	341
Rhizosolenia longiseta	114
Order Pennales	
Diploneis sp.	227
Synedra ulna	454

Lake Whitney P11 (320401097291301)

Phytoplankton Analyses October 1986 to September 1987

Date	8-26-87
Time	1321
TOTAL CELLS/mL	576,123
NUMBER OF SPECIES	53
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	568
Carteria sp.	454
Chlamydomonas sp. 1	227
Chlorococcum sp.	568
Chlorogonium sp.	341
Crucigenia apiculata	1363
Crucigenia tetrapedia	909
Franceia sp.	341
Pediastrum boryanum	2954
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus bijuga	454
Scenedesmus dimorphus	454
Scenedesmus quadricauda	227
Scenedesmus serratus	227
Schroederia setigera	114
Tetraedron minimum	568
CYANOPHYTA (Blue-green algae)	
Anabaenopsis circularis	2726
Anabaenopsis phillippinensis	29082
Aphanocapsa delicatissima	29990
Aphanocapsa elachista	8179
Aphanothece sp.	70432
Chroococcus limneticus	4998
Chroococcus multicoloratus	227
Chroococcus varius	13632
Chroococcus sp.	1363
Dactylococcopsis fascicularis	17722
Gloeocapsa sp.	3635
Lyngbya limnetica	178352
Merismopedia tenuissima	1818
Microcystis marina	34534
Oscillatoria angustissima	37715
Oscillatoria limnetica	18176
Oscillatoria subtilissima	14314
Pseudanabaena catenata	85200
Spirulina sp.	227
Synechococcus lineare	7498
Synechococcus sp.	57
EUGLENOPHYTA (Euglenoids)	
Trachelomonas sp.	114
Trachelomonas volvocina	114
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium sp.	114
Peridinium sp.	454
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Chaetoceros sp.	682
Cyclotella meneghiniana	795
Cyclotella stelligera	636
Rhizosolenia longiseta	2272
Stephanodiscus sp.	159
Order Pennales	
Diploneis sp.	114
Nitzschia acicularis	68
Nitzschia gracilis	34
Nitzschia palea	341
Nitzschia paleacea	171
Synedra ulna	68

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX

LOCATION.--Lat 31°52'00", long 97°22'00", Hill County, Hydrologic Unit 12060202, immediately below Whitney Dam, 3.4 mi upstream from gaging station near Whitney, 4.0 mi upstream from Iron Creek, and 7.4 mi southwest of Whitney.

DRAINAGE AREA.--27,189 mi², of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: August 1946 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to current year.
WATER TEMPERATURE: October 1947 to current year.

INSTRUMENTATION.--From July 1953 to September 1966, water temperature was continuously recorded at this station.

REMARKS.--Records of discharge are given for gaging station 08093100. No appreciable inflow between dam and gaging station except during periods of heavy local rains. 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, 3,620 microsiemens Aug. 24, 1978; minimum daily, 203 microsiemens May 23, 1952.
WATER TEMPERATURES: Maximum daily, 33.5°C July 3, 1973; minimum daily, 0.0°C Jan. 28, 29, 1948.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,580 microsiemens Oct. 22, 23; minimum daily, 1,950 microsiemens on several days during August.
WATER TEMPERATURE: Maximum daily, 27°C July 19, 24; minimum daily, 8.0°C Jan. 26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 28...	1025	3610	2380	370	270	100	28	340
JAN 27...	1515	1110	2360	410	310	120	28	330
MAR 17...	1135	2420	2180	380	270	110	26	300
MAY 05...	0955	644	2200	420	290	120	30	290
JUN 23...	1000	16900	2030	400	280	110	30	270
AUG 12...	1053	1010	1930	370	250	100	30	260

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 28...	8	6.9	95	290	530	0.40	6.2	1400
JAN 27...	7	6.5	106	290	530	0.30	5.6	1400
MAR 17...	7	5.8	107	280	480	0.40	5.4	1300
MAY 05...	6	6.3	133	270	450	0.30	5.6	1300
JUN 23...	6	6.1	120	270	430	0.30	3.8	1200
AUG 12...	6	6.5	119	250	420	0.50	7.1	1100

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	176750	2100	1200	573000	460	220100	240	112200	380
NOV.	1986	48374	2300	1320	172000	510	67200	260	34000	400
DEC.	1986	60383	2360	1360	221000	530	86700	270	43900	410
JAN.	1987	48535	2390	1370	180000	540	70600	270	35700	410
FEB.	1987	64370	2370	1360	237000	530	92800	270	46900	410
MAR.	1987	152320	2330	1340	549000	520	214400	260	108600	410
APR.	1987	112530	2170	1240	377000	480	145500	240	74000	390
MAY	1987	45505	2200	1260	155000	490	59900	250	30500	390
JUNE	1987	336450	2140	1220	1112000	470	428000	240	217900	380
JULY	1987	49220	2000	1140	152000	430	57700	220	29500	360
AUG.	1987	28145	1960	1120	84800	420	32200	220	16500	360
SEPT	1987	16864	1990	1130	51500	430	19600	220	10000	360
TOTAL		1139446	**	**	3865000	**	1495000	**	760000	**
WTD.AVG.		3122	2200	1260	**	490	**	250	**	390

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2040	2390	2330	2370	2370	2380	2170	2160	2170	2030	1960	1980
2	2040	2340	2340	2380	2380	2380	2170	2170	2180	2000	1950	1980
3	2050	2290	2340	2390	2380	2380	2180	2090	2190	2010	1950	1980
4	2040	2340	2350	2380	2380	2380	2180	2150	2190	2020	1950	1980
5	2030	2270	2350	2390	2390	2370	2200	2180	2210	2020	1960	1980
6	2030	2290	2360	2390	2380	2370	2190	2190	2220	2010	1950	1980
7	2030	2280	2360	2390	2380	2370	2180	2190	2230	2030	1950	1980
8	2030	2270	2360	2390	2380	2340	2180	2210	2210	2030	1950	1980
9	2020	2270	2360	2390	2380	2340	2180	2200	2220	2030	1960	1980
10	2020	2270	2360	2390	2380	2300	2180	2200	2200	2030	1970	1980
11	2020	2280	2370	2380	2380	2300	2180	2200	2190	2030	1970	1990
12	2000	2280	2360	2390	2380	2300	2190	2200	2180	2020	1960	1990
13	2000	2280	2360	2390	2380	2290	2170	2210	2170	2000	1960	1990
14	1990	2280	2360	2390	2380	2320	2170	2200	2180	1960	1960	1990
15	1990	2280	2360	2390	2380	2310	2170	2200	2170	1990	1960	1990
16	2000	2280	2370	2390	2380	2320	2160	2200	2170	1990	1970	1990
17	2040	2280	2380	2400	2360	2280	2160	2200	2160	1990	1970	1990
18	2170	2320	2380	2370	2360	2300	2160	2200	2150	2030	1960	1990
19	2250	2320	2370	2390	2360	2270	2160	2190	2140	1970	1960	1990
20	2360	2320	2370	2390	2360	2270	2150	2120	2120	1970	1960	1990
21	2450	2330	2380	2400	2370	2270	2150	2190	2090	1960	1960	1990
22	2580	2400	2390	2400	2360	2260	2160	2190	2080	1960	1960	2000
23	2580	2350	2360	2390	2370	2250	2160	2200	2050	1960	1960	2000
24	2280	2300	2370	2390	2360	2260	2160	2060	2030	1970	1970	2000
25	2300	2300	2360	2390	2360	2250	2160	2200	2000	1970	1970	2000
26	2240	2300	2370	2390	2360	2240	2160	2210	2030	1960	1960	2000
27	2330	2310	2370	2400	2360	2240	2150	2230	2000	1960	1970	2000
28	2390	2310	2370	2390	2350	2240	2160	2230	2020	1960	1970	2000
29	2400	2320	2370	2390	---	2240	2160	2220	2020	1970	1980	2000
30	2350	2320	2370	2400	---	2240	2160	2220	2030	1960	1980	2000
31	2390	---	2370	2400	---	2230	---	2230	---	1960	1980	---
MEAN	2180	2310	2360	2390	2370	2300	2170	2190	2130	1990	1960	1990

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	20.0	13.0	11.0	10.0	11.0	13.0	17.0	20.0	25.0	25.0	
2	25.0	20.0	13.0	10.0	10.0	11.0	13.0	17.0	21.0	25.0	25.0	
3	25.0	20.0	13.0	11.0	10.0	11.0	13.0	17.0	22.0	25.0	26.0	
4	25.0	20.0	13.0	10.0	10.0	12.0	13.0	16.0	22.0	25.0	26.0	
5	24.0	19.0	13.0	10.0	10.0	11.0	13.0	17.0	23.0	25.0	26.0	
6	24.0	19.0	14.0	10.0	10.0	11.0	13.0	17.0	23.0	26.0	26.0	
7	24.0	19.0	14.0	10.0	11.0	12.0	13.0	17.0	23.0	25.0	26.0	
8	24.0	20.0	13.0	10.0	10.0	11.0	13.0	17.0	23.0	24.0	25.0	
9	24.0	19.0	13.0	10.0	10.0	12.0	13.0	16.0	23.0	25.0	25.0	
10	24.0	19.0	12.0	11.0	10.0	13.0	14.0	16.0	23.0	25.0	26.0	
11	24.0	17.0	12.0	10.0	11.0	12.0	14.0	18.0	24.0	25.0	26.0	
12	22.0	17.0	12.0	10.0	11.0	12.0	15.0	17.0	24.0	25.0	26.0	
13	20.0	16.0	12.0	10.0	12.0	12.0	14.0	17.0	23.0	26.0	26.0	
14	22.0	15.0	12.0	10.0	11.0	12.0	15.0	17.0	23.0	26.0	26.0	
15	21.0	16.0	12.0	10.0	11.0	12.0	15.0	18.0	24.0	25.0	25.0	
16	21.0	17.0	12.0	10.0	11.0	12.0	15.0	17.0	24.0	26.0	25.0	
17	22.0	16.0	12.0	10.0	10.0	12.0	15.0	17.0	24.0	25.0	26.0	
18	21.0	16.0	11.0	10.0	10.0	12.0	16.0	18.0	24.0	25.0	26.0	
19	20.0	16.0	12.0	10.0	10.0	13.0	16.0	18.0	24.0	27.0	26.0	
20	20.0	15.5	12.0	9.0	10.0	13.0	16.0	17.0	24.0	26.0	26.0	
21	20.0	15.5	11.0	9.0	---	14.0	16.0	18.0	24.0	26.0	26.0	
22	20.0	15.5	11.0	9.0	11.0	15.0	16.0	18.0	25.0	26.0	25.0	
23	21.0	15.0	11.0	9.0	10.0	15.0	16.0	18.0	25.0	26.0	25.0	
24	20.0	14.0	11.0	10.0	10.0	13.0	16.0	18.0	25.0	27.0	26.0	
25	20.0	15.0	11.0	10.0	11.0	14.0	16.0	18.0	26.0	25.0	26.0	
26	20.0	14.0	11.0	8.0	11.0	14.0	16.0	18.0	26.0	25.0	26.0	
27	20.0	15.0	11.0	9.0	11.0	14.0	16.0	19.0	25.0	26.0	26.0	
28	20.0	---	11.0	9.0	11.0	15.0	16.0	19.0	25.0	25.0	26.0	
29	20.0	14.0	11.0	9.0	---	12.0	16.0	19.0	25.0	26.0	25.0	
30	20.0	14.0	11.0	9.0	---	12.0	11.0	19.0	25.0	26.0	25.0	
31	20.0	---	10.0	10.0	---	13.0	---	20.0	---	26.0	26.0	
MEAN	22.0	17.0	12.0	10.0	10.5	12.5	14.5	17.5	23.5	25.5	25.5	

08093100 BRAZOS RIVER NEAR AQUILLA, TX

LOCATION.--Lat 31°48'44", long 97°17'51", Bosque County, Hydrologic Unit 12060202, on right bank at downstream side of highway embankment near right end of bridge on Farm Road 2114, 2.0 mi downstream from Tener Creek, 4.9 mi downstream from Iron Creek, 5.4 mi southwest of Aquilla, 9.0 mi downstream from Whitney Dam, and at mile 434.0.

DRAINAGE AREA.--27,244 mi², of which 9,566 mi², probably is noncontributing.

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1974, published as Brazos River near Whitney.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 404.29 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1948, nonrecording gage at site 13.9 mi upstream at datum 27.77 ft higher. Oct. 1, 1948, of Feb. 12, 1975, at site 5.6 mi upstream at datum 13.10 ft higher.

REMARKS.--No estimated daily discharges. Records good. Most of flow is released from Lake Whitney (station 08092500). The Brazos River at Whitney Dam (station 08092600) uses the discharge record at this station for publication of water quality records. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1939-51) prior to regulation by Lake Whitney, 1,802 ft³/s (1,306,000 acre-ft/yr); 36 years (water-years 1952-87) regulated, unadjusted, 1,432 ft³/s (1,037,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft³/s May 18, 1949 (gage height, 31.03 ft), at site and datum then in use (Oct. 1, 1948, to Feb. 12, 1975); minimum daily, 0.4 ft³/s May 9, 1953. Maximum discharge since construction of Whitney Dam in 1951, 58,200 ft³/s May 28, 1957 (gage height, 27.34 ft), at site and datum in use Oct. 1 1948, to Feb. 12, 1975).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1853, 45 ft May 9, 1922, at site and datum in use Oct. 1, 1948, to Feb. 12, 1975, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,500 ft³/s June 12 at 1430 hours (gage height, 18.38 ft); minimum daily, 31 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	2310	1210	2370	2400	2580	2320	623	5670	816	793	739
2	1430	2310	2350	2350	2390	2600	2330	770	10100	4490	763	1400
3	1470	2310	2360	1330	2400	6120	2320	633	14200	4520	795	805
4	2590	2350	2350	1220	2400	11600	2340	634	13700	4500	833	607
5	2630	2320	2350	1210	2400	11600	2370	669	13700	4480	782	585
6	2850	2300	1230	2340	2410	12300	2960	617	13800	4400	819	599
7	3410	2310	913	2340	2400	13400	4580	576	13900	2300	878	177
8	7830	2310	1040	2330	2390	13400	6000	594	13900	2270	804	465
9	10400	2300	2270	2370	1720	10900	6000	609	14100	830	814	591
10	11300	2300	990	2350	360	5680	6690	604	14300	2250	819	605
11	12800	2300	1630	2330	1200	5520	7920	860	14700	843	805	606
12	12800	2290	2380	1880	2400	5640	7920	963	15800	829	1010	609
13	12400	1720	1410	154	2420	4800	7900	972	13900	2250	1020	616
14	12400	1720	1270	134	2430	3490	6390	976	8090	823	1030	619
15	12300	1360	1350	136	2440	3490	4450	943	7340	808	1070	602
16	12200	1170	1740	140	2430	2890	4390	916	5410	806	1280	614
17	9010	1420	1830	147	2430	2330	4490	817	5300	837	923	629
18	4940	936	1920	260	2420	2760	3370	1370	8050	733	1150	637
19	4910	1170	1840	178	2410	3470	3430	898	13300	926	1040	184
20	4880	1250	1830	877	2460	2930	2720	1020	15100	820	1050	32
21	3650	1170	1830	2350	2440	2240	2320	933	14800	813	1050	439
22	2370	396	2050	2340	2450	2250	2320	1010	15800	808	1050	597
23	2810	120	2890	2340	2440	2270	2320	978	17300	905	1070	563
24	2520	732	2480	2350	2470	2240	2310	1040	17000	784	1040	828
25	2410	1470	2440	2320	2470	2160	2320	1040	12100	777	1070	818
26	2400	1220	2430	1400	2570	2250	2280	1440	5840	768	1050	222
27	2680	1200	2420	419	2540	2260	2300	4460	5760	768	344	31
28	3660	1190	2410	2330	2680	2280	2290	4510	5700	772	728	418
29	3630	1200	2400	2350	---	2290	2280	4800	5450	779	1000	619
30	3610	1220	2390	1520	---	2290	900	4590	2340	768	684	608
31	3000	---	2380	2370	---	2290	---	4640	---	747	581	---
TOTAL	176750	48374	60383	48535	64370	152320	112530	45505	336450	49220	28145	16864
MEAN	5702	1612	1948	1566	2299	4914	3751	1468	11210	1588	908	562
MAX	12800	2350	2890	2370	2680	13400	7920	4800	17300	4520	1280	1400
MIN	1430	120	913	134	360	2160	900	576	2340	733	344	31
AC-FT	350600	95950	119800	96270	127700	302100	223200	90260	667300	97630	55830	33450

CAL YR 1986 TOTAL 554555 MEAN 1519 MAX 12800 MIN 44 AC-FT 1100000
WTR YR 1987 TOTAL 1139450 MEAN 3122 MAX 17300 MIN 31 AC-FT 2260000

08093160 AQUILLA CREEK NEAR PEORIA, TX
RECONNAISSANCE PARTIAL-RECORD STATION

LOCATION.--Lat 31°58'40", long 97°14'44", Hill County, Hydrologic Unit 12060202, at bridge on State Highway 22 and 1.4 mi west of Peoria.

DRAINAGE AREA.--83.8 mi².

PERIOD OF RECORD.--Periodic discharge measurements: October 1983 to September 1984.
Chemical and biochemical analyses: October 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 29...	0840	0.85	656	7.80	16.0	38	4.6	7.0	72	1.4	260	86
DEC 10...	0930	1.9	1020	7.90	8.0	13	0.10	9.4	80	1.0	410	170
JAN 27...	1345	2.5	1190	8.00	8.0	10	5.1	11.5	99	0.7	470	200
MAR 16...	0815	4.8	1370	7.90	15.5	14	7.0	8.2	85	0.2	540	240
MAY 05...	0845	27	471	7.70	18.5	55	480	7.7	85	3.7	170	80
JUN 11...	1236	829	260	7.70	23.0	140	210	5.5	66	--	110	15

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 WH WAT TOTAL 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...	96	5.0	38	1	4.9	174	120	28	0.50	16	410
DEC 10...	150	8.0	77	2	4.5	235	260	51	0.70	6.0	700
JAN 27...	170	12	85	2	3.1	279	280	60	0.60	6.5	780
MAR 16...	190	17	100	2	3.9	303	320	90	0.60	6.9	910
MAY 05...	61	3.2	28	1	5.2	86	110	19	0.50	9.9	290
JUN 11...	39	2.3	14	0.6	5.8	92	35	11	0.30	15	180

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 29...	5	<1	4.35	0.050	4.40	0.030	1.1	1.1	0.080	4.0	--
DEC 10...	6	4	1.45	0.050	1.50	0.040	0.76	0.80	0.020	7.6	--
JAN 27...	3	<1	2.38	0.020	2.40	0.040	0.76	0.80	0.010	--	1
MAR 16...	14	14	--	<0.010	0.800	0.070	0.43	0.50	0.030	5.5	--
MAY 05...	992	176	4.76	0.240	5.00	0.130	3.6	3.7	0.800	37	4
JUN 11...	374	53	0.530	0.070	0.600	0.110	3.1	3.2	0.290	32	--

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 29...	--	--	--	--	--	--	--	--	--	--	--
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
JAN 27...	91	<1	<10	2	15	<5	120	<0.1	1	<1	10
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	52	<1	<10	3	43	<5	1	0.1	<1	<1	<3
JUN 11...	--	--	--	--	--	--	--	--	--	--	--

08093250 HACKBERRY CREEK AT HILLBORO, TX

LOCATION.--Lat 32°00'20", long 97°08'59", Hill County, Hydrologic Unit 12060202, at downstream side of highway embankment near right end of bridge on State Highway 22, 0.1 mi upstream from Little Hackberry Creek, and 1.2 mi west of county courthouse in Hillsboro.

DRAINAGE AREA.--57.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 546.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known diversions above station.

AVERAGE DISCHARGE.--8 years (water years 1980-87), 22.5 ft³/s (16,300 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,050 ft³/s June 16, 1981 (gage height, 18.95 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1936, 18.3 ft September 1936, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	1400	1,880	14.73	June 15	1930	1,210	13.63
June 11	0620	1,690	14.50	June 18	1500	2,160	14.60
June 13	0100	*2,740	*15.01	June 20	1500	880	13.08
June 13	2100	1,300	13.75				

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.9	7.9	14	10	e200	13	1.7	26	1.9	.0	.0
2	.00	1.9	6.4	12	12	e80	12	1.3	14	2.2	.00	.0
3	.00	1.9	5.1	12	9.3	e35	10	e10	22	4.4	.00	.0
4	.00	5.1	4.1	11	8.5	e20	10	e110	104	2.6	.00	.0
5	.00	8.7	3.9	9.7	7.8	e16	10	e20	19	1.2	.00	.0
6	33	3.7	4.3	10	11	e13	13	9.0	8.1	.63	.00	.0
7	121	2.8	8.0	9.8	13	e11	13	4.6	5.0	.37	.00	29
8	50	2.7	10	9.4	9.6	e9.0	12	5.5	21	.24	.00	41
9	19	2.6	6.9	77	7.4	e8.0	11	24	114	.18	.00	9.9
10	7.3	2.4	5.3	34	6.4	e30	9.4	7.4	411	.34	.00	13
11	3.9	4.4	4.4	16	5.8	e17	8.1	3.6	1110	.23	.0	3.9
12	186	3.9	5.7	13	6.6	e11	7.5	6.0	483	.14	.00	2.8
13	22	3.3	6.6	12	6.7	e9.0	9.5	23	1330	.06	.00	43
14	9.2	2.9	18	12	6.9	e8.0	7.9	4.5	505	.02	.00	19
15	5.4	2.7	e162	12	19	e10	6.3	130	450	.0	.00	5.2
16	4.0	2.9	42	11	14	14	4.7	e166	208	.0	.00	2.5
17	3.0	3.2	26	22	8.8	e200	4.7	27	46	.00	.0	1.1
18	2.7	2.7	e173	e163	6.7	e70	4.3	7.8	851	.06	.0	1.1
19	2.5	2.5	59	e174	5.8	e30	3.9	50	92	.03	.0	1.2
20	2.1	2.4	29	e50	e350	e15	3.5	e111	413	.0	.0	.62
21	1.9	2.2	21	28	e150	e11	3.2	14	105	.0	.0	.39
22	2.0	8.8	e101	22	e55	16	3.6	5.4	43	.0	.0	.27
23	157	6.1	e119	19	e20	14	3.7	2.6	26	.0	.0	.21
24	195	3.9	e92	17	e18	e13	3.6	3.3	18	.00	.0	.15
25	35	176	52	15	e25	11	3.3	3.3	13	.00	.0	.13
26	13	67	32	13	e250	e9.0	3.2	2.0	8.2	.00	.01	.10
27	7.0	23	25	12	e90	e8.5	2.6	1.2	5.6	.0	.01	.10
28	4.6	13	21	12	e500	11	2.7	64	3.9	.0	.0	.11
29	3.3	9.7	19	13	---	12	2.1	1250	2.8	.0	.0	.08
30	2.7	9.0	17	11	---	12	2.0	232	2.3	.01	.0	.01
31	2.2	---	15	9.1	---	13	---	77	---	.00	.0	---
TOTAL	894.80	383.3	1101.6	855.0	1633.3	936.5	203.8	2377.2	6459.9	14.61	.02	174.87
MEAN	28.9	12.8	35.5	27.6	58.3	30.2	6.79	76.7	215	.47	.00	5.83
MAX	195	176	173	174	500	200	13	1250	1330	4.4	.01	43
MIN	.00	1.9	3.9	9.1	5.8	8.0	2.0	1.2	2.3	.00	.00	.00
AC-FT	1770	760	2190	1700	3240	1860	404	4720	12810	29	.0	347
CFSM	.50	.22	.61	.48	1.01	.52	.12	1.32	3.72	.0	.0	.10
IN.	.57	.25	.71	.55	1.05	.60	.13	1.53	4.15	.0	.0	.11

CAL YR 1986 TOTAL 7445.12 MEAN 20.4 MAX 1160 MIN .00 AC-FT 14770 CFSM .35 IN. 4.78
WTR YR 1987 TOTAL 15034.84 MEAN 41.2 MAX 1330 MIN .00 AC-FT 29820 CFSM .71 IN. 9.66

e Estimated.

08093250 HACKBERRY CREEK AT HILLBORO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 27...	1440	7.0	652	8.10	20.0	28	40	8.6	97	1.0	220	79
DEC 11...	1010	4.5	821	8.10	5.0	7	5.0	12.0	96	1.2	290	95
JAN 27...	1010	12	783	8.20	7.0	7	16	12.0	101	0.8	290	96
MAR 16...	1055	14	808	8.10	17.0	4	25	9.6	103	0.4	290	98
MAY 05...	1405	25	591	7.80	21.0	32	150	7.4	86	2.3	200	100
JUN 11...	1500	928	408	7.60	25.0	55	130	6.2	77	--	150	21

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 27...	84	3.2	40	1	4.4	144	130	19	0.70	12	380
DEC 11...	110	4.5	67	2	3.8	198	190	35	0.70	4.2	530
JAN 27...	110	4.0	51	1	2.5	195	170	28	0.60	3.5	490
MAR 16...	110	4.2	57	2	2.6	194	180	30	0.60	4.2	500
MAY 05...	75	2.8	41	1	3.8	98	130	25	0.60	9.0	350
JUN 11...	55	2.2	25	0.9	5.4	125	55	14	0.40	19	250

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 27...	84	16	3.26	0.040	3.30	0.030	0.97	1.0	0.110	7.7	--
DEC 11...	11	<1	3.08	0.020	3.10	0.030	0.57	0.60	0.090	6.4	--
JAN 27...	15	10	3.78	0.020	3.80	0.020	0.78	0.80	0.090	1.3	2
MAR 16...	55	22	2.97	0.030	3.00	0.040	0.76	0.80	0.170	4.6	--
MAY 05...	216	44	6.93	0.270	7.20	0.120	3.2	3.3	0.240	14	6
JUN 11...	227	41	1.06	0.040	1.10	0.050	1.5	1.5	0.130	11	--

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 27...	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
JAN 27...	53	<1	<10	1	11	<5	24	<0.1	1	<1	8
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	47	<1	20	7	24	<5	6	0.1	<1	<1	<3
JUN 11...	--	--	--	--	--	--	--	--	--	--	--

08093260 HACKBERRY CREEK BELOW HILLSBORO, TX
(Low-flow partial-record station)

LOCATION.--Lat 31°59'43", long 97°08'38", Hill County, Hydrologic Unit 12060202, at abandoned steel truss bridge on county road, 0.7 mi downstream from Little Hackberry Creek, 0.8 mi downstream from State Highway 22, and 1.4 mi southwest of county courthouse in Hillsboro.

DRAINAGE AREA.--86.8 mi².

PERIOD OF RECORD.--Periodic discharge measurements: October 1979 to current year. Chemical and biochemical analyses: October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 28...	0900	5.2	670	8.00	15.0	17	32	8.5	86	1.0	230	81
DEC 11...	1230	5.5	853	7.90	7.0	9	8.2	11.3	95	1.0	270	86
JAN 26...	1300	15	769	8.10	8.0	7	12	11.6	100	0.8	290	110
MAR 16...	1435	16	780	8.00	17.0	12	22	9.1	97	2.1	290	100
MAY 06...	0845	12	674	7.90	20.0	35	83	7.4	83	1.5	220	98
JUN 24...	1100	26	645	7.80	27.5	16	36	7.6	98	2.6	260	59

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 WH WAT TOTAL 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 28...	86	3.5	47	1	7.1	148	150	27	0.70	11	420
DEC 11...	100	4.5	70	2	6.8	182	170	48	0.60	5.7	510
JAN 26...	110	4.2	50	1	4.1	187	150	40	0.50	4.4	480
MAR 16...	110	4.7	56	1	4.3	191	160	35	0.50	4.9	490
MAY 06...	83	3.4	48	1	6.8	123	150	32	0.50	8.7	410
JUN 24...	100	3.6	34	1	4.1	206	110	20	0.30	12	410

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 28...	48	10	3.66	0.040	3.70	0.050	1.2	1.2	0.560	7.0	--
DEC 11...	12	<1	3.85	0.050	3.90	0.220	1.5	1.7	2.30	7.2	--
JAN 26...	12	<1	4.08	0.020	4.10	0.040	0.96	1.0	0.660	4.5	2
MAR 16...	46	25	2.76	0.040	2.80	0.090	0.71	0.80	0.710	5.8	--
MAY 06...	120	28	5.57	0.230	5.80	0.370	0.93	1.3	0.370	13	5
JUN 24...	62	27	0.780	0.020	0.800	0.110	0.89	1.0	0.280	6.0	4

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	48	<1	<10	1	10	<5	21	<0.1	1	<1	14
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	55	<1	<10	4	18	<5	13	<0.1	<1	<1	<3
JUN 24...	61	<1	<10	1	5	<5	7	<0.1	<1	<1	12

08093350 AQUILLA LAKE ABOVE AQUILLA, TX

LOCATION.--Lat 31°53'59", long 97°12'09", Hill County, Hydrologic Unit 12060202, 450 ft upstream from Farm Road 310 that runs along top of Aquilla Dam on Aquilla Creek, and 3.4 miles north-northeast of Aquilla.

DRAINAGE AREA.--255 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to September 1985.

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

REMARKS.--The lake is formed by an earthfill dam with a crest length of 11,890 ft and a top width of 38.0 ft. A reinforced concrete inlet structure, near center of dam, houses the flood-control gates and operating equipment. Closure of the dam began Mar. 20, 1982, and the dam was completed in January 1983. The dam was built and is owned by the U. S. Army Corps of Engineers. Deliberate impoundment began Apr. 29, 1983. The lake was build for water supply, flood control, and recreation purposes. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-ft)
Top of dam	582.5	-
Spillway crest (uncontrolled)	564.5	213,700
Top of flood-control pool	556.0	146,000
Top of conservation pool	537.5	52,400
Invert, lowest gated outlet	503.0	932

COOPERATION.--Area and capacity tables by the U.S. Army Corps of Engineers. Records of elevations and contents provided by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed contents, 84,200 acre-ft, June 19, 1987 (elevation, 545.51 ft); minimum observed, 4,600 acre-ft Oct. 6-10, 1983 (elevation, 511.31 ft Oct. 6, 7, 9, 10 and 511.30 ft Oct. 8.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 84,200 acre-ft June 19 at 0300 hours (elevation, 545.51 ft); minimum observed, 49,570 acre-ft Sept. 6 at 2400 hours (elevation, 536.63 ft).

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

536.0	47,610	540.0	61,040	544.0	77,250
538.0	54,020	542.0	68,750	546.0	86,560

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51030	53750	53550	55340	53120	60060	52530	52000	60750	57280	51740	49910
2	50900	53320	53490	55140	53090	59620	52530	51970	60490	56240	51640	49850
3	50900	53090	53420	55040	53050	58980	52530	52330	60380	55890	51580	49790
4	50900	53290	53350	54800	53050	58090	52460	53020	60240	55480	51480	49720
5	50930	53190	53250	54590	53090	57210	52530	53150	59700	55070	51450	49660
6	51580	53090	53250	54490	53090	56300	52530	53190	59080	54730	51350	49560
7	52000	53020	53320	54320	52990	55440	52530	53190	58410	54320	51260	51090
8	52160	53020	53320	54120	52990	54560	52530	53550	57810	53950	51160	51710
9	52260	52920	53320	54290	52920	53720	52530	53620	57700	53550	51090	51680
10	52230	52890	53220	54220	52860	53120	52530	53620	60280	53350	51060	51870
11	52460	52720	53190	54060	52860	52790	52460	53580	62110	53220	51260	51900
12	53290	52790	53120	53850	52820	52620	52530	53580	71100	53150	51160	51970
13	53190	52530	53050	53820	52790	52590	52720	53550	78550	53050	51090	52330
14	53190	52460	53320	53790	52790	52560	52590	53490	80460	52950	51000	52390
15	53150	52390	53720	53720	52920	52530	52590	53520	82410	52790	50900	52490
16	53090	52460	53850	53580	52860	52820	52560	53650	83250	52690	50800	52390
17	52990	52460	53850	53690	52760	54390	52530	53690	83400	52660	50710	52430
18	52920	52460	53990	54420	52690	54630	52490	53620	84200	52590	50640	52720
19	52790	52460	53990	54490	52760	54660	52490	53850	82500	52590	50580	52360
20	52720	52460	53920	54390	53950	54390	52460	54020	81940	52530	50480	52590
21	52620	52390	53850	54290	54420	53790	52460	54060	80280	52460	50420	52530
22	52590	52530	54590	54120	54530	53120	52390	53990	78190	52430	50360	52460
23	53720	52590	56240	53950	54460	52660	52360	53990	75920	52360	50290	52390
24	54930	52590	56370	53850	55000	52390	52330	54020	73630	52300	50200	52330
25	54930	53450	56370	53690	55340	52390	52300	53920	71260	52230	50130	52260
26	54900	53650	56270	53520	56720	52390	52260	53790	68920	52160	50070	52200
27	54830	53720	56130	53350	57600	52390	52230	53620	66520	52100	50130	52100
28	54730	53690	55960	53120	60240	52530	52200	54090	64150	52000	50070	52200
29	54660	53650	55820	53150	---	52590	52130	59080	61890	51970	49980	52130
30	54420	53580	55680	53120	---	52490	52030	60710	59660	51870	49940	52070
31	54060	---	55510	53050	---	52530	---	60860	---	51810	49940	---
MAX	54930	53750	56370	55340	60240	60060	52720	60860	84200	57280	51740	52720
MIN	50900	52390	53050	53050	52690	52390	52030	51970	57700	51810	49940	49560
(†)	538.01	537.87	538.44	537.71	539.78	537.55	537.40	539.95	539.62	537.33	536.75	537.41
(ϕ)	+2970	-480	+1930	-2460	+7190	-7710	-500	+8830	-1200	-7850	-1870	+2130

CAL YR 1986 MAX 68150 MIN 49250 (ϕ) +2690
WTR YR 1987 MAX 84200 MIN 49560 (ϕ) +980

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

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

LOCATION.--Lat 31°53'58", long 97°12'26", Hill County, Hydrologic Unit 12060202, at Aquilla Dam on Aquilla Creek at Farm Road 310 and 3.3 mi north-northeast of Aquilla.

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1984 to current year.

315354097125701 - AQUILLA LAKE SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
29...	1021	1.00	392	8.60	9.5	9.2	81
29...	1023	10.0	392	8.60	9.0	9.2	80
29...	1025	20.0	390	8.60	9.0	9.1	80
29...	1027	25.0	390	8.50	9.0	9.1	80
MAY							
06...	1030	1.00	465	8.20	22.0	6.9	79
06...	1032	10.0	465	8.20	22.0	6.9	79
06...	1034	20.0	465	8.20	22.0	6.9	79
AUG							
26...	1124	1.00	400	7.70	29.0	4.3	57
26...	1126	10.0	402	7.60	29.0	3.8	50
26...	1128	23.0	402	7.50	29.0	3.2	42

315358097122601 - AQUILLA LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN										
29...	0936	1.00	397	8.20	9.5	1.00	9.4	83	160	37
29...	0936	1.00	--	--	--	--	--	--	--	--
29...	0939	10.0	394	8.20	9.0	--	9.3	81	--	--
29...	0941	20.0	394	8.10	9.0	--	9.3	81	--	--
29...	0943	30.0	394	8.00	9.0	--	9.2	80	150	0
29...	0945	40.0	394	7.90	9.0	--	9.2	80	--	--
29...	0947	50.0	393	7.70	9.0	--	9.2	80	150	33
MAY										
06...	1002	1.00	466	8.10	22.0	0.90	6.8	78	170	40
06...	1003	1.00	--	--	--	--	--	--	--	--
06...	1004	10.0	466	8.00	21.5	--	6.8	77	--	--
06...	1006	20.0	466	7.80	21.5	--	6.5	74	--	--
06...	1008	25.0	470	7.60	19.5	--	4.6	50	--	--
06...	1010	30.0	472	7.40	18.5	--	2.2	24	--	--
06...	1012	44.0	472	7.40	18.0	--	2.0	21	180	40
AUG										
26...	1034	1.00	398	7.70	29.5	1.20	4.7	62	150	21
26...	1036	10.0	398	7.60	29.0	--	4.5	59	--	--
26...	1038	20.0	398	7.60	28.5	--	4.0	52	--	--
26...	1040	25.0	400	7.50	28.5	--	3.5	46	--	--
26...	1042	30.0	454	7.30	25.0	--	2.2	27	--	--
26...	1044	42.0	482	7.20	24.0	--	2.2	26	180	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WH WAT TOTAL 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)
JAN										
29...	57	3.3	24	0.9	5.8	119	60	22	0.40	5.4
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	55	3.1	23	0.9	5.5	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	55	3.3	23	0.9	5.8	118	59	17	--	5.4
MAY										
06...	62	3.7	28	1	5.6	130	85	18	0.40	0.8
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	64	3.8	27	0.9	5.5	135	83	19	--	3.9
AUG										
26...	53	3.4	23	0.9	5.4	125	39	15	0.40	7.2
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	65	4.2	27	0.9	6.0	200	36	17	--	15

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315358097122601 - AQUILLA LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
29...	250	0.880	0.020	0.900	0.030	0.87	0.90	<0.010	8	3
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	--	0.780	0.020	0.800	0.030	0.77	0.80	0.020	16	6
29...	--	--	--	--	--	--	--	--	--	--
29...	240	0.780	0.020	0.800	0.030	0.77	0.80	0.020	6	10
MAY										
06...	280	1.14	0.060	1.20	0.110	1.3	1.4	0.020	5	6
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	1.13	0.070	1.20	0.120	1.7	1.8	0.020	<10	20
06...	--	--	--	--	--	--	--	--	--	--
06...	--	1.12	0.080	1.20	0.120	1.5	1.6	0.040	20	70
06...	290	0.980	0.120	1.10	0.200	0.90	1.1	0.040	13	200
AUG										
26...	220	--	0.030	<0.100	0.020	0.28	0.30	0.020	11	37
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	0.050	<0.100	0.020	1.2	1.2	<0.010	160	810
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	0.050	<0.100	0.100	0.20	0.30	0.020	20	250
26...	300	--	<0.010	<0.100	2.00	1.7	3.7	0.210	1300	5800

315402097115401 - AQUILLA LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
29...	1011	1.00	393	8.50	9.5	9.3	82
29...	1013	10.0	393	8.40	9.5	9.2	81
29...	1015	20.0	393	8.40	9.5	9.1	80
MAY							
06...	1042	1.00	465	8.30	22.0	6.8	78
06...	1044	10.0	465	8.30	22.0	6.8	78
06...	1046	15.0	465	8.30	22.0	6.8	78
AUG							
26...	1104	1.00	398	7.80	29.5	4.6	61
26...	1106	10.0	398	7.70	29.0	4.4	58
26...	1108	20.0	398	7.70	29.0	4.2	55
26...	1110	25.0	398	7.60	29.0	3.4	45

315601097111501 - AQUILLA LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)
JAN									
29...	1126	1.00	399	8.80	10.0	1.00	9.4	84	0.880
29...	1128	10.0	388	8.80	9.5	--	9.2	81	--
29...	1130	20.0	430	8.70	9.5	--	9.2	81	0.880
29...	1132	30.0	488	8.70	9.5	--	9.0	80	--
29...	1134	38.0	490	8.60	9.5	--	9.0	80	1.76
MAY									
06...	1147	1.00	467	8.20	23.0	1.10	6.5	76	1.05
06...	1149	10.0	469	8.00	21.5	--	5.8	66	--
06...	1151	20.0	472	7.80	20.5	--	3.8	42	1.10
06...	1153	25.0	475	7.80	19.5	--	2.0	22	--
06...	1155	30.0	474	7.80	19.0	--	1.8	19	0.990
06...	1157	38.0	474	8.00	18.5	--	1.8	19	0.990
AUG									
26...	1222	1.00	400	8.20	30.0	0.90	5.4	72	--
26...	1224	10.0	400	8.10	30.0	--	5.4	72	--
26...	1226	20.0	400	8.10	29.5	--	5.3	70	--
26...	1228	25.0	414	7.80	29.5	--	3.7	49	--
26...	1230	30.0	414	7.70	29.5	--	2.0	27	--
26...	1232	36.0	426	7.60	29.5	--	1.9	25	--

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315601097111501 - AQUILLA LAKE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN								
29...	0.020	0.900	0.020	1.2	1.2	<0.010	20	<10
29...	--	--	--	--	--	--	--	--
29...	0.020	0.900	0.030	1.1	1.1	0.130	20	<10
29...	--	--	--	--	--	--	--	--
29...	0.040	1.80	0.040	1.3	1.3	0.030	20	<10
MAY								
06...	0.050	1.10	0.100	0.90	1.0	0.020	<10	10
06...	--	--	--	--	--	--	--	--
06...	0.100	1.20	0.200	1.1	1.3	0.040	<10	80
06...	--	--	--	--	--	--	--	--
06...	0.110	1.10	0.180	0.92	1.1	0.040	20	220
06...	0.110	1.10	0.170	1.4	1.6	0.060	20	260
AUG								
26...	<0.010	<0.100	0.030	0.77	0.80	<0.010	20	40
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	<0.010	--	0.40	0.030	10	70
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.420	1.3	1.7	0.030	190	420
26...	<0.010	<0.100	0.570	1.3	1.9	0.030	910	600

315649097103701 - AQUILLA LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN										
29...	1146	1.00	449	9.00	11.5	1.00	10.3	95	170	38
29...	1147	1.00	--	--	--	--	--	--	--	--
29...	1148	12.0	449	8.90	10.5	--	10.6	96	170	35
MAY										
06...	1214	1.00	473	8.10	25.0	1.20	5.9	72	170	42
06...	1215	1.00	--	--	--	--	--	--	--	--
06...	1216	9.00	473	8.00	23.0	--	4.0	47	170	47
AUG										
26...	1248	1.00	412	7.80	31.0	0.90	3.9	53	150	25
26...	1250	9.00	415	7.70	31.0	--	2.0	27	150	24

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 WH WAT TOTAL 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)
JAN										
29...	61	3.4	26	0.9	5.5	128	65	16	4.9	260
29...	--	--	--	--	--	--	--	--	--	--
29...	62	3.1	27	1	5.5	133	74	25	4.5	280
MAY										
06...	61	3.7	29	1	5.5	126	88	22	0.9	290
06...	--	--	--	--	--	--	--	--	--	--
06...	63	3.7	28	1	5.3	126	81	19	1.3	280
AUG										
26...	55	3.5	24	0.9	6.6	127	63	15	7.9	250
26...	55	3.4	23	0.9	5.3	127	54	16	8.1	240

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)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN									
29...	1.17	0.030	1.20	0.010	1.3	1.3	<0.010	20	<1
29...	--	--	--	--	--	--	--	--	--
29...	1.37	0.030	1.40	0.030	0.87	0.90	0.010	11	3
MAY									
06...	0.860	0.040	0.900	0.130	1.6	1.7	0.040	14	4
06...	--	--	--	--	--	--	--	--	--
06...	0.850	0.050	0.900	0.270	1.7	2.0	0.040	3	4
AUG									
26...	--	<0.010	<0.100	0.020	0.38	0.40	0.020	6	24
26...	--	<0.010	<0.100	0.100	0.40	0.50	0.070	15	130

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315518097123401 - AQUILLA LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
JAN									
29...	1036	1.00	382	8.70	10.0	1.40	9.2	82	0.680
29...	1038	10.0	382	8.70	9.5	--	9.1	81	--
29...	1040	20.0	382	8.60	9.5	--	9.0	80	0.680
29...	1042	30.0	382	8.50	9.0	--	8.4	73	--
29...	1044	40.0	382	8.50	9.0	--	8.3	73	0.590
MAY									
06...	1058	1.00	465	8.10	22.0	1.10	6.4	74	--
06...	1100	10.0	467	7.90	21.5	--	5.7	65	--
06...	1102	20.0	472	7.80	20.5	--	4.0	45	1.01
06...	1104	25.0	476	7.80	19.0	--	2.6	28	--
06...	1106	30.0	480	7.80	18.5	--	1.8	19	0.800
06...	1108	38.0	488	7.80	18.0	--	1.8	19	--
AUG									
26...	1132	1.00	398	8.20	30.0	1.10	5.8	78	--
26...	1134	10.0	398	8.10	30.0	--	5.7	76	--
26...	1136	20.0	398	8.00	29.5	--	5.6	74	--
26...	1138	30.0	400	7.80	29.5	--	5.1	68	--
26...	1140	35.0	444	7.40	29.5	--	1.8	24	--

DATE	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)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
29...	0.020	0.700	0.020	0.78	0.80	0.010	<10	<10
29...	--	--	--	--	--	--	--	--
29...	0.020	0.700	0.030	0.87	0.90	<0.010	<10	<10
29...	--	--	--	--	--	--	--	--
29...	0.010	0.600	0.080	1.0	1.1	<0.010	20	20
MAY								
06...	<0.010	<0.100	1.10	1.6	2.7	0.090	<10	20
06...	--	--	--	--	--	--	--	--
06...	0.090	1.10	0.160	1.0	1.2	0.020	<10	90
06...	--	--	--	--	--	--	--	--
06...	0.100	0.900	0.330	1.1	1.4	0.040	60	390
06...	<0.010	<0.100	1.10	1.3	2.4	0.090	1400	1400
AUG								
26...	<0.010	<0.100	<0.010	--	1.0	0.010	10	40
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	<0.010	<0.100	0.040	0.76	0.80	0.030	80	180
26...	<0.010	<0.100	0.850	2.7	3.5	0.020	1400	490

315748097144901 - AQUILLA LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN										
29...	1051	1.00	380	8.70	11.0	1.40	9.2	84	150	30
29...	1052	1.00	--	--	--	--	--	--	--	--
29...	1053	10.0	380	8.60	10.0	--	9.0	81	--	--
29...	1055	20.0	383	8.60	9.5	--	8.6	76	150	34
MAY										
06...	1128	1.00	--	--	--	--	--	--	--	--
06...	1128	1.00	462	8.30	23.5	1.30	6.8	80	170	39
06...	1130	10.0	467	8.10	22.0	--	6.1	70	--	--
06...	1132	22.0	478	7.90	20.5	--	4.0	45	180	48
AUG										
26...	1155	1.00	398	8.30	30.5	1.10	5.7	77	150	30
26...	1157	10.0	398	8.30	30.5	--	5.6	76	--	--
26...	1159	15.0	398	8.20	30.5	--	5.4	73	150	27

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315748097144901 - AQUILLA LAKE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 WH WAT TOTAL 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)
JAN										
29...	55	3.3	23	0.9	5.9	121	56	19	4.9	240
29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
29...	56	3.6	24	0.9	5.6	121	--	--	5.0	--
MAY										
06...	--	--	--	--	--	--	--	--	--	--
06...	60	3.9	28	1	5.8	127	88	20	0.5	280
06...	--	--	--	--	--	--	--	--	--	--
06...	65	3.8	27	0.9	5.6	130	80	20	2.3	280
AUG										
26...	54	3.6	23	0.9	6.3	120	55	15	7.3	240
26...	--	--	--	--	--	--	--	--	--	--
26...	54	3.6	23	0.9	5.3	123	56	15	7.4	240

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)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN									
29...	0.590	0.010	0.600	0.020	0.68	0.70	0.020	6	3
29...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
29...	0.590	0.010	0.600	0.030	0.67	0.70	0.010	19	11
MAY									
06...	--	--	--	--	--	--	--	--	--
06...	0.960	0.040	1.00	0.090	0.81	0.90	0.030	10	6
06...	--	--	--	--	--	--	--	--	--
06...	0.820	0.080	0.900	0.280	1.3	1.6	0.040	61	50
AUG									
26...	--	<0.010	<0.100	<0.010	--	0.70	0.010	7	3
26...	--	--	--	--	--	--	--	--	--
26...	--	<0.010	<0.100	0.010	0.59	0.60	0.020	12	8

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	0936
TOTAL CELLS/mL	14,045
NUMBER OF SPECIES	21
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Carteria sp.	454
Chlorococcum sp.	909
Chodatella subsalsa	341
Mesotaenium sp.	227
Oocystis sp.	454
Tetrastrum staurogeniaeforme	909
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	2726
Chroococcus dispersus	227
Dactylococcopsis fasciçularis	2840
Dactylococcopsis sp.	114
Synechococcus sp.	2726
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	12
Cyclotella ocellata	35
Cyclotella stelligera	1451
Melosira lirata	70
Stephanodiscus sp.	23
Order Pennales	
Diploneis sp.	3
Fragilaria vaucheriae	15
Synedra delicatissima	22
Synedra filiformis var. *exilis* ?	373

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	1147
TOTAL CELLS/mL	36,218
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *acicularis*	568
Ankistrodesmus falcatus var. *mirabilis*	568
Carteria sp.	1590
Chodatella subsalsa	207
Closterium sp.	114
Mesotaenium sp.	454
Tetrastrum staurogeniaeforme	909
CHRYSOPHYTA (golden-brown algae)	
Kephyrion sp.	227
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	6362
Aphanothece sp.	909
Chroococcus dispersus	341
Dactylococcopsis fascicularis	2613
Synechococcus sp.	4430
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	227
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella stelligera	12382
Melosira lirata	1136
Order Pennales	
Synedra filiformis var. *exilis* ?	3067
Synedra ulna	114

Aquilla Lake EC (315748197144901)

Phytoplankton Analyses October 1986 to September 1987

Date	1-29-87
Time	1052
TOTAL CELLS/mL	37,891
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *acicularis*	114
Ankistrodesmus nannoselene	114
Chlamydomonas sp.	57
Chlorella sp.	227
Chlorococcum sp.	341
Chodatella subsalsa	454
Closterium sp. 1	341
Closterium sp. 2	57
Crucigenia quadrata	1818
Oocystis sp.	114
Scenedesmus opoliensis	227
Scenedesmus quadricauda	454
Tetraedron minimum	114
Tetrastrum staurogeniaeforme	454
CHRYSOPHYTA (golden-brown algae)	
Dinobryon sp.	454
Kephyrion sp.	114
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	7838
Aphanothece sp.	341
Chroococcus dispersus	114
Dactylococcopsis fascicularis	2386
Dactylococcopsis sp.	170
Synechococcus sp.	10451
Synechocystis sp.	341
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	120
Cyclotella stelligera	7319
Melosira lirata	2160
Stephanodiscus sp.	60
Order Pennales	
Fragilaria vaucheriae	97
Synedra delicatissima	97
Synedra filiformis var. *exilis* ?	943

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses October 1986 to September 1987

Date	5-6-87
Time	1003
TOTAL CELLS/mL	101,616
NUMBER OF SPECIES	21
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	114
Chlorococcum sp.	114
Chodatella subsalsa	114
Closterium sp.	114
Gloeocystis sp.	682
Oocystis sp.	227
Pediastrum duplex var. *clathratum*	909
Pediastrum simplex	1136
Scenedesmus armatus	57
Scenedesmu brasiliensis	227
Scenedesmus sp.	227
Tetraedron minimum	227
Tetrastrum staurogeniaeforme	454
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	82814
Aphanothece saxicola	568
Chroococcus multicoloratus	114
Chroococcus pallidus	227
Dactylococcopsis fascicularis	227
Microcystis sp.	454
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella oscellata	12496
Order Pennales	
Navicula sp.	114

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses October 1986 to September 1987

Date	5-6-87
Time	1215
TOTAL CELLS/mL	160,520
NUMBER OF SPECIES	38
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	57
Ankistrodesmus falcatus var. *mirabilis*	57
Chlamydomonas sp. 1	114
Chlamydomonas sp. 2	114
Chlorococcum sp.	909
Closterium sp.	57
Crucigenia sp.	454
Kirchneriella lunaris	454
Mesotaenium sp.	57
Oocystis sp.	284
Pediastrum simplex	909
Scenedesmus abundans	114
Scenedesmus armatus	227
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus brasiliensis	227
Scenedesmus quadricauda	114
Scenedesmus serratus	227
Sphaerocystis schroeteri	682
Staurastrum sp.	57
Tetraedron caudatum	57
Tetraedron minimum	511
CHRYSOPHYTA (golden-brown algae)	
Dinobryon sp.	454
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	117462
Aphanothece saxicola	568
Chroococcus multicoloratus	568
Dactylococcopsis fascicularis	114
Lyngbya nana	5454
Merismopedia tenuissima	4317
Microcystis sp.	15450
Synechococcus sp.	12042
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	57
Phacus longicauda	57
Phacus orbicularis	57
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	2329
Melosira lirata	454
Order Pennales	
Synedra rumpens	57

Aquilla Lake EC (315748197144901)

Phytoplankton Analyses October 1986 to September 1987

Date	5-6-87
Time	1128
TOTAL CELLS/mL	130,775
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	114
Chlorococcum sp.	687
Closterium sp.	227
Crucigenia sp.	682
Nephrocytium sp.	454
Oocystis sp.	682
Pediastrum simplex	1590
Pediastrum tetras	795
Scenedesmus abundans	227
Scenedesmus brasiliensis	454
Scenedesmus dimorphus	909
Scenedesmus quadricauda	1818
Staurastrum sp.	568
Tetraedron caudatum	114
Tetraedron minimum	1818
Green coccoid	1122
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	95878
Aphanothece saxicola	2272
Chroococcus multicoloratus	114
Dactylococcopsis fascicularis	114
Microcystis sp.	4771
Synechococcus sp.	795
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas hispida	114
Trachelomonas sp.	28
PYRRHOPHYTA (dinoflagellates)	
Peridinium sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	14200
Order Pennales	
Synedra rumpens	114

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses October 1986 to September 1987

Date	8-26-87
Time	1035
TOTAL CELLS/mL	443,203
NUMBER OF SPECIES	69
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	454
Ankistrodesmus falcatus var. *falcatus*	114
Ankistrodesmus falcatus var. *mirabilis*	227
Ankistrodesmus nannoselene	227
Carteria sp.	57
Closterium sp.	114
Coelastrum sphaericum	682
Cosmarium sp.	227
Crucigenia apiculata	3635
Crucigenia tetrapedia	5907
Dictyosphaerium ehrenbergianum	1818
Dictyosphaerium pulchellum	2726
Euastrum sp.	114
Franceia ovalis	114
Gloeocystis sp.	227
Golenkinia radiata	227
Oocystis lacustris	1818
Pediastrum simplex	227
Planktosphaeria sp.	454
Scenedesmus abundans	454
Scenedesmus barsiliensis	454
Scenedesmus dimorphus	227
Scenedesmus quadricauda	1818
Scenedesmus serratus	1136
Tetraedron minimum	682
Tetraedron muicum	114
Tetraedron sp.	14
Treubaria triappendiculata	28
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensis (?)	22038
Aphanocapsa delicatissima	6816
Aphanocapsa elachista	54528
Aphanocapsa elachista var. *conferta*	20448
Aphanocapsa nidulans	3655
Aphanothece saxicola	35216
Aphanothece sp.	5907
Chroococcus limneticus	4998
Chroococcus limneticus var. *subsalsus*	454
Chroococcus multicoloratus	19539
Chroococcus pallidus	19539
Chroococcus varius	6816
Chroococcus sp.	2272
Dactylococcopsis acicularis	2272
Dactylococcopsis fascicularis	9099
Dactylococcopsis raphidioides	114
Lyngbya limnetica	20448
Lyngbya nana	2272
Merismopedia elegans	1363
Merismopedia tenuissima	15484
Microcystis marina	42032
Microcystis sp.	4544
Oscillatoria angustissima	2726
Oscillatoria limnetica	3408
Oscillatoria numicida	9542
Oscillatoria splendida	1022
Oscillatoria subtilissima	15904
Pseudanabaena catenata	66115
Spirulina sp.	13632
Synechococcus lineare	1136
Synechococcus sp.	2045
EUGLENOPHYTA (Euglenoids)	
Euglena acus	114
Trachelomonas volvocina	57
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	57
Cryptomonas sp.	227
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	682
Rhizosolenia longiseta	227
Stephanodiscus sp.	682
Order Pennales	
Anomoeoneis sp.	454
Nitzschia acicularis	909
Nitzschia subacicularis	114

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses October 1986 to September 1987

Date	8-26-87
Time	1249
TOTAL CELLS/mL	216,408
NUMBER OF SPECIES	46
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Chlamydomonas sp.	114
Chlorococcum sp.	227
Crucigenia tetrapedia	454
Dictyosphaerium pulchellum	227
Gloeocystis sp.	227
Mesotaenium sp.	1931
Scenedesmus abundans	454
Scenedesmus brasiliensis	227
Scenedesmus denticulatus	227
Scenedesmus dimorphus	454
Scenedesmus quadricauda	227
Scenedesmus serratus	2726
Tetraedron sp.	57
CHRYSOPHYTA (Golden-brown algae)	
Xanthidium sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensis ?	17836
Aphanocapsa delicatissima	4771
Aphanocapsa elachista	5680
Aphanocapsa elachista var. *conferta*	2726
Aphanothece saxicola	82360
Aphanothece sp.	13405
Chroococcus limneticus	454
Chroococcus limneticus var. *subsalsus*	454
Chroococcus multicoloratus	2954
Chroococcus pallidus	4544
Chroococcus varius	1590
Dactylococcopsis acicularis	3181
Dactylococcopsis fascicularis	3067
Gloeocapsa sp.	1363
Lyngbya limnetica	5907
Lyngbya nana	2726
Merismopedia elegans	2954
Merismopedia tenuissima	5112
Microcystis marina	15450
Oscillatoria angustissima	2272
Oscillatoria limnetica	11587
Oscillatoria subtilissima	6816
Synechococcus lineare	1818
Synechococcus sp.	3635
EUGLENOPHYTA (Euglenoids)	
Phacus longicauda	114
Phacus orbicularis	57
Trachelomonas volvocina	227
PYRRHOPHYTA (Dinoflagellates)	
Peridinium inconspicua	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	341
Rhizosolenia longiseta	568
Order Pennales	
Anomoeoneis sp.	227
Nitzschia acicularis	341

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake EC (315748097144901)

Phytoplankton Analyses October 1986 to September 1987

Date	8-26-87
Time	1156
TOTAL CELLS/mL	369,910
NUMBER OF SPECIES	51
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	57
Ankistrodesmus falcatus var. *falcatus*	114
Ankistrodesmus falcatus var. *mirabilis*	57
Carteria sp.	57
Chlorogonium sp.	57
Cosmarium sp.	57
Crucigenia tetrapedia	227
Gonium pectorale	568
Mesotaenium sp.	170
Pandorina morum	454
Scenedesmus brasiliensis	454
Scenedesmus sp. 1	568
Scenedesmus sp. 2	114
Tetraedron caudatum	57
Tetraedron trigonum	28
Tetraedron sp.	170
Treubaria triappendiculata	57
CHRYSOPHYTA (Golden-brown algae)	
Xanthidium sp.	170
CYANOPHYTA (Blue-green algae)	
Anabaena flos-aquae	1136
Anabaenopsis phillippinensis (?)	19993
Aphanocapsa delicatissima	8406
Aphanocapsa elachista	19994
Aphanocapsa elachista var. *conferta*	11360
Aphanothece saxicola	48394
Aphanothece sp.	3635
Chroococcus limneticus	1818
Chroococcus multicoloratus	9315
Chroococcus pallidus	4090
Chroococcus varius	2954
Dactylococcopsis acicularis	1136
Dactylococcopsis fascicularis	9088
Lyngbya limnetica	24083
Lyngbya nana	20902
Merismopedia elegans	1818
Merismopedia tenuissima	4998
Microcystis marina	29536
Oscillatoria angustissima	45440
Oscillatoria limnetica	16813
Oscillatoria splendida	3635
Oscillatoria subtilissima	29536
Pseudanabaena catenata	31808
Spirulina sp.	12496
Synechococcus sp.	2954
EUGLENOPHYTA (Euglenoids)	
Euglena acus	284
Trachelomonas volvocina	227
PYRRHOPHYTA (Dinoflagellates)	
Peridinium inconspicua	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	57
Melosira granulata var. *angustissima* f. *spiralis*	170
Stephanodiscus niagarae	57
Stephanodiscus sp.	170
Order Pennales	
Nitzschia acicularis	114

08093360 AQUILLA CREEK ABOVE AQUILLA, TX

LOCATION.--Lat 31°53'43", long 97°12'10", Hill County, Hydrologic Unit 12060202, on right bank of excavated outlet channel, 0.2 mi downstream from Aquilla Dam on Aquilla Creek and Farm Road 310 (on top of Aquilla Dam), and 3.3 mi north-northeast of Aquilla.

