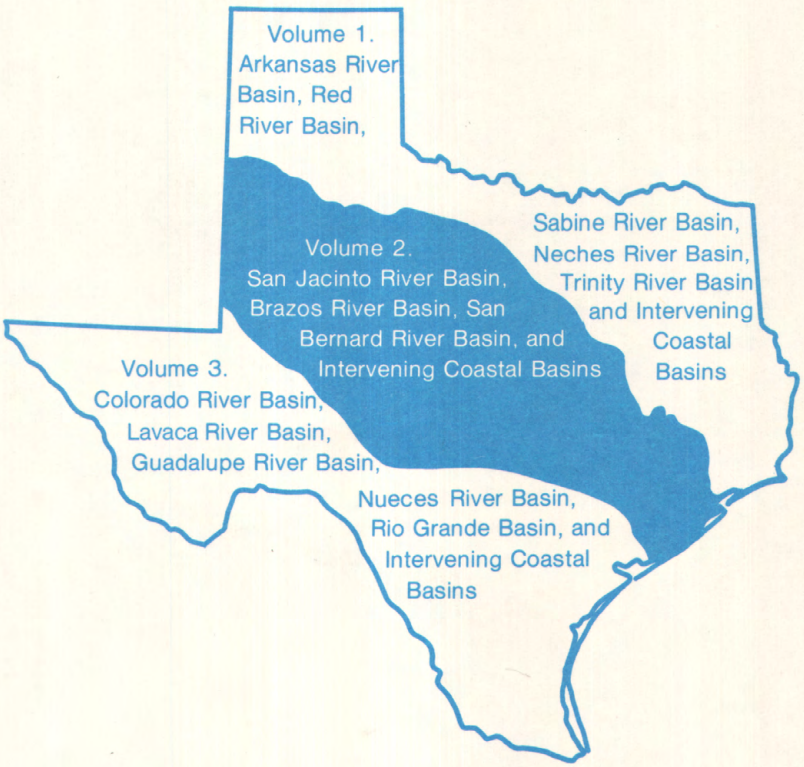
Water Resources Data Texas Water Year 1988

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-88-2
Prepared in cooperation with the State of Texas
and with other agencies

CALENDAR FOR WATER YEAR 1988

1987

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1988

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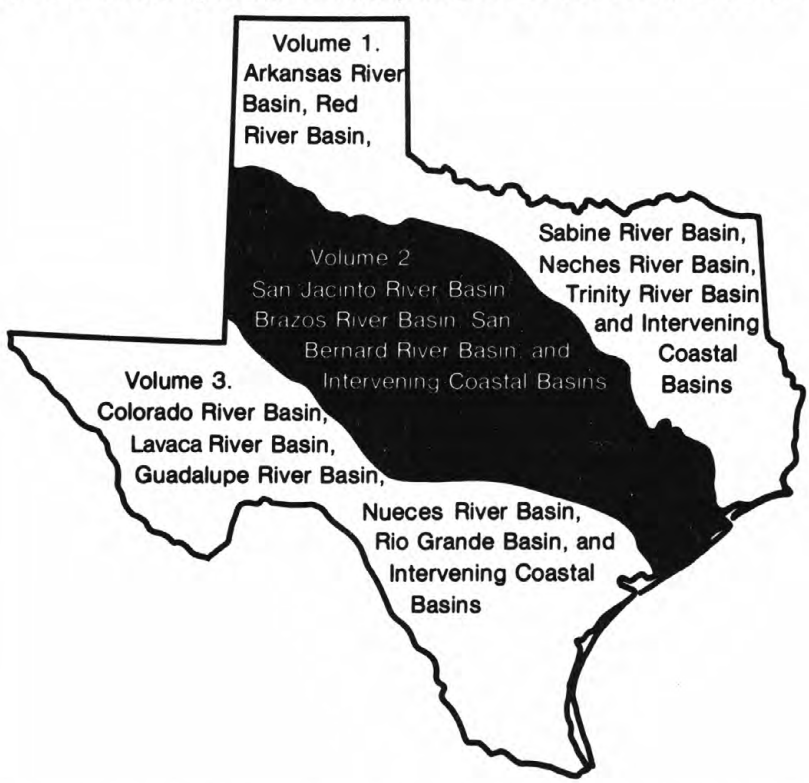
Water Resources Data
Texas
Water Year 1988

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

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-88-2
Prepared in cooperation with the State of Texas
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
8011A Cameron Road
Austin, Texas 78753

1989

Preface

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

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

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

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

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

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

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

16. Abstract (Limit: 200 words)
Surface-water data for the 1988 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 also are 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.

17. Document Analysis a. Descriptors
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b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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Department of Commerce

CONTENTS

ILLUSTRATION

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

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

WATER RESOURCES DATA - TEXAS, 1988

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 104 gaging stations; stage only at 9 gaging stations; stage and contents at 20 lakes and reservoirs; and water quality at 60 gaging stations. Also included are data for 45 partial-record stations. 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-88-2." 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) 832-5791.

COOPERATION

Federal agencies that assisted the Geological Survey in the collection of data in this report in the form of funds or services in 1988 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, M.R. Arnold II, Executive Administrator; the cities of Abilene, 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 Public Works Department; 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; Lavaca-Navidad River Authority; 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; Texas Water Commission; 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 typically are deep with wide alluvial flood plains, and streamflow is perennial. In the western part of the State, most streams flow through arroyos, and streamflow usually is ephemeral.

Precipitation for the first half of the water year 1988 was normal to above normal in the Panhandle, East Texas, and the Lower Rio Grande Valley, and was below normal for the remainder of the State. For the second half of the water year, precipitation was slightly above normal in West Texas to substantially above normal in the Panhandle, and was below normal to substantially below normal for the remainder of the State. Total precipitation for the year was below normal to substantially below normal in South and Southeast Texas, above normal in the Panhandle, and near normal for the remainder of the State.

Although precipitation during the current water year was below normal to substantially below normal in several regions of Texas, streamflow was in the normal to above normal range at every index station for the entire year. This pattern of streamflow was the result of above normal precipitation that occurred in the previous water year (1987).

Conservation storage in 71 selected reservoirs throughout the State, with a combined conservation capacity of 25,951,000 acre-feet, decreased from 88 percent at the end of September 1987 to 81 percent at the end of September 1988. Records from these reservoirs indicate that storage increased in 9, decreased in 61, and remained the same in 1.

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 area described in volume 2 and the location of selected streamflow and water-quality stations in the area is shown in figure 1.

Streamflow

The most notable characteristic of streamflow in Texas for the water year 1988 was the lack of extreme hydrologic events. Streamflow was normal to below normal throughout

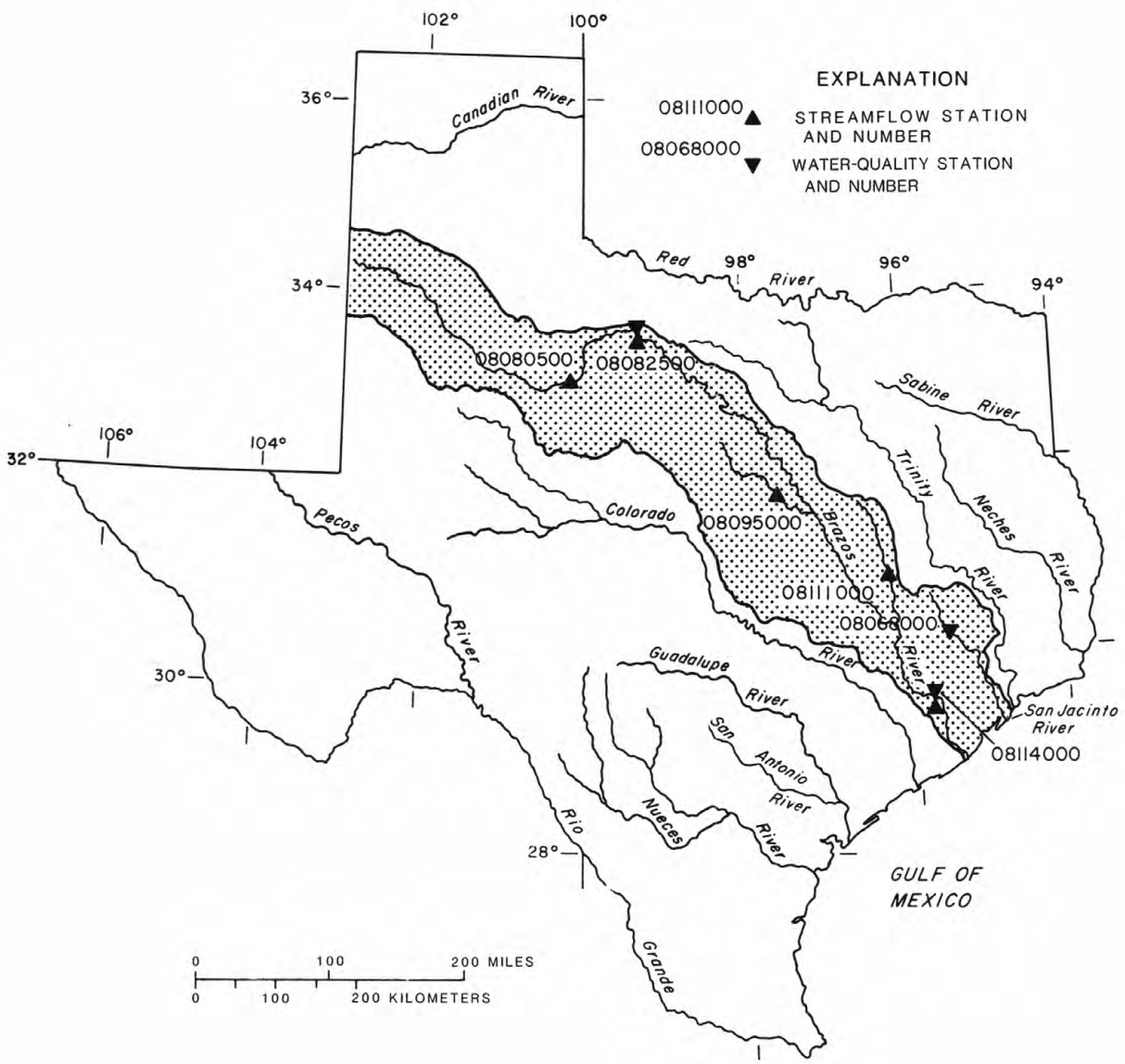

Figure 1.--Area of Texas covered by volume 2 (shaded) and location of selected streamflow and water-quality stations in volume 2.

the general area during the year, as shown by data for five selected stations in this area.

Streamflow at the hydrologic index station North Bosque River near Clifton was normal for 11 months and greater than normal (within the highest 25 percent of record) in June. A comparison of streamflow for the water year 1988 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 1988 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
		Max.	Min.	Avg.	Max.	Min.	Avg.
Brazos River basin							
08080500	Double Mountain Fork Brazos River near Aspermont, Tex. 1/	3,790	6.0	45.9	91,400	0	160 (1925-34, 1941-88)
08082500	Brazos River at Seymour, Tex.	7,410	0	104	95,400	0	374 (1925-88)
0809500	North Bosque River near Clifton, Tex. 2/	28,400	1.9	88.3	92,800	0	198 (1968-88)
08111000	Navasota River near Bryan, Tex.	1,120	.07	94.1	38,200	0	582 (1961-88)
08114000	Brazos River at Richmond, Tex.	17,100	411	2,184	123,000	35	7,194 (1941-88)

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

At the other three index stations in the State, streamflow during the water year 1988 was normal to above normal. Monthly mean discharge and median of the monthly means for the water years 1951-80 for the four hydrologic index stations in the State are shown in figure 2. For the Neches River near Rockland, streamflow was greater than normal during November through January, and normal for the remainder of the year. The North Concho River near Carlsbad had greater than normal streamflow from November through April and during July and September, and normal streamflow during October, May, June, and August. The Guadalupe River near Spring Branch had greater than normal streamflow in November and July and normal streamflow for the remainder of the year.

Conservation storage in 21 selected reservoirs in this area of the State, with a total combined conservation capacity of 3,921,370 acre-feet, decreased from 89 percent at the end of September 1987, to 79 percent at the end of September 1988. Records from these reservoirs indicate that storage increased in 3 and decreased in 18.

Water Quality

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

Records of discharge-weighted-average concentrations of dissolved solids for the water year 1988 are compared with those for the water years 1984-88 for selected long-term daily or continuous-record water-quality stations (fig. 1) in the San Jacinto and Brazos River basins. Results are shown in the following table:

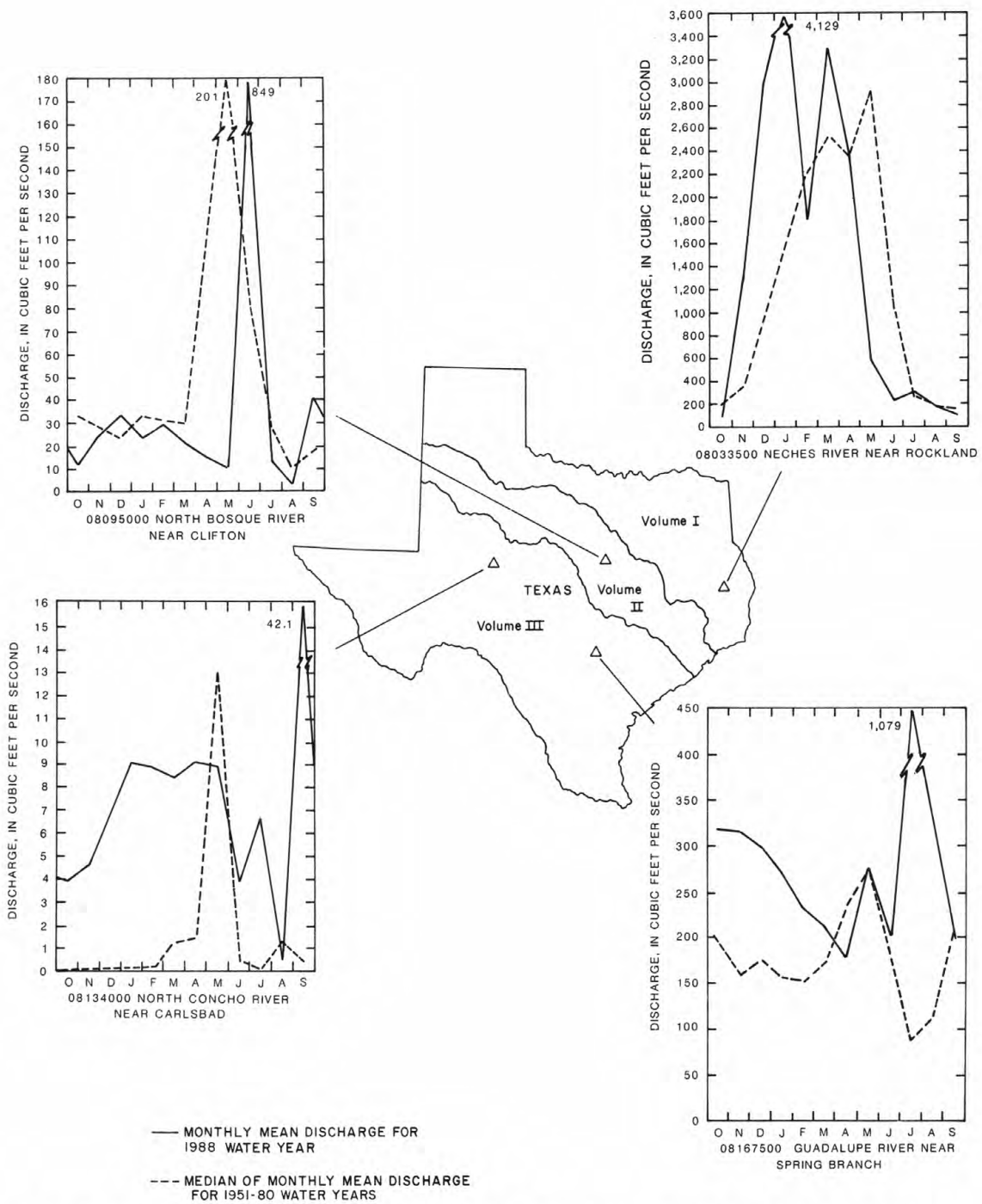

Figure 2.--Comparison of monthly mean discharges at four long-term hydrologic index gaging stations during the 1988 water year with median of the monthly mean discharges for 1951-80 water years.

Station no.	and name	Mean discharge (cubic feet per second) 1988	Mean discharge (cubic feet per second) 1984-88	Discharge-weighted-average concentration of dissolved solids (milligrams per liter) 1988	Discharge-weighted-average concentration of dissolved solids (milligrams per liter) 1984-88
San Jacinto River basin					
08068000	West Fork San Jacinto River near Conroe, Tex.	230	416	148	122
Brazos River basin					
08082500	Brazos River at Seymour, Tex.	104	380	4,340	3,040
08114000	Brazos River at Richmond, Tex.	2,184	6,411	431	390

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 1988 water year that began October 1, 1987, and ended September 30, 1988. 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. These 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, 1988, is called the "water year 1988."

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-A12. "Fluorometric procedures for dye tracing," by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12, 1986. 41 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-A16. "Measurement of discharge using tracers," by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 p.

3-A17. "Acoustic velocity meter systems," by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 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, 3,633 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, 438,800 acre-ft Mar. 18 at 0600 to 1600 hours (elevation, 201.40 ft); minimum, 381,800 acre-ft Sept. 30 (elevation, 198.59 ft).

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

198.0	370,500
200.0	409,600
202.0	451,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407600	398500	429600	430900	431100	428800	430700	427600	420400	415000	407200	395700
2	407200	398500	429000	430700	432200	430700	430100	427400	420600	414600	407200	395300
3	407000	398300	429200	430500	432600	431100	429200	427600	422200	414400	406700	395100
4	406300	398300	429200	430900	432000	431100	429400	427600	422600	414800	406100	394300
5	406100	398100	429000	430900	432600	430700	429600	427200	422600	415200	405100	393300
6	405900	397300	433200	432800	431800	430700	429800	426500	422600	414800	404700	392100
7	405100	396700	433500	433200	431100	430300	429600	425900	422400	414800	403700	391100
8	404300	398100	432800	432800	430900	432000	429400	425900	421600	414400	402500	390100
9	404100	398700	432000	432200	430700	431500	429600	426100	421400	414200	402100	389100
10	404100	397500	431100	431500	430100	430900	429000	426100	421400	414400	400900	388400
11	404300	397100	430700	430700	429800	431100	428400	426100	420600	414000	401300	387200
12	403700	396700	430700	431100	429200	431800	428200	426300	419700	414800	400700	386600
13	403100	396500	430700	430700	428800	431100	427800	425900	419100	414400	400500	386200
14	402300	396100	430900	430300	429800	430700	427600	425500	418700	414200	400500	386200
15	402100	397500	430100	430300	429800	429800	427400	425100	418900	413800	400300	386100
16	402100	400700	429400	430700	429000	429400	427200	424900	418500	413600	399900	386200
17	402100	400300	428800	430900	429600	438200	427200	424700	418100	413100	400300	385500
18	401700	400300	429200	431100	433000	438400	428600	424700	417900	412100	401300	384700
19	401700	400100	433200	432000	433700	437700	427600	423900	417700	411300	400900	384500
20	401500	399700	436500	431800	433500	435600	427400	423500	417500	411100	400500	384300
21	400900	398900	437300	431500	432800	433500	427000	425300	417300	410700	400100	384100
22	400100	398700	436000	431300	431800	431300	427200	424900	418500	410300	399700	383900
23	400300	398700	434300	431100	432000	430500	427600	424300	418300	409400	399300	383700
24	400300	399300	432600	431500	431500	430100	426800	424100	417900	409200	399300	383900
25	400300	423500	432600	431100	431100	430500	427200	423500	417500	408800	399100	383900
26	400700	427400	432800	431100	430500	430700	427000	423000	417100	408000	398500	383400
27	400100	430300	433500	430900	430300	429800	426800	422200	417300	407600	397700	383200
28	399300	429800	433700	430700	429800	430100	425700	421200	416900	408000	397500	382000
29	398900	429400	432600	430500	429600	431300	427400	420800	416200	407600	397300	382400
30	398500	429400	431300	430700	---	431100	427800	420400	415400	407400	397100	381800
31	398500	---	431800	430900	---	430700	---	420000	---	407200	396100	---
MAX	407600	430300	437300	433200	433700	438400	430700	427600	422600	415200	407200	395700
MIN	398500	396100	428800	430300	428800	428800	425700	420000	415400	407200	396100	381800
(†)	199.44	200.96	201.07	201.03	200.97	201.02	200.88	200.50	200.28	199.88	199.32	198.59
(ϕ)	-9700	+30900	+2400	-900	-1300	+1100	-2900	-7800	-4600	-8200	-11100	-14300

CAL YR 1987 MAX 454300 MIN 396100 (ϕ) +900
WTR YR 1988 MAX 438400 MIN 381800 (ϕ) -26400

(†) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
08...	1120	1.00	235	8.10	9.5	1.19	9.9	86	87
08...	1122	10.0	235	8.10	9.5	--	9.9	86	--
08...	1124	20.0	235	8.10	9.5	--	9.9	86	--
08...	1126	30.0	235	8.10	9.5	--	9.9	86	--
08...	1128	40.0	235	8.10	9.5	--	9.9	86	--
08...	1130	53.0	235	8.00	9.5	--	9.9	86	90
JUN									
07...	1008	1.00	250	8.60	28.0	1.58	8.5	109	90
07...	1010	10.0	250	8.60	27.5	--	8.4	107	--
07...	1012	20.0	250	7.90	25.5	--	6.1	75	--
07...	1014	30.0	250	7.50	24.5	--	3.2	38	--
07...	1016	40.0	260	7.40	21.0	--	0.5	6	--
07...	1018	54.0	275	7.40	19.5	--	0.4	4	98
AUG									
24...	1135	1.00	255	8.50	30.5	0.94	5.6	75	90
24...	1137	10.0	255	8.50	30.0	--	5.5	73	--
24...	1139	15.0	255	8.30	30.0	--	4.6	61	--
24...	1141	20.0	260	7.40	29.0	--	0.5	7	--
24...	1143	25.0	265	7.30	28.5	--	0	0	--
24...	1145	30.0	270	7.20	27.0	--	0	0	--
24...	1147	40.0	275	7.00	23.0	--	0	0	--
24...	1149	51.0	295	7.00	21.5	--	0	0	100

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
08...	10	31	2.4	14	0.7	3.9	77	9.7	21
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
08...	18	32	2.4	13	0.6	3.9	72	9.6	22
JUN									
07...	13	32	2.5	14	0.7	3.4	77	8.6	22
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	1	35	2.6	14	0.6	3.3	97	9.7	28
AUG									
24...	6	32	2.5	15	0.7	3.0	84	7.2	23
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	6	36	2.6	14	0.6	3.2	95	5.4	30

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302127095335501 - LAKE CONROE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB								
08...	0.20	6.9	135	0.200	0.80	0.050	13	5
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	--	--	--	0.100	0.70	0.040	10	10
08...	--	--	--	--	--	--	--	--
08...	--	6.6	133	0.100	0.80	0.040	120	32
JUN								
07...	0.30	<0.01	129	<0.100	0.50	0.010	<3	26
07...	--	--	--	--	--	--	--	--
07...	--	--	--	<0.100	0.60	0.020	10	180
07...	--	--	--	<0.100	0.50	0.020	80	1800
07...	--	--	--	--	--	--	--	--
07...	--	9.7	165	<0.100	1.4	0.120	1200	3500
AUG								
24...	0.10	7.6	141	<0.100	1.2	0.030	10	39
24...	--	--	--	--	--	--	--	--
24...	--	--	--	<0.100	1.1	0.030	20	120
24...	--	--	--	<0.100	0.90	0.030	10	720
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	11	164	<0.100	3.4	0.370	1400	3500

302132095333701 - LAKE CONROE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1144	1.00	235	8.20	9.5	1.18	10.1	88
08...	1146	10.0	235	8.10	9.5	--	10.0	87
08...	1148	20.0	235	8.10	9.5	--	10.0	87
08...	1150	30.0	235	8.10	9.5	--	10.0	87
08...	1152	40.0	235	8.10	9.5	--	10.0	87
08...	1154	55.0	235	8.10	9.5	--	10.0	87
JUN								
07...	1034	1.00	250	8.60	28.0	1.58	8.7	111
07...	1036	10.0	250	8.60	27.0	--	8.5	107
07...	1038	20.0	250	7.80	25.5	--	6.1	75
07...	1040	30.0	250	7.40	24.5	--	3.4	41
07...	1042	40.0	260	7.40	21.5	--	0.6	7
07...	1044	55.0	280	7.50	19.5	--	0.5	5
AUG								
24...	1212	1.00	255	8.60	30.5	0.98	5.1	68
24...	1214	10.0	255	8.30	30.0	--	2.9	38
24...	1216	20.0	255	7.30	29.0	--	0.2	3
24...	1218	30.0	265	7.20	27.0	--	0	0
24...	1220	40.0	280	6.90	22.5	--	0	0
24...	1222	50.0	295	6.90	21.0	--	0	0
24...	1224	63.0	315	6.90	20.5	--	0	0

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302245095365301 - LAKE CONROE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1100	1.00	235	8.30	9.0	1.00	10.5	90
08...	1102	10.0	235	8.20	9.0	--	10.3	88
08...	1104	20.0	235	8.20	9.0	--	9.9	85
08...	1106	30.0	235	8.20	8.5	--	8.6	73
JUN								
07...	0938	1.00	250	8.60	28.0	1.31	8.0	103
07...	0940	10.0	250	8.60	26.5	--	8.5	106
07...	0942	15.0	255	8.00	26.0	--	6.1	75
07...	0944	20.0	255	7.60	25.5	--	4.7	58
07...	0946	28.0	260	7.60	25.0	--	2.0	24
AUG								
24...	1106	1.00	255	8.50	31.0	0.87	5.4	73
24...	1108	5.00	255	8.20	30.5	--	4.7	63
24...	1110	10.0	255	7.90	30.5	--	3.7	50
24...	1112	15.0	260	7.50	29.5	--	0	0
24...	1114	20.0	265	7.40	29.0	--	0	0
24...	1116	27.0	275	7.30	28.5	--	0	0

302323095341201 - LAKE CONROE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1300	1.00	235	8.20	9.5	1.27	10.3	89
08...	1302	10.0	235	8.20	9.5	--	10.2	88
08...	1304	20.0	235	8.10	9.5	--	10.2	88
08...	1306	30.0	235	8.10	9.5	--	10.2	88
08...	1308	40.0	235	8.10	9.5	--	10.2	88
08...	1310	54.0	235	8.20	9.5	--	10.1	88
JUN								
07...	1122	1.00	250	8.60	29.0	1.50	8.5	111
07...	1124	10.0	250	8.40	26.0	--	8.1	100
07...	1126	20.0	255	7.90	25.5	--	6.2	76
07...	1128	30.0	255	7.60	25.0	--	5.0	61
07...	1130	40.0	260	7.40	21.5	--	0.2	2
07...	1132	55.0	275	7.40	20.5	--	0.2	2
AUG								
24...	1325	1.00	255	8.80	31.0	0.94	6.4	87
24...	1327	10.0	255	8.60	30.0	--	5.7	76
24...	1329	20.0	260	7.60	29.5	--	2.2	29
24...	1331	30.0	270	7.20	27.0	--	0.5	6
24...	1333	40.0	285	7.00	23.5	--	0	0
24...	1335	50.0	295	7.10	22.5	--	0	0

302320095334001 - LAKE CONROE SITE CL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1244	1.00	235	8.20	9.5	1.26	10.3	89
08...	1246	10.0	235	8.20	9.5	--	10.2	88
08...	1248	20.0	235	8.20	9.5	--	10.2	88
08...	1250	30.0	235	8.20	9.5	--	10.1	88
08...	1252	39.0	235	8.10	9.5	--	10.0	87
JUN								
07...	1056	1.00	250	8.60	28.0	1.64	8.1	104
07...	1058	10.0	250	8.50	26.5	--	8.6	107
07...	1100	20.0	255	7.80	25.0	--	5.8	70
07...	1102	30.0	255	7.50	24.5	--	4.2	50
07...	1104	38.0	260	7.40	22.5	--	0.3	3
AUG								
24...	1256	1.00	255	8.70	31.0	0.94	6.1	82
24...	1258	10.0	255	8.50	30.0	--	4.1	54
24...	1300	20.0	255	7.40	29.0	--	1.4	18
24...	1302	30.0	270	7.20	27.0	--	0	0
24...	1304	46.0	290	7.20	22.5	--	0	0

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302448095374101 - LAKE CONROE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1328	1.00	230	8.20	9.0	1.01	10.7	92
08...	1330	10.0	230	8.20	9.0	--	10.7	92
08...	1332	20.0	230	8.20	9.0	--	10.5	90
08...	1334	30.0	230	8.20	9.0	--	10.4	89
JUN								
07...	0910	1.00	250	8.70	27.5	1.30	9.0	114
07...	0912	10.0	250	8.70	26.5	--	9.0	112
07...	0914	15.0	255	7.40	25.5	--	3.5	43
07...	0916	20.0	255	7.30	25.0	--	0.7	9
07...	0918	30.0	270	7.40	24.5	--	0.7	8
AUG								
24...	1356	1.00	255	8.60	31.5	0.76	6.0	82
24...	1358	10.0	255	7.80	30.0	--	3.9	52
24...	1400	20.0	265	7.50	29.5	--	0	0
24...	1402	28.0	270	7.50	29.0	--	0	0

302607095360901 - LAKE CONROE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
3									
)8...	1350	1.00	230	8.20	9.5	1.06	10.4	90	85
)8...	1352	10.0	230	8.10	9.5	--	10.3	89	--
)8...	1354	20.0	230	8.10	9.5	--	10.3	89	--
)8...	1356	30.0	230	8.10	9.5	--	10.3	89	--
)8...	1358	42.0	230	8.20	9.0	--	10.3	88	87
4									
)7...	1210	1.00	250	8.80	29.5	1.17	9.5	125	88
)7...	1212	10.0	250	8.40	26.0	--	8.5	105	--
)7...	1214	20.0	255	7.70	25.0	--	5.5	67	--
)7...	1216	30.0	255	7.30	24.0	--	0.9	11	--
)7...	1218	41.0	270	7.40	22.5	--	0	0	96
3									
24...	1412	1.00	250	8.80	31.0	0.84	6.7	91	88
24...	1414	10.0	255	8.40	30.5	--	5.1	68	--
24...	1416	20.0	255	7.70	30.0	--	3.0	40	--
24...	1418	30.0	275	7.20	26.5	--	0	0	--
24...	1420	38.0	295	7.00	25.0	--	0	0	100

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
08...	10	30	2.4	13	0.6	3.8	75	10
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	12	31	2.4	13	0.6	3.8	75	9.9
JUN								
07...	13	31	2.5	14	0.7	3.2	75	8.3
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
07...	2	34	2.7	14	0.7	3.2	94	8.8
AUG								
24...	6	31	2.5	14	0.7	3.0	82	7.4
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	0	36	2.7	14	0.6	3.2	102	4.1

08067600 LAKE CONROE NEAR CONROE, TX--Continued

302607095360901 - LAKE CONROE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB								
08...	21	6.8	132	0.100	0.60	0.040	<3	2
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	21	6.8	133	0.100	0.80	0.040	5	4
JUN								
07...	22	6.0	132	<0.100	0.60	0.020	3	36
07...	--	--	--	--	--	--	--	--
07...	--	--	--	<0.100	0.50	0.010	40	880
07...	--	--	--	--	--	--	--	--
07...	23	7.2	152	<0.100	0.80	0.060	580	2600
AUG								
24...	23	6.9	137	<0.100	1.0	0.030	13	33
24...	--	--	--	--	--	--	--	--
24...	--	--	--	<0.100	0.90	0.040	60	870
24...	--	--	--	--	--	--	--	--
24...	22	9.8	157	<0.100	2.8	0.240	770	3000

302714095372201 - LAKE CONROE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
08...	1415	1.00	230	8.00	9.5	0.89	10.2	88
08...	1417	10.0	230	8.00	9.5	--	10.1	88
08...	1419	23.0	230	8.00	9.0	--	10.1	87
JUN								
07...	1236	1.00	250	8.60	29.0	1.24	9.0	117
07...	1238	10.0	255	7.50	26.0	--	4.9	61
07...	1240	15.0	255	7.30	25.5	--	1.4	17
07...	1242	23.0	260	7.40	24.5	--	0	0
AUG								
24...	1440	1.00	250	8.70	31.5	0.83	6.5	89
24...	1442	10.0	255	7.60	30.0	--	4.0	53
24...	1444	20.0	260	7.60	30.0	--	0.6	8

303129095360501 - LAKE CONROE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
08...	1446	1.00	220	7.80	9.0	0.41	9.9	85	76
08...	1448	10.0	220	7.80	9.0	--	9.9	85	--
08...	1450	20.0	220	7.80	9.0	--	9.8	84	--
08...	1452	31.0	220	7.80	9.0	--	9.8	84	69
JUN									
07...	1308	1.00	260	9.00	29.5	0.52	11.5	152	89
07...	1310	10.0	260	7.50	26.0	--	4.3	53	--
07...	1312	15.0	260	7.40	26.0	--	3.1	38	--
07...	1314	20.0	260	7.30	26.0	--	2.3	28	--
07...	1316	30.0	265	7.30	26.0	--	1.1	14	94
AUG									
24...	1506	1.00	250	8.90	32.5	0.53	7.3	101	83
24...	1508	10.0	255	7.80	31.0	--	2.8	38	--
24...	1510	15.0	260	7.70	31.0	--	2.2	30	--
24...	1512	20.0	260	7.70	31.0	--	2.1	28	--
24...	1514	27.0	260	7.70	31.0	--	2.0	27	91

08067600 LAKE CONROE NEAR CONROE, TX--Continued

303129095360501 - LAKE CONROE SITE GC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
FEB								
08...	21	27	2.2	14	0.7	3.8	56	15
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	13	24	2.2	15	0.8	3.9	56	17
JUN								
07...	17	31	2.7	17	0.8	3.4	72	9.9
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
07...	12	33	2.8	15	0.7	3.3	82	9.2
AUG								
24...	4	29	2.5	16	0.8	3.1	79	7.4
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	9	32	2.7	16	0.8	3.1	82	7.3

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
FEB								
08...	24	11	131	0.100	0.60	0.070	38	3
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	25	12	133	0.200	0.80	0.090	73	7
JUN								
07...	26	8.2	141	<0.100	0.50	0.030	3	5
07...	--	--	--	--	--	--	--	--
07...	--	--	--	<0.100	0.80	0.020	10	140
07...	--	--	--	--	--	--	--	--
07...	25	17	155	<0.100	0.60	0.040	10	120
AUG								
24...	25	9.6	140	<0.100	1.9	0.090	10	53
24...	--	--	--	--	--	--	--	--
24...	--	--	--	<0.100	1.2	0.120	10	200
24...	--	--	--	--	--	--	--	--
24...	25	19	154	<0.100	1.7	0.130	13	120

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.--15 years, 11.4 ft³/s (8,260 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, 290 ft³/s Sept. 29; maximum gage height, 7.20 ft Dec. 24 at 0700 hours (result of backwater from taintor gate releases); no controlled releases for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
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	226
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	138	224
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	222
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	221
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	219
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	219
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	219
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	219
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	219
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	218
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	222
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	83	226
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	222
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	85
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	101	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	143	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	195	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	83	.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	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	173
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	139	290
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	229	275
31	.00	---	.00	.00	---	.00	---	.00	---	.00	226	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	964.00	2804.00	3699.00
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	31.1	90.5	123
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	221	229	290
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	.0	.0	.0	.0	.0	.0	.0	1910	5560	7340

CAL YR 1987 TOTAL 834.00 MEAN 2.28 MAX 119 MIN .00 AC-FT 1650
WTR YR 1988 TOTAL 7467.00 MEAN 20.4 MAX 290 MIN .00 AC-FT 14810

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.--16 years (water years 1973-88), 230 ft³/s (166,600 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 daily discharge, 1.400 ft³/s Dec. 23, 24 (gage height unknown); no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	.00	2.0	e440	4.3	2.1	203	1.3	.00	.00	.00	199
2	.00	.00	1.6	e120	4.3	2.0	202	1.3	.00	.00	44	199
3	.00	.00	1.6	9.3	4.3	2.9	198	.92	.00	.00	197	199
4	.00	.00	1.6	e2.0	4.8	3.3	91	.92	.00	.00	198	199
5	.00	.00	1.6	e2.0	94	2.5	2.9	.92	.00	.00	198	197
6	.00	.00	164	6.6	e200	2.5	3.3	.92	.00	.00	198	197
7	.00	.00	436	e360	e210	2.5	2.9	.92	.00	.00	198	193
8	.00	.00	414	e420	e220	3.8	2.9	.92	.00	.00	193	194
9	.00	.00	409	e420	e220	4.3	2.9	.92	.00	.00	193	196
10	.00	.00	405	e380	e210	3.8	3.3	.92	.00	.00	193	196
11	.00	.00	243	e210	e160	2.9	3.3	.92	.00	.00	194	199
12	.00	.00	9.7	e200	e11	3.3	2.5	.92	.00	.00	112	205
13	.00	.00	3.3	153	2.5	4.3	1.6	.92	.00	.00	3.5	203
14	.00	.00	3.3	9.5	2.0	3.3	1.3	.92	.00	.00	.00	121
15	.00	.00	2.9	e1.4	2.0	2.9	1.3	.92	.00	.00	.00	3.5
16	.00	.00	1.3	e1.8	2.5	2.5	1.3	.92	.00	50	.00	.00
17	.00	.00	1.3	e2.0	2.5	152	.92	.92	.00	127	.00	.00
18	.00	.00	1.3	e2.1	87	1360	1.3	.60	.00	162	.00	.00
19	.00	.00	135	e2.7	302	1320	1.6	.60	.00	201	.00	.00
20	.00	.00	537	e2.6	401	1300	.92	.60	.00	201	.00	.00
21	.00	.00	1140	2.5	395	1280	.92	.60	.00	117	.00	.00
22	.00	.00	1330	2.5	388	1060	.92	.60	.00	2.9	.00	.00
23	.00	.00	e1400	2.5	212	509	.92	.00	.00	.00	.00	.00
24	.00	.00	e1400	2.9	190	197	.92	.00	.00	.00	.00	.00
25	.00	392	e1200	3.8	189	97	.92	.00	.00	.00	.00	.00
26	.00	310	e650	4.3	189	7.6	.92	.00	.00	.00	.00	.00
27	.00	97.2	e650	4.3	189	2.9	.92	.00	.00	.00	.00	.00
28	.00	243	e640	4.3	189	2.5	.92	.00	.00	.00	.00	125
29	.00	11	e630	4.3	88	20	1.3	.00	.00	.00	76	282
30	.00	2.0	e620	4.3	---	206	1.3	.00	.00	.00	205	261
31	.00	---	e500	4.3	---	208	---	.00	---	.00	199	---
TOTAL	0.00	1055.20	12934.5	2785.0	4173.2	7770.9	738.20	19.40	0.00	860.90	2401.50	3368.50
MEAN	.00	35.2	417	89.8	144	251	24.6	.63	.00	27.8	77.5	112
MAX	.00	392	1400	440	401	1360	203	1.3	.00	201	205	282
MIN	.00	.00	1.3	1.4	2.0	2.0	.92	.00	.00	.00	.00	.00
AC-FT	.0	2090	25660	5520	8280	15410	1460	38	.0	1710	4760	6680

CAL YR 1987 TOTAL 71820.68 MEAN 197 MAX 2650 MIN .00 AC-FT 142500
WTR YR 1988 TOTAL 36107.30 MEAN 98.7 MAX 1400 MIN .00 AC-FT 71620

e Estimated.

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1972 to September 1986, October 1987 to current year.

REMARKS.--Beginning in October 1987, a change in sampling procedures was initiated, making samples more representative of outflow from Lake Conroe. The sample location for floodflows and controlled releases through the outflow weir is at the bridge on State Highway 105 (station 08067650). The sample location for uncontrolled low flows is at the outflow weir for Lake Conroe (station 08067610). See "REMARKS" section for station 08067610 Lake Conroe at Outflow Weir near Conroe, Tx.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN 19...	1028	2.7	365	7.50	13.5	25	3.2	8.3	81	0.8	140
FEB 17...	0945	2.5	315	7.70	12.0	28	3.2	10.4	97	1.2	120
MAR 29...	1103	4.5	355	7.50	21.0	14	21	8.0	90	0.9	120
AUG 02...	0918	1.1	382	8.20	26.0	13	9.5	5.0	63	2.6	130

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 WAT WH TOT FET 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 19...	25	48	3.9	21	0.8	2.9	111	14	35	0.20	14
FEB 17...	15	41	3.5	20	0.8	2.8	102	12	30	0.20	8.2
MAR 29...	9	44	3.5	19	0.8	2.7	116	11	33	0.20	11
AUG 02...	17	45	4.7	25	1	2.9	115	8.8	43	0.20	13

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	206	8	1	--	<0.010	0.200	0.020	0.58	0.60	0.040	6.1
FEB 17...	179	<1	<1	0.090	0.010	0.100	0.020	0.48	0.50	0.040	6.5
MAR 29...	194	5	1	--	<0.010	<0.100	<0.010	--	0.40	0.050	7.2
AUG 02...	212	29	13	0.090	0.010	0.100	0.030	0.97	1.0	0.050	7.7

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)
JAN 19...	1	150	2	<1	2	110	<5	170	<0.1	<1
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 29...	--	--	--	--	--	--	--	--	--	--
AUG 02...	2	130	1	<1	<1	8	<5	4	<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)
JAN 19...	<1.0	9	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 29...	--	--	--	--	--	--	--	--	--	--
AUG 02...	<1.0	10	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	0.01

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
JAN 19...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 29...	--	--	--	--	--	--	--	--	--	--
AUG 02...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01

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)
JAN 19...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	<0.01	<0.01
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 29...	--	--	--	--	--	--	--	--	--	--
AUG 02...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	0.02	<0.01

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 September 1987.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)
OCT										
21...	0840	4.6	220	6.90	18.0	5	7.5	7.7	80	0.6
NOV										
10...	1215	10	222	7.40	15.0	8	5.9	8.2	80	1.2
DEC										
14...	1155	39	289	7.10	17.5	60	18	8.1	85	--
JAN										
19...	1300	58	365	7.60	13.5	45	8.7	9.7	95	0.8
FEB										
18...	0913	32	480	7.50	13.5	47	12	9.6	92	1.4
MAR										
30...	0925	36	381	7.70	17.5	29	14	7.8	82	0.7
APR										
28...	1005	10	435	7.80	20.0	14	12	7.2	79	1.3
MAY										
24...	1014	5.5	339	7.50	23.0	17	15	6.4	75	1.3
JUN										
21...	0926	3.6	256	7.50	25.0	45	22	5.7	69	1.4
JUL										
27...	1014	2.0	215	7.30	27.5	28	11	5.8	74	1.2
AUG										
23...	1014	2.7	185	7.40	28.0	21	12	4.8	62	1.0
SEP										
27...	0934	1.5	175	7.20	23.5	40	12	5.8	68	1.0

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
OCT										
21...	88	110	35	10	3	<0.010	<0.100	0.010	0.39	0.40
NOV										
10...	210	270	35	13	4	<0.010	<0.100	<0.010	--	0.20
DEC										
14...	120	210	62	18	3	<0.010	<0.100	0.020	0.58	0.60
JAN										
19...	88	130	69	16	1	0.010	<0.100	0.030	0.57	0.60
FEB										
18...	150	190	86	16	6	<0.010	<0.100	0.020	0.48	0.50
MAR										
30...	160	430	91	27	2	<0.010	<0.100	0.020	0.48	0.50
APR										
28...	80	210	92	13	18	<0.010	<0.100	0.040	0.36	0.40
MAY										
24...	150	160	61	28	25	<0.010	<0.100	0.020	0.18	0.20
JUN										
21...	20	190	50	39	13	0.010	<0.100	0.050	0.85	0.90
JUL										
27...	32	240	23	15	6	0.010	<0.100	0.040	0.86	0.90
AUG										
23...	150	170	28	31	11	0.010	<0.100	0.040	0.66	0.70
SEP										
27...	80	92	23	12	<1	<0.010	<0.100	<0.010	--	0.40

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT										
21...	0.050	0.030	0.09	2.8	2.8	3	0.700	<0.100	100	50
NOV										
10...	0.060	0.030	0.09	3.5	3.9	2	0.500	<0.100	140	40
DEC										
14...	0.140	0.020	0.06	10	11	3	1.50	0.100	160	50
JAN										
19...	0.070	0.030	0.09	9.6	7.6	3	0.700	0.100	210	40
FEB										
18...	0.050	0.010	0.03	8.1	6.4	1	5.20	0.900	60	40
MAR										
30...	0.090	0.040	0.12	9.2	8.4	2	3.30	0.400	110	50
APR										
28...	0.060	0.020	0.06	5.2	5.1	2	4.50	0.400	30	90
MAY										
24...	0.050	0.020	0.06	4.6	4.3	2	2.10	0.200	110	80
JUN										
21...	0.120	0.270	0.83	5.4	4.5	3	3.60	0.400	80	80
JUL										
27...	0.100	0.040	0.12	3.8	3.3	<1	1.10	0.100	100	50
AUG										
23...	0.100	0.100	0.31	3.9	2.6	1	1.10	0.100	20	40
SEP										
27...	0.070	0.040	0.12	3.2	2.9	<1	1.50	0.200	90	40

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.--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); 16 years (water years 1973-88) regulated, 535 ft³/s (387,600 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, 4,120 ft³/s Nov. 25 at 1600 hours (gage height, 16.03 ft); minimum daily, 17 ft³/s Aug. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	24	222	678	73	106	346	87	28	25	27	208
2	29	24	165	483	75	96	331	73	28	25	37	210
3	27	24	135	261	79	128	308	71	48	24	145	212
4	26	24	118	196	82	125	251	64	132	25	200	211
5	26	24	105	182	134	104	100	55	63	33	219	209
6	26	24	133	167	364	89	88	48	49	48	218	210
7	25	24	929	675	347	83	81	44	66	37	212	209
8	24	24	999	894	326	83	70	43	77	33	210	205
9	24	45	876	816	320	88	65	43	58	34	208	214
10	24	35	675	779	304	85	61	42	47	33	210	211
11	23	34	538	511	333	77	87	40	41	41	217	212
12	23	31	200	389	161	73	88	40	37	33	204	214
13	23	29	128	365	94	72	58	38	34	43	56	208
14	23	29	111	181	84	89	51	37	32	30	29	197
15	23	29	143	129	84	73	48	36	32	28	26	58
16	23	86	108	117	83	64	46	34	31	27	24	27
17	23	98	87	126	77	82	47	33	30	132	24	26
18	23	56	88	122	113	e1570	48	31	29	169	23	22
19	22	46	213	119	508	2570	56	31	28	222	23	22
20	23	41	1240	111	746	2740	49	30	29	237	22	21
21	22	38	2270	106	748	2540	43	38	30	225	22	19
22	23	36	2720	92	723	1650	42	45	29	56	21	19
23	25	34	2440	85	494	885	41	36	34	27	20	19
24	29	34	2010	82	338	464	40	34	31	22	26	19
25	31	2130	1600	90	309	346	39	31	35	22	22	19
26	27	2750	1120	91	293	163	42	29	32	21	20	18
27	26	3040	1400	75	285	127	42	28	28	20	18	18
28	25	2370	1410	72	278	110	39	27	27	21	17	24
29	24	910	1200	71	242	101	62	28	26	24	18	282
30	24	373	1020	71	---	e240	133	27	25	24	180	318
31	24	---	870	72	---	366	---	28	---	25	205	---
TOTAL	770	12466	25273	8208	8097	15389	2802	1271	1216	1766	2903	3861
MEAN	24.8	416	815	265	279	496	93.4	41.0	40.5	57.0	93.6	129
MAX	31	3040	2720	894	748	2740	346	87	132	237	219	318
MIN	22	24	87	71	73	64	39	27	25	20	17	18
AC-FT	1530	24730	50130	16280	16060	30520	5560	2520	2410	3500	5760	7660

CAL YR 1987 TOTAL 157839 MEAN 432 MAX 5230 MIN 21 AC-FT 313100
WTR YR 1988 TOTAL 84022 MEAN 230 MAX 3040 MIN 17 AC-FT 166700

e Estimated.