DRAINAGE AREA.--255 mi².

PERIOD OF RECORD.--April 1982 to current year (operated as low-water record only). Prior to Mar. 16, 1982, operated as a full range discharge station.

GAGE.--Water-stage recorder and concrete weir with sharp-crested, 90 degree v-notch weir section for low-flows. Datum of gage is 478.71 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 15, 1982, at site about 0.2 mi to left of current location at same datum.

REMARKS.--Records fair except those greater than 25 ft³/s, which are good. Daily discharges above 135 ft³/s are not published. Flow is regulated by Aquilla Lake 0.2 mi upstream (station 08093350). Deliberate impoundment of water began Apr. 29, 1983.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,100 ft³/s June 16, 1981 (gage height, 26.98 ft); no flow for many days in 1980-86.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined; maximum gage height, 12.50 ft June 23; minimum daily, 0.03 ft³/s Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	---	27	110	26	---	.13	.12	59	---	.06	.09
2	.13	---	27	110	26	---	.13	.13	---	---	.06	.07
3	.13	---	27	110	26	---	.12	.20	---	---	.05	.07
4	.14	25	27	107	26	---	.12	.30	---	---	.05	.06
5	.14	25	27	107	26	---	.12	.17	---	---	.05	.07
6	.14	25	27	107	26	---	.14	.17	---	---	.08	.06
7	.14	25	28	106	26	---	.13	.17	---	---	.06	.18
8	.15	25	28	104	26	---	.13	.23	---	---	.06	.12
9	.17	25	28	104	26	---	.13	.27	---	---	.04	.09
10	.17	25	28	104	26	---	.12	.20	---	45	.03	.10
11	.15	25	28	103	26	---	.11	.18	43	25	.13	.10
12	.15	25	28	102	26	---	.11	.17	24	24	.11	.13
13	.15	25	28	36	26	27	.14	14	---	24	.07	.11
14	.17	17	28	35	26	27	.13	29	---	24	.06	.08
15	.17	.14	28	98	26	27	.12	29	55	24	.06	.10
16	15	.10	28	97	26	27	.13	29	.29	28	.06	.11
17	28	.10	67	97	26	27	.12	29	.23	19	.06	.07
18	28	.09	122	97	26	27	.12	29	72	.24	.06	.20
19	27	.11	120	94	26	27	.12	29	---	.15	.07	.08
20	27	.11	119	94	26	---	.11	29	---	.12	.07	.08
21	27	.11	119	94	26	---	.12	29	---	.05	.07	.07
22	27	.12	119	94	26	---	.11	29	---	.05	.06	.07
23	26	.11	116	92	55	---	.13	29	---	.05	.07	.07
24	26	.11	117	92	76	---	.12	29	---	.05	.09	.07
25	25	.37	119	92	76	.21	.11	29	---	.05	.07	.09
26	25	.13	116	91	76	.18	.12	29	---	.05	.07	.09
27	25	.13	113	89	---	.15	.12	29	---	.05	.12	.09
28	25	14	113	90	---	.14	.12	29	---	.06	.11	.09
29	24	27	113	63	---	.20	.12	31	---	.06	.11	.08
30	---	27	113	25	---	.16	.12	31	---	.06	.11	.07
31	---	---	110	25	---	.14	---	31	---	.06	.10	---
TOTAL	---	---	2138	2769	---	---	3.67	544.31	---	---	2.27	2.76
MEAN	---	---	69.0	89.3	---	---	.12	17.6	---	---	.07	.09
MAX	---	---	122	110	---	---	.14	31	---	---	.13	.20
MIN	---	---	27	25	---	---	.11	.12	---	---	.03	.06
AC-FT	---	---	4240	5490	---	---	7.3	1080	---	---	4.5	5.5

CAL YR 1986	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --	
WTR YR 1987	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --	

08093500 AQUILLA CREEK NEAR AQUILLA, TX

LOCATION.--Lat 31°50'40", long 97°12'04", Hill County, Hydrologic Unit 12060202, on downstream side of highway embankment near left end of bridge on Farm Road 1304, 1.0 mi southeast of Aquilla, 1.2 mi downstream from Cobb Creek, 4.7 mi below Aquilla Dam, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--308 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1938 to current year. Records of daily discharge for December 1924 to August 1925, published in WSP 608, are unreliable.

REVISED RECORDS.--WSP 1712: 1944(M), 1957-58. WDR TX-76-2: Drainage area. See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 451.48 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since May 1983, flow from 252 mi² above this station has been regulated by Aquilla Lake, located 4.7 mi upstream on Aquilla Creek, which began impounding water Apr. 24, 1983.

AVERAGE DISCHARGE.--43 years (water years 1940-82), prior to regulation, 119 ft³/s (5.25 in/yr), 86,220 acre-ft/yr; 5 years (water years 1983-87), regulated, unadjusted, 60.8 ft3/s (44,050 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,300 ft³/s June 16, 1981 (gage height, 31.35 ft), from rating curve extended above 25,900 ft³/s on basis of slope-area measurement of 74,200 ft³/s, adjusted to gage site; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 31, 1887, reached a stage of 34 ft, from information by local resident. Flood of Sept. 27, 1936, was the highest since 1887 and reached a stage of 33 ft, from floodmark; discharge 84,500 ft³/s (by slope-area measurements at site 9 mi downstream) and 74,200 ft³/s (adjusted to gage site).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,700 ft³/s June 11 at 0615 hours (gage height, 21.99 ft); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	211	37	e140	34	419	20	19	125	1070	.84	.82
2	.02	210	35	e138	36	392	19	19	317	764	.82	.78
3	.01	133	35	e135	34	459	18	19	794	201	.85	.75
4	.00	113	34	e135	34	543	18	93	515	193	.78	.71
5	.00	62	34	e135	34	533	19	9.9	361	190	.78	.65
6	503	43	34	e135	33	532	22	4.6	350	189	.81	.62
7	116	40	34	e135	33	526	22	4.6	346	187	.81	6.5
8	30	40	39	e134	34	524	24	83	343	185	.77	1.6
9	5.1	39	36	e197	34	517	24	488	371	184	.76	.32
10	2.3	38	34	e200	34	369	26	24	584	104	.72	.29
11	40	37	33	e143	34	205	26	14	1290	26	.70	.42
12	809	37	32	e140	34	143	27	10	412	24	.82	.27
13	32	36	33	e48	34	46	27	21	1100	23	.80	1.0
14	13	31	50	e17	34	46	29	44	589	23	.72	.46
15	7.7	7.4	182	e138	35	46	29	44	328	22	.70	.10
16	13	6.5	73	e138	34	46	27	44	77	22	.68	.0
17	29	6.8	81	e140	33	303	28	45	27	19	.69	.1
18	28	6.2	236	e575	33	102	28	45	389	1.4	.67	.25
19	28	6.1	179	e643	33	76	26	54	1050	.80	.65	.34
20	28	6.0	156	e170	52	180	26	52	1040	.77	.63	.0
21	28	6.2	148	e144	46	334	25	46	1040	.88	.62	.00
22	28	6.2	378	e141	39	332	25	46	1060	1.0	.62	.00
23	96	8.3	830	e135	57	334	25	46	1150	1.1	.61	.00
24	131	8.1	186	e129	109	206	24	58	1160	1.0	.59	.00
25	39	227	156	e123	103	22	24	51	1150	.95	.57	.00
26	32	54	e147	e120	173	20	23	49	1140	.94	.55	.00
27	31	21	e141	e112	212	20	22	48	1120	.91	.55	.00
28	29	23	e141	108	999	20	21	51	1100	.92	.66	.00
29	29	38	e141	83	---	20	21	847	1090	.90	.74	.00
30	101	38	e141	34	---	22	20	143	1080	.88	.77	.00
31	210	---	e140	33	---	21	---	101	---	.85	.80	---
TOTAL	2438.15	1538.8	3956	4798	2434	7358	715	2623.1	21498	3439.30	22.08	15.98
MEAN	78.6	51.3	128	155	86.9	237	23.8	84.6	717	111	.71	.53
MAX	809	227	830	643	999	543	29	847	1290	1070	.85	6.5
MIN	.00	6.0	32	17	33	20	18	4.6	27	.77	.55	.00
AC-FT	4840	3050	7850	9520	4830	14590	1420	5200	42640	6820	44	32

CAL YR	1986	TOTAL	29739.61	MEAN	815	MAX	2050	MIN	.00	AC-FT	58990	
WTR YR	1987	TOTAL	50836.11	MEAN	139	MAX	1290	MIN	.00	AC-FT	100800	

e Estimated.

08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March 1960 to June 1966, October 1967 to current year. Chemical and biochemical analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1965 to June 1966, November 1967 to September 1982.
WATER TEMPERATURE: May 1965 to June 1966, November 1967 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,080 microsiemens Dec. 31. 1975; minimum daily, 182 microsiemens Oct. 31, 1974.
WATER TEMPERATURE: Maximum daily, 31.0°C July 3, 1980; minimum daily, 0.0°C Jan. 8, 1976, Jan. 10, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 29...	1715	29	424	8.00	19.5	7	18	8.0	88	1.0	160	30
DEC 11...	1545	34	457	7.80	8.0	5	2.2	11.2	96	0.6	180	38
JAN 28...	1300	107	431	8.20	9.0	7	6.0	11.4	101	0.8	170	38
MAR 17...	0905	510	550	7.90	14.5	55	400	8.9	91	2.4	200	63
MAY 05...	1755	7.1	602	7.90	21.0	37	56	7.2	83	1.5	230	93
JUN 23...	1800	1.0	400	7.70	27.0	26	20	7.8	100	2.6	150	33

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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...	58	3.3	21	0.8	5.7	128	56	13	0.40	6.7	240
DEC 11...	66	3.5	24	0.8	5.0	141	63	18	0.50	6.5	270
JAN 28...	62	3.4	24	0.8	5.3	131	62	19	0.40	5.5	260
MAR 17...	75	2.5	30	1	3.2	135	88	25	0.30	9.3	310
MAY 05...	85	3.9	33	1	3.1	135	120	24	0.40	9.1	360
JUN 23...	54	3.2	23	0.9	5.4	115	67	15	0.20	6.3	240

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT 29...	38	7	1.39	0.010	1.40	<0.010	--	0.70	0.030	5.4	--
DEC 11...	6	<1	--	<0.010	1.50	0.020	0.68	0.70	<0.010	6.4	--
JAN 28...	10	7	1.28	0.020	1.30	0.030	0.47	0.50	0.010	4.4	1
MAR 17...	1340	224	8.70	1.30	10.0	0.140	3.0	3.1	0.770	17	--
MAY 05...	86	24	6.89	0.110	7.00	0.120	2.1	2.2	0.090	8.6	3
JUN 23...	55	26	0.460	0.040	0.500	0.100	1.4	1.5	0.100	8.4	3

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 29...	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	54	<1	<10	<1	12	<5	10	<0.1	<1	<1	15
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	55	<1	<10	<1	9	<5	17	<0.1	<1	1	<3
JUN 23...	55	<1	20	<1	20	15	<1	<0.1	<1	<1	13

08094800 NORTH BOSQUE RIVER AT HICO, TX

LOCATION.--Lat 31°58'41", long 98°02'04", Hamilton County, Hydrologic Unit 12060204, on left bank at downstream side of bridge on U.S. Highway 281 near south boundary of Hico, 2.6 mi downstream from Gilmore Creek, 5.0 mi upstream from Honey Creek, and 92.4 mi upstream from mouth.

DRAINAGE AREA.--359 mi².

PERIOD OF RECORD.--January 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 982.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow is affected at times by discharge from flood-detention pools of 40 floodwater-retarding structures with combined detention capacity of 65,720 acre-ft. These structures control runoff from 202 mi² in North Bosque River and Green Creek drainage basins. The city of Stephenville discharges a small amount of sewage effluent into river above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1963-73) prior to regulation, 50.5 ft³/s (36,590 acre ft/yr); 14 years (water years 1974-87) regulated, 35.5 ft³/s (25,720 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s Apr. 30, 1977 (gage height, 22.27 ft), from rating curve extended above 9,000 ft³/s; no flow at times in 1962-65, 1967-68, 1971, 1974, 1976, and 1978-86.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 27.6 ft May 23, 1952, from floodmarks (discharge, 87,800 ft³/s, by contracted-opening measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,820 ft³/s May 29 at 1130 hours (gage height, 13.88 ft); minimum, 5.5 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	8.0	9.0	20	32	544	77	18	560	e137	7.7	7.0
2	6.5	7.9	9.0	20	46	279	73	47	393	e129	7.4	6.0
3	6.2	7.8	9.2	20	39	182	69	e239	371	e122	7.9	5.5
4	6.1	8.2	9.4	20	34	154	67	393	338	e110	10	5.9
5	5.9	15	9.5	19	32	129	65	102	273	e102	9.0	8.8
6	22	10	9.7	19	36	110	73	56	213	e87	8.8	7.5
7	52	8.8	13	20	45	95	67	33	193	e78	9.5	6.1
8	23	8.6	14	20	41	89	58	24	200	e71	9.8	6.5
9	15	8.1	10	34	37	78	55	27	682	e63	9.0	6.2
10	11	7.9	8.9	58	37	67	52	22	829	e55	8.8	5.7
11	15	7.9	8.8	34	37	77	55	18	795	e50	8.8	6.3
12	33	8.3	8.8	29	37	69	47	17	726	e46	9.3	6.4
13	16	9.3	9.0	26	36	66	40	17	813	e38	9.8	6.0
14	12	8.8	13	25	36	67	35	16	417	e34	10	6.9
15	11	8.8	12	25	41	61	34	454	278	e25	9.8	8.5
16	9.8	8.9	11	24	49	59	34	307	224	e23	9.5	8.1
17	9.4	8.8	11	24	38	295	33	155	199	e134	9.5	7.9
18	9.2	8.5	29	33	34	184	31	110	292	e108	9.3	6.8
19	9.0	7.7	63	33	33	124	29	118	572	e37	9.0	7.7
20	8.9	7.7	38	31	241	110	27	133	1260	e26	8.8	8.3
21	8.8	7.8	30	30	236	116	25	87	e745	20	8.8	6.6
22	8.8	8.2	30	29	124	150	24	54	e498	e15	8.3	6.7
23	9.1	8.1	44	27	90	142	24	45	e360	e12	8.1	6.4
24	9.3	8.1	44	27	107	122	24	1550	e286	11	7.9	6.4
25	9.3	12	32	27	118	110	22	878	e223	9.8	7.7	6.2
26	8.9	38	27	26	170	104	21	410	e204	9.3	9.0	6.2
27	8.3	16	25	26	268	100	20	239	e190	8.8	9.5	6.5
28	8.0	11	23	27	1050	93	20	402	e174	8.3	9.0	6.4
29	7.9	9.5	22	28	---	95	19	4250	e162	8.1	8.8	6.5
30	7.9	9.0	21	28	---	89	18	1700	e146	8.1	8.1	6.6
31	7.9	---	20	30	---	80	---	945	---	7.7	7.7	---
TOTAL	382.4	302.7	623.3	839	3124	4040	1238	12866	12616	1593.1	274.6	202.6
MEAN	12.3	10.1	20.1	27.1	112	130	41.3	415	421	51.4	8.86	6.75
MAX	52	38	63	58	1050	544	77	4250	1260	137	10	8.8
MIN	5.9	7.7	8.8	19	32	59	18	16	146	7.7	7.4	5.5
AC-FT	758	600	1240	1660	6200	8010	2460	25520	25020	3160	545	402
CFSM	.0	.0	.06	.08	.31	.36	.11	1.16	1.17	.14	.0	.0
IN.	.0	.0	.06	.09	.32	.42	.13	1.33	1.31	.17	.0	.0

CAL YR 1986 TOTAL 32136.6 MEAN 88.0 MAX 5880 MIN .50 AC-FT 63740 CFSM .25 IN. 3.33
WTR YR 1987 TOTAL 38101.5 MEAN 104 MAX 4250 MIN 5.5 AC-FT 75570 CFSM .29 IN. 3.95

e Estimated.

08095000 NORTH BOSQUE RIVER NEAR CLIFTON, TX

LOCATION.--Lat 31°47'09", long 97°34'04", Bosque County, Hydrologic Unit 12060204, near right bank at downstream side of bridge on Farm Road 219, 0.5 mi northeast of Clifton, 2.5 mi downstream from Meridian Creek, and 42.0 mi upstream from mouth.

DRAINAGE AREA.--968 mi².

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 788: 1924-26, 1928, 1930. WSP 1058: 1945(M). WSP 1512: 1924(M), 1927, 1928(M), 1929, 1930(M), 1931-33, 1934(M), 1935-37, 1939. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 605.43 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1955, and from Apr. 23, 1957, to Mar. 26, 1958, nonrecording gage at site 1.1 mi upstream at datum 17.02 ft higher; Oct. 1, 1955, to Apr. 22, 1957, and Mar. 27, 1958, to Sept. 30, 1959, water-stage recorder destroyed by floods of Apr. 27, 1957, and Oct. 4, 1959); and Oct. 1, 1959, to Jan. 1, 1961, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. The city of Clifton diverts water from the river upstream from this station for municipal use. The cities of Clifton and Meridian discharge sewage effluent into the river, upstream and downstream respectively, from the station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08094800. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--44 years (water years 1924-67) unregulated, 195 ft³/s (141,300 acre-ft/yr); 20 years (water years 1968-87) regulated, 161 ft³/s (116,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,800 ft³/s Oct. 4, 1959 (gage height, 34.88 ft), from rating curve extended above 34,000 ft³/s on basis of contracted-opening measurement of 92,800 ft³/s; no flow at times. Maximum stage since at least 1854, that of Oct. 4, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 9, 1922, reached a stage of about 32 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 8,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	1430	*20,500	*21.88	No other peak greater than base discharge.			

Minimum daily discharge, 9.1 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	39	56	171	137	1100	199	62	e1000	252	43	29
2	12	38	51	158	150	e860	188	62	e700	221	41	28
3	12	44	48	150	161	e600	177	79	e900	215	39	25
4	13	52	46	139	159	e480	166	261	e1600	193	36	23
5	12	62	45	134	141	e430	167	376	e900	168	34	23
6	25	54	45	131	153	e400	186	170	e520	147	35	22
7	69	51	54	127	174	e380	211	120	e410	130	33	24
8	83	49	61	123	180	e360	200	96	e350	113	32	25
9	81	41	64	154	165	e340	184	93	e400	108	31	32
10	56	38	64	262	147	e330	172	80	e1500	104	30	28
11	47	37	60	270	138	e310	162	75	e4500	101	32	26
12	130	41	56	203	134	e390	152	68	e4800	96	37	28
13	156	47	53	170	131	e350	146	61	e3000	89	33	29
14	82	47	61	159	130	e330	134	57	e1500	82	31	27
15	54	47	120	150	135	e310	125	103	1100	76	27	28
16	44	49	158	141	148	e300	121	1020	860	82	27	28
17	39	49	139	143	150	e390	117	373	697	187	27	26
18	34	48	184	694	134	e800	115	218	606	187	24	38
19	31	46	313	478	120	e400	112	153	700	113	23	126
20	28	45	298	330	212	e350	106	593	1110	93	21	36
21	26	43	220	265	837	e330	100	313	1260	82	21	25
22	28	42	277	234	512	e400	97	185	796	74	21	19
23	403	41	731	210	347	e500	93	126	574	69	20	16
24	350	39	560	194	345	e350	92	629	471	64	20	14
25	162	71	400	179	501	e290	88	1610	403	61	19	12
26	108	117	317	164	717	e240	85	738	352	55	17	11
27	81	117	266	154	1220	e230	79	436	314	54	19	10
28	65	97	233	148	1990	e230	74	333	288	50	21	11
29	54	74	212	147	---	e230	65	12100	265	48	23	10
30	50	63	196	143	---	e210	62	e3000	256	47	26	9.1
31	45	---	184	134	---	e200	---	e1500	---	44	26	---
TOTAL	2392	1628	5572	6259	9468	12420	3975	25090	32132	3405	869	788.1
MEAN	77.2	54.3	180	202	338	401	132	809	1071	110	28.0	26.3
MAX	403	117	731	694	1990	1100	211	12100	4800	252	43	126
MIN	12	37	45	123	120	200	62	57	256	44	17	9.1
AC-FT	4740	3230	11050	12410	18780	24640	7880	49770	63730	6750	1720	1560
CFSM	.08	.06	.19	.21	.35	.41	.14	.84	1.11	.11	.0	.0
IN.	.09	.06	.21	.24	.36	.48	.15	.96	1.23	.13	.0	.0

CAL YR 1986	TOTAL	76472.0	MEAN	210	MAX	12100	MIN	2.4	AC-FT	151700	CFSM	.22	IN.	2.94
WTR YR 1987	TOTAL	103998.1	MEAN	285	MAX	12100	MIN	9.1	AC-FT	206300	CFSM	.29	IN.	4.00

e Estimated.

08095200 NORTH BOSQUE RIVER AT VALLEY MILLS, TX

LOCATION.--Lat 31°40'10", long 97°28'09", Bosque County, Hydrologic Unit 12060204, on right bank at downstream side of bridge on Farm Road 56, about 0.8 mi downstream from Thompson Hollow, 0.8 mi north of intersection of State Highway 6 and Farm Road 56 in Valley Mills, and 28.0 mi upstream from mouth.

DRAINAGE AREA.--1,146 mi².

PERIOD OF RECORD.--August 1959 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 524.55 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 29, 1959, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow is affected at times by discharge from the flood-detention pools of 42 floodwater-retarding structures with a combined detention capacity of 66,800 acre-ft. These structures control runoff from 207 mi². There are several small diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years (water years 1960-67) unregulated, 263 ft³/s (190,500 acre-ft/yr); 20 years (water years 1968-87) regulated, 197 ft³/s (142,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft³/s Oct. 4, 1959 (gage height, 40.22 ft, from floodmarks), from rating curve extended above 28,200 ft³/s on basis of slope-area measurement of 107,000 ft³/s; no flow Oct. 5-12, 1965, many days in 1984, and Oct. 1-5, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1868, 43 ft in May 1908. Floods in September 1936 and April 1945 reached a stage of about 38 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 29	1700	*16,800	*27.33	June 11	0630	9,690	19.99

Minimum daily discharges, 20 ft³/s Oct. 1-3, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	58	75	198	161	1930	213	65	1180	321	54	33
2	20	50	71	188	169	1080	199	63	815	291	52	34
3	20	54	66	179	177	775	189	74	927	279	49	32
4	21	72	65	170	179	622	177	114	1510	251	47	30
5	20	76	65	164	167	525	177	483	900	217	46	29
6	63	74	64	161	170	465	193	183	642	186	44	28
7	76	67	71	157	188	452	214	124	487	164	44	28
8	85	67	77	153	195	436	212	101	392	138	42	31
9	96	62	78	173	186	401	197	93	494	129	42	30
10	74	57	80	246	171	374	184	83	2660	122	40	34
11	62	54	78	277	163	364	173	75	5110	117	39	30
12	125	57	76	227	160	401	164	71	4320	112	43	30
13	144	62	72	197	156	390	157	65	4340	104	41	31
14	102	65	76	182	157	354	147	62	2270	97	39	30
15	74	65	116	175	160	337	138	58	1420	91	36	30
16	62	65	162	167	167	326	133	1000	1100	91	34	34
17	55	65	152	165	173	449	127	405	850	153	34	38
18	48	65	166	592	165	914	124	214	827	283	32	40
19	43	62	274	502	154	586	119	151	905	140	31	127
20	40	62	283	342	187	420	114	510	1300	108	29	69
21	38	60	225	279	762	356	107	323	1550	96	28	49
22	38	59	250	249	540	392	104	182	1060	86	28	42
23	281	57	752	227	357	538	105	125	786	81	28	37
24	388	54	611	213	330	391	99	388	644	77	28	36
25	184	85	425	199	459	337	95	1850	551	72	27	32
26	127	109	340	188	625	282	91	804	471	67	25	30
27	99	131	290	179	1340	249	90	442	409	65	25	30
28	83	117	258	174	1970	245	85	285	367	62	28	30
29	73	95	238	171	---	245	77	9980	331	60	29	29
30	67	82	222	167	---	233	67	4660	317	58	31	26
31	63	---	208	160	---	227	---	1810	---	56	33	---
TOTAL	2691	2108	5986	6821	9788	15096	4271	24843	38935	4174	1128	1109
MEAN	86.8	70.3	193	220	350	487	142	801	1298	135	36.4	37.0
MAX	388	131	752	592	1970	1930	214	9980	5110	321	54	127
MIN	20	50	64	153	154	227	67	58	317	56	25	26
AC-FT	5340	4180	11870	13530	19410	29940	8470	49280	77230	8280	2240	2200

CAL YR 1986 TOTAL 76288 MEAN 209 MAX 13900 MIN 4.7 AC-FT 151300
WTR YR 1987 TOTAL 116950 MEAN 320 MAX 9908 MIN 20 AC-FT 232000

08095550 WACO LAKE NEAR WACO, TX

LOCATION.--Lat 31°34'46", long 97°11'51", McLennan County, Hydrologic Unit 12060203, in intake structure at Waco Dam on Bosque River, at northwest edge of city limits of Waco, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--1,652 mi².

PERIOD OF RECORD.--Feburary 1965 to current year. Prior to October 1970, published as Waco Reservoir.

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

REMARKS.--The lake is formed by a rolled earthfill dam 24,618 ft long, including spillway. The lake was built for flood control and water conservation. From Oct. 1, 1964, to Feb. 26, 1965, the lake was operated as a detention basin only. On Feb. 26, 1965, old Lake Waco was breached and deliberate impoundment began. The spillway is controlled by fourteen 40.0- by 35.0-foot tainter gates. The outlet works consists of three gate-controlled outlets, 6.7 by 20.0 ft, opening into a 20.0-foot-diameter concrete conduit and two 54-inch concrete pipes. Low-flow releases are made through two 54-inch butterfly values. Flow into two wet wells is controlled by four 5.0- by 6.0-foot slide gates that are used to release water downstream for the city of Waco municipal water supply. Capacity table No. 2-C is based on a sedimentation survey completed in December 1970. Flow is affected at times by discharge from the flood-detention pools of 44 floodwater-retarding structures with a combined detention capacity of 76,460 acre-ft. These structures control runoff from 248 mi² in the Bosque River and Hog Creek drainage basins. 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	510.0	-
Design flood	505.0	824,400
Top of gates	500.0	722,500
Crest of spillway	465.0	229,900
Top of conservation pool	455.0	149,200
Lowest gated outlet (invert)	400.0	560

COOPERATION.--Records were furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 292,100 acre-ft May 15, 1968 (elevation, 470.86 ft); minimum since initial filling, 86,360 acre-ft Oct. 8, 1984 (elevation, 445.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 205,400 acre-ft on June 18 at 1600 hours (elevation, 462.22 ft); minimum, 138,400 acre-ft on Sept. 15 at 2400 hours (elevation, 453.49 ft).

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

453.0	135,000	457.0	163,900	461.0	195,300
455.0	149,200	459.0	179,200	463.0	212,100

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148900	152400	153300	158300	150700	166400	150500	151000	184500	151400	148500	140800
2	148600	151400	153000	156100	150300	165800	150400	151100	180300	153000	148300	140600
3	148400	150500	152800	154300	150200	162700	150300	152500	176200	153600	148000	140500
4	148200	153300	152600	152200	150100	158100	150200	152900	173300	154000	147800	140300
5	147900	154000	152300	151400	149900	154600	150500	153700	168800	154300	147600	140000
6	150300	154200	152200	151500	149800	153400	150500	154100	163800	154100	147300	139800
7	151200	154200	152200	151500	149600	152800	150500	154300	159300	153400	147000	139700
8	151600	154200	151900	151600	149500	151900	150600	154300	154200	152800	146700	139500
9	151900	154000	150900	151900	149600	150900	150500	153700	153300	152700	146400	139300
10	151900	154000	150000	152200	150000	150300	150500	153300	159300	152200	146200	139100
11	152000	153700	149900	152400	150100	150500	150400	152700	171200	151400	146300	138900
12	152200	153600	150200	152500	149800	150800	150300	152100	180600	150900	146100	138900
13	152200	153400	150400	152800	149700	150900	151700	151400	191000	149900	145900	138800
14	152200	153100	151400	153600	150000	150600	151300	150900	194200	149600	145700	138600
15	151900	153000	152300	154200	150300	150300	151100	150300	199600	149600	145300	138400
16	151700	152800	152700	154900	150300	150500	150800	150900	202300	149600	145000	139400
17	151300	152600	152500	156300	150500	151900	150500	151500	204600	149800	144700	140000
18	150900	151900	153100	159000	150500	152200	150100	151100	203500	149900	144400	140500
19	150700	151100	153300	160900	150600	151700	149800	150800	198700	150100	144100	140500
20	150600	150100	153400	161500	151500	151100	149800	150600	194900	150100	143700	140500
21	150600	149900	153400	160800	152800	150700	149900	150400	192200	150200	143500	140300
22	150900	150100	158100	159900	154000	150300	150100	149800	188100	150200	143200	140200
23	153700	150200	165900	158800	154700	150200	150300	150200	180500	150100	142900	140000
24	155800	150900	168000	157900	155900	149700	150400	150400	173800	150000	142600	139900
25	156300	151900	168800	156700	157200	149800	150600	153800	166500	149800	142200	139500
26	156600	152500	169000	156700	159700	149900	150800	154800	160300	149600	141900	139300
27	156200	153000	168900	156600	162000	150100	150900	154900	155800	149600	141600	139100
28	155500	153300	167500	155400	164000	150300	150900	154600	151900	149300	141300	139400
29	154700	153400	165400	154300	---	150400	151000	169800	150500	149200	141200	139200
30	153900	153400	163200	153000	---	150300	150900	183500	150900	149000	141100	138900
31	153000	---	160800	151700	---	150500	---	185700	---	148800	141000	---
MAX	156600	154200	169000	161500	164000	166400	151700	185700	204600	154300	148500	140800
MIN	147900	149900	149900	151400	149500	149700	149800	149800	150500	148800	141000	138400
(†)	455.53	455.58	456.58	455.34	457.01	455.18	455.24	459.82	455.24	454.94	453.86	453.56
(ϕ)	+3900	+400	+7400	-9100	+12300	-13500	+400	+34800	-34800	-2100	-7800	-2100

CAL YR 1986 MAX 207100 MIN 141500 (ϕ) -2200
WTR YR 1987 MAX 204600 MIN 138400 (ϕ) -10200

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

08096500 BRAZOS RIVER AT WACO, TX

LOCATION.--Lat 31°32'06", long 97°04'22", McLennan County, Hydrologic Unit 12060202, on left bank 2.2 mi downstream from bridge on LaSalle Avenue and at mile 400.7.

DRAINAGE AREA.--29,573 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--September 1898 to current year (January 1912 to September 1914 monthly records only, published in WSP 1312).

REVISED RECORDS.--WSP 850 and 878: 1899-1900, 1907-9 (monthly and yearly summaries only). WSP 1512: 1901-5, 1910, 1915, 1925-26(M), 1927-29. WSP 1922: 1957. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 349.34 ft above National Geodetic Vertical Datum of 1929. Sept. 14, 1898, to Mar. 28, 1918, May 6, 1922, to Feb. 12, 1925, nonrecording gage, and May 28, 1918, to May 5, 1922, Feb. 13, 1925, to Aug. 14, 1969, water-stage recorder. Prior to Aug. 14, 1969, at site 3.9 mi upstream at datum 7.46 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow largely regulated by Lake Whitney and by Waco Lake (stations 08092500 and 08095550). The combined capacity for 18 reservoirs above station is 4,135,000 acre-ft, of which 2,194,000 acre-ft is flood-control storage in Lake Whitney and in Waco Lake. The city of Waco diverts water above station for municipal use, and the Brazos River Authority returns treated sewage effluent to the river above station. There are many other small diversions above station for municipal supply, irrigation, and for oilfield operations that will not appreciably affect flow. Several observations of water temperature were made during the year. Gage-height telemeter at station. Flow is affected at times by discharge from the flood-detention pools of eleven water-retarding structures with a combined detention capacity of 6,420 acre-ft. These structures control runoff from 20.4 mi² in the Aquilla and Hackberry Creeks drainage basins.

AVERAGE DISCHARGE.--42 years (water years 1899-1940) unregulated, 2,560 ft³/s (1,855,000 acre-ft/yr); 47 years (water years 1940-87) regulated, 2,201 ft³/s (1,595,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft³/s Sept. 27, 1936 (gage height, 40.90 ft), at former site and datum, levee on left bank was overtopped and broken by flood; no flow Aug. 20, 21, 1918, and probably for several days in August 1923.
Maximum stage since at least 1847, that of Sept. 27, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage for 1847-98, 34.63 ft May 28, 1885, from floodmark at site 3.9 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,200 ft³/s June 13 at 0630 hours (gage height, 20.97 ft); minimum daily, 10 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	961	3040	1430	3720	2990	4670	2630	583	5720	1190	1290	600
2	1110	2870	1840	3660	2760	4310	2580	587	10400	4240	772	742
3	1070	2860	2480	3270	2630	5530	2630	993	18100	4170	257	1410
4	1610	3000	2500	2870	2590	15700	2600	1730	19200	3910	975	666
5	2310	2790	2490	2510	2580	16000	2650	2430	17300	3870	540	564
6	3350	2470	2210	2270	2590	15000	2710	51	16800	3930	1160	607
7	3720	2570	1410	2760	2600	16200	3640	29	16600	3190	398	723
8	4410	2560	1450	2760	2580	16600	5630	369	16500	2810	14	1600
9	9060	2530	2340	2850	2420	16100	5760	1740	15600	2780	989	1370
10	9730	2540	2240	2870	668	8580	5880	937	15000	1700	1260	697
11	11900	2520	1590	2770	477	7120	8030	868	18300	2640	656	636
12	14000	2540	1960	2590	2370	6270	8220	1240	19000	1440	720	679
13	11400	2240	1820	1840	2450	6100	8750	1220	22500	1360	20	622
14	11100	2040	1430	274	2350	4090	8050	1290	11600	2410	18	218
15	11200	2040	1980	23	2410	3920	4420	1400	8350	911	1040	10
16	11200	1490	2110	16	2350	3910	4340	1320	6810	890	1040	19
17	10900	1380	2380	15	2340	4050	4260	1110	4760	945	1070	1040
18	5030	1620	2830	2300	2360	3600	3500	1180	5880	909	920	745
19	4160	1750	3000	480	2380	4260	3510	1900	14100	844	1020	969
20	4070	1920	2720	21	2720	4120	3150	1570	17300	835	1070	2190
21	4000	1610	2660	1970	2540	3410	2070	1540	17300	822	1060	209
22	2720	1080	3320	3140	4230	3330	2240	1450	17300	801	1010	286
23	2980	335	7440	3150	1920	3380	2260	1270	20300	280	1040	533
24	3230	206	4500	3360	2230	3300	2240	1220	20500	661	1060	554
25	2680	1610	3590	2810	2510	2860	2220	1110	19500	995	1040	873
26	2620	2010	3440	3070	1410	2570	2220	1320	10400	1220	1000	663
27	2660	1300	3350	675	3620	2670	2230	3450	8460	371	999	339
28	3310	1160	3490	2230	6730	2660	2230	4190	7970	667	139	145
29	3610	1220	3780	3140	---	2650	2210	5430	6970	846	876	283
30	3590	1440	3760	3110	---	2630	2060	5340	4800	531	1000	516
31	3630	---	3740	3080	---	2720	---	4780	---	1050	764	---
TOTAL	167321	58741	85280	69604	71805	198310	114920	53647	413320	53218	25217	20508
MEAN	5397	1958	2751	2245	2564	6397	3831	1731	13780	1717	813	684
MAX	14000	3040	7440	3720	6730	16600	8750	5430	22500	4240	1290	2190
MIN	961	206	1410	15	477	2570	2060	29	4760	280	14	10
AC-FT	331900	116500	169200	138100	142400	393300	227900	106400	819800	105600	50020	40680

CAL YR 1986 TOTAL 845868 MEAN 2317 MAX 14000 MIN 13 AC-FT 1678000
WTR YR 1987 TOTAL 1331890 MEAN 3649 MAX 22500 MIN 10 AC-FT 2642000

08098290 BRAZOS RIVER NEAR HIGHBANK, TX
(National stream-quality accounting network)

LOCATION.--Lat 31°08'02", long 96°49'29", Falls County, Hydrologic Unit 12070101, near right bank 45 ft downstream from bridge on Farm Road 413, 1.4 mi downstream from Highbank Slough and Spring Branch, 2.6 mi south of Highbank, and at mile 346.6.

DRAINAGE AREA.--30,436 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 279.29 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Many diversions above station for municipal supply, irrigation and industrial use. Flow is affected by 20 upstream reservoirs with a total combined capacity of 4,181,000 acre-ft. Water is diverted from the river upstream from this station by Texas Power and Light Co. to Tradinghouse Reservoir. Flow is affected at times by discharge from the flood-detention pools of 76 floodwater-retarding structures with a total combined detention capacity of 83,290 acre-ft. These structures control runoff from 238 mi² in the Aquilla, Tehyuacana, Castleman Creeks, and Cow Bayou basins. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--22 years, 2,533 ft³/s (1,835,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,700 ft³/s Feb. 4, 1986 (gage height, 23.90 ft); minimum daily, 32 ft³/s Oct. 4-5, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1909, 42 ft in December 1913 and 40 ft in September 1936, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,700 ft³/s June 13 at 1500 hours (gage height, 20.08 ft); minimum daily, 270 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	4500	1590	5080	3460	11500	2650	2090	7010	5670	1080	852
2	786	3360	1540	4980	3300	8230	2620	993	8680	2070	1510	742
3	1020	3160	1920	4740	3100	6580	2580	875	14200	5610	1060	777
4	1030	3300	2380	3840	3010	9240	2580	1950	22800	5160	838	1250
5	1430	3830	2410	3360	2960	15700	2620	3600	22400	4820	845	798
6	1930	3340	2390	2850	2960	15500	2720	3130	20200	4700	1110	687
7	3340	2780	2090	2800	2970	14700	2920	992	19200	4800	973	657
8	3500	2780	1540	3170	2940	15700	4460	493	18000	3470	960	723
9	5100	2700	1900	3220	2950	15900	6500	779	17300	3020	388	1650
10	9560	2640	2980	3320	2590	14100	6660	2090	16300	2860	1040	1350
11	10600	2620	2610	3270	1250	8910	7110	1500	16600	2030	1440	828
12	12500	2570	1860	3170	963	8010	8900	1360	21000	2650	1050	791
13	14700	2560	2050	2970	2700	7810	9170	1580	34200	1720	925	774
14	13300	2220	1960	2070	2790	7180	9410	1560	29800	1700	406	749
15	13100	2070	4160	931	2780	5340	8020	1570	17700	2410	296	610
16	13200	2050	4840	416	2730	5110	5310	1650	13700	1350	624	311
17	13200	1650	4660	324	2650	8110	5170	1730	10000	1350	983	270
18	12200	1570	4860	463	2610	8980	5090	1600	7920	1300	1100	819
19	6910	1690	5130	3490	2600	7500	3960	1550	10500	1230	985	762
20	6090	1770	4920	1770	3020	6800	3860	1970	15800	1160	1040	1510
21	5890	1860	3650	783	3510	5290	3230	1760	17800	1150	1010	1810
22	5520	1680	4740	2470	3560	4140	2400	1690	17700	1130	1000	585
23	4310	1330	12800	3550	5010	3980	2420	1660	17900	1110	1010	385
24	5540	817	14300	3540	3470	3880	2380	1530	19900	888	1010	585
25	4410	1320	10200	3940	4240	3650	2340	1630	20100	763	1000	667
26	3380	3670	8120	3270	5460	3000	2360	1440	18200	1230	1010	802
27	3160	4680	6050	3300	4990	2750	2340	1520	11500	1270	993	831
28	3200	3500	4950	1230	11000	2740	2300	4050	10200	979	1010	656
29	4320	1970	5120	2600	---	2700	2300	5230	9500	596	551	392
30	4650	1530	5360	3460	---	2690	2330	7130	8160	1130	702	325
31	4580	---	5210	3430	---	2670	---	7080	---	1010	1030	---
TOTAL	192769	75517	138290	87807	95573	238390	126710	67782	494270	70336	28979	23948
MEAN	6218	2517	4461	2832	3413	7690	4224	2187	16480	2269	935	798
MAX	14700	4680	14300	5080	11000	15900	9410	7130	34200	5670	1510	1810
MIN	313	817	1540	324	963	2670	2300	493	7010	596	296	270
AC-FT	382400	149800	274300	174200	189600	472800	251300	134400	980400	139500	57480	47500

CAL YR 1986 TOTAL 1146230 MEAN 3140 MAX 66400 MIN 242 AC-FT 2274000
WTR YR 1987 TOTAL 1640370 MEAN 4494 MAX 34200 MIN 270 AC-FT 3254000

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: November 1967 to current year. Pesticide analyses: November 1976 to June 1981. Sediment analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1967 to current year.
WATER TEMPERATURES: November 1967 to February 1984.