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 three-parameter water-quality monitor recorded specific conductance, water temperature, and dissolved oxygen 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, 638 microsiemens Sept. 22; minimum, 58 microsiemens Nov. 25.
WATER TEMPERATURE: Maximum, 31.0°C June 27, 28; minimum, 5.0°C Jan. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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											
10...	0925	36	367	7.30	15.0	--	9.7	10.2	100	2.6	K12
FEB											
08...	1035	325	266	7.30	8.5	18	12	11.1	93	1.5	210
17...	1210	76	407	7.60	14.0	--	24	9.6	93	2.7	52
MAR											
29...	1254	99	338	7.30	22.0	--	--	8.8	101	1.0	--
MAY											
24...	1125	32	402	7.70	25.0	--	14	7.5	91	1.2	270
JUN											
06...	1125	48	320	7.30	24.5	50	39	7.1	85	2.4	92
JUL											
27...	0830	20	522	7.70	27.5	--	--	6.5	83	1.4	--
AUG											
22...	1115	21	399	7.20	28.5	15	15	6.6	85	1.2	550
23...	1240	21	463	8.00	29.0	--	32	6.9	90	1.0	190

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV											
10...	28	66	0	21	3.3	48	3	4.5	67	25	52
FEB											
08...	180	88	17	31	2.6	19	0.9	3.5	71	14	31
17...	1400	110	26	36	3.9	39	2	2.9	80	19	61
MAR											
29...	--	89	14	30	3.3	30	1	2.9	75	16	45
MAY											
24...	130	80	0	26	3.7	46	2	4.3	83	19	54
JUN											
06...	120	69	0	22	3.4	34	2	3.5	69	15	40
JUL											
27...	--	78	0	25	3.8	69	4	6.0	97	35	66
AUG											
22...	220	75	0	24	3.6	49	3	4.6	79	29	46
23...	180	82	0	26	4.1	61	3	5.2	90	34	56

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE 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)
NOV											
10...	0.20	21	233	224	--	--	1.55	1.25	0.050	0.050	1.60
FEB											
08...	0.20	10	--	154	11	1	0.180	--	0.020	--	0.200
17...	0.20	17	238	231	--	--	0.480	0.490	0.020	0.020	0.500
MAR											
29...	0.20	18	--	190	--	--	0.590	--	0.010	--	0.600
MAY											
24...	0.40	21	241	236	--	--	2.39	1.99	0.010	0.010	2.40
JUN											
06...	0.30	18	--	178	63	32	0.680	--	0.020	--	0.700
JUL											
27...	0.40	23	--	286	--	--	3.86	--	0.040	--	3.90
AUG											
22...	0.30	21	--	225	26	11	2.98	--	0.020	--	3.00
23...	0.30	23	272	281	--	--	2.68	2.88	0.020	0.020	2.70

DATE	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, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)
NOV											
10...	1.30	0.230	0.230	0.57	0.80	0.850	0.800	0.740	2.3	--	27
FEB											
08...	--	0.040	--	0.76	0.80	0.100	--	--	--	9.1	--
17...	0.510	0.060	0.060	0.44	0.50	0.410	0.370	0.300	0.92	--	12
MAR											
29...	--	0.020	--	0.48	0.50	0.400	--	--	--	--	--
MAY											
24...	2.00	0.050	0.030	0.45	0.50	0.970	0.930	0.900	2.8	--	21
JUN											
06...	--	0.090	--	0.41	0.50	0.630	--	--	--	6.0	--
JUL											
27...	--	0.060	--	0.84	0.90	1.60	--	--	--	--	--
AUG											
22...	--	0.060	--	1.1	1.2	3.90	--	--	--	5.0	--
23...	2.90	0.050	0.050	0.55	0.60	1.70	1.60	1.30	4.0	--	17

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)
NOV											
10...	2.6	93	130	1	81	<0.5	<1	<1	<3	3	340
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
17...	2.5	98	80	1	120	<0.5	1	<1	<3	1	100
MAR											
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
24...	1.8	88	<10	1	83	<0.5	1	<1	<3	2	23
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
22...	--	--	--	--	--	--	--	--	--	--	--
23...	0.96	98	<10	2	74	<0.5	<1	<1	<3	<1	21

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)
NOV											
10...	<5	13	90	<0.1	<10	1	<1	1.0	200	<6	11
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
17...	<5	8	65	<0.1	<10	<1	<1	<1.0	170	<6	11
MAR											
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
24...	<5	12	52	0.5	<10	<1	<1	<1.0	210	<6	23
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
22...	--	--	--	--	--	--	--	--	--	--	--
23...	<5	12	73	<0.1	<10	2	<1	<1.0	260	<6	15

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

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	770	379	216	449	54	112	16	33	85
NOV.	1987	12466	142	84	2820	18	610	5.8	194	47
DEC.	1987	25273	213	125	8510	28	1900	8.7	593	65
JAN.	1988	8208	279	161	3580	38	837	11	254	76
FEB.	1988	8097	304	175	3840	42	912	13	274	79
MAR.	1988	15389	241	140	5830	32	1330	9.9	410	69
APR.	1988	2802	341	196	1480	48	362	14	107	81
MAY	1988	1271	436	246	845	64	219	18	63	84
JUNE	1988	1216	407	230	756	59	195	17	56	81
JULY	1988	1766	457	257	1230	68	324	19	92	82
AUG.	1988	2903	442	249	1960	65	510	19	145	84
SEPT	1988	3861	390	222	2320	56	585	16	170	84
TOTAL		84022	**	**	33600	**	7900	**	2390	**
WTD.AVG.		230	256	148	**	35	**	11	**	69

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	447	353	394	456	435	441	216	202	208	249	245	247
2	463	359	409	454	431	437	268	199	224	257	243	247
3	433	359	398	452	417	431	279	243	255	280	258	268
4	394	341	367	462	422	455	273	242	254	292	280	287
5	359	343	350	466	397	444	280	254	265	294	282	285
6	365	346	353	522	426	460	282	223	263	312	273	297
7	367	350	359	535	395	473	---	---	240	288	218	239
8	369	334	352	482	411	445	248	194	220	271	226	242
9	352	340	346	472	239	348	251	246	248	277	253	263
10	397	345	361	380	300	338	254	248	251	277	266	273
11	433	394	409	421	329	383	258	252	254	266	260	264
12	415	379	398	442	371	399	282	255	266	267	255	261
13	392	359	374	436	295	390	293	255	278	268	255	263
14	394	332	367	443	355	405	295	275	288	310	270	290
15	394	348	364	449	301	377	309	264	290	318	291	305
16	395	344	362	361	180	265	311	281	294	317	296	306
17	395	366	374	282	177	215	319	293	308	314	297	306
18	405	376	392	340	293	309	327	289	310	328	307	315
19	392	359	377	359	316	341	313	116	249	332	311	322
20	372	360	365	363	306	335	199	122	170	345	324	333
21	387	357	373	361	314	337	184	170	176	368	338	348
22	386	361	374	394	340	364	186	180	183	382	346	363
23	374	340	361	405	316	363	197	183	189	400	368	385
24	350	333	342	370	331	348	217	197	207	388	353	366
25	406	336	357	391	58	147	220	213	217	418	330	367
26	420	346	381	126	82	111	225	216	221	429	365	399
27	419	368	387	111	99	105	225	199	210	470	416	448
28	469	404	443	146	109	132	223	204	212	465	414	445
29	414	333	390	169	141	153	233	225	229	447	396	428
30	449	392	414	202	170	184	243	234	238	431	386	411
31	476	441	454	---	---	---	249	243	246	404	359	380
MONTH	476	332	379	535	58	331	327	116	241	470	218	321

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 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	380	355	369	360	301	330	305	284	294	375	287	319
2	377	357	369	413	357	379	301	274	284	404	369	385
3	394	364	376	377	318	336	283	226	264	444	381	401
4	391	355	382	369	329	346	326	269	297	500	406	458
5	363	285	343	377	350	366	368	330	346	507	465	492
6	285	274	279	391	360	371	398	359	372	494	450	475
7	286	281	283	395	362	378	454	406	419	496	404	446
8	282	277	280	396	356	382	452	400	425	513	478	491
9	298	284	292	389	362	375	444	400	415	508	400	456
10	300	291	296	471	426	439	419	389	405	481	402	441
11	294	276	287	497	450	465	419	302	361	468	431	457
12	367	294	336	479	410	449	376	300	336	464	427	448
13	405	368	383	474	380	442	413	355	386	452	414	437
14	397	374	386	439	349	420	447	400	412	463	421	440
15	396	372	384	462	371	407	419	399	410	456	417	437
16	411	382	396	432	396	416	419	396	407	453	405	431
17	424	400	409	434	256	378	418	385	405	476	413	446
18	428	293	385	225	167	198	419	318	398	517	449	486
19	388	259	310	210	200	203	416	390	401	508	430	469
20	320	266	292	234	212	227	419	377	404	552	450	507
21	366	313	353	221	209	213	444	400	412	490	345	432
22	351	272	305	234	216	227	419	381	405	421	345	365
23	276	264	271	243	234	239	414	315	395	416	374	376
24	278	266	272	257	244	251	412	377	393	454	385	415
25	276	266	273	276	255	262	419	314	393	508	441	469
26	275	264	270	318	279	296	446	387	416	515	443	484
27	275	264	270	349	308	321	470	396	428	513	449	488
28	271	263	268	367	331	347	484	421	458	483	434	457
29	300	263	272	366	344	357	489	345	439	487	429	450
30	---	---	---	363	215	305	305	208	272	490	428	459
31	---	---	---	301	200	254	---	---	---	487	428	458
MONTH	428	259	324	497	167	335	489	208	382	552	287	444

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	508	442	464	521	406	471	513	483	500	415	344	373
2	507	409	460	591	506	536	489	470	481	420	339	374
3	493	206	403	622	520	562	470	437	450	408	339	372
4	239	159	194	598	520	555	458	444	450	352	335	343
5	245	219	230	620	354	549	472	447	456	350	332	340
6	343	246	293	594	380	485	522	450	490	368	341	353
7	428	326	361	562	469	546	478	424	450	348	335	341
8	479	436	459	568	476	528	462	420	442	358	340	349
9	473	428	442	519	384	458	482	451	465	373	352	363
10	472	436	452	575	478	543	475	463	468	380	366	374
11	---	---	462	570	420	489	467	431	452	395	379	388
12	---	---	465	537	486	509	486	471	478	413	393	403
13	---	---	468	524	430	496	475	427	453	419	409	414
14	---	---	470	558	522	544	483	455	470	423	412	419
15	---	---	475	554	517	537	505	485	495	427	420	424
16	---	---	480	543	537	540	508	489	498	488	430	455
17	---	---	482	537	513	525	500	467	480	506	484	497
18	---	---	485	517	439	497	503	465	490	545	480	505
19	---	---	488	443	320	369	516	451	485	608	549	570
20	---	---	478	401	325	358	509	483	499	632	596	614
21	463	449	458	430	400	420	493	405	450	622	604	616
22	476	452	462	438	416	427	486	467	477	638	608	625
23	479	463	473	443	423	432	467	434	455	622	568	593
24	480	399	426	442	429	434	451	409	435	592	549	572
25	449	418	436	494	442	464	462	332	455	595	552	573
26	478	453	472	513	480	494	406	418	468	548	486	516
27	478	436	458	513	512	513	439	425	471	482	439	459
28	458	442	449	513	512	512	430	401	470	500	452	467
29	---	---	470	513	503	509	485	367	440	508	419	485
30	---	---	475	513	491	504	426	271	308	403	321	346
31	---	---	---	513	494	502	347	288	309	---	---	---
MONTH	508	159	436	622	320	494	522	271	458	638	321	451

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	30.5	27.0	28.5	26.5	24.5	26.0	28.0	26.5	27.0
2	---	---	---	30.0	27.0	28.5	---	---	---	27.5	26.5	27.0
3	26.5	23.0	25.0	30.0	27.0	28.5	26.5	25.5	26.0	27.0	26.0	26.5
4	25.0	22.0	23.0	29.5	26.5	27.5	26.5	24.5	25.5	27.0	26.0	26.5
5	26.5	22.5	24.5	27.5	25.0	26.0	27.0	26.5	26.5	27.0	25.5	26.5
6	27.5	23.5	25.5	27.5	25.0	26.0	---	---	---	26.5	24.5	25.5
7	28.5	24.5	26.5	27.5	25.5	26.5	---	---	---	26.0	24.5	25.0
8	29.5	25.5	27.5	27.0	25.5	26.5	---	---	---	26.0	24.0	25.0
9	30.5	26.0	28.0	27.5	25.0	26.5	---	---	---	25.5	24.0	25.0
10	29.0	26.5	28.0	28.5	26.0	27.0	---	---	---	25.5	24.0	25.0
11	28.0	24.0	26.5	28.5	26.0	27.5	---	---	---	25.5	23.5	25.0
12	28.0	23.5	26.0	27.5	27.0	27.5	---	---	---	26.5	24.5	25.5
13	28.0	24.0	26.5	28.5	26.0	27.5	---	---	---	26.0	25.0	25.5
14	30.0	25.0	27.5	29.5	26.5	27.5	---	---	---	26.5	25.0	25.5
15	29.5	24.5	27.5	28.0	26.5	27.0	---	---	---	26.5	24.5	25.5
16	29.0	24.5	27.0	29.5	24.5	27.0	28.5	26.0	27.5	26.5	24.0	25.0
17	29.0	24.5	27.0	---	---	---	28.5	25.5	27.0	26.0	24.0	25.0
18	28.5	24.0	26.5	27.5	25.5	27.0	---	---	---	27.0	24.5	25.5
19	29.0	24.5	27.0	---	---	---	---	---	---	27.0	25.0	26.0
20	30.0	25.0	27.5	26.5	26.0	26.5	30.0	26.5	28.5	27.5	24.5	26.0
21	30.0	25.0	27.5	27.0	24.5	26.0	29.0	26.5	28.0	28.0	24.5	26.0
22	30.5	25.5	27.5	---	---	---	29.0	27.0	28.5	27.0	23.5	25.5
23	29.0	25.0	27.0	27.5	25.0	26.5	29.0	27.0	28.0	27.0	23.5	25.5
24	27.5	25.5	27.0	27.5	24.5	26.5	29.0	27.0	28.0	27.0	24.0	25.5
25	29.5	25.5	27.0	28.0	25.5	27.0	30.0	26.5	28.5	25.5	23.0	24.5
26	30.5	26.0	28.0	29.0	26.5	27.5	29.0	26.0	27.5	26.0	21.5	23.5
27	31.0	26.5	29.0	28.5	25.0	27.0	28.5	25.5	27.5	25.5	21.0	23.0
28	31.0	27.5	29.5	27.5	26.0	26.5	28.5	25.0	27.0	25.0	21.5	23.5
29	29.5	27.5	28.0	---	---	---	28.0	26.0	27.0	24.5	21.5	23.0
30	---	---	---	---	---	---	27.5	25.5	26.5	24.5	23.5	24.0
31	---	---	---	---	---	---	27.5	26.0	27.0	---	---	---
MONTH	31.0	22.0	27.0	30.5	24.5	27.0	30.0	24.5	27.5	28.0	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.--Records good except those for estimated daily discharges, which are poor. 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, 7,680 ft³/s Nov. 25 at 2400 hours (gage height, 22.26 ft), from rating curve extended above 4,800 ft³/s on basis of records for station 08068000; minimum daily (estimated), 29 ft³/s July 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	39	416	1010	104	188	605	150	43	e31	42	228
2	66	36	288	825	106	185	529	105	42	e30	56	231
3	55	35	227	502	103	264	471	98	46	e30	85	236
4	48	35	196	365	117	230	419	94	230	e29	249	233
5	45	34	167	305	159	181	256	82	105	e40	291	228
6	46	32	152	276	403	136	160	72	70	e60	304	224
7	42	35	1130	841	452	119	145	66	55	e45	294	226
8	39	43	1310	1260	399	115	125	59	78	e40	272	225
9	45	44	1080	1090	380	118	112	55	75	e42	267	228
10	42	67	904	1020	380	119	102	52	57	e40	255	230
11	42	50	720	826	355	111	108	50	49	e45	261	230
12	38	47	426	560	329	101	130	50	45	e40	242	231
13	40	43	200	500	169	94	108	50	42	37	167	235
14	39	43	169	387	170	91	87	48	40	39	57	228
15	35	44	147	223	183	109	80	47	38	34	45	174
16	37	68	174	196	176	88	77	46	36	32	37	73
17	39	176	125	213	168	99	75	50	40	40	36	58
18	38	112	113	218	185	1690	73	48	42	163	41	52
19	39	78	150	210	410	2690	71	43	41	202	50	44
20	36	66	1430	194	848	2770	79	43	38	277	39	41
21	37	60	2340	175	857	2730	70	55	41	302	35	39
22	40	57	2980	162	871	2110	66	61	43	200	45	37
23	43	52	2820	146	728	1270	64	58	38	74	36	36
24	45	50	2380	136	439	716	62	48	42	45	39	36
25	58	3470	2010	127	375	441	59	46	56	38	38	37
26	51	5570	1570	129	349	285	57	44	54	36	36	34
27	47	3830	2100	120	333	165	55	45	41	32	34	32
28	40	3540	2150	107	318	137	52	44	34	31	32	33
29	41	1760	1630	104	318	123	55	44	32	34	32	89
30	40	769	1360	103	---	231	188	44	e31	36	65	420
31	38	---	1200	103	---	684	---	45	---	39	218	---
TOTAL	1363	20285	32064	12433	10184	18390	4540	1842	1624	2163	3700	4448
MEAN	44.0	676	1034	401	351	593	151	59.4	54.1	69.8	119	148
MAX	72	5570	2980	1260	871	2770	605	150	230	302	304	420
MIN	35	32	113	103	103	88	52	43	31	29	32	32
AC-FT	2700	40240	63600	24660	20200	36480	9010	3650	3220	4290	7340	8820

CAL YR 1987 TOTAL 212507 MEAN 582 MAX 6940 MIN 32 AC-FT 421500
WTR YR 1988 TOTAL 113036 MEAN 309 MAX 5570 MIN 29 AC-FT 224200

e Estimated.

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.

INSTRUMENTATION.--Stage-activated water sampler since January 1985 provides water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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)
FEB											
09...	0806	382	274	7.40	9.0	46	14	11.0	94	1.8	370
MAY											
20...	0815	44	476	7.30	23.0	--	--	7.2	84	--	--
JUN											
06...	0815	77	372	6.50	24.5	45	80	6.1	73	2.7	370
27...	0815	41	572	6.80	27.5	--	--	6.2	78	--	--
JUL											
13...	0810	37	471	6.90	27.0	--	--	6.0	75	--	--
27...	0835	32	442	6.80	28.0	--	--	6.7	85	--	--
AUG											
10...	1310	255	288	7.90	32.0	--	--	8.6	118	--	--
23...	0645	39	524	7.20	28.0	5	11	5.1	65	1.0	170
SEP											
07...	1010	225	287	7.80	25.0	--	--	8.4	101	--	--
20...	0815	43	472	7.70	26.5	--	--	7.0	86	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB											
09...	620	84	21	29	2.9	22	1	3.3	64	17	36
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	650	61	10	19	3.2	49	3	3.3	51	16	74
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
23...	120	88	1	28	4.4	70	3	4.6	87	34	84
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
FEB											
09...	0.20	10	160	21	<1	0.280	0.210	0.020	0.020	0.300	0.230
MAY											
20...	--	--	--	--	--	0.470	0.550	0.030	0.020	0.500	0.570
JUN											
06...	0.30	12	209	17	15	0.250	0.280	0.050	0.030	0.300	0.310
27...	--	--	--	--	--	0.650	0.650	0.050	0.040	0.700	0.690
JUL											
13...	--	--	--	--	--	0.750	0.760	0.050	0.040	0.800	0.800
27...	--	--	--	--	--	--	0.540	--	0.030	--	0.570
AUG											
10...	--	--	--	--	--	0.190	0.210	0.010	0.010	0.200	0.220
23...	0.20	19	301	23	9	0.750	0.820	0.050	0.050	0.800	0.870
SEP											
07...	--	--	--	--	--	0.090	--	0.010	<0.010	0.100	0.110
20...	--	--	--	--	--	1.07	1.16	0.030	0.040	1.10	1.20

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
B											
09...	0.060	0.040	--	0.66	0.70	--	0.120	0.100	9.9	--	--
MAY											
20...	0.060	0.040	0.64	0.76	0.80	0.70	0.540	0.500	--	--	--
JUN											
06...	0.230	0.240	0.37	0.66	0.90	0.60	0.310	0.260	7.6	--	--
27...	0.160	0.150	0.64	0.45	0.60	0.80	0.790	0.700	--	--	--
JUL											
13...	0.110	0.150	0.49	0.45	0.60	0.60	0.840	0.710	--	--	--
27...	--	0.120	--	0.48	0.60	1.8	0.380	0.380	--	--	--
AUG											
10...	0.050	0.020	0.75	0.78	0.80	0.80	0.210	0.150	--	--	--
23...	0.140	0.160	0.96	0.14	0.30	1.1	0.960	0.900	5.0	4	110
SEP											
07...	<0.010	<0.010	--	--	0.80	0.90	0.270	0.110	--	--	--
20...	0.010	0.020	0.59	0.58	0.60	0.60	0.520	0.490	--	--	--

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)
FEB										
09...	--	--	--	120	--	8	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	100	--	1	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
23...	<1	<1	<1	23	<5	66	<0.1	<1	2.0	5
SEP										
07...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--

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 estimated daily discharges, which are fair. No known diversion above station.

AVERAGE DISCHARGE.--49 years, 222 ft³/s (7.19 in/yr), 160,800 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)
Nov. 26	Unknown	*7,500	*20.52	No other peak greater than base discharge.			

Minimum discharge, 8.2 ft³/s Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	18	328	295	55	54	276	126	24	e19	27	11
2	46	18	220	260	55	75	196	158	25	e19	36	11
3	37	18	170	243	53	87	152	89	25	e18	28	11
4	31	18	136	204	79	106	124	61	27	e18	18	11
5	27	18	120	172	200	99	92	49	27	44	19	10
6	24	e18	139	163	297	83	78	41	26	72	36	9.9
7	22	e18	278	431	251	70	72	39	26	24	27	10
8	21	e21	479	582	214	64	67	38	23	e18	20	e10
9	20	e46	461	548	151	74	64	36	22	e16	17	10
10	20	e70	232	332	130	79	60	34	e21	e17	15	10
11	19	e50	157	224	118	70	57	33	e21	18	22	10
12	19	e38	128	176	104	60	69	32	e21	e18	13	10
13	19	e34	113	155	90	53	72	31	e21	e17	13	10
14	19	e31	102	137	85	49	70	30	e21	e17	14	10
15	19	e60	94	122	84	47	68	29	e20	e17	13	11
16	19	e98	84	128	78	44	57	28	e20	e16	13	11
17	19	e200	78	130	72	131	52	27	e20	e16	13	12
18	19	e130	75	131	77	853	52	27	e20	e16	13	11
19	19	e84	251	125	110	1020	49	27	e20	17	12	11
20	19	e54	857	115	178	1400	46	26	e19	e51	11	11
21	19	e47	1280	100	211	1700	44	68	e19	35	12	11
22	19	e40	1670	86	129	629	44	57	e19	31	12	10
23	e25	e36	1760	76	74	243	51	41	19	36	12	11
24	e30	e34	1420	69	68	179	49	31	25	27	11	11
25	e27	e3500	712	66	87	157	47	28	83	24	12	11
26	e23	e6500	554	60	64	136	48	29	28	20	12	11
27	e22	e5500	893	56	62	124	48	26	20	22	11	11
28	e21	e2500	987	53	58	114	46	24	20	27	11	11
29	19	e1400	993	52	56	107	57	24	20	24	11	11
30	19	e600	809	52	---	243	80	24	e19	24	11	12
31	18	---	409	51	---	638	---	24	---	20	11	---
TOTAL	752	21199	15989	5394	3290	8788	2287	1337	721	758	506	320.9
MEAN	24.3	707	516	174	113	283	76.2	43.1	24.0	24.5	16.3	10.7
MAX	72	6500	1760	582	297	1700	276	158	83	72	36	12
MIN	18	18	75	51	53	44	44	24	19	16	11	9.9
AC-FT	1490	42050	31710	10700	6530	17430	4540	2650	1430	1500	1000	637
CFSM	.06	1.69	1.23	.42	.27	.68	.18	.10	.06	.06	.04	.03
IN.	.07	1.88	1.42	.48	.29	.78	.20	.12	.06	.07	.04	.03

CAL YR 1987 TOTAL 102175 MEAN 280 MAX 6500 MIN 17 AC-FT 202700 CFSM .67 IN. 9.07
WTR YR 1988 TOTAL 61341.9 MEAN 168 MAX 6500 MIN 9.9 AC-FT 121700 CFSM .40 IN. 5.45

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.

INSTRUMENTATION.--Stage-activated water sampler since October 1984 provides water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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)
FEB											
08...	0925	222	255	7.30	8.0	27	83	11.0	91	2.7	3400
MAY											
20...	0922	27	541	7.60	23.0	--	--	6.6	77	--	--
JUN											
06...	1025	27	548	7.80	24.0	17	1.6	7.8	92	3.7	36
28...	1030	20	582	7.60	28.0	--	--	6.5	83	--	--
JUL											
11...	1010	18	618	7.90	27.5	--	--	7.8	99	--	--
25...	0935	24	499	7.00	27.0	--	--	6.0	75	--	--
AUG											
10...	0810	15	553	7.40	28.0	--	--	4.8	61	--	--
22...	1005	12	639	7.40	28.5	16	26	5.8	75	1.5	150
SEP											
06...	1105	9.7	676	7.50	24.0	--	--	7.8	92	--	--
19...	1330	12	697	7.70	29.0	--	--	9.1	118	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB											
08...	3000	51	13	15	3.3	28	2	3.0	38	13	43
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	290	79	0	24	4.6	80	4	4.3	112	15	84
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
22...	480	74	0	22	4.6	100	5	6.0	141	17	91
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
FEB											
08...	0.20	13	144	135	6	0.360	0.440	0.040	0.040	0.400	0.480
MAY											
20...	--	--	--	--	--	2.32	2.42	0.180	0.180	2.50	2.60
JUN											
06...	0.40	14	305	25	23	2.20	2.20	0.200	0.200	2.40	2.40
28...	--	--	--	--	--	2.52	2.53	0.080	0.070	2.60	2.60
JUL											
11...	--	--	--	--	--	3.33	0.240	0.070	0.070	3.40	0.310
25...	--	--	--	--	--	2.36	2.36	0.040	0.040	2.40	2.40
AUG											
10...	--	--	--	--	--	3.12	3.03	0.080	0.070	3.20	3.10
22...	0.30	17	359	70	14	3.43	3.63	0.070	0.070	3.50	3.70
SEP											
06...	--	--	--	--	--	3.66	3.77	0.040	0.030	3.70	3.80
19...	--	--	--	--	--	3.76	3.65	0.040	0.050	3.80	3.70

08068520 SPRING CREEK AT SPRING, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (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)
FEB											
08...	0.200	0.210	0.50	1.2	1.4	0.70	0.270	0.230	13	--	--
MAY											
20...	0.390	0.380	1.0	0.72	1.1	1.4	1.70	1.70	--	--	--
JUN											
06...	0.350	0.340	0.55	0.76	1.1	0.90	2.00	2.00	5.5	--	--
28...	0.120	0.120	0.68	0.88	1.0	0.80	2.40	2.10	--	--	--
JUL											
11...	0.060	0.080	1.0	0.72	0.80	1.1	2.30	2.40	--	--	--
25...	0.110	0.120	0.69	0.68	0.80	0.80	1.90	1.80	--	--	--
AUG											
10...	0.140	0.130	0.76	0.77	0.90	0.90	2.40	2.30	--	--	--
22...	0.140	0.140	0.56	0.56	0.70	0.70	3.40	3.40	6.0	3	67
SEP											
06...	0.050	0.070	1.2	1.0	1.1	1.2	3.40	3.10	--	--	--
19...	0.080	0.090	1.0	0.71	0.80	1.1	3.60	3.40	--	--	--

DATE	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										
08...	--	--	--	340	--	36	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	12	--	62	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
22...	2	<1	<1	22	<5	19	<0.1	<1	<1.0	17
SEP										
06...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

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, February 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.--No estimated daily discharges. Records fair. 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.--11 years (water years 1975-82, 1985-88), 61.2 ft³/s (44,340 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, 1,380 ft³/s Nov. 27 at 0700 hours (gage height, 59.91 ft); no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	.06	139	46	2.8	2.9	17	18	.30	.00	.00	.00
2	2.5	.02	85	34	2.5	3.3	21	4.1	.25	.00	.58	.00
3	.83	.85	64	21	2.2	17	9.6	.82	2.0	.00	.00	.00
4	.39	1.5	54	14	3.9	12	3.9	.00	1.7	.00	.00	.00
5	.24	.56	44	10	6.6	5.6	.49	.00	.87	.04	.00	.00
6	.61	.15	75	8.3	32	6.6	.29	.00	.16	.07	.00	.00
7	1.6	.06	237	49	19	6.2	.80	.00	.04	.08	.00	.00
8	.86	.02	194	55	9.1	5.7	1.2	.00	.01	.08	.00	.00
9	.30	.05	105	27	6.6	3.9	1.2	.00	.0	.09	.00	.00
10	.15	.06	65	16	5.7	1.6	1.2	.00	.06	.12	.00	.00
11	.17	.05	42	11	5.2	1.5	.86	.05	.06	.14	.00	.00
12	.17	.01	29	7.9	4.1	1.2	.55	.19	.07	.10	.00	.00
13	.07	.00	22	6.4	3.4	.93	.47	1.4	.07	.11	.00	.00
14	.04	.00	18	5.2	2.5	.47	.68	.00	.09	.04	.00	.00
15	.01	.01	16	4.3	2.3	.38	.85	.00	.05	.00	.00	.00
16	.00	3.3	12	4.3	2.6	.32	.95	.01	.03	.64	.00	.00
17	.00	2.6	9.1	5.6	2.5	4.1	1.0	.10	.03	.63	.00	.00
18	.00	.00	8.1	8.2	2.5	133	1.8	.16	.00	.00	.00	.00
19	.00	.00	61	11	4.4	103	1.8	.19	.00	.00	.00	.00
20	.00	.00	307	14	5.7	20	1.6	.23	.00	.00	.00	.00
21	.00	.03	500	9.3	3.7	7.2	1.4	.74	.00	.01	.00	.00
22	.00	.22	563	4.9	2.7	7.1	.82	1.1	.03	.00	.00	.00
23	.05	.30	489	4.1	2.0	3.0	.53	.41	.05	.00	.00	.00
24	.36	.30	242	2.9	2.1	3.3	.30	.42	.04	.03	.00	.00
25	1.4	634	157	2.3	1.7	3.7	.10	.47	.04	.08	.00	.00
26	.66	1170	150	2.5	2.3	3.6	.07	.81	.14	.08	.00	.00
27	.48	1350	207	2.4	1.6	4.0	.04	1.4	.24	.08	.00	.01
28	.24	1180	270	2.3	2.2	3.3	.0	1.3	.28	.55	.00	.05
29	.16	875	196	2.9	2.9	2.9	10	.83	.11	1.7	.00	.12
30	.17	432	85	3.1	---	2.9	40	.65	.02	.54	.00	.13
31	.12	---	56	2.9	---	4.7	---	.35	---	.00	.00	---
TOTAL	17.08	5651.15	4501.2	397.8	146.8	375.40	120.50	33.73	6.74	5.21	0.58	0.31
MEAN	.55	188	145	12.8	5.06	12.1	4.02	1.09	.22	.17	.019	.010
MAX	5.5	1350	563	55	32	133	40	18	2.0	1.7	.58	.13
MIN	.00	.00	8.1	2.3	1.6	.32	.00	.00	.00	.00	.00	.00
AC-FT	34	11210	8930	789	291	745	239	67	13	10	1.2	.6

CAL YR 1987 TOTAL 29430.19 MEAN 80.6 MAX 1480 MIN .00 AC-FT 58370
WTR YR 1988 TOTAL 11256.50 MEAN 30.8 MAX 1350 MIN .00 AC-FT 22330

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.--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.--13 years, 79.7 ft³/s (57,740 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, 1,550 ft³/s Nov. 28 at time unknown (gage height, 44.56 ft); no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	.05	e200	66	3.0	1.3	15	28	.24	.81	.64	.00
2	2.4	.02	e120	52	2.6	1.4	25	8.3	.19	.31	1.8	.00
3	.73	.00	78	34	3.3	13	12	3.6	4.1	.22	3.8	.00
4	3.0	.77	67	25	5.8	15	4.8	3.9	5.5	1.1	5.0	.00
5	2.1	1.1	56	20	12	6.9	1.3	4.2	2.8	.62	11	.00
6	1.1	.51	59	18	44	9.0	.80	1.9	1.3	1.1	8.8	.56
7	3.4	.22	295	71	e31	7.5	.91	.71	.73	1.3	5.5	.07
8	2.3	.15	299	e82	e17	7.7	1.3	.36	1.1	.90	3.7	.00
9	3.6	.20	141	e45	12	5.1	1.0	.23	.49	1.3	5.9	.39
10	6.3	.19	84	28	13	2.7	.81	.18	.61	1.0	.83	.20
11	2.0	.29	60	21	9.8	1.4	.68	e.23	1.3	1.1	.22	.02
12	.79	.21	50	18	7.0	1.2	.54	e.19	.51	.92	.11	.00
13	e.40	.14	40	15	5.7	.95	.59	e.79	.35	.85	.11	.00
14	e.35	.08	21	12	4.4	.85	.41	e.34	.76	.85	.10	.00
15	e.20	.04	18	9.0	3.6	.72	.38	e.16	.71	.50	.11	.00
16	e.30	5.5	14	8.0	3.3	.68	.41	.20	.38	.53	.04	.00
17	e.10	8.7	11	8.1	4.0	4.6	.49	.16	.26	4.8	.15	.00
18	e.20	1.5	9.0	9.9	7.2	113	.55	.22	.21	.64	.22	.00
19	e.15	.62	68	13	7.5	142	.47	.27	.19	.32	.01	.00
20	e.10	.51	426	15	8.3	33	.61	.26	.64	5.1	.00	.00
21	e.05	.66	635	13	5.2	13	.60	e1.7	1.2	3.4	.00	.00
22	e.05	.44	705	7.5	3.5	12	.53	.79	.59	4.4	.00	.00
23	e.05	.28	631	5.9	2.2	9.0	.42	.85	.40	1.4	.00	.00
24	e.05	.45	367	4.3	1.7	4.5	.28	.30	.28	.79	.00	.00
25	e.40	431	194	3.7	1.6	4.8	.19	.25	.25	.50	.00	.00
26	e.40	1120	178	3.5	1.9	4.2	.15	.23	.24	.61	.00	.00
27	e.25	1400	242	3.0	1.8	4.2	.33	.30	.55	.49	.00	.04
28	.20	e1500	343	3.8	1.4	3.5	.22	.67	.52	.74	.00	.09
29	.08	e1100	269	4.7	1.4	3.3	15	.56	.51	11	.00	15
30	.13	e550	119	4.2	---	5.7	62	.39	.85	9.6	.00	9.4
31	.08	---	77	3.2	---	7.3	---	.28	---	1.0	.00	---
TOTAL	38.26	6123.63	5876.0	626.8	225.2	439.50	147.77	60.52	27.76	58.20	48.04	25.77
MEAN	1.23	204	190	20.2	7.77	14.2	4.93	1.95	.93	1.88	1.55	.86
MAX	7.0	1500	705	82	44	142	62	28	5.5	11	11	15
MIN	.05	.00	9.0	3.0	1.4	.68	.15	.16	.19	.22	.00	.00
AC-FT	76	12150	11660	1240	447	872	293	120	55	115	95	51

CAL YR 1987 TOTAL 34628.09 MEAN 94.9 MAX 1610 MIN .00 AC-FT 68680
WTR YR 1988 TOTAL 13697.45 MEAN 37.4 MAX 1500 MIN .00 AC-FT 27170

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 12...	1204	0.36	492	7.60	14.0	40	2.8	10.2	98	2.7	130
FEB 10...	1235	13	265	7.40	11.0	140	57	10.6	96	2.7	54
MAY 23...	1325	0.84	398	8.20	24.0	65	51	9.4	112	3.6	93
AUG 01...	1203	0.51	431	8.10	29.5	55	27	8.0	105	1.6	100

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 WAT WH TOT FET 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 12...	0	39	9.0	45	2	13	138	20	62	0.20	42
FEB 10...	22	16	3.4	27	2	6.9	32	27	41	0.20	12
MAY 23...	0	30	4.4	43	2	4.3	103	18	48	0.80	14
AUG 01...	0	31	5.7	51	2	2.9	124	11	51	0.40	21

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 12...	314	5	<1	--	0.010	<0.100	0.040	--	--	0.220	26
FEB 10...	153	24	<1	0.360	0.040	0.400	0.210	1.2	1.4	0.280	18
MAY 23...	225	30	20	0.260	0.040	0.300	0.110	0.89	1.0	0.560	10
AUG 01...	249	43	36	0.060	0.040	0.100	0.120	1.6	1.7	0.200	7.0

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 12...	2	190	<1	<1	3	360	13	16	0.2	<1
FEB 10...	1	74	<1	<1	4	670	<5	29	<0.1	<1
MAY 23...	3	160	<1	<1	2	160	<5	85	<0.1	<1
AUG 01...	3	290	1	<1	1	39	<5	50	<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 12...	<1.0	6	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
FEB 10...	<1.0	13	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY 23...	<1.0	41	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	0.01
AUG 01...	<1.0	15	<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 12...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
FEB 10...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
MAY 23...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
AUG 01...	<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 1987 TO SEPTEMBER 1988

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										
12...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	0.03	<0.01	<0.01
FEB										
10...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	<0.01	<0.01
MAY										
23...	<0.01	<0.01	<0.01	<0.1	<0.01	<1	<0.01	<0.01	<0.01	<0.01
AUG										
01...	<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 of 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.--6 years, 21.8 ft³/s (7.22 in/yr), 15,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s Nov. 25, 1987 at 1300 hours (gage height, 80.49 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)
Nov. 25	1300	*3,400	*80.49	No other peak greater than base discharge.			