INSTRUMENTATION.--Beginning September 1980, specific conductance is recorded continuously at this station. From October 1980 to February 1984 water temperature was 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, 3,000 microsiemens Aug. 24, 1978; minimum daily, 140 microsiemens Mar. 8, 1984.
WATER TEMPERATURES (1967-84): Maximum daily, 35.5°C July 15, 16, 1978; minimum daily, 0.0°C Dec. 29-31, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,470 microsiemens Oct. 22; minimum daily, 262 microsiemens Dec. 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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 29...	1400	4120	1780	8.20	21.5	51	8.3	95	0.5	440	120	320
FEB 04...	1350	2990	1800	7.60	14.5	7.9	10.4	103	0.6	K5	K6	330
MAY 12...	1550	1550	1740	7.70	26.0	52	8.2	103	0.7	580	600	400
JUN 14...	1140	30000	1070	8.20	27.0	--	--	--	--	--	--	240
AUG 19...	1455	1180	1900	8.50	31.5	21	9.2	126	1.8	49	160	370

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT 29...	210	93	22	250	6	6.3	111	220	400	0.30	7.0	1070
FEB 04...	200	98	20	240	6	5.5	129	230	360	0.40	5.1	1030
MAY 12...	250	120	23	200	5	5.5	148	210	370	0.10	6.2	992
JUN 14...	120	70	15	130	4	5.7	112	120	190	0.30	9.9	--
AUG 19...	240	98	29	240	6	6.1	127	250	360	0.40	7.3	1110

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT 29...	1100	--	<0.010	0.390	0.030	0.030	1.4	1.4	0.090	0.050	0.040	0.12
FEB 04...	1000	0.660	0.010	0.670	0.080	0.030	0.62	0.70	0.580	0.060	0.060	0.18
MAY 12...	1000	0.750	0.030	0.780	0.100	0.090	0.80	0.90	0.180	0.110	0.100	0.31
JUN 14...	610	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	1100	--	0.010	<0.100	<0.010	<0.010	--	1.1	0.190	0.170	0.110	0.34

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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)
OCT 29...	109	1210	73	30	2	130	<0.5	<1	<1	<3	2	20
FEB 04...	59	476	43	10	2	120	<0.5	<1	<1	<3	1	30
MAY 12...	141	590	85	30	2	130	<0.5	<1	<1	<3	1	19
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	47	150	93	10	2	120	<0.5	<1	<1	<3	1	8

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
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WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	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 29...	<5	25	3	0.2	10	4	<1	<1	1300	<6	18
FEB 04...	<5	26	4	<0.1	<10	<1	<1	<1	1300	<6	20
MAY 12...	<5	30	8	0.2	<10	<1	<1	<1	1400	<6	23
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	<5	18	2	0.3	<10	<1	<1	<1	1400	<6	22

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	192769	1950	1120	581000	420	216300	210	110900	360
NOV.	1986	75517	1740	991	202000	350	72300	190	38600	340
DEC.	1986	138290	1260	715	267000	230	86600	140	51100	270
JAN.	1987	87807	1410	802	190000	270	62900	150	36400	300
FEB.	1987	95573	1830	1050	270000	380	98500	200	51500	350
MAR.	1987	238390	1800	1020	659000	370	240700	200	125900	340
APR.	1987	126710	1630	929	318000	320	109500	180	60800	330
MAY	1987	67782	1560	885	162000	300	55400	170	31000	320
JUNE	1987	494270	1270	721	962000	230	304800	140	184200	280
JULY	1987	70336	1620	922	175000	320	60300	180	33500	330
AUG.	1987	28979	1760	1010	78600	360	27900	190	15000	350
SEPT	1987	23948	1590	904	58400	310	20000	170	11200	330
TOTAL		1640371	**	**	3923000	**	1355000	**	750000	**
WTD.AVG.		4494	1560	886	**	310	**	170	**	320

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	1960	1930	1930	2230	2150	2190	1890	1840	1870	1350	495	722
2	1940	1740	1880	2160	1970	2100	1810	1670	1730	1390	498	1210
3	1920	1670	1730	1960	1870	1930	1790	1680	1740	1400	1380	1390
4	2030	1940	1980	1900	1730	1830	1980	1700	1880	1450	1370	1430
5	1990	1830	1920	1810	1330	1720	1980	1970	1970	1440	1160	1290
6	2000	1870	1940	1700	1410	1590	1980	1960	1980	1280	1110	1200
7	1860	1620	1790	1990	1540	1820	1990	1960	1970	1530	1160	1310
8	1540	1110	1290	2020	1890	1950	1960	1850	1930	1750	1510	1670
9	1880	1170	1520	1990	1900	1950	1820	1470	1590	1750	1720	1730
10	2000	1880	1940	1990	1920	1940	1600	1210	1430	1730	1690	1710
11	1990	1950	1970	1960	1910	1940	1660	1290	1550	1720	1670	1700
12	1990	1950	1960	1980	1910	1940	1670	1440	1610	1730	1670	1690
13	1990	1560	1770	2020	1940	1960	1900	1290	1500	1750	1720	1740
14	1990	1720	1900	1960	1910	1930	2070	1750	1980	1770	1740	1760
15	2060	1970	2000	1950	1770	1900	1650	1080	1310	1760	1570	1740
16	2050	1970	2000	2000	1770	1890	1370	1100	1270	1740	1650	1690
17	2050	1970	2000	2010	1780	1910	1320	1120	1240	1640	1510	1580
18	2080	1980	2020	1850	1780	1810	1420	1140	1270	1500	1390	1430
19	2060	1900	1970	1830	1760	1800	1590	1350	1440	1450	1150	1270
20	2250	2060	2180	1910	1430	1800	1580	1390	1470	1140	908	996
21	2410	2260	2340	1600	1320	1490	1840	1550	1630	912	898	902
22	2470	2350	2400	1650	1480	1570	1880	1290	1600	949	764	898
23	2410	1770	2150	1610	1520	1570	1290	924	1050	1190	927	1000
24	1860	1550	1690	1900	1450	1780	1060	799	928	1480	1190	1340
25	2100	1580	1890	1720	1150	1350	542	262	376	1580	1480	1530
26	1820	1610	1670	1590	910	1390	904	558	749	1610	1570	1590
27	1960	1840	1920	1180	930	1060	1300	905	1080	1640	1610	1620
28	2060	1950	1990	1250	930	1060	1460	1310	1390	1640	1610	1630
29	2050	1830	1940	1680	1280	1500	1550	1370	1480	1700	1610	1650
30	2180	2060	2140	1830	1700	1770	1380	1270	1310	1700	1510	1560
31	2220	2170	2190	---	---	---	1340	1290	1320	1620	1530	1580
MONTH	2470	1110	1940	2230	910	1750	2070	262	1470	1770	495	1440

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
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SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1660	1620	1630	1300	973	1160	1550	1540	1540	1790	1750	1780
2	1680	1650	1670	1110	928	966	1570	1540	1560	1740	1700	1720
3	1740	1690	1700	1380	1120	1270	1580	1550	1570	1730	1690	1710
4	1890	1740	1790	1700	1320	1420	1590	1570	1580	1710	1670	1690
5	1940	1900	1910	2020	1800	1970	1600	1570	1580	1720	1620	1680
6	1980	1920	1950	2130	1970	2020	1590	1570	1580	1660	1630	1640
7	1990	1970	1980	2250	2130	2170	1600	1580	1580	1670	1650	1660
8	1990	1980	1990	2290	2250	2260	1630	1580	1600	1660	1340	1600
9	2030	1990	2000	2310	2280	2300	1750	1640	1700	1600	1430	1500
10	2050	1990	2020	2320	2250	2300	1740	1680	1710	1620	1550	1580
11	2000	1930	1970	2240	2020	2120	1690	1670	1680	1610	1570	1590
12	1930	1860	1900	2070	1940	1990	1680	1660	1670	1760	1600	1670
13	2180	1860	2030	2050	1960	2020	1670	1640	1660	1700	1200	1510
14	1940	1820	1870	2050	1990	2030	1650	1600	1620	1170	967	1040
15	2100	1940	2020	1990	1870	1930	1630	1610	1620	1520	998	1310
16	2230	2110	2180	1880	1840	1860	1620	1590	1610	1640	1470	1580
17	2240	2200	2220	1850	1250	1550	1610	1590	1600	1640	1530	1580
18	2240	2180	2200	1290	1200	1240	1610	1580	1600	1750	1500	1640
19	2240	2200	2230	1310	1210	1260	1610	1580	1600	1690	1580	1630
20	2240	1990	2180	1480	1250	1330	1600	1560	1580	1690	1570	1640
21	2090	1920	2030	1690	1480	1570	1590	1550	1570	1670	1520	1590
22	2110	1880	2010	1790	1690	1750	1610	1560	1580	1810	1470	1700
23	2220	2090	2180	1780	1670	1730	1650	1580	1610	1700	1450	1590
24	2150	1620	1840	1670	1640	1650	1650	1620	1630	1570	1420	1520
25	1860	1700	1780	1660	1510	1570	1680	1640	1650	1620	1410	1510
26	1960	1400	1730	1510	1370	1470	1690	1670	1680	1480	1300	1390
27	1550	1300	1440	1490	1330	1370	1710	1670	1690	1780	1400	1620
28	1420	892	1160	1560	1500	1540	1730	1700	1720	1930	1690	1840
29	---	---	---	1570	1550	1560	1760	1730	1750	2000	1890	1970
30	---	---	---	1560	1530	1550	1780	1760	1770	1950	989	1590
31	---	---	---	1560	1530	1540	---	---	---	1000	704	868
MONTH	2240	892	1910	2320	928	1690	1780	1540	1630	2000	704	1580
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	963	694	864	1700	1620	1670	1730	1680	1700	1680	1630	1660
2	1200	902	1010	1640	1570	1610	1770	1700	1740	1640	1600	1630
3	1040	838	892	1580	988	1350	1790	1730	1770	1640	1580	1610
4	1160	962	1050	1760	1350	1540	1730	1630	1680	1660	1590	1620
5	1210	962	1140	1870	1770	1830	1690	1580	1620	1700	1650	1670
6	1300	1230	1280	1900	1860	1880	1690	1630	1670	1700	1680	1690
7	1370	1320	1340	1910	1850	1890	1770	1670	1710	1690	1660	1680
8	1410	1370	1390	1830	1760	1780	1770	1720	1750	1740	1680	1700
9	1440	1390	1410	1760	1430	1600	1720	1690	1710	1740	1540	1670
10	1530	1390	1460	1700	1400	1550	1800	1700	1730	1740	1540	1700
11	1510	1260	1410	1660	1470	1610	1870	1760	1810	1740	1690	1710
12	1260	1010	1160	1450	1240	1320	1940	1850	1890	1710	1530	1660
13	1060	876	947	1580	1430	1530	1920	1860	1890	1620	1540	1570
14	1180	1010	1090	1530	1290	1420	1850	1770	1810	1690	1560	1630
15	1180	1050	1110	1420	1290	1370	1790	1770	1780	1710	1650	1680
16	1370	1180	1320	1580	1430	1530	1830	1750	1780	1700	1520	1640
17	1360	1040	1230	1570	1510	1530	1810	1730	1760	1540	1480	1510
18	1440	1330	1380	1550	1490	1510	1870	1760	1810	1590	1490	1560
19	1430	1140	1320	1580	1550	1560	1910	1860	1890	1500	1120	1370
20	1450	1310	1380	1630	1570	1600	1940	1900	1910	1180	1010	1130
21	1480	1410	1460	1630	1570	1600	1900	1810	1860	1640	1220	1480
22	1500	1430	1470	1640	1600	1620	1850	1780	1810	1640	1580	1620
23	1510	1460	1480	1650	1610	1630	1800	1760	1770	1670	1610	1640
24	1510	1490	1510	1640	1560	1610	1780	1760	1770	1650	1500	1580
25	1530	1500	1520	1560	1540	1550	1780	1760	1770	1490	1400	1440
26	1530	1370	1500	1650	1550	1580	1760	1740	1750	1600	1400	1460
27	1340	1200	1240	1770	1640	1700	1750	1720	1730	1750	1610	1670
28	1320	1290	1310	1800	1750	1770	1730	1670	1720	1820	1730	1780
29	1400	1300	1340	1760	1700	1710	1730	1670	1710	1810	1760	1780
30	1600	1390	1420	1740	1660	1690	1700	1670	1690	1840	1800	1820
31	---	---	---	1700	1630	1670	1690	1580	1650	---	---	---
MONTH	1600	694	1280	1910	988	1610	1940	1580	1760	1840	1010	1610

08099100 LEON RIVER NEAR DE LEON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°10'25", long 98°31'58", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on State Highway 16, 1.5 mi upstream from Flat Creek, 4.4 mi northeast of De Leon, 6 mi downstream from Hog Creek, and 250.1 mi upstream from mouth.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--September 1960 to September 1985 (continuous-record station), October 1985 to current year. Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.93 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1960, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Only daily discharges greater than 600 ft³/s are published Flow is regulated by Leon Reservoir (station 08099000) about 17.5 mi upstream. Numerous diversions above station for municipal, steam powerplant operation and other uses. Recording rain gage discontinued May 31, 1978.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,540 ft³/s Jan. 21, 1968 (gage height, 15.50 ft); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.3 ft occurred in May 1908 at a point 2,000 ft downstream from present gage site and is the highest since that time, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,310 ft³/s May 29 at 2330 hours (gage height, 14.11 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	764	---	---	621	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	1200	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	1740	---	---	---	---
17	---	---	---	---	---	---	---	1610	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	1000	793	---	---	---
21	---	---	---	---	---	---	---	997	980	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	2040	---	---	---	---
25	---	---	---	---	---	---	---	3130	---	---	---	---
26	---	---	---	---	---	---	---	967	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	930	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	2810	---	---	---	---
30	---	---	---	---	---	---	---	3620	---	---	---	---
31	---	---	---	---	---	---	---	1540	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1986	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--		
WTR YR 1987	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--		

08099300 SABANA RIVER NEAR DE LEON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°06'50", long 98°36'19", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on Farm Road 587, 0.6 mi downstream from Spring Branch, 4.0 mi west of De Leon, 4.2 mi upstream from Turkey Creek, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--264 mi².

PERIOD OF RECORD.--September 1960 to September 1985 (continuous-record station), October 1985 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.59 ft above National Geodetic Vertical Datum of 1929 (levels by State Department of Highways and Public Transportation). Prior to Nov. 22, 1960, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Feb. 28 and Mar. 1. Records good except those for estimated daily discharges, which are fair. Only daily discharges above 250 ft³/s are published. Flow may be slightly affected by Nabors Lake 0.4 mi upstream on Spring Branch. One observation of water temperature was made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 12, 1967 (gage height, 22.05 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 24 ft in May 1908, from information by local resident.

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. 28	1700	a2,830	a18.91	May 29	2100	*3,500	*19.90
May 24	1030	1,640	15.36	June 12	0330	1,670	15.51

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	429	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	479	---	---	---
12	---	---	---	---	---	---	---	---	881	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	400	406	---	---	---
21	---	---	---	---	---	---	---	---	251	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	1020	---	---	---	---
25	---	---	---	---	---	---	---	277	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	982	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	2600	---	---	---	---
30	---	---	---	---	---	---	---	1120	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1986	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--			
WTR YR 1987	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--			

08099400 PROCTOR LAKE NEAR PROCTOR, TX

LOCATION.--Lat 31°58'07", long 98°29'09", Comanche County, Hydrologic Unit 12070201, in intake structure at Proctor Lake on Leon River, 2.0 mi upstream from U.S. Highways 67 and 377, 3.5 mi west of Proctor, and 228.1 mi upstream from mouth.

DRAINAGE AREA.--1,259 mi².

PERIOD OF RECORD.--January 1963 to current year. Prior to October 1970, published as Proctor Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 28, 1963, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a reinforced concrete gated structure and rolled earthfill dam, total length, 13,460 ft. The lake was operated as a detention basin from Jan. 30 to July 5, 1963. The gates were closed July 6, 1963, but the lake was operated to elevation 1,156.0 ft until construction was completed. Deliberate impoundment began Sept. 30, 1963. The spillway is a gated concrete gravity structure located on the left bank, with an ogee weir section and stilling basin. The spillway is controlled by eleven 40.0- by 35.0-foot tainter gates. The spillway was designed to discharge 431,800 ft³/s at an elevation of 1,201.0 ft. The lake is operated for flood control and water conservation. Inflow is partly regulated by one major reservoir (see station 08099000). Inflow is also affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 43,690 acre-ft. These structures control runoff from 172 mi² in the Leon River and Rush Creek drainage basins. The capacity table is based on a survey made in 1946. Borrow is not included in capacity totals. 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	1,206.0	-
Design flood	1,201.0	433,000
Top of gates	1,197.0	374,200
Crest of spillway (top of conservation pool)	1,162.0	59,400
Lowest gated outlet (invert)	1,128.0	68

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 174,800 acre-ft June 12, 1986 (elevation, 1,179.33 ft); minimum since first filling of lake, 18,900 acre-ft Oct. 4, 1984 (elevation, 1,149.37 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 150,400 acre-ft June 14 at 0400 hours (elevation, 1,176.50 ft); minimum, 57,840 acre-ft Sept. 28 at 0200 hours (elevation, 1,161.66 ft).

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

1,161.0	54,890	1,170.0	103,600	1,176.0	146,500
1,164.0	69,060	1,172.0	116,900	1,177.0	154,500
1,167.0	85,300	1,174.0	131,200		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58480	59070	60550	59440	60090	71320	63540	58980	141200	135500	81550	61210
2	58290	59070	60410	59480	60130	73560	63060	58980	141600	133300	80660	60830
3	58340	58930	60370	59480	60180	74410	62770	59390	140900	131200	79880	60410
4	58340	59210	60320	59440	60230	74510	62480	59670	140200	129100	79050	59950
5	58840	59070	60230	59440	60460	74410	62440	59670	140000	127000	78070	59530
6	60090	59070	60130	59480	60410	74140	62250	59760	139800	123900	77360	59160
7	61110	59020	60270	59530	60510	73820	62060	59620	138800	122000	76550	59020
8	61210	59020	60130	59670	60600	73400	61920	59670	137100	119400	75740	58930
9	60970	58980	60130	59860	60550	73140	61770	59620	136100	116900	74990	58800
10	60650	59160	59950	59950	60550	72510	61680	59620	136000	114400	74350	58520
11	60550	58980	59990	59990	60510	72150	61490	59580	138900	112000	73560	58290
12	60510	59120	59950	60040	60510	71680	61400	59480	144000	110300	72820	58520
13	60180	58800	59900	60040	60460	71160	61350	59390	146600	107600	72250	58480
14	59900	58750	59990	60090	60600	70700	61070	59760	147600	105300	71630	58430
15	59760	58750	59990	60090	60740	70130	60970	62340	147600	103300	70800	58480
16	59720	58750	59990	60090	60510	70130	60830	64990	147400	101200	70130	58380
17	59720	58750	60230	60320	60320	69780	60790	68000	147000	99200	69420	58340
18	59620	58750	60740	60090	60230	69470	60690	70590	148300	97270	68660	59070
19	59580	58750	61580	60040	60370	69110	60600	71210	147800	95360	67950	58980
20	59530	58700	61440	60130	60930	68660	60550	72250	148000	93460	67200	58980
21	59440	58660	61210	60040	61300	68300	60600	74410	149700	91590	66510	58890
22	59530	58700	61210	59990	61350	67850	60550	75740	149300	90160	65820	58800
23	59580	58750	60930	59950	61110	67550	60320	76120	148100	89500	65180	58660
24	59480	58890	60690	60040	61160	66960	59990	88620	146800	88620	64500	58520
25	59390	59530	60410	59950	61260	66510	59720	94930	145200	87740	63730	58340
26	59350	60550	60130	59950	61580	66020	59480	98580	143500	86860	63100	58160
27	59300	60740	59860	59900	62820	65520	59350	99330	141900	85820	63060	58020
28	59260	60790	59620	59860	66360	65330	59210	101400	140200	84950	62770	58250
29	59210	60690	59620	59900	---	64840	59070	119700	138900	84090	62630	58160
30	59160	60690	59530	59900	---	64110	58980	133100	138200	83180	62010	58020
31	59120	---	59530	59860	---	63680	---	138800	---	82390	61580	---
MAX	61210	60790	61580	60320	66360	74510	63540	138800	149700	135500	81550	61210
MIN	58290	58660	59530	59440	60090	63680	58980	58980	136000	82390	61580	58020
(†)	1161.94	1162.28	1162.03	1162.10	1163.46	1162.91	1161.91	1175.01	1174.93	1166.49	1162.47	1161.70
(ϕ)	+550	+1570	-1160	+330	+6500	-2680	-4700	+79820	-600	-55810	-20810	-3560

CAL YR 1986 MAX 173800 MIN 43200 (ϕ) +15430
WTR YR 1987 MAX 149700 MIN 58020 (ϕ) -550

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

08099500 LEON RIVER NEAR HASSE, TX

LOCATION.--Lat 31°57'28", long 98°27'32", Comanche County, Hydrologic Unit 12070201, on left bank 110 ft left and 70 ft upstream from left upstream end of bridge on U.S. Highways 67 and 377, 500 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 0.3 mi upstream from Walnut Creek, 2.0 mi downstream from Proctor Lake, 2.1 mi northeast of Hasse, and 225.2 mi upstream from mouth.

DRAINAGE AREA.--1,261 mi².

PERIOD OF RECORD.--January 1939 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1342: 1952. WSP 1392: 1952. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,115.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 16 to Nov. 14, Feb. 24 to May 3, May 17-27, June 4 to July 16, July 22 to Aug. 3, Sept. 8, Sept. 12-15. Records fair. Since October 1963, flow has been regulated by Proctor Lake (station 08099400) 2.0 mi upstream. There are numerous diversions above station for municipal, steam powerplant operation and other uses. Gage-height telemeter at station.

AVERAGE DISCHARGE.--24 years (water years 1940-63), prior to completion of Proctor Lake, 151 ft³/s (109,400 acre-ft/yr); 24 years (water years 1964-87); regulated, 94.2 ft³/s (68,250 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft³/s May 24, 1952 (gage height, 21.49 ft); maximum gage height, 21.72 ft Oct. 4, 1959; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1858, occurred in May 1908, from information by local resident. At a site about 2.5 mi upstream, flood of May 1908 was 9.1 ft higher than that of May 24, 1952, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft³/s May 28 at 2400 hours (gage height, 12.01 ft); minimum daily, 0.03 ft³/s May 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	25	69	42	38	544	176	.42	229	997	320	84
2	9.5	25	48	12	40	26	147	.19	347	1180	315	82
3	9.0	23	38	28	42	201	114	2.5	915	1180	307	82
4	9.3	30	36	16	44	460	88	1.3	902	1160	293	82
5	12	30	45	14	46	460	76	.63	263	1150	286	82
6	17	23	59	15	63	454	73	.05	220	1210	279	81
7	13	22	62	17	57	450	66	.03	522	1370	271	48
8	85	22	60	19	64	447	54	.90	1010	1330	264	20
9	178	28	59	32	67	439	48	2.5	1250	1300	260	48
10	171	34	51	34	64	435	37	2.4	1250	1270	255	53
11	171	58	38	34	62	429	29	2.5	952	1250	249	54
12	168	33	34	35	62	423	25	3.2	264	1230	243	38
13	166	35	32	36	60	416	28	3.4	266	1220	235	5.0
14	164	23	32	36	57	406	28	4.0	273	1210	230	5.0
15	99	20	34	39	71	401	19	8.3	273	1190	222	4.6
16	16	22	33	39	66	394	14	8.9	276	1170	218	2.6
17	30	22	34	40	58	408	13	7.8	273	1140	213	1.6
18	34	22	56	45	51	391	14	46	310	1110	207	7.1
19	38	20	152	39	47	384	13	201	553	1090	202	4.1
20	36	20	375	38	72	377	9.9	217	1010	1060	196	2.6
21	34	18	341	38	92	372	12	232	1030	1040	192	2.6
22	34	19	325	40	112	370	8.9	247	1030	900	188	2.6
23	36	22	310	36	195	358	68	260	1030	390	184	14
24	39	24	280	39	293	344	144	462	1020	370	178	45
25	32	36	255	38	293	319	126	412	1010	365	173	45
26	28	58	231	34	319	304	107	462	1000	360	168	45
27	26	91	209	34	397	296	88	546	993	355	124	43
28	24	82	142	34	597	287	36	867	985	350	84	40
29	23	74	70	36	---	276	.87	649	978	345	82	31
30	22	70	67	33	---	244	.87	140	981	335	82	30
31	21	---	65	31	---	207	---	203	---	330	82	---
TOTAL	1758.8	1031	3642	1003	3429	11322	1663.54	4993.02	21415	28957	6602	1084.8
MEAN	56.7	34.4	117	32.4	122	365	55.5	161	714	934	213	36.2
MAX	178	91	375	45	597	544	176	867	1250	1370	320	84
MIN	9.0	18	32	12	38	26	.87	.03	220	330	82	1.6
AC-FT	3490	2040	7220	1990	6800	22460	3300	9900	42480	57440	13100	2150

CAL YR 1986 TOTAL 80009.62 MEAN 219 MAX 1340 MIN .04 AC-FT 158700
WTR YR 1987 TOTAL 86901.06 MEAN 238 MAX 1370 MIN .03 AC-FT 172400

08100000 LEON RIVER NEAR HAMILTON, TX

LOCATION.--Lat 31°47'19", long 98°07'16", Hamilton County, Hydrologic Unit 12070201, at downstream side of bridge on U.S. Highway 281, 2.2 mi upstream from Mesquite Creek, 3.6 mi downstream from Bear Creek, 5.9 mi north of Hamilton, and 172.9 mi upstream from mouth.

DRAINAGE AREA.--1,891 mi².

PERIOD OF RECORD.--January 1925 to September 1931, September 1960 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 955.38 ft above National Geodetic Vertical Datum of 1929. Jan. 7, 1925, to Sept. 30, 1931, nonrecording gage 1.4 mi downstream at datum 1.87 ft higher. Sept. 1 to Nov. 22, 1960, nonrecording gage at same site and at 5.00-foot higher datum. Nov. 22, 1960, to Sept. 30, 1972, recording gage at same site and at 5.00-foot higher datum.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Since 1960, at least 10 percent of the drainage area above this station is regulated by Proctor Lake (station 08099400) 54 mi upstream and by several other smaller reservoirs. There are numerous diversions above station for irrigation, municipal supply, and for industrial uses. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 11,610 acre-ft. These structures control runoff from 43.9 mi² in the northeast tributaries drainage basin. A gage-height telemeter was removed on Mar. 7, 1985. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1926-31) unregulated, 130 ft³/s (94,180 acre-ft/yr); 27 years (water years 1961-87) regulated, 143 ft³/s (103,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s Sept. 9, 1962 (gage height, 31.93 ft) no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1858, 38.4 ft in May 1908 and December 1913; flood in September 1911 reached a stage of 37.0 ft, all at present site and datum, from information by local residents. The flood in October 1959 reached a stage of 34.1 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,400 ft³/s May 29 at 0600 hours (gage height, 24.86 ft). Minimum daily discharge, 15 ft³/s Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	45	116	176	85	1310	400	53	943	935	e390	157
2	43	43	107	168	94	985	e390	48	752	916	e380	146
3	41	41	104	138	99	373	e370	53	722	950	e370	141
4	38	45	82	103	96	238	e340	80	1020	1060	e350	131
5	146	50	64	109	93	530	e350	95	1120	1070	e340	126
6	212	46	62	101	104	570	e340	68	828	1050	e320	128
7	228	50	75	92	120	560	315	50	543	1030	e310	136
8	151	46	101	89	128	547	284	44	599	1080	e310	141
9	97	41	102	119	115	533	258	49	1410	1190	e300	62
10	180	40	97	148	117	518	238	50	1980	1210	e300	30
11	242	39	91	141	116	573	223	47	2060	1190	e310	40
12	560	41	87	123	112	603	213	43	2970	1150	e320	42
13	359	46	76	117	111	547	196	40	1760	1120	e300	45
14	273	45	69	116	111	519	179	37	1140	1110	e290	45
15	253	43	90	113	113	500	175	38	865	1190	e290	26
16	237	43	90	108	118	482	164	159	720	1290	e280	21
17	134	39	87	120	128	1030	146	264	636	1050	e270	18
18	75	37	125	173	113	1080	133	106	777	1010	e260	28
19	64	36	161	158	102	663	127	76	1060	977	e260	28
20	61	35	173	145	124	559	116	325	765	869	e260	20
21	63	34	317	129	322	564	104	367	991	885	e250	22
22	65	34	536	120	259	2060	101	341	1080	901	e240	19
23	126	31	723	113	210	1430	105	347	1080	873	e230	16
24	123	30	620	113	232	676	96	1810	1050	626	e230	15
25	81	87	501	102	401	571	189	2470	1030	353	e230	15
26	74	144	421	97	532	529	212	1140	1010	442	235	35
27	67	161	373	96	773	509	206	644	981	e440	230	43
28	61	106	341	91	1150	482	148	721	965	e420	215	44
29	55	120	315	89	---	461	116	4530	945	e410	201	46
30	51	122	221	83	---	459	86	4000	936	e410	185	43
31	47	---	186	81	---	432	---	2160	---	e400	173	---
TOTAL	4252	1720	6513	3671	6078	20893	6320	20255	32738	27607	8629	1809
MEAN	137	57.3	210	118	217	674	211	653	1091	891	278	60.3
MAX	560	161	723	176	1150	2060	400	4530	2970	1290	390	157
MIN	38	30	62	81	85	238	86	37	543	353	173	15
AC-FT	8430	3410	12920	7280	12060	41440	12540	40180	64940	54760	17120	3590

CAL YR 1986 TOTAL 124196 MEAN 340 MAX 6880 MIN .07 AC-FT 246300
WTR YR 1987 TOTAL 140485 MEAN 385 MAX 4530 MIN 15 AC-FT 278700

e Estimated.

08100500 LEON RIVER AT GATESVILLE, TX

LOCATION.--Lat 31°25'58", long 97°45'42", Coryell County, Hydrologic Unit 12070201, on right bank at upstream side of county road bridge, 800 ft downstream from U.S. Highway 84 bridge in Gatesville, 0.3 mi downstream from Dodds Creek, 5.2 mi upstream from Cottonwood Creek, and 99.0 mi upstream from mouth.

DRAINAGE AREA.--2,342 mi².

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 723.85 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1950, to Feb. 8, 1951, nonrecording gage; Feb. 9, 1951, to Jan. 21, 1969, water-stage recorder; all at site 800 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Some upstream regulation by Proctor Lake (08099400) and other smaller reservoirs. Flow at times is slightly affected by discharge from 18 floodwater-retarding structures with a combined detention capacity of 12,600 acre-ft. These structures control runoff from 47.0 mi² in the northeast tributaries and Pecan Creek drainage basins. There are numerous diversions above station for irrigation, municipal supply, and oilfield operation. The city of Hamilton, located about 70 mi upstream from this station, diverts flow from the river for municipal use and returned sewage effluent to the stream. The city of Gatesville obtains all of their municipal water supply from ground-water wells but discharges sewage effluent back to the Leon River downstream from this station. Several observations of water temperature were made during the year. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--37 years, 235 ft³/s (170,300 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,200 ft³/s Oct. 4, 1959 (gage height, 34.14 ft), from rating curve extended above 41,000 ft³/s; no flow at times in 1951-52, 1954-55, 1971, 1978-79, and 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, about 35 ft in May 1908, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,640 ft³/s June 12 at 2300 hours (gage height, 22.96 ft); minimum daily, 0.27 ft³/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	66	143	339	176	1330	518	145	4650	1070	399	172
2	55	64	141	311	177	1440	491	123	1940	1070	402	166
3	52	62	135	290	185	1160	457	98	1290	1050	382	158
4	52	169	128	272	185	736	429	90	2950	1030	373	147
5	51	121	125	231	184	463	407	90	1390	1140	371	139
6	97	87	111	206	183	511	403	110	1420	1190	356	131
7	218	82	104	210	185	641	406	124	1210	1170	347	127
8	246	76	104	200	204	634	410	103	765	1140	336	131
9	216	72	118	222	210	619	376	89	2030	1150	331	131
10	151	71	135	290	208	603	344	83	3820	1280	327	129
11	113	65	132	290	197	759	315	81	5970	1320	323	90
12	198	61	131	257	198	708	292	80	6300	1310	330	54
13	405	61	126	240	195	713	274	76	5770	1280	315	49
14	435	59	137	226	192	651	255	70	5310	1250	316	53
15	313	60	184	214	191	613	235	65	2540	1230	308	53
16	270	69	191	209	188	594	221	152	1540	1200	299	60
17	253	67	183	207	187	859	217	171	1190	1560	290	47
18	224	68	242	441	187	1020	206	243	1020	1350	281	41
19	137	63	277	491	192	1260	188	238	1060	1160	275	44
20	94	60	281	368	213	824	174	185	1380	1090	260	51
21	80	57	265	312	253	664	165	209	1200	1040	247	55
22	76	56	584	280	368	620	156	392	1220	1010	238	38
23	120	55	1580	253	410	1720	147	373	1320	973	236	32
24	115	54	1180	237	373	1990	143	360	1320	934	235	30
25	169	112	839	225	383	857	142	1100	1290	774	233	31
26	141	114	681	216	742	661	135	2530	1260	452	231	28
27	104	164	578	200	956	607	219	1940	1210	436	229	27
28	91	185	523	196	1530	582	229	1350	1150	467	233	27
29	85	176	489	193	---	562	219	2290	1120	460	234	45
30	77	138	462	187	---	541	167	3660	1090	452	223	49
31	71	---	417	178	---	533	---	4440	---	424	182	---
TOTAL	4770	2614	10726	7991	8852	25475	8340	21060	65725	31462	9142	2335
MEAN	154	87.1	346	258	316	822	278	679	2191	1015	295	77.8
MAX	435	185	1580	491	1530	1990	518	4440	6300	1560	402	172
MIN	51	54	104	178	176	463	135	65	765	424	182	27
AC-FT	9460	5180	21280	15850	17560	50530	16540	41770	130400	62400	18130	4630

CAL YR 1986 TOTAL 146222 MEAN 401 MAX 4630 MIN 3.9 AC-FT 290000
WTR YR 1987 TOTAL 198492 MEAN 544 MAX 6300 MIN 27 AC-FT 393700

08101000 COWHOUSE CREEK AT PIDCOKE, TX

LOCATION.--Lat 31°17'05", long 97°53'05", Coryell County, Hydrologic Unit 12070202, on left bank 125 ft downstream from bridge on Farm Road 116, 0.1 mi downstream from Beehouse Creek, 0.6 mi northeast of Pidcoke, 4.9 mi upstream from Table Rock Creek, and 34.6 mi upstream from mouth.

DRAINAGE AREA.--455 mi².

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1712: 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 736.71 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No known diversion above station. Several observations of water temperatures were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--37 years, 83.4 ft³/s (2.49 in/yr), 60,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,200 ft³/s Oct. 4, 1959 (gage height, 40.1 ft, from floodmark); from rating curve extended above 30,000 ft³/s on basis of slope-area measurement of 55,800 ft³/s; no flow at times. Maximum stage since at least 1882, that of Oct. 4, 1959, from information by local resident.

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)
Oct. 23	0900	11,300	20.14	June 3	1500	4,130	12.10
Nov. 4	1200	3,800	11.65	June 4	0400	*13,600	*22.30
May 24	1830	7,630	16.38	June 9	2130	3,540	11.26
May 28	0530	8,580	17.40	June 12	0930	6,060	14.59
May 29	1100	12,100	20.86				

Minimum daily discharge, 1.2 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	59	67	183	105	481	138	72	449	88	18	6.8
2	3.8	58	64	172	113	335	121	71	250	85	15	5.0
3	3.4	58	61	167	112	271	108	71	1090	80	13	4.2
4	3.4	787	60	158	104	232	103	76	5220	76	11	3.1
5	5.0	149	58	153	103	208	108	85	636	73	9.8	2.5
6	143	92	58	153	104	195	215	76	307	70	7.6	2.3
7	312	82	69	149	113	184	217	73	221	68	7.7	6.9
8	133	78	73	148	109	174	144	72	187	65	6.6	17
9	83	75	73	194	103	166	117	74	1110	65	5.9	4.9
10	72	72	68	228	99	159	105	73	1450	65	7.2	3.5
11	67	72	65	169	99	378	99	71	1740	63	8.8	2.8
12	123	70	67	150	98	413	93	70	3300	60	16	5.2
13	112	71	65	143	97	250	94	69	993	58	7.5	4.1
14	76	70	91	140	97	198	90	68	878	55	6.2	4.2
15	69	70	185	137	98	181	86	67	487	52	5.5	3.2
16	63	69	123	131	96	173	85	85	304	51	5.1	5.6
17	57	68	101	135	94	755	84	269	237	189	4.3	6.5
18	54	65	296	458	92	536	82	89	391	97	3.9	15
19	52	63	251	232	91	354	81	87	351	58	3.3	25
20	49	61	156	176	117	284	79	521	249	46	2.8	46
21	48	58	134	164	181	244	78	138	209	42	2.4	38
22	61	58	742	152	137	272	78	82	155	40	2.0	25
23	1590	56	1310	141	109	306	78	77	137	39	1.7	14
24	149	55	521	135	138	251	78	2140	124	37	1.5	9.8
25	91	191	361	126	169	184	77	500	112	35	1.5	7.0
26	76	186	295	118	580	170	76	216	107	30	1.4	5.3
27	72	93	253	115	523	169	75	116	97	28	1.2	4.8
28	68	79	230	113	1010	163	74	1880	92	26	5.4	4.9
29	66	73	216	111	---	161	73	5040	87	26	6.2	4.7
30	64	70	202	107	---	165	72	843	90	24	4.8	3.4
31	62	---	193	105	---	158	---	390	---	21	6.3	---
TOTAL	3831.8	3108	6508	4963	4891	8170	3008	13561	21060	1812	199.6	290.7
MEAN	124	104	210	160	175	264	100	437	702	58.5	6.44	9.69
MAX	1590	787	1310	458	1010	755	217	5040	5220	189	18	46
MIN	3.4	55	58	105	91	158	72	67	87	21	1.2	2.3
AC-FT	7600	6160	12910	9840	9700	16210	5970	26900	41770	3590	396	577
CFSM	.27	.23	.46	.35	.38	.58	.22	.96	1.54	.13	.0	.0
IN.	.31	.25	.53	.41	.40	.67	.25	1.11	1.72	.15	.0	.0

CAL YR 1986	TOTAL	35286.9	MEAN	96.7	MAX	2250	MIN	1.5	AC-FT	69990	CFSM	.21	IN.	2.88
WTR YR 1987	TOTAL	71402.8	MEAN	196	MAX	5220	MIN	1.2	AC-FT	141600	CFSM	.43	IN.	5.84

08102000 BELTON LAKE NEAR BELTON, TX

LOCATION.--Lat 31°06'22", long 97°28'28", Bell County, Hydrologic Unit 12070201, in intake structure at Belton Dam on Leon River, 1.6 mi upstream from bridge on State Highway 317, 3.5 mi north of Belton, 8.9 mi upstream from Nolan Creek, and 16.7 mi upstream from mouth.

DRAINAGE AREA.--3,531 mi².

PERIOD OF RECORD.--March 1954 to current year. Prior to October 1970, published as Belton Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 20, 1955, nonrecording gage at present site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 5,524 ft long, including a 1,300-foot uncontrolled broad-crested spillway in a saddle near left end of dam and a 418-foot-long dike. Deliberate impoundment began Mar. 8, 1954, and the dam was completed in December 1954. The lake was built for flood control and conservation storage. The controlled outlet works consist of a 22.0-foot-diameter conduit that is controlled by three 7.0- by 22.0-foot broome-type gates. The service outlet consists of a 36- by 36-inch gated outlet that discharges into the flood-control conduit. Beginning January 1976, the capacity table is based on a sedimentation survey made in 1966. There are many small diversions upstream for irrigation, municipal supply, and oilfield operations. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08100500. 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	662.0	-
Design flood	656.9	-
Crest of spillway	631.0	1,086,000
Top of conservation pool	594.0	442,000
Service outlet (invert)	540.0	51,240
Lowest gated outlet (invert)	483.0	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, 870,300 acre-ft June 6, 1957 (elevation, 620.45 ft); minimum since initial filling, 113,400 acre-ft Dec. 16, 1956 (elevation, 553.06 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 663,900 acre-ft June 19 at 2400 hours (elevation, 609.61 ft); minimum, 441,500 acre-ft Sept. 30 at 2400 hours (elevation, 593.96 ft).

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

593.0	429,700	599.0	506,900	605.0	591,100	610.0	669,200
596.0	467,300	602.0	548,100	608.0	637,200		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	445200	450400	447200	495200	459200	473200	459800	443100	495700	646100	536000	444800
2	444300	449100	446300	493300	458600	477100	458200	443400	505200	645100	531300	444800
3	443800	447600	445600	491300	458000	478900	456400	443800	516100	640800	526800	444600
4	443600	453700	444800	488900	456200	478000	454500	444100	536600	636600	521900	444500
5	443100	454500	443800	486200	453900	476200	453400	444500	544500	632900	517200	444300
6	445000	453900	443500	484200	451900	473800	451900	444600	548100	629600	512200	444100
7	449600	453700	444000	481900	450400	471600	450400	444700	550200	625500	508600	444300
8	450100	453100	444300	479000	449100	470600	448500	445600	550800	621800	502900	444300
9	450100	452100	444800	477500	447400	470200	446600	445700	556300	618700	499200	444300
10	449900	451600	444700	475200	446100	469500	445600	446000	569300	615400	494500	444100
11	449600	450100	444700	472600	444800	469400	444700	446200	583500	611100	490200	444100
12	450100	449600	444600	470000	443400	469700	444100	446300	601700	607900	485200	444200
13	449700	447900	444600	467300	442600	468900	445600	446700	620800	604700	480200	444100
14	448900	447100	446200	465100	442400	468100	445100	447100	634700	600900	475600	443800
15	447500	446800	449400	462700	442700	466900	445000	447100	645900	597200	470800	443600
16	445800	447200	451200	460100	441900	466700	444600	448600	652600	593200	466200	443600
17	444800	447200	452800	459600	441700	469300	444300	449400	656700	590500	461600	443700
18	444500	446800	457100	462300	442100	470000	444300	450000	661200	588000	456700	444800
19	444000	446200	458500	463100	443000	470200	444500	451100	662100	584700	451900	444700
20	443400	445300	459200	463900	444800	469900	444300	452300	662400	581000	449200	444500
21	443100	444300	460100	463900	445700	469400	444300	452400	662300	577100	448500	444300
22	443500	444000	471200	463700	446700	468200	444100	451900	658900	573200	447400	444000
23	453100	444200	484200	463100	447400	467800	444000	451800	655900	569300	446300	443400
24	456100	444600	491400	463200	449900	468500	443800	453900	653300	565600	445300	443000
25	457300	447900	496600	462600	450700	469500	443700	455200	651400	561200	444500	442600
26	458400	449100	500400	462300	455400	468600	443500	455800	648300	556700	444200	442400
27	458200	449600	502200	461700	460500	467300	443200	458500	645600	551800	444200	442500
28	456400	449200	501300	461000	468500	466600	443000	463100	642600	548800	444200	442100
29	454700	448700	500100	460900	---	464800	442900	475400	641900	548800	444100	441900
30	452900	448100	498800	460400	---	463000	442900	481400	644300	545500	444700	441500
31	451400	---	497300	459600	---	461300	---	488100	---	540700	445000	---
MAX	458400	454500	502200	495200	468500	478900	459800	488100	662400	646100	536000	444800
MIN	443100	444000	443500	459600	441700	461300	442900	443100	495700	540700	444100	441500
(†)	594.75	594.49	598.28	595.40	596.09	595.53	594.07	597.59	608.45	601.47	594.24	593.96
(ϕ)	+5400	-3300	+49200	-37700	+8900	-7200	-18400	+45200	+156200	-103600	-95700	-3500

CAL YR 1986 MAX 575100 MIN 441100 (ϕ) +13000
WTR YR 1987 MAX 662400 MIN 441500 (ϕ) -4500

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

08102500 LEON RIVER NEAR BELTON, TX

LOCATION.--Lat 31°04'12", long 97°26'28", Bell County, Hydrologic Unit 12070201, on left bank 1,400 ft upstream from bridge on Farm Road 817, 2,000 ft upstream from concrete dam, 1.0 mi upstream from bridge on Interstate Highway 35 and U.S. Highway 81, 1.6 mi northeast of Belton, 3.2 mi downstream from Belton Dam, 5.2 mi upstream from Nolan Creek, and 13.1 mi upstream from mouth.

DRAINAGE AREA.--3,542 mi².

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1442: 1925(M), 1935(M), 1936, 1938(M), 1941-42(M), 1944-45(M). WSP 1712: 1937(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 476.68 ft above National Geodetic Vertical Datum of 1929. Prior to May 21, 1931, nonrecording gage.

REMARKS.--No estimated daily discharges. Records good. The city of Temple diverts water from the pool at gage and returns sewage effluent to Little Elm Creek downstream from station. The Brazos River Authority returns sewage effluent to the Leon River downstream from station for their Temple-Belton plant. Flow regulated by Belton Lake (station 08102000) since Mar. 8, 1954. U.S. Army Corps of Engineers satellite telemeter at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1924-53) unregulated, 659 ft³/s (477,400 acre-ft/yr); 34 years (water years 1954-87) regulated, 502 ft³/s (363,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,500 ft³/s Apr. 22, 1945 (gage height, 24.41 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1913 reached a stage of 25 ft, and flood in September 1921 reached a stage of 21 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft³/s July 17 at 0500 hours (gage height, 6.71 ft); minimum daily, 2.6 ft³/s May 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	785	734	2000	773	47	1510	28	25	244	2850	108
2	346	785	739	1990	768	50	1520	26	28	1940	2840	139
3	338	789	738	1990	767	1070	1520	27	31	3360	2830	131
4	321	793	739	1990	1360	2140	1520	23	50	3370	2820	102
5	326	791	739	1980	1860	2140	1530	23	25	3360	2800	101
6	337	790	559	1980	1420	2140	1530	24	22	3360	2790	100
7	327	789	427	1980	1070	2130	1520	27	265	3360	2130	102
8	415	790	422	1980	1070	1630	1520	26	2030	3370	2630	102
9	493	788	415	1980	1070	1310	1530	34	1820	3370	2640	106
10	491	788	420	1970	1070	1310	1130	32	42	3370	2620	99
11	491	788	416	1970	1070	1310	821	23	32	3370	2620	107
12	486	787	418	1970	1070	1380	823	11	34	3360	2610	101
13	479	787	418	1970	850	1500	706	2.6	70	3370	2610	106
14	799	546	423	1970	629	1500	586	3.9	79	3360	2600	100
15	1100	324	232	1970	629	1500	584	11	35	3360	2590	102
16	1100	328	59	1970	626	1500	587	21	50	3360	2600	100
17	757	315	60	1370	386	1510	452	25	44	3330	2590	110
18	479	501	402	778	158	1490	350	27	41	3350	2580	117
19	476	642	689	771	46	1500	353	20	506	3350	2580	117
20	474	642	690	774	56	1500	352	19	1720	3350	1500	116
21	363	644	688	773	47	1500	354	269	1740	3350	550	119
22	282	489	431	772	51	1500	344	561	1980	3350	561	147
23	291	346	84	772	228	1500	338	558	2770	3350	566	120
24	154	344	71	771	389	1500	339	561	2760	3340	556	123
25	39	348	73	774	635	1510	337	558	2770	3340	421	122
26	40	338	71	774	456	1520	332	738	2780	3340	173	121
27	454	341	887	772	52	1520	333	901	2780	3340	100	97
28	1120	566	2020	775	55	1520	336	1030	2770	1990	99	94
29	1120	736	2010	771	---	1530	328	781	2120	381	100	66
30	1110	738	2000	772	---	1530	196	32	53	2170	114	63
31	928	---	2000	771	---	1520	---	27	---	2860	110	---
TOTAL	16278	18438	20074	43850	18661	45307	23681	6449.5	29472	93475	55180	3238
MEAN	525	615	648	1415	666	1462	789	208	982	3015	1780	108
MAX	1120	793	2020	2000	1860	2140	1530	1030	2780	3370	2850	147
MIN	39	315	59	771	46	47	196	2.6	22	244	99	63
AC-FT	32290	36570	39820	86980	37010	89870	46970	12790	58460	185400	109400	6420

CAL YR 1986 TOTAL 325583.6 MEAN 892 MAX 2840 MIN 5.8 AC-FT 645800
WTR YR 1987 TOTAL 374103.4 MEAN 1025 MAX 3370 MIN 2.6 AC-FT 742000

08103800 LAMPASAS RIVER NEAR KEMPNER, TX

LOCATION.--Lat 31°04'54", long 98°00'59", Lampasas County, Hydrologic Unit 12070203, on left bank 800 ft upstream from centerline of U.S. Highway 190, 0.6 mi upstream from Mesquite Creek, 0.8 mi west of Kempner, 0.9 mi downstream from Sulphur Creek, and 72.3 mi upstream from mouth.

DRAINAGE AREA.--818 mi².

PERIOD OF RECORD.--October 1962 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 828.38 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1967, at site 800 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. At times, flow is affected by discharge from the flood-detention pools of 13 floodwater-retarding structures with a combined detention capacity of 38,570 acre-ft. These structures control runoff from 131 mi² in the Sulphur and Bennett Creeks drainage basins. There are many small diversions above station for irrigation and municipal supply. The city of Lampasas diverts water upstream from this station and returns sewage effluent to Sulfur Creek, upstream from this station. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--25 years, 130 ft³/s (94,180 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,000 ft³/s May 16, 1965 (gage height, 32.98 ft); minimum daily, 1.4 ft³/s July 17, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1871, occurred in September 1873 (stage about 45 ft). Flood of May 13, 1957, reached a stage of 37 ft, and flood of Oct. 4, 1959, reached a stage of 34 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 23	1000	*19,700	a*16.85	June 9	1830	10,600	11.73
Nov. 4	1330	7,760	a10.67	June 11	0330	10,300	11.55
May 28	0230	8,260	10.93	June 12	0430	13,200	13.36
May 29	0900	4,300	8.45	June 13	0530	9,520	11.13
June 4	1330	13,800	13.75				

a From floodmark.

Minimum daily discharge, 25 ft³/s Oct. 1 and 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	e520	226	501	284	742	304	152	536	333	91	65
2	26	e500	212	475	284	574	291	152	423	285	89	58
3	26	e490	205	462	275	522	268	146	668	262	85	56
4	25	2220	202	421	269	488	265	142	7250	238	81	53
5	34	860	199	407	263	466	260	146	1900	218	78	53
6	138	476	200	401	272	452	318	146	1180	202	75	52
7	669	414	236	392	281	434	323	130	734	189	72	229
8	256	388	260	386	262	428	285	140	554	180	70	303
9	162	364	237	454	245	420	265	173	3290	179	67	105
10	120	334	220	465	237	417	255	139	3320	176	67	70
11	119	322	219	398	239	550	243	124	5720	168	67	61
12	361	301	228	377	240	632	233	140	7040	158	98	60
13	221	288	222	368	236	492	359	117	5830	154	83	58
14	175	279	282	368	234	460	266	111	2480	148	74	55
15	149	281	449	359	235	444	230	106	1630	146	69	54
16	129	274	374	348	223	432	220	945	1230	143	67	56
17	121	262	342	367	213	1120	217	543	1010	523	64	74
18	102	259	636	693	207	761	210	267	1070	322	62	221
19	96	253	554	504	203	521	199	204	814	187	58	191
20	89	254	468	427	253	463	194	363	665	158	58	131
21	91	236	440	402	324	435	187	252	598	144	56	86
22	181	236	1460	384	272	417	182	200	526	142	55	68
23	4200	226	2300	360	237	423	185	179	473	136	53	60
24	974	215	1290	352	292	418	181	501	445	131	53	56
25	738	334	968	327	372	360	176	462	410	128	52	53
26	737	343	803	308	1210	350	170	248	382	122	52	51
27	706	269	701	305	839	350	165	197	344	117	50	51
28	e640	253	643	303	1290	339	161	2840	321	113	53	51
29	e600	242	608	301	---	332	158	1740	301	106	60	53
30	e570	236	568	282	---	343	154	710	345	95	62	47
31	e540	---	537	273	---	317	---	501	---	95	60	---
TOTAL	13020	11929	16289	12170	9791	14902	6924	12216	51489	5698	2081	2581
MEAN	420	398	525	393	350	481	231	394	1716	184	67.1	86.0
MAX	4200	2220	2300	693	1290	1120	359	2840	7250	523	98	303
MIN	25	215	199	273	203	317	154	106	301	95	50	47
AC-FT	25830	23660	32310	24140	19420	29560	13730	24230	102100	11300	4130	5120

CAL YR 1986	TOTAL	80943	MEAN	222	MAX	10300	MIN	14	AC-FT	160600
WTR YR 1987	TOTAL	159090	MEAN	436	MAX	7250	MIN	25	AC-FT	315600

e Estimated.

08103900 SOUTH FORK ROCKY CREEK NEAR BRIGGS, TX
(Hydrologic bench-mark station)

LOCATION.--Lat 30°54'41", long 98°02'12", Burnet County, Hydrologic Unit 12070203, at upstream side of bridge on Ranch Road 963, 6 mi above confluence with North Fork Rocky Creek, 7 mi west of Briggs, and 12.9 mi above mouth.

DRAINAGE AREA.--33.3 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: 1972-73(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder, concrete control, and crest-stage gages. Datum of gage is 955.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Recording rain gage at station.

AVERAGE DISCHARGE.--24 years, 10.9 ft³/s (4.45 in/yr), 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s June 19, 1976 (gage height, 22.70 ft), from rating curve extended above 1,000 ft³/s on basis of slope-area measurements of 3,580 and 8,510 ft³/s and conveyance-slope study; no flow for many days each year for 1963-74 and 1976-87.
Maximum stage since at least 1904, 22.70 ft June 19, 1976.

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)
Oct. 23	0345	1,080	5.37	Sept. 18	0715	*1,750	*6.71
June 9	0945	1,160	5.53				

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	18	9.7	45	23	35	12	3.3	15	16	1.3	.00
2	.00	18	9.0	42	21	32	11	3.3	12	14	1.2	.00
3	.00	17	8.8	40	20	31	11	3.1	26	13	1.1	.00
4	.00	52	8.6	37	20	29	11	3.1	97	11	1.0	.00
5	.00	29	8.6	35	19	29	11	2.9	43	9.8	.94	.00
6	.00	24	8.7	35	20	28	13	2.8	30	8.7	.91	.00
7	1.1	24	11	34	19	26	11	2.5	26	8.0	.79	22
8	1.5	23	11	33	18	25	10	2.8	25	7.6	.75	13
9	1.1	21	9.9	42	16	24	9.6	3.3	242	7.3	.65	1.5
10	.58	19	10	33	16	23	9.1	3.0	181	7.1	.58	.87
11	.58	19	14	29	16	32	8.5	2.6	202	6.6	.51	.50
12	23	18	14	29	15	26	7.9	7.9	188	5.8	.46	.47
13	6.4	17	11	29	15	24	68	3.3	128	5.3	.46	.37
14	3.9	17	21	28	15	24	15	2.6	88	5.1	.43	.24
15	2.8	17	39	26	15	23	10	2.4	73	5.0	.32	.18
16	2.5	17	30	25	13	22	8.7	7.8	61	5.1	.23	.17
17	2.2	16	28	47	13	40	7.8	8.8	52	5.4	.17	.14
18	2.1	14	65	82	12	25	7.2	4.6	46	5.4	.1	153
19	1.9	13	45	39	12	22	6.7	3.5	43	4.3	.00	2.5
20	1.9	13	39	35	15	21	6.1	3.4	38	3.6	.00	.62
21	2.3	11	39	34	14	20	5.7	3.0	34	3.3	.00	.30
22	27	12	205	32	13	19	5.7	2.5	31	3.1	.00	.22
23	268	12	192	31	11	19	5.6	2.4	28	2.9	.00	.13
24	51	11	105	30	20	16	5.3	3.5	26	2.6	.00	.1
25	31	24	85	27	18	15	4.9	7.3	24	2.4	.00	.11
26	29	16	74	26	59	15	4.6	3.2	22	2.2	.00	.1
27	28	13	65	26	44	15	4.4	2.4	20	2.1	.00	.1
28	24	12	61	25	55	14	4.1	2.3	18	1.9	.00	.12
29	22	11	57	25	---	13	3.7	25	16	1.8	.00	.15
30	21	11	52	23	---	14	3.5	11	20	1.6	.00	.41
31	20	---	49	23	---	13	---	12	---	1.3	.00	---
TOTAL	574.86	539	1385.3	1047	567	714	302.1	151.6	1855	179.3	11.90	197.30
MEAN	18.5	18.0	44.7	33.8	20.2	23.0	10.1	4.89	61.8	5.78	.38	6.58
MAX	268	52	205	82	59	40	68	25	242	16	1.3	153
MIN	.00	11	8.6	23	11	13	3.5	2.3	12	1.3	.00	.00
AC-FT	1140	1070	2750	2080	1120	1420	599	301	3680	356	24	391

CAL YR 1986 TOTAL 5092.16 MEAN 14.0 MAX 517 MIN .00 AC-FT 10100
WTR YR 1987 TOTAL 7524.32 MEAN 20.6 MAX 268 MIN .00 AC-FT 14920

08103900 SOUTH FORK ROCKY CREEK NEAR BRIGGS, TX--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1961 to January 1964. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: July 1971 to July 1982. Sediment analyses: May to June 1963, February 1968 to current year. Radiochemical analyses: January 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV 05...	1335	26	462	7.90	17.0	0.80	9.8	104	720	320	240
MAR 02...	1350	32	521	8.00	15.0	0.70	10.9	111	K19	48	280
JUN 15...	1415	73	552	8.00	29.0	1.1	7.5	101	K72	200	290
SEP 10...	1500	0.94	372	8.00	27.0	0.30	8.6	109	190	270	170

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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...	20	62	20	7.5	0.2	2.2	220	18	11	0.40	10
MAR 02...	36	71	25	7.7	0.2	1.0	247	30	11	0.50	7.1
JUN 15...	22	74	24	7.1	0.2	1.5	264	15	8.7	0.40	12
SEP 10...	10	44	15	8.2	0.3	2.3	163	16	9.8	0.40	11

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (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)
NOV 05...	265	270	<0.010	0.100	<0.010	<0.010	--	1.3	0.010	0.020	0.010
MAR 02...	279	300	<0.010	0.210	<0.010	0.020	--	1.1	0.010	<0.010	<0.010
JUN 15...	295	300	<0.010	<0.100	0.020	0.010	0.28	0.30	0.080	0.010	<0.010
SEP 10...	199	210	<0.010	<0.100	<0.010	<0.010	--	0.40	0.020	<0.010	<0.010

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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)
NOV 05...	0.03	3	0.21	76	20	<1	49	<0.5	<1	<1	<3
MAR 02...	--	5	0.43	66	40	<1	49	<0.5	<1	<1	<3
JUN 15...	--	11	2.2	89	<10	<1	57	<0.5	<1	4	<3
SEP 10...	--	6	0.02	61	<10	<1	39	<0.5	<1	<1	<3

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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)
NOV 05...	1	4	<5	12	4	<0.1	<10	2	<1	<1	2000
MAR 02...	1	3	<5	12	4	<0.1	<10	<1	<1	<1	2400
JUN 15...	1	4	<5	10	4	0.2	<10	<1	<1	<1	2400
SEP 10...	<1	<3	<5	<4	3	<0.1	<10	1	<1	<1	1400

08103900 SOUTH FORK ROCKY CREEK NEAR BRIGGS, TX--Continued
(Hydrologic bench-mark station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	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										
05...	<6	3	0.7	<0.4	2.1	<0.4	1.7	<0.4	0.04	0.68
MAR										
02...	<6	14	--	--	--	--	--	--	--	--
JUN										
15...	<6	9	--	--	--	--	--	--	--	--
SEP										
10...	<6	<3	--	--	--	--	--	--	--	--

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX

LOCATION.--Lat 31°01'20", long 97°31'57", Bell County, Hydrologic Unit 12070203, in intake structure at Stillhouse Hollow Dam on Lampasas River, 5 mi southwest of Belton, and 16.0 mi upstream from mouth.

DRAINAGE AREA.--1,313 mi².

PERIOD OF RECORD.--September 1966 to current year. Prior to October 1970, published as Stillhouse Hollow Reservoir.

REVISED RECORDS.--WDR TX-76-2: 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 15,624 ft long, including a 1,650-foot spillway and 5,894-foot dike. The lake was operated as a temporary detention basin from Sept. 2, 1966, to Feb. 19, 1968. Deliberate impoundment began Feb. 19, 1968. The lake was built for flood control and water conservation. The spillway is an uncontrolled broad-crested weir 1,650 ft long located near right end of dam. The flood-control outlet consists of a 12.0-foot-diameter conduit controlled by two 5.67- by 12.0-foot slide gates at an invert elevation of 515.0 ft. The capacity curve is based on maps prepared by Brazos River Authority in 1937 and supplemented by contour maps prepared by the U.S. Army Corps of Engineers in 1958. There are many small diversions upstream for irrigation, municipal supply and oilfield operation. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08103800. 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	698.0	-
Design flood	693.2	1,013,300
Crest of spillway	666.0	630,400
Top of conservation pool	622.0	235,700
Lowest gated outlet (invert)	515.0	775

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 347,100 acre-ft May 2, 3, 1977 (elevation, 637.26 ft); minimum since conservation storage was reached on Apr. 12, 1969, 178,300 acre-ft Oct. 5, 1984 (elevation, 612.18 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 366,100 acre-ft June 26 at 0100 hours (elevation, 639.55 ft); minimum, 235,400 acre-ft Oct. 4 at 2400 hours (elevation, 621.96 ft).

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

621.0	229,300	627.0	269,300	633.0	313,400	638.0	353,200
624.0	248,800	630.0	290,800	636.0	336,900	640.0	369,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235800	248300	238800	281300	246700	250500	249500	239600	251400	342800	246000	236500
2	235700	246800	238500	281200	244300	252500	248800	239500	252600	338600	242700	236500
3	235600	245300	238300	281000	241900	253500	248100	239300	254600	335700	240000	236400
4	235700	247100	238000	280600	240200	253600	247300	239200	265300	332800	238800	236300
5	235900	248000	237800	280200	239100	253700	246900	239100	272300	329700	238000	236300
6	236500	247500	237600	279700	238200	253700	246300	238800	275300	327000	237200	236200
7	239000	246900	237600	279200	237700	253700	245700	238300	276700	323600	237000	236300
8	240000	245900	237600	278700	237100	253600	245100	238300	277400	320700	236900	237100
9	240200	244800	237800	278400	236400	253500	244400	238300	281200	317800	236900	237400
10	240200	243900	238000	277900	236200	253200	243400	238200	292500	315200	237100	237500
11	240300	242500	237900	277200	236200	253300	242100	237600	304800	312100	237400	237600
12	240800	241300	237800	276600	236300	253500	240600	236800	320100	309300	237400	237900
13	241500	239800	237700	275900	236500	253600	239600	236100	333300	305200	237400	237900
14	241100	239200	238400	275100	237100	253500	238500	236000	340200	302100	237400	237900
15	240200	239200	240000	274300	237400	253400	237400	236000	345100	298800	237400	238000
16	239200	239300	241700	273500	237600	253300	237000	236900	348600	295600	237300	238100
17	238200	239300	243100	273200	237600	254000	236800	239000	351600	293000	237200	238100
18	237600	238900	245200	273200	237400	255100	236500	239500	354700	290800	237200	241700
19	237500	238200	246200	273000	237200	255200	236300	240200	357300	288000	237100	242300
20	237300	237400	246800	272000	237600	255200	236300	240200	359300	284600	237100	242600
21	237400	236500	247300	270800	237600	255100	236800	240300	361200	281800	237000	242800
22	237600	236300	253700	269000	237600	254900	237100	240000	362400	278900	236900	242500
23	246100	236600	263900	266900	237600	254600	237500	239600	364100	275400	236900	241500
24	249500	237100	269600	264800	238300	254200	237900	239100	365300	272100	236800	240600
25	251700	238200	273900	262500	238800	253700	238300	239500	366000	268900	236700	239900
26	253300	238700	277200	260300	241100	253200	238700	239400	364700	265600	236500	239100
27	254100	239100	279500	258100	244500	252700	239000	239100	362800	262400	236500	238200
28	253000	239200	280200	255800	248000	252100	239400	242500	360700	259200	236400	237500
29	251900	239100	280800	253700	---	251500	239600	246000	357300	255900	236300	236600
30	250700	238900	281200	251300	---	250800	239700	248600	350800	252700	236500	236000
31	249500	---	281400	248900	---	250200	---	250100	---	249400	236500	---
MAX	254100	248300	281400	281300	248000	255200	249500	250100	366000	342800	246000	242800
MIN	235600	236300	237600	248900	236200	250200	236300	236000	251400	249400	236300	236000
(†)	624.10	622.50	628.70	624.02	623.88	624.21	622.62	624.20	637.71	624.09	622.13	622.05
(ϕ)	+13700	-10600	+42500	-32500	-900	+2200	-10500	+10400	+100700	-101400	-12900	-500

CAL YR 1986 MAX 281400 MIN 233600 (ϕ) +45100
WTR YR 1987 MAX 366000 MIN 235600 (ϕ) +200

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

08104100 LAMPASAS RIVER NEAR BELTON, TX

LOCATION.--Lat 31°00'06", long 97°29'32", Bell County, Hydrologic Unit 12070203, on left bank 22 ft upstream from upstream bridge of two bridges on Interstate Highway 35 and U.S. Highway 81, 3.5 mi downstream from Stillhouse Hollow Dam, 4.1 mi southwest of Belton, and 12.7 mi upstream from mouth.

DRAINAGE AREA.--1,321 mi².

PERIOD OF RECORD.--February 1963 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 476.58 ft above National Geodetic Vertical Datum of 1929 (from Texas Department of Highways and Public Transportation levels, run from a Santa Fe Railroad bench mark).

REMARKS.--No estimated daily discharges. Records good. Many small diversions above station for irrigation and for municipal supply. Since Sept. 2, 1966, flow largely regulated by Stillhouse Hollow Lake (station 08104050). Gage-height telemeter at station.

AVERAGE DISCHARGE.--3 years (water year 1964-66) unregulated, 368 ft³/s (266,600 acre-ft/yr); 21 years (water years 1967-87) regulated, 234 ft³/s (169,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,900 ft³/s May 17, 1965 (gage height, 43.58 ft); no flow Aug. 9, 10, 12-15, and Sept. 5, 6, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1877, 45 ft September 1921, from information by local residents. Flood of May 1957 reached a stage of 44.4 ft (discharge, 83,500 ft³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,240 ft³/s July 1 at 1600 hours (gage height, 19.23 ft); minimum daily, 15.0 ft³/s Apr. 25-29 and Sept. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	1160	409	1180	1840	23	850	235	19	5370	1780	16
2	17	1160	410	1180	1830	23	844	232	21	2970	1780	16
3	17	1160	407	1180	1830	415	844	230	22	1950	1440	16
4	17	1170	408	1180	1470	842	847	229	23	1950	723	16
5	18	1160	408	1170	1120	842	849	228	19	1950	393	16
6	19	1150	411	1180	927	839	847	230	20	1940	390	16
7	20	1150	412	1170	771	837	844	229	406	1940	179	16
8	121	1150	412	1170	772	837	842	229	808	1930	23	16
9	232	1140	287	1170	771	835	845	228	408	1930	20	15
10	232	1140	403	1170	575	831	1060	227	28	1920	20	15
11	232	1140	402	1170	412	831	1210	520	26	1910	20	15
12	240	1140	403	1180	414	830	1200	799	31	1910	19	17
13	232	1140	402	1180	331	833	1190	597	35	1900	18	16
14	524	785	408	1180	232	835	1190	312	40	1890	17	16
15	790	412	222	1180	231	837	968	181	42	1880	17	16
16	785	413	23	1180	230	839	592	182	45	1870	17	17
17	781	413	23	1180	333	853	429	180	47	1880	16	18
18	477	609	396	1180	420	846	431	180	50	1870	16	21
19	225	779	789	1180	421	844	431	180	51	1860	16	18
20	225	780	785	1370	425	847	218	172	52	1860	17	18
21	224	774	787	1540	425	852	19	307	53	1850	16	18
22	227	477	497	1720	427	854	17	414	54	1840	16	222
23	247	224	49	1880	429	854	16	422	54	1840	17	394
24	125	223	36	1870	437	853	16	422	56	1840	16	395
25	23	237	36	1860	432	851	15	424	288	1830	16	394
26	23	223	36	1850	245	852	15	424	1330	1820	16	395
27	370	221	536	1850	23	854	15	424	1670	1810	16	396
28	1160	322	1190	1850	23	856	15	424	1670	1800	16	394
29	1150	408	1180	1850	---	847	15	250	2240	1800	16	394
30	1150	409	1180	1840	---	845	110	19	3950	1800	16	190
31	1160	---	1180	1840	---	846	---	17	---	1790	16	---
TOTAL	11080	22669	14527	43680	17796	24083	16784	9147	13558	62700	7098	3522
MEAN	357	756	469	1409	636	777	559	295	452	2023	229	117
MAX	1160	1170	1190	1880	1840	856	1210	799	3950	5370	1780	396
MIN	17	221	23	1170	23	23	15	17	19	1790	16	15
AC-FT	21980	44960	28810	86640	35300	47770	33290	18140	26890	124400	14080	6990

CAL YR 1986 TOTAL 138524 MEAN 380 MAX 1970 MIN 4.9 AC-FT 274800
WTR YR 1987 TOTAL 246644 MEAN 676 MAX 5370 MIN 15 AC-FT 489200

08104310 SALADO CREEK BELOW SALADO SPRINGS AT SALADO, TX

LOCATION.--Lat 30°57'07", long 92°21'26", Bell County, Hydrologic Unit 12070205, on right bank downstream from low-water crossing in the Mill Creek Country Club and subdivision at Salado.

PERIOD OF RECORD.--October 1984 to September 1987 (converted to low-flow partial record).

GAGE.--Water-stage recorder. Elevation of gage is 545 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Discharges are not published above 100 ft³/s. No known regulation above station. Several observations of water temperature made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum gage height and discharge not determined; minimum daily discharge, 23 ft³/s on Sept. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	69	51	---	---	---	70	45	44	64	41	32
2	37	68	49	---	---	---	68	44	46	59	44	31
3	36	68	50	---	---	---	66	44	---	57	45	32
4	38	---	51	---	---	---	67	45	---	53	45	31
5	36	---	53	---	---	---	66	44	---	51	46	30
6	45	70	54	---	---	96	66	44	57	49	45	29
7	---	68	59	---	---	94	62	44	48	48	42	29
8	59	64	57	---	---	93	64	43	47	48	43	30
9	50	62	59	---	99	91	65	44	---	51	44	31
10	46	60	---	---	95	90	62	44	---	52	43	29
11	48	59	---	---	91	94	61	44	---	48	44	30
12	---	58	---	---	89	95	59	47	---	47	43	30
13	---	57	80	---	85	92	63	45	---	48	41	29
14	58	54	---	---	84	89	58	49	---	47	39	28
15	51	53	---	---	83	88	58	46	97	47	38	28
16	49	55	---	---	78	85	58	55	---	47	38	27
17	48	53	---	---	77	---	58	---	---	60	37	26
18	47	53	---	---	77	---	56	44	---	53	36	---
19	47	52	---	---	74	96	54	41	---	49	38	---
20	49	51	---	---	87	86	52	45	---	46	37	27
21	49	51	---	---	88	83	51	43	---	47	36	23
22	57	52	---	---	80	81	51	43	---	47	35	23
23	---	52	---	---	76	79	50	45	---	46	34	23
24	---	52	---	---	---	77	49	47	85	45	33	23
25	---	---	---	---	---	74	47	48	78	47	32	25
26	78	---	---	---	---	75	47	47	72	46	32	26
27	71	62	---	---	---	73	46	47	71	44	32	26
28	62	55	---	---	---	74	46	46	67	45	32	26
29	67	53	---	---	---	71	45	---	63	45	32	27
30	60	53	---	---	---	71	46	---	64	44	32	27
31	66	---	---	---	---	71	---	47	---	42	33	---
TOTAL	---	---	---	---	---	---	1711	---	---	1522	1192	---
MEAN	---	---	---	---	---	---	57.0	---	---	49.1	38.5	---
MAX	---	---	---	---	---	---	70	---	---	64	46	---
MIN	---	---	---	---	---	---	45	---	---	42	32	---
AC-FT	---	---	---	---	---	---	3390	---	---	3020	2360	---

CAL YR 1986 TOTAL -- MEAN -- MAX -- MIN -- AC-FT --
WTR YR 1987 TOTAL -- MEAN -- MAX -- MIN -- AC-FT --

08104500 LITTLE RIVER NEAR LITTLE RIVER, TX

LOCATION.--Lat 30°57'59", long 97°20'45", Bell County, Hydrologic Unit 12070204, on right bank 25 ft downstream from State Highway 95, 2.4 mi southeast of Little River, 5 mi downstream from confluence of Leon and Lampasas Rivers, and 95.8 mi upstream from mouth.

DRAINAGE AREA.--5,228 mi².

PERIOD OF RECORD.--October 1923 to May 1929, August 1962 to current year.
Water-quality records.--Chemical analyses: October 1964 to September 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.11 ft above National Geodetic Vertical Datum of 1929. From Oct. 5, 1923, to May 27, 1929, nonrecording gage at railroad bridge 0.5 mi upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Many small diversions upstream for irrigation and municipal supply affect very low flows. Flow regulated by Belton Lake (station 08102000) on Leon River beginning Mar. 8, 1954, and by Stillhouse Hollow Lake (station 08104050) on the Lampasas River beginning Sept. 2, 1966. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08102600. Several observations of water temperature were made during the year. Brazos River Authority satellite telemeter at station.

AVERAGE DISCHARGE.--5 years (water years 1924-28) unregulated, 709 ft³/s (513,700 acre-ft/yr); 25 years (water years 1963-87) regulated, 879 ft³/s (636,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,600 ft³/s May 17, 1965 (gage height, 42.85 ft); minimum daily, 8.2 ft³/s Aug. 6, 19, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 46.8 ft in September 1921, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,240 ft³/s Dec. 23 at 0500 hours (gage height, 19.42 ft); minimum daily, 189 ft³/s Sept. 6, 15, and 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407	2340	1480	3910	3060	628	2710	389	226	5850	5130	246
2	401	2320	1470	3860	3050	479	2700	385	220	5860	5120	233
3	398	2320	1460	3850	3040	985	2680	383	429	6010	4980	223
4	380	2580	1450	3820	3190	3510	2680	392	1320	5990	4140	218
5	428	2630	1450	3790	3490	3520	2690	384	614	5960	3460	217
6	575	2390	1320	3820	3190	3520	2800	383	307	5920	3430	212
7	988	2390	1070	3830	2350	3500	2700	374	361	5900	2750	221
8	696	2360	1070	3820	2320	3240	2680	370	2880	5930	2830	271
9	829	2330	960	3870	2310	2700	2680	438	4380	6040	2810	233
10	793	2320	1030	3840	2210	2680	2520	380	1120	5970	2810	220
11	797	2320	1280	3770	1920	2730	2220	454	1060	5870	2820	218
12	1170	2290	1160	3760	1910	2720	2220	862	1330	5840	2820	239
13	923	2300	1100	3760	1760	2870	2300	791	2100	5830	2780	295
14	1080	2030	1270	3750	1150	2860	1970	500	2190	5820	2770	231
15	2000	958	2650	3740	1190	2860	1800	337	735	5790	2750	222
16	1990	944	818	3710	1130	2860	1460	351	519	5800	2750	226
17	1800	924	569	3440	1020	3540	1120	441	443	6150	2740	304
18	1160	1090	1630	2520	800	2960	887	349	442	5910	2740	527
19	785	1700	2500	2580	647	2830	881	328	783	5800	2730	489
20	769	1700	2180	2580	761	2800	813	338	2350	5760	2230	266
21	717	1690	2080	2840	707	2790	500	459	2340	5740	759	244
22	663	1490	4340	2890	657	2780	481	1110	2480	5730	748	280
23	1710	754	5820	3150	697	2790	467	1110	3330	5710	746	647
24	1380	750	1550	3150	1520	2770	462	1130	3330	5680	766	653
25	471	1710	1010	3130	1350	2750	458	1140	3330	5700	710	653
26	367	1040	814	3120	2030	2750	452	1240	4440	5650	391	658
27	396	851	1140	3110	719	2740	448	1550	5160	5630	228	667
28	2680	977	4040	3110	1430	2730	446	1680	5180	5290	222	687
29	2780	1500	4060	3110	---	2720	439	1970	4680	2170	224	646
30	2760	1500	4000	3080	---	2720	413	475	3540	3670	238	578
31	2660	---	3950	3070	---	2720	---	267	---	5130	322	---
TOTAL	34953	52498	60721	105780	49608	84052	47077	20760	61619	174100	69944	11024
MEAN	1128	1750	1959	3412	1772	2711	1569	670	2054	5616	2256	367
MAX	2780	2630	5820	3910	3490	3540	2800	1970	5180	6150	5130	687
MIN	367	750	569	2520	647	479	413	267	220	2170	222	212
AC-FT	69330	104100	120400	209800	98400	166700	93380	41180	122200	345300	138700	21870

CAL YR 1986 TOTAL 574418 MEAN 1574 MAX 9400 MIN 106 AC-FT 1139000
WTR YR 1987 TOTAL 772136 MEAN 2115 MAX 6150 MIN 212 AC-FT 1532000

08104645 NORTH FORK SAN GABRIEL RIVER NEAR LIBERTY HILL, TX

LOCATION.--Lat 30°42'11", long 95°52'37", Williamson County, Hydrologic Unit 12070205, at upstream side of U.S. Highway 183 bridge, 0.4 mi upstream from Hamilton Branch, 3.8 mi northeast of Liberty Hill.

DRAINAGE AREA.--202 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 05...	1030	413	7.80	17.0	10	10	9.4	99	1.3	210	22
DEC 09...	1010	471	7.90	13.0	3	8.5	9.2	89	0.5	230	20
MAR 02...	1040	474	7.90	12.0	16	5.8	10.8	102	0.9	240	22
MAY 05...	1055	473	7.90	23.0	2	0.50	8.8	105	0.3	230	26
JUL 06...	1005	488	7.90	26.5	1	1.2	8.2	104	0.8	240	22
SEP 01...	0920	439	8.00	24.0	2	0.50	8.1	98	0.8	220	29

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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV 05...	66	10	7.7	0.2	2.3	184	20	11	0.30	10	240
DEC 09...	68	15	9.1	0.3	1.1	212	21	16	0.30	8.8	270
MAR 02...	74	13	8.5	0.2	1.2	216	19	10	0.30	9.2	260
MAY 05...	61	19	11	0.3	1.0	205	22	16	0.30	9.7	260
JUL 06...	66	19	11	0.3	1.1	221	20	11	0.30	13	270
SEP 01...	53	21	12	0.4	1.2	190	23	14	0.30	14	250

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV 05...	8	<1	<0.010	0.800	0.020	1.4	1.4	0.030	6.3	1	46
DEC 09...	<1	<1	<0.010	0.500	0.030	0.27	0.30	<0.010	1.3	--	--
MAR 02...	2	1	<0.010	0.500	0.020	0.58	0.60	0.010	2.1	--	--
MAY 05...	<1	<1	<0.010	0.200	0.020	0.28	0.30	0.010	1.4	--	--
JUL 06...	2	1	<0.010	0.600	0.030	--	<0.20	<0.010	1.7	<1	55
SEP 01...	4	<1	<0.010	0.100	0.020	--	<0.20	<0.010	1.7	<1	46

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 05...	<1	<10	2	8	<5	5	<0.1	<1	<1	3
DEC 09...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	--	--	--	--	--	--	--	--	--
MAY 05...	--	--	--	--	--	--	--	--	--	--
JUL 06...	1	30	<1	5	<5	2	<0.1	<1	<1	9
SEP 01...	<1	30	<1	3	<5	2	<0.1	4	<1	<3

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX

LOCATION.--Lat 30°40'03", long 97°43'38", Williamson County, Hydrologic Unit 12070205, at North San Gabriel Dam, on North Fork San Gabriel River, 2.5 mi upstream from Middle Fork San Gabriel River, 3.7 mi northwest of Georgetown, and 4.4 mi upstream from confluence with South Fork San Gabriel River.

DRAINAGE AREA.--247 mi².

WATER-DISCHARGE RECORDS

PEROID OF RECORD.--March 1980 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 May 13, 1980, nonrecording gage at present site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam, 6,700 ft long, including the spillway. The lake was built for water conservation and flood control. Deliberate impoundment began on Mar. 3, 1980. The spillway is an ungated broad-crested weir 1,000 ft long, located near right end of dam. The spillway for normal flood releases is a gated, 11-foot-diameter conduit, controlled by two 5- by 11 foot slide gates, located near the center of dam. The invert for the floodgate is 720.0 ft. A low-flow outlet, consisting of four 3- by 4-foot gates is located near the center of dam. These gates are inverts of 735.0, 749.0, 763.0, and 777.0 ft. Figures given herein represent total content. Data regarding dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	861.0	246,700
Design flood	856.2	221,200
Crest of spillway	834.0	130,800
Top of conservation pool	791.0	37,080
Lowest gated outlet (invert of 11-foot conduit)	720.0	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, 89,730 acre-ft June 22, 1981 (elevation, 819.44 ft); minimum, 466 acre-ft Mar. 4, 1980 (elevation, 724.46 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 86,020 acre-ft June 22 at 0500 hours (elevation, 817.90 ft); minimum, 35,200 acre-ft Oct. 5 at 2400 hours (elevation, 789.53 ft).

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

789.0	34,540	799.0	48,690	809.0	66,690	818.0	86,260
794.0	41,150	804.0	57,240	814.0	77,120		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35540	37100	37200	44270	37410	39430	38300	38060	39450	81760	37300	36780
2	35510	37040	37300	43230	37400	39750	38430	38110	40120	80350	37280	36740
3	35480	37130	37340	42240	37360	40050	38580	38190	40780	78910	37240	36720
4	35460	37640	37340	41200	37170	40350	38720	38250	52640	77490	37200	36680
5	35450	37940	37330	40160	37170	40050	38930	38250	54480	76000	37200	36660
6	35540	38130	37360	39150	37270	39340	39110	38230	55490	74240	37210	36630
7	35550	38210	37370	38130	37300	38620	39270	38220	55900	72250	37210	36960
8	35540	38230	37450	37670	37300	37900	39420	38220	55810	70260	37210	36950
9	35530	38220	37480	37660	37320	37610	39570	38210	60130	68380	37210	36940
10	35510	38190	37690	37610	37340	37610	39720	38190	64680	66470	37210	36940
11	35600	38150	37870	37480	37210	37650	39830	38180	70650	64510	37210	36900
12	35770	38100	38010	37360	37110	37570	39970	38170	75070	62780	37200	36900
13	35820	38030	38100	37230	37190	37460	40130	38150	78580	60610	37200	36890
14	35840	37970	38420	37250	37360	37440	40300	38130	81050	58650	37170	36860
15	35860	37940	39120	37580	37450	37410	40000	38110	82480	56680	37150	36940
16	35880	37910	39600	37900	37560	37400	39180	38420	83610	54750	37110	36940
17	35880	37890	40000	38350	37620	37650	38770	38530	84590	53100	37100	36920
18	35880	37850	40600	39000	37710	37520	38390	38410	85440	51150	37070	36960
19	35890	37810	40310	39390	37830	37440	37990	38100	85860	49220	37040	37060
20	35890	37730	39870	39490	38010	37440	37580	37670	85980	47310	37030	37100
21	35960	37660	39410	38800	38140	37460	37440	37280	86000	45380	37000	37080
22	36080	37610	42120	38290	38230	37500	37490	37060	85980	43520	36990	37060
23	37700	37530	45490	38310	38090	37040	37570	37070	85910	41670	36960	37030
24	38260	37530	46900	38370	37950	36890	37650	37300	85810	40300	36940	37000
25	38570	37560	47960	38370	37730	37070	37710	37730	85720	39450	36910	36980
26	38700	37360	48850	38230	37940	37270	37780	37780	85530	38580	36890	36940
27	38640	37150	48800	37990	38260	37460	37850	37830	85320	37700	36850	36910
28	38370	37120	47940	37740	39050	37650	37930	37580	85060	37300	36830	36900
29	38070	37130	47070	37520	---	37790	37970	38420	84310	37320	36820	36870
30	37750	37150	46170	37410	---	37940	38010	38740	83120	37320	36810	36830
31	37420	---	45220	37400	---	38110	---	39070	---	37320	36800	---
MAX	38700	38230	48850	44270	39050	40350	40300	39070	86000	81760	37300	37100
MIN	35450	37040	37200	37230	37110	36890	37440	37060	39450	37300	36800	36630
(†)	791.26	791.05	796.78	791.24	792.48	791.78	791.70	792.49	816.66	791.18	790.78	790.81
(ϕ)	+1860	-270	+8070	-7820	+1650	-940	-100	+1060	+44050	-45800	-520	+30

CAL YR 1986 MAX 58320 MIN 35450 (ϕ) +7510
WTR YR 1987 MAX 86000 MIN 35450 (ϕ) +1270

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

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

WATER-QUALITY RECORDS

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

304016097433101 - LAKE GEORGETOWN SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
JAN											
20...	1335	1.00	405	8.20	10.0	1.70	9.4	85	<4	K4	200
20...	1336	2.00	--	--	--	--	--	--	--	--	--
20...	1337	30.0	405	8.30	10.0	--	9.4	85	--	--	--
20...	1339	68.0	405	8.30	10.0	--	9.5	86	--	--	210
APR											
14...	0920	1.00	428	8.30	17.0	2.60	8.9	95	K3	K3	220
14...	0921	4.20	--	--	--	--	--	--	--	--	--
14...	0922	10.0	428	8.30	17.0	--	9.0	96	--	--	--
14...	0924	20.0	428	8.30	17.0	--	8.9	95	--	--	--
14...	0926	30.0	428	8.30	17.0	--	8.9	95	--	--	--
14...	0928	40.0	428	8.30	17.0	--	8.9	95	--	--	--
14...	0930	50.0	433	8.20	14.5	--	8.4	85	--	--	--
14...	0932	60.0	438	8.10	14.0	--	6.3	63	--	--	--
14...	0934	68.0	445	7.80	13.0	--	3.0	29	--	--	230
AUG											
11...	0930	1.00	401	7.80	30.0	1.70	6.7	92	<1	K10	200
11...	0932	10.0	401	7.80	30.0	--	6.6	90	--	--	--
11...	0934	20.0	413	7.50	29.0	--	3.2	43	--	--	--
11...	0938	30.0	435	7.20	27.5	--	0	0	--	--	--
11...	0940	40.0	441	7.20	27.0	--	0	0	--	--	--
11...	0942	50.0	455	7.10	26.5	--	0	0	--	--	--
11...	0944	60.0	443	7.00	23.0	--	0	0	--	--	--
11...	0946	67.0	439	7.00	20.5	--	0	0	--	--	210

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL 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)
JAN											
20...	17	62	12	7.4	0.2	1.9	187	17	14	0.20	8.8
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	20	64	12	7.6	0.2	1.9	189	17	12	--	9.2
APR											
14...	20	64	14	8.9	0.3	1.4	197	19	13	0.30	7.9
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	27	68	14	8.5	0.3	1.5	200	19	14	--	9.0
AUG											
11...	17	57	13	8.5	0.3	2.3	179	14	12	0.20	11
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	1	66	12	7.0	0.2	2.4	213	10	9.1	--	16

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304016097433101 - LAKE GEORGETOWN SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
20...	240	0.390	0.010	0.400	0.090	0.41	0.50	0.020	9	3
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	<0.010	0.400	0.060	0.64	0.70	0.010	<10	10
20...	240	0.390	0.010	0.400	0.080	1.1	1.2	0.110	12	8
APR										
14...	250	0.370	0.030	0.400	0.040	0.56	0.60	0.010	<3	1
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	0.370	0.030	0.400	0.030	0.57	0.60	0.020	<10	<10
14...	--	--	--	--	--	--	--	--	--	--
14...	--	0.470	0.030	0.500	0.050	0.55	0.60	0.010	<10	<10
14...	250	0.480	0.020	0.500	0.080	0.82	0.90	0.010	4	150
AUG										
11...	230	--	<0.010	<0.100	<0.010	--	0.70	0.040	14	3
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	<0.010	<0.100	0.010	0.79	0.80	0.040	<10	10
11...	--	--	<0.010	<0.100	0.040	0.66	0.70	0.030	90	80
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	250	--	<0.010	<0.100	1.40	0.20	1.6	0.080	330	340

304006097452501 - LAKE GEORGETOWN SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)
JAN											
20...	1425	1.00	418	8.20	10.0	1.70	9.6	87	K1	K4	220
20...	1427	30.0	430	8.20	9.5	--	9.8	88	--	--	--
20...	1429	59.0	490	8.30	8.0	--	10.1	87	--	--	260
APR											
15...	0800	1.00	431	8.20	16.5	1.50	8.7	91	<1	K3	220
15...	0802	10.0	431	8.20	16.5	--	8.7	91	--	--	--
15...	0804	20.0	431	8.20	16.5	--	8.7	91	--	--	--
15...	0806	30.0	431	8.20	16.5	--	8.7	91	--	--	--
15...	0808	40.0	431	8.20	15.0	--	8.0	81	--	--	--
15...	0810	50.0	431	8.10	14.0	--	7.5	74	--	--	--
15...	0820	60.0	431	8.00	14.0	--	7.4	73	--	--	220
AUG											
11...	1005	1.00	413	7.90	30.0	2.30	6.4	88	<1	K1	200
11...	1007	10.0	413	7.80	30.0	--	6.2	85	--	--	--
11...	1009	15.0	421	7.60	29.5	--	4.0	54	--	--	--
11...	1011	20.0	437	7.30	28.5	--	0	0	--	--	--
11...	1013	30.0	445	7.20	28.0	--	0	0	--	--	--
11...	1015	40.0	450	7.20	27.5	--	0	0	--	--	--
11...	1017	50.0	465	7.20	26.0	--	0	0	--	--	--
11...	1019	57.0	474	7.10	23.5	--	0	0	--	--	220

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
JAN										
20...	23	66	13	7.8	0.2	1.8	195	18	12	9.2
20...	--	--	--	--	--	--	--	--	--	--
20...	33	79	15	9.1	0.3	1.1	226	21	14	8.7
APR										
15...	21	65	15	8.9	0.3	1.3	203	20	14	7.8
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	19	66	14	8.8	0.3	1.4	203	19	14	8.2
AUG										
11...	18	59	14	8.6	0.3	2.4	187	14	11	11
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	0	68	13	7.6	0.2	2.3	231	9.8	11	15

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304006097452501 - LAKE GEORGETOWN SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
20...	240	0.490	0.010	0.500	0.060	0.44	0.50	0.020	3	2
20...	--	--	<0.010	0.500	0.050	0.65	0.70	0.010	<10	10
20...	280	--	<0.010	0.900	0.060	0.44	0.50	0.020	8	8
APR										
15...	250	0.370	0.030	0.400	0.030	0.57	0.60	0.010	<3	<1
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	0.370	0.030	0.400	0.030	0.57	0.60	0.010	<10	<10
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	250	0.470	0.030	0.500	0.060	0.64	0.70	0.010	3	6
AUG										
11...	230	--	<0.010	<0.100	<0.010	--	0.70	0.050	8	3
11...	--	--	<0.010	<0.100	<0.010	--	0.70	0.040	<10	10
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	<0.010	<0.100	0.020	1.4	1.4	0.040	30	100
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	270	--	<0.010	<0.100	1.40	0.80	2.2	0.090	610	430

304055097471301 - LAKE GEORGETOWN SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)
JAN											
20...	1505	1.00	461	8.20	9.5	1.60	11.0	98	K6	K8	240
20...	1506	1.00	--	--	--	--	--	--	--	--	--
20...	1507	20.0	474	8.20	8.5	--	10.9	95	--	--	--
20...	1509	33.0	468	8.20	7.0	--	11.1	93	--	--	250
APR											
14...	1035	1.00	454	8.20	16.0	0.90	7.9	82	K15	K5	230
14...	1036	1.50	--	--	--	--	--	--	--	--	--
14...	1037	10.0	453	8.20	16.0	--	7.9	82	--	--	--
14...	1039	20.0	446	8.20	15.0	--	7.5	76	--	--	--
14...	1041	33.0	443	8.20	14.5	--	7.2	73	--	--	220
AUG											
11...	1033	1.00	442	7.70	31.5	1.10	5.3	74	K4	K10	220
11...	1035	10.0	428	7.40	30.0	--	1.8	25	--	--	--
11...	1037	15.0	434	7.40	30.0	--	0.6	8	--	--	--
11...	1039	20.0	473	7.20	29.5	--	0	0	--	--	--
11...	1041	30.0	498	7.20	28.0	--	0	0	--	--	240

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
JAN										
20...	25	73	14	8.6	0.3	1.4	215	20	11	8.9
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	32	76	14	8.7	0.3	1.1	215	21	17	8.6
APR										
14...	25	68	15	9.2	0.3	1.2	207	20	14	7.7
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	25	67	14	8.7	0.3	1.3	200	19	13	8.2
AUG										
11...	18	60	16	9.8	0.3	2.2	198	17	13	13
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	6	69	16	9.4	0.3	2.2	232	10	12	15

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304055097471301 - LAKE GEORGETOWN SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
20...	270	--	<0.010	0.600	0.060	0.14	0.20	0.010	8	<1
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	<0.010	0.700	0.040	0.46	0.50	0.010	<10	10
20...	280	--	<0.010	0.800	0.060	0.44	0.50	0.030	11	6
APR										
14...	260	0.370	0.030	0.400	0.050	0.45	0.50	0.010	<3	2
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	0.370	0.030	0.400	0.060	0.54	0.60	0.010	<10	<10
14...	250	0.370	0.030	0.400	0.060	0.74	0.80	0.010	<3	6
AUG										
11...	250	--	<0.010	<0.100	0.040	2.0	2.0	0.060	6	3
11...	--	--	<0.010	<0.100	0.030	1.4	1.4	0.050	20	20
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	<0.010	<0.100	0.360	1.2	1.6	0.070	300	310
11...	270	--	<0.010	<0.100	1.10	0.90	2.0	0.070	1200	390

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

Georgetown Lake AC (304016097433101)

Phytoplankton Analyses October 1986 to September 1987

Date	1-20-87
Time	1336
TOTAL CELLS/mL	14,995
NUMBER OF SPECIES	25
DEPTH COLLECTED (ft.)	2.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	114
Arthrodesmus sp.	114
Chlamydomonas sp.	28
Crucigenia tetrapedia	227
Mesotaenium sp.	57
Oocystis sp.	170
Spondylosium planum	57
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	7838
Aphanothece saxicola	4544
Chroococcus varius	57
Synechococcus aeruginosa	227
Synechococcus sp.	1193
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	28
Peridinium pusilium	28
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	127
Cyclotella stelligera	23
Melosira italica	21
Order Pennales	
Achnanthes lanceolata var. *dubia*	4
Amphipleura pellucida	4
Anomoeoneis sp.	4
Cymbella microcephala var. *crassa*	17
Nitzschia palea	9
Nitzschia paleacea	4
Synedra sp.	43

Georgetown Lake CC (30405509741301)

Phytoplankton Analyses October 1986 to September 1987

Date	1-20-87
Time	1506
TOTAL CELLS/mL	6,712
NUMBER OF SPECIES	24
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	256
Chlorella sp.	28
Gloeocystis sp.	28
Mesotaenium sp.	57
Scenedesmus dimorphus	85
Scenedesmus serratus	114
Tetraedron minimum	28
CHRYSOPHYTA (golden-brown algae)	
Kephyrion sp.	28
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	4317
Aphanocapsa elachista	227
Aphanothece saxicola	142
Dactylococcopsis acicularis	28
Synechococcus sp.	966
PYRRHOPHYTA (dinoflagellates)	
Peridinium inconspicuum	28
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	84
Cyclotella stelligera	14
Melosira italica	34
Melosira sp.	67
Order Pennales	
Cymbella microcephala var. *crassa*	32
Navicula sp.	12
Nitzschia palea	40
Nitzschia paleacea	20
Synedra sp.	20

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

Georgetown Lake AC (304016097433101)

Phytoplankton Analyses October 1986 to September 1987

Date	4-14-87
Time	0921
TOTAL CELLS/mL	21,170
NUMBER OF SPECIES	25
DEPTH COLLECTED (ft.)	4.2

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	57
Chlamydomonas sp.	114
Crucigenia tetrapedia	511
Elakatothrix viridis	114
Gloeocystis sp.	568
Mesotaenium sp.	909
Oocystis sp.	57
Scenedesmus bijuga	114
Scenedesmus serratus	114
Sphaerocystis schroeteri	398
CHRYSOPHYTA (golden-brown algae)	
Dinobryon divergens	170
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	13518
Aphanocapsa elastica	170
Aphanothece sp.	284
Chroococcus limneticus	284
Synechococcus sp.	2499
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	57
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	625
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	83
Stephanodiscus hantzschii var. *pusilus*	289
Stephanodiscus niagarae	83
Order Pennales	
Diploneis sp.	76
Pleurosigma salinarum	19
Synedra filiformis var. *exilis*	19
Synedra ulna	38

Georgetown Lake CC (30405509741301)

Phytoplankton Analyses October 1986 to September 1987

Date	4-14-87
Time	1036
TOTAL CELLS/mL	9,148
NUMBER OF SPECIES	21
DEPTH COLLECTED (ft.)	1.5

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas sp.	57
Chloroccocum sp.	227
Crucigenia tetrapedia	227
Closterium macilentum	57
Dictyosphaerium pulchellum	114
Mesotaenium sp.	398
Oocystis sp.	398
Scenedesmus quadricauda	114
Tetraedron minimum	57
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	5453
Dactylococcopsis sp.	57
Synechococcus sp.	1136
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	57
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	170
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	114
Melosira italica	57
Order Pennales	
Nitzschia acicularis	85
Nitzschia denticula	43
Nitzschia linearis	57
Nitzschia palea	213
Synedra ulna	57

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

Georgetown Lake AC (304016097433101)

Phytoplankton Analyses October 1986 to September 1987

Date	8-11-87
Time	0931
TOTAL CELLS/mL	201,244
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	2.8

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	114
Cosmarium sp.	170
Crucigenia tetrapedia	909
Dictyosphaerium pulchellum	284
Golenkinia radiata	57
Mesotaenium sp.	568
Nephrocytium limneticum	227
Pteromonas sp.	114
CHRYSOPHYTA (Golden-brown algae)	
Anabaenopsis phillipinensis ?	8974
Aphanothece saxicola	134730
Chroococcus limneticus	170
Dactylococcopsis acicularis	341
Dactylococcopsis fascicularis	2726
Lyngbya limnetica	1363
Lyngbya nana	3181
Oscillatoria angustissima	42486
Synechococcus lineare	341
Synechococcus sp.	227
PYRRHOPHYTA (Dinoflagellates)	
Ceratium cornutum	114
Peridinium sp.	114
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	398
Melosira sp.	454
Order Pennales	
Anomoeoneis vitrea	1250
Nitzschia acicularis	57
Nitzschia sp.	170
Synedra nana	1534
Synedra sp.	57

Georgetown Lake CC (304055097471301)

Phytoplankton Analyses October 1986 to September 1987

Date	8-11-87
Time	1034
TOTAL CELLS/mL	376,601
NUMBER OF SPECIES	32
DEPTH COLLECTED (ft.)	1.8

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	227
Chlorococcum sp.	568
Crucigenia tetrapedia	1363
Dictyosphaerium pulchellum	795
Gloeocystis sp.	114
Kirchneriella obesa	114
Mesotaenium sp.	682
Nephrocytium limneticum	454
Oocystis sp.	341
Scenedesmus serratus	227
Tetraedron minimum	114
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensi ?	9429
Aphanocapsa delicatissima	3635
Aphanothece saxicola	305584
Chroococcus limneticus	341
Dactylococcopsis acicularis	1818
Dactylococcopsis fascicularis	4658
Lyngbya nana	9997
Merismopedia tenuissima	7043
Oscillatoria angustissima	22038
Oscillatoria limnetica	2272
Synechococcus lineare	909
Synechococcus sp.	1932
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	57
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	568
Melosira sp.	114
Stephanodiscus hantzschii	454
Stephanodiscus niagarae	14
Order Pennales	
Anomoeoneis vitrea	227
Nitzschia denticula	57
Nitzschia sp.	114
Synedra nana	341

08104700 NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN, TX

LOCATION.--Lat 30°39'42", long 97°42'40", Williamson County, Hydrologic Unit 12070205, on left bank 5,000 ft downstream from North Fork dam, 1.5 mi upstream from Middle Fork San Gabriel River, 2.7 mi upstream from Interstate Highway 35, 2.7 mi northwest of Georgetown, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--248 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 689.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Beginning Mar. 3, 1980, flow largely regulated by Lake Georgetown (station 08104650) located about 1.0 mi upstream from gage. A U.S. Army Corps of Engineers satellite telemeter is located at station.

AVERAGE DISCHARGE.--11 years (water years 1969-79) unregulated, 88.1 ft³/s (63,830 acre-ft/yr); 8 years (water years 1980-87) regulated, 81.2 ft³/s (58,830 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s Sept. 17, 1974 (gage height, 26.20 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 39.5 ft in September 1921. Flood in April 1957 reached a stage of 34.5 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s July 6 at 1100 hours (gage height, 8.34 ft); minimum daily, 0.71 ft³/s May 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	238	19	817	117	32	1.3	1.9	1.8	1040	37	4.1
2	5.8	105	.73	808	117	32	1.4	.71	4.4	1030	37	4.0
3	5.6	13	23	808	117	32	1.4	.71	3.4	1020	37	5.0
4	5.6	14	50	804	176	18	1.4	12	58	1010	37	5.1
5	5.8	13	50	794	86	299	1.4	30	6.9	1000	22	5.2
6	6.5	13	49	792	49	470	1.5	30	4.9	1220	8.8	5.1
7	6.2	68	48	783	83	470	1.4	30	184	1350	8.4	9.0
8	6.0	106	49	441	85	466	1.4	30	298	1330	8.4	6.0
9	5.6	106	50	205	86	259	1.4	30	154	1310	8.9	5.6
10	5.6	106	51	203	82	137	1.4	30	7.2	1300	8.9	5.5
11	6.3	106	51	203	133	137	1.4	30	6.9	1290	8.9	5.8
12	18	106	51	203	132	180	1.4	30	8.4	1280	8.6	6.2
13	7.5	105	51	203	52	170	1.6	30	11	1260	8.5	6.2
14	6.8	105	52	138	27	137	1.3	30	6.8	1240	7.9	6.4
15	6.4	106	55	5.5	27	136	212	26	6.3	1230	8.3	7.8
16	6.2	106	25	4.9	27	136	412	21	5.6	1220	8.2	7.7
17	6.2	106	6.4	4.8	27	140	268	20	5.3	1220	8.0	7.1
18	6.2	106	297	4.6	27	189	205	99	5.2	1200	6.7	8.0
19	6.2	106	507	4.8	27	152	205	219	172	1180	5.3	7.2
20	6.2	106	503	94	29	120	205	222	301	1150	5.3	6.8
21	6.4	106	502	465	29	108	98	220	302	1140	5.2	6.6
22	7.4	107	387	416	29	108	4.0	125	302	1110	5.3	6.6
23	14	107	12	122	137	309	2.2	15	296	1090	5.3	6.7
24	9.7	106	9.2	124	221	172	2.2	6.6	298	804	5.3	6.8
25	8.5	107	8.5	122	221	1.4	2.4	1.1	301	479	5.3	7.0
26	68	180	8.5	171	221	1.0	2.5	.97	302	477	5.3	6.9
27	183	167	452	207	110	1.0	2.4	.97	307	472	5.3	6.8
28	256	74	856	208	32	1.0	2.2	125	307	239	5.3	6.4
29	246	44	841	208	---	1.0	2.0	127	593	39	5.1	4.9
30	245	46	831	155	---	1.2	2.1	2.7	1060	39	5.3	4.8
31	242	---	826	115	---	1.3	---	2.1	---	38	5.3	---
TOTAL	1420.6	2884	6721.33	9633.6	2506	4416.9	1646.7	1548.76	5319.1	29807	347.1	187.3
MEAN	45.8	96.1	217	311	89.5	142	54.9	50.0	177	962	11.2	6.24
MAX	256	238	856	817	221	470	412	222	1060	1350	37	9.0
MIN	5.6	13	.73	4.6	27	1.0	1.3	.71	1.8	38	5.1	4.0
AC-FT	2820	5720	13330	19110	4970	8760	3270	3070	10550	59120	688	372

CAL YR 1986 TOTAL 34553.61 MEAN 94.7 MAX 3020 MIN .66 AC-FT 68540
WTR YR 1987 TOTAL 66437.97 MEAN 182 MAX 1350 MIN .71 AC-FT 131800

08104700 NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN												
20...	1705	241	409	8.10	10.0	7	1.8	11.4	103	0.4	210	22
APR												
14...	1205	1.3	491	8.00	16.0	1	1.0	10.9	113	0.2	250	26
AUG												
11...	1131	8.9	411	7.90	30.0	2	0.30	7.4	99	1.1	210	17

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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											
20...	63	12	7.6	0.2	1.8	185	17	12	0.30	9.0	230
APR											
14...	73	17	8.5	0.2	1.4	226	20	13	0.20	8.3	280
AUG											
11...	59	14	8.1	0.3	2.2	188	14	11	0.20	12	230

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN											
20...	1	<1	0.390	0.010	0.400	0.070	1.2	1.3	0.010	4.2	<1
APR											
14...	3	1	1.97	0.030	2.00	0.040	0.46	0.50	0.010	2.4	<1
AUG											
11...	2	<1	--	<0.010	0.200	0.040	0.96	1.0	0.030	3.9	2

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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											
20...	39	<1	<10	<1	3	<5	<1	<0.1	<1	<1	3
APR											
14...	50	<1	<10	<1	<3	23	11	<0.1	<1	<1	4
AUG											
11...	45	<1	<10	1	12	<5	12	<0.1	<1	<1	<3

08104900 SOUTH FORK SAN GABRIEL RIVER AT GEORGETOWN, TX

LOCATION.--Lat 30°37'32", long 97°41'27", Williamson County, Hydrologic Unit 12070205, on right bank at downstream side of downstream bridge of two bridges on Interstate Highway 35, 1.1 mi southwest of the courthouse at Georgetown, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--133 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948, 1962-67, and December 1967 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 687.72 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. Gage-height telemeter at station.

AVERAGE DISCHARGE.--19 years (water years 1969-87), 52.8 ft³/s (5.39 in/yr), 38,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s Sept. 3, 1981 (gage height, 24.60 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, about 41 ft Apr. 24, 1957, 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)
May 29	0630	5,740	9.97	June 11	1830	5,330	9.64
June 4	1430	*13,100	*14.75	June 12	0600	8,380	11.87
June 9	1300	3,930	8.39	June 13	0430	5,830	10.03
June 10	2400	8,410	11.90	June 13	2330	2,890	7.33

Minimum daily discharge, 2.3 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	35	37	177	67	109	55	24	131	139	32	10
2	6.4	36	34	167	64	92	54	24	284	124	32	10
3	3.1	34	35	164	62	86	53	24	180	113	30	8.4
4	2.3	56	35	153	61	83	53	25	5090	101	29	5.8
5	6.0	72	35	148	60	81	54	24	653	94	29	7.1
6	9.0	44	35	146	59	79	57	24	253	84	27	7.7
7	8.7	43	36	139	58	79	54	24	171	78	24	16
8	9.8	42	37	129	57	78	52	25	132	73	23	9.9
9	11	41	37	133	56	74	52	25	1360	73	23	6.2
10	9.8	39	49	131	54	74	51	25	2020	79	22	5.8
11	15	38	100	114	54	80	50	25	3190	69	22	5.4
12	46	38	59	107	54	80	49	21	3010	62	21	6.5
13	39	38	53	103	54	73	49	18	2530	57	17	7.3
14	26	38	74	101	53	73	49	18	1170	55	17	6.7
15	22	38	241	97	55	73	42	18	538	54	17	8.4
16	19	39	126	94	52	70	33	24	411	53	16	11
17	17	38	92	103	51	118	32	23	349	88	15	8.0
18	17	36	264	130	50	85	30	23	314	68	15	20
19	19	35	174	99	50	73	30	22	299	53	14	15
20	20	35	128	87	57	70	28	22	268	49	13	15
21	19	34	112	82	55	69	28	19	247	47	11	13
22	29	35	1000	79	53	70	28	19	229	48	11	9.6
23	242	37	1020	76	51	68	27	18	214	47	12	8.5
24	97	35	389	77	86	63	26	19	205	43	11	8.1
25	50	45	303	74	81	63	25	20	190	43	8.8	7.3
26	44	44	260	70	200	62	26	19	279	43	7.3	4.2
27	43	39	234	69	151	62	25	18	174	40	7.5	5.5
28	40	38	218	68	144	61	25	18	154	38	5.3	5.5
29	37	37	208	67	---	59	25	1140	142	36	8.9	5.5
30	36	37	197	66	---	57	24	101	151	35	11	5.4
31	35	---	186	66	---	55	---	159	---	34	11	---
TOTAL	984.2	1196	5808	3316	1949	2319	1186	2008	24338	2020	542.8	262.8
MEAN	31.7	39.9	187	107	69.6	74.8	39.5	64.8	811	65.2	17.5	8.76
MAX	242	72	1020	177	200	118	57	1140	5090	139	32	20
MIN	2.3	34	34	66	50	55	24	18	131	34	5.3	4.2
AC-FT	1950	2370	11520	6580	3870	4600	2350	3980	48270	4010	1080	521
CFSM	.24	.30	1.41	.80	.52	.56	.30	.49	6.10	.49	.13	.07
IN.	.28	.33	1.62	.93	.55	.65	.33	.56	6.81	.56	.15	.07

CAL YR 1986 TOTAL 27560.9 MEAN 75.5 MAX 5180 MIN .96 AC-FT 54670 CFSM .57 IN. 7.71
WTR YR 1987 TOTAL 45929.7 MEAN 126 MAX 5090 MIN 2.3 AC-FT 91100 CFSM .95 IN. 12.8

08105000 SAN GABRIEL RIVER AT GEORGETOWN, TX

LOCATION.--Lat 30°39'14", long 97°39'18", Williamson County, Hydrologic Unit 12070203, on left bank 100 ft downstream from Missouri-Kansas Railroad bridge, 1.2 mi below confluence of North and South Forks, about 1.5 mi below bridges on State Highway 418, and 1.8 mi northeast of Williamson County Courthouse in Georgetown.

DRAINAGE AREA.--399 mi².

PERIOD OF RECORD.--February 1924 to August 1925, July 1934 to September 1973, and October 1984 to September 1987 (converted to low-flow partial-record).

GAGE.--Water stage recorder and concrete control. Datum of gage is 643.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Daily discharges are not published above 200 ft³/s. Flow is partially regulated by Lake Georgetown (station 08104650) and at times by gates in a recreation dam 3,000 ft upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 155,000 ft³/s Apr. 24, 1957, (gage height, 31.89 ft in gage well, 34.10 ft, from outside floodmark), from rating curve extended above 24,000 ft³/s on basis of contracted-opening measurement of peak flow; no flow at times in 1954-57.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.92 ft June 4 (maximum discharge not determined); minimum daily, 19 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	---	92	---	---	196	89	51	197	---	105	45
2	22	150	65	---	---	177	86	50	159	---	104	43
3	21	75	69	---	---	170	84	49	---	---	100	41
4	19	105	101	---	---	154	83	54	---	---	98	39
5	22	150	101	---	140	130	88	73	---	---	88	40
6	40	97	101	---	133	---	92	75	---	---	71	41
7	35	122	104	---	181	---	85	74	---	---	67	70
8	31	165	105	---	179	---	82	74	---	---	65	53
9	30	161	107	---	176	---	80	74	---	---	66	44
10	28	156	159	---	169	---	78	73	---	---	65	42
11	43	153	194	---	176	---	77	73	---	---	63	42
12	131	151	181	---	181	---	76	71	---	---	62	42
13	84	150	159	---	145	---	81	70	---	---	58	44
14	61	149	182	190	109	---	76	70	---	---	57	41
15	52	150	---	150	115	---	73	68	---	---	58	49
16	48	151	---	144	108	---	---	102	---	---	55	58
17	44	150	200	154	104	---	130	81	---	---	56	47
18	43	147	200	182	103	---	---	75	---	---	53	75
19	42	143	---	150	103	171	---	---	---	---	50	60
20	40	140	---	139	128	---	---	---	---	---	48	57
21	43	139	---	---	114	---	130	---	---	---	45	52
22	72	143	---	---	110	---	69	140	---	---	44	48
23	167	146	---	---	112	---	65	61	---	---	46	45
24	187	143	---	---	---	159	61	62	---	---	44	45
25	125	179	---	---	---	102	58	54	---	---	43	44
26	133	181	---	---	---	99	59	45	---	---	41	43
27	180	197	---	---	---	99	57	41	---	---	42	42
28	---	156	---	---	---	97	54	42	---	143	41	44
29	---	107	---	---	---	95	40	---	---	113	44	42
30	---	106	---	---	---	91	46	197	---	111	47	40
31	---	---	---	---	---	89	---	189	---	108	48	---
TOTAL	---	---	---	---	---	---	---	---	---	---	1874	1418
MEAN	---	---	---	---	---	---	---	---	---	---	60.5	47.3
MAX	---	---	---	---	---	---	---	---	---	---	105	75
MIN	---	---	---	---	---	---	---	---	---	---	41	39
AC-FT	---	---	---	---	---	---	---	---	---	---	3720	2810

CAL YR	1986	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --	
WTR YR	1987	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --	

08105100 BERRY CREEK NEAR GEORGETOWN, TX

LOCATION.--Lat 30°41'28", long 97°39'21", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of upstream service road on Interstate Highway 35, 2.9 mi north of the county courthouse at Georgetown, and 3.6 mi (revised) upstream from mouth.

DRAINAGE AREA.--83.1 mi².

PERIOD OF RECORD.--July 1967 to current year.
Water-quality records.--Sediment records: October 1976 to September 1981.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 659.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversions. U.S. Army Corps of Engineers satellite telemeter at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 27.5 ft³/s (4.49 in/yr), 19,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s Oct. 31, 1974 (gage height, 19.33 ft); maximum gage height, 20.11 ft from floodmark, Feb. 3, 1986; no flow at times in 1967, 1971-72, and 1978-79, and 1982-85.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1921 occurred September 1921, 25 ft, from information by State Department of Highways and Public Transportation and local residents (discharge not determined).

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. 23	0200	1,780	7.88	June 11	1000	1,610	7.57
June 4	1100	*10,700	a*18.30				

a From floodmark.