Minimum, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	e.00	10	11	.20	.12	4.9	5.0	.00	.00	3.2	.00
2	6.1	e.00	6.5	7.4	.18	.15	4.7	5.5	.00	.00	.98	.00
3	3.2	e.00	4.8	4.6	.18	1.6	2.7	2.0	.00	.00	.42	.00
4	1.4	e.00	3.9	3.4	.45	2.6	1.4	.36	.00	.00	.20	.00
5	.66	e.00	3.4	2.7	11	1.0	.88	.13	.01	.00	.11	.00
6	.31	e.00	14	2.8	21	.53	.66	.08	.06	.00	.06	.00
7	.51	e.00	76	41	7.9	.36	.51	.06	.03	.00	.01	.00
8	1.3	e.00	23	27	3.5	.32	.45	.06	.01	.00	.00	.00
9	.63	e.10	11	9.9	2.4	.51	.39	.05	.00	.05	.00	.00
10	.32	1.2	9.5	5.4	2.2	.35	.31	.05	.00	.09	.00	.00
11	.19	.40	7.7	3.1	1.7	.23	.26	.07	.00	.03	.00	.00
12	.08	.23	6.8	2.3	1.0	.15	.19	.14	.00	.0	.00	.00
13	.08	.15	4.6	2.1	.72	.12	.14	.10	.00	.00	.00	.00
14	.08	.10	4.4	1.5	.57	.08	.17	.06	.00	.00	.00	.00
15	.11	.15	3.1	1.0	.49	.07	.21	.04	.00	.00	.00	.00
16	.63	9.6	3.1	1.1	.43	.07	.18	.02	.00	.00	.00	.00
17	.46	6.0	1.1	1.2	.35	8.9	.19	.01	.00	.00	.00	.00
18	.31	1.8	.72	1.2	1.2	121	.15	.00	.00	.00	.00	.00
19	.18	.79	62	1.1	3.5	32	.19	.00	.00	.00	.00	.00
20	.08	.54	205	.95	1.8	14	.26	.00	.00	.08	.00	.00
21	e.04	.38	153	1.0	1.0	5.0	.26	.09	.00	.04	.00	.00
22	e.00	.25	151	.71	1.5	2.7	.23	.08	.00	.00	.00	.00
23	e.00	.18	57	.51	.56	1.6	.21	.10	1.7	.00	.00	.00
24	e.00	.15	35	.38	.31	1.1	.22	.06	.12	.0	.00	.00
25	e.00	2140	31	.27	.21	.91	.21	.02	.07	.01	.00	.00
26	e.00	1760	37	.23	.13	.75	.18	.00	.03	1.9	.00	.00
27	e.00	364	82	.26	.16	.86	.16	.00	.0	15	.00	.00
28	e.00	76	90	.25	.15	.54	.14	.00	.00	10	.00	.00
29	e.00	27	31	.19	.13	.44	1.3	.00	.00	11	.00	.00
30	e.00	15	16	.18	---	.57	14	.00	.00	7.8	.00	.00
31	e.00	---	13	.21	---	2.5	---	.00	---	4.1	.00	---
TOTAL	17.45	4404.02	1156.62	134.94	64.92	201.13	35.75	14.08	2.03	50.10	4.98	0.00
MEAN	.56	147	37.3	4.35	2.24	6.49	1.19	.45	.068	1.62	.16	.00
MAX	6.1	2140	205	41	21	121	14	5.5	1.7	15	3.2	.00
MIN	.00	.00	.72	.18	.13	.07	.14	.00	.00	.00	.00	.00
AC-FT	35	8740	2290	268	129	399	71	28	4.0	99	9.9	.0
CFSM	.01	3.58	.91	.11	.05	.16	.03	.01	.00	.04	.00	.00
IN.	.02	4.00	1.05	.12	.06	.18	.03	.01	.00	.05	.00	.00

CAL YR 1987 TOTAL 11274.04 MEAN 30.9 MAX 2140 MIN .00 AC-FT 22360 CFSM .75 IN. 10.23
WTR YR 1988 TOTAL 6086.02 MEAN 16.6 MAX 2140 MIN .00 AC-FT 12070 CFSM .41 IN. 5.52

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. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--6 years, 102 ft³/s (73,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s May 14, 1982, and Nov. 26, 1987; maximum gage height, 43.48 ft May 14, 1982; minimum daily (estimated), 0.29 ft³/s Sept. 15, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,550 ft³/s Nov. 26 at 1630 hours (gage height, 43.35 ft); minimum daily (estimated), 0.50 ft³/s on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	e.50	637	89	e4.9	e2.8	23	66	e2.5	e1.1	8.4	e1.7
2	5.9	e.50	197	68	e4.3	e3.0	31	21	e2.0	e1.0	30	e1.6
3	6.6	e.50	103	45	e5.0	e6.0	20	10	118	e.90	35	e1.6
4	e5.0	e1.6	79	32	e7.0	21	10	e6.0	12.0	6.0	8.1	e1.5
5	e4.0	e2.0	64	25	17	11	e6.0	e5.5	e6.0	12	8.4	e1.4
6	e3.0	e1.5	67	29	54	7.9	e3.5	e4.0	e4.0	9.7	15	3.3
7	e4.5	e1.2	317	124	51	7.8	e2.5	e2.5	e2.5	e5.0	9.8	e2.2
8	e4.5	e1.0	383	134	21	12	e3.0	e1.5	e2.0	e2.5	7.2	e1.8
9	e5.0	e1.5	216	73	15	e9.0	e2.5	e1.0	e1.8	e2.2	6.8	e2.2
10	e8.0	e3.0	110	41	12	e6.0	e2.2	e1.0	e2.0	e2.0	7.3	e2.0
11	e5.0	e2.2	71	27	12	e4.0	e2.0	e.90	e2.0	e2.2	5.7	e1.8
12	e3.0	e1.6	50	21	10	e3.0	e1.8	e.80	e1.8	e1.8	5.2	e4.0
13	e2.2	e1.2	35	20	8.5	e2.5	e1.7	e1.0	e1.5	e1.6	e3.0	e2.5
14	e1.5	e1.0	26	18	e6.5	e2.3	e1.6	e1.2	e1.4	e1.7	e2.2	e2.0
15	e1.2	e6.0	22	15	e5.5	e2.2	e1.5	e2.0	e1.2	e1.5	e1.8	e1.9
16	e1.2	122	19	13	e5.0	e2.2	e1.4	e1.4	e1.2	e1.6	e1.5	e1.8
17	e.80	26	15	12	e5.5	29	e1.6	e1.2	e1.4	e5.5	e1.2	e1.6
18	e2.0	10	12	12	9.5	198	e1.6	e1.0	e1.2	e1.5	e4.0	e1.5
19	e1.4	e3.5	106	14	8.9	229	e1.6	e1.0	e1.0	e1.4	e2.0	e1.4
20	e1.0	e2.2	585	14	9.8	72	e2.0	e1.0	e1.0	81	e1.5	e1.3
21	e.70	e1.8	783	17	8.6	26	e2.0	77	e1.5	43	e1.6	e1.2
22	e.50	e1.5	890	13	e6.0	17	e1.6	8.8	12	10	e1.5	e1.1
23	e.50	e1.2	763	11	e4.5	14	e1.4	e3.0	e7.0	6.0	e2.5	e1.0
24	e.60	e1.2	570	8.7	e3.5	e10	e1.3	e2.5	2.0	e3.5	e2.2	e1.2
25	e.70	692	288	e6.5	e3.0	e7.0	e1.2	e2.0	e1.5	e2.0	e2.0	e1.1
26	.70	2890	235	e6.0	e3.5	e6.5	e1.1	e1.8	e1.0	e3.0	e2.1	e1.0
27	e.65	2490	321	e5.0	e3.2	e6.5	e1.2	e1.5	.98	8.9	e2.0	e.90
28	e.60	1360	454	e5.3	e3.0	e5.5	e1.1	e1.5	e.90	27	e1.9	e.80
29	e.50	1250	395	e5.6	e2.9	e4.5	20	e1.5	e.80	18	e2.0	e2.0
30	e.50	1090	204	e6.2	---	78	74	e2.0	e1.2	30	e1.9	e10
31	e.50	---	108	e5.8	---	82	---	e2.0	---	21	1.8	---
TOTAL	81.65	9966.70	8125	916.1	310.6	887.7	225.4	233.60	195.38	314.60	185.6	59.40
MEAN	2.63	332	262	29.6	10.7	28.6	7.51	7.54	6.51	10.1	5.99	1.98
MAX	9.4	2890	890	134	54	229	74	77	118	81	35	10
MIN	.50	.50	12	5.0	2.9	2.2	1.1	.80	.80	.90	1.2	.80
AC-FT	162	19770	16120	1820	616	1760	447	463	388	624	368	118

CAL YR 1987 TOTAL 48241.25 MEAN 132 MAX 2890 MIN .50 AC-FT 95690
WTR YR 1988 TOTAL 21501.73 MEAN 58.7 MAX 2890 MIN .50 AC-FT 42650

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 May 1986 and February to September 1987 (gage heights and discharge measurements only), October 1987 to September 1988.

GAGE.--Water-stage and rainfall recorders. Datum of gage is 70.00 ft above National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Low flow is sustained by sewage effluent from urbanized areas and drainage from irrigated farm land. Several measurements of water temperature were obtained during the year. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,910 ft³/s Oct. 25, 1984 (gage height, 37.88 ft); minimum daily, 4.0 ft³/s Apr. 28, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,360 ft³/s Nov. 27 at 0700 hours (gage height, 32.15 ft); minimum daily, 4.0 ft³/s Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	8.1	723	109	e16	16	87	96	17	9.2	17	11
2	20	8.7	238	83	e15	57	66	51	13	17	28	14
3	20	8.1	133	65	e14	41	53	32	274	15	98	14
4	17	7.8	100	53	e60	41	30	21	42	14	19	14
5	14	8.2	86	45	e130	43	19	16	22	59	15	13
6	16	6.9	134	e60	e100	30	14	18	15	62	19	13
7	12	6.5	277	e300	e90	31	9.5	14	13	23	17	10
8	13	17	357	e150	e65	64	7.9	11	11	13	14	14
9	15	63	251	e100	e55	52	8.3	11	11	11	12	14
10	14	15	146	e70	e35	31	8.0	10	11	9.8	13	13
11	20	9.0	101	e50	e30	25	7.4	10	9.4	12	108	14
12	16	7.9	73	e35	e25	21	6.1	9.6	8.6	10	29	51
13	12	7.7	55	39	e22	20	6.1	9.8	9.6	9.3	11	22
14	10	8.0	42	e34	e22	19	5.7	10	9.5	9.7	12	8.8
15	9.6	12	34	e30	e25	17	5.5	12	9.0	9.4	19	8.5
16	10	343	30	e32	e22	18	6.9	11	9.1	9.6	11	12
17	10	93	26	e30	e20	151	8.9	11	9.3	9.2	9.2	12
18	10	43	21	e28	e50	283	6.3	9.9	8.9	9.3	45	9.5
19	11	22	e150	e30	e35	276	5.0	10	9.0	12	19	9.4
20	11	15	e650	34	e25	145	5.0	10	9.7	479	15	8.7
21	9.2	13	e850	35	e25	58	4.9	246	10	112	16	8.4
22	8.1	12	932	e30	e22	33	4.9	51	36	25	11	8.6
23	23	12	784	e25	e20	26	5.2	20	87	15	26	8.7
24	15	11	620	e22	18	18	4.8	16	18	12	15	8.1
25	12	1870	319	e19	17	14	4.9	14	14	9.6	11	8.1
26	11	2250	300	e17	17	13	4.1	13	12	8.5	13	7.1
27	8.4	3050	478	e15	16	12	4.1	12	9.1	14	10	6.7
28	7.6	1600	442	e14	18	11	4.0	11	8.9	42	9.3	6.1
29	8.3	1300	391	15	17	10	72	11	8.4	21	13	6.4
30	8.0	1160	224	e15	---	297	98	15	9.1	25	11	18
31	7.7	---	135	e15	---	321	---	15	---	24	10	---
TOTAL	406.9	11987.9	9102	1599	1026	2194	572.5	807.3	733.6	1110.6	675.5	372.1
MEAN	13.1	400	294	51.6	35.4	70.8	19.1	26.0	24.5	35.8	21.8	12.4
MAX	28	3050	932	300	130	321	98	246	274	479	108	51
MIN	7.6	6.5	21	14	14	10	4.0	9.6	8.4	8.5	9.2	6.1
AC-FT	807	23780	18050	3170	2040	4350	1140	1600	1460	2200	1340	738

CAL YR 1987 TOTAL --- MEAN --- MAX --- MIN --- AC-FT ---
WTR YR 1988 TOTAL 30587.4 MEAN 83.6 MAX 3050 MIN 4.0 AC-FT 60670

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.--No estimated daily discharges. Records good. 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.--44 years, 162 ft³/s (117,400 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 May 1929 (discharge, 26,000 ft³/s), present datum, 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)
Nov. 25	1115	*5,950	*24.39	Nov. 27	1215	3,420	18.56

Minimum daily discharge, 17 ft³/s Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	19	877	177	35	26	125	94	24	22	40	27
2	32	19	314	122	27	130	82	62	21	32	34	31
3	26	19	151	96	23	69	71	40	306	59	99	33
4	26	18	115	75	91	38	49	32	66	35	38	30
5	23	18	100	62	275	49	36	25	33	69	34	28
6	24	18	182	102	157	35	30	27	26	86	62	30
7	22	17	313	464	115	36	28	23	22	48	32	25
8	21	21	431	190	80	80	30	21	21	23	29	28
9	24	112	302	143	70	70	31	22	20	21	28	28
10	24	32	165	96	49	33	35	22	20	19	27	27
11	27	21	119	69	43	28	33	22	18	21	345	28
12	28	19	90	57	40	26	26	22	18	21	75	82
13	23	18	73	60	35	25	25	21	19	20	32	67
14	20	21	62	47	35	25	25	22	21	20	27	33
15	20	48	53	42	38	24	24	24	21	23	39	32
16	21	437	49	63	32	23	27	25	21	22	29	39
17	20	157	45	63	27	290	33	24	22	21	29	35
18	21	56	40	42	93	473	27	24	22	21	72	29
19	21	35	515	40	49	309	26	22	22	24	63	26
20	21	28	694	40	37	180	26	23	23	767	29	27
21	20	24	1140	41	38	79	23	350	24	168	35	27
22	19	24	1010	41	34	50	26	75	31	43	29	29
23	40	24	857	34	30	41	26	29	96	28	52	27
24	38	24	701	32	27	34	23	22	32	24	45	38
25	34	3340	429	29	26	28	25	24	37	22	42	34
26	24	2270	366	29	26	27	26	23	24	21	29	26
27	20	3230	701	26	25	26	23	23	22	21	28	24
28	18	1970	541	26	27	25	25	21	21	48	26	22
29	18	1380	489	25	28	27	103	19	20	38	30	23
30	18	1240	304	25	---	423	111	20	20	36	29	45
31	18	---	190	26	---	530	---	23	---	39	27	---
TOTAL	743	14659	11418	2384	1612	3259	1200	1226	1093	1862	1535	980
MEAN	24.0	489	368	76.9	55.6	105	40.0	39.5	36.4	60.1	49.5	32.7
MAX	40	3340	1140	464	275	530	125	350	306	767	345	82
MIN	18	17	40	25	23	23	23	19	18	19	26	22
AC-FT	1470	29080	22650	4730	3200	6460	2380	2430	2170	3690	3040	1940

CAL YR 1987 TOTAL 81202 MEAN 222 MAX 3340 MIN 17 AC-FT 161100
WTR YR 1988 TOTAL 41971 MEAN 115 MAX 3340 MIN 17 AC-FT 83250

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.

INSTRUMENTATION.--Stage-activated water sampler since October 1984 provides water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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											
16...	1250	646	--	--	16.0	--	--	--	--	--	--
16...	1540	772	--	--	16.5	--	--	--	--	--	--
16...	2250	525	--	--	16.5	--	--	--	--	--	--
17...	0920	136	--	--	16.5	--	--	--	--	--	--
DEC											
21...	0946	1250	--	--	17.0	--	--	--	--	--	--
21...	1441	1330	--	--	16.0	--	--	--	--	--	--
22...	0908	1010	--	--	16.0	--	--	--	--	--	--
23...	0836	869	--	--	16.0	--	--	--	--	--	--
24...	0952	718	--	--	15.0	--	--	--	--	--	--
26...	1202	306	--	--	16.5	--	--	--	--	--	--
FEB											
08...	0755	80	350	7.80	8.5	110	66	11.0	92	2.3	24
MAY											
20...	0812	22	813	9.10	25.5	--	--	8.0	98	--	--
JUN											
06...	0900	24	519	7.90	25.5	80	120	8.8	107	4.6	520
28...	0945	19	722	7.90	29.5	--	--	6.9	91	--	--
JUL											
11...	0910	19	729	7.80	29.0	--	--	6.7	87	--	--
25...	0845	21	626	7.90	29.5	--	--	6.0	78	--	--
AUG											
10...	0720	24	702	8.20	30.5	--	--	6.1	82	--	--
AUG											
11-11	1300	715	156	--	--	--	--	--	--	--	--
22...	0850	27	675	8.20	30.5	16	6.0	5.9	79	2.5	520
SEP											
06...	1005	30	773	8.40	25.5	--	--	7.4	90	--	--
19...	1255	24	736	8.00	28.0	--	--	6.9	88	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	56	62	0	19	3.5	45	3	6.5	67	23	44
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	580	82	0	26	4.1	77	4	6.5	132	18	59
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
AUG											
11-11	--	--	--	--	--	--	--	--	--	--	--
22...	200	100	0	32	4.8	100	5	8.1	156	24	87
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE 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)
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	0.30	11	205	58	9	2.66	2.76	0.040	0.040	2.70	2.80
MAY											
20...	--	--	--	--	--	5.73	6.13	0.170	0.170	5.90	6.30
JUN											
06...	0.40	15	301	153	37	3.16	3.16	0.140	0.140	3.30	3.30
28...	--	--	--	--	--	5.36	5.46	0.140	0.140	5.50	5.60
JUL											
11...	--	--	--	--	--	6.84	6.15	0.160	0.150	7.00	6.30
25...	--	--	--	--	--	5.90	5.80	0.100	0.100	6.00	5.90
AUG											
10...	--	--	--	--	--	6.01	6.11	0.090	0.090	6.10	6.20
AUG											
11-11	--	--	--	--	--	1.27	1.28	0.030	0.020	1.30	1.30
22...	0.30	19	394	11	9	5.17	5.57	0.130	0.130	5.30	5.70
SEP											
06...	--	--	--	--	--	7.48	7.60	0.120	0.100	7.60	7.70
19...	--	--	--	--	--	6.70	6.29	0.100	0.110	6.80	6.40

DATE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV											
16...	--	--	--	--	--	--	--	--	--	964	1680
16...	--	--	--	--	--	--	--	--	--	1290	2690
16...	--	--	--	--	--	--	--	--	--	405	574
17...	--	--	--	--	--	--	--	--	--	184	68
DEC											
21...	--	--	--	--	--	--	--	--	--	1040	3510
21...	--	--	--	--	--	--	--	--	--	855	3070
22...	--	--	--	--	--	--	--	--	--	622	1700
23...	--	--	--	--	--	--	--	--	--	371	870
24...	--	--	--	--	--	--	--	--	--	320	620
26...	--	--	--	--	--	--	--	--	--	115	95
FEB											
08...	0.180	0.170	1.2	1.6	1.8	1.4	1.50	1.60	16	--	--
MAY											
20...	0.030	0.010	0.87	0.89	0.90	0.90	2.80	2.30	--	--	--
JUN											
06...	0.650	0.610	1.2	1.7	2.3	1.9	3.40	3.40	9.1	--	--
28...	0.150	0.150	1.0	0.75	0.90	1.2	4.40	4.00	--	--	--
JUL											
11...	0.160	0.200	1.0	1.0	1.2	1.2	5.00	4.80	--	--	--
25...	0.220	0.230	1.2	1.1	1.3	1.4	4.40	4.40	--	--	--
AUG											
10...	0.110	0.080	0.69	0.82	0.90	0.80	3.70	3.70	--	--	--
AUG											
11-11	0.150	0.140	1.0	1.3	1.4	1.2	1.10	1.00	--	--	--
22...	0.100	0.100	1.8	1.3	1.4	1.9	3.90	3.80	6.1	--	--
SEP											
06...	0.080	0.120	1.2	1.1	1.2	1.3	4.50	3.90	--	--	--
19...	0.140	0.140	1.2	0.96	1.1	1.3	5.00	5.00	--	--	--

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. 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 DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV											
16...	26	27	31	36	46	62	85	98	100	--	--
16...	23	27	32	37	43	53	72	91	100	--	--
16...	41	43	47	51	58	71	86	97	100	--	--
17...	74	76	85	87	91	93	97	99	100	--	--
DEC											
21...	12	13	15	18	24	33	58	97	100	--	--
21...	11	12	14	18	21	30	45	97	100	--	--
22...	11	12	13	16	19	24	34	90	100	--	--
23...	9	10	11	13	17	28	41	93	100	--	--
24...	13	15	16	18	22	31	46	94	100	--	--
26...	39	44	52	53	64	74	81	97	100	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
11...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
AUG											
11-11	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	5	110
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	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										
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
DEC										
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	250	--	12	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	53	--	13	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
AUG										
11-11	--	--	--	80	--	<10	--	--	--	--
22...	<1	<1	3	16	<5	<1	<0.1	<1	1.0	15
SEP										
06...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

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, nonrecording 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.
1954-88: 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, 19.93 ft Nov. 26 at 0300 hours; minimum not recorded.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.02	---	13.99	13.48	12.81	13.13	13.74	12.61	11.88	---	---	---
2	11.99	---	13.52	13.07	12.82	13.64	13.48	12.68	11.80	---	---	---
3	12.02	---	13.27	12.67	12.78	13.59	13.32	12.62	12.07	---	---	---
4	11.98	---	13.13	12.27	12.76	13.35	13.32	12.61	12.19	---	---	---
5	11.93	---	13.13	11.88	12.99	13.30	13.23	12.62	12.11	---	---	---
6	11.90	---	13.15	11.82	13.03	13.25	13.11	12.67	12.10	---	---	---
7	11.86	---	13.60	12.94	13.16	13.24	13.02	12.66	12.07	---	---	---
8	11.87	---	13.76	13.26	13.19	13.19	12.99	12.59	12.08	---	---	---
9	11.83	---	13.74	13.41	13.19	13.09	12.98	12.57	12.19	---	---	---
10	11.79	---	13.67	13.42	13.19	13.19	12.95	12.54	12.04	---	---	---
11	11.72	---	13.45	13.42	13.16	13.19	12.73	12.55	11.97	---	11.89	---
12	11.69	---	13.31	13.23	12.95	13.09	12.56	12.52	11.93	---	11.79	---
13	11.70	---	13.23	12.94	12.99	12.99	12.60	12.46	11.89	---	---	---
14	11.63	---	13.19	12.69	13.02	12.82	12.67	12.46	11.90	---	---	---
15	11.64	---	12.83	12.40	12.97	12.79	12.66	12.41	11.79	---	---	---
16	11.57	11.43	12.78	12.42	13.01	12.86	12.68	12.37	11.71	---	---	---
17	11.51	11.43	12.82	12.51	13.04	13.60	12.71	12.31	11.68	---	---	---
18	11.57	---	12.87	12.63	13.19	14.68	12.64	12.28	11.61	---	---	---
19	11.49	---	13.64	12.65	13.07	14.94	12.56	12.26	11.63	---	---	---
20	11.44	---	14.17	12.65	13.24	15.15	12.62	12.20	11.55	11.90	---	---
21	11.48	---	15.70	12.67	13.35	15.26	12.61	12.33	11.53	11.86	---	---
22	11.41	---	15.75	12.72	13.42	15.12	12.56	12.27	11.52	---	---	---
23	11.41	---	15.76	12.79	13.40	14.19	12.55	12.23	11.46	---	---	---
24	---	---	15.56	12.78	13.25	13.58	12.54	12.19	11.45	---	---	---
25	---	19.79	14.99	12.71	13.13	13.33	12.53	12.17	11.45	---	---	---
26	---	19.93	14.19	12.65	13.13	13.23	12.46	12.14	---	---	---	---
27	---	19.35	14.93	12.71	13.09	13.21	12.44	12.10	---	---	---	---
28	---	19.32	14.93	12.76	13.07	13.19	12.45	12.10	---	---	---	---
29	---	17.01	14.51	12.85	13.07	13.19	12.60	12.10	---	---	---	---
30	---	14.90	14.24	12.89	---	13.76	12.57	12.07	---	---	---	---
31	---	---	13.84	12.84	---	14.03	---	12.01	---	---	---	---
MAX	---	---	15.76	13.48	13.42	15.26	13.74	12.68	---	---	---	---

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.--No estimated daily discharges. Records good. There are no large diversions above station. Rain gage and gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 228 ft³/s, 9.53 in/yr (165,200 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 (discharge, 53,500 ft³/s), present site and datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 29	1200	*1,800	*12.61				

Minimum discharge, 7.4 ft³/s Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	27	130	298	83	89	223	91	24	16	20	13
2	27	26	100	346	88	143	186	94	23	15	22	12
3	27	26	84	296	86	295	141	71	24	15	19	14
4	26	26	76	253	89	162	117	51	28	14	19	14
5	26	26	70	223	106	135	103	42	38	21	18	16
6	26	26	104	204	182	112	91	38	39	31	20	13
7	25	26	800	416	183	95	81	37	36	25	19	11
8	25	26	1140	784	168	120	73	36	27	24	19	11
9	25	26	616	777	144	193	69	36	23	26	15	11
10	25	26	213	421	138	163	65	35	20	24	13	11
11	25	27	143	249	123	163	60	32	19	22	14	10
12	25	26	115	195	108	120	56	31	18	23	15	11
13	24	26	98	175	99	97	53	31	16	24	19	18
14	24	27	90	157	95	81	51	30	17	31	18	22
15	24	32	83	146	94	72	49	29	17	27	16	18
16	24	75	73	140	90	68	47	27	16	24	15	16
17	24	96	66	150	85	122	76	27	16	24	18	17
18	24	54	66	150	99	869	67	26	16	23	14	17
19	25	44	118	151	336	1250	53	25	19	21	14	16
20	25	41	597	143	683	1510	48	24	16	20	23	15
21	24	36	1050	126	808	1290	53	27	24	20	19	13
22	24	33	1170	111	384	334	55	36	19	19	16	13
23	25	32	749	102	194	200	49	35	17	16	15	13
24	28	31	367	96	149	159	55	29	18	15	15	17
25	28	183	307	92	122	140	52	27	20	14	14	12
26	29	860	341	87	108	127	45	25	22	14	14	13
27	28	1180	735	84	98	115	40	25	24	20	13	13
28	27	1040	1390	80	95	104	38	24	20	24	14	12
29	27	581	1740	79	91	94	45	24	20	25	12	12
30	27	198	1040	80	---	125	89	24	17	20	11	15
31	27	---	354	82	---	205	---	24	---	18	12	---
TOTAL	799	4883	14025	6693	5128	8752	2230	1113	653	655	505	419
MEAN	25.8	163	452	216	177	282	74.3	35.9	21.8	21.1	16.3	14.0
MAX	29	1180	1740	784	808	1510	223	94	39	31	23	22
MIN	24	26	66	79	83	68	38	24	16	14	11	10
AC-FT	1580	9690	27820	13280	10170	17360	4420	2210	1300	1300	1000	831
CFSM	.08	.50	1.39	.66	.54	.87	.23	.11	.07	.07	.05	.04
IN.	.09	.56	1.61	.77	.59	1.00	.26	.13	.07	.07	.06	.05

CAL YR 1987 TOTAL 81924 MEAN 224 MAX 2030 MIN 22 AC-FT 162500 CFSM .69 IN. 9.38
WTR YR 1988 TOTAL 45855 MEAN 125 MAX 1740 MIN 10 AC-FT 90950 CFSM .39 IN. 5.25

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. Pesticide analyses: January to August 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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												
09...	1220	142	294	6.90	9.0	30	8.3	12.4	106	1.2	520	210
JUN												
07...	0810	38	162	6.80	24.5	50	18	6.5	78	1.5	96	130
AUG												
23...	0910	15	159	6.60	29.0	18	9.4	5.9	76	0.7	140	150

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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												
09...	78	32	26	3.1	27	1	2.1	46	16	55	0.20	16
JUN												
07...	31	13	9.6	1.8	18	1	1.0	18	6.3	31	0.20	12
AUG												
23...	28	12	8.1	1.8	19	2	0.90	16	4.0	34	0.10	13

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB											
09...	173	13	1	--	0.010	<0.100	0.020	0.38	0.40	0.020	7.5
JUN											
07...	91	29	20	0.090	0.010	0.100	0.020	0.48	0.50	0.060	4.6
AUG											
23...	90	16	6	--	<0.010	<0.100	0.030	0.67	0.70	0.050	3.3

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.--No estimated daily discharges. Records good. 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, 15 ft³/s on many days during September 1988.

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)
Dec. 30	1300	*16.30	*12.67				

Minimum discharge, 15 ft³/s on many days during September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	29	214	403	91	107	305	94	30	22	26	15
2	34	29	149	336	93	184	271	92	29	20	27	16
3	30	29	118	353	95	539	216	94	34	20	29	18
4	29	29	102	301	98	378	167	75	49	19	28	17
5	29	29	94	254	115	222	141	60	39	21	25	17
6	28	28	90	228	180	175	125	52	43	29	25	17
7	28	28	243	333	207	140	112	48	44	44	25	20
8	28	28	746	506	198	125	98	46	44	34	25	17
9	28	28	1030	717	184	166	91	45	35	31	24	16
10	27	27	584	683	172	182	85	45	32	31	22	16
11	27	28	232	383	161	168	78	44	28	30	20	16
12	27	30	170	251	143	155	74	42	27	29	22	16
13	26	31	141	206	128	120	70	40	26	28	22	15
14	26	31	123	183	119	101	67	40	25	30	22	17
15	26	31	109	164	119	88	65	40	23	34	23	26
16	26	40	100	154	117	81	63	39	23	34	22	24
17	26	87	91	157	112	109	62	38	23	31	19	20
18	26	94	83	162	133	623	83	37	23	28	18	19
19	27	60	108	161	195	981	77	36	23	28	22	19
20	28	46	298	159	394	1230	66	34	25	27	18	19
21	28	45	720	147	623	1450	62	34	29	27	24	18
22	26	41	1080	128	690	1260	64	35	27	25	31	17
23	27	39	1160	117	339	403	66	40	28	24	22	16
24	29	37	767	109	199	250	61	42	24	23	21	16
25	31	171	399	104	158	203	63	36	24	20	21	18
26	34	335	335	100	134	177	61	34	26	20	20	21
27	33	719	452	97	123	158	57	32	27	20	18	15
28	33	1030	840	94	113	142	52	32	28	35	18	16
29	32	1010	1280	91	109	127	49	31	25	34	18	16
30	31	565	1590	90	---	127	63	30	24	32	19	16
31	29	---	1050	90	---	282	---	30	---	30	17	---
TOTAL	904	4754	14498	7261	5542	10453	2914	1417	887	860	693	529
MEAN	29.2	158	468	234	191	337	97.1	45.7	29.6	27.7	22.4	17.6
MAX	45	1030	1590	717	690	1450	305	94	49	44	31	26
MIN	26	27	83	90	91	81	49	30	23	19	17	15
AC-FT	1790	9430	28760	14400	10990	20730	5780	2810	1760	1710	1370	1050
CFSM	.08	.41	1.21	.60	.49	.87	.25	.12	.08	.07	.06	.05
IN.	.09	.46	1.39	.70	.53	1.00	.28	.14	.09	.08	.07	.05

CAL YR 1987 TOTAL 102392 MEAN 281 MAX 4240 MIN 26 AC-FT 203100 CFSM .72 IN. 9.82
WTR YR 1988 TOTAL 50712 MEAN 139 MAX 1590 MIN 15 AC-FT 100600 CFSM .36 IN. 4.86

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. Since June 1984, a stage-activated water sampler provides water-quality samples over selected runoff events.

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, 4.0 °C Jan. 10, 11, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 327 microsiemens May 8; minimum, 58 microsiemens Nov. 25.
WATER TEMPERATURE: Maximum, 31.0°C Aug. 8, 9; minimum, 4.0°C Jan. 10, 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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)
FEB											
09...	0910	186	233	7.50	8.0	57	15	11.6	96	1.1	780
MAY											
20...	1242	34	238	7.10	24.0	--	--	7.6	91	--	--
JUN											
06...	0915	44	194	6.90	23.0	37	20	6.9	80	1.7	270
27...	0950	27	217	6.50	26.0	--	--	6.6	81	--	--
JUL											
13...	0925	27	189	6.50	27.0	--	--	6.5	81	--	--
27...	0945	19	217	6.50	27.0	--	--	6.7	84	--	--
AUG											
10...	1035	23	198	6.80	27.5	--	--	6.8	86	--	--
23...	0815	22	200	7.20	27.5	50	14	6.3	80	0.7	80
SEP											
07...	0855	22	211	6.80	23.0	--	--	7.5	87	--	--
20...	1015	19	199	6.60	26.5	--	--	6.9	85	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB											
09...	490	53	23	17	2.6	24	1	1.9	30	18	42
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	220	42	13	13	2.2	23	2	1.7	29	8.3	36
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
23...	110	36	7	11	2.0	26	2	1.4	29	6.6	38
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
FEB											
09...	0.20	14	139	13	1	--	0.100	<0.010	0.010	0.100	0.110
MAY											
20...	--	--	--	--	--	--	--	<0.010	<0.010	0.200	0.250
JUN											
06...	0.30	12	116	19	1	0.290	--	0.010	<0.010	0.300	0.340
27...	--	--	--	--	--	0.190	--	0.010	<0.010	0.200	0.260
JUL											
13...	--	--	--	--	--	0.290	--	0.010	<0.010	0.300	0.290
27...	--	--	--	--	--	--	--	--	<0.010	--	0.280
AUG											
10...	--	--	--	--	--	0.190	--	0.010	<0.010	0.200	0.210
23...	0.20	15	119	17	10	--	--	<0.010	<0.010	0.300	0.290
SEP											
07...	--	--	--	--	--	--	--	<0.010	<0.010	0.200	0.240
20...	--	--	--	--	--	--	--	<0.010	<0.010	0.100	0.150

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (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)
FEB											
09...	0.030	0.010	0.47	0.59	0.60	0.50	0.060	0.040	9.2	--	--
MAY											
20...	0.020	0.050	0.38	0.75	0.80	0.40	0.080	0.070	--	--	--
JUN											
06...	0.030	0.020	0.37	0.48	0.50	0.40	0.100	0.080	4.8	--	--
27...	0.020	0.020	0.38	0.38	0.40	0.40	0.150	0.100	--	--	--
JUL											
13...	<0.010	<0.010	--	--	0.40	0.30	0.150	0.120	--	--	--
27...	--	0.040	--	0.46	0.50	1.8	0.110	0.100	--	--	--
AUG											
10...	0.020	<0.010	0.38	--	0.40	0.40	0.160	0.110	--	--	--
23...	0.030	0.040	1.1	0.36	0.40	1.1	1.90	0.150	3.9	1	65
SEP											
07...	<0.010	<0.010	--	--	0.60	0.60	0.140	0.100	--	--	--
20...	<0.010	<0.010	--	--	0.50	0.50	0.150	0.120	--	--	--

DATE	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										
09...	--	--	--	310	--	28	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	220	--	48	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
23...	<1	<1	<1	240	<5	65	<0.1	<1	<1.0	<3
SEP										
07...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	904	191	115	281	32	78	13	31	46
NOV.	1987	4754	129	82	1060	19	241	12	157	36
DEC.	1987	14498	157	98	3820	25	963	13	497	41
JAN.	1988	7261	199	118	2320	34	675	12	233	46
FEB.	1988	5542	194	114	1710	34	513	11	159	44
MAR.	1988	10453	154	94	2660	25	703	11	321	39
APR.	1988	2914	225	130	1030	41	322	11	85	49
MAY	1988	1417	208	121	463	37	143	10	40	46
JUNE	1988	887	184	110	264	31	75	12	28	44
JULY	1988	860	220	129	299	39	92	11	27	49
AUG.	1988	693	207	123	230	36	67	12	23	48
SEPT	1988	529	214	126	180	38	54	12	17	49
TOTAL		50712	**	**	14300	**	3930	**	1620	**
WTD.AVG.		139	172	105	**	29	**	12	**	42

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

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	199	182	190	179	176	177	163	148	155	---	---	190
2	192	187	189	179	175	176	173	161	167	---	---	195
3	187	170	175	180	177	179	191	174	183	---	---	200
4	180	173	177	183	178	180	204	191	197	206	198	204
5	185	174	180	188	181	185	212	204	208	203	198	200
6	188	185	187	190	187	189	216	208	214	208	198	202
7	190	185	188	192	188	189	216	154	189	205	180	188
8	195	190	193	191	186	189	166	93	117	189	165	175
9	195	192	193	189	187	188	118	100	109	192	149	163
10	195	192	194	190	188	189	147	118	131	160	154	156
11	195	192	194	190	188	189	174	148	161	167	157	162
12	200	195	197	191	187	189	196	175	186	178	167	171
13	203	198	200	191	188	189	218	197	209	191	178	184
14	204	201	202	192	188	190	225	218	222	201	192	196
15	205	200	203	190	185	188	228	224	226	211	201	206
16	204	200	202	185	166	176	232	228	229	219	212	215
17	204	200	202	175	164	171	233	230	231	224	218	222
18	203	196	199	178	157	168	234	230	232	232	224	228
19	198	194	196	157	139	151	233	162	209	235	228	231
20	197	194	196	139	134	136	194	157	169	240	231	234
21	196	193	195	158	138	147	178	117	144	252	241	247
22	194	191	192	163	158	160	139	132	135	257	253	256
23	194	187	190	175	165	172	145	134	138	267	256	261
24	189	186	187	171	167	168	155	145	148	272	266	270
25	188	186	187	174	58	127	173	155	164	272	270	271
26	187	184	186	147	91	124	185	171	177	271	269	269
27	194	185	188	144	105	119	190	185	189	269	266	267
28	196	184	190	110	96	102	---	---	190	266	264	265
29	192	184	188	127	111	119	---	---	170	267	263	265
30	186	180	184	147	129	138	---	---	140	272	267	268
31	182	180	181	---	---	---	---	---	185	272	267	270
MONTH	205	170	191	192	58	165	234	93	178	272	149	220

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	273	270	272	203	192	197	220	200	208	172	158	168
2	274	268	272	211	203	208	239	197	211	168	159	163
3	268	264	267	204	196	201	271	232	254	156	132	138
4	272	265	267	215	197	207	282	246	265	163	133	145
5	274	247	263	212	184	,198	279	236	259	192	162	174
6	245	227	236	208	183	193	282	231	264	296	192	248
7	279	230	237	239	212	225	293	227	266	312	259	282
8	288	230	247	253	236	247	285	240	252	327	284	310
9	270	231	250	259	235	242	254	237	241	302	237	262
10	280	272	276	260	175	216	240	230	234	287	245	261
11	275	264	267	209	173	186	238	234	236	326	248	286
12	266	248	258	278	211	242	246	236	241	314	279	304
13	249	245	246	297	260	283	249	238	241	310	287	301
14	251	247	249	260	249	255	265	238	250	290	265	276
15	251	248	249	261	228	255	236	220	226	275	266	272
16	257	249	252	256	119	156	229	215	222	284	259	276
17	257	252	254	228	114	138	223	216	220	255	234	245
18	252	229	244	127	98	110	222	208	215	242	234	238
19	225	187	198	113	88	99	211	205	207	235	221	228
20	263	202	228	106	100	104	206	148	183	221	212	217
21	230	102	153	107	101	104	175	147	155	212	199	204
22	97	88	93	110	100	104	176	159	168	199	191	195
23	111	92	102	193	111	121	185	176	181	191	181	186
24	130	111	121	235	182	213	189	185	187	182	175	178
25	140	128	132	226	210	217	205	187	194	175	165	172
26	160	138	149	251	209	231	224	206	217	165	153	159
27	171	161	167	264	232	247	225	211	221	153	145	149
28	183	171	177	263	212	249	208	179	191	145	131	138
29	193	181	186	272	225	251	184	168	176	131	126	128
30	---	---	---	277	217	256	182	167	171	127	124	126
31	---	---	---	241	201	217	---	---	---	129	124	126
MONTH	288	88	218	297	88	199	293	147	219	327	124	211

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

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	125	123	124	214	202	208	271	206	231	234	202	214
2	124	117	120	215	206	210	265	198	222	250	199	213
3	120	86	112	218	207	210	257	202	226	231	196	210
4	152	101	117	216	207	210	260	209	223	240	198	215
5	164	138	156	217	175	204	273	202	225	243	198	213
6	147	107	124	215	191	207	257	196	211	242	201	216
7	144	111	128	220	209	212	241	186	205	240	205	220
8	133	115	121	240	222	228	250	188	203	257	207	222
9	148	118	131	246	203	221	236	197	210	254	206	220
10	189	149	167	240	176	204	232	195	203	271	207	223
11	220	190	205	200	176	186	249	197	205	261	207	227
12	243	222	232	218	198	205	240	199	209	255	204	223
13	256	244	251	221	201	208	206	189	199	249	204	218
14	264	257	261	221	207	211	205	179	187	245	206	220
15	267	262	265	275	208	228	189	177	183	266	209	223
16	---	---	250	273	206	232	217	180	187	239	208	221
17	---	---	242	262	202	225	196	185	189	255	206	219
18	---	---	238	263	197	235	207	193	198	254	207	222
19	---	---	232	267	198	232	216	198	206	237	203	218
20	---	---	228	279	208	224	237	196	208	246	195	212
21	---	---	222	261	202	223	241	193	208	256	191	208
22	---	---	218	264	205	215	224	193	202	252	191	209
23	---	---	211	264	212	223	220	190	202	234	192	204
24	---	---	206	282	219	232	246	193	209	238	186	204
25	---	---	201	271	216	231	256	201	214	241	182	198
26	205	200	201	273	217	231	238	190	209	234	184	198
27	207	200	204	288	211	247	218	189	200	242	190	205
28	213	205	209	285	211	248	218	191	204	254	192	206
29	213	210	211	269	179	223	220	195	206	217	196	206
30	211	205	208	269	176	217	244	196	207	238	198	210
31	---	---	---	281	211	235	236	198	210	---	---	---
MONTH	267	86	193	288	175	220	273	177	206	271	182	214

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

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 except those for estimated daily discharges, which are fair. No diversion above station.

AVERAGE DISCHARGE.--45 years, 76.8 ft³/s (9.93 in/yr), (55,640 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)
Mar. 19	0600	*1,460	*11.91				

Minimum discharge, 11 ft³/s on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	45	87	40	39	83	45	19	14	13	16
2	19	19	40	94	39	45	65	32	18	13	14	14
3	19	19	e38	75	39	58	55	27	18	12	21	14
4	18	19	e36	76	40	57	47	24	20	12	20	14
5	18	19	e36	66	46	46	43	22	21	14	17	13
6	18	18	e540	60	75	41	42	22	19	34	16	12
7	18	17	e450	199	70	37	39	21	18	40	14	12
8	18	17	e170	235	57	41	36	21	17	24	13	11
9	18	23	e100	107	52	49	35	22	17	18	12	11
10	17	33	e75	81	54	55	34	23	16	17	12	11
11	17	25	e60	68	48	42	32	22	15	17	13	12
12	17	21	e50	64	42	37	31	21	15	18	13	12
13	17	20	e45	62	39	34	30	21	14	21	16	12
14	17	20	e40	57	39	31	30	20	14	23	14	12
15	17	23	e38	54	40	30	29	19	14	18	13	12
16	18	36	e37	53	39	30	29	19	14	23	13	e13
17	18	57	36	59	36	53	29	18	14	21	12	e13
18	18	43	37	58	47	671	31	19	13	17	12	e13
19	18	32	72	55	188	900	30	19	13	15	24	e12
20	18	26	474	52	101	143	29	18	16	15	72	e12
21	18	24	422	45	69	97	29	20	21	15	30	12
22	17	24	237	42	58	79	27	39	17	14	20	11
23	18	24	123	41	52	69	26	28	15	13	17	11
24	20	25	99	41	48	62	26	22	17	12	16	12
25	25	585	100	40	44	58	25	20	17	12	14	12
26	27	925	111	39	43	54	24	20	20	12	14	12
27	22	174	293	37	41	51	23	19	27	13	13	12
28	20	108	441	37	40	47	22	19	18	14	12	11
29	19	70	155	38	40	47	24	18	15	15	12	12
30	19	52	97	39	---	61	62	18	14	14	13	13
31	19	---	81	39	---	101	---	18	---	13	20	---
TOTAL	582	2517	4578	2100	1566	3165	1067	696	506	533	535	369
MEAN	18.8	83.9	148	67.7	54.0	102	35.6	22.5	16.9	17.2	17.3	12.3
MAX	27	925	540	235	188	900	83	45	27	40	72	16
MIN	17	17	36	37	36	30	22	18	13	12	12	11
AC-FT	1150	4990	9080	4170	3110	6280	2120	1380	1000	1060	1060	732
CFSM	.18	.80	1.41	.65	.51	.97	.34	.21	.16	.16	.16	.12
IN.	.21	.89	1.62	.74	.55	1.12	.38	.25	.18	.19	.19	.13

CAL YR 1987 TOTAL 28875 MEAN 79.1 MAX 1400 MIN 12 AC-FT 57270 CFSM .75 IN. 10.23
WTR YR 1988 TOTAL 18214 MEAN 49.8 MAX 925 MIN 11 AC-FT 36130 CFSM .47 IN. 6.45

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.

INSTRUMENTATION.--Stage-activated water sampler since November 1984 provides water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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)
FEB											
08...	1210	57	210	7.40	8.0	37	7.3	11.6	96	0.8	700
MAY											
20...	1052	18	110	7.20	22.0	--	--	8.0	92	--	--
JUN											
06...	1235	20	98	7.00	23.0	25	10	8.9	103	1.3	56
27...	1100	28	109	6.80	25.5	--	--	7.5	91	--	--
JUL											
13...	1210	17	96	6.70	26.0	--	--	7.8	96	--	--
25...	1105	12	95	6.50	25.0	--	--	7.6	91	--	--
AUG											
10...	0935	12	90	6.80	26.0	--	--	6.7	83	--	--
23...	0800	16	90	6.70	26.0	50	16	6.5	80	0.9	150
SEP											
06...	1230	12	92	6.90	23.0	--	--	8.5	99	--	--
20...	1125	12	90	6.80	26.0	--	--	7.3	89	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB											
08...	550	62	19	21	2.4	16	0.9	1.6	43	15	29
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	120	25	5	7.4	1.6	9.4	0.8	0.90	20	4.4	14
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
23...	440	27	6	8.4	1.4	7.4	0.6	1.6	21	6.2	11
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
FEB											
08...	0.20	13	125	6	<1	0.190	0.190	0.010	0.010	0.200	0.200
MAY											
20...	--	--	--	--	--	0.390	--	0.010	<0.010	0.400	0.380
JUN											
06...	0.20	13	65	6	6	--	--	<0.010	<0.010	0.300	0.330
27...	--	--	--	--	--	--	--	<0.010	<0.010	0.300	0.310
JUL											
13...	--	--	--	--	--	--	--	<0.010	<0.010	0.300	0.320
25...	--	--	--	--	--	0.690	--	0.010	<0.010	0.700	0.410
AUG											
10...	--	--	--	--	--	--	--	<0.010	<0.010	0.300	0.270
23...	<0.10	12	62	25	14	--	--	<0.010	<0.010	0.300	0.300
SEP											
06...	--	--	--	--	--	0.290	--	0.010	<0.010	0.300	0.330
20...	--	--	--	--	--	0.160	0.210	0.040	0.040	0.200	0.250

08070500 CANEY CREEK NEAR SPLENDORA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
FEB											
08...	0.010	0.020	0.39	0.48	0.50	0.40	0.040	0.030	6.0	--	--
MAY											
20...	0.030	0.030	0.27	0.57	0.60	0.30	0.040	0.030	--	--	--
JUN											
06...	<0.010	0.020	--	0.38	0.40	0.20	0.050	0.040	2.7	--	--
27...	0.020	0.010	0.28	0.19	0.20	0.30	0.030	0.020	--	--	--
JUL											
13...	<0.010	<0.010	--	--	0.30	0.20	0.050	0.040	--	--	--
25...	0.030	0.030	0.27	0.27	0.30	0.30	0.040	0.040	--	--	--
AUG											
10...	0.040	0.010	0.26	0.49	0.50	0.30	0.030	0.030	--	--	--
23...	0.040	0.040	0.36	0.36	0.40	0.40	0.050	0.030	4.9	1	49
SEP											
06...	<0.010	<0.010	--	--	0.20	0.20	0.040	0.030	--	--	--
20...	0.020	0.020	0.18	0.38	0.40	0.20	0.050	0.050	--	--	--

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)
FEB										
08...	--	--	--	310	--	33	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	340	--	25	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
23...	<1	<1	<1	300	<5	52	<0.1	<1	<1.0	<3
SEP										
06...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--

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 Co. 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 except those for estimated daily discharges, which are fair. 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 for several days in 1984 and 1988.

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)
Mar. 4	0800	*1,140	*20.09				

Minimum discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e.11	29	144	8.7	10	439	3.5	.70	.07	.06	.00
2	9.1	e.11	19	119	8.5	147	340	9.1	.50	.04	.07	.00
3	3.9	e.10	13	103	9.0	884	263	8.7	8.4	.04	.12	.00
4	1.6	e.10	9.0	86	9.1	1110	163	5.0	60	.04	.21	.00
5	1.1	e.09	6.1	69	20	918	94	4.1	27	.17	.14	.02
6	.84	e.08	7.8	57	93	789	67	3.2	7.0	5.8	.06	.03
7	.64	e.07	100	190	125	451	49	2.4	2.9	31	.03	.04
8	.38	e.06	129	270	128	198	37	1.8	1.6	4.1	.02	.01
9	.25	e.05	214	275	114	140	28	1.5	.98	16	.01	.00
10	e.23	.04	179	263	93	107	20	1.3	.65	4.4	.00	.00
11	e.23	.03	82	178	90	111	15	.97	.52	1.1	54	.00
12	e.23	.02	52	108	80	113	13	.77	.40	.45	48	.00
13	e.21	.01	39	78	65	73	10	.70	.65	.19	4.7	.00
14	e.20	.00	30	63	50	49	8.1	.84	1.1	.10	.77	2.9
15	e.20	.00	21	52	42	37	6.9	.78	1.1	.06	2.5	1.1
16	e.19	8.5	16	46	40	28	6.0	.58	.99	.05	1.1	.73
17	e.19	16	13	49	38	149	5.5	.43	.83	.05	.24	.44
18	e.18	34	9.5	56	43	1040	5.2	.29	.69	.07	.08	.29
19	e.17	38	55	66	104	949	4.6	.22	.56	.06	.04	.22
20	e.16	26	280	72	147	859	3.9	.15	.58	.04	.03	.13
21	e.16	15	416	65	133	793	3.9	1.2	.71	.09	.03	1.8
22	e.16	8.1	518	54	93	635	3.9	14	.79	.07	.03	5.3
23	e.16	4.3	467	43	60	319	3.3	6.8	.95	.05	.02	3.0
24	e.14	2.3	331	36	44	123	2.6	7.9	4.0	.04	.01	1.7
25	e.14	105	234	29	34	79	2.2	6.8	3.0	.04	.01	.97
26	e.14	163	165	21	25	60	1.9	3.4	2.0	.05	.00	.52
27	e.13	123	217	16	18	47	1.6	1.5	1.4	.06	.00	.27
28	e.13	99	373	14	15	39	1.4	1.0	.53	.08	.00	.12
29	e.13	60	349	12	12	33	1.4	1.0	.28	.11	.00	.04
30	e.12	41	299	11	---	93	2.4	.80	.12	.31	.00	.03
31	e.12	---	198	9.4	---	489	---	.80	---	.09	.00	---
TOTAL	34.53	744.07	4870.4	2654.4	1741.3	10872	1602.8	91.53	130.93	64.82	112.28	19.66
MEAN	1.11	24.8	157	85.6	60.0	351	53.4	2.95	4.36	2.09	3.62	.66
MAX	13	163	518	275	147	1110	439	14	60	31	54	5.3
MIN	.12	.00	6.1	9.4	8.5	10	1.4	.15	.12	.04	.00	.00
AC-FT	68	1480	9660	5270	3450	21560	3180	182	260	129	223	39
CFSM	.01	.11	.72	.39	.28	1.61	.25	.01	.02	.01	.02	.00
IN.	.01	.13	.83	.45	.30	1.86	.27	.02	.02	.01	.02	.00

CAL YR 1987 TOTAL 90958.38 MEAN 249 MAX 11500 MIN .00 AC-FT 180400 CFSM 1.14 IN. 15.52
WTR YR 1988 TOTAL 22938.72 MEAN 62.7 MAX 1110 MIN .00 AC-FT 45500 CFSM .29 IN. 3.91

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.

INSTRUMENTATION.--Stage-activated water sampler since May 1984 provides water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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)
FEB											
09...	1025	116	154	5.90	7.0	38	31	11.4	92	3.6	3700
MAY											
20...	0645	0.16	342	6.40	21.0	--	--	3.2	36	--	--
JUN											
06...	1000	7.2	124	6.80	22.0	90	27	5.6	64	1.9	350
28...	0815	0.60	245	6.70	26.5	--	--	3.4	42	--	--
JUL											
13...	1025	0.19	329	5.70	27.0	--	--	2.8	35	--	--
27...	1045	0.06	378	6.70	27.0	--	--	3.1	39	--	--
AUG											
23...	0900	0.02	166	6.90	27.0	100	21	1.0	13	1.6	44
SEP											
07...	0815	0.05	208	6.80	22.0	--	--	3.4	39	--	--
20...	0925	0.14	253	6.80	25.5	--	--	2.9	35	--	--

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB											
09...	2800	31	19	8.9	2.1	17	1	2.5	12	14	31
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUN											
06...	350	32	14	10	1.8	12	1	1.6	18	17	17
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	96	59	0	19	2.7	12	0.7	1.9	64	10	11
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
FEB											
09...	0.10	5.7	89	31	1	--	--	0.020	0.020	<0.100	<0.100
MAY											
20...	--	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100
JUN											
06...	0.20	4.9	77	16	7	0.280	0.340	0.020	0.010	0.300	0.350
28...	--	--	--	--	--	0.090	--	0.010	<0.010	0.100	0.120
JUL											
13...	--	--	--	--	--	0.080	0.110	0.020	0.010	0.100	0.120
27...	--	--	--	--	--	--	--	--	<0.010	--	<0.100
AUG											
23...	0.20	6.1	103	18	3	--	--	0.020	<0.010	<0.100	<0.100
SEP											
07...	--	--	--	--	--	--	--	0.010	<0.010	<0.100	<0.100
20...	--	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100

DATE	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)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
FEB											
09...	0.090	0.080	1.1	1.5	1.6	1.2	0.090	0.070	24	--	--
MAY											
20...	0.040	0.050	0.76	0.65	0.70	0.80	0.060	0.040	--	--	--
JUN											
06...	0.050	0.060	0.65	0.74	0.80	0.70	0.050	0.050	11	--	--
28...	0.040	0.040	0.66	0.56	0.60	0.70	0.060	0.070	--	--	--
JUL											
13...	0.010	0.020	0.69	0.68	0.70	0.70	0.120	0.090	--	--	--
27...	--	0.060	--	0.74	0.80	1.4	0.040	0.030	--	--	--
AUG											
23...	0.130	0.140	0.87	0.76	0.90	1.0	0.080	0.040	9.7	2	110
SEP											
07...	0.040	0.060	0.66	0.64	0.70	0.70	0.040	0.030	--	--	--
20...	<0.010	0.030	--	0.57	0.60	0.60	0.030	0.030	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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										
09...	--	--	--	550	--	35	--	--	--	--
MAY										
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	260	--	79	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
AUG										
23...	<1	<1	<1	500	<5	1400	<0.1	<1	<1.0	<3
SEP										
07...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--

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, 170,100 acre-ft Nov. 27 at 0800 hours (gage height, 46.31 ft); minimum, 114,300 acre-ft Sept. 29 (gage height, 41.62 ft).

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

41.0	107,900	45.0	152,900
43.0	129,100	47.0	179,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141800	132700	157900	151100	151700	154200	158200	148900	139800	129800	125700	122900
2	141800	132500	156600	147200	151800	159200	157000	149500	139200	129200	125600	122900
3	141700	132100	155800	143000	152100	159000	156000	149600	141200	129000	126100	123700
4	141200	131900	155000	138700	151100	157900	155500	149600	143000	129800	125900	123400
5	140600	131400	154500	136400	152700	157100	155000	149300	143200	129600	125600	122900
6	140500	130800	155100	139300	153700	156600	153700	149000	142800	130100	125600	123300
7	139900	130500	156800	144600	155300	155700	153500	148400	142400	130200	125600	122900
8	139600	130400	158800	150900	155800	155800	153500	148700	142100	129800	125400	122600
9	139200	130300	159000	155100	155800	154400	153300	148400	141700	129200	125500	122400
10	139000	129800	157600	156600	155900	154400	151100	148300	141600	128800	125000	121900
11	138900	129200	156800	154500	153500	154500	148800	148000	140500	128400	130300	121500
12	138300	129000	155500	152300	153700	154500	148400	147700	139900	127900	132100	121700
13	137500	128700	154900	148700	153700	152900	148500	147100	139100	127500	132300	121800
14	137100	128400	153800	145800	154200	151400	148700	146600	138400	127200	132300	122000
15	136700	128400	151800	145600	153300	151400	148800	146100	137800	126700	131800	122600
16	136400	120900	151600	147100	153200	151200	149000	145700	137000	126100	131200	122200
17	136100	133200	151500	148300	153700	157300	149300	145200	136400	125400	130400	121700
18	135800	133800	151700	149500	154800	161000	148900	144700	135700	125000	130100	120900
19	135400	133900	155000	150700	155000	163700	147900	144300	134700	125000	129800	120400
20	135500	133600	156600	150200	156000	163200	147700	143800	134300	126200	129100	119800
21	134300	133400	159900	150900	157000	163300	147400	145000	134000	127800	128700	119200
22	134500	133400	160800	151200	157300	161400	147700	144900	133800	127800	128400	118300
23	134500	133300	160300	151600	156400	158500	147900	144400	133300	127300	127900	117800
24	134300	133000	158800	151400	155100	156700	147200	144400	133400	126700	127500	117400
25	134200	153300	156800	150900	155000	155800	147100	143800	133200	126300	126400	116900
26	134300	169900	154000	150500	154900	155000	146600	143200	133100	126200	125600	116200
27	134100	169500	156200	150600	154800	154200	146500	142400	132600	127500	125100	115400
28	133500	167700	157500	150500	154600	153800	145800	141900	132100	127600	124500	114700
29	133200	163300	157100	151100	154500	153600	147800	141300	131200	127200	124000	114600
30	133100	160100	156700	150900	---	157200	148500	140700	130400	126700	123300	115000
31	132800	---	154900	151500	---	159300	---	140200	---	126300	122900	---
MAX	141800	169900	160800	156600	157300	163700	158200	149600	143200	130200	132300	123700
MIN	132800	120900	151500	136400	151100	151200	145800	140200	130400	125000	122900	114600
(†)	43.32	45.55	45.15	44.88	45.12	45.49	44.64	43.96	43.11	42.74	42.43	41.69
(⊕)	-9100	+27300	-5200	-3400	+3000	+4800	-10800	-8300	-9800	-4100	-3400	-7900
(‡‡)	15550	15650	14270	15030	14390	15160	14680	18640	18890	19640	19430	19090

CAL YR 1987 MAX 184900 MIN 120900 (⊕) +2100 (‡‡) 171740
WTR YR 1988 MAX 169900 MIN 114600 (⊕) -26900 (‡‡) 200420

(†) Gage height, in feet, at end of month.
(⊕) Change in contents, in acre-feet.
(‡‡) Diversions, in acre-feet, for municipal and industrial use by city of Houston and the 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, August 1983 to current year.

295505095083101 - LAKE HOUSTON SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB												
24...	0915	1.00	190	7.90	12.5	0.25	9.7	89	0.380	0.400	0.020	0.020
24...	0917	18.0	190	7.90	12.5	--	9.2	85	0.380	0.410	0.020	0.030
AUG												
23...	0806	1.00	260	7.70	30.0	0.55	4.5	59	--	0.020	<0.010	0.100
23...	0808	5.00	255	7.40	29.5	--	3.6	47	--	--	--	--
23...	0810	10.0	255	7.30	29.5	--	3.2	42	--	--	--	--
23...	0812	15.0	250	7.20	29.0	--	2.8	36	--	0.040	<0.010	0.200

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)	PHOSPHOROUS DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB												
24...	0.400	0.420	0.030	0.040	0.57	0.56	0.60	0.60	0.190	0.150	200	<10
24...	0.400	0.440	0.050	0.070	0.55	0.43	0.50	0.60	0.200	0.170	270	10
AUG												
23...	<0.100	0.120	0.020	0.030	0.88	0.47	0.50	0.90	0.160	0.140	20	10
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	<0.100	0.240	0.060	0.060	0.94	0.74	0.80	1.0	0.160	0.170	20	120

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT												
01...	0948	1.00	165	7.50	24.5	0.35	--	--	6.5	77	--	--
01...	0949	--	--	--	--	--	--	--	--	--	--	--
01...	0950	10.0	165	7.50	24.5	--	--	--	6.4	76	--	--
01...	0952	20.0	165	7.50	24.5	--	--	--	6.4	76	--	--
01...	0954	30.0	165	7.40	24.5	--	--	--	6.3	75	--	--
01...	0956	46.0	165	7.40	24.5	--	--	--	6.3	75	--	--
FEB												
24...	0930	1.00	185	7.70	12.5	0.26	63	29	9.7	89	1.0	230
24...	0931	0.42	--	--	--	--	--	--	--	--	--	--
24...	0932	10.0	185	7.70	12.5	--	--	--	9.7	89	--	--
24...	0934	20.0	185	7.70	12.5	--	--	--	9.7	89	--	--
24...	0936	30.0	185	7.70	12.5	--	--	--	9.7	89	--	--
24...	0938	46.0	185	7.70	12.5	--	67	29	9.7	89	1.0	--
MAY												
20...	0900	1.00	200	7.70	26.0	0.50	--	--	7.3	90	--	--
20...	0901	0.82	--	--	--	--	--	--	--	--	--	--
20...	0902	5.00	200	7.30	25.0	--	--	--	6.3	76	--	--
20...	0904	10.0	200	7.20	24.5	--	--	--	5.9	71	--	--
20...	0906	15.0	195	7.10	24.0	--	--	--	4.7	56	--	--
20...	0908	20.0	195	7.00	24.0	--	--	--	3.8	45	--	--
20...	0910	25.0	195	7.00	23.5	--	--	--	3.0	35	--	--
20...	0912	35.0	195	7.00	23.0	--	--	--	2.0	23	--	--
20...	0914	45.0	195	7.10	23.0	--	--	--	1.3	15	--	--
JUN												
06...	0910	1.00	210	8.20	27.0	0.43	55	17	7.7	96	2.9	K1
06...	0911	0.70	--	--	--	--	--	--	--	--	--	--
06...	0912	5.00	210	7.90	26.5	--	--	--	7.3	90	--	--
06...	0914	10.0	210	7.60	26.5	--	--	--	7.0	87	--	--
06...	0916	15.0	210	7.50	26.0	--	--	--	6.1	75	--	--
06...	0918	20.0	210	7.50	26.0	--	--	--	6.0	74	--	--
06...	0920	25.0	210	7.40	25.5	--	--	--	6.0	73	--	--
06...	0922	35.0	210	7.40	25.5	--	--	--	5.8	71	--	--
06...	0924	45.0	210	7.30	25.5	--	90	28	5.2	63	2.5	--
28...	0856	1.00	240	8.30	29.5	0.70	--	--	7.1	93	--	--
28...	0857	1.15	--	--	--	--	--	--	--	--	--	--
28...	0858	5.00	240	7.70	29.0	--	--	--	5.8	76	--	--
28...	0900	10.0	240	7.60	28.5	--	--	--	5.7	74	--	--
28...	0902	15.0	240	7.30	28.0	--	--	--	4.6	59	--	--
28...	0904	20.0	235	7.20	28.0	--	--	--	3.6	46	--	--
28...	0906	25.0	230	7.10	27.5	--	--	--	2.7	34	--	--
28...	0908	30.0	230	7.10	27.5	--	--	--	2.0	25	--	--
28...	0910	40.0	230	7.00	26.5	--	--	--	0	0	--	--
28...	0912	47.0	230	7.00	26.5	--	--	--	0	0	--	--
JUL												
13...	0928	1.00	260	7.70	29.0	0.64	--	--	6.1	79	--	--
13...	0929	1.05	--	--	--	--	--	--	--	--	--	--
13...	0930	5.00	260	7.60	29.0	--	--	--	6.1	79	--	--
13...	0932	10.0	260	7.60	29.0	--	--	--	6.0	78	--	--
13...	0934	15.0	260	7.60	29.0	--	--	--	6.0	78	--	--
13...	0936	20.0	260	7.40	28.5	--	--	--	5.6	72	--	--
13...	0938	25.0	260	7.30	28.5	--	--	--	4.5	58	--	--
13...	0940	30.0	260	7.20	28.5	--	--	--	4.3	55	--	--
13...	0942	35.0	260	7.10	28.0	--	--	--	2.5	32	--	--
13...	0944	44.0	260	7.10	28.0	--	--	--	0.9	11	--	--
26...	0920	1.00	275	7.50	29.5	0.53	--	--	5.2	68	--	--
26...	0921	0.87	--	--	--	--	--	--	--	--	--	--
26...	0922	5.00	275	7.30	29.0	--	--	--	4.5	58	--	--
26...	0924	10.0	275	7.20	29.0	--	--	--	4.0	52	--	--
26...	0926	15.0	275	7.20	29.0	--	--	--	3.9	51	--	--
26...	0928	20.0	275	7.20	28.5	--	--	--	3.8	49	--	--
26...	0930	25.0	275	7.20	28.5	--	--	--	3.8	49	--	--
26...	0932	30.0	275	7.20	28.5	--	--	--	3.7	48	--	--
26...	0934	35.0	275	7.20	28.5	--	--	--	3.7	48	--	--
26...	0936	44.0	275	7.20	28.5	--	--	--	2.6	33	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	210	46	12	15	2.1	17	1	2.7	34	19	25	0.20
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	47	13	15	2.2	16	1	2.7	34	20	24	0.20
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
06...	K18	52	11	17	2.4	20	1	2.5	41	13	28	0.20
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	55	9	18	2.5	20	1	2.5	46	13	30	0.30
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
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JUL												
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26...	--	--	--	--	--	--	--	--	--	--	--	--
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26...	--	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT												
01...	--	--	--	--	0.090	0.090	0.010	0.010	0.100	0.100	0.020	0.300
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	0.090	--	0.010	--	0.100	--	0.030	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	0.090	--	0.010	<0.010	0.100	<0.100	0.040	1.80
FEB												
24...	9.9	113	10	<1	0.380	0.400	0.020	0.020	0.400	0.420	0.040	0.030
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	0.380	0.390	0.020	0.020	0.400	0.410	0.040	0.040
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	10	113	12	1	0.380	0.400	0.020	0.020	0.400	0.420	0.040	0.030
MAY												
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	0.100	0.020	0.020
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	<0.010	--	<0.100	--	0.050	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	0.070	0.190	0.030	0.020	0.100	0.210	0.140	0.300
JUN												
06...	5.4	113	17	<1	--	--	<0.010	<0.010	<0.100	<0.100	0.030	0.040
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.010	0.020	<0.100	<0.100	0.030	0.070
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	6.9	122	29	24	--	0.080	0.030	0.060	<0.100	0.140	0.090	0.340
28...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.010	0.030
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	0.010	--	<0.100	--	0.010	--
28...	--	--	--	--	--	--	0.010	--	<0.100	--	0.030	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	0.020	<0.010	<0.100	2.00	0.180	0.180
JUL												
13...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010	<0.010
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	<0.010	--	<0.100	--	<0.010	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	0.010	--	<0.100	--	0.040	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	0.030	0.030	<0.100	<0.100	0.260	0.500
26...	--	--	--	--	--	--	<0.010	<0.010	<0.100	0.280	0.030	0.010
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	0.010	--	<0.100	--	0.050	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	0.580	0.690	0.020	0.020	0.600	0.710	0.100	0.080

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS 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)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
01...	0.38	0.30	0.60	0.40	0.140	0.120	--	--	--	--	--
01...	--	--	--	--	--	--	--	6.30	0.400	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	0.27	--	--	0.30	0.140	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	0.46	0.20	2.0	0.50	0.150	0.220	--	--	--	--	--
FEB											
24...	0.56	0.57	0.60	0.60	0.180	0.120	12	--	--	60	<10
24...	--	--	--	--	--	--	--	3.90	0.400	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	0.56	0.46	0.50	0.60	0.180	0.130	--	--	--	100	<10
24...	--	--	--	--	--	--	--	--	--	--	--
24...	0.76	0.57	0.60	0.80	0.180	0.130	13	--	--	140	<10
MAY											
20...	0.78	0.48	0.50	0.80	0.100	0.060	--	--	--	60	<10
20...	--	--	--	--	--	--	--	5.40	0.300	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	0.55	--	--	0.60	0.110	--	--	--	--	120	30
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	0.56	0.60	0.90	0.70	0.180	0.120	--	--	--	160	<10
JUN											
06...	0.67	0.86	0.90	0.70	0.080	0.070	11	--	--	14	<1
06...	--	--	--	--	--	--	--	18.0	0.800	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.67	0.43	0.50	0.70	0.070	0.060	--	--	--	130	90
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.71	0.56	0.90	0.80	0.100	0.120	10	--	--	63	230
28...	0.39	0.57	0.60	0.40	0.110	0.070	--	--	--	30	60
28...	--	--	--	--	--	--	--	17.0	0.600	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	0.59	--	--	0.60	0.130	--	--	--	--	30	170
28...	1.5	--	--	1.5	0.140	--	--	--	--	40	410
28...	--	--	--	--	--	--	--	--	--	--	--
28...	0.12	0.32	0.50	0.30	0.420	0.440	--	--	--	60	900
JUL											
13...	--	--	0.70	0.80	0.130	0.130	--	--	--	20	20
13...	--	--	--	--	--	--	--	12.0	0.800	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	0.60	0.110	--	--	12.0	0.800	20	40
13...	--	--	--	--	--	--	--	--	--	--	--
13...	0.76	--	--	0.80	0.190	--	--	4.70	0.300	40	110
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	0.64	0.70	1.2	0.90	0.190	0.230	--	--	--	40	650
26...	0.77	0.49	0.50	0.80	0.120	0.100	--	--	--	20	20
26...	--	--	--	--	--	--	--	6.40	0.400	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	0.75	--	--	0.80	0.120	--	--	--	--	30	80
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	0.50	0.52	0.60	0.60	0.270	0.240	--	--	--	40	180

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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												
10...	0920	1.00	280	8.30	31.0	0.79	--	--	6.1	82	--	--
10...	0921	1.30	--	--	--	--	--	--	--	--	--	--
10...	0922	5.00	280	7.70	30.5	--	--	--	5.5	74	--	--
10...	0924	10.0	280	7.30	30.5	--	--	--	4.4	59	--	--
10...	0926	15.0	280	7.10	29.5	--	--	--	2.1	28	--	--
10...	0928	20.0	280	7.00	29.5	--	--	--	1.2	16	--	--
10...	0930	25.0	280	6.90	29.0	--	--	--	0.4	5	--	--
10...	0932	30.0	280	6.90	29.0	--	--	--	0	0	--	--
10...	0934	35.0	280	6.90	29.0	--	--	--	0	0	--	--
10...	0936	40.0	280	6.90	29.0	--	--	--	0	0	--	--
10...	0938	45.0	280	6.90	28.5	--	--	--	0	0	--	--
23...	0822	1.00	275	7.60	30.0	0.67	17	2.5	4.2	55	2.0	K1
23...	0823	1.10	--	--	--	--	--	--	--	--	--	--
23...	0824	5.00	275	7.50	29.5	--	--	--	3.6	47	--	--
23...	0826	10.0	275	7.40	29.5	--	--	--	3.4	44	--	--
23...	0828	15.0	275	7.40	29.5	--	--	--	2.8	37	--	--
23...	0830	20.0	275	7.30	29.5	--	--	--	2.4	31	--	--
23...	0832	25.0	275	7.20	29.5	--	--	--	2.0	26	--	--
23...	0834	30.0	275	7.20	29.0	--	--	--	0.9	12	--	--
23...	0836	35.0	275	7.20	29.0	--	--	--	0.4	5	--	--
23...	0838	42.0	275	7.20	29.0	--	17	5.4	0.4	5	2.1	--
SEP												
06...	1006	1.00	290	8.10	27.5	0.67	--	--	6.7	85	--	--
06...	1007	1.10	--	--	--	--	--	--	--	--	--	--
06...	1008	5.00	290	7.90	27.5	--	--	--	6.1	77	--	--
06...	1010	10.0	290	7.90	27.5	--	--	--	6.1	77	--	--
06...	1012	15.0	290	7.80	27.5	--	--	--	5.8	73	--	--
06...	1014	20.0	290	7.70	27.0	--	--	--	5.6	70	--	--
06...	1016	25.0	290	7.60	27.0	--	--	--	5.2	65	--	--
06...	1018	30.0	290	7.30	27.0	--	--	--	4.8	60	--	--
06...	1020	35.0	290	7.50	27.0	--	--	--	4.8	60	--	--
06...	1022	42.0	290	7.40	27.0	--	--	--	4.8	60	--	--
20...	1028	1.00	295	8.30	28.5	0.60	--	--	6.8	87	--	--
20...	1029	0.98	--	--	--	--	--	--	--	--	--	--
20...	1030	5.00	300	8.00	28.0	--	--	--	6.4	81	--	--
20...	1032	10.0	300	7.80	28.0	--	--	--	5.6	71	--	--
20...	1034	15.0	300	7.70	28.0	--	--	--	5.3	67	--	--
20...	1036	20.0	300	7.70	28.0	--	--	--	5.2	66	--	--
20...	1038	25.0	300	7.60	27.5	--	--	--	4.8	60	--	--
20...	1040	30.0	300	7.40	27.5	--	--	--	3.6	45	--	--
20...	1042	35.0	300	7.20	27.5	--	--	--	1.9	24	--	--
20...	1044	42.0	300	7.10	27.5	--	--	--	1.2	15	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET 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)
AUG												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
23...	K4	62	3	20	2.9	32	2	3.1	59	12	42	0.10
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	64	0	21	2.9	30	2	3.0	64	12	41	0.10
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
AUG											
10...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	<0.010	--	<0.100	--	0.060
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	<0.010	--	<0.100	--	0.040
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	0.010	0.010	<0.100	<0.100	0.140
23...	9.1	157	5	2	--	--	<0.010	<0.010	<0.100	<0.100	0.010
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	0.060	0.010	0.040	<0.100	0.100	0.030
23...	--	--	--	--	0.170	0.070	0.030	0.090	0.200	0.160	0.070
23...	--	--	--	--	--	--	--	--	--	--	--
23...	9.9	160	11	3	--	--	<0.010	0.020	<0.100	<0.100	0.300
SEP											
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.020	--	<0.100	--	0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.010	--	<0.100	--	0.040
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	0.010	--	<0.100	--	0.040
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	<0.010	--	<0.100	--	<0.010
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	0.020	--	0.080	--	0.100	--	0.080

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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											
10...	<0.010	--	--	0.60	0.60	0.120	0.080	--	--	--	--
10...	--	--	--	--	--	--	--	--	6.60	0.200	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	<0.20	0.140	--	--	3.10	0.100	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	0.36	--	--	0.40	0.160	--	--	1.00	<0.100	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	0.110	0.46	0.09	0.20	0.60	0.200	0.170	--	--	--	--
23...	<0.010	0.99	--	0.30	1.0	0.150	0.090	7.4	--	--	3
23...	--	--	--	--	--	--	--	--	14.0	0.500	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.040	0.77	0.56	0.60	0.80	0.150	0.130	--	--	--	--
23...	0.090	1.0	0.31	0.40	1.1	0.150	0.140	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.330	0.50	0.27	0.60	0.80	0.220	0.150	7.5	--	--	6
SEP											
06...	0.010	--	0.39	0.40	0.50	0.160	0.100	--	--	--	--
06...	--	--	--	--	--	--	--	--	20.0	1.30	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	0.59	--	--	0.60	0.210	--	--	19.0	1.50	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	0.56	--	--	0.60	0.230	--	--	15.0	1.10	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.050	0.56	0.55	0.60	0.60	0.160	0.170	--	--	--	--
20...	<0.010	--	--	0.40	0.40	0.120	0.120	--	--	--	--
20...	--	--	--	--	--	--	--	--	19.0	1.10	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	0.50	0.130	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	0.92	--	0.60	1.0	0.130	0.130	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
AUG											
10...	--	--	--	--	90	--	30	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	70	--	160	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	90	--	480	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	160	--	770	--	--	--	--
23...	80	1	<1	1	8	<5	99	<0.1	<1	5.0	7
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	<10	--	160	--	--	--	--
23...	--	--	--	--	10	--	420	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	91	1	<1	1	61	<5	1500	<0.1	<1	<1.0	7
SEP											
06...	--	--	--	--	<10	--	<10	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	<10	--	20	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	10	--	40	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	<10	--	90	--	--	--	--
20...	--	--	--	--	20	--	20	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	20	--	80	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	40	--	350	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295516095080801 - LAKE HOUSTON SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
23...	<0.10	0.20	<0.10	<0.5	0.1	<0.1	<0.10	<0.5	<0.50	0.10	<0.1
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--

295527095074501 - LAKE HOUSTON SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB												
24...	1000	1.00	180	7.60	13.0	0.27	9.6	89	0.380	0.380	0.020	0.020
24...	1002	23.0	180	7.60	13.0	--	9.6	89	0.380	0.390	0.020	0.020
AUG												
23...	0910	1.00	275	7.70	30.0	0.70	4.5	59	--	--	<0.010	<0.010
23...	0912	5.00	275	7.40	30.0	--	3.6	48	--	--	--	--
23...	0914	10.0	275	7.30	29.5	--	2.9	38	--	--	--	--
23...	0916	15.0	275	7.20	29.5	--	2.2	29	--	--	--	--
23...	0918	23.0	275	7.20	29.5	--	1.1	14	--	0.070	0.010	0.030

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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB												
24...	0.400	0.400	0.040	0.050	0.56	0.55	0.60	0.60	0.170	0.150	290	20
24...	0.400	0.410	0.030	0.060	0.57	0.54	0.60	0.60	0.180	0.140	250	<10
AUG												
23...	<0.100	<0.100	0.020	0.020	1.1	0.48	0.50	1.1	0.140	0.110	10	210
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	<0.100	0.100	0.060	0.040	1.5	0.36	0.40	1.6	0.180	0.140	10	330

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295708095092901 - LAKE HOUSTON SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1050	1.00	205	7.70	13.0	0.26	9.8	91
24...	1052	12.0	205	7.70	13.0	--	9.8	91
AUG								
23...	1028	1.00	285	8.10	30.5	0.69	5.2	69
23...	1030	5.00	285	7.90	30.0	--	4.8	63
23...	1032	10.0	285	8.00	30.0	--	4.8	63

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295702095091401 - LAKE HOUSTON SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
OCT								
01...	1018	1.00	170	7.50	24.5	0.36	6.4	76
01...	1020	10.0	170	7.50	24.5	--	6.3	75
01...	1022	20.0	170	7.50	24.5	--	6.3	75
01...	1024	30.0	170	7.50	24.0	--	6.4	75
01...	1026	38.0	170	7.50	24.0	--	6.4	75
FEB								
24...	1032	1.00	185	7.60	13.0	0.28	9.7	90
24...	1034	10.0	185	7.60	13.0	--	9.6	89
24...	1036	20.0	185	7.60	13.0	--	9.6	89
24...	1038	30.0	180	7.60	13.0	--	9.5	88
24...	1040	41.0	180	7.60	13.0	--	9.5	88
MAY								
20...	0928	1.00	205	7.60	26.5	0.55	6.7	83
20...	0930	5.00	205	7.30	26.0	--	6.0	74
20...	0932	10.0	205	7.00	25.0	--	4.5	54
20...	0934	15.0	205	6.90	24.5	--	2.6	31
20...	0936	20.0	205	6.80	24.0	--	1.9	23
20...	0938	30.0	200	6.90	23.0	--	1.1	13
20...	0940	36.0	215	7.00	21.0	--	0.4	4
JUN								
06...	0944	1.00	230	8.00	26.5	0.43	7.4	92
06...	0946	5.00	225	7.80	26.0	--	7.1	87
06...	0948	10.0	225	7.70	26.0	--	7.0	86
06...	0950	15.0	215	7.60	26.0	--	6.5	80
06...	0952	20.0	210	7.50	25.5	--	6.0	73
06...	0954	25.0	210	7.50	25.5	--	5.7	69
06...	0956	30.0	220	7.50	25.5	--	5.8	71
06...	0958	37.0	220	7.70	25.5	--	5.9	72
28...	0934	1.00	250	8.20	30.0	0.66	6.6	87
28...	0936	5.00	250	7.70	29.5	--	5.8	76
28...	0938	10.0	255	7.30	29.0	--	4.2	55
28...	0940	15.0	255	7.10	28.5	--	2.5	32
28...	0942	20.0	250	7.10	28.0	--	1.5	19
28...	0944	25.0	240	7.00	27.5	--	0.8	10
28...	0946	30.0	240	7.10	26.5	--	0.1	1
28...	0948	37.0	265	7.20	25.0	--	0	0
JUL								
13...	1012	1.00	270	7.60	29.0	0.61	5.6	73
13...	1014	5.00	270	7.60	29.0	--	5.6	73
13...	1016	10.0	270	7.60	29.0	--	5.4	70
13...	1018	15.0	270	7.60	29.0	--	5.4	70
13...	1020	20.0	270	7.60	29.0	--	5.4	70
13...	1022	25.0	270	7.60	29.0	--	5.4	70
13...	1024	30.0	270	7.40	28.5	--	4.7	60
13...	1026	36.0	270	7.30	28.0	--	1.7	22
26...	1000	1.00	280	7.40	30.0	0.53	4.7	62
26...	1002	5.00	285	7.30	29.0	--	4.0	52
26...	1004	10.0	285	7.20	29.0	--	3.9	51
26...	1006	15.0	285	7.20	29.0	--	3.9	51
26...	1008	20.0	285	7.20	29.0	--	3.9	51
26...	1010	25.0	285	7.20	29.0	--	3.8	49
26...	1012	30.0	285	7.20	29.0	--	3.8	49
AUG								
10...	1000	1.00	290	8.40	31.5	0.76	5.9	80
10...	1002	5.00	290	8.00	31.0	--	5.6	75
10...	1004	10.0	290	7.00	30.0	--	1.6	21
10...	1006	15.0	280	7.00	29.5	--	0.9	12
10...	1008	20.0	280	7.00	29.5	--	0.6	8
10...	1010	25.0	285	7.00	29.5	--	0	0
10...	1012	30.0	285	7.00	29.0	--	0	0
10...	1014	35.0	291	7.20	29.0	--	0	0
23...	1000	1.00	280	8.20	30.5	0.72	5.6	75
23...	1002	5.00	280	7.90	30.0	--	4.8	63
23...	1004	10.0	285	7.70	30.0	--	4.2	55
23...	1006	15.0	285	7.60	30.0	--	3.9	51
23...	1008	20.0	285	7.40	30.0	--	2.9	38
23...	1010	25.0	285	7.30	30.0	--	1.8	24
23...	1012	30.0	290	7.20	29.5	--	0.3	4
23...	1014	36.0	295	7.20	29.0	--	0.3	4
SEP								
06...	1050	1.00	295	8.30	27.5	0.59	7.1	90
06...	1052	5.00	295	8.00	27.0	--	6.4	80
06...	1054	10.0	295	7.90	27.0	--	6.2	78
06...	1056	15.0	295	7.90	26.5	--	6.1	76
06...	1058	20.0	295	7.90	26.5	--	6.1	76
06...	1100	25.0	295	7.90	26.5	--	6.1	76
06...	1102	30.0	295	7.90	26.5	--	6.1	76
06...	1104	36.0	295	8.00	26.5	--	6.0	75
20...	1116	1.00	300	8.00	28.5	0.48	6.2	79
20...	1118	5.00	300	7.90	28.0	--	5.9	75
20...	1120	10.0	305	7.80	28.0	--	5.4	69
20...	1122	20.0	305	7.80	28.0	--	5.4	69
20...	1124	30.0	305	7.80	28.0	--	5.1	65
20...	1126	37.0	305	7.80	28.0	--	5.1	65

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295656095090201 - LAKE HOUSTON SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1020	1.00	185	7.60	13.0	0.28	9.6	89
24...	1022	10.0	185	7.60	13.0	--	9.6	89
24...	1024	20.0	185	7.60	13.0	--	9.6	89
24...	1026	30.0	185	7.60	13.0	--	9.6	89
24...	1028	41.0	185	7.60	13.0	--	9.7	90
AUG								
23...	0936	1.00	280	8.20	30.5	0.68	5.5	73
23...	0938	5.00	280	8.00	30.0	--	5.1	67
23...	0940	10.0	280	8.00	30.0	--	4.9	65
23...	0942	15.0	280	7.80	30.0	--	4.5	59
23...	0944	20.0	285	7.60	30.0	--	3.9	51
23...	0946	25.0	285	7.40	30.0	--	2.9	38
23...	0948	33.0	285	7.40	30.0	--	2.3	30

295902095075301 - LAKE HOUSTON SITE CR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1106	1.00	300	7.90	14.5	0.28	9.6	92
24...	1108	14.0	300	7.80	14.5	--	9.6	92
AUG								
23...	1042	1.00	290	8.30	31.0	0.60	5.2	70
23...	1044	5.00	290	7.90	31.0	--	4.2	56
23...	1046	13.0	295	7.40	30.5	--	2.8	37

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)	PHOSPHOROUS TOTAL (MG/L AS P)
FEB							
24...	0.680	0.020	0.700	0.020	0.88	0.90	0.440
24...	0.780	0.020	0.800	0.030	0.77	0.80	0.440
AUG							
23...	--	<0.010	<0.100	0.020	0.88	0.90	0.310
23...	--	--	--	--	--	--	--
23...	--	<0.010	<0.100	0.030	0.57	0.60	0.360

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT										
01...	1040	1.00	205	7.60	24.5	0.25	--	--	6.3	75
01...	1042	10.0	205	7.50	24.0	--	--	--	6.1	72
01...	1044	20.0	205	7.50	24.0	--	--	--	6.1	72
01...	1046	29.0	205	7.50	24.0	--	--	--	6.2	73
FEB										
24...	1112	1.00	220	7.70	14.0	0.24	65	28	9.2	88
24...	1113	0.40	--	--	--	--	--	--	--	--
24...	1114	10.0	220	7.70	13.5	--	--	--	9.3	88
24...	1116	20.0	220	7.70	13.5	--	--	--	9.4	88
24...	1118	30.0	220	7.70	13.5	--	65	30	9.3	88
MAY										
20...	0954	1.00	215	7.70	27.0	0.50	--	--	6.8	85
20...	0955	0.82	--	--	--	--	--	--	--	--
20...	0956	5.00	215	7.40	26.5	--	--	--	6.2	77
20...	0958	10.0	225	7.20	26.0	--	--	--	5.6	69
20...	1000	15.0	235	7.00	26.0	--	--	--	3.2	39
20...	1002	20.0	235	6.90	25.0	--	--	--	1.4	17
20...	1004	27.0	220	6.80	24.0	--	--	--	0.4	5
JUN										
06...	1008	1.00	245	8.20	27.0	0.43	35	12	7.8	97
06...	1009	0.70	--	--	--	--	--	--	--	--
06...	1010	5.00	245	8.10	26.5	--	--	--	7.6	94
06...	1012	10.0	245	7.80	26.0	--	--	--	6.9	85
06...	1014	15.0	235	7.60	26.0	--	--	--	6.2	76
06...	1016	20.0	230	7.50	26.0	--	--	--	5.5	67
06...	1018	25.0	230	7.50	25.5	--	--	--	5.2	63
06...	1020	30.0	230	7.50	25.5	--	55	53	4.6	56
28...	1008	1.00	260	8.30	31.0	0.60	--	--	6.6	89
28...	1009	0.98	--	--	--	--	--	--	--	--
28...	1010	5.00	260	8.10	30.0	--	--	--	6.0	79
28...	1012	10.0	265	7.70	30.0	--	--	--	5.3	70
28...	1014	15.0	295	7.30	29.0	--	--	--	3.0	39
28...	1016	20.0	300	7.20	29.0	--	--	--	2.2	29
28...	1018	27.0	300	7.30	29.0	--	--	--	1.8	23
JUL										
13...	1040	1.00	305	7.80	29.0	0.36	--	--	5.5	71
13...	1041	0.59	--	--	--	--	--	--	--	--
13...	1042	5.00	305	7.70	29.0	--	--	--	5.3	69
13...	1044	10.0	305	7.70	29.0	--	--	--	5.2	67
13...	1046	15.0	305	7.60	29.0	--	--	--	5.0	65
13...	1048	20.0	305	7.60	29.0	--	--	--	5.0	65
13...	1050	26.0	305	7.60	29.0	--	--	--	5.0	65
26...	1038	1.00	300	8.00	31.0	0.48	--	--	6.2	83
26...	1039	0.78	--	--	--	--	--	--	--	--
26...	1040	5.00	300	7.60	30.0	--	--	--	5.3	70
26...	1042	10.0	300	7.50	29.5	--	--	--	4.9	64
26...	1044	15.0	295	7.60	29.5	--	--	--	5.1	67
26...	1046	20.0	295	7.60	29.5	--	--	--	5.1	67
26...	1048	28.0	310	7.30	29.5	--	--	--	3.2	42
AUG										
10...	1030	1.00	300	8.60	32.5	0.66	--	--	6.2	86
10...	1031	1.08	--	--	--	--	--	--	--	--
10...	1032	5.00	300	8.30	31.5	--	--	--	5.9	80
10...	1034	10.0	300	7.20	31.0	--	--	--	2.4	32
10...	1036	15.0	305	7.10	31.0	--	--	--	1.1	15
10...	1038	20.0	305	7.10	30.5	--	--	--	0.3	4
10...	1040	28.0	310	7.20	29.5	--	--	--	0	0
23...	1052	1.00	290	8.60	31.5	0.57	16	5.5	5.8	79
23...	1053	0.94	--	--	--	--	--	--	--	--
23...	1054	5.00	290	8.30	31.0	--	--	--	4.9	66
23...	1056	10.0	295	7.90	30.5	--	--	--	3.8	51
23...	1058	15.0	300	7.40	30.5	--	--	--	1.5	20
23...	1100	20.0	300	7.40	30.0	--	--	--	1.1	15
23...	1102	27.0	300	7.50	30.0	--	18	6.0	0.9	12
SEP										
06...	1124	1.00	300	8.40	27.5	0.38	--	--	7.4	94
06...	1125	0.62	--	--	--	--	--	--	--	--
06...	1126	5.00	300	8.00	27.0	--	--	--	6.1	76
06...	1128	10.0	300	7.90	26.5	--	--	--	5.8	72
06...	1130	15.0	300	7.90	26.5	--	--	--	5.7	71
06...	1132	20.0	300	7.90	26.5	--	--	--	5.7	71
06...	1134	28.0	300	7.90	26.5	--	--	--	5.7	71
20...	1142	1.00	310	8.20	28.5	0.37	--	--	6.4	82
20...	1143	0.60	--	--	--	--	--	--	--	--
20...	1144	5.00	310	8.00	28.0	--	--	--	6.1	78
20...	1146	10.0	310	7.90	28.0	--	--	--	5.6	71
20...	1148	15.0	310	7.80	28.0	--	--	--	5.3	67
20...	1150	20.0	310	7.80	28.0	--	--	--	5.3	67
20...	1152	27.0	310	7.80	28.0	--	--	--	5.2	66