Minimum daily discharge, 0.08 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	6.1	8.6	61	37	66	33	16	32	66	28	11
2	.19	6.1	8.4	57	37	57	31	15	245	65	27	10
3	.14	6.3	8.2	57	36	53	29	15	171	63	26	10
4	.08	7.8	8.2	54	36	50	29	15	3610	61	23	8.5
5	.11	7.7	8.2	52	36	47	29	14	437	53	22	8.0
6	.58	7.4	8.2	52	35	45	29	14	171	49	21	8.2
7	.78	6.9	8.1	50	34	45	31	13	148	48	20	10
8	.65	7.3	8.0	49	33	44	29	13	144	47	19	9.5
9	.65	7.2	8.0	49	33	43	28	13	229	50	18	9.5
10	.62	7.1	12	53	32	43	27	13	487	48	18	9.5
11	1.1	7.0	22	49	32	45	27	14	869	46	16	9.4
12	23	6.9	19	47	32	49	27	13	458	45	16	9.0
13	4.5	7.1	15	47	31	46	26	13	329	44	16	8.4
14	4.4	7.1	20	47	31	46	25	12	230	44	16	8.5
15	4.3	7.3	137	46	30	46	25	12	160	43	16	8.4
16	4.2	7.3	45	44	29	45	25	23	130	42	15	9.1
17	4.2	7.3	31	46	29	100	24	15	118	52	14	9.9
18	4.4	7.3	185	77	28	59	23	18	114	52	14	11
19	4.5	7.2	84	57	28	49	23	18	106	43	14	9.7
20	4.8	7.1	59	50	30	45	22	17	100	41	13	9.4
21	5.1	7.1	54	48	33	43	21	17	94	39	13	11
22	5.8	7.1	747	45	32	42	21	17	89	38	13	10
23	17	7.1	833	43	29	41	20	16	85	37	12	9.1
24	7.0	6.9	159	43	76	39	20	16	83	36	13	8.4
25	6.4	8.3	111	43	57	38	20	15	81	34	13	8.2
26	6.4	7.2	95	40	139	37	19	14	80	34	12	7.7
27	6.5	7.5	82	39	89	35	19	13	84	33	12	7.4
28	6.4	8.1	76	39	132	35	18	48	78	33	10	7.3
29	6.0	8.1	72	39	---	34	18	273	77	31	9.9	7.0
30	6.0	8.5	68	38	---	33	17	65	74	31	9.5	7.1
31	6.1	---	65	37	---	33	---	39	---	30	9.5	---
TOTAL	142.16	217.4	3064.9	1498	1236	1433	735	829	9113	1378	498.9	270.2
MEAN	4.59	7.25	98.9	48.3	44.1	46.2	24.5	26.7	304	44.5	16.1	9.01
MAX	23	8.5	833	77	139	100	33	273	3610	66	28	11
MIN	.08	6.1	8.0	37	28	33	17	12	32	30	9.5	7.0
AC-FT	282	431	6080	2970	2450	2840	1460	1640	18080	2730	990	536
CFSM	.06	.09	1.19	.58	.53	.56	.29	.32	3.66	.53	.19	.11
IN.	.06	.10	1.37	.67	.55	.64	.33	.37	4.08	.62	.22	.12

CAL YR 1986 TOTAL 12686.09 MEAN 34.8 MAX 3660 MIN .08 AC-FT 25160 CFSM .42 IN. 5.68
WTR YR 1987 TOTAL 20415.53 MEAN 55.9 MAX 3610 MIN .08 AC-FT 40490 CFSM .67 IN. 9.14

08105200 BERRY CREEK AT STATE HIGHWAY 971 NEAR GEORGETOWN, TX

LOCATION.--Lat 30°40'33", long 97°36'51", Williamson County, Hydrologic Unit 12070203, at downstream side of State Highway 971 bridge and 4.7 mi northeast of Georgetown.

PERIOD OF RECORD.--November 1964 to September 1973 (periodic discharge measurements only), October 1984 to September 1987 (converted to low-flow partial-record).

GAGE.--Water-stage recorder. Elevation of gage is 617 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Daily discharges are not published above 100 ft^3/s. No known regulation above station. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum gage height and discharge not determined; minimum daily discharges, 2.9 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	23	25	88	53	69	46	27	19	---	42	21
2	3.4	23	25	86	53	65	45	26	---	---	41	21
3	2.9	22	26	85	51	62	44	25	---	---	39	21
4	4.2	---	28	83	51	61	43	25	---	---	36	19
5	5.2	29	27	81	50	60	42	24	---	---	35	18
6	4.9	25	27	81	49	58	42	23	---	---	34	18
7	4.4	25	26	80	48	57	42	23	---	---	33	23
8	4.1	25	27	78	48	56	41	23	---	---	31	18
9	4.4	25	27	78	48	56	40	23	---	---	30	18
10	18	24	---	78	47	55	39	23	---	---	30	17
11	---	24	60	75	46	56	39	24	---	---	28	17
12	---	24	48	73	45	56	40	23	---	97	26	18
13	30	24	38	72	44	54	40	23	---	88	25	16
14	24	23	---	71	44	54	39	23	---	85	25	16
15	23	23	---	70	44	54	38	23	---	83	26	18
16	21	23	69	69	42	53	38	30	---	81	25	16
17	e20	22	47	70	39	---	37	28	---	---	24	15
18	e20	22	---	80	39	60	36	27	---	---	23	21
19	e19	21	---	72	43	54	35	27	---	81	22	16
20	e20	21	33	68	41	53	34	27	---	68	22	15
21	e21	21	26	66	42	52	33	26	---	63	21	16
22	e25	21	---	65	40	51	32	26	---	60	21	17
23	---	21	---	63	39	51	31	26	---	58	21	14
24	---	23	---	62	66	50	31	26	---	56	21	13
25	e28	---	---	61	55	49	30	26	---	55	21	13
26	e27	30	---	59	---	48	30	26	---	54	20	16
27	e27	27	---	58	73	48	29	25	---	50	21	14
28	26	26	98	57	---	48	29	25	---	48	20	16
29	25	26	94	56	---	47	28	---	---	48	19	15
30	24	25	92	55	---	46	27	28	---	45	19	17
31	23	---	90	54	---	46	---	20	---	44	20	---
TOTAL	---	---	---	2194	---	---	1100	---	---	---	821	513
MEAN	---	---	---	70.8	---	---	36.7	---	---	---	26.5	17.1
MAX	---	---	---	88	---	---	46	---	---	---	42	23
MIN	---	---	---	54	---	---	27	---	---	---	19	13
AC-FT	---	---	---	4350	---	---	2180	---	---	---	1630	1020

CAL YR	1986	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --		
WTR YR	1987	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --		

e Estimated.

08105300 SAN GABRIEL RIVER NEAR WEIR, TX

LOCATION.--Lat 30°38'45", long 97°35'06", Williamson County, Hydrologic Unit 12070205, on left bank at downstream side of State Highway 29 bridge, 0.5 mi upstream from Manske Branch, 4.7 mi east of Georgetown, and 54.8 mi upstream from mouth.

DRAINAGE AREA.--563 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 582.04 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Since March 1980, flow is partially regulated by Lake Georgetown (station 08104650) 12 mi upstream. The city of Georgetown releases sewage effluent into the river 6.5 mi upstream from this station.

AVERAGE DISCHARGE.--2 years (water years 1978-79) prior to regulation by Lake Georgetown, 165 ft³/s (119,500 acre-ft/yr); 8 years (water years 1980-87) regulated, 222 ft³/s (160,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,500 ft³/s Feb. 3, 1986 (gage height, 23.23 ft); minimum daily, 0.45 ft³/s Aug. 22, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1852, about 37 ft Sept. 10, 1921, from information by local residents. The second highest flood since 1852, about 32 ft, occurred Apr. 24, 1957, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,300 ft³/s June 4 at 1630 hours (gage height, 19.92 ft); minimum daily, 23 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	311	140	1200	267	326	129	77	254	1260	148	61
2	27	250	105	1170	255	264	130	75	535	1230	144	56
3	25	118	101	1160	255	242	126	74	770	1210	133	53
4	24	187	141	1120	293	224	124	79	11800	1200	133	53
5	23	221	143	1140	293	393	128	93	1430	1190	128	50
6	46	150	142	1140	163	738	139	101	590	1300	104	50
7	53	160	147	1090	209	732	133	106	544	1420	99	70
8	40	207	150	823	212	727	122	103	659	1410	95	76
9	35	200	156	473	212	564	121	104	1740	1430	95	65
10	33	196	370	469	209	308	121	102	1690	1410	93	60
11	51	189	378	445	235	330	115	105	3900	1400	91	58
12	700	187	282	437	295	368	116	100	3510	1400	88	60
13	158	186	239	433	205	392	125	98	2740	1370	84	60
14	107	186	420	411	162	318	113	97	1650	1380	81	58
15	87	188	1320	209	168	317	217	97	966	1380	81	56
16	80	189	518	202	162	316	546	173	737	1380	78	74
17	73	189	356	216	156	808	397	141	652	1500	78	63
18	70	185	1200	279	150	464	316	119	568	1400	74	96
19	70	179	1150	228	149	416	312	259	679	1380	74	84
20	68	176	950	254	214	314	312	267	840	1360	72	71
21	65	175	892	628	175	279	238	255	785	1340	70	68
22	195	178	3190	777	168	265	99	227	744	1340	67	63
23	1450	181	3000	295	215	420	96	90	699	1330	67	58
24	441	180	940	297	684	499	90	83	654	1110	65	57
25	213	335	608	289	526	156	88	76	623	657	63	58
26	183	262	493	322	1050	152	83	71	709	652	60	59
27	259	288	739	392	681	153	81	61	619	636	58	56
28	336	207	1290	395	592	153	79	99	598	462	56	58
29	326	155	1270	395	---	138	76	4810	719	164	56	55
30	318	151	1250	337	---	142	61	442	1260	162	58	53
31	312	---	1230	259	---	137	---	299	---	155	60	---
TOTAL	5895	5966	23310	17285	8355	11055	4833	8883	43664	35018	2653	1859
MEAN	190	199	752	558	298	357	161	287	1455	1130	85.6	62.0
MAX	1450	335	3190	1200	1050	808	546	4810	11800	1500	148	96
MIN	23	118	101	202	149	137	61	61	254	155	56	50
AC-FT	11690	11830	46240	34280	16570	21930	9590	17620	86610	69460	5260	3690

CAL YR 1986 TOTAL 101666 MEAN 279 MAX 12600 MIN 18 AC-FT 201700
WTR YR 1987 TOTAL 168776 MEAN 462 MAX 11800 MIN 23 AC-FT 334800

08105300 SAN GABRIEL RIVER NEAR WEIR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1976 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1976 to September 1982.

INSTRUMENTATION.--Water temperature was recorded continuously from December 1976 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 35.5°C July 27, 1982; minimum daily, 2.5°C Jan. 22, 1978, Jan. 2, 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV												
06...	1030	137	480	7.80	17.0	4	5.2	10.2	107	1.0	230	22
DEC												
09...	1325	162	477	7.90	15.0	4	1.1	9.3	93	1.0	230	27
MAR												
04...	1040	234	515	8.00	14.0	4	4.0	11.5	111	1.0	250	26
MAY												
05...	1420	102	522	7.90	25.0	4	3.3	9.5	116	0.7	250	26
JUL												
06...	1310	1390	369	7.90	24.0	8	2.5	9.7	117	1.4	180	20
AUG												
18...	1240	72	503	7.80	29.0	3	2.1	9.4	125	1.1	250	31

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 WH WAT TOTAL 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											
06...	74	11	12	0.4	2.0	208	21	14	0.30	9.7	270
DEC											
09...	73	12	12	0.4	1.6	205	21	19	0.30	8.7	270
MAR											
04...	82	11	12	0.3	1.3	224	22	14	0.30	7.9	280
MAY											
05...	76	15	15	0.4	1.3	226	21	21	0.30	10	300
JUL											
06...	55	11	7.6	0.3	1.9	163	13	9.8	0.20	10	210
AUG											
18...	74	15	14	0.4	1.3	216	19	18	0.20	12	280

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV											
06...	6	6	--	<0.010	1.50	0.020	0.78	0.80	0.850	3.1	1
DEC											
09...	8	<1	1.58	0.020	1.60	0.070	0.13	0.20	0.130	2.1	--
MAR											
04...	3	2	1.59	0.010	1.60	0.020	0.98	1.0	0.040	1.6	--
MAY											
05...	12	8	1.66	0.040	1.70	0.060	0.84	0.90	0.150	2.0	--
JUL											
06...	6	<1	--	<0.010	0.500	0.030	--	<0.20	0.020	3.9	1
AUG											
18...	13	4	2.07	0.030	2.10	0.010	0.39	0.40	0.100	2.8	1

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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...	59	<1	20	1	4	<5	6	<0.1	<1	1	6
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
JUL											
06...	41	3	<10	<1	12	<5	12	<0.1	<1	<1	9
AUG											
18...	45	<1	40	1	4	<5	8	<0.1	<1	<1	3

08105600 GRANGER LAKE NEAR GRANGER, TX

LOCATION.--30°41'34", long 97°19'34", Williamson County, Hydrologic Unit 12070205, at Granger Dam on San Gabriel River, 1.5 mi south of Friendship, 2.2 mi upstream from Willis Creek, 7.1 mi east of Granger, and at mile 31.9.

DRAINAGE AREA.--730 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1980 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 Mar. 27, 1980, nonrecording gage at present site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam, 16,320 ft long, including the spillway. The lake was built for water conservation and flood control. Deliberate impoundment began on Jan. 21, 1980. The spillway is an ungated 950-foot long ogee weir, located near right end of dam. The spillway for normal flood releases is a gated 18-foot-diameter conduit, controlled by two 8- by 18-foot slide gates, located near the center of dam. The invert for the floodgate is 457.0 ft. A low-flow outlet consists of three 3- by 4-foot gated openings, with invert elevations of 486.0, 494.0, and 502.0 ft. 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	555.0	674,500
Designed flood	550.3	580,000
Crest of spillway	528.0	244,200
Top of conservation pool	504.0	65,510
Lowest gated outlet (invert of 18-foot conduit)	457.0	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, 186,200 acre-ft June 19, 1981 (elevation, 522.25 ft); minimum, 615 acre-ft Jan. 21, 1980 (elevation, 462.60 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 184,800 acre-ft June 19 at 1500 hours (elevation, 522.10 ft); minimum, 65,600 acre-ft Oct. 5 at 2400 hours (elevation, 504.02 ft).

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

504.0	65,510	514.0	120,600	523.0	193,100
509.0	90,030	519.0	157,900		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65860	70380	68750	104700	67190	76250	67140	66520	94230	137400	70690	67230
2	65680	68530	68440	103700	67320	77130	66880	66520	96780	134600	70420	67190
3	65600	67500	68120	101900	66920	77470	66570	66740	101500	130800	70150	67190
4	65600	67860	67900	100300	66340	76250	66340	66880	129400	127300	69880	67100
5	65600	67860	67720	98880	66700	74560	66260	67050	136200	123600	69610	67100
6	66260	67770	67540	97240	67050	73620	66120	67190	138200	120200	69340	67050
7	66520	67680	67410	95560	67410	72680	65950	67230	138200	117400	69060	67190
8	66520	67680	67360	93780	67770	71750	65730	67360	137300	114500	68890	67230
9	66430	67590	67320	91300	68030	70780	65900	67500	141200	111800	68800	67190
10	66340	67540	68890	88660	68300	69020	66170	67590	146300	108800	68710	67190
11	66520	67320	69970	86080	68210	67680	66520	68300	156400	105900	68570	67140
12	70150	66700	69920	83500	68030	66520	66880	68480	166500	103200	68350	67190
13	70560	66300	69240	80970	67770	66340	67410	68570	174000	99060	68170	67140
14	69970	66430	70470	78260	67360	66660	67500	68660	177600	96370	67990	67140
15	68750	66570	75330	75570	67010	66880	67360	68710	179500	93550	67810	67280
16	67500	66790	76880	72680	66340	67190	67900	71010	181200	90970	67590	67230
17	66790	66970	78210	70650	66170	69110	68300	71380	183100	90910	67360	67230
18	66340	67100	81690	68300	66170	68710	68300	71290	184200	88220	67140	67590
19	65900	67410	82000	67050	66300	67770	68440	71100	183200	85600	67050	67630
20	65770	67860	81690	66430	66830	67190	68030	70650	181300	82360	67050	67630
21	65990	68030	81280	66340	67050	67410	67230	69740	179300	79560	67050	67630
22	66970	67940	92190	67280	67140	67680	66520	69200	176200	76830	67010	67540
23	77470	67940	104000	67590	67140	68030	66080	68660	171400	74230	67010	67500
24	79560	68120	106900	67940	68660	68660	65950	68300	167200	73380	66970	67460
25	80160	68930	108700	68120	69060	68570	66040	67770	162500	72770	66920	67410
26	80460	68980	110300	67860	70830	68440	66170	67140	157800	72120	66880	67410
27	79460	69200	110400	67410	72680	68300	66260	66430	153300	71430	66790	67500
28	77670	69200	110300	67230	75140	68120	66340	65770	149700	71430	66740	67460
29	75910	69060	109300	66830	---	67860	66430	89100	145100	71290	66740	67320
30	74180	68980	107800	66830	---	67540	66430	91970	141200	71100	67190	67100
31	72210	---	106400	66970	---	67320	---	93320	---	70880	67230	---
MAX	80460	70380	110400	104700	75140	77470	68440	93320	184200	137400	70690	67630
MIN	65600	66300	68890	66340	66170	66340	65730	65770	94230	70880	66740	67050
(†)	505.49	504.78	511.80	504.33	506.11	504.41	504.21	509.59	516.88	505.20	504.39	504.36
(ϕ)	+6130	-3230	+37420	-39430	+8170	-7820	-890	+26890	+47880	-70320	-3650	-130

CAL YR 1986 MAX 110400 MIN 64760 (ϕ) +40060
WTR YR 1987 MAX 184200 MIN 65600 (ϕ) +1020

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

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

WATER-QUALITY RECORDS

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

304132097200801 - GRANGER LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
FEB											
03...	0945	1.00	439	8.80	12.0	0.70	10.5	99	K2	K1	210
03...	0946	1.10	--	--	--	--	--	--	--	--	--
03...	0947	10.0	439	8.80	12.0	--	10.4	98	--	--	--
03...	0949	20.0	439	8.80	12.0	--	10.3	97	--	--	--
03...	0951	30.0	439	8.70	12.0	--	10.3	97	--	--	--
03...	0953	45.0	439	8.50	11.5	--	9.5	89	--	--	210
APR											
15...	1030	1.00	429	8.20	18.5	0.70	8.8	96	K2	K1	200
15...	1031	1.20	--	--	--	--	--	--	--	--	--
15...	1032	10.0	429	8.20	17.5	--	8.6	91	--	--	--
15...	1034	20.0	429	8.20	17.5	--	8.6	91	--	--	--
15...	1036	30.0	429	8.20	17.5	--	8.5	90	--	--	--
15...	1038	43.0	429	8.10	17.5	--	8.5	90	--	--	200
AUG											
18...	0830	1.00	370	7.90	29.0	0.40	6.6	87	K2	K13	170
18...	0833	10.0	370	7.90	29.0	--	6.5	86	--	--	--
18...	0835	20.0	370	7.90	29.0	--	6.4	85	--	--	--
18...	0837	30.0	370	7.90	29.0	--	6.4	85	--	--	--
18...	0839	42.0	370	7.90	29.0	--	6.3	83	--	--	170

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL 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)
FEB											
03...	32	70	9.4	12	0.4	2.0	182	24	19	0.30	7.0
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	25	69	9.2	13	0.4	2.1	185	24	16	--	7.2
APR											
15...	30	64	10	15	0.5	1.9	171	27	21	0.30	7.1
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	32	63	10	15	0.5	1.9	167	27	21	--	7.2
AUG											
18...	18	51	9.4	11	0.4	2.7	148	20	14	0.20	12
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	17	51	9.3	11	0.4	2.7	149	19	14	--	11

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB										
03...	250	1.77	0.030	1.80	0.060	0.74	0.80	0.010	3	2
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	1.67	0.030	1.70	0.050	0.75	0.80	0.010	<10	<10
03...	--	--	--	--	--	--	--	--	--	--
03...	250	1.57	0.030	1.60	0.090	0.91	1.0	0.030	6	11
APR										
15...	250	1.94	0.060	2.00	0.060	0.44	0.50	0.020	3	<1
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	2.04	0.060	2.10	0.030	1.1	1.1	0.020	<10	<10
15...	--	--	--	--	--	--	--	--	--	--
15...	250	1.94	0.060	2.00	0.050	0.65	0.70	0.020	4	4
AUG										
18...	210	0.090	0.010	0.100	0.050	0.55	0.60	0.040	4	<1
18...	--	--	--	--	--	--	--	--	--	--
18...	--	0.080	0.020	0.100	0.060	0.54	0.60	0.050	<10	<10
18...	--	--	--	--	--	--	--	--	--	--
18...	210	0.080	0.020	0.100	0.070	0.63	0.70	0.070	3	14

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

304209097195101 - GRANGER LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
03...	1040	1.00	440	8.90	12.0	10.5	99
03...	1042	10.0	440	8.80	12.0	10.3	97
03...	1044	20.0	440	8.80	12.0	10.3	97
03...	1046	28.0	440	8.80	12.0	9.9	93
APR							
15...	1105	1.00	429	8.10	18.5	8.8	96
15...	1107	10.0	429	8.10	17.5	8.6	91
15...	1109	22.0	429	8.10	17.5	8.6	91
AUG							
18...	0900	1.00	370	8.00	28.5	6.6	87
18...	0902	10.0	370	8.00	28.5	6.5	85
18...	0905	23.0	370	8.00	28.5	6.5	85

304206097215001 - GRANGER LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
FEB									
03...	1110	1.00	450	8.90	13.0	0.40	10.2	98	2.17
03...	1112	10.0	446	8.80	12.0	--	9.9	93	--
03...	1114	20.0	440	8.70	11.0	--	8.6	79	1.56
03...	1116	29.0	440	8.60	11.0	--	8.3	77	1.56
APR									
15...	1125	1.00	432	8.20	19.0	0.60	8.7	95	2.04
15...	1127	10.0	432	8.10	18.0	--	8.4	90	--
15...	1129	20.0	432	8.10	17.5	--	8.2	87	2.04
15...	1131	28.0	432	8.10	17.5	--	8.2	87	2.14
AUG									
18...	0917	1.00	370	7.90	28.5	0.30	6.1	80	0.080
18...	0919	10.0	370	7.90	28.5	--	5.8	76	--
18...	0921	20.0	370	7.90	28.5	--	5.5	72	0.180
18...	0923	28.0	370	7.80	28.5	--	4.3	56	0.080

DATE	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)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
03...	0.030	2.20	0.060	1.1	1.2	0.030	<10	<10
03...	--	--	--	--	--	--	--	--
03...	0.040	1.60	0.120	0.58	0.70	0.030	<10	<10
03...	0.040	1.60	0.150	0.85	1.0	0.040	<10	20
APR								
15...	0.060	2.10	0.050	0.75	0.80	0.020	<10	<10
15...	--	--	--	--	--	--	--	--
15...	0.060	2.10	0.060	0.74	0.80	0.030	<10	<10
15...	0.060	2.20	0.060	0.84	0.90	0.020	<10	<10
AUG								
18...	0.020	0.100	0.090	1.0	1.1	0.050	<10	<10
18...	--	--	--	--	--	--	--	--
18...	0.020	0.200	0.110	0.69	0.80	0.100	<10	<10
18...	0.020	0.100	0.150	1.0	1.2	0.120	<10	10

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

304108097215101 - GRANGER LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
FEB											
03...	1215	1.00	457	8.80	13.0	0.60	10.1	98	K3	K3	230
03...	1217	10.0	457	8.80	12.5	--	10.0	95	--	--	--
03...	1219	20.0	440	8.80	11.5	--	9.7	91	--	--	--
03...	1221	30.0	440	8.60	11.0	--	8.3	77	--	--	--
03...	1223	44.0	440	8.50	11.0	--	7.0	65	--	--	210
APR											
15...	1345	1.00	442	8.20	20.0	0.60	8.9	100	<1	<1	210
15...	1347	10.0	442	8.10	18.0	--	8.4	91	--	--	--
15...	1349	20.0	442	8.10	17.5	--	8.4	90	--	--	--
15...	1351	30.0	442	8.10	17.5	--	8.3	89	--	--	--
15...	1353	42.0	442	8.10	17.5	--	7.9	84	--	--	200
AUG											
18...	0947	1.00	376	7.80	28.5	0.40	5.7	75	K3	56	170
18...	0949	10.0	376	7.80	28.5	--	5.6	74	--	--	--
18...	0951	20.0	376	7.60	28.5	--	3.8	50	--	--	--
18...	0953	30.0	376	7.60	28.5	--	3.5	46	--	--	--
18...	0954	35.0	376	7.50	28.5	--	3.3	43	--	--	--
18...	0955	41.0	388	7.40	28.0	--	1.8	23	--	--	170

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB										
03...	28	72	11	12	0.4	1.8	197	31	16	7.3
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	20	69	9.1	12	0.4	2.1	190	22	14	7.5
APR										
15...	33	66	11	15	0.5	1.9	177	26	21	7.3
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	22	64	10	14	0.4	1.8	179	27	21	7.2
AUG										
18...	16	52	9.3	11	0.4	2.7	152	19	14	12
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	19	53	9.4	11	0.4	2.7	152	18	13	12

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB										
03...	270	1.78	0.020	1.80	0.060	0.34	0.40	0.020	7	2
03...	--	--	--	--	--	--	--	--	--	--
03...	--	1.67	0.030	1.70	0.090	0.71	0.80	0.010	<10	20
03...	--	--	--	--	--	--	--	--	--	--
03...	250	1.45	0.050	1.50	0.280	0.82	1.1	0.050	9	44
APR										
15...	250	1.94	0.060	2.00	0.050	0.65	0.70	0.010	7	1
15...	--	--	--	--	--	--	--	--	--	--
15...	--	1.93	0.070	2.00	0.060	0.64	0.70	0.020	20	<10
15...	--	--	--	--	--	--	--	--	--	--
15...	250	1.93	0.070	2.00	0.090	0.81	0.90	0.020	8	13
AUG										
18...	210	--	<0.010	0.100	0.170	0.83	1.0	0.040	5	2
18...	--	0.080	0.020	0.100	0.110	0.59	0.70	0.040	<10	<10
18...	--	--	--	--	--	--	--	--	--	--
18...	--	0.080	0.020	0.100	0.150	0.95	1.1	0.050	<10	30
18...	--	--	--	--	--	--	--	--	--	--
18...	210	--	0.020	<0.100	0.290	1.2	1.5	0.120	4	150

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

303947097231401 - GRANGER LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
FEB											
03...	1300	1.00	472	8.60	13.0	0.40	8.7	84	K23	K10	230
03...	1301	0.75	--	--	--	--	--	--	--	--	--
03...	1302	10.0	450	8.60	12.0	--	8.6	82	--	--	--
03...	1304	24.0	450	8.60	11.5	--	8.1	76	--	--	210
APR											
15...	1300	1.00	490	8.10	20.5	0.50	8.3	94	<1	<1	230
15...	1301	0.90	--	--	--	--	--	--	--	--	--
15...	1302	10.0	468	8.10	18.0	--	7.6	82	--	--	--
15...	1304	15.0	468	8.00	17.0	--	6.7	71	--	--	--
15...	1306	20.0	485	7.80	16.0	--	3.8	39	--	--	--
15...	1308	23.0	485	7.70	15.5	--	3.3	34	--	--	230
AUG											
18...	1100	1.00	429	7.70	28.0	0.20	5.3	69	K7	K24	200
18...	1103	10.0	437	7.50	28.0	--	4.1	53	--	--	--
18...	1105	22.0	462	7.40	27.5	--	2.2	28	--	--	200

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB										
03...	26	73	11	12	0.4	1.8	202	24	14	7.5
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	21	70	9.7	12	0.4	2.1	194	23	17	7.3
APR										
15...	32	73	12	16	0.5	1.5	200	27	23	7.4
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	32	74	12	15	0.4	1.6	202	26	22	7.8
AUG										
18...	23	60	11	13	0.4	2.4	172	22	16	12
18...	--	--	--	--	--	--	--	--	--	--
18...	22	62	12	14	0.4	2.3	182	23	18	12

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB										
03...	260	1.97	0.030	2.00	0.100	0.50	0.60	0.020	4	4
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	<10	10
03...	260	1.56	0.040	1.60	0.160	0.84	1.0	0.060	6	22
APR										
15...	280	2.22	0.080	2.30	0.090	0.41	0.50	0.010	<3	3
15...	--	--	--	--	--	--	--	--	--	--
15...	--	2.02	0.080	2.10	0.120	0.68	0.80	0.010	<10	<10
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	280	1.76	0.140	1.90	0.340	0.46	0.80	0.020	5	60
AUG										
18...	240	0.840	0.060	0.900	0.150	0.65	0.80	0.070	7	9
18...	--	0.840	0.060	0.900	0.210	1.4	1.6	0.090	<10	20
18...	250	1.13	0.070	1.20	0.320	0.68	1.0	0.170	4	110

Granger Lake AC (304132097200801)

Phytoplankton Analyses October 1986 to September 1987

Date	2-3-87
Time	0946
TOTAL CELLS/mL	1,815
NUMBER OF SPECIES	19
DEPTH COLLECTED (ft.)	

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	28
Chlorococcum sp.	28
Crucigenia tetrapedia	85
Franceia sp.	28
Micratinium pusillum	284
Scenedesmus denticulatus	114
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	227
Dactylococcopsis fascicularis	57
Synechococcus sp.	28
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	32
Cyclotella stelligera	5
Melosira ambigua	33
Melosira granulata var. *angustissima* f. *spiralis*	2
Melosira italica	33
Stephanodiscus tenuis ?	406
Order Pennales	
Nitzschia acicularis	57
Nitzschia subacicularis	28
Surirella ovata	28
Synedra sp.	312

Granger Lake DC (303947097231401)

Phytoplankton Analyses October 1986 to September 1987

Date	2-3-87
Time	1301
TOTAL CELLS/mL	3,056
NUMBER OF SPECIES	24
DEPTH COLLECTED (ft.)	

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *acicularis*	28
Arthrodesmus sp.	28
Chlamydomonas sp.	28
Chlorella sp.	28
Chlorococcum sp.	28
CHRYSOPHYTA (golden-brown algae)	
Kephyrion sp.	57
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	1051
Dactylococcopsis acicularis	85
Dactylococcopsis fascicularis	28
Synechococcus sp.	852
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	57
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	130
Melosira italica	86
Stephanodiscus tenuis ?	238
Order Pennales	
Cymbella minuta	6
Navicula cryptocephala	103
Nitzschia acicularis	11
Nitzschia denticula	11
Nitzschia dissipata	23
Nitzschia gracilis	29
Nitzschia palea	103
Nitzschia thermalis	29
Surirella angustata	6
Synedra sp.	11

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

Granger Lake AC (304132097200801)

Phytoplankton Analyses October 1986 to September 1987

Date	4-15-87
Time	1031
TOTAL CELLS/mL	38,575
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	1704
Chlorococcum sp.	3067
Chodatella subsalsa	909
Crucigenia tetrapedia	1590
Gloeocystis sp.	114
Kirchneriella lunaris	227
Mesotaenium sp.	227
Oocystis sp.	1250
Scenedesmus armatus	341
Scenedesmus bijuga	114
Scenedesmus brasiliensis	454
Scenedesmus dimorphus	227
Scenedesmus quadricauda	454
Sphaerocystis schroeteri	227
CHRYSOPHYTA (golden-brown algae)	
Dinobryon divergens	227
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	12950
Aphanothece saxicola	2726
Chroococcus varius	1250
Dactylococcopsis fascicularis	682
Synechococcus elongatus	9202
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella stelligera	7
Melosira italica	57
Stephanodiscus hantzschii var. *pusilus*	114
Order Pennales	
Nitzschia acicularis	57
Nitzschia linearis	57
Nitzschia palea	114
Nitzschia subacicularis	227

Granger Lake DC (303947097231401)

Phytoplankton Analyses October 1986 to September 1987

Date	4-15-87
Time	1301
TOTAL CELLS/mL	33,455
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	227
Ankistrodesmus nannoselene	682
Chlamydomonas sp.	227
Chlorococcum sp.	1136
Chodatella subsalsa	1363
Crucigenia tetrapedia	454
Gloeocystis sp.	568
Kirchneriella lunaris	227
Mesotaenium sp.	341
Oocystis sp.	1250
Pandorina morum	2726
Phacotus lenticularis	341
Scenedesmus brasiliensis	454
Scenedesmus quadricauda	1136
Sphaerocystis schroeteri	568
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	4317
Aphanothece saxicola	3408
Chroococcus dispersus	568
Chroococcus multicoloratus	341
Dactylococcopsis fascicularis	227
Dactylococcopsis sp.	227
Synechococcus elongatus	11814
EUGLENOPHYTA (euglenoid algae)	
Euglena viridis	114
Euglena sp.	227
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Stephanodiscus hantzschii var. *pusilus*	227
Order Pennales	
Nitzschia acicularis	57
Nitzschia palea	114
Nitzschia subacicularis	114

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

Granger Lake AC (304132097200801)

Phytoplankton Analyses October 1986 to September 1987

Date	8-18-87
Time	0831
TOTAL CELLS/mL	126,721
NUMBER OF SPECIES	44
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	227
Chlorella sp.	227
Chlorogonium sp.	57
Crucigenia tetrapedia	909
Golenkinia radiata	227
Kirchneriella lunaris	341
Mesotaenium sp.	1590
Nephrocytium sp.	227
Pediastrum simplex	227
Phacotus lenticularis	114
Pteromonas sp.	114
Scenedesmus armatus	227
Scenedesmus quadricauda	227
Scenedesmus serratus	909
Staurastrum sp.	114
Tetrastrum staurogeniaeforme	454
Tetraedron minimum	114
Tetraedron sp.	227
Treubaria triappendiculata	114
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensis ?	9429
Aphanocapsa delicatissima	8861
Aphanocapsa elachista	4998
Aphanothece sp.	17608
Chroococcus dispersus	1136
Chroococcus pallidus	682
Chroococcus varius	909
Dactylococcopsis fascicularis	6248
Dactylococcopsis raphidioides	454
Gloeothece linearis	114
Lyngbya limnetica	29990
Merismopedia tenuissima	5680
Oscillatoria angustissima	12496
Oscillatoria limnetica	15222
Oscillatoria subtilissima	568
Pseudanabaena catenata	2272
Synechococcus lineare	1250
Synechococcus sp.	454
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	114
Trachelomonas hispida	114
Trachelomonas volvocina	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	454
Cyclotella sp.	227
Melosira sp.	454
Order Pennales	
Nitzschia palea	227

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

Granger Lake DC (303947097231401)

Phytoplankton Analyses October 1986 to September 1987

Date	8-18-87
Time	1101
TOTAL CELLS/mL	140,903
NUMBER OF SPECIES	54
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	227
Carteria sp.	114
Chlamydomonas sp.	227
Chlorella sp.	341
Chlorococcum sp.	682
Chodatella subsalsa	114
Coelastrum sphaericum	795
Cosmarium sp.	57
Crucigenia apiculata	454
Dictyosphaerium pulchellum	682
Gloeocystis sp.	114
Kirchneriella lunaris	568
Nephrocytium sp.	795
Phacotus lenticularis	114
Scenedesmus armatus	227
Scenedesmus quadricauda	454
Scenedesmus serratus	682
Schroederia setigera	114
Staurastrum sp.	114
Tetraedron minimum	114
Treubaria triappendiculata	57
CHRYSOPHYTA (Golden-brown algae)	
Tetrastrum staurogeniaeforme	454
CYANOPHYTA (Blue-green algae)	
Anabaenopsis phillippinensis ?	6021
Aphanocapsa delicatissima	5226
Aphanocapsa elachista	9770
Aphanothece sp.	43054
Chroococcus dispersus	4090
Chroococcus pallidus	227
Chroococcus varius	454
Dactylococcopsis fascicularis	1022
Dactylococcopsis raphidioides	682
Lyngbya limnetica	21243
Merismopedia tenuissima	7952
Microcystis sp.	1818
Oscillatoria angustissima	13178
Oscillatoria geminata	682
Oscillatoria limnetica	7384
Oscillatoria subtilissima	114
Oscillatoria sp.	909
Pseudanabaena catenata	2499
Synechococcus lineare	1363
Synechococcus sp.	2840
Synechocystis sp.	341
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	227
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	568
Cyclotella sp.	114
Melosira granulata var. *angustissima*	227
Melosira sp.	682
Order Pennales	
Amphora perpusilla	7
Anomoeoneis vitrea	27
Nitzschia acicularis	227
Nitzschia palea	227
Synedra sp.	114

08105700 SAN GABRIEL RIVER AT LANEPORT, TX

LOCATION.--Lat 30°41'39", long 97°16'43", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of county bridge, 0.2 mi north of Laneport, 3.4 mi downstream from Willis Creek, 7.5 mi northwest of Thrall, and 26.2 mi upstream from mouth.

DRAINAGE AREA.--738 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: 1965(M), 1966(P), 1967(M), 1968, 1969(P), 1973(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 412.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by Granger Lake (station 08105600) since Jan. 21, 1980. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--14 years (water years 1966-79) unregulated, 289 ft³/s (209,400 acre-ft/yr); 8 years (water years 1980-87) regulated, 255 ft³/s (184,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s Oct. 31, 1974 (gage height, 30.80 ft); no flow Aug. 21 to Oct 6, and Oct. 13-15, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1910, occurred during September 1921, 39.6 ft; in April 1957, 34.6 ft; and in October 1959, 33.8 ft; from floodmarks at present site and datum. Discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft³/s June 24 at 1800 hours (gage height, 13.85 ft); minimum daily, 3.1 ft³/s Oct. 5.

LATITUDE 304139 LONGITUDE 0971643 DRAINAGE AREA 738.00 DATUM 412.60 STATE 48 COUNTY 491
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	1280	289	1880	281	8.0	287	58	7.1	2700	289	57
2	70	1280	289	1870	282	5.9	286	58	11	2660	285	55
3	34	856	288	1820	485	172	286	58	46	2630	285	55
4	3.5	286	287	1800	672	871	287	59	64	2610	281	55
5	3.1	282	288	1800	346	1130	288	59	25	2580	281	55
6	6.6	282	289	1780	49	1270	289	60	9.3	2550	281	55
7	4.4	282	290	1760	98	1260	288	61	483	2520	188	55
8	33	284	291	1760	99	1260	289	61	1330	2500	134	55
9	87	285	291	1760	129	1250	156	61	1470	2510	134	55
10	87	283	294	1760	162	1240	8.7	61	81	2490	134	55
11	90	282	295	1760	308	1140	7.4	61	115	2470	133	55
12	97	502	482	1750	441	969	7.0	61	73	2450	132	55
13	94	429	716	1740	440	726	28	62	34	2470	132	57
14	370	160	720	1720	440	271	59	78	24	2460	132	57
15	698	158	752	1720	439	271	201	99	21	2460	132	56
16	695	160	386	1640	435	271	338	102	19	2470	132	57
17	473	160	11	1450	290	274	338	100	19	2450	132	56
18	259	161	578	1440	152	640	337	176	40	2430	132	57
19	257	88	1330	1050	152	982	334	367	550	2420	97	56
20	156	3.8	1300	670	153	778	530	563	1740	2390	59	56
21	53	66	1300	669	153	274	724	759	1720	2370	58	56
22	53	289	971	476	154	275	509	570	1970	2360	58	56
23	107	290	69	278	210	284	327	365	2540	2340	58	55
24	63	289	22	279	278	283	200	369	2650	1840	58	56
25	56	291	12	276	555	284	59	364	2800	971	58	55
26	108	290	9.5	483	848	284	58	364	2700	965	57	56
27	631	290	605	680	455	285	59	364	2650	970	57	57
28	1310	289	1400	683	16	286	59	364	2610	651	57	74
29	1300	288	1690	688	---	284	59	313	2630	288	57	92
30	1290	289	1910	492	---	285	59	27	2750	287	59	93
31	1290	---	1900	279	---	286	---	14	---	289	57	---
TOTAL	9868.6	10174.8	19354.5	38213	8522	17898.9	6757.1	6138	31181.4	63551	4139	1764
MEAN	318	339	624	1233	304	577	225	198	1039	2050	134	58.8
MAX	1310	1280	1910	1880	848	1270	724	759	2800	2700	289	93
MIN	3.1	3.8	9.5	276	16	5.9	7.0	14	7.1	287	57	55
AC-FT	19570	20180	38390	75800	16900	35500	13400	12170	61850	126100	8210	3500

CAL YR 1986 TOTAL 111270.8 MEAN 305 MAX 2550 MIN .24 AC-FT 220700
WTR YR 1987 TOTAL 217562.2 MEAN 596 MAX 2800 MIN 3.1 AC-FT 431500

08105700 SAN GABRIEL RIVER AT LANEPORT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: July 1972 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1976 to March 1982.

INSTRUMENTATION.-- Water temperature was recorded continuously from December 1976 to March 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 37.5°C July 9, 1978; minimum daily, 1.5°C Jan. 28, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV												
06...	1410	281	328	7.80	17.0	7	19	10.3	107	1.3	140	20
DEC												
10...	1410	293	356	8.00	10.5	9	12	9.3	83	1.2	160	21
MAR												
04...	1425	996	442	8.00	16.0	12	20	11.6	117	1.6	200	28
MAY												
06...	1500	59	440	7.90	24.0	6	8.5	8.7	104	0.6	200	31
JUL												
07...	1355	2600	376	7.80	28.0	22	6.5	8.9	115	2.5	170	15
AUG												
31...	1145	60	390	7.70	26.0	6	21	6.3	79	1.4	170	22

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 WH WAT TOTAL 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											
06...	43	7.6	13	0.5	3.1	119	22	15	0.30	8.1	180
DEC											
10...	51	7.9	13	0.5	2.6	139	22	23	0.30	7.0	210
MAR											
04...	66	9.6	13	0.4	2.0	176	24	16	0.30	5.9	240
MAY											
06...	61	11	17	0.5	1.9	167	30	21	0.30	8.3	250
JUL											
07...	55	7.5	10	0.4	3.2	153	18	12	0.20	10	210
AUG											
31...	53	9.8	13	0.4	2.7	151	21	17	0.30	12	220

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV											
06...	20	6	0.490	0.010	0.500	0.010	0.69	0.70	0.040	3.8	5
DEC											
10...	21	10	0.780	0.020	0.800	0.060	3.0	3.1	0.040	5.4	--
MAR											
04...	46	5	1.95	0.050	2.00	0.030	1.1	1.1	0.020	2.8	--
MAY											
06...	15	6	1.95	0.050	2.00	0.040	0.56	0.60	0.030	2.7	--
JUL											
07...	19	17	0.080	0.020	0.100	0.080	0.52	0.60	0.040	5.9	7
AUG											
31...	50	5	0.680	0.020	0.700	0.030	--	<0.20	0.040	5.3	5

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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...	46	1	<10	1	<3	5	3	<0.1	<1	<1	4
DEC											
10...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	41	<1	30	1	<3	<5	16	<0.1	<1	<1	<3
AUG											
31...	62	<1	<10	<1	6	<5	4	<0.1	10	<1	17

08106310 SAN GABRIEL RIVER NEAR ROCKDALE, TX

LOCATION.--Lat 30°43'29", long 97°02'19", Milam County, Hydrologic Unit 12070204, on left bank at downstream side of Farm Road 486, 1.2 mi downstream from Brushy Creek, 4.3 mi upstream from mouth, and 5.3 mi north of Rockdale.

DRAINAGE AREA.--1,359 mi².

PERIOD OF RECORD.--October 1974 to current year. Prior to October 1980, gage-height record only (not published).

GAGE.--Water-stage recorder. Datum of gage is 311.59 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated discharges, which are fair. Flow is largely regulated by Granger Lake (station 08105600). Flow is affected at times by discharge from the flood-detention pools of 46 floodwater-retarding structures with a combined detention capacity of 46,140 acre-ft. These structures control runoff from 144 mi² in the Brushy Creek drainage basin. U.S. Army Corps of Engineers satellite telemeter at station. Several observations of water temperature were made during the year. Backwater from Little River occurs at times.

AVERAGE DISCHARGE.--7 years, 538 ft³/s (389,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 32.91 ft July 27, 1979 (discharge not determined, but may have been in backwater from Little River). Maximum discharge, 15,600 ft³/s June 14, 1981 (gage height, 32.11 ft); minimum daily 0.08 ft³/s July 13, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,800 ft³/s May 31 at 0600 hours (gage height, 31.02 ft; minimum daily, 1.2 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	1530	336	2490	449	1220	412	98	8200	3130	478	87
2	58	1510	328	2450	445	583	405	97	1900	3410	471	81
3	29	1390	318	2410	497	433	399	96	4860	3390	462	77
4	11	558	312	2380	934	919	394	95	6510	3220	443	74
5	1.8	716	308	2350	863	1360	391	148	7910	3160	403	71
6	1.2	550	309	2350	166	1560	394	131	4950	3110	381	68
7	7.5	429	309	2330	171	1510	405	112	1510	3060	365	69
8	16	407	313	2320	187	1490	404	112	2070	3030	238	67
9	48	391	329	2320	180	1490	379	105	4300	3060	225	113
10	70	374	448	2340	248	1470	150	100	5680	3090	220	82
11	73	351	1510	2310	281	1430	114	99	5970	3100	213	72
12	930	393	1260	2270	583	1230	105	144	6300	3000	209	74
13	2890	711	1130	2250	590	1180	106	184	6060	2960	205	72
14	1220	234	1180	2240	590	564	154	110	5670	2920	199	71
15	871	215	3500	2230	600	496	181	133	2880	2900	195	70
16	775	210	4210	2210	621	484	402	162	1200	2870	193	74
17	685	209	1470	2030	564	697	403	592	1010	2860	190	79
18	306	206	2400	2330	256	977	399	304	1890	3640	188	87
19	286	199	4750	2030	240	1330	395	395	1710	3290	185	346
20	266	86	2740	1170	288	1230	427	1170	2270	2890	103	344
21	88	55	1990	1070	476	604	745	1020	2290	2790	87	170
22	267	216	3300	994	382	496	700	784	2250	2740	83	126
23	2520	303	8340	544	317	479	390	440	2900	2780	82	105
24	5000	309	7900	514	588	493	372	477	3000	2690	79	94
25	2630	1280	2880	499	1210	470	144	496	3250	1530	77	87
26	996	1030	1380	541	2780	448	119	435	3160	1340	75	81
27	817	512	1020	979	3840	440	113	437	3220	1310	73	78
28	1700	404	2070	986	1910	432	109	416	3200	1230	72	84
29	1650	367	2180	989	---	421	105	1830	3110	e574	72	181
30	1590	349	2560	945	---	417	102	6590	3220	e438	83	137
31	1560	---	2530	471	---	416	---	10300	---	434	119	---
TOTAL	27421.5	15494	63610	53342	20256	26769	9318	27612	112450	79946	6468	3221
MEAN	885	516	2052	1721	723	864	311	891	3748	2579	209	107
MAX	5000	1530	8340	2490	3840	1560	745	10300	8200	3640	478	346
MIN	1.2	55	308	471	166	416	102	95	1010	434	72	67
AC-FT	54390	30730	126200	105800	40180	53100	18480	54770	223000	158600	12830	6390

CAL YR 1986 TOTAL 227685.9 MEAN 624 MAX 8340 MIN .12 AC-FT 451600
WTR YR 1987 TOTAL 445907.4 MEAN 1222 MAX 10300 MIN .12 AC-FT 884500

e Estimated.

08106350 LITTLE RIVER NEAR ROCKDALE, TX

LOCATION.--Lat 30°45'38", long 97°00'49", Milam County, Hydrologic Unit 12070204, on right bank downstream from Alcoa pumping station, 200 ft downstream from mouth of San Gabriel River, and 6.8 mi north of Rockdale.

DRAINAGE AREA.--6,959 mi².

PERIOD OF RECORD.--February 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 299.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Daily discharges are not published above 1,000 ft³/s. There are numerous diversions for irrigation and municipal supply above station. For statement regarding regulations by the Soil Conservation Service floodwater-retarding structures, see station No. 08106310. The Aluminum Co. of America diverts water from Little River to their plant reservoir. Satellite telemetry at station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 35.67 ft June 15, 1981 (maximum discharge not determined); minimum daily, 13 ft³/s May 9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 34.13 ft Dec. 23 (maximum discharge not determined); minimum daily discharge, 273 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	681	---	---	---	---	---	---	564	---	---	---	441
2	576	---	---	---	---	---	---	505	---	---	---	376
3	509	---	---	---	---	---	---	506	---	---	---	347
4	467	---	---	---	---	---	---	512	---	---	---	329
5	454	---	---	---	---	---	---	559	---	---	---	319
6	578	---	---	---	---	---	---	543	---	---	---	311
7	---	---	---	---	---	---	---	510	---	---	---	307
8	---	---	---	---	---	---	---	506	---	---	---	309
9	---	---	---	---	---	---	---	499	---	---	---	384
10	---	---	---	---	---	---	---	564	---	---	---	328
11	---	---	---	---	---	---	---	483	---	---	---	273
12	---	---	---	---	---	---	---	---	---	---	---	276
13	---	---	---	---	---	---	---	---	---	---	---	279
14	---	---	---	---	---	---	---	893	---	---	---	318
15	---	---	---	---	---	---	---	676	---	---	---	273
16	---	---	---	---	---	---	---	555	---	---	---	275
17	---	---	---	---	---	---	---	---	---	---	---	312
18	---	---	---	---	---	---	---	---	---	---	---	440
19	---	---	---	---	---	---	---	825	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	451
22	---	---	---	---	---	---	---	---	---	---	---	338
23	---	---	---	---	---	---	---	---	---	---	952	338
24	---	---	---	---	---	---	927	---	---	---	901	691
25	---	---	---	---	---	---	704	---	---	---	891	732
26	---	---	---	---	---	---	638	---	---	---	832	732
27	---	---	---	---	---	---	618	---	---	---	549	742
28	---	---	---	---	---	---	601	---	---	---	344	743
29	---	---	---	---	---	---	588	---	---	---	303	818
30	---	---	---	---	---	---	577	---	---	---	311	764
31	---	---	---	---	---	---	---	---	---	---	352	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1986 TOTAL -- MEAN -- MAX -- AC-FT --
WTR YR 1987 TOTAL -- MEAN -- MAX -- AC-FT --

08106500 LITTLE RIVER AT CAMERON, TX

LOCATION.--Lat 30°49'53", long 96°57'01", Milam County, Hydrologic Unit 12070204, on right bank at site of old McCowan Bridge, 2,020 ft upstream from bridge on U.S. Highway 77, 1.1 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2 mi southeast of Cameron, and 33.6 mi upstream from mouth.

DRAINAGE AREA.--7,065 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1916 to current year.

REVISED RECORDS.--WSP 718: 1918-20, 1922. WSP 1512: 1918-20(M), 1921, 1922(M), 1924(M), 1926, 1929-30, 1934, 1935(M), 1936, 1940(M), 1941, 1944-45(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 281.89 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nov. 2, 1916, to Sept. 30, 1922, nonrecording gage at site 1.8 mi upstream at different datum. Oct. 1, 1922, to Apr. 8, 1926, nonrecording gage at McCowan Bridge 30 ft downstream at same datum. Apr. 9, 1926, to Oct. 9, 1933, nonrecording gage at bridge on U.S. Highway 77, 2,020 ft downstream at 1.58 ft lower datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Many small diversions for irrigation and municipal supply affect low flows. Since 1954, at least 10 percent of the drainage area has been regulated by upstream reservoirs. There is some regulation by Belton Lake (station 08102000) on Leon River beginning Mar. 8, 1954, and by Stillhouse Hollow Lake (station 08104050) on the Lampasas River beginning Sept. 2, 1966. The Aluminum Co. of America diverts water 10.9 mi upstream from the gage for use at their Rockdale plant. The city of Cameron diverts water 2.1 mi upstream from the gage. Treated effluent is returned to the river upstream from gage. Flow is affected at times by discharge from the flood-detention pools of 65 floodwater-retarding structures with a combined detention capacity of 68,500 acre-ft. These structures control runoff from 209 mi² in the Nolan, Donahoe, and Brushy Creeks drainage basins. Satellite telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1918-53) unregulated, 1,807 ft³/s (1,309,000 acre-ft/yr); 34 years (water years 1954-87) regulated, 1,600 ft³/s (1,159,00 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 647,000 ft³/s Sept. 10, 1921 (gage height, 53.2 ft, present datum, from floodmark), from rating curve extended above 110,000 ft³/s on basis of slope-area measurement of 647,000 ft³/s; no flow July 12-27, 1956.
Maximum stage since 1852, that of Sept. 10, 1921.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1852 reached about the same stage as that of Sept. 10, 1921. Flood in December 1913 reached a stage of 49.0 ft. Stages based on information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,400 ft³/s Dec. 24 at 1100 hours (gage height, 32.88 ft); minimum daily, 293 ft³/s Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	728	3700	1780	e6170	3320	e5380	3180	572	12700	7180	5010	432
2	586	3450	1730	e6100	3300	e3780	3160	496	4410	8340	5100	405
3	517	3410	1710	e6030	3300	e2060	3140	494	6320	8750	5070	372
4	466	2800	1700	e5970	3590	e2030	3130	498	9000	8570	4940	356
5	441	3090	1680	e5880	3770	4800	3130	529	10600	8540	4300	345
6	567	3000	1670	5830	3520	5300	3170	552	8680	8480	3710	336
7	741	2660	1610	5810	3180	5350	3260	508	2930	8420	3600	329
8	1150	2610	1420	5760	2530	5330	3180	498	2730	8390	2920	329
9	909	2580	1460	5760	2440	5050	3140	486	6840	8400	2840	375
10	979	2530	1590	5800	2490	4450	2900	549	10800	8490	2880	371
11	971	2460	3070	5760	2410	4410	2640	484	10100	8520	2860	301
12	1470	2440	3240	5650	2400	4280	2320	492	10400	8400	2830	295
13	5010	2760	2540	5610	2420	4220	2340	1040	14200	8330	2820	313
14	3320	2410	2400	5600	2280	3730	2510	971	12400	8280	2780	334
15	2080	2090	6410	5570	1820	3440	2240	703	7570	8230	2750	304
16	2780	1280	9870	5540	1820	3400	2240	554	2690	8200	2730	293
17	2760	1210	4470	5390	1770	3930	1970	924	1950	8190	2730	320
18	2250	1180	3920	5240	1450	5290	1680	1010	2950	8850	2730	433
19	1620	1270	8440	4870	1190	4880	1450	822	3490	8990	2720	553
20	1240	1650	6640	3740	1150	4530	1410	1380	3230	8320	2670	1000
21	1050	1610	4340	3490	1570	3860	1630	1590	4880	8140	2230	490
22	995	1720	5590	3620	1410	3530	1440	1280	4910	8080	1050	366
23	3600	1740	14800	3310	1180	3500	1060	1510	5660	8070	935	335
24	10300	1190	20200	3430	1440	3510	980	1510	6580	8040	880	595
25	8530	3010	9920	3430	3390	3500	785	1680	6900	6950	853	687
26	2600	3140	3280	3400	4530	3400	652	1710	6960	6370	828	689
27	1490	1880	2430	3700	7860	3350	623	1680	7220	6300	571	691
28	2160	1440	e3380	3750	e5110	3320	604	1890	8120	6270	397	690
29	3750	1420	e5140	3750	---	3250	590	2990	8110	5290	335	736
30	3860	1800	e5980	3730	---	3210	577	8720	7870	2900	335	707
31	3820	---	e6220	3400	---	3190	---	11800	---	3790	368	---
TOTAL	72740	67530	148630	151090	76640	123260	61131	49922	211200	238070	76772	13782
MEAN	2346	2251	4795	4874	2737	3976	2038	1610	7040	7680	2477	459
MAX	10300	3700	20200	6170	7860	5380	3260	11800	14200	8990	5100	1000
MIN	441	1180	1420	3310	1150	2030	577	484	1950	2900	335	293
AC-FT	144300	133900	294800	299700	152000	244500	121300	99020	418900	472200	152300	27340

CAL YR 1986 TOTAL 834944 MEAN 2288 MAX 20200 MIN 135 AC-FT 1656000
WTR YR 1987 TOTAL 1290770 MEAN 3536 MAX 20200 MIN 293 AC-FT 2560000

e Estimated.