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	0.8	53	15	17	2.5	22	1	2.6	38	17
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	1.0	52	16	17	2.4	21	1	2.7	36	20
MAY										
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	2.7	58	7	19	2.6	24	1	3.0	51	13
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	3.1	56	7	18	2.6	22	1	2.6	49	13
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
23...	2.1	61	4	20	2.8	33	2	2.9	57	12
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	2.9	65	1	21	3.0	36	2	3.2	64	13
SEP										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE 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)
OCT									
01...	--	--	--	--	--	--	0.080	0.020	0.100
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	0.090	0.010	0.100
FEB									
24...	31	0.20	10	125	18	<1	0.480	0.020	0.500
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	31	0.20	10	126	19	<1	0.480	0.020	0.500
MAY									
20...	--	--	--	--	--	--	--	<0.010	<0.100
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	<0.010	<0.100
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	0.020	<0.100
JUN									
06...	39	0.30	5.5	137	17	13	--	<0.010	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	<0.010	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	32	0.20	5.9	126	99	32	--	0.010	<0.100
28...	--	--	--	--	--	--	--	<0.010	<0.100
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	<0.010	<0.100
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	0.010	<0.100
JUL									
13...	--	--	--	--	--	--	--	<0.010	<0.100
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	<0.010	<0.100
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	<0.010	<0.100
26...	--	--	--	--	--	--	--	<0.010	<0.100
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	<0.010	<0.100
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	0.020	<0.100
AUG									
10...	--	--	--	--	--	--	--	<0.010	<0.100
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	0.010	<0.100
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	<0.010	<0.100
23...	44	0.10	9.2	158	14	4	--	<0.010	<0.100
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	<0.010	<0.100
23...	--	--	--	--	--	--	--	--	--
23...	45	0.20	9.5	169	8	9	--	<0.010	<0.100
SEP									
06...	--	--	--	--	--	--	--	<0.010	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	0.010	<0.100
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	<0.010	<0.100
20...	--	--	--	--	--	--	--	<0.010	<0.100
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	<0.010	<0.100

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095074201 - LAKE HOUSTON SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
OCT									
01...	0.050	0.45	0.50	0.230	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	0.070	0.33	0.40	0.240	--	--	--	--	--
FEB									
24...	0.040	0.66	0.70	0.230	11	--	--	130	<10
24...	--	--	--	--	--	9.60	0.900	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	0.040	0.56	0.60	0.240	11	--	--	160	10
MAY									
20...	0.020	0.78	0.80	0.100	--	--	--	<10	30
20...	--	--	--	--	--	8.70	0.400	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	0.050	0.65	0.70	0.150	--	--	--	20	180
20...	--	--	--	--	--	--	--	--	--
20...	0.140	0.86	1.0	0.230	--	--	--	70	160
JUN									
06...	<0.010	--	0.50	0.100	8.5	--	--	14	<1
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	0.020	0.48	0.50	0.090	--	--	--	10	10
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	0.080	0.52	0.60	0.100	10	--	--	11	190
28...	<0.010	--	0.60	0.150	--	--	--	<10	20
28...	--	--	--	--	--	17.0	0.700	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	0.050	0.75	0.80	0.230	--	--	--	20	60
28...	--	--	--	--	--	--	--	--	--
28...	8.00	0.0	0.80	0.240	--	--	--	20	70
JUL									
13...	<0.010	--	0.90	0.180	--	--	--	20	<10
13...	--	--	--	--	--	21.0	0.900	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	<0.010	--	1.1	0.190	--	17.0	0.800	20	10
13...	--	--	--	--	--	--	--	--	--
13...	<0.010	--	1.0	0.180	--	17.0	1.20	<10	30
26...	0.030	0.67	0.70	0.220	--	--	--	20	20
26...	--	--	--	--	--	18.0	1.10	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	0.030	0.57	0.60	0.190	--	--	--	20	60
26...	--	--	--	--	--	--	--	--	--
26...	0.170	0.43	0.60	0.360	--	--	--	30	80
AUG									
10...	0.030	0.67	0.70	0.200	--	--	--	60	60
10...	--	--	--	--	--	7.00	0.200	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	0.060	0.14	0.20	0.260	--	2.60	0.100	90	270
10...	--	--	--	--	--	--	--	--	--
10...	0.270	0.13	0.40	0.330	--	--	--	140	760
23...	0.010	1.2	1.2	0.240	8.8	--	--	11	5
23...	--	--	--	--	--	13.0	0.600	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	0.170	0.73	0.90	0.370	--	--	--	20	40
23...	--	--	--	--	--	--	--	--	--
23...	0.140	1.2	1.3	0.410	7.3	--	--	24	120
SEP									
06...	<0.010	--	0.70	0.220	--	--	--	<10	<10
06...	--	--	--	--	--	18.0	0.900	--	--
06...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
06...	<0.010	--	0.50	0.270	--	23.0	1.20	<10	<10
06...	--	--	--	--	--	--	--	--	--
06...	<0.010	--	0.50	0.220	--	15.0	0.700	<10	<10
20...	<0.010	--	0.40	0.210	--	--	--	20	<10
20...	--	--	--	--	--	41.0	2.80	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	<0.010	--	0.70	0.210	--	--	--	30	20

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

295902095073001 - LAKE HOUSTON SITE CL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1130	1.00	220	7.70	14.0	0.26	9.5	90
24...	1132	14.0	220	7.70	14.0	--	9.5	90
AUG								
23...	1124	1.00	290	8.70	32.0	0.65	6.1	83
23...	1126	5.00	290	8.60	31.5	--	6.0	81
23...	1128	11.0	290	8.40	31.0	--	5.3	71

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)
FEB							
24...	0.480	0.020	0.500	0.040	0.76	0.80	0.270
24...	0.480	0.020	0.500	0.030	0.77	0.80	0.270
AUG							
23...	--	<0.010	<0.100	0.020	0.88	0.90	0.200
23...	--	--	--	--	--	--	--
23...	--	<0.010	<0.100	0.020	0.98	1.0	0.290

300016095075601 - LAKE HOUSTON SITE DR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1210	1.00	240	7.60	14.5	0.28	9.5	91
24...	1212	10.0	240	7.60	14.5	--	9.4	90
24...	1214	21.0	240	7.60	14.5	--	9.5	91
AUG								
23...	1156	1.00	295	8.70	31.5	0.45	5.9	80
23...	1158	5.00	295	8.10	31.0	--	4.4	59
23...	1200	10.0	295	7.90	31.0	--	4.1	55
23...	1202	15.0	295	7.50	30.5	--	2.3	31
23...	1204	19.0	300	7.50	30.5	--	0.6	8

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300016095073401 - LAKE HOUSTON SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
OCT								
01...	1054	1.00	205	7.50	24.5	0.24	5.8	69
01...	1056	10.0	210	7.40	24.0	--	5.5	65
01...	1058	20.0	210	7.40	24.0	--	5.6	66
01...	1100	24.0	210	7.40	24.0	--	5.6	66
FEB								
24...	1220	1.00	250	7.70	14.5	0.24	9.4	90
24...	1222	10.0	245	7.70	14.5	--	9.4	90
24...	1224	24.0	240	7.70	14.0	--	9.4	89
MAY								
20...	1024	1.00	230	7.80	27.0	0.44	6.4	80
20...	1026	5.00	230	7.60	27.0	--	6.1	76
20...	1028	10.0	230	7.40	26.5	--	5.6	69
20...	1030	15.0	235	7.10	26.5	--	4.4	55
20...	1032	23.0	240	7.00	25.5	--	1.4	17
JUN								
06...	1040	1.00	255	8.30	27.0	0.50	8.0	100
06...	1042	5.00	255	8.10	26.5	--	7.4	92
06...	1044	10.0	260	7.80	26.0	--	6.4	78
06...	1046	15.0	265	7.70	26.0	--	5.7	70
06...	1048	20.0	365	7.80	25.5	--	4.2	51
06...	1050	25.0	610	7.90	25.5	--	2.4	29
28...	1034	1.00	290	8.50	31.0	0.51	7.1	95
28...	1036	5.00	290	8.40	30.5	--	6.5	87
28...	1038	10.0	285	7.80	30.0	--	5.3	70
28...	1040	15.0	330	7.40	29.5	--	3.0	39
28...	1042	23.0	340	7.30	29.5	--	1.0	13
JUL								
13...	1112	1.00	305	7.90	29.5	0.35	6.3	82
13...	1114	5.00	305	7.80	29.5	--	6.2	81
13...	1116	10.0	305	7.80	29.0	--	6.0	78
13...	1118	15.0	305	7.80	29.0	--	5.9	77
13...	1120	22.0	305	7.70	29.0	--	5.1	66
26...	1108	1.00	310	8.20	30.5	0.47	6.5	86
26...	1110	5.00	310	7.90	30.0	--	5.5	72
26...	1112	10.0	315	7.70	30.0	--	4.9	65
26...	1114	15.0	310	7.70	30.0	--	5.2	68
26...	1116	23.0	320	7.60	30.0	--	4.0	53
AUG								
10...	1108	1.00	315	8.70	32.5	0.64	5.5	76
10...	1110	5.00	325	8.30	31.5	--	4.7	64
10...	1112	10.0	340	7.70	31.0	--	2.0	27
10...	1114	15.0	315	7.20	31.0	--	0.9	12
10...	1116	23.0	315	7.30	30.0	--	0	0
23...	1212	1.00	295	8.80	32.0	0.52	6.6	90
23...	1214	5.00	295	8.40	31.0	--	5.3	71
23...	1216	10.0	295	8.20	31.0	--	4.4	59
23...	1218	15.0	295	8.00	30.5	--	4.2	56
23...	1220	23.0	295	7.60	30.5	--	0.9	12
SEP								
06...	1206	1.00	305	8.60	27.5	0.40	7.7	97
06...	1208	5.00	305	8.40	27.0	--	7.0	88
06...	1210	10.0	300	8.00	26.5	--	6.1	76
06...	1212	15.0	300	7.90	26.5	--	5.4	67
06...	1214	23.0	300	7.90	26.5	--	5.4	67
20...	1224	1.00	310	8.50	29.0	0.40	7.2	93
20...	1226	5.00	310	8.20	28.0	--	6.4	81
20...	1228	10.0	310	8.10	28.0	--	6.1	78
20...	1230	15.0	310	8.00	28.0	--	5.8	74
20...	1232	23.0	310	7.90	28.0	--	5.4	69

300016095072301 - LAKE HOUSTON SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
24...	1228	1.00	250	7.70	14.5	0.28	9.4	90
24...	1230	10.0	240	7.70	14.0	--	9.4	89
24...	1232	20.0	240	7.70	14.0	--	9.4	89
24...	1234	29.0	240	7.70	14.0	--	9.4	89
AUG								
23...	1232	1.00	295	8.90	32.0	0.59	6.7	91
23...	1234	5.00	295	8.60	31.5	--	5.5	74
23...	1236	10.0	290	8.10	31.0	--	4.0	54
23...	1238	15.0	290	7.50	30.5	--	0.9	12
23...	1240	20.0	290	7.50	30.5	--	0.3	4
23...	1242	24.0	295	7.60	30.5	--	0.3	4

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300202095075701 - LAKE HOUSTON SITE ER

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 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)
FEB												
24...	1402	1.00	190	7.30	15.0	0.28	9.0	88	0.100	<0.010	0.010	0.100
24...	1404	12.0	190	7.30	15.0	--	8.6	84	0.100	<0.010	0.010	0.100
AUG												
23..	1354	1.00	270	8.80	33.5	0.48	6.2	87	--	<0.010	<0.010	<0.100
23...	1356	5.00	260	8.20	31.5	--	3.9	53	--	--	--	--
23...	1358	10.0	290	8.30	31.5	--	3.6	49	--	<0.010	<0.010	<0.100

DATE	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)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB											
24...	0.110	0.040	0.050	0.66	0.35	0.40	0.70	0.070	0.030	130	<10
24...	0.110	0.030	0.020	0.67	0.38	0.40	0.70	0.080	0.030	160	20
AUG											
23...	<0.100	0.010	0.030	0.89	0.67	0.70	0.90	0.260	0.240	20	10
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<0.100	0.030	0.020	1.3	0.18	0.20	1.3	0.330	0.300	20	40

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT												
01...	1200	1.00	180	7.40	25.0	0.20	--	--	6.5	78	--	--
01...	1201	--	--	--	--	--	--	--	--	--	--	--
01...	1202	10.0	175	7.20	24.0	--	--	--	5.6	66	--	--
01...	1204	22.0	170	7.20	23.5	--	--	--	5.7	67	--	--
FEB												
24...	1348	1.00	190	7.20	14.5	0.25	68	22	8.6	83	1.8	54
24...	1349	0.41	--	--	--	--	--	--	--	--	--	--
24...	1350	10.0	190	7.20	14.5	--	--	--	8.6	83	--	--
24...	1352	22.0	190	7.20	14.5	--	67	27	8.7	84	2.0	--
MAY												
20...	1116	1.00	230	7.70	27.5	0.43	--	--	6.2	78	--	--
20...	1117	0.70	--	--	--	--	--	--	--	--	--	--
20...	1118	5.00	230	7.50	27.5	--	--	--	5.6	71	--	--
20...	1120	10.0	235	7.20	27.0	--	--	--	4.1	51	--	--
20...	1122	15.0	230	7.00	26.5	--	--	--	2.7	33	--	--
20...	1124	21.0	215	7.20	26.0	--	--	--	0.8	10	--	--
JUN												
06...	1204	1.00	235	8.40	27.5	0.40	35	14	8.2	104	3.8	K2
06...	1205	0.66	--	--	--	--	--	--	--	--	--	--
06...	1206	5.00	240	7.80	26.5	--	--	--	7.3	91	--	--
06...	1208	10.0	250	7.60	26.0	--	--	--	5.4	66	--	--
06...	1210	15.0	255	7.60	26.0	--	--	--	5.1	63	--	--
06...	1212	21.0	260	7.60	26.0	--	36	24	4.5	55	2.2	--
28...	1200	1.00	280	8.50	32.5	0.38	--	--	6.7	92	--	--
28...	1201	0.62	--	--	--	--	--	--	--	--	--	--
28...	1202	5.00	280	7.70	31.0	--	--	--	4.8	65	--	--
28...	1204	10.0	250	7.20	30.0	--	--	--	2.2	29	--	--
28...	1206	15.0	250	7.20	29.5	--	--	--	0.6	8	--	--
28...	1208	19.0	250	7.40	29.5	--	--	--	0.5	7	--	--
JUL												
13...	1226	1.00	275	7.80	30.0	0.32	--	--	6.1	81	--	--
13...	1227	0.52	--	--	--	--	--	--	--	--	--	--
13...	1228	5.00	275	7.80	29.5	--	--	--	6.1	80	--	--
13...	1230	10.0	275	7.70	29.5	--	--	--	5.9	77	--	--
13...	1232	15.0	275	7.60	29.5	--	--	--	5.6	73	--	--
13...	1234	20.0	275	7.70	29.0	--	--	--	5.1	66	--	--
26...	1222	1.00	295	8.30	32.0	0.42	--	--	6.4	87	--	--
26...	1223	0.69	--	--	--	--	--	--	--	--	--	--
26...	1224	5.00	295	7.80	30.0	--	--	--	5.1	67	--	--
26...	1226	10.0	295	7.70	30.0	--	--	--	4.8	63	--	--
26...	1228	15.0	300	7.70	30.0	--	--	--	4.7	62	--	--
26...	1230	20.0	300	7.80	29.5	--	--	--	4.5	59	--	--
AUG												
10...	1236	1.00	290	8.60	33.0	0.48	--	--	6.0	84	--	--
10...	1237	0.78	--	--	--	--	--	--	--	--	--	--
10...	1238	5.00	295	7.50	32.0	--	--	--	3.3	45	--	--
10...	1240	10.0	300	7.30	31.5	--	--	--	1.1	15	--	--
10...	1242	15.0	295	7.20	31.0	--	--	--	0.4	5	--	--
10...	1244	21.0	295	7.40	31.0	--	--	--	0	0	--	--
23...	1320	1.00	270	8.80	34.0	0.52	22	9.5	6.1	86	3.4	K1
23...	1321	0.86	--	--	--	--	--	--	--	--	--	--
23...	1322	5.00	275	7.90	31.5	--	--	--	3.4	46	--	--
23...	1324	10.0	285	7.60	31.0	--	--	--	2.8	38	--	--
23...	1326	15.0	230	7.10	30.5	--	--	--	0	0	--	--
23...	1328	20.0	235	7.10	30.5	--	22	15	0	0	3.0	--
SEP												
06...	1236	1.00	270	8.30	27.5	0.29	--	--	6.8	86	--	--
06...	1237	0.48	--	--	--	--	--	--	--	--	--	--
06...	1238	5.00	270	8.10	27.0	--	--	--	6.6	83	--	--
06...	1240	10.0	280	7.70	26.5	--	--	--	5.2	65	--	--
06...	1242	15.0	280	7.70	26.5	--	--	--	5.1	63	--	--
06...	1244	20.0	280	7.80	26.5	--	--	--	5.1	63	--	--
20...	1246	1.00	285	8.40	29.0	0.31	--	--	6.4	83	--	--
20...	1247	0.51	--	--	--	--	--	--	--	--	--	--
20...	1248	5.00	285	8.20	28.5	--	--	--	6.0	77	--	--
20...	1250	10.0	285	7.90	28.0	--	--	--	5.1	65	--	--
20...	1252	15.0	285	7.90	28.0	--	--	--	5.1	65	--	--
20...	1254	20.0	285	8.00	28.0	--	--	--	5.1	65	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
OCT												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	56	47	21	15	2.2	18	1	1.9	26	19	31	0.10
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	47	27	15	2.2	18	1	1.9	20	19	31	0.10
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
06...	K1	53	7	17	2.6	25	2	2.3	46	11	35	0.20
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	62	5	20	2.9	26	2	2.7	57	12	35	0.30
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
23...	K4	55	0	18	2.5	32	2	2.9	57	12	40	0.10
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	53	2	17	2.6	27	2	2.6	51	11	37	0.10
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
OCT											
01...	--	--	--	--	--	--	0.020	0.010	<0.100	<0.100	0.030
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	0.020	<0.010	<0.100	<0.100	0.050
FEB											
24...	9.3	113	17	2	0.090	0.110	0.010	0.010	0.100	0.120	0.040
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	9.5	109	21	<1	0.090	0.110	0.010	0.010	0.100	0.120	0.050
MAY											
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.030
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.030
JUN											
06...	7.3	128	14	12	--	--	<0.010	<0.010	<0.100	<0.100	0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	6.1	139	42	25	--	--	<0.010	<0.010	<0.100	<0.100	0.080
28...	--	--	--	--	--	--	<0.010	--	<0.100	--	0.030
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	<0.010	--	<0.100	--	0.060
JUL											
13...	--	--	--	--	--	--	0.010	<0.010	<0.100	<0.100	<0.010
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.020
26...	--	--	--	--	--	--	<0.010	<0.010	0.100	<0.100	0.020
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	0.040	--	0.010	<0.010	0.050	0.110	0.020
AUG											
10...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	0.010	<0.010	<0.100	<0.100	0.230
23...	9.7	152	2	<1	--	--	<0.010	<0.010	<0.100	<0.100	0.010
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	9.4	138	15	<1	--	--	<0.010	<0.010	<0.100	<0.100	0.130
SEP											
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.020
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
OCT											
01...	0.040	0.97	--	<0.20	1.0	0.120	0.080	--	--	--	--
01...	--	--	--	--	--	--	--	--	16.0	0.800	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	0.040	0.35	0.56	0.60	0.40	0.120	0.090	--	--	--	--
FEB											
24...	0.030	0.76	0.57	0.60	0.80	0.090	0.050	15	--	--	--
24...	--	--	--	--	--	--	--	--	7.50	0.800	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	0.020	0.85	0.58	0.60	0.90	0.090	0.040	13	--	--	--
MAY											
20...	0.010	0.87	0.39	0.40	0.90	0.100	0.060	--	--	--	--
20...	--	--	--	--	--	--	--	--	4.60	0.200	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	0.020	0.57	0.58	0.60	0.60	0.160	0.080	--	--	--	--
JUN											
06...	0.020	0.49	0.78	0.80	0.50	0.060	0.060	7.9	--	--	--
06...	--	--	--	--	--	--	--	--	8.20	0.500	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.090	0.42	0.41	0.50	0.50	0.110	0.070	9.1	--	--	--
28...	--	0.57	--	0.40	0.60	0.160	0.100	--	--	--	--
28...	--	--	--	--	--	--	--	--	18.0	1.10	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	0.74	--	0.50	0.80	0.150	0.140	--	--	--	--
JUL											
13...	<0.010	--	--	0.30	0.80	0.150	0.090	--	--	--	--
13...	--	--	--	--	--	--	--	--	21.0	1.30	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	<0.010	1.1	--	0.50	1.1	0.190	0.190	--	--	--	--
26...	0.020	1.2	0.28	0.30	1.2	0.220	0.150	--	--	--	--
26...	--	--	--	--	--	--	--	--	6.00	0.400	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	0.020	1.1	0.48	0.50	1.1	0.430	0.390	--	--	--	--
AUG											
10...	<0.010	--	--	0.60	0.70	0.260	0.170	--	--	--	--
10...	--	--	--	--	--	--	--	--	12.0	0.500	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	0.120	1.1	0.38	0.50	1.3	0.420	0.390	--	--	--	--
23...	0.040	1.2	0.46	0.50	1.2	0.280	0.200	7.6	--	--	4
23...	--	--	--	--	--	--	--	--	14.0	0.600	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.150	0.67	0.65	0.80	0.80	0.300	0.170	7.7	--	--	7
SEP											
06...	<0.010	0.88	--	0.40	0.90	0.230	0.100	--	--	--	--
06...	--	--	--	--	--	--	--	--	19.0	1.40	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.040	--	0.96	1.0	1.0	0.240	0.140	--	--	--	--
20...	<0.010	--	--	0.40	0.50	0.190	0.160	--	--	--	--
20...	--	--	--	--	--	--	--	--	32.0	1.90	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	<0.010	--	--	0.50	0.50	0.180	0.160	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300158095074601 - LAKE HOUSTON SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	100	--	<10	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	220	--	10	--	--	--	--
MAY											
20...	--	--	--	--	20	--	60	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	30	--	420	--	--	--	--
JUN											
06...	--	--	--	--	15	--	<1	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	9	--	11	--	--	--	--
28...	--	--	--	--	30	--	70	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	70	--	500	--	--	--	--
JUL											
13...	--	--	--	--	30	--	10	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	20	--	20	--	--	--	--
26...	--	--	--	--	20	--	20	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	10	--	20	--	--	--	--
AUG											
10...	--	--	--	--	70	--	190	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	90	--	470	--	--	--	--
23...	51	1	<1	20	14	<5	10	<0.1	<1	<1.0	<3
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	77	<1	<1	<1	43	<5	640	<0.1	<1	3.0	3
SEP											
06...	--	--	--	--	<10	--	<10	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	<10	--	10	--	--	--	--
20...	--	--	--	--	30	--	10	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	40	--	20	--	--	--	--

300156095074001 - LAKE HOUSTON SITE EL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 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)
FEB												
24...	1338	1.00	190	7.30	15.0	0.25	8.7	85	--	0.010	0.010	<0.100
24...	1340	11.0	190	7.40	15.0	--	8.6	84	0.090	<0.010	0.010	0.100
AUG												
23...	1306	1.00	270	8.80	33.0	0.51	6.2	86	--	<0.010	<0.010	<0.100
23...	1308	5.00	275	7.80	31.5	--	3.0	41	--	--	--	--
23...	1310	10.0	280	7.90	31.5	--	2.6	35	--	<0.010	<0.010	<0.100

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300156095074001 - LAKE HOUSTON SITE EL--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB											
24...	<0.100	0.060	0.030	0.64	0.57	0.60	0.70	0.080	0.030	350	20
24...	0.100	0.040	0.030	0.86	0.57	0.60	0.90	0.100	0.050	420	10
AUG											
23...	<0.100	0.020	0.020	1.2	0.68	0.70	1.2	0.260	0.250	20	40
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<0.100	0.020	0.030	1.3	0.67	0.70	1.3	0.330	0.290	20	130

300202095091701 - LAKE HOUSTON SITE FR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB												
24...	1246	1.00	360	7.90	15.0	0.28	9.4	91	0.490	0.490	0.010	0.020
24...	1248	10.0	360	7.80	15.0	--	9.2	90	0.480	0.480	0.020	0.020
AUG												
23...	1420	1.00	315	9.30	34.0	0.30	8.1	114	--	--	<0.010	<0.010
23...	1422	8.00	345	8.40	32.0	--	0.9	12	--	--	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)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB												
24...	0.500	0.510	0.030	0.020	0.77	0.68	0.70	0.80	0.350	0.230	30	<10
24...	0.500	0.500	0.030	0.020	0.87	0.58	0.60	0.90	0.360	0.230	90	30
AUG												
23...	<0.100	<0.100	0.020	0.030	2.0	0.57	0.60	2.0	0.760	0.650	20	30
23...	<0.100	<0.100	0.250	0.270	1.8	0.83	1.1	2.1	0.950	0.910	20	30

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT												
01...	1114	1.00	210	7.60	24.5	0.10	--	--	6.0	71	--	--
01...	1115	--	--	--	--	--	--	--	--	--	--	--
01...	1116	5.00	210	7.40	23.0	--	--	--	5.2	60	--	--
01...	1118	13.0	200	7.40	23.0	--	--	--	5.3	61	--	--
FEB												
24...	1300	1.00	360	7.90	15.0	0.25	61	10	9.4	91	1.2	60
24...	1301	0.41	--	--	--	--	--	--	--	--	--	--
24...	1302	14.0	360	7.80	15.0	--	48	25	9.2	90	1.6	--
MAY												
20...	1050	1.00	360	8.70	28.5	0.32	--	--	5.7	73	--	--
20...	1051	0.52	--	--	--	--	--	--	--	--	--	--
20...	1052	5.00	460	8.60	28.0	--	--	--	4.9	62	--	--
20...	1054	12.0	460	8.20	27.5	--	--	--	2.0	25	--	--
JUN												
06...	1112	1.00	530	9.20	28.0	0.33	35	16	10.4	132	5.6	K1
06...	1113	0.54	--	--	--	--	--	--	--	--	--	--
06...	1114	4.00	730	9.20	26.5	--	--	--	9.7	120	--	--
06...	1116	8.00	700	8.80	26.0	--	--	--	7.1	87	--	--
06...	1118	12.0	800	8.10	25.5	--	50	65	2.1	26	6.4	--
28...	1108	1.00	535	9.40	33.0	0.28	--	--	8.5	118	--	--
28...	1109	0.46	--	--	--	--	--	--	--	--	--	--
28...	1110	5.00	435	8.80	31.0	--	--	--	5.0	67	--	--
28...	1112	11.0	635	8.70	30.0	--	--	--	0	0	--	--
JUL												
13...	1146	1.00	400	8.80	29.5	0.25	--	--	6.9	90	--	--
13...	1147	0.41	--	--	--	--	--	--	--	--	--	--
13...	1148	5.00	400	8.80	29.0	--	--	--	6.9	90	--	--
13...	1150	10.0	400	8.80	29.0	--	--	--	6.9	90	--	--
26...	1156	1.00	325	9.20	31.5	0.33	--	--	6.6	89	--	--
26...	1157	0.54	--	--	--	--	--	--	--	--	--	--
26...	1158	5.00	320	8.90	29.5	--	--	--	4.6	60	--	--
26...	1200	11.0	305	8.70	29.0	--	--	--	3.8	49	--	--
AUG												
10...	1208	1.00	355	9.10	33.5	0.33	--	--	8.0	113	--	--
10...	1209	0.54	--	--	--	--	--	--	--	--	--	--
10...	1210	5.00	385	8.40	32.0	--	--	--	4.0	55	--	--
10...	1212	12.0	385	7.70	32.0	--	--	--	1.3	18	--	--
23...	1434	1.00	320	9.40	34.0	0.30	18	7.5	8.3	117	7.2	K1
23...	1435	0.49	--	--	--	--	--	--	--	--	--	--
23...	1436	5.00	315	8.80	31.5	--	--	--	2.8	38	--	--
23...	1438	11.0	315	8.70	31.5	--	35	28	2.2	30	5.0	--
SEP												
06...	1314	1.00	380	9.10	27.0	0.30	--	--	8.7	109	--	--
06...	1315	0.49	--	--	--	--	--	--	--	--	--	--
06...	1316	5.00	380	8.90	26.0	--	--	--	6.7	83	--	--
06...	1318	12.0	390	8.80	26.0	--	--	--	5.1	63	--	--
20...	1324	1.00	345	9.40	30.0	0.29	--	--	9.3	123	--	--
20...	1325	0.48	--	--	--	--	--	--	--	--	--	--
20...	1326	5.00	345	9.10	29.0	--	--	--	6.3	82	--	--
20...	1328	11.0	345	8.90	28.0	--	--	--	4.0	51	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	28	94	25	32	3.4	31	1	3.5	69	18	50	0.20
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	96	27	33	3.4	30	1	3.5	69	19	51	0.20
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
06...	K6	71	0	23	3.2	72	4	4.1	83	16	110	0.30
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	88	0	28	4.3	130	6	5.2	94	19	170	0.30
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
23...	44	72	0	24	3.0	39	2	3.9	78	13	45	0.20
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	71	0	23	3.2	37	2	3.9	78	12	43	0.20
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
OCT											
01...	--	--	--	--	0.660	0.650	0.040	0.020	0.700	0.670	0.130
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	0.550	0.560	0.050	0.020	0.600	0.580	0.160
FEB											
24...	10	192	29	2	0.580	0.560	0.020	0.020	0.600	0.580	0.020
24...	--	--	--	--	--	--	--	--	--	--	--
24...	10	194	45	<1	0.580	0.540	0.020	0.020	0.600	0.560	0.030
MAY											
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.040
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	0.010	--	<0.100	--	0.250
JUN											
06...	6.2	285	26	24	--	--	0.020	0.010	<0.100	<0.100	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	8.0	424	25	21	0.520	0.480	0.080	0.070	0.600	0.550	0.320
28...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.030
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	0.190
JUL											
13...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	<0.050	<0.010	<0.100	<0.100	<0.010
26...	--	--	--	--	--	--	0.010	<0.010	<0.100	<0.100	0.030
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	0.280	--	0.020	0.010	0.300	<0.100	0.070
AUG											
10...	--	--	--	--	0.270	--	0.030	0.020	0.300	<0.100	0.150
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	0.360	0.440	0.040	0.040	0.400	0.480	0.420
23...	13	188	8	9	--	--	<0.010	<0.010	<0.100	<0.100	0.030
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	15	184	19	8	--	--	0.010	<0.010	<0.100	<0.100	0.120
SEP											
06...	--	--	--	--	0.360	0.320	0.040	0.030	0.400	0.350	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	0.360	0.330	0.040	0.030	0.400	0.360	0.180
20...	--	--	--	--	--	--	<0.010	--	<0.100	--	<0.010
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	<0.010	<0.010	<0.100	<0.100	<0.010

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS 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)
OCT											
01...	0.130	0.87	0.67	0.80	1.0	0.600	0.530	--	--	--	--
01...	--	--	--	--	--	--	--	--	20.0	1.90	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	0.180	0.74	0.62	0.80	0.90	0.550	0.480	--	--	--	--
FEB											
24...	0.020	0.88	0.78	0.80	0.90	0.380	0.250	11	--	--	--
24...	--	--	--	--	--	--	--	--	18.0	1.70	--
24...	0.030	0.87	0.37	0.40	0.90	0.390	0.230	12	--	--	--
MAY											
20...	0.020	0.76	0.68	0.70	0.80	0.480	0.400	--	--	--	--
20...	--	--	--	--	--	--	--	--	22.0	1.30	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	0.85	--	1.5	1.1	0.710	0.660	--	--	--	--
JUN											
06...	0.030	--	0.87	0.90	0.60	0.600	0.550	11	--	--	--
06...	--	--	--	--	--	--	--	--	48.0	1.90	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.280	1.2	1.6	1.9	1.5	0.870	0.840	11	--	--	--
28...	0.020	1.6	0.18	0.20	1.6	0.710	0.560	--	--	--	--
28...	--	--	--	--	--	--	--	--	49.0	3.40	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	<0.010	2.6	--	0.80	2.8	1.20	0.890	--	--	--	--
JUL											
13...	<0.010	--	--	0.80	1.7	0.690	0.880	--	--	--	--
13...	--	--	--	--	--	--	--	--	53.0	3.00	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	<0.010	--	--	0.60	1.4	0.710	0.540	--	--	--	--
26...	0.020	2.9	0.58	0.60	2.9	0.960	0.730	--	--	--	--
26...	--	--	--	--	--	--	--	--	27.0	1.70	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	0.070	1.6	0.53	0.60	1.7	0.950	0.730	--	--	--	--
AUG											
10...	<0.010	1.5	--	0.60	1.7	0.960	0.630	--	--	--	--
10...	--	--	--	--	--	--	--	--	50.0	3.90	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	0.450	1.6	0.35	0.80	2.0	0.990	0.830	--	--	--	--
23...	0.020	1.5	0.98	1.0	1.5	0.890	0.780	12	--	--	5
23...	--	--	--	--	--	--	--	--	30.0	1.40	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	0.100	1.3	0.70	0.80	1.4	0.870	0.770	11	--	--	5
SEP											
06...	<0.010	--	--	0.50	1.0	0.980	0.780	--	--	--	--
06...	--	--	--	--	--	--	--	--	66.0	2.60	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	0.090	0.92	0.61	0.70	1.1	1.10	0.730	--	--	--	--
20...	--	--	--	0.60	0.90	0.730	0.600	--	--	--	--
20...	--	--	--	--	--	--	--	--	68.0	4.70	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	<0.010	--	--	0.60	0.70	0.580	0.570	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

300209095091201 - LAKE HOUSTON SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	20	--	<10	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	20	--	20	--	--	--	--
MAY											
20...	--	--	--	--	20	--	<10	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	<10	--	<10	--	--	--	--
JUN											
06...	--	--	--	--	8	--	3	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	8	--	4	--	--	--	--
28...	--	--	--	--	20	--	30	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	20	--	30	--	--	--	--
JUL											
13...	--	--	--	--	20	--	<10	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	<10	--	<10	--	--	--	--
26...	--	--	--	--	20	--	<10	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	30	--	10	--	--	--	--
AUG											
10...	--	--	--	--	90	--	20	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	100	--	40	--	--	--	--
23...	61	<1	<1	20	8	<5	<1	<0.1	<1	<1.0	3
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	55	<1	<1	4	13	<5	6	<0.1	<1	1.0	<3
SEP											
06...	--	--	--	--	<10	--	<10	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	<10	--	<10	--	--	--	--
20...	--	--	--	--	30	--	<10	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	30	--	<10	--	--	--	--

300214095090901 - LAKE HOUSTON SITE FL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB												
24...	1314	1.00	355	7.90	15.0	0.28	9.2	90	0.580	0.580	0.020	0.020
24...	1316	10.0	355	7.80	15.0	--	9.2	90	0.580	0.590	0.020	0.020

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-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB												
24...	0.600	0.600	0.030	0.020	0.77	0.48	0.50	0.80	0.390	0.270	30	10
24...	0.600	0.610	0.030	0.020	0.77	0.48	0.50	0.80	0.400	0.260	<10	<10

Lake Houston AC (295516095080801)

Phytoplankton Analyses September 1987 to October 1988

Date	2-24-88
Time	0931
TOTAL CELLS/mL	35,571
NUMBER OF SPECIES	31
DEPTH COLLECTED (ft.)	0.42

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	675
Ankistrodesmus falcatus	113
Chlamydomonas sp.	225
Chlorococcum sp.	675
Oocystis sp.	225
Tetraedron minimum	225
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	3,616
Aphanocapsa elachista	13,447
Chroococcus limneticus	450
Chroococcus multicoloratus	6,328
Chroococcus pallidus	1,238
Dactylococcopsis fascicularis	338
Microcystis sp.	6,215
Synechococcus lineare	1,013
Synechococcus sp.	338
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas sp.	113
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	21
Cyclotella stelligera	9
Cyclotella sp.	3
Melosira granulata var. *angustissima*	16
Melosira italica	6
Melosira lirata	41
Stephanodiscus dubius	16
Stephanodiscus hantzschii	142
Order Pennales	
Fragilaria leptostauron ?	8
Fragilaria vaucheriae	4
Navicula aikenensis	4
Navicula capitata	4
Navicula sp.	13
Nitzschia palea	17
Nitzschia subacicularis	33

Lake Houston CC (295902095074201)

Phytoplankton Analyses September 1987 to October 1988

Date	2-24-88
Time	1113
TOTAL CELLS/mL	10,831
NUMBER OF SPECIES	36
DEPTH COLLECTED (ft.)	0.40

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	411
Ankistrodesmus falcatus	51
Ankistrodesmus nannoselene	154
Chlamydomonas sp.	103
Chlorococcum sp.	205
Chodatella quadriseta	154
Oocystis sp.	51
Scenedesmus brasilliensis	205
Scenedesmus quadricauda	205
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	616
Aphanocapsa elachista	3,387
Chroococcus multicoloratus	1,591
Chroococcus pallidus	1,642
Dactylococcopsis acicularis	103
Dactylococcopsis fascicularis	103
Gloeothece linearis	308
Microcystis sp.	616
Synechococcus lineare	462
Synechococcus sp.	154
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas sp.	51
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	5
Cyclotella stelligera	64
Melosira granulata	39
Melosira granulata var. *angustissima* f. *spiralis*	15
Melosira lirata	83
Stephanodiscus dubius	6
Stephanodiscus hantzschii	19
Stephanodiscus niagare	1
Order Pennales	
Fragilaria pinnata var. *lancettula*	1
Fragilaria sp.	1
Navicula minima	2
Navicula simula	1
Navicula sp.	1
Nitzschia palea	15
Nitzschia subacicularis	5
Nitzschia sp.	1

Lake Houston EC (300158095074601)

Phytoplankton Analyses September 1987 to October 1988

Date	2-24-88
Time	1349
TOTAL CELLS/mL	15,779
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	0.41

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	506
Ankistrodesmus nannoselene	84
Chlamydomonas sp.	338
Chlorococcum sp.	169
Chodatella salsa	84
Franceia ovalis	84
Roya sp. ?	84
Scenedesmus dimorphus	338
Staurastrum sp.	84
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	4,896
Aphanocapsa elachista	2,701
Aphanothece saxicola	844
Chroococcus dispersus	675
Chroococcus multicoloratus	1,857
Dactylococcopsis fascicularis	506
Marssoniella elegans	844
Synechococcus lineare	169
Synechococcus sp.	169
EUGLENOPHYTA (Euglenoids)	
Trachelomonas sp.	84
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	84
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	249
Melosira varians	71
Stephanodiscus hantzschii	355
Order Pennales	
Cymbella sp.	16
Gomphonema sp.	16
Hantzschia sp.	16
Navicula aikenensis	16
Navicula cryptocephala	49
Navicula ilopangensis	16
Navicula minuscula	33
Navicula notha	16
Nitzschia acicularis	16
Nitzschia gracilis	49
Nitzschia palea	98
Synedra acus	131
Synedra socia	16
Synedra ulna ?	16

Lake Houston FC (300209095091201)

Phytoplankton Analyses September 1987 to October 1988

Date	2-24-88
Time	1301
TOTAL CELLS/mL	17,917
NUMBER OF SPECIES	35
DEPTH COLLECTED (ft.)	0.41

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	1,013
Ankistrodesmus falcatus	84
Chlamydomonas sp.	675
Chlorococcum sp.	338
Cosmarium sp.	84
Mesotaenium sp.	169
Mougeotia sp.	422
Scenedesmus bijuga	338
Scenedesmus dimorphus	338
Ulothrix sp.	253
CYANOPHYTA (Blue-green algae)	
Anabaena circinalis	591
Aphanocapsa delicatissima	6,162
Aphanocapsa elachista	1,773
Chroococcus multicoloratus	844
Chroococcus pallidus	169
Dactylococcopsis fascicularis	253
Gloeothece linearis	675
Oscillatoria sp.	507
Synechococcus lineare	760
EUGLENOPHYTA (Euglenoids)	
Euglena acus	169
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	52
Melosira granulata var. *angustissima* f. *spiralis*	621
Melosira lirata	156
Melosira sp.	52
Stephanodiscus hantzschii	574
Order Pennales	
Navicula cryptocephala	47
Navicula simula	47
Navicula sp.	47
Nitzschia acicularis	47
Nitzschia palea	281
Nitzschia subacicularis	47
Nitzschia sublinearis	188
Nitzschia sp.	47
Surirella sp.	47
Synedra acus	47

Lake Houston AC (295516095080801)

Phytoplankton Analyses September 1987 to October 1988

Date	6-6-88
Time	0911
TOTAL CELLS/mL	5,638
NUMBER OF SPECIES	35
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Actinastrum hantzschii	100
Ankistrodesmus convolutus	50
Ankistrodesmus falcatus	150
Chlamydomonas sp.	150
Cosmarium sp.	16
Crucigenia tetrapedia	50
Crucigenia truncata	128
Dictyosphaerium pulchellum	192
Elakatothrix gelatinosa	50
Pandorina morum	128
Pediastrum duplex	64
Pediastrum simplex	112
Pediastrum tetras	64
Scenedesmus bijuga	200
Scenedesmus dimorphus	200
Scenedesmus intermedius	400
Scenedesmus quadricauda	64
Selenastrum westii	128
Tetraedron trigonum	50
Tetrastrum staurogeniaeforme	200
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	850
Chroococcus dispersus	200
Chroococcus minor	400
Oscillatoria hamelii	150
Schizothrix calcicola	150
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas sp.	16
PYRRHOPHYTA (dinoflagellates)	
Ceratium cornutum	250
Peridinium quadridens	32
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	16
Melosira distans	100
Melosira granulata	112
Stephanodiscus minutus	750
Order Pennales	
Nitzschia acicularis	50
Nitzschia sp.	50
Synedra ulna	16

Lake Houston CC (295902095074201)

Phytoplankton Analyses September 1987 to October 1988

Date	6-6-88
Time	1009
TOTAL CELLS/mL	23,962
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	150
Ankistrodesmus falcatus	700
Chlamydomonas sp.	200
Coelastrum reticulatum	400
Kirchneriella contorta	50
Micractinium pusillum	200
Pandorina morum	800
Pediastrum simplex	68
Platydorina caudata	272
Polyedriopsis spinulosa	50
Scenedesmus bijuga	68
Scenedesmus intermedius	1000
Scenedesmus quadricauda	1000
Sphaerocystis schroeteri	200
Tetraedron caudatum	50
Tetraedron gracile	17
Tetraedron minimum	50
Tetraedron trigonum	150
Tetrastrum staurogeniaeforme	200
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	800
Chroococcus dispersus	300
Chroococcus minor	2150
Merismopedia tenuissima	5100
Oscillatoria hamelii	400
Schizothrix calcicola	7000
Spirulina laxissima	200
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	50
Phacus sp.	50
Trachelomonas sp.	50
PYRRHOPHYTA (dinoflagellates)	
Ceratium cornutum	51
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	300
Cyclotella stelligera	150
Melosira distans	100
Melosira granulata	100
Stephanodiscus minutus	1000
Order Pennales	
Achnanthes minutissima	34
Nitzschia acicularis	250
Nitzschia holsatica	68
Nitzschia sp.	150
Synedra acus	34

Lake Houston EC (300158095074601)

Phytoplankton Analyses September 1987 to October 1988

Date	6-6-88
Time	1205
TOTAL CELLS/mL	15,144
NUMBER OF SPECIES	36
DEPTH COLLECTED (ft.)	0.66

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus convolutus	100
Ankistrodesmus falcatus	700
Chlamydomonas sp.	300
Cosmarium sp.	300
Crucigenia tetrapedia	48
Pandorina morum	128
Polyedriopsis spinulosa	16
Scenedesmus acutiformis	400
Scenedesmus bijuga	200
Scenedesmus intermedius	800
Scenedesmus quadricauda	800
Schroederia setigera	16
Sphaerocystis schroeteri	64
Tetraedron trigonum	16
Tetrastrum staurogeniaeforme	400
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	1800
Chroococcus dispersus	400
Chroococcus minor	187
Merismopedia glauca	125
Merismopedia tenuissima	4000
Oscillatoria hamelii	400
Schizothrix calcicola	500
Spirulina laxissima	200
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas sp.	16
PYRRHOPHYTA (dinoflagellates)	
Peridinium willei	16
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	16
Melosira distans	200
Melosira granulata	200
Stephanodiscus minutus	1600
Order Pennales	
Achnanthes minutissima	500
Fragilaria construens	100
Nitzschia acicularis	300
Nitzschia holsatica	64
Nitzschia sp.	200
Synedra acus	16
Synedra ulna	16

Lake Houston FC (300209095091201)

Phytoplankton Analyses September 1987 to October 1988

Date	6-6-88
Time	1113
TOTAL CELLS/mL	115,916
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.54

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Actinastrum hantzschii	4000
Ankistrodesmus convolutus	3500
Ankistrodesmus falcatus	500
Chlamydomonas sp.	500
Cosmarium sp.	16
Pediastrum duplex	256
Scenedesmus bijuga	2000
Scenedesmus dimorphus	2000
Scenedesmus quadricauda	18000
Sphaerocystis schroeteri	500
Tetraedron trigonum	2000
Tetrastrum heteracanthum	2000
CYANOPHYTA (blue-green algae)	
Anabaena spiroides	7500
Chroococcus dispersus	4000
Chroococcus minor	4500
Merismopedia glauca	10000
Merismopedia tenuissima	30000
Schizothrix calcicola	5000
Spirulina laxissima	1500
EUGLENOPHYTA (euglenoid algae)	
Phacus sp.	500
Trachelomonas sp.	500
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	64
Melosira granulata	64
Stephanodiscus minutus	11000
Order Pennales	
Fragilaria construens	500
Navicula sp.	500
Nitzschia acicularis	1000
Nitzschia holsatica	4000
Nitzschia sp.	16

Lake Houston AC (295516095080801)

Phytoplankton Analyses September 1987 to October 1988

Date	7-26-88
Time	0921
TOTAL CELLS/mL	115,275
NUMBER OF SPECIES	36
DEPTH COLLECTED (ft.)	0.87

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas globosa?	2168
Chlamydomonas sp. 1	723
Chlamydomonas sp. 2	723
Chlorococcum sp.	1084
Euastrum sp.	2168
Kirchneriella sp.	1445
Pandorina morum	10118
Scenedesmus brasiliensis	1445
Scenedesmus quadricauda	2891
Scenedesmus sp. 1	3614
Schroederia setigera	723
Tetraedron minimum	723
Tetraedron muticum	1084
Tetrastrum staurogeniformae	1445
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	2530
CYANOPHYTA (blue-green algae)	
Aphanothece sp.	1445
Chroococcus pallidus	2168
Marssoniella elegans	1084
Synechococcus sp.	42642
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	1084
Trachelomonas volvocina	361
Trachelomonas sp.	361
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	723
Gymnodinium sp.	3614
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella atomus	2168
Cyclotella meneghiniana	1807
Cyclotella pseudostelligera	723
Cyclotella sp.	3614
Melosira distans	723
Melosira distans var. *alpigena*	4698
Melosira italica	3252
Stephanodiscus subtilis	361
Stephanodiscus vestibulis	7227
Order Pennales	
Navicula hustedtii	361
Nitzschia holsatica	3614
Synedra delicatissima	361

Lake Houston CC (295902095074201)

Phytoplankton Analyses September 1987 to October 1988

Date	7-26-88
Time	1039
TOTAL CELLS/mL	138,634
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	0.78

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas globosa?	555
Chlamydomonas sp.	1109
Chlorogonium sp.	555
Closterium sp.	277
Cosmarium sp.	1664
Crucigenia apiculata	1109
Euastrum sp.	555
Kirchneriella sp.	4436
Nephrocytium sp.	1109
Pandorina morum	13309
Pteromonas sp.	277
Scenedesmus acuminatus	1109
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	7763
CYANOPHYTA (blue-green algae)	
Anabaena sp.	4991
Chroococcus limneticus	11368
Chroococcus pallidus	832
Synechococcus sp.	55453
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	555
Trachelomonas hispida var. *crenulatocollis*?	277
Trachelomonas volvocina	277
Trachelomonas sp.	832
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	832
Gymnodinium sp.	4714
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella atomus	1386
Cyclotella meneghiniana	3604
Cyclotella pseudostelligera	555
Cyclotella sp.	4159
Melosira distans var. *alpigena*	1109
Melosira italica	555
Melosira granulata	2495
Stephanodiscus subtilis	555
Stephanodiscus vestibulis	6377
Order Pennales	
Navicula hustedtii	1109
Nitzschia fonticola	277
Nitzschia holsatica	1941
Nitzschia subacicularis	277
Nitzschia sp.	277

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses September 1987 to October 1988

Date	7-26-88
Time	1223
TOTAL CELLS/mL	157,716
NUMBER OF SPECIES	51
DEPTH COLLECTED (ft.)	0.69

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	1011
Ankistrodesmus falcatus var. *mirabilis*	337
Chlamydomonas sp.	1348
Chlamydomonas globosa?	1011
Chlorococcum sp.	337
Cosmarium sp.	4044
Euastrum sp.	1348
Golenkinia radiata	337
Gonium sociale	1348
Kirchneriella sp.	2696
Lagerheimia quadriseta	337
Pandorina morum	5392
Polyedriopsis sp.	337
Pteromonas sp.	337
Scenedesmus acuminatus	1348
Scenedesmus quadricauda	4718
Tetraedron muticum	1685
Tetraedron trigonum	674
Tetraedron trigonum var. gracile	337
Tetrastrum staurogeniformae	2696
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	8425
CYANOPHYTA (blue-green algae)	
Anabaenopsis circinalis	3033
Chroococcus limneticus	13143
Raphidiopsis curvata	674
Synechococcus sp.	54594
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	674
Trachelomonas hispida var. *crenulatocollis*?	337
Trachelomonas volvocina	337
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	1011
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	674
Gymnodinium sp.	674
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella atomus	3370
Cyclotella meneghiniana	3707
Cyclotella pseudostelligera	674
Cyclotella sp.	6740
Melosira distans	674
Melosira distans var. *alpigena*	2022
Melosira italica	674
Melosira granulata	674
Melosira granulata var. *angustissima*	1011
Stephanodiscus subtilis	337
Stephanodiscus vestibulis	6740
Order Pennales	
Navicula hustedtii	3033
Navicula minima?	2359
Navicula mucicoloides	674
Nitzschia acicularis	1011
Nitzschia fonticola	674
Nitzschia holsatica	4718
Nitzschia subacicularis	2359
Nitzschia sp.	674
Synedra delicatissima	337

Lake Houston FC (300209095091201)

Phytoplankton Analyses September 1987 to October 1988

Date	7-26-88
Time	1157
TOTAL CELLS/mL	112,604
NUMBER OF SPECIES	43
DEPTH COLLECTED (ft.)	0.54

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	1646
Chlamydomonas globosa?	1646
Chlamydomonas sp. 1	659
Chlamydomonas sp. 2	329
Cosmarium sp.	3951
Crucigenia tetrapedia	1317
Kirchneriella sp.	13499
Pediastrum tetras	1317
Scenedesmus abundans	659
Scenedesmus acuminatus	1317
Scenedesmus armatus	1976
Scenedesmus armatus var. *bicaudatus*	1317
Scenedesmus quadricauda	9878
Tetraedron minimum	329
Tetraedron muticum	1646
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	2634
CYANOPHYTA (blue-green algae)	
Aphanothece sp.	659
Chroococcus limneticus	3951
Merismopedia elegans	2634
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	2963
Trachelomonas volvocina	659
Trachelomonas sp.	329
CRYPTOPHYTA (cryptomonads)	
Chroomonas sp.	329
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium sp.	329
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella atomus	1317
Cyclotella meneghiniana	11524
Cyclotella pseudostelligera	1646
Cyclotella sp.	9878
Melosira distans var. *alpigena*	1317
Melosira italica	1317
Melosira granulata	659
Melosira granulata var. *angustissima*	2963
Stephanodiscus subtilis	329
Stephanodiscus vestibulis	8561
Order Pennales	
Diploneis sp.	329
Navicula hustedtii	1317
Navicula mucicoloides	5268
Nitzschia fonticola	329
Nitzschia frustulum	329
Nitzschia holsatica	6914
Nitzschia palea	329
Nitzschia subacicularis	1646
Nitzschia sp.	659

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1987 to September 1988

Date	8-23-88
Time	0823
TOTAL CELLS/mL	69,109
NUMBER OF SPECIES	53
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. *mirabilis*	235
Chlamydomonas globosa?	235
Chlamydomonas sp. 1	1057
Chlamydomonas sp. 2	59
Closteriopsis longissima	59
Coelastrum sphaericum	1174
Cosmarium sp.	587
Crucigenia tetrapedia	1174
Euastrum sp.	117
Eudorina elegans	2114
Kirchneriella sp.	1174
Lagerheimia quadriseta	59
Pandorina morum	939
Pediastrum duplex	470
Scenedesmus acuminatus	235
Scenedesmus quadricauda	1292
Tetraedron arthrodesmiforme	59
Tetraedron caudatum	59
Tetrastrum staurogeniformae	235
CHRYSOPHYTA (Golden-brown algae)	
Mallomonas sp.	176
small chrysophyte flagellates	705
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	2936
Anabaenopsis circinalis	646
Chroococcus dispersus	587
Dactylococcopsis fascicularis	117
Oscillatoria limnetica	1527
Synechococcus sp.	31942
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	176
Trachelomonas volvocina	235
PYRRHOPHYTA (Dinoflagellates)	
Peridinium quadridens	235
Peridinium sp.	705
unidentified dinoflagellates	881
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas lucens	176
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	1761
Cyclotella kutzingiana	763
Cyclotella meneghiniana	822
Cyclotella pseudostelligera	939
Cyclotella sp.	235
Melosira distans var. *alpigena*	1644
Melosira granulata	176
Melosira granulata var. *angustissima*	294
Melosira italica	1703
Skeletonema potamos	763
Stephanodiscus hantzschii	528
Stephanodiscus vestibulis	3523
Order Pennales	
Navicula hustedtii	2525
Navicula minima	117
Nitzschia acicularis	352
Nitzschia holsatica	235
Nitzschia subacicularis	117
Nitzschia tryhlionella var. *victoriae*	117
Nitzschia sp.	59
Rhizosolenia eriensis	59

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1987 to September 1988

Date	8-23-88
Time	1053
TOTAL CELLS/mL	108,451
NUMBER OF SPECIES	53
DEPTH COLLECTED (ft.)	0.94

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. *mirabilis*	463
Carteria sp.	77
Chlamydomonas globosa?	232
Chlamydomonas sp. 1	1235
Chlamydomonas sp. 2	154
Cosmarium sp.	1389
Crucigenia tetrapedia	926
Dictyosphaerium sp.?	1003
Euastrum sp.	463
Franceia sp.	77
Kirchneriella sp.	3551
Nephrocytium sp.	618
Oocystis sp.	309
Pandorina morum	2470
Scenedesmus acuminatus	618
Scenedesmus quadricauda	2316
Selenastrum minutum	154
Tetraedron muticum	77
Tetraedron sp.	232
CHRYSOPHYTA (Golden-brown algae)	
Mallomonas sp.	77
small chrysophyte flagellates	1312
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	3782
Anabaenopsis circinalis	695
Chroococcus sp.	463
Dactylococcopsis fascicularis	926
Synechococcus sp.	58896
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	309
Trachelomonas volvocina	154
Trachelomonas sp.	309
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium sp.	232
Peridinium quadridens	309
unidentified dinoflagellates	849
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	3860
Cyclotella kutzingiana	1312
Cyclotella meneghiniana	1621
Cyclotella pseudostelligera	772
Cyclotella sp.	232
Melosira distans var. *alpigena*	2547
Melosira granulata var. *angustissima*	309
Melosira italica	849
Skeletonema potamos	926
Stephanodiscus hantzschii	1235
Stephanodiscus vestibulis	4631
Order Pennales	
Achnanthes linearis	232
Navicula hustedtii	2933
Navicula minima	309
Nitzschia acicularis	618
Nitzschia fonticola	154
Nitzschia holsatica	463
Nitzschia paleacea	77
Nitzschia subacicularis	77
Nitzschia tryblionella var. *victoriae*	77
Nitzschia sp.	540

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1987 to September 1988

Date	8-23-88
Time	1321
TOTAL CELLS/mL	125,902
NUMBER OF SPECIES	55
DEPTH COLLECTED (ft.)	0.86

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. *mirabilis*	250
Ankistrodesmus nannoselene	833
Chlamydomonas globosa?	833
Chlamydomonas sp. 1	1332
Chlamydomonas sp. 2	250
Cosmarium sp.	3081
Eudorina elegans	1832
Kirchneriella sp.	999
Oocystis sp.	333
Pandorina morum	5329
Scenedesmus abundans	333
Scenedesmus acuminatus	333
Scenedesmus brasiliense	500
Scenedesmus quadricauda	1665
Scenedesmus sp.	1332
Tetraedron minimum	333
Tetraedron muticum	83
unidentified green algal flagellates	333
CHRYSOPHYTA (Golden-brown algae)	
Mallomonas sp.	83
small chrysophyte flagellates	1665
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	5163
Anabaenopsis circinalis	2498
Aphanothece sp.	1665
Chroococcus sp.	500
Dactylococcopsis fascicularis	500
Oscillatoria limnetica	3581
Synechococcus sp.	59121
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	250
Trachelomonas volvocina	167
Trachelomonas sp.	83
PYRRHOPHYTA (Dinoflagellates)	
unidentified dinoflagellates	83
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	4996
Cyclotella kutzingiana	4163
Cyclotella meneghiniana	1166
Cyclotella pseudostelligera	583
Melosira distans var. *alpigena*	916
Melosira granulata	167
Melosira granulata var. *angustissima*	1582
Melosira italica	833
Skeletonema potamos	749
Stephanodiscus hantzschii	666
Stephanodiscus vestibulis	4913
Order Pennales	
Achnanthes lanceolata var. *dubia*	83
Achnanthes linearis	167
Navicula hustedtii	1749
Navicula minima	1915
Navicula mucicoloides	416
Nitzschia acicularis	916
Nitzschia fonticola	416
Nitzschia holsatica	1665
Nitzschia palea	1082
Nitzschia paleacea	167
Nitzschia subacicularis	916
Nitzschia sp.	250
Synedra delicatissima	83

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1987 to September 1988

Date	8-23-88
Time	1435
TOTAL CELLS/mL	405,495
NUMBER OF SPECIES	58
DEPTH COLLECTED (ft.)	0.49

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	869
Ankistrodesmus falcatus	9561
Ankistrodesmus falcatus var. *mirabilis*	2173
Chlamydomonas globosa?	2173
Chlamydomonas sp.	12169
Cosmarium sp. 1	4346
Cosmarium sp. 2	2173
Crucigenia sp.	17384
Dictyosphaerium sp.?	13038
Gonium sociale	1738
Kirchneriella sp.	35204
Lagerheimia sp.	435
Scenedesmus abundans	5215
Scenedesmus acuminatus	5215
Scenedesmus quadricauda	27815
Scenedesmus serratus	8692
Scenedesmus sp.	2608
Selenastrum minutum	869
Tetraedron muticum	435
unidentified green algal flagellates	7388
CHRYSOPHYTA (Golden-brown algae)	
Small chrysophyte flagellates	3912
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	2608
Chroococcus limneticus	3912
Chroococcus sp.	33031
Oscillatoria limnetica	89096
Spirulina sp.	11735
Synechococcus sp.	33031
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	1738
Trachelomonas sp.	435
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium sp.	869
Peridinium quadridens	1304
unidentified dinoflagellates	1304
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	1304
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	2173
Cyclotella kutzingiana	11300
Cyclotella meneghiniana	4346
Melosira distans var. *alpigena*	1304
Melosira granulata	435
Melosira granulata var. *angustissima*	5650
Melosira italica	869
Stephanodiscus hantzschii	1738
Stephanodiscus vestibulis	3042
Order Pennales	
Achnanthes linearis	3042
Navicula gregaria	435
Navicula hustedtii	3042
Navicula minima	1304
Navicula mucicoloides	5650
Navicula pupula	435
Nitzschia fonticola	869
Nitzschia gracilis	435
Nitzschia holsatica	8258
Nitzschia palea	1738
Nitzschia paleacea	435
Nitzschia rautenbachiae	435
Nitzschia reversa	435
Nitzschia subacicularis	2173
Nitzschia sp.	435
Synedra delicatissima	1738

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston AC (295516095080801)

Phytoplankton Analyses October 1987 to September 1988

Date	9-6-88
Time	1007
TOTAL CELLS/mL	870,435
NUMBER OF SPECIES	47
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	193
Ankistrodesmus falcatus var. *mirabilis*	386
Chlamydomonas globosa?	193
Chlamydomonas sp. 1	2894
Chlamydomonas sp. 2	772
Cosmarium sp.	1544
Crucigenia apiculata	1544
Crucigenia tetrapedia	6946
Dictyosphaerium sp.?	9841
Kirchneriella sp.	2123
Oocystis sp.	1544
Pandorina morum	1930
Pediastrum duplex	1351
Scenedesmus dimorphus	1544
Scenedesmus quadricauda	386
Scenedesmus serratus	386
Tetraedron trigonum var. *gracile*	193
Tetraedron sp.	579
unidentified green algal flagellates	386
CHRYSOPHYTA (Golden-brown algae)	
small chrysophyte flagellates	1737
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	1930
Anabaenopsis circinalis	6561
Aphanocapsa elachista	1930
Chroococcus sp.	1737
Spirulina laxa	193
Synechococcus sp.	769898
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	579
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium sp.	386
unidentified dinoflagellates	1737
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	13507
Cyclotella kutzingiana	3666
Cyclotella meneghiniana	772
Melosira distans var. *alpigena*	3666
Melosira granulata	579
Melosira granulata var. *angustissima*	1930
Melosira italica	5210
Skeletonema potamos	2701
Stephanodiscus vestibulis	7525
Order Pennales	
Achnanthes linearis	193
Diploneis sp.	193
Navicula hustedtii	4245
Nitzschia acicularis	193
Nitzschia holsatica	1930
Nitzschia paleacea	386
Nitzschia subacicularis	386
Nitzschia tryblionella var. *victoriae* ??	193
Nitzschia sp.	1737

Lake Houston CC (295902095074201)

Phytoplankton Analyses October 1987 to September 1988

Date	9-6-88
Time	1125
TOTAL CELLS/mL	344,430
NUMBER OF SPECIES	58
DEPTH COLLECTED (ft.)	0.62

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Actinastrum hantzschii var. *fluviatile*	913
Ankistrodesmus convolutus	183
Ankistrodesmus falcatus	1278
Chlamydomonas globosa?	183
Chlamydomonas sp. 1	2009
Chlamydomonas sp. 2	183
Cosmarium sp.	1096
Crucigenia tetrapedia	2922
Dictyosphaerium sp.?	3652
Euastrum sp.	365
Kirchneriella sp.	3835
Scenedesmus acuminatus	730
Scenedesmus arcuatus var. *platydisca*	1461
Scenedesmus quadricauda	4383
Scenedesmus serratus	730
Scenedesmus sp.	2191
Selenastrum minutum	183
Tetraedron sp.	183
Tetrastrum staurogeniformae	730
CHRYSOPHYTA (Golden-brown algae)	
small chrysophyte flagellates	548
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	3105
Anabaenopsis circinalis	2009
Chroococcus sp.	365
Oscillatoria limnetica	548
Synechococcus sp.	259327
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	913
Trachelomonas sp.	183
PYRRHOPHYTA (Dinoflagellates)	
Peridinium quadridens	183
unidentified dinoflagellates	365
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	183
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	8583
Cyclotella kutzingiana	1826
Cyclotella meneghiniana	4018
Cyclotella pseudostelligera	1278
Melosira distans var. *alpigena*	913
Melosira granulata	730
Melosira granulata var. *angustissima*	913
Melosira italica	3287
Skeletonema potamos	8583
Stephanodiscus hantzschii	2922
Stephanodiscus subtilis	365
Stephanodiscus vestibulis	8583
Order Pennales	
Achnanthes linearis	183
Diploneis sp.	183
Navicula hustedtii	913
Navicula minima	183
Navicula mucicoloides	365
Nitzschia acicularis	1096
Nitzschia filiformis	183
Nitzschia fonticola	365
Nitzschia holsatica	1644
Nitzschia palea	365
Nitzschia paleacea	183
Nitzschia subacicularis	365
Nitzschia tryblionella var. *victoriae*	183
Nitzschia sp.	913
Synedra delicatissima	183
Synedra radians	183

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston EC (300158095074601)

Phytoplankton Analyses October 1987 to September 1988

Date	9-6-88
Time	1237
TOTAL CELLS/mL	173,225
NUMBER OF SPECIES	55
DEPTH COLLECTED (ft.)	0.48

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	435
Ankistrodesmus falcatus var. *mirabilis*	181
Chlamydomonas globosa?	109
Chlamydomonas sp. 1	652
Chlamydomonas sp. 2	109
Cosmarium sp. 1	435
Cosmarium sp. 2	72
Kirchneriella sp.	1087
Pandorina morum	579
Pediastrum biradiatum	181
Scenedesmus abundans	145
Scenedesmus acuminatus	145
Scenedesmus quadricauda	290
Scenedesmus sp.	398
Tetraedron muticum	36
Tetraedron trigonum var. *gracile*	36
Tetraedron sp.	72
CHRYSOPHYTA (Golden-brown algae)	
small chrysophyte flagellates	72
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	724
Anabaenopsis circinalis	326
Chroococcus sp.	36
Oscillatoria limnetica	1666
Synechococcus sp.	146899
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	145
Trachelomonas volvocina	36
PYRRHOPHYTA (Dinoflagellates)	
unidentified dinoflagellates	36
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	4853
Cyclotella kutzingiana	543
Cyclotella meneghiniana	2028
Cyclotella pseudostelligera	290
Melosira distans var. *alpigena*	471
Melosira granulata	254
Melosira granulata var. *angustissima*	326
Melosira italica	1014
Skeletonema potamos	2064
Stephanodiscus hantzschii	1014
Stephanodiscus subtilis	36
Stephanodiscus vestibulis	3151
Order Pennales	
Achnanthes linearis	36
Diploneis sp.	36
Navicula gregaria	72
Navicula hustedtii	398
Navicula minima	217
Navicula mucicoloides	36
Navicula pupula	36
Navicula tenera	36
Nitzschia acicularis	290
Nitzschia fonticola	36
Nitzschia gracilis	36
Nitzschia holsatica	471
Nitzschia palea	72
Nitzschia paleacea	36
Nitzschia subacicularis	145
Nitzschia sp.	254
Synedra delicatissima	72

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

Lake Houston FC (300209095091201)

Phytoplankton Analyses October 1987 to September 1988

Date	9-6-88
Time	1315
TOTAL CELLS/mL	558,216
NUMBER OF SPECIES	62
DEPTH COLLECTED (ft.)	0.49

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus sp.	3874
Chlamydomonas globosa?	1409
Chlamydomonas sp.	9861
Chlorogonium elongatum	704
Coelastrum sphaericum	15144
Cosmarium sp.	3522
Gonium sociale	5635
Kirchneriella sp.	9861
Lagerheimia quadriseta	352
Oocystis sp.	2113
Scenedesmus abundans	6339
Scenedesmus acuminatus	5635
Scenedesmus armatus	3522
Scenedesmus quadricauda	27471
Scenedesmus serratus	4226
Scenedesmus sp.	5635
Tetraedron caudatum	1057
Tetraedron trigonum var. *gracile*	704
unidentified green algal flagellates	704
CHRYSOPHYTA (Golden-brown algae)	
small chrysophyte flagellates	1057
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	4226
Anabaenopsis circinalis	22892
Aphanocapsa elachista	18314
Chroococcus dispersus	20075
Chroococcus sp.	6692
Gleocapsa sp.	2818
Merismopedia tenuissima	70085
Merismopedia punctata	2818
Oscillatoria limnetica	234910
Raphidiopsis curvata	704
Spirulina laxa	704
Synechococcus sp.	15144
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	352
Trachelomonas volvocina	352
Trachelomonas sp.	352
PYRRHOPHYTA (Dinoflagellates)	
Glenodinium pulvisculus	1057
unidentified dinoflagellates	352
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	352
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella atomus	2113
Cyclotella kutzingiana	2818
Cyclotella meneghiniana	1409
Cyclotella pseudostelligera	7748
Melosira granulata var. *angustissima*	2465
Stephanodiscus hantzschii	1409
Stephanodiscus subtilis	352
Stephanodiscus vestibulis	8805
Order Pennales	
Achnanthes linearis	3170
Amphora perpusilla	704
Diploneis sp.	352
Navicula capitata var. *luneburgensis*	704
Navicula gregaria	352
Navicula mucicoloides	3874
Navicula pygmaea	352
Navicula tenera	704
Nitzschia angustata	352
Nitzschia frustulum	1409
Nitzschia holsatica	1761
Nitzschia gracilis	352
Nitzschia palea	704
Nitzschia sp.	2465
Synedra delicatissima	1409
Synedra rumpens var. *fragilarioides*	1409

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. 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, 5.17 ft Nov. 27 at 0900 hours; minimum, -1.94 ft Apr. 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.50	.29	3.20	1.60	2.14	.57	2.60	.46	2.73	.99	2.63	.91
2	2.62	.54	3.18	1.55	2.32	.57	2.44	.46	2.79	.79	3.05	1.59
3	2.38	.44	3.30	1.48	2.42	.38	2.84	1.00	2.12	.44	3.10	1.04
4	2.57	.27	2.85	.55	2.30	.28	2.50	.48	2.12	-.27	1.97	.48
5	2.63	.77	2.97	.74	2.92	.91	2.61	.63	1.74	.65	2.63	1.13
6	1.97	.54	3.15	1.37	3.60	2.00	2.87	1.63	2.27	.90	2.13	1.35
7	---	---	3.43	1.63	3.58	.80	3.20	.13	2.58	1.35	2.67	1.05
8	---	---	3.35	1.27	2.64	1.13	1.79	-.02	2.28	.95	2.79	1.24
9	---	---	3.22	-.15	2.73	1.12	1.89	.57	2.29	1.05	1.94	.23
10	---	---	1.25	-1.53	2.78	1.35	1.73	.88	2.68	.91	2.43	.08
11	---	---	1.65	-.45	2.67	1.16	2.39	.98	2.64	-.70	3.36	1.07
12	---	---	2.27	.77	2.40	1.01	2.43	1.37	1.64	-.86	3.05	1.08
13	---	---	2.33	.94	2.78	1.95	1.98	.20	1.89	-.16	1.98	-.20
14	---	1.24	2.70	1.10	3.42	1.10	2.62	.98	2.34	.58	1.35	-.88
15	3.27	1.28	3.40	1.70	1.10	-.91	2.50	.58	2.15	-.46	2.14	.08
16	---	---	3.95	1.76	2.06	.09	3.12	1.18	2.46	.33	2.80	1.19
17	---	---	2.62	1.08	2.69	.68	3.07	.70	3.13	1.34	3.56	2.34
18	---	---	3.15	1.51	3.07	1.30	2.87	.67	3.71	1.64	2.81	-.22
19	---	---	2.86	.50	3.57	1.83	3.27	1.10	2.23	.40	1.91	-.22
20	---	1.08	2.48	.25	3.33	.97	2.98	-.07	2.41	.51	2.37	1.18
21	3.18	.88	2.92	.77	3.15	1.72	1.80	-.10	2.41	.47	2.32	1.12
22	3.50	1.93	3.30	1.22	3.70	2.10	1.77	.09	2.76	.43	2.43	1.11
23	3.58	2.07	3.30	.98	3.66	2.47	1.87	.66	2.64	.70	2.58	.77
24	3.54	1.93	2.93	1.07	3.87	2.33	1.87	.35	2.49	.33	2.87	.80
25	3.55	1.10	3.87	1.25	3.39	2.18	.47	-1.22	2.45	.68	2.65	.93
26	3.35	1.40	4.09	2.13	3.18	1.23	1.36	-.65	2.41	.66	2.52	.50
27	2.92	.68	5.17	4.09	1.49	.85	1.55	-.60	2.18	.44	2.30	.45
28	2.70	1.30	4.37	3.32	1.88	1.00	1.91	.06	2.11	.13	3.02	1.52
29	3.15	1.12	3.57	2.70	1.90	.10	2.32	.52	1.87	.43	3.10	1.37
30	3.05	1.25	2.81	1.70	2.87	1.25	2.68	1.12	---	---	2.57	.74
31	3.10	1.20	---	---	2.82	1.42	2.63	.92	---	---	3.38	1.85
MONTH	---	---	5.17	-1.53	3.87	-.91	3.27	-1.22	3.71	-.86	3.56	-.88

08072050 SAN JACINTO RIVER NEAR SHELDON, TX--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.66	2.50	3.50	1.53	3.21	1.04	2.59	.39	2.58	1.14	2.65	1.38
2	2.98	1.58	3.80	1.70	2.57	.39	2.42	.24	2.63	1.27	3.21	1.30
3	2.78	1.30	3.19	1.36	2.79	.47	2.42	.38	2.32	.83	3.31	1.32
4	3.28	2.10	2.24	.52	3.17	.30	2.25	.52	2.43	.64	2.77	.63
5	2.94	1.09	2.43	-.17	2.80	.66	2.42	.77	2.20	.50	2.40	.63
6	2.03	.45	2.47	.40	2.58	.86	2.93	1.43	2.17	.20	2.78	1.10
7	2.29	.08	3.17	.72	2.21	.50	3.07	1.52	1.75	-.07	2.78	1.08
8	2.20	.30	3.23	1.27	2.43	.90	3.33	1.46	1.35	-.43	2.79	1.40
9	2.20	.32	2.67	.73	2.31	.70	3.42	1.37	1.94	-.62	3.18	1.36
10	1.83	-.40	2.29	.50	2.34	.53	2.99	.39	2.44	.19	2.79	1.76
11	-.04	-1.80	2.08	.57	2.38	.15	2.96	.58	2.93	.78	2.60	1.39
12	.17	-1.94	2.16	.84	2.67	.61	3.11	1.04	2.35	.80	2.81	1.52
13	1.56	-.52	2.61	.75	3.17	.85	2.75	.92	2.36	.70	2.80	1.57
14	1.83	.60	2.10	.08	3.42	1.25	2.84	.85	2.55	1.12	2.80	1.20
15	2.18	.56	2.18	-.18	3.25	1.09	2.69	.75	2.47	1.27	3.21	2.42
16	2.46	.40	2.27	.23	2.67	.68	2.19	.63	1.82	.73	4.35	3.01
17	3.32	.96	2.17	-.12	2.41	.56	1.97	.42	2.10	.90	4.75	3.18
18	2.95	1.01	1.97	-.23	2.21	.47	2.04	.49	1.99	.13	4.64	1.97
19	1.97	-.34	2.15	-.18	2.39	.55	2.82	.83	1.94	.58	3.51	1.23
20	2.88	.20	2.34	.15	2.48	.91	2.08	.92	1.90	.27	2.92	.86
21	3.13	.78	2.08	-.21	2.64	1.17	1.66	.30	1.93	.12	2.78	.84
22	2.81	1.10	1.47	-.01	2.71	1.42	1.66	.25	2.03	.11	2.68	.65
23	2.62	.82	1.47	-.18	2.63	1.32	1.75	.08	2.07	.15	2.57	.83
24	2.63	.35	1.20	.18	2.79	1.32	1.82	.08	1.94	.08	2.42	.88
25	2.22	.37	1.49	.13	3.68	1.38	1.80	.02	2.28	-.20	2.37	.43
26	2.47	.58	2.57	.72	2.64	.63	1.94	-.15	2.43	.20	2.53	.49
27	2.24	.58	2.08	.88	2.28	.48	2.24	-.12	2.68	.45	2.50	.43
28	2.93	1.47	2.88	.76	2.21	.13	2.18	-.04	2.84	.90	2.44	.63
29	4.82	2.30	3.46	1.57	2.68	.05	2.54	.39	2.57	1.03	2.60	.61
30	4.73	2.49	3.77	1.74	2.74	.23	2.43	.42	2.44	.57	2.90	.83
31	---	---	3.77	1.83	---	---	2.65	.55	2.53	.93	---	---
MONTH	4.82	-1.94	3.80	-.23	3.68	.05	3.42	-.15	2.93	-.62	4.75	.43

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 to Sept. 30, 1985; all records adjusted to original site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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.--11 years, 48.0 ft³/s (34,780 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)
Apr. 29	1800	*533	*29.66				

Minimum daily discharge, 0.68 ft ³/s Mar. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	2.5	54	18	2.0	.82	45	70	2.4	2.9	32	4.0
2	5.2	6.1	28	14	1.6	7.8	23	21	2.9	2.6	73	3.0
3	3.6	6.5	5.9	10	2.0	6.6	11	8.5	26	2.4	69	4.2
4	3.9	4.2	4.9	7.2	9.3	1.9	5.7	3.6	27	2.5	43	5.0
5	2.9	2.9	3.2	5.9	5.9	1.1	5.2	2.9	14	13	48	4.9
6	2.4	3.5	5.3	9.3	9.5	.95	2.8	2.2	7.4	32	31	4.0
7	2.2	7.4	5.0	99	4.1	.97	2.1	3.3	4.9	30	20	3.0
8	2.1	13	3.8	48	2.9	1.0	1.7	3.0	3.3	18	11	2.7
9	2.3	17	4.4	25	2.3	1.9	1.8	2.7	2.2	11	6.8	2.3
10	1.8	9.2	3.7	13	2.7	1.3	1.5	3.3	2.1	7.0	8.5	3.3
11	1.4	6.3	2.5	7.7	2.7	1.1	1.5	2.7	1.8	4.9	21	3.2
12	1.3	e5.0	e2.2	10	2.0	.93	1.8	3.4	1.5	4.3	21	3.6
13	.95	e4.0	e2.0	10	1.4	.78	6.3	2.3	1.9	3.9	17	3.6
14	.90	e3.0	1.9	5.8	1.7	.71	2.5	3.6	2.2	3.6	14	3.2
15	1.3	13	1.7	4.0	2.1	.68	3.0	4.1	5.7	3.4	9.5	2.9
16	1.8	157	1.9	4.4	1.6	.74	2.5	2.8	22	6.8	5.8	4.7
17	1.1	56	1.9	5.0	1.4	90	3.4	2.7	34	6.8	9.3	4.0
18	.82	19	2.1	15	4.3	247	2.5	2.9	42	4.5	10	4.2
19	1.2	8.9	33	20	3.9	50	1.7	2.8	41	4.1	18	3.6
20	1.1	6.2	63	12	2.2	18	1.4	2.7	55	9.4	16	2.9
21	1.1	3.0	298	7.1	1.6	8.4	1.2	12	57	38	16	2.2
22	.71	2.1	181	4.5	1.4	5.9	1.5	6.2	31	33	12	2.0
23	.84	2.0	81	2.5	1.4	3.6	1.2	3.6	40	24	8.6	2.1
24	1.7	1.3	47	2.1	e1.3	3.1	1.4	3.6	e42	18	5.4	1.8
25	3.5	126	35	2.6	e1.2	2.8	1.7	3.7	e20	16	5.9	2.1
26	1.9	133	36	2.8	e1.1	2.3	4.4	2.5	e17	11	5.9	2.8
27	3.4	98	85	2.4	e1.0	2.0	7.1	2.0	13	8.7	5.0	4.3
28	2.1	99	84	2.3	.94	1.8	9.0	1.5	8.0	15	3.9	4.5
29	1.4	102	45	2.7	.94	2.2	150	2.0	5.2	25	4.1	5.7
30	.85	74	26	2.2	---	124	228	2.4	3.6	27	5.5	80
31	.79	---	20	2.3	---	132	---	1.9	---	21	3.6	---
TOTAL	64.16	991.1	1168.4	376.8	76.48	722.38	531.9	191.9	536.1	409.8	559.8	179.8
MEAN	2.07	33.0	37.7	12.2	2.64	23.3	17.7	6.19	17.9	13.2	18.1	5.99
MAX	7.6	157	298	99	9.5	247	228	70	57	38	73	80
MIN	.71	1.3	1.7	2.1	.94	.68	1.2	1.5	1.5	2.4	3.6	1.8
AC-FT	127	1970	2320	747	152	1430	1060	381	1060	813	1110	357

CAL YR 1987 TOTAL 14749.65 MEAN 40.4 MAX 1210 MIN .71 AC-FT 29260
WTR YR 1988 TOTAL 5808.62 MEAN 15.9 MAX 298 MIN .68 AC-FT 11520

e Estimated.

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, 4,330 acre-ft Apr. 4 at 0800 TO 1100 (elevation, 86.20 ft); minimum, 0.11 acre-ft May 25-29, 31, June 2 (elevation, 73.65 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		
76.9	4	80.4	49	84.0	1,370		
77.6	8	81.0	100	85.0	2,430		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.13	.22	.30	.13	.13	3230	2200	.12	.15	.33	.13
2	.18	.12	.19	.23	.13	.31	3870	2380	.12	.13	3.4	.14
3	.14	.12	.17	.20	.12	.24	4220	1860	49	.13	1.9	.14
4	.13	.14	.16	.18	.12	.17	3940	983	277	.19	.83	.13
5	.14	.14	.13	.16	.16	.13	3210	38	412	.23	.38	.13
6	.13	.14	.14	.22	.16	.13	2470	.16	155	.19	.34	.14
7	.12	.14	.23	2.1	.21	.13	1690	.13	e.35	.19	.29	.13
8	.12	.15	.17	.78	.16	.13	938	.13	.20	.20	.24	.13
9	.12	.23	.15	.35	.14	.13	213	.13	.16	.19	.19	.12
10	.12	.18	.14	.26	.14	.12	.18	.12	.14	.17	.17	.12
11	.13	.15	.13	.21	.13	.12	.18	.12	.13	.15	.21	.12
12	.13	.13	.13	.17	.13	.12	.16	.12	.13	.14	.23	.15
13	.13	.12	.13	.16	.13	.12	.16	.12	.13	.14	.22	.14
14	.13	.12	.13	.16	.13	.12	.17	.12	.13	.14	.19	.13
15	.13	.12	.13	.15	.13	.12	.18	.12	.18	.14	.17	.49
16	.13	.79	.12	.16	.13	.12	.18	.12	.20	.14	.15	5.3
17	.13	.97	.12	.18	.13	6.1	.16	.12	.19	.14	.13	9.8
18	.13	.37	.12	.16	.16	260	.13	.12	.18	.13	.13	e.33
19	.13	.25	1.1	.17	.13	604	.12	.12	.17	.13	.17	e.14
20	.13	.19	5.9	.19	.13	579	.12	.12	.17	.18	.17	.13
21	.13	.16	483	.17	.13	40	.12	.31	.17	.15	.17	.13
22	.12	.13	1190	.15	.13	.23	.12	.24	.14	.19	.20	.13
23	.13	.13	1360	.14	.12	.18	.12	.17	.14	.22	.19	.13
24	.13	.13	1240	.13	.12	.16	.12	.13	.14	.21	.17	.13
25	.13	2.5	863	.13	.12	.14	.12	.12	.23	.18	.13	.13
26	.13	6.1	394	.13	.12	.17	.12	.11	.19	.17	.13	.13
27	.13	4.9	136	.13	.12	6.5	.12	.11	.24	.15	.13	.13
28	.13	1.9	41	.13	.19	.44	.12	.11	.23	.15	.13	.13
29	.13	.38	5.5	.13	.16	.38	41	.11	.20	.15	.13	.13
30	.13	.27	.55	.13	---	100	1090	.12	.17	.16	.23	.30
31	.13	---	.29	.13	---	1800	---	.12	---	.18	.16	---
MAX	.25	6.1	1360	2.1	.21	1800	4220	2380	412	.23	3.4	9.8
MIN	.12	.12	.12	.13	.12	.12	.12	.11	.12	.13	.13	.12

CAL YR 1987 MAX 22660 MIN .09
WTR YR 1988 MAX 4220 MIN .11

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 poor. Channel was rectified in 1981 and 1987 water years. Considerable diversions and return of irrigation water from area above station. Several observation of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--11 years, 19.9 ft³/s (14,420 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)
Aug. 11	1700	*358	*6.36				

Minimum, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	e.00	e7.2	9.9	e.93	e.11	21	13	.33	e.07	.02	.17
2	e3.0	e.00	4.4	4.5	e.66	11	10	4.0	.24	e.05	.08	.15
3	e1.5	e.20	2.6	3.2	e.33	6.1	4.2	1.4	57	e.04	4.4	.21
4	e1.0	e.10	e.48	2.2	e.16	e.68	1.7	.31	8.0	31	18	.29
5	e.60	e.06	e.04	1.5	e.26	e.15	.54	e.10	5.8	14	26	.17
6	e.40	e1.0	15	4.5	1.5	e.08	e.18	e.03	2.1	1.8	35	.07
7	e.30	e.80	35	26	e.72	e.03	e.07	e.01	.83	.19	18	.03
8	e.20	e.70	19	12	e.84	e.44	e.03	e.01	.30	.22	8.6	.01
9	e.10	e2.0	9.8	6.5	e.82	e.17	e.02	.00	e.14	.71	5.3	.03
10	e.06	e.90	6.0	3.8	e.60	e.08	e.01	e.00	e.08	.78	2.6	.09
11	e.04	e.50	4.7	2.7	e.73	e.04	e.01	e.00	e.04	.40	88	.05
12	e.02	e.40	3.3	1.8	e.43	e.02	e.01	e.00	e.02	.26	37	.09
13	e.02	e.30	2.3	1.2	e.24	e.02	.01	e.00	e.02	.11	3.5	.56
14	e.02	e.20	1.4	e.81	e.56	e.02	e.01	e.00	e.01	.03	.81	.26
15	e.10	e5.0	e.63	e.65	e.57	e.01	e.01	e.00	e.01	.01	3.7	.14
16	e.06	e30	e.25	e1.0	e.26	e.01	e.01	e.00	e.01	.00	5.7	.33
17	e.04	e15	e.07	2.3	e.12	33	e.05	e.00	e.01	.00	2.8	.37
18	e.02	e9.0	e.21	1.0	2.3	36	e.01	e.00	e.01	.00	1.1	.29
19	e.02	e6.0	16	1.7	1.9	13	e.01	e.00	e.01	.00	9.0	.11
20	e.02	e4.0	20	1.3	e.35	5.3	e.00	e.00	e.02	2.1	16	.03
21	e.01	e2.5	67	1.3	e.31	3.3	e.00	28	.11	36	11	.01
22	e.01	e2.0	36	e.73	e.84	1.0	e.00	4.6	.10	16	6.5	.01
23	e.02	e1.5	20	e.52	e.67	e.39	e.00	.60	.06	7.3	3.9	.00
24	e.50	e1.0	15	e.42	e.51	e.15	e.00	.44	.07	1.4	2.2	.00
25	e.30	34	14	e.33	e.38	e.05	e.00	.39	.14	.16	.94	.00
26	e.20	e13	14	3.1	e.29	e.03	e.00	e.19	.27	.05	.36	.01
27	e.10	e20	30	5.8	e.23	e.02	e.00	e.11	.15	.03	.21	.01
28	e.05	e15	18	4.4	e.18	e.01	.00	e.06	.12	2.0	.16	.01
29	e.00	e11	12	2.5	e.14	e.01	78	e.04	.10	.71	.12	.01
30	e.00	14	7.9	2.9	---	32	38	e.27	e.08	.12	.30	.01
31	e.00	---	7.7	2.0	---	46	---	.39	---	.03	.26	---
TOTAL	14.71	190.16	389.98	112.56	17.83	189.22	153.88	53.95	76.18	115.57	311.56	3.52
MEAN	.47	6.34	12.6	3.63	.61	6.10	5.13	1.74	2.54	3.73	10.1	.12
MAX	6.0	34	67	26	2.3	46	78	28	57	36	88	.56
MIN	.00	.00	.04	.33	.12	.01	.00	.00	.01	.00	.02	.00
AC-FT	29	377	774	223	35	375	305	107	151	229	618	7.0

CAL YR 1987 TOTAL 4359.30 MEAN 11.9 MAX 225 MIN .00 AC-FT 8650
WTR YR 1988 TOTAL 1629.12 MEAN 4.45 MAX 88 MIN .00 AC-FT 3230

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, 2,830 acre-ft Apr. 4 at 0800 hours (elevation, 87.62 ft); minimum, 0.34 acre-ft Dec. 18, 19 (elevation, 71.64).