08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1959 to September 1974. Chemical and biochemical analyses: January 1968 to current year. Sediment analyses: February 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1959 to current year.
WATER TEMPERATURES: October 1959 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, 1,280 microsiemens Sept. 25, 26, 1963; minimum daily, 154 microsiemens Sept. 13, 1974.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 6, 1964, Aug. 1, 1969; minimum daily, 0.0°C Dec. 25, 26, 29, 30, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 714 microsiemens Sept. 1; minimum daily, 255 microsiemens Dec. 24.
WATER TEMPERATURE: Maximum daily, 28.0°C Oct. 4; minimum daily, 8.0°C Jan. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)
NOV 04...	1240	2660	426	7.50	21.0	310	8.2	94	1.5	K1800	K1300
FEB 03...	1415	3250	520	7.50	12.0	36	9.8	92	0.5	500	1100
MAR 24...	1405	3360	494	7.50	15.5	50	9.1	93	0.7	K60	K40
MAY 13...	1315	1050	701	7.70	23.5	94	7.5	89	1.2	580	540
JUN 30...	1507	8160	447	7.50	22.5	86	7.9	92	1.6	100	1100
AUG 18...	1500	2740	465	7.60	27.0	55	6.7	85	0.9	110	1000

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 04...	170	25	50	10	21	0.7	3.7	142	22	35	0.30
FEB 03...	220	29	63	14	24	0.7	2.9	187	27	36	0.30
MAR 24...	210	26	64	11	23	0.7	3.0	179	32	37	0.30
MAY 13...	260	39	76	16	44	1	2.9	218	53	59	0.10
JUN 30...	190	27	58	10	18	0.6	3.3	160	24	24	0.30
AUG 18...	180	33	54	11	22	0.7	4.3	148	28	33	0.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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 04...	8.0	249	240	--	--	<0.010	<0.010	0.600	0.650	<0.010
FEB 03...	7.6	294	290	0.880	0.860	0.020	0.010	0.900	0.870	0.060
MAR 24...	7.3	309	290	0.870	0.900	0.030	0.020	0.900	0.920	0.080
MAY 13...	8.6	405	390	1.87	1.88	0.030	0.020	1.90	1.90	0.030
JUN 30...	9.9	253	240	0.380	--	0.020	<0.010	0.400	0.420	0.050
AUG 18...	10	259	250	0.360	0.420	0.040	0.020	0.400	0.440	0.040

08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 04...	<0.010	--	0.90	0.150	0.090	0.080	0.25	527	3780	91
FEB 03...	0.040	0.64	0.70	0.100	0.060	0.050	0.15	172	1510	75
MAR 24...	0.030	0.42	0.50	0.070	0.040	0.040	0.12	210	1910	76
MAY 13...	0.040	1.4	1.4	0.500	0.300	0.280	0.86	342	970	93
JUN 30...	0.060	0.75	0.80	0.030	0.040	0.010	0.03	368	8110	80
AUG 18...	0.020	0.66	0.70	0.130	0.110	0.060	0.18	248	1830	95

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	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 04...	30	3	59	<0.5	<1	<1	<3	2	22	<5
FEB 03...	<10	1	56	<0.5	<1	<1	<3	2	27	<5
MAR 24...	--	--	--	--	--	--	--	--	--	--
MAY 13...	10	3	74	<0.5	<1	<1	<3	<1	6	53
JUN 30...	10	3	48	<0.5	<1	<1	<3	15	5	<5
AUG 18...	20	4	72	<0.5	<1	<1	<3	1	12	<5

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 04...	10	<1	<0.1	<10	7	<1	<1	560	<6	9
FEB 03...	13	3	<0.1	<10	1	<1	<1	860	<6	38
MAR 24...	--	--	--	--	--	--	--	--	--	--
MAY 13...	21	2	0.1	<10	1	<1	<1	950	<6	9
JUN 30...	<4	2	0.5	<10	<1	<1	<1	580	<6	10
AUG 18...	<4	3	0.1	<10	<1	<1	<1	430	<6	170

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	72740	366	199	39100	25	4820	22	4320	150
NOV.	1986	67530	435	238	43400	30	5410	28	5050	170
DEC.	1986	148630	394	215	86200	27	10700	24	9800	150
JAN.	1987	151090	468	257	105000	32	13200	31	12500	180
FEB.	1987	76640	513	283	58600	36	7420	35	7250	200
MAR.	1987	123260	494	272	90600	34	11400	33	11000	190
APR.	1987	61131	523	289	47700	37	6050	36	5940	200
MAY	1987	49922	439	241	32500	30	4090	29	3910	170
JUNE	1987	211200	380	207	118000	26	14600	23	13200	150
JULY	1987	238070	456	250	161000	31	20100	30	19000	180
AUG.	1987	76772	461	253	52400	32	6570	30	6220	180
SEPT	1987	13782	582	323	12000	41	1540	42	1570	220
TOTAL		1290767	**	**	846000	**	106000	**	99800	**
WTD.AVG.		3536	443	243	**	30	**	29	**	170

08106500 LITTLE RIVER AT CAMERON, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	346	408	454	454	510	490	497	600	277	464	458	714
2	370	413	454	454	512	476	499	603	387	486	460	650
3	426	410	455	452	514	572	499	608	298	495	458	641
4	428	430	455	452	510	635	498	635	351	458	459	653
5	418	423	454	448	509	483	500	643	330	454	457	688
6	400	437	454	447	475	479	499	700	308	456	453	643
7	368	434	455	447	485	481	501	655	400	458	451	645
8	340	437	466	447	515	478	505	637	480	456	449	650
9	351	442	489	451	504	477	500	634	428	460	449	650
10	377	444	500	452	510	490	496	634	359	462	450	702
11	429	443	492	457	500	488	501	634	380	459	449	644
12	418	445	480	450	503	495	535	649	352	460	450	647
13	319	433	469	448	493	502	535	595	360	458	453	640
14	326	442	468	447	494	489	530	577	302	454	450	662
15	397	452	403	457	519	497	538	584	352	452	448	614
16	402	473	367	454	536	499	583	599	460	449	446	614
17	398	502	388	458	536	498	536	589	509	445	444	608
18	406	502	449	467	526	484	545	506	545	438	446	605
19	426	500	368	512	550	482	547	590	396	439	446	585
20	438	477	404	496	587	483	562	532	416	441	444	482
21	435	463	456	500	658	490	535	467	430	439	448	494
22	449	470	452	501	650	498	528	480	427	441	500	427
23	375	462	308	505	623	500	566	553	414	441	544	496
24	278	476	255	510	602	500	572	506	419	443	548	536
25	293	351	350	509	560	506	576	483	415	453	543	541
26	402	330	479	509	519	500	611	513	414	454	540	537
27	432	416	534	501	447	500	612	501	432	455	550	539
28	402	469	501	500	487	501	611	501	447	455	579	541
29	465	490	457	499	---	501	606	470	446	456	620	539
30	414	477	447	500	---	500	602	333	449	496	644	549
31	414	---	454	505	---	502	---	258	---	524	654	---
MEAN	392	445	439	474	530	499	541	557	399	458	490	598

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

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

08109000 BRAZOS RIVER NEAR BRYAN, TX

LOCATION (REVISED).--Lat 30°36'50", long 96°29'11", Brazos-Burleson County line, Hydrologic Unit 12070101, on left bank 2.4 mi downstream from Little Brazos River, 5 mi downstream from Texas and New Orleans Railroad Co. bridge, 9 mi southwest of Bryan, and at mile 281.1.

DRAINAGE AREA.--39,515 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--August 1899 to December 1902, February 1918 to January 1926, June 1926 to current year. Monthly figures only for some periods, published in WSP 1312. Prior to September 1925, published as "near College Station".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 192.33 ft above National Geodetic Vertical Datum of 1929. Aug. 1, 1899, to Dec. 31, 1902, and Feb. 23, 1918, to Sept. 17, 1925, nonrecording gage at site 7.5 mi downstream at different datum. Sept. 11, 1925, to Oct. 24, 1932, nonrecording gage at site 3,000 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Flow is partly regulated by four upstream reservoirs with a combined capacity of 4,447,600 acre-ft, of which 3,200,800 acre-ft is for flood control. Many small diversions above station for irrigation, municipal, industrial, and oilfield operation. Flow is affected at times by discharge from the flood-detention pools of 145 floodwater-retarding structures with a combined detention capacity of 152,800 acre-ft. These structures control runoff from 450 mi². Since 1941, at least 10 percent of drainage area is regulated by upstream reservoirs. Several observations of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--24 years (water years 1900-1902, 1919-25, 1927-40) unregulated, 5,652 ft³/s (4,095,000 acre-ft/yr); 47 years (water years 1941-87) regulated, 4,890 ft³/s (3,543,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 54 ft Sept. 12, 1921, present site and datum (discharge not determined); minimum daily, 89 ft³/s Aug. 24, 1934.
Maximum stage since at least 1854, that of Sept. 12, 1921.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 5, 1913, reached a stage of 51 ft, present site and datum, from information by Texas and New Orleans Railroad Co. at their bridge 5 mi upstream and from comparison of maximum stages reached by floods in 1913 and 1921 at gage near College Station. Flood in 1854 reached about the same stage as flood of Dec. 5, 1913.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,400 ft³/s June 14 at 1700 hours (gage height, 29.61 ft); minimum daily, 1,070 ft³/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	8130	4110	11600	7070	19900	6030	3200	24300	16000	5220	1540
2	1530	7820	4000	11300	6960	16300	5990	3140	23000	13200	6050	1540
3	1350	6820	3890	11100	6760	10500	5950	2090	18900	11100	6900	1460
4	1740	6690	4060	10800	6530	8230	5900	1820	30000	15000	6290	1340
5	1710	6590	4520	10100	6710	13200	5910	2420	36600	14300	5970	1640
6	1920	7450	4520	9530	6800	20500	6000	3940	36200	13900	5100	1530
7	2640	6610	4490	8990	6520	20400	6100	4480	31600	13600	5210	1280
8	4260	5730	4230	8820	6170	20200	6340	2240	25800	13600	4670	1220
9	5180	5620	3560	9200	5580	21100	7620	1650	27600	12500	4270	1210
10	6030	5490	4240	9180	5500	20800	9430	1470	32100	12100	3720	1610
11	9720	5360	6810	9370	5340	16800	9390	2700	34400	11900	3740	2340
12	11900	5270	8820	9150	4360	12300	9640	2400	37400	11200	4770	1560
13	16300	5210	6280	8810	3850	11400	10800	2100	45500	11500	4210	1380
14	20000	5460	5580	8540	4980	11300	11100	2650	58800	10600	4010	1330
15	15200	4940	10100	7950	5340	10200	11300	2700	53400	10500	3680	1320
16	14600	4410	22800	7050	4770	8590	9580	2460	34100	11000	3410	1310
17	15300	3690	21100	6560	4760	10100	7480	2460	20600	10000	3380	1140
18	15100	3290	13000	6370	4620	16000	7100	2690	14200	10000	3890	1070
19	12400	3120	18800	6430	4280	15100	6710	2840	15100	10800	4060	1220
20	7560	3300	19300	8180	4310	12500	5640	2530	17200	10600	3950	1530
21	6550	3660	13700	6060	4900	11000	5510	3450	22700	9850	3950	2240
22	6250	3800	11500	5030	6170	9010	5280	3540	25800	9640	3470	2920
23	6630	3790	28800	6050	5820	7780	4310	3150	25800	9540	2280	1580
24	19600	3470	41200	6990	6410	7540	3940	3300	27500	9520	2120	1090
25	22500	9280	40500	6980	7460	7430	3780	3320	29800	9230	2070	1160
26	13900	12600	25600	7200	11600	7150	3580	3550	30200	7790	2030	1530
27	6300	10900	13700	6780	16400	6550	3420	3420	26700	7890	2010	1600
28	4890	9670	9780	7030	17000	6270	3370	3360	20200	7690	1830	1750
29	5640	7310	9710	5770	---	6210	3320	8020	19200	7530	1670	1650
30	7890	4760	11400	6350	---	6160	3250	14100	18300	5930	1490	1420
31	8270	---	11900	7430	---	6080	---	19700	---	4450	1240	---
TOTAL	275300	180240	392000	250700	186970	376600	193770	120890	863000	332460	116660	45510
MEAN	8881	6008	12650	8087	6677	12150	6459	3900	28770	10720	3763	1517
MAX	22500	12600	41200	11600	17000	21100	11300	19700	58800	16000	6900	2920
MIN	1350	3120	3560	5030	3850	6080	3250	1470	14200	4450	1240	1070
AC-FT	546100	357500	777500	497300	370900	747000	384300	239800	1712000	659400	231400	90270

CAL YR 1986 TOTAL 2264420 MEAN 6204 MAX 60100 MIN 756 AC-FT 4491000
WTR YR 1987 TOTAL 3334100 MEAN 9135 MAX 58800 MIN 1070 AC-FT 6613000

08109700 MIDDLE YEGUA CREEK NEAR DIME BOX, TX

LOCATION.--Lat 30°20'21", long 96°54'16", Lee County, Hydrologic Unit 12070102, on right bank 25 ft upstream from centerline of State Highway 21, 4.5 mi upstream from West Yegua Creek, 5.0 mi southwest of Dime Box, and 17.5 mi upstream from mouth.

DRAINAGE AREA.--236 mi².

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 295.4 ft above State Department of Highways and Public Transportation datum. June 30 to July 21, 1970, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good. Several observations of water temperature were made during the year. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--25 years, 55.1 ft³/s (3.17 in/yr) 39,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s May 24, 1975 (gage height, 15.16 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1851, 16 ft in December 1913, from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	0900	601	9.38	June 4	0700	4,260	12.82
Dec. 24	0800	3,580	12.43	June 12	0700	2,580	11.76
Mar. 1	0400	1,310	10.59	June 14	1400	*5,140	*13.26
June 1	1600	2,620	11 79				

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	11	35	43	28	1180	8.3	4.0	1410	18	4.6	.0
2	.46	8.3	27	39	28	774	8.0	4.0	1910	18	3.1	.0
3	.30	7.7	20	37	30	458	7.1	4.2	2030	17	1.5	.0
4	.21	9.1	17	34	30	163	6.7	4.2	3450	15	1.5	.0
5	.12	16	17	31	30	77	6.7	4.1	2170	14	2.9	.0
6	.16	21	15	31	29	57	8.4	20	1570	13	4.7	.0
7	.15	21	14	30	27	46	9.6	72	1060	13	5.0	.0
8	.14	22	13	30	27	40	9.8	25	715	12	4.4	.0
9	.13	23	13	31	27	37	9.2	13	510	12	3.3	.0
10	.10	24	15	34	26	34	9.0	8.7	855	12	2.3	.0
11	.10	22	20	34	26	36	9.0	7.2	2100	10	1.5	.0
12	3.0	19	24	33	25	39	7.8	6.2	2310	9.3	1.1	.0
13	7.9	17	32	30	24	40	7.4	6.6	2110	9.1	.61	.0
14	50	17	43	30	25	38	7.4	7.0	3960	8.3	.24	.0
15	93	17	237	30	26	35	8.5	7.9	2330	8.2	.10	.0
16	42	16	288	30	26	31	10	18	1260	8.4	.06	.0
17	21	16	243	36	25	99	9.0	123	796	7.2	.04	.0
18	14	17	307	60	24	162	7.9	112	477	5.7	.03	.0
19	10	22	359	79	23	229	7.1	47	144	5.8	.01	.0
20	7.2	23	281	73	41	271	6.6	77	103	6.6	.01	26
21	5.7	27	215	54	77	222	6.0	131	61	6.0	.01	44
22	8.9	28	412	42	134	56	5.5	125	40	5.5	.01	17
23	60	28	957	35	87	30	5.1	54	32	6.2	.0	7.9
24	134	43	2690	32	84	23	4.5	27	27	6.5	.0	3.4
25	174	424	1700	30	131	18	4.0	20	24	6.3	.0	2.1
26	233	526	1060	28	400	15	3.9	16	22	6.1	.0	.99
27	193	316	687	27	500	13	3.5	14	19	6.2	.0	.59
28	58	254	327	27	626	12	4.1	13	18	6.5	.0	.73
29	28	174	99	28	---	9.9	3.7	93	17	5.3	.0	.60
30	19	65	65	27	---	9.5	3.9	262	17	4.2	.0	12
31	14	---	51	27	---	8.9	---	268	---	4.5	.0	---
TOTAL	1178.36	2234.1	10283	1132	2586	4263.3	207.7	1594.1	31547	285.9	37.02	115.31
MEAN	38.0	74.5	332	36.5	92.4	138	6.92	51.4	1052	9.22	1.19	3.84
MAX	233	526	2690	79	626	1180	10	268	3960	18	5.0	44
MIN	.10	7.7	13	27	23	8.9	3.5	4.0	17	4.2	.00	.00
AC-FT	2340	4430	20400	2250	5130	8460	412	3160	62570	567	73	229
CFSM	.16	.32	1.41	.15	.39	.58	.0	.22	4.46	.0	.0	.0
IN.	.19	.35	1.62	.18	.41	.67	.0	.25	4.97	.0	.0	.0

CAL YR 1986 TOTAL 26391.21 MEAN 72.3 MAX 2690 MIN .00 AC-FT 52350 CFSM .31 IN. 4.16
WTR YR 1987 TOTAL 554463.58 MEAN 152 MAX 3960 MIN .00 AC-FT 110000 CFSM .64 IN. 8.74

08109800 EAST YEGUA CREEK NEAR DIME BOX, TX

LOCATION.--Lat 30°24'26", long 96°49'02", Burleson County, Hydrologic Unit 12070102, on left bank 49 ft upstream from centerline of State Highway 21, 0.8 mi downstream from Buffalo Creek, 3.5 mi north of Dime Box, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--244 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 284.00 ft State Department of Highways and Public Transportation datum. Nov. 6 to Dec. 10, 1970, nonrecording gage at present site and datum.

REMARKS.-- Records good, except for estimated daily discharges which are fair. Diversions above station for irrigation. Gage-height telemeter at station.

AVERAGE DISCHARGE.--25 years, 60.8 ft³/s (44,050 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s May 24, 1975 (gage height, 13.91 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1886, 17 ft in 1899 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)
Nov. 25	2200	1,100	9.40	June 3	0200	*3,860	*11.35
Nov. 27	0500	1,460	9.80	June 4	0700	2,990	10.92
Dec. 24	0600	3,710	11.28	June 10	1600	1,860	10.17
Feb. 28	1100	1,410	9.75	June 15	0100	1,540	9.88
June 1	1700	2,140	10.38				

Minimum daily discharge, 0.06 ft³/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	7.6	25	35	22	764	21	6.9	1900	17	5.3	.23
2	.79	6.9	20	31	23	270	21	4.8	2080	17	5.6	.22
3	e.50	5.8	17	29	23	82	21	4.4	2920	19	5.1	.14
4	e.30	6.1	15	27	22	52	19	4.2	2690	17	4.4	.11
5	e.18	8.6	13	25	22	43	19	4.0	2140	15	3.8	.09
6	e.20	16	13	25	22	36	23	8.6	1470	14	3.8	.09
7	e.22	11	13	25	19	32	26	70	787	13	4.5	.24
8	e.19	8.6	13	26	19	30	25	28	305	12	5.0	.39
9	e.17	7.7	15	30	19	27	21	16	585	13	4.9	.23
10	e.60	8.2	17	34	18	26	20	12	1630	13	4.8	.09
11	e1.5	7.1	24	35	16	32	19	11	1470	14	4.8	.17
12	e4.0	6.0	40	31	17	39	18	10	1110	13	4.2	.17
13	e15	5.4	31	29	17	38	17	8.8	1250	11	3.7	.27
14	e30	4.6	48	27	18	32	26	8.7	1380	9.6	3.2	.18
15	e78	5.0	253	26	22	29	34	8.1	1410	8.8	2.9	.17
16	e40	7.6	387	29	25	29	25	9.4	721	9.3	2.4	.51
17	e23	8.3	736	34	24	212	21	15	204	8.4	1.8	1.0
18	e10	8.5	427	63	20	291	19	27	70	8.7	1.6	.52
19	e5.5	7.7	176	69	18	329	16	18	42	8.7	1.4	.67
20	e4.0	6.9	253	50	44	128	15	37	32	9.3	1.1	.60
21	e3.5	6.3	272	38	122	51	14	61	27	9.5	1.0	.51
22	e15	6.5	480	33	147	40	14	50	24	8.7	1.0	.40
23	e65	6.7	2070	30	55	37	15	32	21	7.8	1.1	.35
24	120	7.8	3150	28	60	34	14	32	19	7.0	.96	.60
25	48	776	1710	25	131	30	14	45	18	8.9	.68	1.3
26	22	1140	800	23	607	30	14	27	17	14	.61	2.2
27	14	1380	192	22	1120	29	13	25	17	11	.31	1.6
28	11	670	70	20	1340	27	13	20	16	9.1	.09	25
29	8.6	98	51	19	---	25	10	257	15	7.5	.06	47
30	7.1	35	43	19	---	23	8.9	394	15	6.7	.08	9.6
31	6.7	---	37	20	---	22	---	1240	---	5.8	.34	---
TOTAL	536.05	4279.9	11411	957	4012	2869	555.9	2494.9	24385	346.8	80.53	94.65
MEAN	17.3	143	368	30.9	143	92.5	18.5	80.5	813	11.2	2.60	3.15
MAX	120	1380	3150	69	1340	764	34	1240	2920	19	5.6	47
MIN	.17	4.6	13	19	16	22	8.9	4.0	15	5.8	.06	.09
AC-FT	1060	8490	22630	1900	7960	5690	1100	4950	48370	688	160	188

CAL YR 1986 TOTAL 38538.32 MEAN 106 MAX 3180 MIN .00 AC-FT 76440
WTR YR 1987 TOTAL 52022.44 MEAN 143 MAX 3150 MIN .06 AC-FT 103200

e Estimated.

08109800 EAST YEGUA CREEK NEAR DIME BOX, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: November 1980 to August 1987. Sediment analyses: June 1966 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 07...	1140	14	1270	7.20	18.0	25	17	8.4	89	1.3	480	420
DEC 10...	1020	15	1240	7.20	10.0	11	14	8.3	73	1.3	460	410
MAR 05...	1130	44	1100	7.20	16.0	55	22	9.4	94	1.7	360	290
MAY 06...	1055	5.8	1620	7.30	22.0	25	12	5.9	68	1.5	610	540
JUL 07...	1025	16	1150	7.50	28.0	28	20	6.0	77	1.1	370	300
AUG 31...	0900	0.40	1230	7.20	24.0	6	1.2	3.7	44	1.1	430	350

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 WH WAT TOTAL 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 07...	130	37	77	2	8.4	57	410	130	0.50	14	840
DEC 10...	130	34	87	2	8.2	57	370	160	0.30	20	840
MAR 05...	93	30	78	2	7.0	62	280	140	0.40	17	680
MAY 06...	160	51	120	2	7.6	69	530	190	0.30	15	1100
JUL 07...	96	32	85	2	7.3	72	290	150	0.60	18	720
AUG 31...	110	38	85	2	8.1	79	330	130	0.50	11	760

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV 07...	26	8	--	<0.010	<0.100	0.050	0.65	0.70	0.040	7.1	<1
DEC 10...	25	4	0.190	0.010	0.200	0.090	0.71	0.80	0.050	7.9	--
MAR 05...	39	4	0.090	0.010	0.100	0.080	0.22	0.30	0.080	8.3	--
MAY 06...	34	16	0.090	0.010	0.100	0.150	0.85	1.0	0.070	7.1	--
JUL 07...	37	18	0.290	0.010	0.300	0.090	0.41	0.50	0.050	8.0	<1
AUG 31...	1	<1	--	<0.010	<0.100	0.060	--	<0.20	0.040	6.7	<1

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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...	83	<1	<10	1	15	<5	290	<0.1	1	<1	7
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	--	--	--	--	--	--
JUL 07...	82	<1	<10	1	17	<5	100	<0.1	<1	<1	9
AUG 31...	83	<1	10	<1	10	<5	210	<0.1	18	<1	<3

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX

LOCATION.--Lat 30°19'20", long 96°31'32", Burleson County, Hydrologic Unit 12070102, in intake structure of Somerville Dam on Yegua Creek, at the southwest edge of the city limits of Somerville, and 20.0 mi upstream from mouth.

DRAINAGE AREA.--1,007 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1966 to current year. Prior to October 1970, published as Somerville 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 20,210 ft long, with a 4,715-foot-long dike and a 1,250-foot long uncontrolled spillway. Deliberate impoundment began Jan. 3, 1967, and the dam was completed Oct. 27, 1967. The spillway is an uncontrolled ogee weir 1,250 ft wide located near right end of dam. The low-flow outlet consists of one 10.0-foot-diameter conduit that is controlled by two 5.0- by 10.0-foot tractor-type gates. Capacity table is based on Geological Survey topographic maps dated 1959. The lake was designed for flood control and water conservation 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	280.0	-
Design flood	274.5	1,028,800
Crest of spillway	258.0	507,500
Top of conservation pool	238.0	160,100
Lowest gated outlet (invert of 10-foot conduit)	206.0	200

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 311,000 acre-ft June 9, 1979 (elevation, 248.55 ft); minimum, 88,800 acre-ft Oct. 5, 1984 (elevation, 230.70 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350,700 acre-ft June 19 at 1400 hours (elevation, 250.74 ft); minimum, 152,800 acre-ft Sept. 30 at 1600 hours (elevation, 237.35 ft).

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

237.0	148,900	243.0	223,900	249.0	318,900
240.0	184,000	246.0	268,800	251.0	355,600

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159700	162200	174500	256000	204700	206100	163700	158900	175900	312600	213500	159400
2	159400	161700	172900	254500	201900	209700	162200	158600	189200	308600	211700	159300
3	159200	161400	172200	253300	199700	211500	161500	158600	222200	305200	209800	159100
4	159100	161800	169800	251600	197200	210600	161000	158500	249600	301300	207900	158900
5	159000	161300	168200	250600	195100	208700	161000	158600	266300	297400	206200	158600
6	158700	160900	166500	249200	192900	206600	160700	158600	274700	294500	204300	158500
7	158600	160800	165400	248000	190400	204200	160300	158600	279800	290300	202500	158400
8	158600	160700	164500	246600	188100	202200	160100	159100	283100	286900	200600	158300
9	158400	160500	163000	245600	185700	199800	160300	159100	286500	283600	198800	158200
10	158300	163200	162400	243900	183200	197900	160200	159200	290200	280000	197300	158200
11	158600	169800	162300	242300	181400	195800	160300	159900	294800	276500	195800	158100
12	161300	170000	161800	241000	179000	193600	160200	160100	300200	273400	194200	158200
13	161500	169200	161600	239500	176600	191300	160600	160100	308400	269700	191000	158100
14	161600	168400	163200	238000	174300	188800	160200	160100	319800	266000	189200	157800
15	161700	167700	172000	236600	173100	186700	160100	160000	334300	262700	187300	157900
16	162000	167100	178500	235400	170900	184800	160100	161300	342200	258800	185300	159000
17	161800	166500	182900	235700	168600	189000	160100	161300	346700	255600	183400	159500
18	161700	165800	185900	234800	166000	189300	160100	161500	349900	252200	181500	159700
19	161600	165100	187700	233400	164200	189000	160000	161500	349900	248900	179800	159800
20	161500	164400	188500	232100	166300	188100	160000	162200	347800	245300	178000	159900
21	161400	163600	188600	230200	168100	186900	160000	162500	345800	242200	176100	158900
22	162200	163000	197600	227800	168800	185000	159800	163000	343200	238600	174500	158600
23	163300	162600	217800	225200	168600	183000	159700	163200	340200	235300	172600	158400
24	164300	162800	234000	223600	171800	180800	159500	163200	337100	232500	170900	158300
25	164700	166500	246900	220700	174900	178300	159400	163300	333800	229600	169100	158100
26	165300	169100	254800	218200	185800	176300	159400	163200	329400	226900	167300	157700
27	165200	172900	258500	216100	196000	173800	159300	163100	325700	224200	165500	157500
28	164600	174900	259900	214200	201400	171700	159200	163000	321900	221500	164300	158100
29	164200	175800	259600	211600	---	169200	159100	165800	318200	219200	162500	157900
30	163300	175700	258600	209300	---	166500	158900	167800	315400	217100	161600	157500
31	162600	---	257300	206900	---	164800	---	171600	---	215400	160200	---
MAX	165300	175800	259900	256000	204700	211500	163700	171600	349900	312600	213500	159900
MIN	158300	160500	161600	206900	164200	164800	158900	158500	175900	215400	160200	157500
(†)	238.22	239.32	245.26	241.76	241.35	238.41	237.89	238.98	248.80	242.39	238.01	237.77
(ϕ)	+2800	+13100	+81600	-50400	-5500	-36600	-5900	+12700	+143800	-100000	-55200	-2700

CAL YR 1986 MAX 273700 MIN 155900 (ϕ) +83200
WTR YR 1987 MAX 349900 MIN 157500 (ϕ) -2300

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

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

WATER-QUALITY RECORDS

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

301908096313101 - SOMERVILLE LAKE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
JAN											
26...	1050	1.00	260	8.20	10.0	0.60	10.4	92	K2	<2	77
26...	1051	1.00	--	--	--	--	--	--	--	--	--
26...	1052	20.0	260	7.90	9.5	--	10.1	88	--	--	--
26...	1054	31.0	260	7.90	9.0	--	10.1	87	--	--	74
APR											
16...	0930	1.00	329	7.90	20.5	0.50	9.2	103	K2	K5	98
16...	0931	0.90	--	--	--	--	--	--	--	--	--
16...	0932	5.00	329	7.70	20.0	--	8.8	98	--	--	--
16...	0934	10.0	329	7.40	19.0	--	8.0	87	--	--	--
16...	0936	15.0	329	7.30	18.5	--	7.5	81	--	--	--
16...	0938	20.0	329	7.30	18.0	--	7.2	77	--	--	--
16...	0940	25.0	329	7.20	18.0	--	6.5	69	--	--	--
16...	0941	28.0	329	7.20	18.0	--	6.4	68	--	--	94
AUG											
19...	0900	1.00	306	7.40	30.0	0.50	5.8	77	K2	K10	95
19...	0902	10.0	306	7.30	30.0	--	5.7	76	--	--	--
19...	0904	20.0	306	7.30	30.0	--	5.7	76	--	--	--
19...	0906	29.0	306	7.00	30.0	--	5.3	71	--	--	88

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL 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)
JAN											
26...	38	22	5.3	17	0.9	5.4	39	40	29	0.20	12
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	35	21	5.2	17	0.9	5.4	39	40	30	--	12
APR											
16...	60	28	6.8	23	1	5.2	38	61	37	0.10	11
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	55	27	6.5	22	1	5.2	39	60	38	--	11
AUG											
19...	39	27	6.7	20	0.9	6.1	56	40	30	0.20	14
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	32	25	6.3	19	0.9	6.1	56	44	30	--	6.3

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
26...	150	0.190	0.010	0.200	0.150	0.95	1.1	0.040	91	<1
26...	--	--	--	--	--	--	--	--	--	--
26...	--	0.190	0.010	0.200	0.170	1.7	1.9	0.060	50	<10
26...	150	0.080	0.020	0.100	0.180	0.72	0.90	0.050	100	<1
APR										
16...	190	0.060	0.040	0.100	0.060	1.6	1.7	0.040	89	4
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	0.060	0.040	0.100	0.180	1.2	1.4	0.040	80	<10
16...	--	--	--	--	--	--	--	--	--	--
16...	--	0.060	0.040	0.100	0.140	1.5	1.6	0.040	110	<10
16...	--	--	--	--	--	--	--	--	--	--
16...	190	0.060	0.040	0.100	0.180	0.92	1.1	0.040	84	47
AUG										
19...	180	--	0.010	<0.100	0.030	1.1	1.1	0.060	13	28
19...	--	--	0.010	<0.100	0.030	1.3	1.3	0.060	<10	40
19...	--	--	--	--	--	--	--	--	--	--
19...	170	--	0.050	<0.100	0.130	2.7	2.8	0.300	31	230

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301940096315801 - SOMERVILLE LAKE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
26...	1125	1.00	260	8.30	10.0	10.4	92
26...	1127	10.0	260	8.10	9.5	9.8	86
26...	1129	19.0	260	8.10	9.5	9.8	86
APR							
16...	1000	1.00	330	7.90	21.0	9.2	104
16...	1002	10.0	330	7.30	18.5	7.7	83
16...	1004	21.0	330	7.30	18.5	7.5	81
AUG							
19...	0926	1.00	306	8.20	30.5	7.8	105
19...	0928	10.0	306	8.10	30.5	7.7	104
19...	0930	20.0	306	7.40	30.0	5.7	76
19...	0932	25.0	306	7.40	30.0	5.4	72

302026096341501 - SOMERVILLE LAKE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
26...	1145	1.00	265	8.60	10.5	10.6	95
26...	1147	16.0	265	7.90	9.5	8.8	77
APR							
16...	1020	1.00	325	7.80	20.0	8.8	98
16...	1022	5.00	325	7.20	18.5	7.2	78
16...	1024	12.0	325	7.10	18.5	6.0	65
AUG							
19...	0941	1.00	306	8.10	30.5	7.3	98
19...	0943	10.0	306	8.00	30.0	6.9	92
19...	0945	14.0	306	8.00	30.0	6.7	89

301805096332501 - SOMERVILLE LAKE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
26...	1200	1.00	260	8.60	10.0	10.8	96
26...	1202	10.0	260	8.10	9.5	9.9	87
26...	1204	18.0	260	8.00	9.5	9.5	83
APR							
16...	1040	1.00	337	8.30	20.5	10.0	112
16...	1042	5.00	337	7.90	19.5	9.2	101
16...	1044	10.0	337	7.60	19.5	8.6	95
16...	1046	15.0	337	7.20	18.0	6.9	74
AUG							
19...	0947	1.00	310	7.40	30.0	5.5	73
19...	0949	10.0	310	7.40	30.0	5.1	68
19...	0951	17.0	310	7.40	30.0	3.8	51

301847096334601 - SOMERVILLE LAKE DR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
26...	1215	1.00	251	8.30	10.5	10.7	96
26...	1217	10.0	251	8.10	10.0	9.9	88
26...	1219	20.0	251	8.10	9.5	9.7	85
26...	1221	27.0	251	8.00	9.5	9.3	81
APR							
16...	1050	1.00	332	8.00	20.5	9.3	104
16...	1052	5.00	332	7.70	19.5	8.8	97
16...	1054	10.0	332	7.60	19.5	8.6	95
16...	1056	15.0	344	7.30	18.5	7.6	82
16...	1058	21.0	344	7.10	18.0	6.6	70
AUG							
19...	1005	1.00	310	7.40	29.5	5.6	74
19...	1007	10.0	310	7.40	29.5	5.1	67
19...	1009	22.0	310	7.40	29.5	4.7	62

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301904096335601 - SOMERVILLE LAKE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
JAN											
26...	1230	1.00	251	8.60	10.5	0.60	10.3	92	K2	<2	74
26...	1232	10.0	251	8.30	10.0	--	9.8	87	--	--	--
26...	1234	20.0	251	8.20	9.5	--	9.8	86	--	--	--
26...	1236	28.0	251	8.00	9.5	--	9.1	80	--	--	70
APR											
16...	1110	1.00	327	7.90	20.5	0.60	9.2	103	<2	K1	95
16...	1112	5.00	327	8.00	19.5	--	9.2	101	--	--	--
16...	1114	10.0	327	7.30	18.5	--	7.4	80	--	--	--
16...	1116	15.0	327	7.20	18.5	--	7.2	78	--	--	--
16...	1118	20.0	327	7.10	18.5	--	6.9	74	--	--	--
16...	1120	27.0	327	7.10	18.5	--	6.4	69	--	--	95
AUG											
19...	1023	1.00	310	7.80	30.0	0.70	6.9	92	<2	K6	95
19...	1025	10.0	310	7.60	30.0	--	6.4	85	--	--	--
19...	1027	20.0	310	7.20	30.0	--	4.9	65	--	--	--
19...	1030	27.0	310	7.20	29.5	--	3.8	50	--	--	95

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL 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)
JAN											
26...	36	21	5.2	17	0.9	5.5	38	40	29	13	150
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	32	20	4.9	16	0.9	5.4	38	39	26	12	150
APR											
16...	59	27	6.7	23	1	5.3	36	59	35	11	190
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	57	27	6.6	22	1	5.2	38	60	36	11	190
AUG											
19...	39	27	6.6	20	0.9	6.1	56	44	30	14	180
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	38	27	6.6	20	0.9	6.0	57	44	30	14	180

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)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
26...	0.090	0.010	0.100	0.170	0.93	1.1	0.040	--	160	<1
26...	--	--	--	--	--	--	--	--	--	--
26...	0.190	0.010	0.200	0.190	1.4	1.6	0.090	--	70	<10
26...	0.090	0.010	0.100	0.220	0.88	1.1	0.050	--	110	12
APR										
16...	0.060	0.040	0.100	0.060	1.2	1.3	0.020	--	96	4
16...	--	--	--	--	--	--	--	--	--	--
16...	0.060	0.040	0.100	0.140	0.86	1.0	0.040	--	80	<10
16...	--	--	--	--	--	--	--	--	--	--
16...	0.060	0.040	0.100	0.160	1.1	1.3	0.040	--	100	<10
16...	0.160	0.040	0.200	0.180	1.6	1.8	0.040	--	100	25
AUG										
19...	--	<0.010	<0.100	<0.010	--	1.3	0.060	--	5	2
19...	--	--	--	--	--	--	--	--	--	--
19...	--	0.010	<0.100	0.040	0.96	1.0	0.090	--	<10	20
19...	--	0.010	<0.100	0.080	1.1	1.2	0.070	0.9	17	100

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301817096364101 - SOMERVILLE LAKE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
26...	1305	1.00	245	8.20	11.0	10.2	93
26...	1307	10.0	250	8.00	9.5	9.6	84
26...	1309	21.0	250	8.00	9.5	9.5	83
APR							
16...	1300	1.00	434	8.30	22.5	10.4	122
16...	1302	5.00	377	7.50	19.5	8.5	94
16...	1304	10.0	360	7.30	19.0	7.7	84
16...	1306	15.0	340	7.00	19.0	6.6	72
16...	1308	20.0	340	7.00	19.0	6.4	70
AUG							
19...	1050	1.00	308	7.70	29.5	6.9	91
19...	1052	10.0	308	7.60	29.5	6.6	87
19...	1054	22.0	308	7.40	29.5	4.8	63

301754096380801 - SOMERVILLE LAKE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (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)
JAN											
26...	1330	1.00	312	8.00	11.0	0.40	10.1	92	K2	<2	88
26...	1331	0.80	--	--	--	--	--	--	--	--	--
26...	1332	14.0	287	7.80	9.0	--	9.3	80	--	--	80
APR											
16...	1230	1.00	527	8.30	22.5	0.40	10.2	119	K2	K2	160
16...	1231	0.70	--	--	--	--	--	--	--	--	--
16...	1232	5.00	466	7.60	19.5	--	8.4	92	--	--	--
16...	1234	11.0	450	6.90	19.0	--	5.5	60	--	--	130
AUG											
19...	1110	1.00	326	7.40	29.5	0.40	5.8	77	K2	K12	100
19...	1115	11.0	326	7.50	29.5	--	6.1	81	--	--	99

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN										
26...	55	24	6.8	20	1	5.5	33	59	36	12
26...	--	--	--	--	--	--	--	--	--	--
26...	47	22	6.1	18	0.9	5.4	33	54	33	11
APR										
16...	120	45	12	40	1	6.2	44	110	66	11
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	92	38	9.6	32	1	5.7	42	90	54	12
AUG										
19...	41	29	7.2	21	0.9	6.3	61	45	32	14
19...	38	28	7.0	21	1	6.3	61	45	33	14

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
26...	180	0.090	0.010	0.100	0.090	0.91	1.0	0.060	200	13
26...	--	--	--	--	--	--	--	--	--	--
26...	170	0.090	0.010	0.100	0.130	0.97	1.1	0.040	170	9
APR										
16...	320	--	0.030	<0.100	0.030	0.97	1.0	0.020	45	4
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	270	0.060	0.040	0.100	0.160	1.4	1.6	0.050	80	100
AUG										
19...	190	--	0.010	<0.100	0.010	1.3	1.3	0.090	16	36
19...	190	--	0.010	<0.100	0.020	1.6	1.6	0.110	17	150

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake AC (301908096313101)

Phytoplankton Analyses October 1986 to September 1987

Date	1-26-87
Time	1051
TOTAL CELLS/mL	130,116
NUMBER OF SPECIES	46
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *mirabilis*	114
Ankistrodesmus nannoselene	341
Chlamydomonas sp.	114
Chlorella sp.	2272
Chlorococcum sp.	114
Chodatella longiseta	341
Chodatella subsalsa	114
Coelastrum sphaericum	682
Franceia ovalis	114
Gloeocystis sp.	227
Kirchneriella lunaris	5112
Kirchneriella obesa	1590
Oocystis sp.	1477
Scenedesmus abundans	174
Scenedesmus bijuga	114
Scenedesmus quadricauda	227
Scenedesmus serratus	227
Tetrastrum heteracanthum	454
Tetrastrum staurogeniaeforme	341
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	49984
Aphanothece sp.	30672
Chroococcus multicoloratus	114
Chroococcus pallidus	1136
Dactylococcopsis acicularis	114
Dactylococcopsis fascicularis	1704
Dactylococcopsis smithii	568
Dactylococcopsis sp.	454
Merismopedia tenuissima	1136
Oscillatoria subtilissima	12496
Pseudoanabaena sp.	909
Synechococcus aeruginosa	341
Synechococcus lineare var. *spirale*	1477
Synechococcus sp.	12837
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	27
Cyclotella stelligera	321
Melosira granulata	27
Melosira lirata	428
Stephanodiscus dubius ?	147
Stephanodiscus sp.	54
Order Pennales	
Diploneis sp.	139
Navicula arvensis	46
Navicula minuscula	186
Nitzschia acicularis	325
Nitzschia palea	186
Nitzschia thermalis	93
Synedra sp.	46

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake FC (301754096380301)

Phytoplankton Analyses October 1986 to September 1987

Date	1-26-87
Time	1331
TOTAL CELLS/mL	24,401
NUMBER OF SPECIES	41
DEPTH COLLECTED (ft.)	0.8

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus var. *mirabilis*	170
Ankistrodesmus nannoselene	57
Chlamydomonas sp.	114
Chlorella sp.	738
Chlorococcum sp.	284
Chlorogonium sp.	57
Chodatella subsalsa	114
Kirchneriella lunaris	57
Mesotaenium sp.	227
Oocystis sp.	454
Pteromonas sp.	114
Scenedesmus denticulatus	114
Scenedesmus quadricauda	114
Scenedesmus serratus	227
Tetrastrum heteracanthum	227
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	10224
Aphanocapsa elachista	2386
Aphanothece saxicola	2556
Chroococcus multicoloratus	257
Chroococcus pallidus	114
Dactylococcopsis acicularis	57
Dactylococcopsis fascicularis	682
Dactylococcopsis smithii	227
Dactylococcopsis sp.	227
Synechococcus aeruginosa	57
Synechococcus sp.	1988
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas hispida	114
Trachelomonas volvocina	1022
Trachelomonas sp.	57
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	13
Cyclotella stelligera	563
Melosira lirata	153
Stephanodiscus dubius ?	281
Stephanodiscus sp.	13
Order Pennales	
Navicula arvensis	30
Navicula minuscula	20
Nitzschia acicularis	20
Nitzschia palea	69
Nitzschia paleacea	59
Nitzschia subacicularis	30

Somerville Lake AC (301908096313101)

Phytoplankton Analyses October 1986 to September 1987

Date	4-16-87
Time	0931
TOTAL CELLS/mL	59,756
NUMBER OF SPECIES	39
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus nannoselene	227
Chlamydomonas sp.	341
Chlorococcum sp.	682
Chodatella subsalsa	114
Chodatella sp.	1363
Closterium sp.	227
Gloeocystis sp.	114
Kirchneriella lunaris	454
Mesotaenium sp.	568
Oocystis pusilla	1931
Oocystis sp.	1590
Pediastrum duplex	682
Pediastrum duplex var. *clathratum*	909
Pteromonas sp.	57
Scenedesmus acuminatus	454
Scenedesmus armatus	454
Scenedesmus quadricauda	341
Scenedesmus serratus	454
Tetraedron quadricuspidatum	114
Tetraedron trigonum	114
Tetrastrum heteracanthum	909
Tetrastrum staurogeniaeforme	909
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	14995
Aphanocapsa elachista	2272
Aphanothece saxicola	341
Dactylococcopsis fascicularis	341
Gloeocapsa sp.	2272
Merismopedia tenuissima	1136
Microcystis marina	3181
Synechococcus lineare	2272
Synechococcus sp.	341
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas hispida	57
CRYPTOPHYTA (cryptomonads)	
Cryptomonas sp.	341
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella stelligera	341
Melosira granulata var. *angustissima* f. *spiralis*	227
Stephanodiscus hantzschii var. *pusilus*	18062
Stephanodiscus niagarae	1341
Order Pennales	
Diploneis sp.	114
Navicula arvensis	114

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake FC (301754096360801)

Phytoplankton Analyses October 1986 to September 1987

Date	4-16-87
Time	1231
TOTAL CELLS/mL	310,304
NUMBER OF SPECIES	52
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	114
Ankistrodesmus nannoselene	2158
Carteria sp.	114
Chlorococcum sp.	2726
Chodatella subsalsa	1590
Chodatella sp.	227
Crucigenia tetrapedia	227
Elakatothrix viridis	114
Gloeocystis vesiculosa	682
Kirchneriella lunaris	1704
Mesotaenium sp.	227
Oocystis sp.	795
Phacotus lenticularis	114
Scenedesmus serratus	227
Schroederia setigera	114
Sphaerocystis schroeteri	682
Tetraedron trigonum	227
Tetrastrum staurogeniaeforme	9429
CYANOPHYTA (blue-green algae)	
Anabaena circinalis	114
Aphanocapsa delicatissima	174944
Aphanocapsa elachista	14086
Aphanothece nidulans	1477
Aphanothece saxicola	12496
Chroococcus dispersus	114
Chroococcus pallidus	227
Chroococcus varius	1363
Dactylococcopsis fascicularis	3181
Dactylococcopsis sp.	682
Lyngbya sp.	454
Marssoniella elegans	1477
Merismopedia tenuissima	7270
Microcystis marina	3181
Oscillatoria subtilissima	227
Spirulina laxa	1363
Spirulina sp.	44986
Synechococcus sp.	3181
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	114
Trachelomonas horrida	114
Trachelomonas schauinslandii	114
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella stelligera	909
Melosira granulata	57
Melosira lirata	1136
Melosira sp.	3522
Stephanodiscus hantzschii var. *pusilus*	9315
Stephanodiscus niagarae	114
Order Pennales	
Anomoeoneis sp.	227
Diploneis sp.	114
Nitzschia palea	114
Nitzschia subacicularis	114
Nitzschia thermalis	114
Nitzschia sp.	1818

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake AC (301908096313101)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	0901
TOTAL CELLS/mL	606,308
NUMBER OF SPECIES	62
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	568
Ankistrodesmus falcatus var. *falcatus*	909
Ankistrodesmus nannoselene	568
Chlamydomonas sp.	114
Chlorococcum sp.	909
Chlorogonium sp.	227
Chodatella subsalsa	114
Crucigenia apiculata	454
Dictyosphaerium pulchellum	568
Golenkinia radiata	227
Kirchneriella lunaris	1931
Kirchneriella obesa	227
Micratinium pusillum	454
Oocystis sp.	568
Scenedesmus armatus	454
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus quadricauda	227
Scenedesmus serratus	682
Tetraedron minimum	114
Tetraedron trigonum	114
Tetraedron sp.	114
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	682
Anabaenopsis circularis	568
Anabaenopsis raciborskii	39646
Aphanizomenon flos-aquae	1363
Aphanocapsa delicatissima	66115
Aphanocapsa elachista	31808
Aphanothece nidulans	4544
Aphanothece saxicola	64478
Aphanothece sp.	2726
Chroococcus limneticus	227
Chroococcus multicoloratus	5907
Chroococcus pallidus	8634
Chroococcus varius	7270
Dactylococcopsis acicularis	4090
Dactylococcopsis fascicularis	18176
Dactylococcopsis smithii	454
Gloeothece confluens	
Lyngbya limnetica	30218
Lyngbya contorta	682
Lyngbya nana	39192
Merismopedia punctatum	6816
Merismopedia tenuissima	7725
Microcystis marina	11814
Oscillatoria angustissima	12723
Oscillatoria limnetica	5907
Oscillatoria splendida	1818
Pseudanabaena catenata	211978
Spirulina sp.	1590
Synechococcus lineare	227
Synechococcus sp.	2272
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	568
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	2726
Melosira granulata var. *angustissima* f. *spiralis*	1477
Melosira lirata	114
Stephanodiscus dubius	341
Order Pennales	
Anomoeoneis sp.	568
Nitzschia gracilis	114
Nitzschia microcephala	14
Nitzschia palea	341
Nitzschia paleacea	57
Nitzschia subacicularis	454
Synedra filiformis var. *exilis*	114

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake FC (301754096380801)

Phytoplankton Analyses October 1986 to September 1987

Date	8-19-87
Time	1111
TOTAL CELLS/mL	479,619
NUMBER OF SPECIES	66
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	1136
Ankistrodesmus falcatus	114
Ankistrodesmus nannoselene	227
Carteria sp.	227
Chlamydomonas sp.	227
Chlorococcum sp.	682
Chlorogonium sp.	341
Chodatella quadriseta	454
Chodatella subsalsa	114
Closterium sp.	114
Dictyosphaerium pulchellum	1590
Dysmorphococcus sp.	114
Franceia ovalis	114
Kirchneriella contorta	795
Kirchneriella lunaris	682
Kirchneriella obesa	227
Nephrocytium sp.	227
Scenedesmus armatus	227
Scenedesmus armatus var. *bicaudatus*	227
Scenedesmus brasiliensis	227
Scenedesmus bijuga	454
Scenedesmus quadricauda	454
Scenedesmus serratus	454
Scenedesmus sp.	227
Staurastrum sp.	114
Tetraedron minimum	114
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	2499
Anabaena sp.	909
Anabaenopsis raciborskii	33171
Aphanocapsa delicatissima	127232
Aphanocapsa elachista	2045
Aphanocapsa elachista var. *conferta*	15904
Aphanotheca sp.	36806
Aphanothece saxicola	17040
Chroococcus limneticus	682
Chroococcus minutus	3635
Chroococcus pallidus	909
Coelosphaerium sp.	1136
Dactylococcopsis acicularis	1590
Dactylococcopsis fascicularis	8634
Dactylococcopsis raphidioides	227
Gomphosphaeria sp.	1818
Lyngbya nana	13859
Merismopedia elegans	4090
Merismopedia punctatum	8634
Merismopedia tenuissima	9997
Oscillatoria angustissima	14314
Oscillatoria limnetica	454
Oscillatoria subtilissima	3862
Pseudanabaena catenata	146203
Spirulina sp.	2613
Synechococcus sp.	3181
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	227
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	937
Cyclotella stelligera	5891
Melosira granulata var. *angustissima*	119
Melosira granulata var. *angustissima* f. *spiralis*	268
Melosira lirata	134
Stephanodiscus dubius	268
Order Pennales	
Anomoeoneis sp.	40
Nitzschia gracilis	26
Nitzschia microcephala	66
Nitzschia paleacea	132
Nitzschia subacicularis	92
Synedra fasciculata	26
Synedra fillformis var. *exilis*	66

08110000 YEGUA CREEK NEAR SOMERVILLE, TX

LOCATION.--Lat 30°19'18", long 96°30'26", Burleson County, Hydrologic Unit 12070102, on left bank 40 ft downstream from bridge on State Highway 36, 860 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.0 mi downstream from Somerville Lake, 2.0 mi south of Somerville, 5.0 mi upstream from Davidson Creek, and 18.4 mi upstream from mouth.

DRAINAGE AREA.--1,009 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year.

REVISED RECORDS.--WSP 1512: 1926(M), 1929, 1935. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 199.21 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 30, 1934, nonrecording gage at railway bridge 860 ft upstream at datum 34.30 ft higher. Jan. 30, 1934, to Nov. 30, 1970, water-stage recorder at highway bridge 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good above 1.0 ft³/s and fair below. Flow regulated by Somerville Lake (station 08109900) since Feb. 3, 1965.

AVERAGE DISCHARGE.--41 years (water years 1925-65) unregulated, 290 ft³/s (210,100 acre-ft/yr); 22 years (water years 1966-87) regulated, 302 ft³/s (218,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,800 ft³/s July 1, 1940 (gage height, 19.27 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 22 ft Dec. 5, 1913, present site and datum, from information by Gulf, Colorado, and Santa Fe Railway Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,300 ft³/s June 30 at 1100 hours (gage height, 8.62 ft); minimum daily, 0.29 ft³/s MAY 1-3, 1987.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	213	825	815	1330	1.5	655	.29	4.2	2240	935	413
2	.85	185	861	814	1320	1.3	650	.29	92	2210	934	9.6
3	1.2	137	860	813	1310	334	478	.29	401	2190	938	2.4
4	1.4	70	858	810	1310	943	172	.30	50	2160	933	1.7
5	1.6	67	858	810	1300	1130	161	.58	9.8	2150	933	1.7
6	1.5	65	857	814	1280	1150	162	.66	3.0	2130	931	1.8
7	1.5	64	858	814	1270	1160	161	.73	338	2130	929	1.7
8	1.5	63	858	815	1270	1170	81	.80	867	2130	928	1.7
9	1.5	47	786	824	1260	1170	2.3	.88	1120	2130	923	1.7
10	1.5	28	674	845	1250	1180	.93	.91	1160	2110	917	1.6
11	1.6	95	531	845	1250	1180	.90	.98	1160	2100	913	1.7
12	2.5	189	213	847	1240	1180	.70	1.3	1180	2090	907	1.9
13	1.5	456	184	848	1230	1180	.82	1.5	1020	2090	898	2.2
14	1.2	480	195	848	1220	1180	.90	1.5	77	2090	897	2.1
15	1.5	483	237	850	1220	1170	.79	1.5	2.1	2090	897	2.0
16	1.9	485	10	848	1190	1160	.66	1.6	1.5	2090	894	2.5
17	2.1	488	165	856	1180	1240	.56	1.7	1.4	2070	891	4.4
18	2.2	489	595	849	1160	1030	.50	1.7	1.4	2080	885	3.0
19	2.4	487	765	846	1150	856	.49	1.7	271	2080	877	2.8
20	2.8	489	769	889	1100	1110	.48	1.9	1100	2080	877	2.5
21	2.9	491	770	1060	503	1120	.47	1.9	1200	2090	874	2.4
22	3.7	492	814	1280	149	1120	.45	1.9	1310	2100	869	2.3
23	5.5	498	553	1330	376	1100	.46	1.9	1610	2100	869	2.1
24	7.1	493	22	1350	666	1090	.40	2.0	1670	2010	870	2.0
25	6.3	546	8.8	1350	749	1080	.42	2.1	1950	1700	868	2.1
26	6.3	503	2.3	1340	602	1080	.45	2.1	2210	1580	860	3.0
27	143	494	349	1340	18	1070	.43	2.0	2230	1550	859	3.4
28	469	609	806	1340	3.6	1070	.40	1.8	2240	1540	858	3.9
29	496	795	815	1340	---	1050	.35	2.7	2240	1420	859	4.1
30	497	807	814	1340	---	1050	.33	2.8	2260	1100	874	3.2
31	431	---	818	1330	---	896	---	2.3	---	948	830	---
TOTAL	2100.45	10808	17731.1	31100	27906.6	31251.8	2534.19	44.61	27779.4	60578	27727	490.5
MEAN	67.8	360	572	1003	997	1008	84.5	1.44	926	1954	894	16.3
MAX	497	807	861	1350	1330	1240	655	2.8	2260	2240	938	413
MIN	.40	28	2.3	810	3.6	1.3	.33	.29	1.4	948	830	1.6
AC-FT	4170	21440	35170	61690	55350	61990	5030	88	55100	120200	55000	973

CAL YR 1986 TOTAL 146164.75 MEAN 400 MAX 1760 MIN .26 AC-FT 289900
WTR YR 1987 TOTAL 240050.87 MEAN 658 MAX 2260 MIN .29 AC-FT 476100

08110000 YEGUA CREEK NEAR SOMERVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March 1942 to March 1959, September 1961 to September 1967, October 1968 to September 1980. Chemical and biochemical analyses: October 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1961 to September 1967.
WATER TEMPERATURE: September 1961 to June 1967.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,380 microsiemens Apr. 14, 1962; minimum daily, 53 microsiemens Sept. 13, 1961.
WATER TEMPERATURE: Maximum daily, 33.0°C June 11, July 31, 1965; minimum daily, 1.5°C Jan. 14, 1964.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN 26...	1430	1420	258	8.40	10.5	40	14	12.2	109	1.8	76	37
AUG 19...	1230	882	310	7.60	30.5	8	1.8	7.4	99	1.9	94	38

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 WH WAT TOTAL 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 26...	22	5.2	17	0.9	5.4	39	41	25	0.20	12	150
AUG 19...	27	6.5	20	0.9	5.6	56	43	29	0.20	14	180

DATE	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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN 26...	11	<1	0.180	0.020	0.200	0.150	1.7	1.9	0.030	7.7	1
AUG 19...	18	3	--	0.010	<0.100	0.020	1.1	1.1	0.080	10	<1

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	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 26...	68	<1	<10	<1	66	<5	<1	<0.1	<1	<1	10
AUG 19...	59	<1	<10	<1	<3	<5	9	<0.1	<1	<1	<3

08110100 DAVIDSON CREEK NEAR LYONS, TX

LOCATION.--Lat 30°25'10", long 96°32'24", Burleson County, Hydrologic Unit 12070102, on left bank 83 ft downstream from Farm Road 60, 1.2 mi downstream from Berry Creek, 2.8 mi northeast of Lyons, and 10.7 mi upstream from mouth.

DRAINAGE AREA.--195 mi².

PERIOD OF RECORD.--October 1962 to current year.
Water-quality records.--Sediment records: June 1966 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 220.26 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. The city of Caldwell discharges sewage effluent into creek above station. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--25 years, 67.9 ft³/s (4.73 in/yr), 49,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s June 24, 1968 (gage height, 18.67 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of June 24, 1968. Flood in 1947 reached a stage of 17 ft, from information by local resident.

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)
Dec. 23	1730	2,570	15.40	June 3	1600	*4,050	*15.91
Feb. 27	0700	1,610	14.75				

Minimum daily discharge, 0.12 ft³/s Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.81	13	21	11	300	11	2.9	787	6.3	1.6	4.9
2	1.9	.78	11	19	11	81	11	2.6	887	7.3	1.5	2.5
3	1.8	.54	8.7	17	12	50	10	2.5	3050	5.9	1.5	1.2
4	1.5	.58	7.6	16	13	37	9.8	2.5	2260	5.3	1.4	.83
5	1.3	.44	6.6	15	12	29	9.5	2.2	1520	4.7	1.2	.71
6	1.4	.51	5.8	14	12	25	10	2.5	745	4.4	1.1	.70
7	1.7	5.0	5.2	14	11	21	11	3.1	218	4.1	1.0	.66
8	1.9	8.7	4.5	13	11	19	11	3.7	59	4.1	.96	.56
9	1.7	6.3	4.2	16	11	17	11	24	44	4.4	.85	.59
10	2.0	9.9	6.3	16	10	16	10	8.4	71	4.0	.66	.54
11	2.4	195	37	17	10	16	9.6	6.7	123	3.8	.59	.45
12	12	26	28	17	10	18	12	7.1	252	3.6	.47	.38
13	77	10	15	15	10	21	9.7	12	908	3.2	.38	.39
14	41	6.4	62	14	10	21	8.0	6.3	843	3.1	.35	.44
15	12	5.1	1020	14	180	18	10	4.7	269	3.1	.28	.67
16	6.2	4.1	1020	14	159	16	14	3.4	96	2.9	.28	.91
17	3.7	2.5	287	17	29	618	11	3.3	46	2.9	.25	.90
18	2.1	2.1	153	90	18	1030	9.7	3.3	32	2.9	.23	1.7
19	1.4	1.7	171	101	15	273	8.4	3.1	24	2.9	.19	2.7
20	1.0	1.8	84	44	261	72	7.7	4.0	19	2.9	.15	1.6
21	.74	1.4	50	28	516	44	6.8	5.4	16	2.4	.12	1.6
22	1.2	1.4	529	21	107	31	6.1	7.2	14	1.8	.38	1.5
23	7.9	1.3	2140	17	52	25	5.6	6.8	12	1.6	.35	.96
24	134	1.7	1690	16	184	24	5.7	6.1	10	1.4	.28	.79
25	34	545	1090	14	265	22	5.7	5.4	9.0	1.6	.29	.72
26	13	561	558	14	1250	19	5.1	5.5	8.5	1.8	.45	.63
27	6.9	280	95	12	1490	17	4.4	5.9	7.9	2.0	.42	.68
28	3.9	226	52	12	871	15	4.1	5.5	6.8	1.9	.49	.91
29	2.5	35	36	11	---	14	3.7	62	6.3	1.7	.71	.91
30	1.5	18	28	11	---	12	3.2	410	6.4	1.7	1.1	.87
31	1.0	---	24	11	---	11	---	476	---	1.7	1.8	---
TOTAL	382.44	1959.06	9241.9	671	5551	2932	254.8	1104.1	12349.9	101.4	21.33	32.90
MEAN	12.3	65.3	298	21.6	198	94.6	8.49	35.6	412	3.27	.69	1.10
MAX	134	561	2140	101	1490	1030	14	476	3050	7.3	1.8	4.9
MIN	.74	.44	4.2	11	10	11	3.2	2.2	6.3	1.4	.12	.38
AC-FT	759	3890	18330	1330	11010	5820	505	2190	24500	201	42	65
CFSM	.06	.33	1.53	.11	1.02	.49	.0	.18	2.11	.0	.0	.0
IN.	.07	.37	1.76	.13	1.06	.56	.0	.21	2.36	.0	.0	.0

CAL YR 1986 TOTAL 26231.37 MEAN 71.9 MAX 2140 MIN .05 AC-FT 52030 CFSM .37 IN. 5.00
WTR YR 1987 TOTAL 34601.41 MEAN 94.8 MAX 3050 MIN .12 AC-FT 68630 CFSM .49 IN. 6.60

08110200 BRAZOS RIVER AT WASHINGTON, TX

LOCATION.--Lat 30°21'40", long 96°09'18", Washington County, Hydrologic Unit 12070101, near right bank beneath floor of bridge on State Highway 105, 2.4 mi upstream from Navasota River, 2.5 mi north of Washington, and at mile 228.8.

DRAINAGE AREA.--41,192 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--November 1965 to September 1983. Stage only site October 1983 to current year. Gage heights collected in this vicinity since 1915 are contained in reports of the National Weather Service.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 140.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated gage height, which are fair. Backwater at times from the Navasota River. There are many diversions above station for irrigation, municipal, industrial, and oilfield operations. At times, flow is affected by five upstream reservoirs with a combined capacity of 4,955,000 acre-ft. Flow is also affected by discharge from the flood-detention pools of 147 floodwater-retarding structures with a combined detention capacity of 153,200 acre-ft. These structures control runoff from 451 mi² above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--17 years (1965-83), 5,153 ft³/s (3,733,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,500 ft³/s Jan. 24, 1968 (gage height, 33.60 ft); maximum gage height, 36.74 ft Apr. 28, 1966 (backwater from Navasota River); minimum discharge, 170 ft³/s Oct. 22, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1856, 62.0 ft Dec. 6, 1913, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 33.68 ft June 15 at 1700 hours; minimum, 3.53 ft Sept. 26.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.57	10.99	8.37	15.70	10.70	19.37	9.48	5.77	19.84	16.55	8.20	4.92
2	4.73	10.85	8.18	15.42	10.60	17.92	9.32	5.75	21.11	15.07	8.97	4.59
3	3.89	10.12	8.05	15.09	10.50	14.77	9.23	4.99	23.19	13.94	9.78	4.37
4	4.32	9.75	8.02	14.74	10.28	13.40	8.86	4.36	25.46	15.13	9.40	4.14
5	4.44	9.71	8.58	14.06	10.26	14.91	8.83	4.56	27.59	e15.05	9.24	4.12
6	4.50	10.15	8.76	13.19	10.37	18.98	8.85	5.55	27.51	e14.73	8.60	4.62
7	5.24	10.08	8.77	12.47	10.29	19.17	8.89	7.62	25.73	e14.50	8.62	4.11
8	6.22	9.10	8.62	12.01	10.0	19.03	8.97	5.65	23.07	e14.48	8.14	3.93
9	8.00	8.90	7.74	12.15	9.47	19.29	9.43	4.38	23.54	e14.08	8.03	3.85
10	7.90	8.75	7.42	12.13	9.31	19.16	10.82	3.91	25.07	e13.73	7.43	3.94
11	10.71	10.46	9.12	12.20	9.26	17.82	11.12	4.53	26.10	e13.70	7.23	5.39
12	12.62	9.19	11.44	12.14	8.64	15.35	11.02	5.23	27.53	e13.48	8.19	4.75
13	14.76	8.97	9.99	11.92	7.88	14.35	11.81	4.77	29.58	e13.30	7.77	4.13
14	16.80	9.08	9.04	11.73	8.45	13.90	12.25	4.93	32.94	e13.00	7.53	3.98
15	15.05	8.80	14.28	11.36	9.42	13.25	12.43	5.28	33.33	12.81	7.37	3.94
16	14.28	8.11	18.94	10.64	9.09	12.01	11.88	5.03	29.19	13.33	7.06	5.53
17	14.69	7.33	18.81	10.73	8.85	14.57	10.06	4.93	22.40	12.66	6.96	4.38
18	14.57	6.85	16.05	10.51	8.67	17.19	9.58	4.86	18.37	12.50	7.25	3.87
19	13.67	6.51	17.94	10.37	8.45	17.82	9.24	5.51	17.64	12.83	7.51	3.66
20	10.75	6.51	18.33	11.47	9.35	16.11	8.56	5.13	18.32	13.05	7.51	4.22
21	9.58	6.85	15.83	10.61	9.51	14.83	8.12	5.52	20.35	12.41	7.49	4.63
22	9.33	7.07	16.70	9.37	9.69	13.39	8.17	6.23	21.53	12.22	7.39	6.01
23	9.21	7.36	23.31	9.62	9.60	12.18	7.31	5.78	21.52	12.11	6.52	5.02
24	15.48	7.13	27.00	10.82	11.13	11.83	6.76	5.99	21.92	12.09	6.11	3.94
25	17.81	11.56	28.19	10.96	11.19	11.77	6.49	6.22	22.70	11.94	6.03	3.54
26	14.97	14.66	24.36	11.15	16.86	11.72	6.33	6.11	22.68	11.15	5.99	4.00
27	10.56	13.31	18.39	10.93	18.67	11.55	6.09	6.13	21.45	10.85	5.97	4.22
28	8.97	12.94	15.62	10.97	18.99	11.13	6.03	5.83	18.58	10.67	5.84	4.55
29	8.89	11.65	14.65	10.14	---	10.66	5.90	10.21	17.82	10.68	5.73	4.49
30	10.70	9.63	15.38	9.57	---	10.32	5.83	14.35	17.45	9.78	5.57	4.21
31	11.27	---	15.87	10.82	---	10.07	---	18.00	---	8.27	5.18	---
MAX	17.81	14.66	28.19	15.70	18.99	19.37	12.43	18.00	33.33	16.55	9.78	6.01
MIN	3.89	6.51	7.42	9.37	7.88	10.07	5.83	3.91	17.45	8.27	5.18	3.54

CAL YR 1986 MAX 28.35 MIN 2.88
WTR YR 1987 MAX 33.33 MIN 3.54

e Estimated.

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX

LOCATION.--Lat 31°34'27", long 96°31"14', Limestone County, Hydrologic Unit 12070103, in city of Groesbeck at water supply pumping plant, 1.2 mi downstream from Springfield Lake, 3.7 mi north of Groesbeck, and 161.4 mi upstream from mouth.

DRAINAGE AREA.--239 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1975 to May 1978 (periodic gage-height and low-flow measurements only), June 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 396.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair Oct. 1 to Jan. 12, and good thereafter. Flow is partly regulated Lake Mexia (station 08110300) 7.4 mi upstream (capacity, 9,400 acre-ft) and by Springfield Lake 1.2 mi upstream (approximate capacity, 3,100 acre-ft). There are several diversions above station for irrigation, municipal supply, oil field operation (total amount unknown). The city of Groesbeck diverts water from pool at gage for municipal use returns washwater and sewage effluent into river downstream from gage. Gage-height telemeter at station.

AVERAGE DISCHARGE.--9 years, 100 ft³/s (72,450 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,200 ft³/s May 11, 1979 (gage height, 15.06 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 26 ft in 1910 and 1944, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,460 ft³/s June 4 at 0800 hours (gage height, 7.77 ft); no flow Aug. 6 to 20, 22 to 30 and Sept. 4 to 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	1.3	54	29	8.8	2030	5.8	2.2	616	7.2	.29	.10
2	.14	1.5	36	20	8.8	561	7.6	2.3	243	6.8	.27	.07
3	.01	1.4	25	25	7.3	155	5.3	2.0	559	8.7	.21	.09
4	.10	3.5	19	17	6.6	86	4.2	99	3640	6.3	.07	.00
5	.98	2.3	14	12	6.3	63	4.2	416	1970	3.6	.04	.00
6	2.6	1.9	11	11	13	48	6.9	210	545	2.8	.00	.00
7	2.8	1.7	11	10	10	36	6.2	91	156	2.1	.00	.01
8	2.9	1.9	15	9.7	7.2	29	5.3	56	84	1.7	.00	.10
9	2.1	1.9	121	16	5.0	24	4.7	50	103	2.0	.00	.13
10	2.1	2.0	337	17	3.9	20	4.8	58	684	2.9	.00	.10
11	2.0	2.0	193	12	4.3	20	4.0	62	508	2.7	.00	.05
12	2.4	1.6	103	11	4.8	18	3.4	49	494	1.7	.00	.09
13	2.0	1.3	70	8.4	4.9	16	11	34	1420	1.5	.00	.39
14	1.8	1.1	61	7.9	4.7	13	14	23	1390	1.6	.00	.39
15	.74	1.4	580	8.7	22	12	4.8	19	442	1.5	.00	.11
16	.64	1.6	1030	9.4	16	10	2.9	17	166	1.5	.00	7.9
17	.50	1.5	416	13	12	407	2.6	18	92	2.0	.00	2.4
18	.41	1.5	317	140	6.3	732	2.8	17	89	1.3	.00	.82
19	.40	2.2	433	370	4.3	284	2.9	15	206	1.2	.00	.58
20	.39	2.4	267	230	192	126	2.7	20	230	1.2	.00	.58
21	.62	1.7	138	110	412	79	4.2	16	199	1.0	.01	.52
22	1.1	1.7	744	87	242	59	3.9	13	95	.85	.00	.55
23	8.1	1.6	2660	46	107	66	2.5	10	59	.98	.00	.55
24	4.3	5.1	2330	38	217	40	2.3	8.2	40	1.0	.00	.40
25	2.4	1090	790	35	437	27	2.2	16	29	.97	.00	.50
26	2.2	1690	188	23	705	21	2.5	21	20	.76	.00	.28
27	1.8	496	94	17	1100	16	2.0	17	13	.69	.00	.44
28	1.6	160	65	14	1520	15	2.0	14	7.7	.56	.00	.28
29	1.3	85	51	13	---	15	1.9	83	5.5	.43	.00	.40
30	1.3	60	42	12	---	17	2.1	398	7.9	.47	.00	.47
31	1.3	---	34	7.9	---	7.0	---	360	---	.36	.05	---
TOTAL	51.51	3627.1	11249	1380.0	5088.2	5052.0	131.7	2216.7	14113.1	68.37	.94	18.30
MEAN	1.66	121	363	44.5	182	163	4.39	71.5	470	2.21	.03	.61
MAX	8.1	1690	2660	370	1520	2030	14	416	3640	8.7	.29	7.9
MIN	.01	1.1	11	7.9	3.9	7.0	1.9	2.0	5.5	.36	.00	.00
AC-FT	102	7190	22310	2740	10090	10020	261	4400	27990	136	1.9	36

CAL YR 1986 TOTAL 59199.68 MEAN 162 MAX 13400 MIN .00 AC-FT 117400
WTR YR 1987 TOTAL 42996.61 MEAN 118 MAX 3640 MIN .00 AC-FT 85280

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1967 to current year.
WATER TEMPERATURE: November 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. Prior to October 1978 this station was published as 08110400 Navasota River near Groesbeck.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,590 microsiemens Oct. 8, 9, 1969; minimum daily, 71 microsiemens June 4, 1973.
WATER TEMPERATURE: Maximum daily, 38.0°C on several days during July 1974, May 28, 1978; minimum daily, 1.5°C Jan. 10, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 527 microsiemens Nov. 23; minimum daily, 150 microsiemens Dec. 23.
WATER TEMPERATURE: Maximum daily, 31.0°C June 25; minimum daily, 6.5°C Jan. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 04...	0725	1.9	473	7.80	20.0	210	11	78	3.5
DEC 22...	1614	1060	185	7.10	14.0	73	9	25	2.5
MAR 31...	0725	5.3	315	7.60	14.0	130	8	48	3.2
MAY 19...	0647	15	338	7.70	26.5	140	10	48	3.7
SEP 30...	0800	0.60	488	7.60	25.0	230	18	86	3.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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 04...	13	0.4	3.1	198	19	20	0.20	16	270
DEC 22...	10	0.5	4.4	64	15	11	0.20	8.5	110
MAR 31...	11	0.4	3.3	125	14	14	0.20	10	180
MAY 19...	15	0.6	4.1	125	14	19	0.20	9.9	190
SEP 30...	11	0.3	2.5	212	15	16	0.20	17	280

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	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.	1986	51.51	456	260	36	28	4.0	16	2.3	190
NOV.	1986	3627.1	279	157	1540	16	156	14	133	110
DEC.	1986	11249	171	96	2900	9.0	272	10	312	64
JAN.	1987	1380.0	241	135	503	13	49	13	49	94
FEB.	1987	5088.2	251	141	1940	14	190	13	183	98
MAR.	1987	5052.0	225	126	1720	12	167	12	170	87
APR.	1987	131.7	419	238	85	26	9.1	16	5.8	180
MAY	1987	2216.7	316	178	1070	18	108	15	90	130
JUNE	1987	14113.1	199	111	4250	11	405	12	438	76
JULY	1987	68.37	361	205	38	21	3.9	16	2.9	150
AUG.	1987	0.94	475	271	0.7	30	0.08	16	0.04	200
SEPT	1987	18.30	447	255	13	28	1.4	16	0.8	190
TOTAL		42996.92	**	**	14100	**	1370	**	1390	**
WTD.AVG.		118	217	121	**	12	**	12	**	84

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	468	448	220	198	340	205	328	483	273	300	482	497
2	469	465	221	208	328	203	336	496	250	312	445	506
3	470	469	224	209	334	205	350	497	251	325	491	503
4	469	450	235	220	339	212	358	415	197	334	495	---
5	467	458	240	229	351	224	380	329	175	344	461	---
6	465	460	242	239	360	234	377	293	166	348	---	---
7	465	463	249	240	363	238	386	298	176	357	---	505
8	464	480	261	275	356	250	400	300	189	360	---	498
9	465	488	270	264	352	257	428	305	199	370	---	483
10	461	496	219	283	351	270	416	308	190	372	---	500
11	459	492	203	281	352	275	427	306	197	378	---	515
12	456	492	217	278	360	272	440	311	199	384	---	512
13	455	494	221	275	381	279	450	311	183	391	---	491
14	458	497	226	270	388	290	442	324	194	384	---	498
15	459	500	210	284	384	299	447	320	201	397	---	501
16	460	509	179	321	392	307	440	326	210	402	---	425
17	460	513	180	318	369	300	454	334	216	416	---	412
18	460	520	186	298	349	225	439	335	225	424	---	446
19	461	521	187	220	347	235	430	338	220	426	---	453
20	460	524	196	222	325	236	440	336	223	420	---	468
21	426	515	189	232	290	245	449	339	224	426	515	474
22	456	522	185	235	259	255	454	333	230	431	---	476
23	457	527	150	235	254	258	467	330	235	440	---	483
24	468	525	151	245	259	266	465	335	238	446	---	480
25	423	405	152	255	268	266	477	350	252	441	---	484
26	434	232	155	260	248	274	484	362	256	457	---	490
27	444	196	162	273	227	285	485	346	276	461	---	492
28	450	191	174	271	231	293	485	350	273	465	---	492
29	456	198	176	286	---	309	499	338	280	470	---	490
30	460	209	190	305	---	320	484	292	292	470	---	488
31	436	---	190	320	---	318	---	301	---	478	510	---
MEAN	457	442	202	260	327	261	431	343	223	401	486	484

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

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

08110430 BIG CREEK NEAR NEAR FREESTONE, TX

LOCATION (REVISED).--Lat 31°30'24", long 96°19'28", Limestone County, Hydrologic Unit 12070103, 12 ft to left and 25 ft downstream from left end of bridge on State Highway 164, 5.1 mi southwest of Freestone, and 8.2 mi upstream from mouth.

DRAINAGE AREA.--57.1 mi².

PERIOD OF RECORD.--July 1975 to June 1978 (periodic gage-height and low-flow measurements only), July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 362.94 ft above National Geodetic Vertical Datum of 1929. Apr. 25, 1985 to Aug. 17, 1987, at site 62 ft downstream at the same datum.

REMARKS.--No estimated daily discharges. Records good. Several observations of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--9 years, 38.6 ft³/s (9.18 in/yr), 27,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft³/s Dec. 3, 1983 (gage height, 14.13 ft); no flow at times in 1978, 1980, 1983-1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 19 ft in April 1957, from information by local residents.

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

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov. 26	0400	1,000	12.93	Dec. 23	1030	*1,080	*13.04
Dec. 10	1530	537	11.65	Feb. 27	1000	625	12.07
Dec. 16	0400	687	12.28	Mar. 18	1200	698	12.31
Dec. 19	1430	511	11.50	June 5	1130	620	12.05

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.18	16	19	8.9	369	9.7	2.3	174	3.6	.13	.00
2	.00	.67	11	16	9.2	127	8.5	2.3	151	7.3	.08	.00
3	.00	.76	8.5	16	9.0	57	7.8	2.4	57	7.7	.02	.00
4	.00	6.7	6.7	15	8.0	38	7.7	4.5	229	5.3	.00	.00
5	.00	78	5.6	14	7.8	28	7.2	6.2	565	3.1	.00	.00
6	.00	31	4.8	14	9.8	23	7.7	4.0	276	2.3	.00	.00
7	.48	3.7	4.6	14	10	20	9.0	3.2	49	2.0	.00	.00
8	2.4	.84	6.6	15	11	18	8.7	2.8	19	1.8	.00	.00
9	.22	.23	272	30	9.7	16	7.8	3.8	15	4.1	.00	.00
10	.13	.10	465	57	8.9	15	7.2	5.7	159	6.2	.00	.00
11	.01	.05	342	34	9.1	17	6.6	4.4	368	6.7	.00	.00
12	.00	.08	96	20	9.4	24	6.4	3.8	359	4.2	.00	.00
13	.00	.08	48	16	11	20	6.5	3.2	299	2.5	.00	.00
14	.00	.17	50	14	11	16	6.7	3.0	328	1.7	.00	.00
15	.06	.08	484	15	16	15	6.2	3.7	95	1.1	.00	.00
16	.02	.11	620	15	20	14	5.6	121	36	.67	.00	95
17	.00	.19	369	28	13	271	5.2	34	21	.52	.00	178
18	.00	.27	327	194	8.1	612	4.8	9.4	23	.43	.00	64
19	.00	.22	483	307	6.4	375	4.6	5.6	28	.73	.00	12
20	.00	.55	314	130	105	95	4.2	4.3	11	.89	.00	5.6
21	.00	1.6	96	48	326	44	4.0	3.5	6.5	.68	.00	3.1
22	.00	.61	343	33	247	30	3.7	3.2	4.4	.69	.00	1.8
23	60	4.4	995	22	65	26	3.5	2.5	3.4	1.4	.00	.97
24	310	4.9	743	17	136	29	3.8	2.3	2.5	.55	.00	.38
25	347	475	400	15	260	21	3.2	2.1	1.9	.69	.00	.16
26	77	857	138	13	448	16	3.1	1.9	1.5	4.2	.00	.05
27	7.3	454	63	11	590	14	3.0	1.9	1.1	2.3	.00	.04
28	1.9	139	41	11	466	13	2.9	1.9	.86	1.2	.00	.04
29	.49	44	31	12	---	11	2.8	101	.63	.56	.00	.02
30	.16	24	26	10	---	11	2.4	233	.59	.26	.00	.00
31	.17	---	22	9.0	---	10	---	93	---	.14	.00	---
TOTAL	807.34	2128.49	6831.8	1184.0	2839.3	2395	170.5	675.9	3285.38	75.51	.23	361.16
MEAN	26.0	70.9	220	38.2	101	77.3	5.68	21.8	110	2.44	.01	12.0
MAX	347	857	995	307	590	612	9.7	233	565	7.7	.13	178
MIN	.00	.05	4.6	9.0	6.4	10	2.4	1.9	.59	.14	.00	.00
AC-FT	1600	4220	13550	2350	5630	4750	338	1340	6520	150	.5	716
CFSM	.46	1.24	3.86	.67	1.78	1.35	.10	.38	1.92	.0	.0	.21
IN.	.53	1.39	4.45	.77	1.85	1.56	.11	.44	2.14	.0	.0	.24

CAL YR 1986 TOTAL 20183.33 MEAN 55.3 MAX 1340 MIN .00 AC-FT 40030 CFSM .97 IN. 13.1
WTR YR 1987 TOTAL 20754.45 MEAN 56.9 MAX 995 MIN .00 AC-FT 41170 CFSM .99 IN. 13.5

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX

LOCATION.--Lat 31°19'30", long 96°19'08", Leon County, Hydrologic Unit 12070103, in left end bypass pier of Sterling C. Robertson Dam on the Navasota River, 7.5 mi northwest of Marquez, and 124 mi upstream from mouth.

DRAINAGE AREA.--675 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1978 to current year.

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

REMARK.--The lake is formed by a rolled earthfill dam 11,395 ft long, including the spillway. The lake was built for water conservation. Deliberate impoundment began on Oct. 16, 1978. The spillway is an uncontrolled broad-crested weir 3,000 ft long located near left end of dam. The spillway for normal flood releases is a gated concrete gravity structure with an ogee weir section and stilling basin located near center of dam. It is controlled by five 40- by 28-foot tainter gates. There are two 4- by 8-foot slide gates located in each of the two center piers of the spillway that discharge into the stilling basin. These gates can also be opened during extreme floods. A low-flow outlet, consisting of a 10-inch-diameter cast iron pipe, is located in the left end of pier. In addition, there are two 36-inch (outside diameter) steel cylinder pipes located in the right end pier for water supply releases. The lowest invert for low flow and water supply releases is at elevation 325.50 ft. The city of Mexia releases various amounts of sewage effluent into stream above lake. Gage-height telemeter 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	380.0	-
Design flood	370.0	334,735
Crest of spillway	369.6	327,760
Top of gates	365.0	253,905
Top of conservation pool	363.0	225,445
Concrete gated spillway	337.0	21,125
Lowest gated outlet (invert)	322.0	265

COOPERATION.--Records of daily lake elevations are obtained in cooperation with the Brazos River Authority. Area and capacity tables were furnished by the Brazos River Authority and are based on Geological Survey topographic maps.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 241,100 acre-ft May 30, 1979 (elevation, 364.12 ft); minimum, 10,740 acre-ft Nov. 30, 1978 (elevation, 332.63 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 237,700 acre-ft Dec. 24, 25 from 2200 hours to 0400 hours (elevation, 363.87 ft); minimum, 193,700 acre-ft Sept. 30 from 2200 to 2400hours (elevation, 360.55 ft).

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

360.0	187,000	363.0	225,600
362.0	212,200	364.0	239,600

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199800	206300	223400	221300	223400	233500	223000	219400	225700	221300	215200	201000
2	199700	206300	222600	221200	223200	230700	223000	219300	225400	221600	214800	200500
3	199200	205800	222700	221500	223200	226500	222800	219700	225300	221300	214400	200000
4	199500	207800	222600	221500	223400	223800	222700	220000	227900	220700	214000	199600
5	199500	207600	222400	221300	223800	222600	223000	220800	232800	220500	213600	199200
6	199900	207600	222000	221500	223500	222600	222800	221300	233500	220200	212900	198800
7	199500	207800	222600	221700	223200	222700	222700	221600	230700	220100	212300	198600
8	199600	207800	223400	221600	223500	222700	222700	222100	228900	220100	211600	198300
9	199600	207800	226400	222400	223000	223200	222400	222400	226400	220200	211600	197800
10	199300	207400	226300	222700	222800	223000	222600	222300	227600	219800	211100	197000
11	199200	207500	225200	222100	223000	223200	221900	222600	227800	219600	210700	197000
12	200600	206800	223500	222300	223000	223200	222100	222400	229200	219400	210200	196800
13	199300	207000	223000	222100	223000	223100	223500	222300	229700	219800	209300	196500
14	199100	206100	224700	222400	224300	223200	222600	222100	228700	219300	209000	196200
15	198800	206300	230100	222700	224900	223100	222400	222600	225600	218900	208500	195700
16	198700	206300	231400	223000	224600	222800	222400	222600	224300	218500	207800	198200
17	198500	206300	227800	224200	224100	229200	222100	222400	224900	218800	207500	198600
18	198200	206600	227100	225000	223900	229600	221900	222100	224600	218600	207000	199100
19	198100	206500	225600	224600	224100	225400	221900	222000	224300	218600	206600	198300
20	197800	206500	222800	223800	226300	223700	221600	222300	223900	218200	206100	198000
21	197600	206100	221700	223700	226800	224100	222000	222100	223800	218100	205400	197800
22	198100	206700	226100	223000	226000	223800	221500	222300	223200	217900	205200	197100
23	203000	206600	234200	222600	224500	225000	221300	221900	223200	217500	204700	196600
24	206100	208000	237700	222800	225300	224600	221200	222300	223000	217700	204000	196100
25	206700	221500	234800	222800	226700	224700	220900	222100	223000	217400	203400	195700
26	206900	230400	227500	223000	230800	224900	220800	221700	222700	216900	203000	195200
27	206700	231300	222000	222800	232900	224300	220500	221700	222300	216600	203100	194800
28	206600	228600	220700	222700	233300	224100	220400	223400	221600	216500	202500	194700
29	206600	225800	220900	223200	---	223900	220100	225300	221700	216100	201900	194300
30	206500	224300	221100	223200	---	223700	219700	224500	221300	215800	201600	193700
31	206300	---	221300	222800	---	223200	---	225600	---	215600	201400	---
MAX	206900	231300	237700	225000	233300	233500	223500	225600	233500	221600	215200	201000
MIN	197600	205800	220700	221200	222800	222600	219700	219300	221300	215600	201400	193700
(†)	361.55	362.91	362.69	362.80	363.56	362.83	362.57	363.00	362.69	362.26	361.16	360.55
(ϕ)	-6700	+18000	-3000	+1500	+10500	-10100	-3500	+5900	-4300	-5700	-14200	-7700

CAL YR 1986 MAX 237700 MIN 197600 (ϕ) -4300
WTR YR 1987 MAX 237700 MIN 193700 (ϕ) -5900

(†) Gage height, in feet, at end of month.
(ϕ) Change in contents, in acre-feet.

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1980 to current year.

311937096194601 - LAKE LIMESTONE SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
27...	0950	1.00	223	8.30	9.0	10.4	91
27...	0952	20.0	223	8.00	9.0	10.0	87
27...	0954	40.0	223	8.00	9.0	10.0	87
APR							
21...	1050	1.00	221	7.50	18.5	8.0	86
21...	1052	10.0	221	7.40	18.5	8.0	86
21...	1054	20.0	221	7.40	18.0	8.0	85
21...	1056	30.0	221	7.30	17.0	7.4	77
21...	1058	40.0	221	7.00	16.5	6.2	64
AUG							
20...	1225	1.00	260	7.30	30.5	6.6	89
20...	1227	10.0	260	7.20	29.5	5.4	71
20...	1229	20.0	260	7.10	29.5	4.6	61
20...	1231	30.0	260	6.90	29.0	2.5	33
20...	1233	37.0	318	6.90	25.0	0	0

311941096191401 - LAKE LIMESTONE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
27...	1010	1.00	223	8.50	9.5	0.90	10.5	92	68
27...	1012	20.0	223	8.10	9.0	--	9.9	86	--
27...	1014	47.0	223	8.00	9.0	--	9.7	84	68
APR									
21...	1200	1.00	230	7.60	18.5	0.67	8.4	90	69
21...	1202	10.0	230	7.60	18.0	--	8.3	88	--
21...	1204	20.0	230	7.60	18.0	--	8.3	88	--
21...	1206	30.0	230	7.60	18.0	--	8.3	88	--
21...	1208	42.0	230	7.40	17.5	--	8.0	84	66
AUG									
20...	1150	1.00	260	7.40	30.5	1.40	6.6	89	76
20...	1152	10.0	260	7.20	29.5	--	5.7	75	--
20...	1154	20.0	260	7.00	29.0	--	5.2	68	--
20...	1156	30.0	260	6.80	29.0	--	2.7	35	--
20...	1158	35.0	302	6.70	25.5	--	0	0	--
20...	1200	40.0	340	6.70	24.0	--	0	0	--
20...	1202	46.0	346	6.70	23.0	--	0	0	98

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
27...	10	21	3.8	14	0.8	4.4	58	20	23
27...	--	--	--	--	--	--	--	--	--
27...	10	21	3.8	14	0.8	4.4	58	19	24
APR									
21...	13	21	4.0	15	0.8	4.1	56	21	22
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	10	20	4.0	15	0.8	4.2	56	20	20
AUG									
20...	7	23	4.5	17	0.9	4.0	69	20	22
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	0	30	5.5	17	0.8	5.1	126	9.4	23

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

311941096191401 - LAKE LIMESTONE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN								
27...	0.10	3.3	120	<0.100	1.0	0.040	39	2
27...	--	--	--	<0.100	0.80	0.040	20	<10
27...	--	3.5	120	<0.100	1.0	0.040	45	10
APR								
21...	0.10	1.6	120	0.100	1.1	0.030	88	1
21...	--	--	--	--	--	--	--	--
21...	--	--	--	0.100	0.80	0.030	100	<10
21...	--	--	--	--	--	--	--	--
21...	--	1.7	120	0.200	1.2	0.030	77	20
AUG								
20...	0.20	5.1	140	<0.100	0.60	0.040	11	34
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	--	--	--	<0.100	0.50	0.180	880	850
20...	--	--	--	--	--	--	--	--
20...	--	--	--	<0.100	2.5	0.010	7000	6100
20...	--	15	200	<0.100	2.9	0.030	11000	7400

312458096205101 - LAKE LIMESTONE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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									
27...	1120	1.00	192	8.20	9.0	0.60	9.9	86	62
27...	1122	20.0	192	8.10	8.5	--	9.8	84	--
27...	1124	31.0	192	8.10	8.5	--	9.8	84	56
APR									
21...	1500	1.00	235	8.00	22.0	0.70	8.7	100	70
21...	1502	10.0	235	8.00	21.5	--	8.6	98	--
21...	1504	15.0	235	7.90	21.5	--	8.4	96	--
21...	1506	20.0	235	7.10	18.0	--	4.8	51	--
21...	1508	31.0	235	7.10	18.0	--	4.9	52	74
AUG									
20...	1100	1.00	263	8.00	31.0	0.90	7.5	102	79
20...	1102	10.0	266	7.60	30.0	--	6.3	84	--
20...	1104	20.0	266	7.30	30.0	--	4.7	84	--
20...	1106	29.0	271	7.30	29.5	--	2.4	32	81

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
JAN								
27...	13	19	3.5	12	0.7	4.2	49	20
27...	--	--	--	--	--	--	--	--
27...	7	17	3.2	11	0.7	4.3	49	19
APR								
21...	14	21	4.2	16	0.9	4.0	56	22
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	17	23	4.0	16	0.8	4.0	57	25
AUG								
20...	10	24	4.6	17	0.9	4.1	69	20
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	9	25	4.6	17	0.9	4.2	72	19

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

312458096205101 - LAKE LIMESTONE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
27...	20	6.7	120	0.100	1.2	0.060	230	2
27...	--	--	--	0.100	--	0.070	110	<10
27...	18	5.5	110	0.100	0.80	0.070	120	3
APR								
21...	21	1.8	120	<0.100	0.80	0.030	93	1
21...	--	--	--	<0.100	0.60	0.030	70	<10
21...	--	--	--	--	--	--	--	--
21...	--	--	--	0.100	0.80	0.050	80	<10
21...	22	2.4	130	0.200	0.70	0.050	94	14
AUG								
20...	23	5.4	140	<0.100	0.90	0.020	20	8
20...	--	--	--	--	--	--	--	--
20...	--	--	--	<0.100	0.60	0.030	30	40
20...	23	6.1	140	<0.100	1.0	0.030	13	160

312625096205901 - LAKE LIMESTONE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
27...	1150	1.00	192	8.10	9.0	9.8	85
27...	1152	10.0	192	8.10	9.0	9.8	85
27...	1154	19.0	192	8.00	9.0	9.8	85
APR							
21...	1320	1.00	243	8.10	22.5	8.6	100
21...	1322	10.0	243	7.90	22.0	8.1	93
21...	1324	15.0	243	7.40	21.0	6.5	73
21...	1326	20.0	243	7.40	21.0	6.3	71
AUG							
20...	0940	1.00	268	7.90	30.5	7.4	100
20...	0942	10.0	276	7.40	30.5	5.4	73
20...	0944	17.0	276	7.30	30.0	2.4	32

312622096224201 - LAKE LIMESTONE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
27...	1215	1.00	192	7.90	8.5	9.8	84
27...	1217	10.0	192	7.90	8.5	9.8	84
27...	1219	22.0	192	7.90	8.5	9.8	84
APR							
21...	1350	1.00	259	8.10	22.5	8.7	101
21...	1352	5.00	259	8.00	22.5	8.5	99
21...	1354	10.0	259	7.40	21.5	6.1	70
21...	1356	15.0	270	7.20	20.5	4.4	49
21...	1358	22.0	270	7.10	19.5	3.1	34
AUG							
20...	1000	1.00	268	8.30	31.0	8.4	114
20...	1002	10.0	280	7.60	29.5	5.6	74
20...	1004	20.0	280	7.50	29.5	3.5	46

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

312726096240001 - LAKE LIMESTONE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
JAN									
27...	1300	1.00	198	7.70	9.0	0.30	9.6	83	62
27...	1302	16.0	198	7.70	8.5	--	9.2	79	63
APR									
21...	1420	1.00	275	8.00	23.5	0.37	8.3	98	91
21...	1422	5.00	275	7.50	23.0	--	6.5	76	--
21...	1424	10.0	275	7.20	21.0	--	4.0	45	--
21...	1426	16.0	282	7.00	20.0	--	1.7	19	90
AUG									
20...	1020	1.00	290	7.80	30.5	0.50	7.3	98	93
20...	1022	5.00	290	7.30	30.5	--	2.2	30	--
20...	1024	10.0	290	7.10	30.0	--	2.0	27	--
20...	1026	14.0	293	7.40	29.5	--	0.9	12	94

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS 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 WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
27...	8	20	2.9	11	0.6	3.9	54	22
27...	9	20	3.1	11	0.6	4.0	54	23
APR								
21...	16	29	4.4	19	0.9	3.9	75	25
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	10	29	4.3	17	0.8	3.9	80	25
AUG								
20...	11	30	4.5	18	0.8	4.5	82	18
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	12	30	4.6	18	0.8	4.5	82	18

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
27...	16	9.3	120	0.300	1.0	0.090	170	5
27...	18	9.1	120	0.300	0.70	0.110	160	15
APR								
21...	26	1.4	150	<0.100	0.80	0.060	47	1
21...	--	--	--	--	--	--	--	--
21...	--	--	--	<0.100	0.90	0.070	60	20
21...	26	3.7	160	<0.100	1.1	0.090	70	110
AUG								
20...	25	8.6	160	<0.100	0.90	0.080	5	4
20...	--	--	--	--	--	--	--	--
20...	--	--	--	<0.100	1.0	0.100	<10	20
20...	26	8.9	160	<0.100	1.1	0.120	12	160

08110500 NAVASOTA RIVER NEAR EASTERLY, TX

LOCATION.--Lat 31°10'12", long 96°17'51", Leon-Robertson County line, Hydrologic Unit 12070103, at left downstream end of bridge on U.S. Highway 79, 1.0 mi upstream from Missouri Pacific Railroad Co. bridge, 7 mi northeast of Easterly, and 105.7 mi upstream from mouth.

DRAINAGE AREA.--968 mi².

PERIOD OF RECORD.--March 1924 to current year.
Water-quality records.--Chemical analyses: December 1941 to September 1947; February 1966 to August 1985. Sediment records: 1962. Daily records: Specific conductance: August 1947 to September 1947.

REVISED RECORDS.--WSP 898: 1924, 1926-27, 1928(M), 1929-30, 1931(M). WSP 1512: 1932(M), 1936. WDR TX-76-2: Drainage area. WDR TX-78-2: 1974(M), 1977.

GAGE.--Water-stage recorder. Datum of gage is 271.46 ft above National Geodetic Vertical Datum of 1929. Prior to June 11, 1932, nonrecording gage at railroad bridge 1.0 mi downstream at 19.86-foot higher datum. June 11, 1932, to Sept. 30, 1978, water-stage recorder 46 ft upstream at 5.00-foot higher datum.

REMARKS.--No estimated daily discharges. Records fair. Flow is largely regulated by Lake Mexia and Lake Limestone. There are numerous diversions above station for irrigation, municipal supply, and oilfield operation. Several observations of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1925-60) unregulated, 406 ft³/s (5.70 in/yr), 294,100 acre-ft/yr; 27 years (water years 1961-87) regulated, 439 ft³/s (6.16 in/yr), 318,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s May 2, 1944 (gage height, 27.13 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1845, 29 ft in June 1899, from information by local residents (discharge, 90,000 ft³/s), from rating curve extended above 60,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,470 ft³/s Dec. 25 at 0800 hours (gage height, 20.93 ft); minimum daily, 7.8 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	11	975	67	33	3380	35	20	2770	19	10	79
2	8.6	11	566	59	34	3260	33	20	2430	20	10	78
3	8.1	11	206	56	34	3040	35	19	1760	27	10	76
4	7.8	16	34	54	33	2910	33	24	1450	21	10	74
5	8.1	42	20	50	31	2210	31	26	1400	17	42	74
6	10	30	16	46	30	881	33	21	1540	13	74	74
7	12	32	15	44	31	113	32	19	1740	15	76	74
8	12	23	15	43	31	57	33	20	1840	15	77	74
9	12	17	23	50	28	50	32	21	2190	15	77	74
10	12	14	556	54	28	45	31	28	2770	15	77	74
11	11	12	1390	53	28	44	30	27	3010	15	77	74
12	17	11	1440	48	27	45	30	23	2460	14	78	74
13	17	11	1150	43	27	48	32	22	2360	13	78	76
14	14	14	338	41	28	45	38	21	3290	13	78	76
15	12	11	671	41	40	42	34	53	4080	13	78	75
16	11	11	1710	42	85	41	31	106	4080	13	79	77
17	11	12	2860	64	66	774	28	51	2550	13	79	79
18	11	12	4080	126	47	1960	26	28	437	14	79	74
19	11	11	4110	357	37	2900	25	22	256	14	78	69
20	11	11	3610	977	91	3600	24	23	267	13	76	68
21	11	11	3330	874	825	2500	24	21	258	12	76	68
22	14	15	2320	382	1140	279	23	21	251	12	76	68
23	105	16	2290	323	1150	79	23	19	184	13	76	70
24	272	16	4120	108	1190	69	23	20	78	14	76	65
25	164	322	6270	47	1480	58	22	39	36	13	76	65
26	98	676	5170	40	2040	49	22	35	29	13	75	64
27	31	1950	4210	37	2790	44	21	22	23	12	74	64
28	17	2420	3840	35	3130	41	21	19	21	12	75	64
29	13	2040	1970	35	---	39	20	513	20	11	76	65
30	11	1740	185	34	---	52	20	1810	20	11	77	64
31	11	---	81	32	---	42	---	2430	---	11	77	---
TOTAL	972.8	9529	57571	4262	14534	28697	845	5543	43600	446	2077	2150
MEAN	31.4	318	1857	137	519	926	28.2	179	1453	14.4	67.0	71.7
MAX	272	2420	6270	977	3130	3600	38	2430	4080	27	79	79
MIN	7.8	11	15	32	27	39	20	19	20	11	10	64
AC-FT	1930	18900	114200	8450	28830	56920	1680	10990	86480	885	4120	4260
CFSM	.0	.33	1.92	.14	.54	.96	.0	.18	1.50	.0	.07	.07
IN.	.0	.37	2.21	.16	.56	1.10	.0	.21	1.68	.0	.08	.08

CAL YR 1986 TOTAL 199441.9 MEAN 546 MAX 29400 MIN 2.6 AC-FT 395600 CFSM .56 IN. 7.66
WTR YR 1987 TOTAL 170226.8 MEAN 466 MAX 6270 MIN 7.8 AC-FT 337600 CFSM .48 IN. 6.54

08111000 NAVASOTA RIVER NEAR BRYAN, TX

LOCATION.--Lat 30°52'10", long 96°11'32", Brazos-Madison County line, Hydrologic Unit 12070103, on right bank at upstream side of bridge on U.S. Highway 190, 2.5 mi upstream from Shepard Creek, 17 mi northeast of Bryan, and 68.4 mi upstream from mouth.

DRAINAGE AREA.--1,454 mi².

PERIOD OF RECORD.--January 1951 to current year.
Water-quality records: Chemical and biochemical analyses: October 1958 to September 1981. Sediment records: October 1973 to September 1981.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 224.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow is largely regulated by Lake Mexia and by Lake Limestone (stations 08110300 and 08110470). There are numerous diversions above the station for irrigation, municipal, and oilfield operations. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years (water years 1952-60) unregulated, 437 ft³/s (316,600 acre-ft/yr); 27 years (water years 1961-87) regulated, 600 ft³/s (437,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,200 ft³/s Apr. 29, 1966 (gage height, 16.57 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1840, 19.5 ft in June 1899, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,320 ft³/s Dec. 28, gage height, 13.60 ft; minimum daily, 14 ft³/s Aug 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	52	e2200	2630	78	3530	74	25	2100	40	17	55
2	18	46	e1750	1030	95	4240	66	25	3260	40	17	53
3	18	43	e1100	382	110	4510	57	24	4910	40	17	52
4	17	47	e650	225	97	4450	52	23	5130	42	16	50
5	17	121	e300	168	87	4150	51	24	4150	49	15	49
6	19	199	e100	140	80	3790	52	27	3180	45	14	48
7	26	171	e66	125	76	3320	53	31	2540	39	17	47
8	44	117	e64	115	74	2300	58	34	2220	31	42	47
9	49	97	e62	114	73	915	54	32	2400	29	49	46
10	39	84	e500	132	70	275	52	39	3120	29	50	48
11	31	71	e1100	145	66	151	52	42	3700	30	50	48
12	64	59	e1800	135	64	115	50	43	4220	29	49	47
13	188	52	e1850	119	63	106	53	43	5940	29	49	47
14	191	50	e1600	107	64	100	60	40	5870	27	49	49
15	117	51	e900	101	77	94	78	36	4940	24	49	50
16	75	51	e1800	99	84	88	76	32	4460	22	49	57
17	53	52	e2800	102	116	441	58	115	4630	21	49	60
18	40	51	e3750	140	134	1090	50	134	5030	21	49	58
19	33	48	e4500	285	104	1470	45	71	4800	22	49	56
20	28	47	e4400	406	213	2110	42	47	3280	23	48	53
21	27	45	e4000	719	571	2780	39	40	1630	23	48	50
22	27	44	e3700	1010	734	3620	36	42	785	22	47	48
23	32	44	e2900	1010	1080	3930	35	38	481	20	47	47
24	310	57	e2800	658	1400	2370	33	34	350	19	47	46
25	714	308	e5000	363	1650	867	31	30	210	23	47	46
26	836	800	e5400	160	2250	305	30	31	115	34	47	44
27	599	1600	e6000	104	2990	161	30	53	73	32	47	43
28	239	e2050	e6880	91	2910	111	28	47	57	33	47	44
29	110	e2400	6240	86	---	93	28	68	48	25	47	45
30	75	e2500	5610	83	---	80	27	655	43	21	50	46
31	60	---	4690	80	---	73	---	1260	---	19	53	---
TOTAL	4114	11357	84512	11064	15410	51635	1450	3185	83672	903	1271	1479
MEAN	133	379	2726	357	550	1666	48.3	103	2789	29.1	41.0	49.3
MAX	836	2500	6880	2630	2990	4510	78	1260	5940	49	53	60
MIN	17	43	62	80	63	73	27	23	43	19	14	43
AC-FT	8160	22530	167600	21950	30570	102400	2880	6320	166000	1790	2520	2930
CFSM	.09	.26	1.87	.25	.38	1.15	.0	.07	1.92	.0	.0	.0
IN.	.11	.29	2.16	.28	.39	1.32	.0	.08	2.14	.0	.0	.0

CAL YR 1986	TOTAL	254424	MEAN	697	MAX	18600	MIN	17	AC-FT	504600	CFSM	.48	IN.	6.51
WTR YR 1987	TOTAL	270052	MEAN	740	MAX	6880	MIN	14	AC-FT	535600	CFSM	.51	IN.	6.91

e Estimated.