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

71.1	0	76.4	30	80.0	202	86.0	1,680
73.6	2	77.2	54	81.5	351	88.0	3,190
75.1	8	78.0	85	83.0	598		
75.7	16	79.0	134	84.5	1,030		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	.46	.54	1.2	.39	.40	2550	1580	.48	.38	.48	.38
2	.41	.47	.45	.53	.40	23	2720	1190	.46	.37	2.5	.43
3	.40	.47	.43	.44	.38	1.0	2810	583	513	.37	1.3	.40
4	.40	.47	.39	.40	.37	.43	2300	189	1100	.96	.97	.43
5	.41	.47	.36	.38	.44	.38	1550	.48	1180	1.4	.71	.40
6	.41	.51	.61	.65	.86	.37	922	.41	781	1.1	.74	.38
7	.42	.47	113	129	.44	.36	435	.38	314	.48	.71	.37
8	.42	.47	21	34	.41	.36	87	.38	1.7	.39	.55	.37
9	.39	1.2	.89	.96	.41	.36	e.47	.39	.74	.39	.67	.37
10	.42	.50	.58	1.4	.40	.38	e.43	.39	.64	.40	.74	.38
11	.42	.43	.48	.54	.40	.35	e.50	.41	.55	.40	90	.38
12	.44	.41	.43	.47	.39	.35	e.47	.41	.53	.41	247	.39
13	.44	.41	.38	.46	.40	.35	e.43	.41	.52	.38	1.8	.47
14	.43	.41	.38	.44	.41	.35	e.41	.41	.52	.38	.72	.39
15	.43	.41	.38	.40	.41	.35	e.38	.41	.51	.38	.60	7.7
16	.44	143	.35	.44	.41	.35	e.50	.41	.51	.36	.56	37
17	.44	36	.35	.68	.39	91	e.55	.38	.50	.36	.49	78
18	.46	.93	.34	.47	1.3	718	e.48	.38	.50	.36	.71	.55
19	.47	.50	69	.43	.63	537	e.44	.38	.50	.36	1.4	.38
20	.46	.41	170	.41	.42	191	e.41	.39	1.2	.39	1.2	.37
21	.47	.37	1070	.39	.41	.48	e.39	22	1.4	1.5	.55	.37
22	.47	.36	1640	.38	.41	.41	e.38	1.0	.41	.80	.48	.35
23	.48	.36	1380	.40	.41	.41	e.38	.50	.44	.61	.44	.36
24	.54	.36	1070	.38	.41	.38	e.38	.45	.41	.48	.44	.35
25	.47	197	472	.38	.40	.37	e.44	.43	.48	.46	.41	.36
26	.46	327	198	.36	.41	.39	e.41	.41	.44	.39	.43	.38
27	.45	226	285	.48	.41	.39	e.38	.39	.42	.41	.39	.36
28	.44	51	261	.41	.40	.43	.36	.38	.41	.62	.38	.36
29	.44	1.1	34	.39	.41	.38	255	.40	.39	.56	.43	.38
30	.44	.72	.74	.38	---	349	1390	.47	.38	.46	.53	.64
31	.45	---	.57	.41	---	2000	---	.48	---	.44	.40	---
MAX	.54	327	1640	129	1.3	2000	2810	1580	1180	1.5	247	78
MIN	.39	.36	.34	.36	.37	.35	.36	.38	.38	.36	.38	.35

CAL YR 1987 MAX 20330 MIN .34
WTR YR 1988 MAX 2810 MIN .34

e Estimated.

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.--Records good except those for estimated daily discharges, which are poor. Estimated daily discharges include backwater affected days. Floodflow are 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. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 213 ft³/s (154,300 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 (estimated), 1,370 ft³/s Apr. 29 at 1700 hours (gage height, 60.38 ft, influenced by backwater); minimum daily, 20 ft³/s Mar. 16, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	29	87	121	30	26	49	47	29	43	66	35
2	36	30	63	69	28	e80	36	305	28	39	183	37
3	29	31	51	49	28	171	29	620	e350	37	241	38
4	42	29	49	45	30	42	313	629	39	52	189	35
5	31	26	46	41	35	28	642	551	32	91	132	34
6	30	25	65	e80	37	25	611	144	297	65	113	34
7	29	24	231	e365	30	24	581	36	442	53	97	33
8	28	39	224	379	29	23	537	34	225	53	90	31
9	28	87	108	195	29	22	362	33	52	52	87	31
10	26	56	67	71	25	22	192	33	43	48	e110	30
11	26	37	51	52	24	24	30	32	39	47	228	30
12	27	31	43	43	23	26	29	32	37	45	291	33
13	26	29	42	41	23	27	27	32	36	43	232	43
14	26	26	42	43	23	21	28	32	37	39	68	39
15	28	36	53	42	23	21	27	31	41	38	52	35
16	28	e310	46	44	23	20	30	32	41	39	46	20
17	30	388	44	54	22	e360	37	32	41	37	41	24
18	34	236	42	45	32	e650	36	31	43	38	46	89
19	35	109	e320	39	44	551	31	30	42	38	65	32
20	30	62	436	38	29	509	29	32	45	43	64	28
21	23	52	e650	34	26	487	28	151	60	77	51	26
22	24	47	432	33	27	187	26	151	54	66	48	26
23	30	45	652	31	29	66	27	54	45	60	47	25
24	34	44	604	29	26	48	25	35	42	58	46	25
25	28	e310	606	28	25	38	24	29	52	53	36	25
26	25	379	581	27	25	143	25	27	49	49	32	27
27	25	e420	e680	29	24	131	25	26	47	49	32	26
28	29	355	593	29	39	82	25	24	52	58	31	25
29	28	202	454	27	35	32	e370	25	50	61	51	41
30	28	120	167	28	---	e360	126	28	46	57	58	96
31	29	---	75	27	---	224	---	29	---	55	45	---
TOTAL	916	3614	7604	2178	823	4470	4357	3327	2436	1583	2918	1053
MEAN	29.5	120	245	70.3	28.4	144	145	107	81.2	51.1	94.1	35.1
MAX	44	420	680	379	44	650	642	629	442	91	291	96
MIN	23	24	42	27	22	20	24	24	28	37	31	20
AC-FT	1820	7170	15080	4320	1630	8870	8640	6600	4830	3140	5790	2090

CAL YR 1987 TOTAL 92250 MEAN 253 MAX 1510 MIN 19 AC-FT 183000
WTR YR 1988 TOTAL 35279 MEAN 96.4 MAX 680 MIN 20 AC-FT 69980

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.--17 years, 306 ft³/s (221,700 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, 2,090 ft³/s Mar. 17 at 2030 hours (gage height, 53.25 ft); minimum daily, 39 ft³/s Apr. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	60	121	207	67	56	105	77	59	56	103	54
2	95	62	102	142	54	242	75	317	51	53	210	58
3	75	62	87	92	50	250	55	715	625	52	289	68
4	91	63	79	77	49	101	303	716	69	83	235	54
5	67	64	74	66	98	63	684	659	71	147	175	52
6	65	61	109	141	95	52	656	239	299	106	147	51
7	61	66	297	535	84	50	622	70	515	78	130	50
8	63	87	298	430	71	52	576	64	292	73	132	47
9	60	198	165	289	63	47	419	64	91	71	101	46
10	60	124	108	141	55	49	264	62	65	66	258	45
11	59	82	92	101	53	49	59	59	59	63	381	45
12	61	70	82	85	50	50	48	62	56	60	341	61
13	62	67	75	74	49	58	46	59	55	58	278	63
14	60	62	71	73	48	45	45	58	53	55	110	58
15	58	104	73	71	47	44	48	57	54	55	84	68
16	59	616	66	104	47	41	61	58	55	55	74	49
17	59	494	64	102	47	615	66	58	55	53	67	64
18	59	336	64	84	118	923	60	56	55	54	74	114
19	62	147	608	73	97	576	51	54	54	78	105	58
20	63	95	606	72	58	539	45	57	71	68	103	50
21	60	78	1190	69	48	510	44	261	144	124	83	47
22	59	70	497	64	47	226	43	306	107	118	78	46
23	70	68	757	60	47	76	42	111	77	100	82	47
24	83	66	704	57	45	63	40	75	62	88	75	45
25	71	496	661	52	43	67	39	63	134	77	61	43
26	66	469	626	51	44	186	40	57	70	79	57	47
27	64	565	819	54	47	239	40	55	65	101	52	45
28	66	452	630	55	54	168	40	51	69	92	51	44
29	62	278	534	51	65	96	637	60	64	92	137	52
30	61	158	272	50	---	707	320	62	58	84	93	230
31	61	---	154	50	---	482	---	63	---	77	69	---
TOTAL	2090	5620	10085	3572	1740	6722	5573	4725	3554	2416	4235	1801
MEAN	67.4	187	325	115	60.0	217	186	152	118	77.9	137	60.0
MAX	128	616	1190	535	118	923	684	716	625	147	381	230
MIN	58	60	64	50	43	41	39	51	51	52	51	43
AC-FT	4150	11150	20000	7090	3450	13330	11050	9370	7050	4790	8400	3570

CAL YR 1987 TOTAL 111432 MEAN 305 MAX 1590 MIN 39 AC-FT 221000
WTR YR 1988 TOTAL 52133 MEAN 142 MAX 1190 MIN 39 AC-FT 103400

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 12...	0945	65	708	7.70	17.0	27	18	9.4	96	1.1	130
FEB 10...	0935	53	757	8.00	16.5	49	35	9.2	94	0.9	140
MAY 23...	1040	118	522	7.80	22.5	65	130	7.9	91	2.2	100
AUG 01...	0935	76	612	8.00	27.5	27	33	7.0	89	0.3	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 WAT WH TOT FET 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 12...	0	39	7.5	94	4	8.6	171	25	94	0.30	20
FEB 10...	0	41	8.0	100	4	10	176	34	96	0.40	20
MAY 23...	0	31	5.8	64	3	6.7	120	25	64	0.40	13
AUG 01...	0	36	6.4	76	3	7.1	157	22	73	0.30	17

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 12...	391	19	2	4.29	0.110	4.40	0.430	--	--	3.50	8.6
FEB 10...	415	28	12	6.58	0.120	6.70	0.800	1.3	2.1	4.70	8.6
MAY 23...	282	203	47	2.17	0.130	2.30	0.390	0.71	1.1	2.20	9.9
AUG 01...	332	60	18	3.31	0.090	3.40	0.390	1.1	1.5	3.40	8.7

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 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 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. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1964-76, 1985-88), 272 ft³/s (197,100 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, 2,210 ft³/s Mar. 17 at 2230 hours (gage height, 46.48 ft); minimum daily, 46 ft³/s Mar. 16, Apr. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	78	145	260	84	65	163	117	64	62	108	68
2	107	78	120	206	70	285	117	270	62	57	197	71
3	88	78	105	155	66	211	88	676	779	53	284	98
4	99	77	95	140	64	100	275	672	103	110	233	64
5	83	77	90	127	112	66	733	647	107	167	180	61
6	80	77	114	171	105	58	707	260	252	124	155	59
7	77	79	300	630	95	60	676	83	533	90	140	57
8	78	92	305	477	83	66	635	74	300	82	150	52
9	78	221	195	369	74	59	483	72	114	81	119	52
10	77	150	130	216	66	55	315	70	69	75	318	51
11	77	101	113	174	64	e54	102	66	60	71	507	49
12	78	85	101	157	63	e55	76	71	55	67	399	71
13	78	83	94	147	60	e63	71	67	56	63	306	72
14	77	79	88	142	61	e50	66	65	56	60	140	66
15	77	146	90	134	60	e49	63	64	57	68	104	74
16	77	658	85	166	59	e46	e79	65	59	58	89	67
17	77	455	82	162	59	585	92	64	59	57	79	91
18	77	362	83	138	132	1170	82	61	57	57	79	113
19	77	172	620	124	103	631	70	58	55	170	125	76
20	78	116	662	113	71	593	e60	60	87	97	126	57
21	77	94	1290	100	61	565	e59	283	173	127	118	54
22	77	86	491	e95	59	307	e58	303	114	133	96	51
23	86	85	725	e89	59	123	e55	120	93	112	97	50
24	108	82	680	e83	57	101	e52	82	76	102	89	51
25	89	494	649	e78	55	101	e48	67	197	89	72	50
26	82	445	625	e74	54	164	e46	60	83	96	65	54
27	80	559	834	e72	58	336	e48	58	72	98	60	52
28	78	444	637	74	60	219	55	54	78	120	58	51
29	84	294	549	68	69	141	700	62	71	103	139	54
30	77	181	335	67	---	746	447	64	65	93	127	280
31	78	---	213	67	---	741	---	65	---	83	91	---
TOTAL	2591	6028	10645	5075	2083	7865	6521	4800	4006	2825	4850	2116
MEAN	83.6	201	343	164	71.8	254	217	155	134	91.1	156	70.5
MAX	135	658	1290	630	132	1170	733	676	779	170	507	280
MIN	77	77	82	67	54	46	46	54	55	53	58	49
AC-FT	5140	11960	21110	10070	4130	15600	12930	9520	7950	5600	9620	4200

CAL YR 1987 TOTAL 116651 MEAN 320 MAX 1890 MIN 50 AC-FT 231400
WTR YR 1988 TOTAL 59405 MEAN 162 MAX 1290 MIN 46 AC-FT 117800

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.--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, 3,550 ft³/s Mar. 17 at 2400 hours; maximum gage height, 15.91 ft Mar. 17 at 2200 hours; minimum discharge not determined (affected by tides).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e220	160	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	1240	---	---	---
4	---	---	---	---	---	---	---	---	260	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	e200	---	---	---	---	---	---	---	---
7	---	---	---	e1000	---	---	---	---	---	---	---	---
8	---	---	---	e470	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	330	---
11	---	---	---	---	---	---	---	---	---	---	1220	---
12	---	---	---	---	---	---	---	---	---	---	740	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	130	---	---	---	---	---	---	---	---	---	---
16	---	1020	---	---	---	840	---	---	---	---	---	---
17	---	660	---	---	---	2050	---	---	---	---	---	---
18	---	---	---	---	---	650	---	---	---	---	---	---
19	---	---	800	---	---	---	---	---	---	---	---	---
20	---	---	1430	---	---	---	---	---	---	---	---	---
21	---	---	2160	---	---	---	---	---	---	---	---	---
22	---	---	810	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	1170	---	---	---	---	---	---	---	---	---
28	---	---	780	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	840	---	---	---	---	150
30	---	---	---	---	---	980	1180	---	---	---	---	880
31	---	---	---	---	---	1550	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1987 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1988 TOTAL - MEAN - MAX - MIN - AC-FT -

e Estimated.

08074000 BUFFALO BAYOU AT HOUSTON, TX

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyusis: October 1968 to July 1981. Pesticide analyses: February 1969 to July 1981.

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 three-parameter water-quality monitor continuously records specific conductance, 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, >1,020 microsiemens Oct. 16, Mar. 14; minimum, 68 microsiemens July 27.
WATER TEMPERATURE: Maximum, 31.5°C on several days during July and August; minimum, 6.0°C Jan. 10.
DISSOLVED OXYGEN: Maximum, 12.0 mg/L Jan. 7; minimum, 1.1 Aug. 9.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	536	465	499	833	807	820	483	402	449	457	389	425
2	594	523	555	850	804	822	548	472	505	464	391	429
3	670	600	630	851	800	819	593	549	568	495	405	438
4	712	672	691	822	776	793	686	598	638	557	495	512
5	794	690	729	806	789	800	748	691	721	595	559	574
6	807	793	799	811	790	802	853	290	708	625	406	592
7	800	767	784	835	785	801	573	328	435	354	179	246
8	813	772	792	824	755	805	474	392	408	350	237	266
9	829	807	818	792	452	593	454	393	419	285	245	262
10	828	802	813	635	421	540	558	458	508	390	276	345
11	822	800	812	596	510	547	640	559	590	513	378	432
12	826	798	814	681	593	624	716	645	677	541	493	514
13	866	816	833	788	683	726	835	722	771	607	528	563
14	892	800	836	889	791	836	909	803	842	639	590	609
15	861	821	839	926	821	907	880	684	752	644	602	635
16	>1020	847	961	879	227	539	828	700	736	665	463	602
17	843	817	829	616	259	336	788	685	717	525	460	485
18	831	815	822	322	283	294	779	691	742	634	484	562
19	821	808	815	462	328	408	770	234	587	666	623	647
20	818	792	804	534	460	490	280	221	255	692	666	677
21	810	796	804	617	540	574	225	106	146	698	675	687
22	811	783	798	736	623	679	305	142	234	714	689	704
23	805	750	777	774	672	718	494	197	301	752	707	724
24	771	661	751	993	700	828	379	218	285	750	730	740
25	702	545	630	896	199	492	236	207	222	764	746	756
26	756	653	713	340	223	266	239	221	230	805	764	788
27	771	717	748	275	200	236	250	168	212	809	782	791
28	800	745	766	280	223	250	248	203	223	816	789	804
29	817	767	791	294	250	281	225	210	218	815	779	796
30	895	796	822	455	294	369	271	229	254	801	757	781
31	885	821	856	---	---	---	421	276	364	822	781	805
MONTH	1020	465	772	993	199	600	909	106	475	822	179	587

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	830	725	799	826	790	807	381	237	318	457	319	385
2	791	699	747	811	145	564	523	386	446	539	432	463
3	777	624	715	581	240	347	643	523	567	550	210	259
4	807	773	791	445	325	376	660	597	627	237	213	225
5	814	577	748	594	455	510	652	177	248	257	222	233
6	663	427	530	664	589	626	209	186	197	321	258	283
7	712	454	609	727	665	696	222	198	208	512	327	413
8	705	636	662	711	683	700	235	207	218	697	524	643
9	698	641	669	678	485	573	241	226	234	763	684	739
10	701	673	683	781	554	700	297	249	285	815	756	779
11	760	701	725	820	766	793	411	283	355	818	788	802
12	784	751	766	845	801	828	615	412	494	837	800	818
13	799	775	788	855	839	846	687	622	661	832	806	816
14	803	787	795	>1020	759	900	716	688	703	840	810	825
15	819	793	800	812	748	780	737	711	722	841	822	833
16	834	793	810	835	813	823	740	680	721	850	825	840
17	834	811	819	847	124	669	662	583	635	840	821	829
18	810	411	677	228	146	182	773	625	679	848	820	832
19	640	379	462	208	199	203	804	771	790	902	828	847
20	709	641	678	219	201	211	807	774	786	895	834	845
21	661	621	640	245	216	232	822	808	814	844	160	430
22	738	668	700	288	238	260	859	816	827	463	249	334
23	754	717	734	525	288	397	842	828	836	482	338	420
24	790	741	763	622	534	576	855	836	845	671	487	554
25	807	788	796	698	626	657	855	841	848	741	647	677
26	829	806	816	747	696	720	858	826	841	748	698	720
27	843	819	833	718	218	426	880	827	849	803	750	784
28	840	792	832	457	339	368	888	853	869	842	756	801
29	840	786	824	530	346	421	875	164	610	865	840	850
30	---	---	---	543	138	410	312	167	230	861	808	831
31	---	---	---	233	131	180	---	---	---	832	548	741
MONTH	843	379	731	1020	124	541	888	164	582	902	160	640

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	771	546	686	807	772	792	653	580	635	673	551	594
2	793	761	778	814	794	805	639	430	576	704	676	691
3	670	148	257	828	800	811	442	306	352	654	540	586
4	322	230	278	819	244	714	380	322	357	663	550	598
5	443	275	366	673	123	380	437	375	413	720	666	690
6	600	402	445	464	328	421	510	425	479	740	716	729
7	604	243	289	558	442	500	547	494	526	765	732	746
8	322	262	295	638	559	579	580	520	552	788	758	767
9	417	326	371	678	645	663	518	363	447	813	771	788
10	556	420	470	700	674	684	638	77	505	807	791	800
11	652	562	606	715	677	693	260	81	184	820	800	811
12	723	658	686	727	711	722	336	165	234	821	793	804
13	776	723	748	751	727	740	333	278	306	829	683	758
14	810	477	738	771	744	756	364	308	339	790	656	741
15	793	391	584	792	761	777	580	332	470	784	677	753
16	828	780	805	790	628	750	637	572	593	738	495	632
17	840	792	807	806	714	772	687	630	653	503	294	430
18	838	826	830	843	798	807	702	680	693	574	375	437
19	834	795	813	823	204	668	712	602	688	690	553	611
20	795	188	722	537	139	341	612	539	582	699	619	661
21	663	217	472	582	248	506	605	403	512	770	694	725
22	653	339	415	655	413	528	608	211	484	776	753	759
23	629	361	497	581	484	526	652	408	559	811	760	777
24	669	360	549	622	578	599	656	531	629	810	718	775
25	667	241	431	645	594	619	738	565	665	804	780	795
26	579	340	428	645	482	600	774	660	715	818	787	799
27	717	591	659	631	68	505	781	718	739	802	785	793
28	738	710	725	607	218	383	776	756	767	797	775	786
29	752	726	737	633	418	515	785	626	764	793	425	737
30	777	757	769	640	497	592	644	262	385	302	176	254
31	---	---	---	669	601	636	672	488	580	---	---	---
MONTH	840	148	575	843	68	625	785	77	528	829	176	694

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	6.1	5.5	5.8	8.0	6.0	7.3	10.3	9.5	10.0
2	---	---	---	5.9	5.2	5.6	7.3	6.1	6.9	10.5	10.0	10.3
3	---	---	---	6.2	5.2	5.8	6.7	2.4	5.5	10.7	9.7	10.5
4	---	---	---	6.2	5.7	5.9	4.8	1.6	3.6	10.9	9.9	10.5
5	---	---	---	6.3	5.7	6.0	5.7	3.0	4.7	10.7	8.9	10.4
6	---	---	---	6.5	5.7	6.0	8.1	4.7	5.5	10.4	8.4	9.3
7	---	---	---	6.4	5.8	6.1	6.7	5.3	6.0	12.0	10.5	11.4
8	---	---	---	6.3	5.7	6.0	7.6	6.7	7.3	11.7	10.9	11.3
9	---	---	---	6.3	4.4	5.4	7.7	7.5	7.6	11.5	10.5	11.1
10	5.9	5.4	5.7	7.2	6.0	6.7	7.7	7.3	7.5	10.7	9.5	10.1
11	6.3	5.5	5.8	7.0	5.8	6.5	7.4	6.7	7.1	10.3	8.3	9.2
12	6.4	5.7	6.0	7.2	4.8	6.3	7.0	6.7	6.9	9.8	7.9	8.8
13	6.3	5.4	5.9	---	---	---	6.8	6.2	6.6	8.6	7.6	8.2
14	6.8	5.6	6.2	---	---	---	6.5	6.0	6.3	8.3	7.8	8.0
15	6.2	5.4	5.8	---	---	---	7.5	6.3	7.1	8.4	7.9	8.2
16	6.1	5.3	5.6	---	---	---	8.4	7.5	8.1	8.1	7.1	7.8
17	6.7	5.4	6.0	---	---	---	9.0	8.2	8.6	7.8	6.4	6.8
18	6.6	5.4	6.2	7.3	7.1	7.2	8.8	8.3	8.5	7.3	6.5	6.9
19	6.5	5.8	6.1	7.2	5.8	7.1	---	---	---	6.8	6.3	6.6
20	6.4	5.6	5.9	7.4	6.0	6.9	---	---	---	7.1	6.4	6.8
21	6.6	5.9	6.2	7.1	5.3	6.5	---	---	---	7.9	7.1	7.5
22	7.1	6.2	6.6	6.4	4.9	5.8	---	---	---	8.2	7.9	8.0
23	6.6	5.0	5.9	6.5	5.0	5.9	---	---	---	8.5	8.1	8.3
24	5.6	3.7	4.8	5.7	4.8	5.4	9.8	9.2	9.4	8.3	8.1	8.2
25	4.8	4.3	4.6	7.0	4.6	5.8	9.3	8.9	9.1	8.4	8.1	8.3
26	5.3	4.6	4.9	7.0	6.3	6.5	9.2	8.8	8.9	8.6	8.4	8.5
27	5.8	5.1	5.4	7.4	7.1	7.2	11.4	9.3	10.3	8.9	8.2	8.6
28	6.3	5.7	5.9	7.8	7.5	7.6	11.7	10.8	11.3	8.8	8.0	8.3
29	6.8	5.0	6.1	8.1	7.8	7.9	11.9	11.5	11.7	8.8	8.1	8.4
30	6.3	5.7	6.0	8.3	7.7	7.9	11.9	11.2	11.6	8.2	7.6	7.9
31	6.2	5.8	6.0	---	---	---	11.4	10.0	10.9	8.0	7.0	7.5
MONTH	7.1	3.7	5.8	8.3	4.4	6.4	11.9	1.6	7.9	12.0	6.3	8.8

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	6.4	7.0	7.5	6.3	6.9	7.6	6.2	6.9	6.0	5.1	5.7
2	7.0	5.0	5.9	8.3	6.1	6.8	6.4	5.7	6.2	6.8	5.0	6.1
3	7.2	5.1	6.1	7.1	5.8	6.4	5.9	5.6	5.8	7.4	6.7	7.1
4	7.8	6.6	7.2	7.4	6.9	7.3	6.6	5.6	5.9	7.3	7.0	7.1
5	8.2	7.3	7.6	7.7	7.3	7.5	7.6	6.2	7.3	7.4	6.8	7.1
6	8.3	7.6	8.1	7.3	6.9	7.2	7.6	7.2	7.4	7.3	6.5	6.9
7	9.0	8.1	8.5	7.2	6.9	7.0	7.4	7.2	7.3	6.7	6.2	6.3
8	8.7	8.2	8.4	7.0	6.8	6.9	7.3	7.0	7.1	6.4	6.0	6.3
9	8.2	7.6	7.9	6.7	5.3	6.0	7.2	6.9	7.1	6.7	6.3	6.5
10	7.5	7.0	7.2	7.0	6.0	6.5	7.2	6.8	6.9	7.2	6.1	6.5
11	7.7	7.0	7.3	6.7	6.2	6.5	7.4	6.7	7.1	6.7	5.8	6.2
12	8.0	7.5	7.8	6.6	6.0	6.3	6.9	6.5	6.8	9.1	5.9	7.0
13	8.2	7.6	7.8	7.2	6.2	6.7	6.9	6.3	6.7	10.1	6.4	7.8
14	7.5	6.6	7.1	7.7	6.7	7.1	6.6	6.2	6.4	9.5	6.4	7.7
15	7.4	6.0	6.7	7.6	7.1	7.4	6.5	6.1	6.3	9.0	6.7	7.6
16	8.1	6.5	7.3	7.8	5.5	7.3	7.2	5.9	6.2	8.8	6.8	7.6
17	7.7	6.9	7.4	9.5	7.0	7.5	6.0	1.3	4.2	9.0	6.8	7.6
18	7.4	6.4	6.9	8.0	7.5	7.7	5.9	3.8	4.7	9.7	6.7	7.8
19	7.8	6.7	7.2	8.8	8.1	8.5	6.9	5.8	6.2	9.2	6.6	7.7
20	8.7	7.9	8.3	8.9	8.4	8.6	6.6	5.8	6.1	9.0	6.6	7.5
21	8.8	8.3	8.6	8.8	8.1	8.3	6.5	5.7	6.0	8.6	3.7	6.2
22	10.4	7.9	8.4	8.2	7.5	7.8	6.1	4.9	5.6	6.3	4.6	5.7
23	8.0	7.6	7.8	7.5	6.5	7.1	6.0	5.0	5.5	6.7	6.0	6.3
24	8.3	7.5	7.9	6.6	6.0	6.4	6.3	4.9	5.5	6.4	6.1	6.3
25	8.4	7.7	8.0	6.0	5.6	5.9	7.2	4.9	6.1	6.6	5.9	6.3
26	8.2	7.6	7.9	5.9	5.6	5.8	7.2	5.8	6.3	7.0	6.1	6.5
27	7.7	7.2	7.4	5.8	3.3	4.7	7.0	5.3	6.0	7.2	6.2	6.6
28	7.8	6.8	7.3	6.2	5.8	6.0	6.7	4.9	5.7	7.6	6.4	6.9
29	7.4	4.5	6.5	6.0	5.3	5.8	8.1	4.7	6.0	7.4	6.4	6.8
30	---	---	---	8.9	5.4	6.8	6.3	5.6	5.8	7.5	5.0	6.4
31	---	---	---	8.7	7.5	8.1	---	---	---	7.1	4.5	5.9
MONTH	10.4	4.5	7.5	9.5	3.3	6.9	8.1	1.3	6.2	10.1	3.7	6.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.2	3.5	5.1	7.8	5.5	6.6	6.2	5.4	5.7	6.4	5.3	5.8
2	6.4	5.4	5.9	7.0	4.7	5.7	6.3	5.1	5.9	6.3	5.1	5.7
3	8.4	5.6	6.2	7.5	5.1	6.1	6.2	5.6	6.0	6.3	4.8	5.6
4	6.2	5.8	6.0	7.9	3.1	5.5	6.4	6.0	6.3	6.6	4.7	5.6
5	6.1	4.9	5.6	5.9	3.6	4.7	6.4	6.2	6.3	7.1	5.8	6.3
6	5.8	5.0	5.2	5.4	4.7	5.2	6.2	5.9	6.1	7.8	6.2	6.8
7	6.8	5.6	6.5	5.8	5.4	5.6	6.3	5.7	6.0	7.9	5.9	6.9
8	6.8	6.3	6.5	6.1	5.5	5.7	6.1	5.0	5.7	7.7	5.9	6.8
9	6.3	5.5	6.1	6.1	5.6	5.8	4.2	1.1	2.9	7.7	6.0	6.8
10	6.1	5.3	5.6	6.5	5.7	6.1	8.9	4.1	5.5	7.6	5.9	6.7
11	6.9	5.7	6.2	6.7	5.4	6.0	8.0	3.4	5.0	7.3	5.7	6.5
12	7.7	6.1	6.7	6.8	5.4	6.1	5.6	4.3	5.0	6.6	5.3	6.0
13	7.9	6.3	7.0	7.0	5.5	6.1	5.9	5.6	5.7	6.3	4.3	5.0
14	7.9	4.4	6.4	7.1	5.6	6.2	5.8	4.5	5.4	6.6	3.7	5.1
15	6.7	2.0	4.3	6.9	5.5	6.1	5.6	4.1	5.0	5.7	4.4	5.2
16	7.5	5.8	6.4	6.3	4.7	5.6	6.1	5.2	5.6	5.2	2.2	3.4
17	9.0	6.3	7.3	7.2	4.9	6.0	6.4	5.4	5.9	4.7	2.6	3.7
18	8.5	6.4	7.3	7.7	5.6	6.4	6.7	5.7	6.1	4.6	3.3	3.7
19	8.2	6.4	7.3	6.1	4.4	5.7	6.4	5.0	5.9	5.2	4.2	4.8
20	7.4	4.0	6.7	8.1	3.2	4.5	6.4	4.9	5.6	5.7	4.2	5.0
21	5.8	3.0	4.1	6.0	3.1	4.6	4.9	3.5	4.1	6.1	5.1	5.6
22	5.3	2.6	3.3	5.7	5.1	5.4	8.3	3.8	4.7	6.2	5.4	5.8
23	5.1	3.1	4.4	6.1	5.6	5.8	5.5	3.8	4.9	6.3	5.7	6.0
24	5.7	4.0	4.8	6.4	5.6	5.9	6.2	4.9	5.5	6.5	6.0	6.2
25	5.0	4.0	4.6	6.3	5.5	5.8	6.2	4.8	5.4	6.6	6.2	6.4
26	5.3	4.4	4.8	6.2	3.5	5.2	6.5	4.9	5.5	6.5	6.1	6.4
27	6.8	5.1	5.9	8.9	4.2	5.3	6.7	4.9	5.7	6.4	5.5	5.9
28	7.1	5.5	6.2	5.5	3.1	4.3	7.4	5.2	6.2	5.8	5.4	5.6
29	7.9	5.5	6.4	5.6	4.6	5.1	8.1	5.3	6.7	5.9	5.1	5.4
30	8.0	5.5	6.6	5.8	5.3	5.5	4.1	1.9	3.0	5.6	4.5	4.9
31	---	---	---	6.3	5.2	5.6	6.5	4.2	5.5	---	---	---
MONTH	9.0	2.0	5.9	8.9	3.1	5.6	8.9	1.1	5.5	7.9	2.2	5.7

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

AVERAGE DISCHARGE.--52 years, 88.5 ft³/s (64,120 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)
Dec. 19	1630	4,870	28.01	Mar. 17	2000	*5,440	*28.89

Minimum daily discharge, 26 ft³/s Nov. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	30	31	127	61	68	117	78	41	33	174	37
2	29	32	41	43	42	645	62	39	36	38	415	43
3	28	33	29	40	35	182	47	38	755	33	372	69
4	32	30	30	39	39	47	43	34	221	98	45	44
5	30	31	32	37	161	44	45	33	143	325	32	40
6	31	26	239	201	63	37	45	35	40	114	34	37
7	29	29	257	524	41	36	43	36	37	61	31	38
8	29	48	40	67	38	58	41	37	34	38	109	37
9	33	146	32	45	43	43	38	36	33	34	50	37
10	30	38	28	40	41	37	38	37	33	33	118	36
11	32	33	28	39	36	37	38	34	33	32	328	39
12	32	33	29	42	36	38	38	38	33	32	514	47
13	31	32	28	41	36	37	38	36	34	32	96	75
14	31	31	29	36	37	36	40	35	41	30	69	40
15	31	155	28	35	40	39	44	36	36	37	53	71
16	32	e600	28	121	40	39	88	35	38	35	37	95
17	31	e44	28	75	44	1190	71	37	36	31	35	103
18	32	e36	30	40	232	637	57	36	35	32	68	42
19	31	e36	1020	40	82	84	53	37	35	252	72	38
20	30	32	358	37	42	46	48	37	71	343	206	39
21	30	32	1130	51	39	42	49	540	36	135	211	37
22	30	29	165	37	38	65	46	131	193	45	74	35
23	40	29	62	36	40	38	47	38	117	33	39	32
24	42	32	62	37	42	37	44	35	38	31	34	38
25	36	e850	59	37	44	35	44	36	128	31	35	36
26	34	141	87	35	43	35	44	35	38	89	44	35
27	31	306	601	35	48	34	39	33	35	483	40	34
28	29	85	123	34	54	37	38	39	35	139	42	34
29	33	33	50	34	58	38	578	35	34	43	135	107
30	30	32	42	37	---	1040	295	39	32	132	70	492
31	30	---	75	37	---	511	---	41	---	37	33	---
TOTAL	979	3044	4821	2079	1595	5292	2258	1766	2451	2861	3615	1887
MEAN	31.6	101	156	67.1	55.0	171	75.3	57.0	81.7	92.3	117	62.9
MAX	42	850	1130	524	232	1190	578	540	755	483	514	492
MIN	28	26	28	34	35	34	38	33	32	30	31	32
AC-FT	1940	6040	9560	4120	3160	10500	4480	3500	4860	5670	7170	3740

CAL YR 1987 TOTAL 46065 MEAN 126 MAX 2200 MIN 26 AC-FT 91370
WTR YR 1988 TOTAL 32648 MEAN 89.2 MAX 1190 MIN 26 AC-FT 64760

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 1987 TO SEPTEMBER 1988

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 (FTU)	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 29...	1125	51	893	8.50	22.0	5	2.0	15.8	179	5.1	11000	950
JUL 26...	0955	37	620	8.20	28.0	22	1.3	9.7	125	4.9	1500	6300

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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 29...	190	0	59	11	110	4	6.7	232	30	110	0.40	21
JUL 26...	130	0	39	7.3	80	3	5.6	166	25	70	0.40	17

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 29...	487	7	<1	7.07	0.230	7.30	0.320	1.1	1.4	9.10	9.7	6
JUL 26...	344	9	8	4.22	0.080	4.30	0.080	1.7	1.8	1.30	10	10

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 29...	210	1	<1	5	11	<5	17	<0.1	2	<1.0	16
JUL 26...	150	2	1	3	26	<5	16	<0.1	1	<1.0	25

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 29...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
JUL 26...	<0.10	0.20	<0.10	<0.5	0.3	<0.1	<0.10	<0.5	<0.50	0.30	<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 U.S. Army 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, 11.5 ft Mar. 17 at 2100 hours; minimum (estimated), -0.5 ft Apr. 11, 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.9	2.0	4.2	2.8	3.4	1.8	3.5	1.5	3.9	2.2	4.0	2.3
2	4.2	2.2	4.0	2.8	3.7	1.9	3.7	1.6	4.1	2.1	8.9	3.1
3	4.1	2.1	4.2	2.6	3.7	1.8	4.2	2.4	3.4	1.9	4.9	2.2
4	4.0	1.9	4.3	2.2	3.7	1.7	3.8	1.7	3.4	1.0	3.3	1.7
5	4.0	2.4	4.3	2.3	4.5	2.3	3.9	2.2	3.3	2.0	3.7	2.4
6	3.6	2.0	4.5	2.8	5.2	3.2	5.8	3.2	3.8	2.2	3.4	2.6
7	3.7	2.0	4.9	3.2	5.4	2.2	6.3	1.9	4.0	2.7	3.9	2.4
8	3.8	2.2	4.7	2.8	4.0	2.4	3.2	1.4	3.7	2.4	4.1	2.5
9	4.1	2.6	4.6	1.4	4.1	2.3	3.4	2.0	3.5	2.4	3.3	1.5
10	4.2	2.2	2.6	---	4.1	2.6	3.0	2.2	4.1	2.3	3.6	1.4
11	3.9	1.9	3.1	1.0	4.0	2.4	3.7	2.3	3.9	.4	4.5	2.4
12	3.5	1.6	3.7	2.2	3.8	2.4	3.7	2.7	3.0	.6	4.4	2.4
13	4.0	2.3	3.7	2.3	4.4	3.6	3.4	1.4	3.3	1.2	3.2	1.2
14	4.4	2.7	3.9	2.7	4.8	1.2	4.0	2.2	3.6	1.8	2.7	.4
15	4.8	2.7	4.7	3.2	2.0	.5	3.8	2.1	3.4	1.0	3.4	1.4
16	4.2	2.8	6.7	3.9	3.6	1.5	4.5	2.6	3.8	1.6	4.2	2.5
17	4.0	2.3	4.1	2.6	4.0	2.0	4.6	2.1	4.5	2.8	11.5	3.6
18	3.6	2.3	4.5	3.1	4.6	2.6	4.1	2.1	5.3	3.1	9.5	1.1
19	3.8	2.5	4.3	1.8	10.3	3.0	4.6	2.4	3.6	1.8	2.4	.4
20	3.8	2.5	3.8	1.8	6.4	2.1	4.3	1.4	3.5	1.8	2.9	1.1
21	4.4	2.2	4.5	2.2	7.0	3.7	3.2	1.4	3.5	1.9	3.1	1.3
22	4.7	3.2	4.6	2.7	4.7	2.3	3.2	1.5	3.9	1.8	3.4	1.5
23	4.9	3.4	4.7	2.5	4.6	2.9	3.2	1.9	3.4	2.0	3.9	1.6
24	4.7	3.0	4.5	2.6	4.7	3.0	3.2	1.7	3.8	1.7	4.2	2.0
25	4.6	2.3	6.9	3.3	4.4	3.1	1.9	---	3.8	2.1	3.9	2.2
26	4.3	2.4	4.7	2.6	4.4	2.2	2.6	.8	3.7	2.0	3.9	1.9
27	4.0	1.8	4.4	2.3	4.4	2.4	2.9	.9	3.4	1.8	3.8	2.0
28	3.9	2.2	3.1	2.0	3.1	1.9	3.3	1.4	3.3	1.4	4.5	2.8
29	4.2	2.4	3.9	2.4	3.0	.8	3.6	1.8	3.3	1.8	4.4	2.4
30	4.3	2.4	3.8	2.5	4.0	2.2	4.1	2.3	---	---	9.6	2.0
31	4.2	2.4	---	---	4.0	2.5	4.1	2.1	---	---	7.2	3.5
MONTH	4.90	1.60	6.90	---	10.30	.50	6.30	---	5.30	.40	11.50	.40