08111500 BRAZOS RIVER NEAR HEMPSTEAD, TX

LOCATION.--Lat 30°07'44", long 96°11'15", Washington-Waller County line, Hydrologic Unit 12070101, at downstream side of bridge on U.S. Highway 290, 6,000 ft upstream from Texas and New Orleans Railroad Co. bridge, 6.5 mi northwest of Hempstead, 10.5 mi upstream from Caney Creek, and at mile 193.8.

DRAINAGE AREA.--43,880 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1938 to current year. Gage-height records collected in this vicinity at intermittent periods since 1903 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1512: 1941. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 117.90 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1940, nonrecording gage at railroad bridge 6,000 ft downstream at datum 5.80 ft lower. Nov. 1, 1940, to Sept. 30, 1963, nonrecording gage at site 1,500 ft downstream at present datum. Oct. 1, 1964, to July 31, 1974, water-stage recorder 1,500 ft downstream at present datum.

REMARKS.--Records good, except those for estimated daily discharges, which are fair. There are many diversions above station for irrigation, municipal and industrial uses, and oilfield operations. At times, flow is affected by reservoirs on the Brazos River above Waco (station 08096500) and by reservoirs on the Lampasas and Little Rivers above Cameron. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08110200. Gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 6,587 ft³/s (4,772,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s May 2, 1957 (gage height, 44.21 ft), at site 1,500 ft downstream; minimum daily, 137 ft³/s Nov. 6, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 56.1 ft Dec. 8, 1913, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co., obtained at bridge 6,000 ft downstream. Flood of July 4, 1899, reached a stage of 53.6 ft, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 58,900 ft³/s June 16 at 0400 hours (gage height, 31.64 ft); minimum daily, 1,400 ft³/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3380	9610	8550	19100	e9300	25700	8700	3490	24800	21100	5750	2550
2	2960	9330	7040	18700	e9600	25800	7990	3440	27600	19000	5310	2280
3	2420	8920	6530	18100	e9500	22200	7640	3390	39800	16400	6150	2060
4	1850	8280	6250	17400	e9300	17300	7430	3030	43500	14500	7000	1860
5	1870	7820	6250	16500	e8900	15000	7070	e2450	44400	16300	6890	1750
6	2100	7720	6960	15200	e8700	18500	7000	e2400	48000	16800	6560	1680
7	2090	8020	7180	13700	e8800	24500	6990	e3000	46900	16300	5940	1870
8	2410	8280	7360	12300	e8700	25200	6990	e4500	41100	16300	5640	1740
9	3240	7230	6930	11500	e8200	25100	7030	e3600	35600	21000	5320	1570
10	4640	6830	6100	11400	7470	25600	7620	e2500	37200	20200	5040	1510
11	5260	7530	5490	11300	7200	25300	9190	e2100	40600	15800	4440	1520
12	8500	9760	7040	11400	7060	21900	9850	e2400	44600	14600	4170	2080
13	12500	7950	9570	11300	6400	17800	9870	e3000	49600	13500	5050	2260
14	16700	7130	8670	11000	5560	15700	10900	e2900	52800	13500	5290	1790
15	18600	7130	11300	10700	6360	14600	11800	e2900	57100	12700	4960	1620
16	15700	6760	21800	10100	7560	13300	12100	e3000	57900	12300	4740	1580
17	14600	5870	26400	e9560	7460	13900	11000	e2900	46500	12700	4400	2140
18	15000	5010	25800	e10700	7020	18400	8700	e2900	34500	12000	4220	2320
19	15000	4350	22500	e11200	6960	21300	7780	e2900	25600	11600	4450	1790
20	12800	4000	24100	9760	7330	21700	7310	e3600	23300	12200	4870	1640
21	9250	3930	23900	10600	9590	19000	6550	e3100	24700	12400	5010	1660
22	7650	4140	20800	10000	9020	16600	5890	e3100	28300	11600	4970	1860
23	7250	4400	28500	8510	8650	14200	5770	e3600	30500	11100	4820	2590
24	7580	4870	39000	8600	8920	12400	5110	e3400	30600	10900	4020	2570
25	17300	5840	47100	9940	11000	11800	4440	e3600	31500	10900	3370	1770
26	20500	12600	49400	10500	16100	11700	4140	e3900	32800	10600	3190	1400
27	15100	14800	38600	10700	22800	11900	3970	e3800	32600	9470	3100	1460
28	9550	13500	25300	10500	25300	11700	3750	e3800	29000	8870	3050	1710
29	7150	12700	19400	10300	---	11000	3630	e3900	23600	8710	3000	1830
30	7030	10800	17600	9260	---	10100	3550	e8300	21900	8630	2920	1910
31	8640	---	18500	e8300	---	9320	---	e16000	---	7490	2780	---
TOTAL	278620	235110	559920	368130	268760	548520	219760	116900	1106900	419470	146420	56370
MEAN	8988	7837	18060	11880	9599	17690	7325	3771	36900	13530	4723	1879
MAX	20500	14800	49400	19100	25300	25800	12100	16000	57900	21100	7000	2590
MIN	1850	3930	5490	8300	5560	9320	3550	2100	21900	7490	2780	1400
AC-FT	552600	466300	1111000	730200	533100	1088000	435900	231900	2196000	832000	290400	111800

CAL YR 1986 TOTAL 2973980 MEAN 8148 MAX 49400 MIN 1200 AC-FT 5899000
WTR YR 1987 TOTAL 4324880 MEAN 11850 MAX 57900 MIN 1400 AC-FT 8578000

e Estimated.

08111700 MILL CREEK NEAR BELLVILLE, TX

LOCATION.--Lat 29°52'51", long 96°12'18", Austin County, Hydrologic Unit 12070104, on left bank at upstream side of abandoned bridge pier, about 5 ft downstream from State Highway 36, 5.0 mi southeast of Bellville, 6.0 mi upstream from Brazos River, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--376 mi².

PERIOD OF RECORD.--July 1963 to current year.
Water-quality records.--Chemical analyses: October 1968 to September 1985. Sediment records: October 1966 to September 1985.

REVISED RECORDS.--WSP 2122: 1965(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 122.82 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. During the year, the city of Bellville discharged about 457 acre-ft of sewage effluent into a tributary of Mill Creek above gage.

AVERAGE DISCHARGE.--24 years, 240 ft³/s (8.67 in/yr), 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,400 ft³/s June 13, 1973 (gage height, 17.95 ft); minimum daily, 0.08 ft³/s July 22, 23, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1899, 22.8 ft in 1940, from information by local residents and the State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 16	1600	6,420	13.74	June 3	2100	*25,600	*16.15
Dec. 24	0300	8,700	14.01				

Minimum daily discharge (estimated), 6.0 ft³/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	26	77	118	83	765	e60	24	1820	68	13	58
2	e17	25	68	109	86	309	e56	23	2250	54	12	25
3	e15	25	60	105	83	219	e52	23	17700	62	11	17
4	e14	55	56	99	81	189	e50	27	15500	44	10	13
5	e20	100	54	94	79	173	e48	35	5450	36	10	10
6	e50	56	52	94	74	e165	e60	e89	1440	31	e10	e8.5
7	e120	56	52	92	71	e160	e55	64	284	31	e9.7	e8.0
8	e150	63	51	93	71	e155	e50	48	274	71	e9.3	e7.6
9	e65	50	70	105	68	e150	e45	72	253	221	e9.0	e7.2
10	31	41	83	109	65	e144	e42	65	427	121	e10	e8.5
11	24	74	83	109	64	e150	e40	49	1120	68	e9.0	370
12	267	869	74	92	65	e165	e38	3240	2070	54	e8.6	96
13	378	1160	75	85	66	e155	e36	2530	3110	42	e8.2	62
14	581	187	80	86	67	e145	e34	245	4690	36	e7.8	36
15	140	100	1700	90	258	e140	e33	110	2630	42	e7.5	26
16	74	82	5450	121	239	e135	e40	170	352	34	e7.2	21
17	52	71	3180	548	138	e265	e38	669	217	33	e7.0	18
18	41	64	1060	1590	99	1250	e35	278	161	30	e6.8	288
19	34	59	1830	927	e90	1710	e34	104	132	31	e6.7	158
20	30	55	822	231	e300	e220	e33	130	115	30	e6.6	56
21	28	49	207	149	e280	e150	e32	114	100	27	e6.5	36
22	55	47	858	142	e150	e130	e32	82	91	25	e6.4	26
23	68	46	5570	127	e100	e120	32	64	83	23	e6.3	21
24	66	53	7140	114	e200	e130	31	55	75	22	e6.2	18
25	e75	476	1950	109	e300	e115	31	49	68	21	e6.2	16
26	60	1170	325	98	e1400	e100	29	44	61	20	e6.1	14
27	44	1210	197	89	e4700	e90	28	38	54	18	e6.1	13
28	37	208	160	80	e2600	e80	26	36	48	17	e6.0	45
29	33	116	144	88	---	e75	25	415	43	16	e10	49
30	29	89	137	87	---	e70	25	992	57	15	63	25
31	27	---	127	81	---	e65	---	512	---	14	107	---
TOTAL	2640	6682	31792	6061	11877	7889	1170	10396	60675	1357	409.2	1556.8
MEAN	85.2	223	1026	196	424	254	39.0	335	2022	43.8	13.2	51.9
MAX	581	1210	7140	1590	4700	1710	60	3240	17700	221	107	370
MIN	14	25	51	80	64	65	25	23	43	14	6.0	7.2
AC-FT	5240	13250	63060	12020	23560	15650	2320	20620	120300	2690	812	3090
CFSM	.23	.59	2.73	.52	1.13	.68	.10	.89	5.38	.12	.0	.14
IN.	.26	.66	3.15	.60	1.18	.78	.12	1.03	6.00	.13	.0	.15

CAL YR 1986 TOTAL 97308.6 MEAN 267 MAX 12800 MIN 4.5 AC-FT 193000 CFSM .71 IN. 9.63
WTR YR 1987 TOTAL 142504.8 MEAN 390 MAX 17700 MIN 6.0 AC-FT 282700 CFSM 1.04 IN. 14.1

e Estimated.

08114000 BRAZOS RIVER AT RICHMOND, TX

LOCATION.--Lat 29°34'56", long 95°45'27", Fort Bend County, Hydrologic Unit 12070104, on right bank at downstream side of downstream bridge on U.S. Highway 59 in Richmond, 925 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 92.0.

DRAINAGE AREA.--45,007 mi², approximately, of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1903 to June 1906, October 1922 to current year. Published as "at Rosenberg" October 1922 to September 1931 and equivalent except for diversion by Richmond Irrigation Co.'s canal. June to November 1901 and June to September 1902 in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1914 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1392: 1933. WSP 1632: 1958. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 37.94 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1922, various types of nonrecording gages at railroad bridge 925 ft upstream at different datums. Oct. 1, 1922, to Sept. 30, 1931, nonrecording chain gage at Rosenberg 7.6 mi upstream at datum about 7 ft higher; Oct. 1, 1931, to Sept. 30, 1975, water-stage recorder at present site at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good except those for June 12-20, which are fair. Considerable water is diverted above station for irrigation and municipal supply. For statement regarding regulation by upstream reservoirs and Soil Conservation Service floodwater-retarding structures, see station 08110200. Gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years (water years 1904-05, 1923-40) unregulated, 7,209 ft³/s (5,223,000 acre-ft/yr); 47 years (water years 1941-87) regulated, 7,301 ft³/s (5,290,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/s June 6, 1929 (gage height, 43.6 ft, from floodmarks), present site and datum; minimum daily, 35 ft³/s Aug. 23, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 51.2 ft Dec. 10, 1913, present datum, from floodmarks on right bank 1,000 ft upstream from gage. From information by Texas and New Orleans Railroad Co., stages of other floods at railroad bridge, present datum, are as follows: May 1884, 46.7 ft; June 13, 1885, 47.7 ft; July 1899, 48.6 ft; May 2, 1915, 46.3 ft; and May 9, 1922, 43.9 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67,800 ft³/s June 17 at 1000 hours (gage height, 32.18 ft); minimum daily, 1,650 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4430	7960	11500	19000	9070	29500	11400	4830	17000	23700	9250	3620
2	3980	9530	9520	19800	9420	28500	10700	4740	27000	22400	7780	3140
3	3650	9790	8040	19700	10000	27300	10000	4680	31800	20500	6620	2810
4	3250	9850	7410	19000	9930	23900	9460	4730	50200	18200	6810	2510
5	2850	9890	7140	18200	9800	19600	9210	4780	59800	16200	7550	2310
6	2410	9040	6970	17500	9560	17300	8960	4530	55700	16700	7890	2190
7	2260	8450	7160	16200	9330	19200	8750	4280	54100	18600	7460	2040
8	2440	8330	7570	14800	9360	24700	8680	4130	52100	19100	7080	1930
9	2740	8650	7770	13700	9360	26000	8620	5080	47700	18800	6650	1950
10	3240	8220	7790	12800	9120	26000	8520	6160	42600	23100	6570	1820
11	4030	7290	7270	12600	8700	26200	8770	4960	43200	22600	6040	1830
12	6160	7190	6390	12400	8320	25900	9900	3910	50700	17900	5610	2180
13	9530	9700	6630	12400	8070	23100	11200	5110	58000	16100	5060	2090
14	13100	10300	8770	12300	7780	19700	11400	7180	62100	15100	4970	2330
15	17100	8100	12800	12200	7190	17700	11900	5190	64600	14800	5590	2350
16	19300	7450	19700	12000	7420	16700	12900	4530	66500	14300	5520	1990
17	17100	7340	28000	12400	8490	15800	13400	4930	67500	13600	5260	1700
18	15100	6750	30600	13600	8370	16100	13000	5570	62000	13700	4980	1710
19	15300	5980	30100	14900	7830	20600	11200	4930	46300	13400	4660	2360
20	15300	5280	26900	13400	7710	23300	9710	4210	30900	12800	4550	2600
21	14000	4790	25600	11400	7910	23100	9080	4050	25800	12900	4750	1970
22	11500	4520	26200	11000	10000	20700	8480	4380	26200	13600	4940	1720
23	9540	4680	28800	11000	10400	18600	7700	4190	29000	12900	4920	1650
24	8380	5280	36800	9750	9660	16600	7220	4470	31100	12400	4840	1850
25	7880	6810	45400	9060	10200	15000	6680	4790	31400	12100	4540	2380
26	14600	7490	50000	9910	15600	14000	6020	4590	32000	12000	3890	2430
27	20500	13300	51300	10600	23100	13800	5580	4830	33100	11900	3540	1900
28	17000	17100	42300	10900	28100	13900	5330	4990	33100	11100	3370	1880
29	11300	14900	29200	10900	---	13700	5130	5080	30300	10200	3320	1990
30	8470	13200	21100	10600	---	13200	4900	5930	25700	9930	3660	2470
31	7370	---	18700	10100	---	12300	---	9040	---	9790	3940	---
TOTAL	293810	257160	633430	414120	289800	622000	273800	154800	1287500	480420	171610	65700
MEAN	9478	8572	20430	13360	10350	20060	9127	4994	42920	15500	5536	2190
MAX	20500	17100	51300	19800	28100	29500	13400	9040	67500	23700	9250	3620
MIN	2260	4520	6390	9060	7190	12300	4900	3910	17000	9790	3320	1650
AC-FT	582800	510100	1256000	821400	574800	1234000	543100	307000	2554000	952900	340400	130300

CAL YR 1986 TOTAL 3274610 MEAN 8972 MAX 51300 MIN 1370 AC-FT 6495000
WTR YR 1987 TOTAL 4944150 MEAN 13550 MAX 67500 MIN 1650 AC-FT 9807000

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1941 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: October 1967 to May 1982. Sediment analyses: April 1957 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to current year.
WATER TEMPERATURE: November 1950 to current year.
SUSPENDED-SEDIMENT DISCHARGE: January 1966 to September 1986.

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, 2,600 microsiemens Sept. 4, 1978; minimum daily, 172 microsiemens Oct. 31, 1984
WATER TEMPERATURE: Maximum daily, 33.0°C Aug. 5, 1951; minimum daily, 1.0°C Jan. 8, 1970.
SEDIMENT CONCENTRATION: Maximum daily mean, 13,500 mg/L Apr. 4, 1979; minimum daily mean, 8 mg/L Nov. 29, 1967, Sept. 20, and Oct. 6, 7, 1980.
SEDIMENT LOAD: Maximum daily, 1,860,000 tons Apr. 4, 1979; minimum daily, 9.8 tons Oct. 11, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,700 microsiemens Apr. 18, 19; minimum daily 317 microsiemens Dec. 29.
WATER TEMPERATURE: Maximum daily; 30.0 on several days during August; minimum daily, 7.0°C Jan. 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (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)
DEC											
09...	1330	7830	846	7.60	14.0	110	9.4	91	1.3	520	490
JAN											
12...	1315	12400	598	7.80	10.5	150	12.0	106	1.3	92	84
MAR											
03...	1305	27400	489	7.60	13.5	450	8.9	84	2.9	580	920
APR											
20...	1342	9640	1650	8.00	21.5	90	8.2	92	0.8	880	120
JUN											
09...	1340	47600	768	7.50	24.5	360	6.5	77	1.8	500	1000
JUL											
28...	1330	11100	570	7.80	28.5	260	6.9	89	0.6	680	130

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL 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)
DEC											
09...	200	85	59	12	88	3	5.2	113	86	140	0.30
JAN											
12...	190	42	59	9.9	48	2	4.2	146	53	72	0.20
MAR											
03...	150	62	48	7.2	40	1	4.6	88	52	75	0.30
APR											
20...	340	190	98	22	200	5	5.2	143	200	320	0.30
JUN											
09...	180	76	56	9.6	79	3	4.8	104	86	120	0.30
JUL											
28...	200	54	58	13	43	1	4.0	145	50	62	0.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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)
DEC										
09...	8.4	497	470	0.480	--	0.020	<0.010	0.500	0.540	0.030
JAN										
12...	8.8	352	340	0.890	--	0.010	<0.010	0.900	0.890	0.030
MAR										
03...	10	297	290	2.41	2.31	0.290	0.290	2.70	2.60	0.040
APR										
20...	6.3	957	940	0.490	--	0.010	<0.010	0.500	0.480	0.030
JUN										
09...	9.9	437	430	0.490	0.430	0.010	0.010	0.500	0.440	0.030
JUL										
28...	10	344	330	0.380	--	0.020	<0.010	0.400	0.330	0.020

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DIS-SOLVED (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, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDIMENT, SUS-PENDED (MG/L)	SEDIMENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 09...	0.010	1.3	1.3	0.090	0.100	0.090	0.28	289	6110	76
JAN 12...	0.050	0.77	0.80	0.190	0.090	0.060	0.18	321	10700	99
MAR 03...	0.040	1.9	1.9	0.350	0.080	0.060	0.18	1350	99900	88
APR 20...	0.050	0.47	0.50	0.300	0.070	0.050	0.15	423	11000	65
JUN 09...	0.040	2.6	2.6	0.240	0.030	0.050	0.15	1410	181000	87
JUL 28...	0.010	0.68	0.70	0.200	0.100	0.040	0.12	711	21300	77

DATE	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC 09...	10	2	90	2	1	<1	<3	2	11	<5
JAN 12...	--	--	--	--	--	--	--	--	--	--
MAR 03...	70	2	71	<0.5	1	<1	<3	6	110	<5
APR 20...	--	--	--	--	--	--	--	--	--	--
JUN 09...	70	3	90	<0.5	3	<1	<3	14	68	<5
JUL 28...	30	3	79	<0.5	<1	<1	<3	4	19	14

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 09...	16	<1	<0.1	<10	1	<1	<1	610	<6	<3
JAN 12...	--	--	--	--	--	--	--	--	--	--
MAR 03...	11	4	<0.1	<10	4	<1	<1	410	<6	15
APR 20...	--	--	--	--	--	--	--	--	--	--
JUN 09...	17	2	<0.1	<10	2	<1	<1	510	<6	10
JUL 28...	17	2	<0.1	<10	<1	1	<1	650	<6	4

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1986 TO SEPTEMBER 1987

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCTANCE (MICROSIEMENS)	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.	1986	293810	1260	711	564000	230	182300	130	100600	270
NOV.	1986	257160	918	517	359000	140	98600	92	63600	230
DEC.	1986	633430	462	260	444000	57	96700	46	77900	140
JAN.	1987	414120	666	375	419000	89	99500	66	73700	190
FEB.	1987	289800	877	494	387000	130	101800	87	68300	230
MAR.	1987	622000	912	514	863000	140	241900	91	153000	230
APR.	1987	273800	1300	733	542000	240	174800	130	96600	280
MAY	1987	154800	1100	622	260000	190	77700	110	46200	260
JUNE	1987	1287500	769	433	1505000	110	387400	76	265700	200
JULY	1987	480420	719	404	525000	99	128500	71	92400	200
AUG.	1987	171610	695	391	181000	94	43500	69	31900	190
SEPT	1987	65700	1020	575	102000	160	28700	100	18100	250
TOTAL		4944150	**	**	6151000	**	1661000	**	1088000	**
WTD.AVG.		13550	818	461	**	120	**	82	**	210

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	805	825	509	552	884	529	769	1410	743	1010	625	857
2	838	915	461	658	863	591	806	1380	756	860	626	906
3	861	1050	458	658	722	505	898	1530	638	863	644	911
4	910	824	444	617	819	607	956	1510	426	870	623	910
5	963	1130	504	627	904	595	1030	1520	318	875	629	916
6	966	1190	610	642	924	634	1030	1520	477	830	753	966
7	990	1190	752	656	920	528	1040	1480	669	800	600	949
8	896	1140	810	580	925	784	1080	1460	733	772	764	993
9	806	1050	835	668	916	1250	1070	1290	769	711	685	1060
10	861	1090	890	691	930	1250	1090	1290	844	827	682	1080
11	910	1020	962	635	950	1420	1090	1390	989	680	652	1210
12	1270	935	985	616	972	1340	1100	1290	914	653	671	1170
13	1310	954	998	736	991	1430	1140	1260	820	740	726	1130
14	881	1060	1020	846	1050	1400	1350	683	713	742	685	860
15	1560	778	860	870	1060	1270	1510	606	745	714	764	1120
16	1570	964	529	870	1010	1160	1550	846	701	625	670	1130
17	1400	1020	454	834	848	1180	1680	812	617	719	644	1180
18	1190	1060	505	763	730	1230	1700	853	633	596	841	1180
19	1590	1050	433	625	926	1170	1700	749	588	630	787	1190
20	1630	1080	370	568	940	770	1640	943	645	660	736	1320
21	1630	1080	408	543	950	953	1620	1060	741	584	717	1140
22	1600	1110	409	535	977	651	1520	1050	718	589	621	1120
23	1560	1200	410	552	879	608	1520	848	850	581	578	1040
24	1530	1120	400	635	918	632	1520	1030	1110	563	691	810
25	1470	1010	376	686	886	677	1540	1080	1190	576	721	949
26	1680	939	377	614	918	816	1480	1010	1170	577	711	1010
27	1250	871	353	543	743	862	1390	1110	1200	573	759	990
28	607	583	324	600	692	883	1350	1100	1210	572	776	995
29	589	430	317	648	---	834	1320	950	1220	574	746	900
30	632	359	391	870	---	800	1360	900	1190	553	845	868
31	785	---	456	875	---	778	---	825	---	568	898	---
MEAN	1150	968	568	671	902	908	1290	1120	811	693	705	1030

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.0	---	11.0	10.0	14.0	13.0	11.0	24.0	25.0	28.0	29.0	26.0
2	28.0	---	10.0	10.0	13.0	13.0	12.0	24.0	25.0	27.0	29.0	26.0
3	28.0	20.0	10.0	11.0	14.0	13.0	13.0	24.0	24.0	27.0	29.0	27.0
4	---	13.0	10.0	10.0	14.0	13.0	13.0	24.0	24.0	---	29.0	28.0
5	27.0	19.0	11.0	9.0	15.0	13.0	15.0	---	24.0	---	29.0	27.0
6	28.0	18.0	---	10.0	14.0	13.0	15.0	24.0	24.0	---	29.0	27.0
7	25.0	18.0	14.0	11.0	---	14.0	14.0	22.0	24.0	---	29.0	27.0
8	24.0	21.0	---	10.0	---	15.0	15.0	23.0	24.0	28.0	30.0	28.0
9	24.0	22.0	14.0	12.0	12.0	14.0	15.0	23.0	24.0	27.0	30.0	28.0
10	21.0	20.0	14.0	12.0	12.0	14.0	16.0	23.0	25.0	27.0	29.0	28.0
11	---	20.0	15.0	10.0	13.0	14.0	19.0	24.0	25.0	27.0	30.0	28.0
12	---	17.0	---	10.0	13.0	14.0	20.0	24.0	25.0	28.0	30.0	28.0
13	19.0	14.0	9.0	10.0	14.0	14.0	21.0	25.0	25.0	29.0	30.0	27.0
14	24.0	21.0	11.0	12.0	15.0	13.0	19.0	25.0	25.0	29.0	30.0	28.0
15	19.0	14.0	---	12.0	---	14.0	18.0	25.0	26.0	29.0	30.0	28.0
16	19.0	15.0	11.0	12.0	14.0	15.0	19.0	25.0	27.0	29.0	30.0	28.0
17	18.0	17.0	11.0	12.0	14.0	16.0	20.0	25.0	27.0	29.0	30.0	28.0
18	18.0	17.0	13.0	11.0	13.0	16.0	20.0	25.0	27.0	29.0	30.0	28.0
19	18.0	18.0	12.0	---	13.0	16.0	20.0	26.0	27.0	28.0	30.0	28.0
20	18.0	20.0	12.0	11.0	---	17.0	21.0	25.0	27.0	28.0	30.0	27.0
21	19.0	17.0	12.0	9.0	11.0	17.0	21.0	26.0	27.0	28.0	30.0	27.0
22	19.0	18.0	12.0	9.0	11.0	18.0	21.0	26.0	27.0	28.0	30.0	26.0
23	21.0	20.0	10.0	7.0	10.0	19.0	22.0	27.0	---	28.0	30.0	24.0
24	20.0	18.0	9.0	9.0	11.0	17.0	22.0	27.0	29.0	28.0	30.0	24.0
25	20.0	15.0	9.0	8.0	11.0	16.0	23.0	27.0	29.0	28.0	30.0	24.0
26	20.0	15.0	9.0	8.0	11.0	16.0	23.0	27.0	28.0	28.0	30.0	24.0
27	19.0	15.0	9.0	9.0	13.0	17.0	24.0	27.0	28.0	29.0	30.0	25.0
28	19.0	13.0	9.0	---	13.0	17.0	---	---	28.0	29.0	29.0	25.0
29	19.0	10.0	9.0	12.0	---	16.0	24.0	---	28.0	29.0	29.0	25.0
30	19.0	10.0	10.0	12.0	---	13.0	24.0	---	28.0	29.0	29.0	24.0
31	19.0	---	10.0	---	---	11.0	---	---	---	29.0	27.0	---
MEAN	21.5	17.0	11.0	10.5	13.0	15.0	18.5	25.0	26.0	28.0	29.5	26.5

08115000 BIG CREEK NEAR NEEDVILLE, TX

LOCATION.--Lat 29°28'35", long 95°48'45", Fort Bend County, Hydrologic Unit 12070104, near center of stream at downstream side of bridge on State Highway 36, 1.5 mi downstream from Coon Creek, 5.5 mi north of Needville, and 10.5 mi upstream from Fairchild Creek, and 33.0 mi upstream from mouth.

DRAINAGE AREA.--42.8 mi².

PERIOD OF RECORD.--May 1947 to June 1950, March 1952 to current year.

REVISED RECORDS.--WSP 1148: 1947. WSP 1712: 1957-58, 1959(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 59.39 ft above National Geodetic Vertical Datum of 1929. Prior to June 30, 1950, and May 29, 1959, to Mar. 29, 1960, nonrecording gage at 10.00 ft higher datum. March 1952 to May 28, 1959, and Mar. 30, 1960, to Sept. 30, 1967, water-stage recorder at 10.00 ft higher datum.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. Channel rectification was completed in April 1956. No diversion above station. Low flow supplemented by drainage from irrigated fields. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1948-49, 1953-87), 36.5 ft³/s (26,440 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s June 26, 1960 (gage height, 23.81 ft); maximum gage height, 24.03 ft Oct. 31, 1959; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, 24.4 ft in August 1945 before channel rectification, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,500 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 13	1730	1,680	19.25	Dec. 3	0230	1,980	19.17
Nov. 4	2330	2,190	20.27	Feb. 26	0530	2,740	20.48
Dec. 15	1630	*3,360	*21.31	June 12	2200	2,120	19.94

Minimum daily discharge, 0.84 ft³/s Apr. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.5	18	3.2	1.6	51	1.4	1.3	17	3.1	2.4	e9.0
2	2.0	33	11	2.6	1.5	24	1.3	1.6	8.7	43	2.4	e5.0
3	1.9	24	6.5	2.4	1.4	13	1.3	1.3	258	15	2.5	e3.5
4	1.8	511	5.0	2.0	1.4	7.9	1.3	1.3	358	12	2.6	e3.0
5	1.9	991	4.3	1.9	1.4	4.6	1.3	3.1	449	7.5	2.6	e2.8
6	5.7	146	3.3	1.8	1.3	3.0	1.2	50	123	5.1	2.6	e2.6
7	5.8	62	2.5	1.8	1.3	2.6	1.2	68	86	7.4	2.4	e2.5
8	9.6	29	2.8	1.8	1.2	2.5	1.2	29	226	21	2.6	e2.4
9	29	15	3.4	1.8	1.3	2.3	1.2	70	384	488	2.5	e2.3
10	25	8.3	6.3	1.7	1.3	2.1	1.2	22	331	138	e10	e4.0
11	20	4.9	4.8	1.8	1.4	1.9	1.3	5.9	272	49	e6.0	e3.0
12	718	2.9	3.3	1.9	1.4	1.9	1.3	3.0	1470	18	e4.0	e2.4
13	1270	2.4	2.8	1.6	1.4	1.9	1.2	2.5	1320	8.7	e3.2	e2.2
14	629	2.4	3.2	1.5	1.3	1.8	1.1	2.1	820	5.8	e2.8	e2.1
15	187	2.3	1930	1.5	7.0	1.8	1.1	1.8	219	4.8	e2.7	e2.0
16	87	2.2	732	91	2.3	1.8	1.1	35	92	4.6	e2.6	1.9
17	43	2.2	194	564	1.5	1.8	1.1	83	119	4.6	e5.0	2.1
18	23	2.2	287	212	1.3	1.7	1.0	32	66	4.0	e4.0	2.9
19	14	2.1	198	85	1.3	1.7	1.0	13	29	3.2	e3.5	e5.0
20	8.8	2.1	95	37	34	1.7	1.0	4.8	13	2.9	e3.0	e3.0
21	5.5	2.0	52	18	24	1.6	1.0	2.7	7.5	3.2	e2.7	e2.5
22	614	2.1	922	10	14	1.6	1.0	2.9	5.5	3.5	e2.6	e2.0
23	1050	98	1050	6.2	7.4	1.6	1.0	4.6	10	4.5	e2.6	e1.8
24	311	247	236	3.9	167	1.5	1.0	25	6.0	6.3	e2.5	e1.8
25	104	712	115	2.8	325	1.5	1.2	25	4.0	6.1	e2.5	e1.7
26	46	207	62	2.3	1680	1.5	1.3	14	3.6	5.1	e2.4	e1.7
27	22	115	33	1.8	259	1.4	1.3	6.2	3.5	5.1	e2.4	e1.6
28	12	97	17	1.8	114	1.4	1.1	3.2	3.4	4.2	e2.6	e4.5
29	6.7	55	10	1.7	---	1.4	.84	3.9	3.2	3.3	e2.5	7.0
30	4.1	31	6.7	1.5	---	1.4	.87	44	3.3	2.9	e2.4	1.6
31	3.0	---	4.6	1.5	---	1.4	---	34	---	2.6	e10	---
TOTAL	5263.0	3413.6	6021.5	1069.8	2657.0	147.3	34.41	596.2	6710.7	892.5	104.6	89.9
MEAN	170	114	194	34.5	94.9	4.75	1.15	19.2	224	28.8	3.37	3.00
MAX	1270	991	1930	564	1680	51	1.4	83	1470	488	10	9.0
MIN	1.8	2.0	2.5	1.5	1.2	1.4	.84	1.3	3.2	2.6	2.4	1.6
AC-FT	10440	6770	11940	2120	5270	292	68	1180	13310	1770	207	178

CAL YR 1986 TOTAL 20543.77 MEAN 56.3 MAX 1930 MIN .83 AC-FT 40750
WTR YR 1987 TOTAL 27000.21 MEAN 74.0 MAX 1930 MIN .84 AC-FT 53550

e Estimated.

08116650 BRAZOS RIVER NEAR ROSHARON, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°20'58", long 95°34'56", Fort Bend-Brazoria County line, Hydrologic Unit 12070104, on right bank at downstream side of bridge on Farm Road 1462, 2.0 mi downstream from Big Creek, 2.1 mi upstream from Cow Creek, and 7.3 mi west of Rosharon and at mile 56.7.

DRAINAGE AREA.--45,339 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--April 1967 to September 1980, Apr. 25, 1984, to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

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

REMARKS.--Records fair. Water is diverted above station for irrigation, industrial, and municipal supply and materially affects low flow. For regulation by upstream reservoirs and Soil Conservation Service floodwater-retarding structures, see station 08110200. Gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years (water years 1968-80, 1985-87), 8,049 ft³/s (5,832,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,900 ft³/s May 14, 1968 (elevation, 50.74 ft); minimum daily, 40 ft³/s Apr. 7-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1884, 56.4 ft about Dec. 11, 1913, from information by the State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,300 ft³/s June 17 at 1800 hours (elevation, 46.60 ft); minimum daily, 1,770 ft³/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4160	7250	13200	18000	9310	30500	10100	3500	9500	22900	8560	4320
2	3950	8270	11000	18600	8770	29600	9360	3420	19400	21900	7770	3630
3	3630	9500	9040	19000	9300	27800	8660	3350	27000	20300	6500	3160
4	3250	9450	7710	18700	9580	25300	8130	3380	38100	17900	5890	2820
5	2900	11800	7160	18300	9480	20500	7730	3580	51100	15600	6330	2540
6	2520	11700	6950	17500	9340	16900	7500	3560	52700	e16500	6930	2310
7	2150	9660	6840	16300	9130	15800	7240	3590	50800	e17000	6900	2180
8	2210	8540	7110	15000	9020	20700	7100	3460	49800	e18000	6580	2050
9	2490	8320	7360	13600	9050	24600	7010	3570	48800	e18000	6180	1980
10	2790	8380	7520	12500	8970	25100	6940	4840	46500	e22000	6070	1990
11	3170	7670	7430	11900	8700	25200	6960	4980	44100	e22000	5780	1850
12	5440	7070	6820	11700	8300	25200	7380	3740	47700	e18000	5370	1900
13	10300	7640	6270	11600	7990	25200	8490	3220	56300	e16000	4990	2290
14	13900	9760	7030	11600	7790	21100	9110	5060	60300	e14000	4730	2110
15	16200	9110	10800	11500	7460	16900	9260	5250	62400	e13400	4930	2450
16	18400	7660	19100	11900	7020	15400	9890	3820	63000	13200	5240	2270
17	18000	7310	27300	13800	7660	14300	10500	3860	63200	12200	5150	2030
18	15600	7040	31500	17100	8230	13400	10600	4170	62300	11900	4930	1840
19	14500	6420	32600	17000	7960	16100	9730	4330	55500	12000	4660	1930
20	14600	5770	29400	15300	7680	20000	8300	3600	39600	11500	4440	2670
21	14100	5130	25700	12800	7640	21800	7490	3070	26400	11200	4400	2580
22	12500	4710	27100	11200	8470	20300	7050	2990	23500	11600	4650	2040
23	12300	4930	34800	11000	9980	17800	6500	3010	25000	11700	4760	1810
24	11600	8590	38300	10300	9870	15600	5930	2980	27900	11100	4750	1770
25	9520	12900	44400	9170	10400	13700	5700	3260	29200	10700	4670	1940
26	9610	13300	47900	9040	19600	12200	5210	3320	29800	10500	4310	2550
27	16900	12500	49100	9820	26800	11600	4540	3200	31100	10500	3740	2380
28	18200	17000	e46400	10300	31000	11500	4140	3390	32100	10300	3500	2030
29	14100	16600	e36500	10400	---	11500	3810	3440	30800	9490	3270	2330
30	9890	15000	e24800	10300	---	11400	3650	3940	26500	8910	3330	2380
31	7810	---	e19000	10000	---	10900	---	5140	---	8730	4300	---
TOTAL	296690	278980	656140	415230	294500	587900	224010	116020	1230400	449030	163610	70130
MEAN	9571	9299	21170	13390	10520	18960	7467	3743	41010	14480	5278	2338
MAX	18400	17000	49100	19000	31000	30500	10600	5250	63200	22900	8560	4320
MIN	2150	4710	6270	9040	7020	10900	3650	2980	9500	8730	3270	1770
AC-FT	588500	553400	1301000	823600	584100	1166000	444300	230100	2440000	890700	324500	139100

CAL YR 1986 TOTAL 3253520 MEAN 8914 MAX 49100 MIN 1110 AC-FT 6453000
WTR YR 1987 TOTAL 4782640 MEAN 13100 MAX 63200 MIN 1770 AC-FT 9486000

e Estimated.

08117500 SAN BERNARD RIVER NEAR BOLING, TX

LOCATION.--Lat 29°18'47", long 95°53'36", Wharton-Fort Bend County line, Hydrologic Unit 12090401, near left bank at downstream side of pile bent of bridge on Farm Road 442, 2.5 mi downstream from Snake Creek, and 4.5 mi northeast of Boling.

DRAINAGE AREA.--727 mi².

PERIOD OF RECORD.--May 1954 to current year.
Water-quality records.--Chemical and biochemical analyses: February 1978 to September 1986.

REVISED RECORDS.--WSP 1712: 1958. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 30.81 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Part of low flow is drainage from areas irrigated with diversions from Colorado River. Diversions above station for irrigation and other uses.

AVERAGE DISCHARGE.--33 years, 511 ft³/s (370,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s June 28, 1960 (gage height, 42.41 ft); minimum daily, 2.4 ft³/s Nov. 27-30, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 43.5 ft in 1913 (probably December). Flood in September 1938 reached a stage of 43.3 ft, from information by local resident.

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)
Dec. 16	1500	5,050	23.80	Feb. 27	0100	5,460	24.90
Dec. 23	1900	5,050	23.80	June 15	2100	*7,090	*27.64

Minimum daily discharge, 18 ft³/s Nov. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	86	436	490	82	4110	23	e90	e1200	160	163	556
2	120	118	290	344	73	4050	21	e90	e2000	173	145	470
3	114	186	195	249	67	3700	20	e95	e3500	197	141	395
4	85	179	133	189	62	2860	19	e95	e5000	216	119	323
5	77	1130	93	150	58	1600	19	e100	e5400	231	111	276
6	79	1130	70	123	55	935	19	e200	e5000	226	137	234
7	101	697	55	105	51	610	19	e400	e5200	211	139	197
8	126	429	43	90	48	389	20	e500	e5300	207	137	163
9	202	321	36	84	45	252	23	e500	e5100	567	112	141
10	263	217	47	85	41	175	22	e450	e4750	450	109	126
11	269	168	55	84	38	132	21	e400	4520	362	142	139
12	575	120	45	80	34	104	21	e1200	4330	345	153	185
13	1960	90	43	76	31	84	39	e1600	4980	295	142	218
14	2710	66	49	74	30	72	54	e1600	5910	245	134	282
15	2380	49	1500	72	39	67	71	e600	6980	215	129	309
16	2060	39	4830	506	55	63	79	e300	6820	209	123	299
17	1850	34	4280	1880	60	60	86	e550	5870	179	113	270
18	1440	30	3840	2660	85	58	87	e700	4940	164	99	238
19	913	26	4320	1940	116	58	83	e600	3920	179	91	323
20	618	24	4090	1570	136	58	86	e300	2530	180	98	293
21	430	21	3690	1490	233	66	87	e200	1410	166	90	270
22	547	18	3710	1420	324	68	96	e150	967	181	86	258
23	970	e80	4820	1050	285	61	97	e100	706	216	88	237
24	882	924	4520	723	429	53	98	e150	528	260	92	209
25	596	2140	3550	495	1070	46	105	e200	391	285	90	180
26	433	2590	3540	338	4320	41	e105	e250	298	271	94	151
27	318	1980	3340	239	5030	38	e110	e200	229	250	97	126
28	250	1340	2540	177	4010	34	e105	e150	190	233	94	105
29	197	932	1500	138	---	32	e100	e200	168	213	102	98
30	152	651	985	111	---	30	e95	e500	160	208	106	122
31	114	---	700	93	---	26	---	e800	---	191	472	---
TOTAL	20971	15815	57345	17125	16907	19932	1830	13270	98297	7485	3948	7193
MEAN	676	527	1850	552	604	643	61.0	428	3277	241	127	240
MAX	2710	2590	4830	2660	5030	4110	110	1600	6980	567	472	556
MIN	77	18	36	72	30	26	19	90	160	160	86	98
AC-FT	41600	31370	113700	33970	33540	39540	3630	26320	195000	14850	7830	14270

CAL YR 1986 TOTAL 169903 MEAN 465 MAX 4830 MIN 2.3 AC-FT 337000
WTR YR 1987 TOTAL 280118 MEAN 767 MAX 6980 MIN 18 AC-FT 555600

e Estimated.

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 ground-water 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 1987

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Brazos River basin				
08080900	White River below falls near Crosbyton, Tex.	Lat 33°39'57", long 101°09'35", Crosby County, at bridge on U.S. Highway 82 and 4.5 mi east of Crosbyton.	(a)	1951-87	1-22-87	3.03
					4-29-87	.17
					7-29-87	.37
08104290	Salado Creek above Salado, Tex.	Lat 30°56'42", long 97°32'30", Bell County, 0.2 mi upstream from I.H. 35, at Salado.	-	1984-87	10-27-86	44.6
					12- 5-86	29.0
					1- 7-87	79.5
					3- 6-87	56.8
					4- 2-87	31.6
					5-11-87	15.7
					6-25-87	41.9
					8- 3-87	12.2
					9- 2-87	8.09
					9-16-87	8.08
08104795	North Fork San Gabriel River upstream from State Highway 418	Lat 30°38'44", long 97°40'49", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	-	1984-87	10-29-86	249
					12- 1-86	14.7
					12- 2-86	8.24
					1-13-87	262
					2-17-87	39.3
					4- 1-87	9.36
					5- 6-87	37.8
					8- 3-87	48.2
					9- 2-87	75.2
					9-17-87	10.9
08104950	South Fork San Gabriel River upstream from State Highway 418 at Georgetown, Tex.	Lat 30°38'38", long 97°40'50", Williamson County, 0.2 mi upstream from State Highway 418, at Georgetown.	-	1984-87	10-28-86	42.3
					12- 1-86	38.5
					1-30-87	154
					1-11-87	116
					2-25-87	51.5
					4- 5-87	55.4
					5-26-87	21.6
					6-28-87	21.6
					8-10-87	29.2
					9- 2-87	8.24
08105095	Berry Creek upstream from I.H. 35 near Georgetown, Tex.	Lat 30°42'11", long 97°39'58", Williamson County, 1.4 mi upstream from I.H. 35 near Georgetown.	-	1984-87	10-28-87	.61
					12- 2-86	3.09
					1- 5-87	38.7
					2-17-87	15.0
					4- 1-87	17.0
					5- 6-87	2.45
					6-22-87	52.1
					8- 3-87	8.96
					9- 2-87	0
					9-15-87	0
08105160	Dry Berry Creek near Georgetown, Tex.	Lat 30°41'28", long 97°38'14, Williamson County, at downstream side of county road, 0.4 mi upstream from mouth, and 4.0 mi northeast of Georgetown.	-	1986-87	10-27-86	13.4
					12- 2-86	4.93
					1- 5-87	9.59
					2-17-86	1.57
					4- 1-87	2.59
					5- 6-76	.54
					6-22-87	4.45
					8- 3-87	.24
					9- 2-87	0
					9-15-87	0

a Not applicable.

Discharge measurements made at low-flow partial-record stations during water year 1987--Continued

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Brazos River basin--Continued				
08111600	Piney Creek near Bellville, Tex.	Lat 29°57'06", long 96°10'20", Austin County, at bridge on county road and about 5.1 mi east of Bellville.	30.7	1948, 1955, 1958, 1964-87	10-29-86 2-11-87 8-21-87	4.3 9.2 2.7
08111650	West Fork Mill Creek near Industry, Tex.	Lat 29°58'55", long 96°30'00", Austin County, at bridge on Farm Road 109 and about 0.6 mi north of Industry.	75.3	1964-87	10-29-86 2-11-87 8-21-87	2.4 8.6 0

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 occuring 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 1987

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		San Jacinto River basin					
08067525	Goose Creek at Baytown, Tex.	Lat 29°46'14", long 94°59'58", Harris County, at bridge on Baker Road in Baytown, 1.1 mi upstream from West Fork Goose Creek, and 2.0 mi upstream from East Fork Goose Creek.	17.3	1984-87	6-11-87	*18.04	-
08068325	Willow Creek near Tomball, Tex.	Lat 30°06'19", long 95°32'47", Harris County, at bridge on Kuykendahl Road, 0.6 mi upstream from Cannon Gully, and 4.0 mi east of Tomball.	41.0	1984-87	6-12-87	24.81	-
08068400	Panther Branch near Conroe, Tex.	Lat 30°11'28", long 95°28'44", Montgomery County, 2,400 ft downstream from former gage site, 5.1 mi upstream from station 08068450, and 8 mi southwest of Conroe.	26.1	1974-76, 1980-87	5-19-80 9- 1-81 5-13-82 5-20-83 2-12-84 10-25-84 11-24-85 6-12-87	7.53 9.93 10.90 10.09 7.93 10.23 12.75 7.59	511 1,940 2,790 2,070 633 1,890 4,420 504
08068438	Swale No. 8 at The Woodlands, Tex.	Lat 30°08'38", long 95°28'09", Montgomery County, at bridge on Grogans' Mill Road at The Woodlands.	.55	1975-76 1980-87	9-28-87	34.23	410
08068450	Panther Branch near Spring, Tex.	Lat 30°08'02", long 95°28'38", Montgomery County, at bridge on Sawdust Road, 3.0 mi upstream from Spring Creek, and 5.1 mi northwest of Spring.	34.5	1972-76 1980-87	9-28-87	12.39	1,600
08068700	Cypress Creek at Sharp Road near Hockley, Tex.	Lat 29°55'15", long 95°50'24", Harris County, at bridge on Sharp Road and 7.4 mi south of Hockley.	80.7	1976-78, 1979-87	6-14-87	67.54	-
08072350	Buffalo Bayou near Fulshear, Tex.	Lat 29°43'22", long 95°46'01", Harris County, at proposed location of Peek Road bridge, about 200 ft downstream from Little Prong (bayou), 4,300 ft upstream from Mason Road, 8.3 mi east-northeast of Fulshear.	81.7	1986-87	12-15-86	14.45	-
08072700	South Mayde Creek near Addicks, Tex.	Lat 29°48'03", long 95°41'33", Harris County, at bridge on Groeschke Road, 3.2 mi west of Addicks, and 4.6 mi upstream from Langham Creek.	32.3	1974-87	12-22-86	*105.84	-
08072760	Langham Creek at West Little York Road near Addick Tex.	Lat 29°52'01", long 95°38'47", Harris County, at bridge on West Little York Road, 500 ft upstream from former site on State Highway 6, 2.1 mi downstream from Dinners Creek, and 5.7 mi north of Addicks.	25.2	1977-87	10-12-86	19.96	604
08072800	Langham Creek near Addicks, Tex.	Lat 29°50'08", long 95°37'32", Harris County, at bridge on Clay Road, 3.6 mi north of Addicks, and 4.4 mi upstream from mouth.	48.9	1974-87	12-23-86	*99.54	-
08074020	Whiteoak Bayou at Alabonson Road at Houston, Tex.	Lat 29°52'14", long 95°28'49", Harris County, at bridge on Alabonson Road, in northwest Houston, 1.0 mi upstream from Vogel Creek, and 2.5 mi upstream from Cole Creek.	34.5	1984-87	10-12-86	*42.88	2,440
08074150	Cole Creek at Deihl Road, Houston, Tex.	Lat 29°51'04", long 95°29'16", Harris County, at bridge on Deihl Road in northwest Houston, 1.8 mi upstream from mouth.	7.50	1964-87†	11-23-86	*76.30	868
08074250	Brickhouse Gully at Costa Rica Street, Houston, Tex.	Lat 29°49'40", long 95°28'09", Harris County, at bridge on Costa Rica Street in northwest Houston and 1.0 mi upstream from Whiteoak Bayou.	11.4	1965-87†	11-23-86	*66.03	3,690
08074540	Little Whiteoak Bayou at Trimble Street at Houston, Tex.	Lat 29°47'33", long 95°22'06", Harris County, at bridge on Trimble Street, Houston.	18.0	1979-87	6-11-87	*37.49	-
08074760	Brays Bayou at Alief Road, Alief, Tex.	Lat 29°42'39", long 95°35'13", Harris County, at bridge on High Star Street in Alief.	14.1	1977-87	6- 9-87	14.23	-
08074780	Keegans Bayou at Keegan Road near Houston, Tex.	Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road and about 16 mi southwest of Houston.	7.47	1965-71, 1975-87	6-12-87	*78.71	-

* Elevation.
† Operated as a regular streamflow station during some of these years.

Annual maximum stage and (or) discharge during water year 1987--Continued

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Elevation (feet)	Discharge (ft^3/s)
		San Jacinto River basin--Continued					
08074800	Keegans Bayou at Roark Road near Houston, Tex.	Lat 29°39'23", long 95°33'43", Harris County, at bridge on Roark Road in southwest Houston.	11.5	1965-87	6-12-87	*74.57	3,900
08074810	Brays Bayou at Gessner Drive, Houston, Tex.	Lat 29°40'21", long 95°31'41", Harris County, at bridge on Gessner Drive in southwest Houston and 0.10 mi below mouth of Keegans Bayou.	53.2	1977-87	6-12-87	*61.91	12,000
08075470	Sims Bayou at Martin Luther King Boulevard, Houston, Tex.	Lat 29°38'42", long 95°20'13", Harris County, at bridge on Martin Luther King Boulevard in south Houston.	48.4	1978-87	6-12-87	*34.46	-
08075780	Greens Bayou at Cutten Road near Houston, Tex.	Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 mi northwest of Houston.	8.06	1965-87	6-12-87	*112.13	433
08076900	Carpenters Bayou near Channelview, Tex.	Lat 29°46'20", long 95°09'24", Harris County, at bridge on temporary Beltway 8, at western boundary of Channelview 4.9 mi upstream from mouth.	29.5	1986-87	6-12-87	*13.67	-
		Clear Creek basin					
08077505	Beamer Street Ditch at Houston, Tex.	Lat 29°35'30", long 95°13'19", Harris County, at bridge on Hughes Road in southeast Houston.	5.19	1984-87	6-12-87	*28.01	-
08077520	Turkey Creek near Friendswood, Tex.	Lat 29°35'02", long 95°11'13", Harris County, at bridge on Dixie Farm Road in southern Harris County, 2.4 mi upstream from Clear Creek, and 3.9 mi north-northeast of Friendswood.	6.78	1985-87	6-12-87	*24.45	-
08077600	Clear Creek near Friendswood, Tex.	Lat 29°31'02", long 95°10'42", Galveston County, at bridge on Farm Road 528 and 1.5 mi southeast of Friendswood.	-	1966-87	6-13-87	*14.02	-
08077630	Horsepen Bayou at Bay Area Blvd., Houston, Tex.	Lat 29°35'00", long 95°06'12", Harris County, at upstream bridge on Bay Area Blvd., in southeast Houston, and 2.0 mi upstream from Armand Bayou.	17.8	1985-87	6-12-87	*9.55	-
		Highland Bayou basin					
08077780	Highland Bayou near Texas City, Tex.	Lat 29°19'54", long 94°56'42", Galveston County, at bridge on State Highway 6, 0.4 mi southwest of U.S. Highway 75, 1.5 mi from mouth, and about 3 mi southwest of Texas City.	-	1974-87	12-22-86	*3.37	-
		Brazos River basin					
08091500	Paluxy River at Glen Rose, Tex.	Lat 32°13'53", long 97°46'37", Somervell County, on left bank at downstream side of remaining pier of dismantled highway bridge, 500 ft upstream from bridge on U.S. Highway 67, 1.0 mi upstream from Cross Branch, 1.2 mi southwest of Glen Rose, and 5.1 mi upstream from mouth.	410	1923-25† 1947-85† 1986-87	9- 2-86 5-29-87	a9.14 9.77	4,700 5,340
08092000	Nolan River at Blum, Tex.	Lat 32°09'02", long 97°24'09", Hill County, on right bank 60 ft upstream from bridge on Farm Road 933, 0.6 mi northwest of Blum, 2.8 mi downstream from Mustang Creek, 3.0 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.2 mi upstream from Rock Creek, and 8.5 mi upstream from mouth.	282	1924-25† 1947-85† 1986-87	6-12-87	11.00	6,870
08095300	Middle Bosque River near McGregor, Tex.	Lat 31°30'33", long 97°21'56", McLennan County, on downstream side of bridge on county road, 1,100 ft downstream from Pecan Creek, 5.2 mi northeast of McGregor, and 7.4 mi upstream from mouth.	182	1959-87	12-23-86	6.08	2,530
08095400	Hog Creek near Crawford, Tex.	Lat°31°33'20", long 97°21'22", McLennan County, on downstream side of bridge on Farm Road 185, 5.6 mi east of Crawford, and 9.8 mi upstream from South Bosque River.	78.2	1959-87	12-23-86 5- 3-87	4.29 4.29	701 701

† Operated as a regular streamflow station during some of these years.

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CALENDAR FOR WATER YEAR 1987

1986

OCTOBER

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NOVEMBER

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1987

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SEPTEMBER

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