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

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.0	3.6	5.0	3.1	4.8	2.7	4.2	2.0	4.1	2.8	4.5	3.1
2	4.0	2.7	5.2	3.2	4.1	1.9	4.1	2.0	4.1	3.0	5.1	3.0
3	4.1	2.6	4.7	2.9	4.8	3.0	4.1	2.1	4.1	2.6	5.2	3.1
4	4.6	2.9	3.8	2.2	5.3	2.0	4.0	2.3	4.0	2.4	4.5	2.4
5	4.3	2.6	4.0	1.5	4.7	2.3	4.9	2.5	3.8	2.2	4.2	2.4
6	3.5	1.8	4.1	2.0	4.0	2.5	4.6	3.2	3.7	1.7	4.5	2.8
7	3.7	1.6	4.7	2.4	3.8	2.4	4.8	3.2	3.4	1.6	4.4	2.7
8	3.6	1.8	4.7	2.9	3.8	2.6	5.2	3.1	3.0	1.3	4.4	3.1
9	3.6	1.9	4.2	2.4	3.7	2.3	5.1	3.1	3.6	1.2	4.7	3.0
10	3.1	1.0	3.9	2.3	3.9	2.1	4.6	2.6	5.1	1.9	4.2	3.3
11	1.2	-.5	3.8	2.2	4.0	1.9	4.5	2.2	4.7	2.6	4.1	2.8
12	1.5	-.5	3.9	2.6	4.2	2.3	4.7	2.8	4.4	3.1	4.3	3.2
13	2.9	.9	4.1	2.3	4.7	2.6	4.4	2.6	4.2	2.5	4.3	3.2
14	3.2	2.1	3.7	1.8	5.1	2.9	4.4	2.6	4.2	2.9	4.4	2.8
15	3.5	2.1	3.8	1.5	4.7	2.8	4.2	2.4	4.1	3.0	5.3	3.9
16	4.0	2.0	3.7	1.8	4.2	2.3	3.8	2.4	3.4	2.4	5.8	4.7
17	4.6	2.5	3.6	1.7	4.0	2.2	3.5	2.2	3.8	2.6	6.3	4.7
18	4.4	2.5	3.6	1.5	3.8	2.2	3.7	2.2	3.7	1.7	6.2	3.5
19	3.4	1.2	3.8	1.5	3.9	2.2	5.2	2.5	3.8	2.2	5.1	2.7
20	4.3	1.7	4.0	1.9	4.2	2.5	4.6	2.6	3.7	2.1	4.4	2.5
21	4.5	2.2	5.1	2.7	4.2	2.8	3.4	2.0	3.7	2.0	4.3	2.3
22	4.2	2.5	3.2	1.8	4.4	3.2	3.3	1.9	3.8	2.0	4.2	2.3
23	4.0	2.2	3.2	1.6	4.2	3.1	3.4	1.9	3.7	1.9	4.0	2.4
24	4.1	1.9	2.9	1.8	4.4	3.0	3.5	1.9	3.6	1.8	4.2	2.5
25	3.7	1.8	3.2	1.9	5.4	3.3	3.4	1.7	4.1	1.5	3.8	2.1
26	3.8	2.1	4.2	2.5	4.2	2.3	3.8	1.6	4.1	2.0	4.1	2.2
27	3.7	2.1	3.8	2.7	4.0	2.2	9.1	1.6	4.3	2.2	3.9	2.1
28	4.5	3.0	4.5	2.5	3.9	1.8	3.9	1.8	4.5	2.7	3.9	2.3
29	8.6	3.6	5.0	3.3	4.3	1.8	4.2	2.2	4.2	2.7	5.5	2.2
30	6.4	3.8	5.4	3.3	4.3	2.0	4.3	2.2	4.1	2.3	6.6	2.6
31	---	---	5.3	3.4	---	---	4.3	2.3	4.3	2.7	---	---
MONTH	8.60	-.50	5.40	1.50	5.40	1.80	9.10	1.60	5.10	1.20	6.60	2.10

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 three-parameter water-quality monitor continuously records specific conductance, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrumentation. Several days the specific conductance exceeded the upper recording limit of 2,000 microsiemens. Data for maximum, minimum, and mean were not computed for days that exceeded this limit. Due to tidal effects, backwater from Whiteoak Bayou, probe location, channel morphology, the water-quality data collected at this location may not be representative of the entire flow through the cross-section.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, >2,000 microsiemens on several days in October and November 1987, June and September 1988; minimum, 82 microsiemens Aug. 11, 1988.
WATER TEMPERATURE: Maximum, 32.5°C Aug. 8, 1988; minimum, 5.5°C Jan. 10, 1988.
DISSOLVED OXYGEN: Maximum, 11.5 mg/L May 14, 1988; minimum, 0.2 mg/L Oct. 3, 6, 1987, Sept. 26, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, >2,000 microsiemens on several days in October, November, June, and September; minimum; 82 microsiemens Aug. 11.
WATER TEMPERATURE: Maximum, 32.5°C Aug. 8;minimum, 5.5°C Jan. 10.
DISSOLVED OXYGEN: Maximim, 11.5 mg/L May 14; minimum, 0.3 mg/L June 21.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	510	418	465	---	---	---	431	367	393	452	389	417
2	540	484	512	---	---	---	503	432	456	454	426	440
3	646	538	574	---	---	---	589	440	515	466	449	460
4	714	587	644	---	---	---	645	527	570	554	467	486
5	751	667	700	---	---	---	697	580	626	619	553	570
6	824	690	750	---	---	---	721	431	629	632	512	622
7	847	780	808	---	---	---	521	261	394	394	219	263
8	1400	759	815	---	---	---	417	300	340	326	261	306
9	---	---	---	---	---	---	321	273	295	307	299	302
10	---	---	---	616	391	510	452	310	355	336	306	318
11	---	---	---	642	483	530	553	416	469	393	338	368
12	---	---	---	608	492	551	638	482	538	601	388	493
13	---	---	---	665	591	627	661	565	600	662	496	558
14	---	---	---	712	668	683	683	601	634	728	563	617
15	---	---	---	1310	674	790	766	647	679	716	596	643
16	---	---	---	673	167	382	788	674	723	731	498	614
17	---	---	---	308	172	252	781	697	736	573	480	505
18	---	---	---	271	228	247	805	690	741	591	450	510
19	---	---	---	368	253	320	760	135	558	678	555	609
20	---	---	---	488	382	416	286	137	203	755	623	654
21	---	---	---	596	413	503	226	120	163	822	651	690
22	---	---	---	642	523	577	326	153	261	770	647	680
23	---	---	---	697	577	629	496	204	303	764	669	700
24	982	733	790	740	638	674	435	239	324	762	687	704
25	765	610	691	749	187	455	256	236	249	732	702	717
26	834	543	643	319	190	247	263	233	252	824	728	758
27	810	675	731	254	193	224	270	191	230	838	737	781
28	868	723	768	264	195	236	267	216	248	831	748	787
29	871	745	825	273	234	257	250	226	241	826	761	788
30	828	769	805	367	271	308	293	247	270	821	756	790
31	1050	795	931	---	---	---	383	295	321	818	722	765
MONTH	1400	418	716	1310	167	448	805	120	430	838	219	578

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

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	838	743	781	1080	848	899	779	239	475	416	314	366
2	767	725	744	956	134	624	472	325	392	454	412	428
3	826	698	753	435	256	299	566	437	515	533	322	388
4	916	635	748	544	366	413	630	554	606	463	380	422
5	889	612	770	529	385	453	644	212	324	550	468	507
6	647	539	586	659	484	551	269	241	253	633	554	593
7	567	447	511	674	591	635	315	275	298	682	634	658
8	685	554	649	747	647	693	374	315	338	709	681	692
9	668	616	641	681	514	616	442	377	408	736	709	721
10	734	636	681	715	483	589	516	445	489	807	736	765
11	779	642	682	772	568	679	546	515	525	875	794	837
12	844	698	764	870	732	783	637	548	590	903	843	881
13	816	715	762	844	765	813	713	631	667	885	850	869
14	802	721	771	864	803	833	778	711	743	893	849	875
15	824	732	777	1010	833	889	821	779	799	849	823	841
16	827	744	792	860	726	795	829	816	823	872	842	854
17	838	737	795	840	144	678	806	780	786	898	863	882
18	821	418	709	229	143	178	780	715	755	891	855	871
19	629	360	478	204	195	200	786	733	763	911	820	876
20	677	364	560	214	194	206	817	787	799	899	750	804
21	683	604	651	245	196	221	822	785	802	---	---	---
22	---	---	---	267	217	242	819	786	807	---	---	---
23	---	---	---	519	268	339	835	776	814	---	---	---
24	839	704	764	638	344	521	878	790	830	542	437	476
25	875	717	791	696	587	633	954	801	872	685	536	601
26	913	753	810	773	654	694	923	879	897	822	640	711
27	1590	779	925	742	369	539	899	840	874	738	696	722
28	---	---	---	682	416	567	875	840	858	823	734	780
29	1800	820	1040	785	690	740	908	122	686	865	748	790
30	---	---	---	823	782	806	308	152	228	835	804	816
31	---	---	---	777	757	763	---	---	---	1030	824	863
MONTH	1800	360	728	1080	134	577	954	122	634	1030	314	710

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	862	620	744	928	753	800	742	423	627	733	567	632
2	753	615	691	930	765	806	677	454	609	763	588	658
3	665	269	397	934	770	822	540	296	398	729	517	597
4	663	492	579	860	563	759	366	291	331	635	552	577
5	738	667	704	698	126	443	472	356	400	700	567	616
6	768	740	757	572	182	377	658	436	478	731	674	699
7	---	---	---	540	420	457	716	495	541	1030	716	798
8	425	329	367	638	483	542	715	525	580	1200	762	892
9	495	315	388	733	568	627	570	321	450	---	---	---
10	653	475	557	780	652	691	727	183	480	---	---	---
11	693	627	649	923	663	719	375	82	180	---	---	---
12	758	697	734	1130	659	728	324	161	226	---	---	---
13	800	753	784	882	704	752	346	218	297	1620	890	1060
14	---	---	---	857	716	766	393	304	330	---	---	---
15	---	---	---	1030	734	791	439	356	382	---	---	---
16	---	---	---	1300	733	797	604	448	550	---	---	---
17	---	---	---	1540	668	876	690	564	611	1080	332	683
18	---	---	---	1810	710	906	703	589	661	572	359	456
19	---	---	---	1250	211	740	706	576	682	702	425	562
20	---	---	---	1580	171	321	695	475	617	755	568	642
21	---	---	---	1380	379	617	617	350	507	907	689	777
22	---	---	---	1320	323	608	610	152	448	1490	716	933
23	---	---	---	1280	412	604	548	259	399	1410	786	973
24	---	---	---	1420	521	716	666	538	621	1560	796	982
25	---	---	---	1620	583	710	682	558	638	975	746	851
26	---	---	---	772	427	592	736	654	695	1330	780	886
27	---	---	---	675	129	530	795	685	729	---	---	---
28	---	---	---	831	234	398	785	725	754	1370	806	910
29	910	711	747	567	306	410	812	626	761	1790	362	919
30	863	711	758	749	274	538	776	348	532	333	114	264
31	---	---	---	776	474	559	638	294	438	---	---	---
MONTH	910	269	633	1810	126	645	812	82	515	1790	114	744

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	25.5	26.0	30.0	28.5	29.5	30.0	28.5	29.0	29.0	28.0	28.5
2	26.5	25.5	26.0	30.5	29.0	29.5	28.5	28.0	28.5	29.0	27.5	28.0
3	25.5	23.0	24.0	30.5	29.5	30.0	28.5	27.5	28.0	27.5	26.5	27.0
4	24.5	23.0	23.5	30.5	28.5	29.5	28.5	27.5	28.0	27.0	26.5	26.5
5	25.0	23.5	24.0	28.5	25.5	27.5	29.5	28.0	28.5	27.5	26.5	27.0
6	26.5	25.0	25.5	28.0	26.0	27.0	30.0	29.0	29.5	27.0	26.0	26.5
7	27.0	25.0	26.0	28.5	27.5	28.0	30.5	29.5	30.0	26.5	25.5	26.5
8	28.0	25.5	26.5	28.0	27.0	27.5	32.5	30.0	30.5	26.5	25.5	26.0
9	28.0	26.5	27.5	27.5	27.0	27.0	31.0	29.5	30.0	26.0	25.5	26.0
10	29.0	28.0	28.5	28.5	27.0	27.5	31.5	28.5	30.5	26.0	25.0	25.5
11	28.5	27.5	28.0	29.5	28.0	29.0	29.0	25.5	27.5	27.0	25.5	26.0
12	28.0	27.0	27.5	29.5	28.5	29.0	28.0	27.0	27.5	27.5	26.5	27.0
13	28.0	27.0	27.5	30.0	29.0	29.5	29.0	27.5	28.0	28.0	26.5	27.5
14	28.0	27.0	27.5	30.5	29.0	30.0	29.0	28.0	28.5	28.5	27.5	28.0
15	27.5	27.0	27.0	30.5	29.0	30.0	30.0	28.5	29.0	28.5	28.0	28.0
16	28.0	26.5	27.0	31.0	29.5	30.0	30.5	29.0	29.5	28.5	27.0	27.5
17	28.0	26.5	27.5	31.0	29.5	30.0	31.0	29.5	30.5	27.5	27.0	27.5
18	28.0	27.0	27.5	30.5	29.5	30.0	30.5	29.5	30.5	28.0	27.5	28.0
19	28.5	27.0	27.5	31.0	26.5	29.5	30.0	28.5	29.0	28.5	27.5	28.0
20	28.5	27.5	27.5	27.5	26.0	27.0	---	---	---	28.5	27.5	28.0
21	27.5	25.5	26.5	27.5	27.0	27.0	---	---	---	28.5	28.0	28.0
22	28.0	26.5	27.0	28.5	27.0	27.5	---	---	---	29.0	28.0	28.0
23	27.5	26.5	26.5	28.5	28.0	28.5	---	---	---	29.0	28.0	28.0
24	28.0	27.0	27.5	30.0	28.5	29.0	---	---	---	28.5	27.5	28.0
25	27.5	26.5	27.0	30.0	29.0	29.5	31.0	29.5	30.0	28.0	27.0	27.5
26	28.0	27.0	27.5	29.5	27.5	29.0	31.0	29.5	30.0	28.0	26.5	27.0
27	29.0	27.5	28.5	29.5	25.5	28.5	30.5	29.0	30.0	27.5	26.0	27.0
28	29.5	28.5	29.0	28.0	26.5	27.0	30.0	29.0	29.5	27.0	26.0	26.5
29	31.0	29.0	29.5	28.5	27.5	27.5	30.5	29.0	29.5	27.0	25.5	26.5
30	30.0	29.0	29.5	29.0	28.0	28.5	29.0	28.0	28.5	25.0	23.5	24.5
31	---	---	---	28.5	27.0	28.0	28.5	28.0	28.0	---	---	---
MONTH	31.0	23.0	27.0	31.0	25.5	28.5	32.5	25.5	29.0	29.0	23.5	27.0

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.5	4.9	5.2	5.8	1.7	3.9	7.9	7.3	7.7	8.1	7.6	7.8
2	5.6	4.5	5.0	---	---	---	7.4	6.8	7.3	8.5	7.4	8.0
3	6.2	4.3	4.8	---	---	---	7.1	6.0	6.7	7.9	7.3	7.7
4	6.6	4.3	5.0	---	---	---	6.4	5.5	6.0	8.0	7.5	7.7
5	5.7	4.6	5.1	---	---	---	5.6	5.0	5.3	8.1	7.3	7.6
6	5.3	4.5	5.0	---	---	---	5.9	4.5	5.0	8.7	6.9	7.3
7	5.9	4.2	4.6	---	---	---	6.3	4.4	5.2	10.2	9.4	9.9
8	5.1	3.2	4.5	---	---	---	6.9	5.2	6.3	10.6	10.0	10.3
9	---	---	---	5.0	2.7	3.9	7.3	6.7	7.0	10.8	10.5	10.6
10	---	---	---	6.6	2.3	4.9	6.8	6.4	6.6	10.5	10.0	10.4
11	---	---	---	6.9	5.6	6.0	6.5	6.0	6.3	10.7	9.7	10.2
12	---	---	---	6.8	5.1	6.0	6.7	5.4	5.8	10.7	8.7	9.6
13	---	---	---	6.9	5.5	6.2	6.7	4.2	5.3	9.3	7.4	8.2
14	---	---	---	6.4	5.5	6.0	6.0	3.8	4.7	8.4	6.3	7.1
15	---	---	---	6.1	4.8	5.3	6.1	4.9	5.2	7.7	6.6	7.2
16	---	---	---	5.9	3.3	5.0	6.7	4.5	5.3	7.7	6.7	7.3
17	---	---	---	7.2	6.0	6.5	6.4	4.3	5.5	7.4	5.1	6.4
18	---	---	---	7.6	7.2	7.5	6.4	4.9	5.7	5.8	4.8	5.4
19	---	---	---	---	---	---	7.8	4.3	5.7	6.2	4.6	5.6
20	---	---	---	7.7	6.9	7.3	7.4	6.3	6.8	---	---	---
21	---	---	---	7.2	6.5	6.9	8.9	7.4	8.3	10.2	5.5	6.9
22	---	---	---	7.2	6.1	6.6	8.5	7.7	8.1	---	---	---
23	---	---	---	6.5	5.8	6.2	8.6	8.0	8.4	10.5	6.8	7.9
24	4.3	2.6	3.7	5.8	4.7	5.3	8.4	7.8	8.1	10.9	7.4	8.0
25	4.1	3.0	3.5	6.8	4.4	5.5	7.9	7.6	7.8	8.0	7.3	7.8
26	4.1	2.8	3.2	7.2	6.1	6.6	7.8	7.4	7.6	8.7	7.1	7.5
27	5.4	3.0	3.7	7.8	7.3	7.6	10.0	7.8	8.9	8.3	7.0	7.5
28	5.1	3.3	4.0	8.3	7.6	8.0	10.2	9.5	9.8	7.7	6.8	7.3
29	5.6	3.8	4.5	8.5	8.2	8.3	10.3	10.0	10.2	7.5	6.0	6.9
30	5.4	4.6	5.0	8.5	7.7	8.1	10.2	9.4	9.9	7.2	4.9	6.0
31	5.6	4.3	4.7	---	---	---	9.4	8.1	9.0	6.7	4.0	5.5
MONTH	6.6	2.6	4.5	8.5	1.7	6.3	10.3	3.8	7.0	10.9	4.0	7.8

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

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.8	4.5	5.6	5.9	3.5	5.0	7.4	6.1	7.0	6.3	5.5	5.8
2	5.6	3.7	4.8	9.0	4.9	6.3	6.8	5.5	5.9	6.4	4.8	5.8
3	5.4	3.7	4.2	6.6	5.4	5.9	6.1	4.9	5.4	7.3	5.6	7.0
4	9.3	3.0	5.5	7.3	6.5	6.9	5.7	4.6	5.0	7.4	7.1	7.3
5	8.2	6.2	7.1	7.0	6.4	6.6	7.3	5.2	6.8	7.6	7.1	7.3
6	9.6	7.9	8.4	7.8	6.3	6.7	7.4	7.1	7.2	7.5	6.3	7.0
7	8.2	7.4	8.0	---	---	---	7.3	7.1	7.2	6.4	5.2	5.9
8	9.0	7.6	8.3	6.3	5.3	5.8	7.2	6.9	7.1	5.6	4.6	5.0
9	8.3	6.8	7.6	7.4	4.2	5.6	7.3	6.9	7.2	5.8	4.9	5.2
10	7.5	6.4	6.9	5.3	3.8	4.6	7.3	6.8	7.0	6.4	4.7	5.4
11	8.8	6.5	7.2	5.2	3.6	4.6	7.5	6.9	7.2	6.7	4.4	5.8
12	9.2	7.5	8.0	5.4	4.2	4.9	9.4	6.1	7.0	8.3	4.5	6.1
13	9.2	7.9	8.3	5.3	4.6	4.9	8.5	5.9	6.5	9.8	5.6	7.3
14	9.1	7.2	8.3	7.7	5.7	6.4	9.6	5.7	6.5	11.5	7.1	9.0
15	8.1	6.5	7.4	7.2	5.3	6.3	7.5	5.3	6.2	10.9	6.9	8.8
16	8.7	6.1	7.1	7.1	5.7	6.5	8.2	5.1	6.2	10.2	7.2	8.3
17	8.0	5.1	6.5	9.0	5.1	6.7	5.3	2.7	4.2	7.8	5.6	6.9
18	6.7	5.1	6.1	8.0	7.3	7.7	8.2	2.8	3.9	8.7	6.1	7.1
19	6.7	5.6	6.0	9.1	8.2	8.8	4.9	3.2	4.4	---	---	---
20	7.4	5.3	6.2	9.4	8.9	9.1	5.8	4.5	5.2	10.1	6.7	8.2
21	7.5	5.2	6.5	9.4	8.0	8.6	6.3	4.8	5.4	7.8	4.2	6.3
22	6.9	5.8	6.5	8.1	7.2	7.7	5.7	4.7	5.1	6.2	3.0	5.1
23	7.0	5.8	6.5	7.1	3.6	6.2	7.5	4.3	4.9	6.0	5.2	5.6
24	7.9	5.6	6.2	6.0	2.8	4.9	8.2	4.8	5.8	5.8	4.7	5.2
25	6.1	3.2	5.2	5.1	4.1	4.7	7.3	5.1	6.0	5.3	4.2	4.8
26	6.6	5.4	6.1	4.6	3.6	4.2	7.0	4.8	5.9	5.3	4.3	4.7
27	6.7	4.8	5.9	5.2	2.3	3.6	7.8	5.2	6.0	6.1	4.8	5.3
28	6.3	4.0	5.6	5.3	3.0	4.5	8.5	5.1	6.3	7.8	5.1	6.1
29	6.3	4.5	5.6	5.2	4.4	4.8	8.0	4.8	6.3	7.7	5.0	6.3
30	---	---	---	8.2	4.1	5.6	6.6	5.8	6.1	8.0	5.6	6.4
31	---	---	---	8.3	7.5	8.0	---	---	---	---	---	---
MONTH	9.6	3.0	6.6	9.4	2.3	6.1	9.6	2.7	6.0	11.5	3.0	6.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.6	2.2	3.9	8.2	4.6	6.2	6.8	3.9	4.5	4.3	2.7	3.4
2	3.7	2.0	2.8	8.7	4.5	5.8	5.5	3.3	4.7	5.2	3.0	3.5
3	6.1	4.6	5.2	6.9	3.4	5.0	5.8	4.6	5.4	---	---	---
4	5.3	4.4	4.9	6.6	2.4	4.6	---	---	---	---	---	---
5	5.0	3.5	4.5	5.5	1.6	3.2	---	---	---	---	---	---
6	4.2	2.4	3.2	5.0	3.6	4.3	---	---	---	---	---	---
7	5.7	3.9	5.3	6.4	3.6	4.0	---	---	---	---	---	---
8	5.6	5.2	5.5	4.8	3.3	4.0	---	---	---	---	---	---
9	5.3	4.7	5.0	6.0	4.0	4.5	---	---	---	---	---	---
10	5.6	3.3	4.1	5.1	3.8	4.4	6.6	.8	2.8	---	---	---
11	6.4	3.1	4.2	5.5	4.6	4.9	---	---	---	---	---	---
12	8.4	4.5	5.8	6.6	4.6	5.1	4.7	3.4	4.1	---	---	---
13	---	---	---	6.7	4.5	5.3	5.3	4.6	5.1	---	---	---
14	9.3	6.0	7.5	7.6	4.4	5.6	5.1	4.0	4.7	---	---	---
15	6.6	2.2	3.9	7.5	4.7	5.9	4.0	1.2	3.1	---	---	---
16	---	---	---	6.9	4.2	5.1	---	---	---	---	---	---
17	6.8	4.4	5.2	6.6	4.3	5.1	---	---	---	---	---	---
18	7.9	4.7	5.7	7.7	4.6	5.4	---	---	---	---	---	---
19	---	---	---	6.2	3.5	4.7	---	---	---	---	---	---
20	5.9	3.3	4.8	7.0	.4	3.2	5.1	2.2	4.1	---	---	---
21	5.2	.3	1.7	5.0	1.1	2.9	---	---	---	4.6	3.1	3.7
22	6.2	.9	2.9	5.3	.8	4.1	---	---	---	4.7	2.2	3.8
23	3.1	.5	2.0	5.2	3.5	4.4	3.9	1.0	2.6	5.2	3.3	4.0
24	3.5	2.1	2.5	6.8	4.3	4.9	7.5	3.3	3.7	6.5	3.7	4.3
25	4.0	2.4	3.5	7.4	4.6	5.3	---	---	---	4.3	2.2	3.3
26	3.9	2.5	3.1	6.4	3.1	4.4	---	---	---	5.5	3.4	4.5
27	5.5	2.7	3.5	8.6	2.2	4.5	6.0	3.4	4.1	5.2	3.0	4.5
28	5.7	4.0	4.7	5.5	2.4	3.9	6.0	3.7	4.6	5.6	3.5	4.5
29	6.5	3.9	4.7	3.8	2.1	3.0	---	---	---	5.7	.9	3.6
30	6.5	4.2	5.3	5.7	3.9	4.7	5.6	.5	2.3	6.7	3.5	4.6
31	---	---	---	4.4	2.4	3.7	3.6	.4	2.0	---	---	---
MONTH	9.3	.3	4.3	8.7	.4	4.6	7.5	.4	3.9	6.7	.9	4.0

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1987 to current year.

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 OF RECORD.--Maximum elevation, 4.5 ft June 11, 12, 1987; minimum, -2.5 ft Apr. 11, 12, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.4 ft Apr. 29 at 1700 hours; minimum, -2.5 ft Apr. 11, 12.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1.9	.2	1.2	2.2	.9	1.6	1.4	-.2	.7	1.8	-.5	.6
2	2.2	.1	1.4	2.1	.9	1.5	1.8	.0	.9	1.7	-.3	.7
3	2.0	.1	.9	2.2	.7	1.5	1.8	-.1	1.0	2.2	.4	1.5
4	2.0	-.1	1.3	2.3	.3	1.3	1.7	-.3	.9	2.1	-.3	.9
5	2.0	.4	1.3	2.3	.4	1.5	2.3	.4	1.3	1.9	.2	1.2
6	1.5	.2	.9	2.6	.9	1.8	3.0	1.3	2.1	2.5	1.2	2.0
7	1.7	.0	.8	2.8	1.2	2.2	3.2	.2	1.6	2.8	-.3	1.1
8	1.8	.2	1.0	2.8	.8	1.9	2.0	.4	1.4	1.2	-.5	.4
9	2.1	.6	1.5	2.6	-.5	1.1	2.1	.3	1.4	1.5	.1	.9
10	2.2	.3	1.4	.6	-1.9	-.8	2.1	.6	1.5	1.1	.3	.7
11	1.9	-.1	1.1	1.1	-.5	.4	2.0	.5	1.3	1.7	.4	1.1
12	1.5	-.3	.7	1.7	.2	1.1	1.9	.5	1.1	1.7	.7	1.2
13	2.0	.4	1.1	1.7	.4	1.1	2.2	1.4	1.9	1.2	-.6	.4
14	2.4	.7	1.5	1.9	1.0	1.5	2.8	.2	1.9	2.0	.3	1.1
15	2.7	.9	2.0	2.8	1.7	2.3	.2	-1.4	-.6	1.8	.0	1.1
16	2.1	.8	1.6	3.2	.6	2.4	1.6	-.4	.5	2.5	.6	1.5
17	2.1	.3	1.3	2.0	.6	1.3	2.1	.2	1.3	2.5	.1	1.4
18	1.6	.3	1.1	2.5	1.1	1.9	2.5	.8	1.8	2.1	.0	1.2
19	1.8	.6	1.3	2.2	.0	1.1	3.0	1.1	2.2	2.6	.4	1.7
20	1.8	.6	1.1	1.9	-.1	.9	2.7	-.1	1.3	2.2	-.7	.7
21	2.5	.4	1.3	2.4	.3	1.3	2.3	.3	1.3	1.0	-.7	.3
22	2.7	1.3	2.1	2.6	.8	1.9	2.4	.3	1.5	1.0	-.5	.5
23	2.9	1.5	2.3	2.8	.6	1.8	2.4	.8	1.8	1.1	-.1	.6
24	2.7	1.1	2.0	2.4	.7	1.7	2.7	.9	2.0	1.1	-.3	.6
25	2.7	.4	1.5	3.6	.8	2.3	2.4	1.1	1.9	-.2	-2.0	-1.4
26	2.4	.5	1.6	2.6	.6	1.6	2.4	.1	1.4	.6	-1.3	-.5
27	2.0	-.1	1.0	2.4	.2	1.6	.7	-.3	.3	.8	-1.2	-.1
28	1.9	.3	1.2	1.1	.0	.5	1.0	-.3	.3	1.3	-.7	.4
29	2.3	.4	1.5	2.0	.2	1.3	.8	-1.4	-.4	1.6	-.3	.7
30	2.3	.5	1.6	1.8	.6	1.3	2.0	.1	1.1	2.0	.3	1.3
31	2.2	.7	1.6	---	---	---	2.0	.5	1.5	1.9	.2	1.2
MONTH	2.9	-.3	1.4	3.6	-1.9	1.4	3.2	-1.4	1.2	2.8	-2.0	.8

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

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.9	.2	1.3	1.9	.2	1.0	2.8	1.5	2.1	2.8	1.0	2.0
2	2.0	.1	1.2	2.4	.9	1.7	1.9	.7	1.3	3.1	1.1	2.2
3	1.4	-.1	.7	2.4	.1	1.1	2.0	.6	1.5	2.5	.7	1.7
4	1.3	-1.0	.0	1.2	-.4	.2	2.5	.9	1.8	1.5	.0	.9
5	1.1	.0	.6	1.7	.4	1.0	2.1	.4	1.4	1.7	-.8	.6
6	1.7	.2	.7	1.4	.6	.9	1.1	-.4	.5	1.9	-.2	1.0
7	1.9	.7	1.3	1.8	.3	1.2	1.5	-.6	.6	2.5	.2	1.4
8	1.6	.3	1.0	1.9	.5	1.3	1.6	-.4	.7	2.5	.8	1.7
9	1.5	.3	1.0	1.0	-.5	.2	1.5	-.2	.7	2.0	.2	1.2
10	2.0	.1	1.2	1.5	-.7	.5	1.0	-1.1	-.4	1.7	.1	.9
11	1.8	-1.5	-.4	2.5	.4	1.5	-1.2	-2.5	-2.0	1.6	.2	.9
12	.9	-1.5	-.4	2.3	.4	1.2	-.5	-2.5	-1.6	1.7	.5	1.1
13	1.3	-.8	.3	1.2	-.8	.2	.8	-1.1	-.2	2.1	.2	1.3
14	1.5	-.2	.9	.6	-1.6	-.4	1.1	.0	.5	1.5	-.2	.8
15	1.1	-1.1	.2	1.3	-.6	.4	1.4	.0	.7	1.7	-.5	.9
16	1.8	-.4	.6	2.1	.5	1.4	1.8	-.1	1.1	1.6	-.2	.9
17	2.4	.8	1.8	3.1	1.3	2.1	2.5	.4	1.7	1.5	-.4	.7
18	3.1	1.0	1.9	2.5	-1.7	-.4	2.2	.3	1.2	1.5	-.6	.5
19	1.5	-.3	.7	.2	-2.1	-1.0	1.3	-.9	.4	1.7	-.6	.7
20	1.5	-.2	.8	.8	-1.1	.1	2.1	-.4	1.1	1.9	-.2	1.0
21	1.3	-.2	.5	.9	-.9	.2	2.4	.1	1.4	1.6	-.8	.9
22	1.8	-.3	.9	1.3	-.7	.4	2.1	.5	1.4	1.0	-.4	.4
23	1.4	-.1	.8	1.8	-.4	.8	1.9	.2	1.2	.9	-.5	.1
24	1.8	-.4	.7	2.1	-.1	1.1	1.9	-.2	1.0	.8	-.3	.4
25	1.7	.0	1.0	1.8	.2	1.1	1.6	-.2	.8	1.0	-.2	.4
26	1.6	-.1	.9	1.7	-.2	.8	1.7	-.1	.8	2.0	.4	1.1
27	1.4	-.3	.6	1.7	-.2	.8	1.5	.1	.8	1.6	.6	1.2
28	1.2	-.5	.5	2.3	.8	1.6	2.3	.9	1.6	2.3	.4	1.7
29	1.1	-.2	.7	2.3	.5	1.3	4.4	1.6	2.8	2.9	1.2	2.2
30	---	---	---	2.1	.0	.7	4.0	1.6	2.8	3.3	1.3	2.5
31	---	---	---	2.4	1.1	1.8	---	---	---	3.2	1.4	2.3
MONTH	3.1	-1.5	.8	3.1	-2.1	.8	4.4	-2.5	.9	3.3	-.8	1.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2.6	.6	1.7	2.1	.0	1.2	2.0	.8	1.4	2.3	1.1	1.9
2	2.0	-.1	1.2	1.9	-.1	1.1	2.0	1.0	1.5	2.9	.9	2.0
3	2.3	.1	1.2	1.9	.0	1.1	1.9	.6	1.3	2.9	1.0	2.0
4	2.8	-.1	1.1	1.8	.2	1.0	2.0	.4	1.3	2.4	.3	1.5
5	2.1	.3	1.2	1.9	.4	1.2	1.7	.1	1.1	2.0	.3	1.5
6	1.9	.4	1.2	2.4	1.1	1.6	1.7	-.4	.9	2.4	.7	1.9
7	1.6	.3	.9	2.6	1.1	2.1	1.4	-.6	.6	2.4	1.2	2.0
8	1.7	.5	1.2	3.0	1.1	2.3	.9	-.7	.2	2.3	1.2	1.9
9	1.6	.2	1.1	2.9	1.1	2.2	1.4	-.9	.6	2.6	.9	1.9
10	1.8	.0	.9	2.4	.6	1.6	2.0	-.1	.9	2.2	1.3	1.8
11	1.8	-.2	1.2	2.4	.2	1.6	2.4	.5	1.6	2.1	.9	1.6
12	2.1	.2	1.4	2.5	.7	1.7	1.8	.6	1.4	2.3	1.2	1.8
13	2.5	.5	1.8	2.2	.5	1.6	2.0	.5	1.4	2.3	1.6	1.9
14	2.9	.8	2.0	2.3	.5	1.5	2.1	.8	1.7	2.3	.8	1.6
15	2.6	.7	1.7	2.1	.4	1.4	2.0	.9	1.4	3.2	2.0	2.5
16	2.1	.3	1.4	1.7	.3	1.1	1.4	.3	.9	3.8	2.7	3.3
17	1.9	.1	1.2	1.4	.1	.8	1.7	.5	1.2	4.3	2.7	3.7
18	1.7	.1	1.0	1.5	.1	.8	1.5	-.3	1.1	4.2	1.6	3.1
19	1.8	.1	1.0	2.4	.5	1.1	1.6	.2	.9	3.0	.8	2.2
20	1.9	.4	1.3	1.5	.5	1.0	1.5	-.2	.9	2.4	.9	1.8
21	2.0	.7	1.4	1.1	.0	.7	1.5	-.2	.9	2.3	1.1	1.8
22	2.3	1.0	1.6	1.2	-.1	.7	1.6	-.2	1.0	2.2	.6	1.6
23	2.1	.9	1.5	1.2	-.1	.7	1.6	-.2	1.0	2.0	.5	1.5
24	2.3	.9	1.9	1.3	-.2	.8	1.5	-.3	1.0	2.0	.5	1.3
25	3.1	.9	2.2	1.3	-.2	.7	1.9	1.0	1.4	1.8	.2	.9
26	2.1	.3	1.4	1.4	-.4	.8	2.0	.6	1.4	2.0	.3	1.0
27	1.9	.0	1.1	2.1	-.4	.9	2.2	1.5	1.8	1.9	.1	1.1
28	1.8	-.2	1.0	1.7	-.3	1.0	2.4	.6	1.5	1.9	.3	1.1
29	2.1	-.3	1.0	2.0	.1	1.3	2.0	.7	1.3	2.2	.3	1.5
30	2.2	-.1	1.2	2.0	.2	1.3	2.0	.3	1.1	2.8	.5	1.6
31	---	---	---	2.2	.3	1.4	2.1	.6	1.3	---	---	---
MONTH	3.1	-.3	1.3	3.0	-.4	1.2	2.4	-.9	1.2	4.3	.1	1.8

YEAR MAXIMUM 4.4 MINIMUM -2.5 MEAN 1.2

08074710 BUFFALO BAYOU AT TURNING BASIN, 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.--Beginning April 1986, a three-parameter water-quality monitor continuously records specific conductance, water temperature, and dissolved oxygen at this station.

REMARKS.--Water-quality monitor data was collected using a submersible pump 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. On February 3, 1988, a raft was anchored in same general vicinity and probe package was placed insitu at a constant elevation of 1.0 ft. below the water-surface. Dissolved oxygen data are not corrected for salinity. When specific conductance exceeded upper recording limit of 20,000 microsiemens, no data was published. Due to tidal effects, location of probe units,and channel morphology, the water-quality data collected at this location may not be representative of the entire flow through the cross-section.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, >20,000 microsiemens Oct. 12-14; minimum, 140 microsiemens July 9, 1987.
WATER TEMPERATURE: Maximum, 33.5°C July 3, 1987, Aug. 26, 27, 1988; minimum, 9.0°C Jan. 7-10, 1988.
DISSOLVED OXYGEN: Maximum, 11.9 mg/L May 16, 1988; minimum, 0.0 mg/L on several days during 1987, and Aug. 10, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, >20,000 microsiemens Oct. 12-14; minimum, 190 microsiemens Mar. 31.
WATER TEMPERATURE: Maximum, 33.5°C Aug. 26, 27; minimum, 9.0°C Jan. 7-10.
DISSOLVED OXYGEN: Maximum, 11.9 mg/L May 16;minimum, 0.0 mg/L Aug. 10.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18000	5700	10900	14300	8310	11500	13000	5260	8380	5430	2190	3400
2	---	---	---	15600	10700	12300	10800	4480	8350	6810	2120	3700
3	17600	8740	13100	16300	10200	13700	12500	6170	8750	10700	3430	6340
4	19200	8950	15400	18400	10300	13300	12800	6040	8430	10200	5670	7940
5	17600	11700	14600	17000	12300	14400	12700	7150	9870	12400	5200	8220
6	19300	9990	14200	16700	11800	13900	10700	6910	9120	12700	7810	10000
7	19400	11700	16200	15200	8720	11900	8130	2530	4530	8000	700	1790
8	18100	11300	15900	14100	7480	9880	7880	2340	4610	4070	790	2120
9	17900	13200	16000	16900	9240	12900	8600	4990	6270	5820	1730	3640
10	18400	11100	14800	16000	6160	10300	10800	5610	7630	4100	2790	3300
11	19900	10300	15500	17200	10800	14900	11100	5410	7760	8880	4040	5780
12	---	---	---	18700	11000	14900	12800	5950	8560	12400	3880	6580
13	---	---	---	16700	10000	13400	14000	8100	10900	11500	6590	8210
14	---	---	---	17500	12000	15400	11500	6440	9170	14700	7130	10700
15	19900	11600	16400	18800	10800	14900	---	---	---	12000	5070	7520
16	17700	10700	13500	12100	1020	5830	---	---	---	9510	3870	5840
17	17000	7170	13700	3580	840	2020	15300	10300	13300	7310	2230	4210
18	17000	7570	12300	7930	2340	4850	14700	9260	12200	6780	1880	3810
19	19200	11900	15300	12900	3560	6160	13600	1070	8480	11200	4190	6370
20	18500	12600	15800	17200	6650	10000	1240	490	757	13100	7300	9870
21	19000	14200	16800	17200	7590	12000	2050	320	1200	13600	7710	9910
22	18900	13000	16600	14200	5920	9850	3890	300	824	13300	7030	9470
23	17700	11700	14800	13800	8030	10200	3190	650	1800	12500	6760	8720
24	15600	10000	12900	12900	7100	9630	2660	680	1340	9930	6470	8430
25	13900	7380	10100	11300	930	5910	820	580	676	9870	6880	8440
26	14900	9240	12500	2410	1240	1770	3440	520	1680	14100	5740	9440
27	17500	10100	13600	4040	1480	2620	3020	530	1750	13100	4780	9010
28	18100	11700	14700	3920	840	2320	4840	830	1540	12200	6920	8520
29	16700	10000	13600	6650	1650	3200	3510	1120	2050	13700	6300	9120
30	15700	9040	12600	10500	2580	5760	6050	1880	3340	10800	5910	8060
31	16600	9290	11900	---	---	---	5770	2310	3630	8370	4670	6400
MONTH	19900	5700	14200	18800	840	9660	15300	300	5760	14700	700	6930

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

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9210	3470	5760	15000	5770	9440	550	220	307	3030	1030	1880
2	12500	4290	7130	12100	510	6180	780	410	535	5280	2350	3690
3	---	---	---	3140	590	1330	990	560	693	8000	2280	4300
4	16600	8720	11100	6890	1720	3190	4250	930	1750	5910	1300	2850
5	15900	6330	11100	5520	2460	3820	1530	780	1090	6670	1510	3200
6	9420	5050	6990	5560	2300	3950	2490	610	1080	6090	1180	3750
7	10400	4950	6830	12500	4070	7880	2130	400	986	8220	2090	4190
8	9200	4140	6630	9110	5000	6960	1330	390	800	8310	2570	4790
9	12000	4450	8610	10300	4110	7020	1770	450	920	6510	3220	5010
10	12400	4840	9350	11000	6540	9430	3820	1110	1830	12000	3180	7440
11	10500	7320	8650	10300	5240	7780	4280	1450	2560	11000	4040	6660
12	15400	4360	8620	9460	4200	6340	6580	3000	4370	9280	5640	7280
13	13000	6550	9380	9330	3800	6260	6710	4060	5160	11000	4670	7920
14	14100	7220	10500	16800	4860	7460	7780	4150	5330	8890	5000	7100
15	15500	6360	9140	9440	6340	8170	7560	4630	5710	9250	4600	7320
16	14100	8170	10900	8430	5460	6960	8040	3370	5390	9930	3740	5780
17	12900	7790	10200	8250	730	6410	5860	3130	4580	11600	2730	6320
18	9410	4720	7220	1550	490	779	9170	3580	5920	12100	6270	8420
19	6930	3650	4950	1360	450	958	13600	5630	8470	14500	5940	9430
20	10000	4370	6890	2130	590	1190	13300	4000	8180	10800	5930	8060
21	12700	4420	8210	2920	990	1500	12800	6670	9590	9360	1030	3920
22	15300	6860	10800	1900	590	1160	14200	6760	9490	4750	1520	3130
23	13000	6520	9680	2200	770	1480	14600	3860	9730	14700	2680	6990
24	14300	7660	11100	4860	1440	2580	14300	6610	11000	14800	4310	9220
25	14400	6460	10900	4900	2410	3340	17600	7570	12100	16700	6530	11800
26	14000	6300	9850	7260	1830	3070	14100	8710	11800	16400	9370	12600
27	12800	5340	8690	5280	2160	3520	14100	7410	10700	19100	7430	12200
28	13100	4440	7770	3720	1790	2360	14500	8200	10600	15500	8110	10600
29	13300	7970	10300	4910	1430	2850	14600	860	9060	14200	8190	11400
30	---	---	---	4350	1450	2850	1370	470	871	11900	7010	9530
31	---	---	---	1360	190	476	---	---	---	13600	7010	8970
MONTH	16600	3470	8830	16800	190	4410	17600	220	5350	19100	1030	6960

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13600	6100	9670	13900	5740	9590	9380	5670	6780	15100	6190	10600
2	14300	6170	9830	14300	6290	9080	9930	2740	7100	15500	5420	10200
3	10300	750	3470	11600	6820	9050	5300	1700	2890	6910	4070	5320
4	6490	810	1950	9850	6030	7480	6950	2680	4320	8150	4340	6060
5	6670	1170	2980	10900	1870	7480	10100	3610	5020	16300	3510	8600
6	8510	3110	5780	3420	1440	2150	9830	3600	6330	17300	10600	14900
7	7960	1890	4720	6010	2460	3940	13100	5430	8990	16800	11000	13500
8	8280	2520	4670	5800	3260	4610	12100	7310	9670	14900	7810	11900
9	7670	2550	4570	8500	3400	5160	11700	6860	8830	17500	10900	13900
10	14400	4170	6960	8590	4610	6170	14200	3990	8770	19900	11100	16100
11	15700	8050	10600	9650	4570	6590	8630	1050	4800	17900	11300	15600
12	12300	7950	10200	11500	4710	7860	2300	520	1020	17200	9300	13600
13	14800	7870	9810	10300	4490	7820	2560	870	1590	16900	10400	13300
14	12800	7020	10000	14600	4610	7840	2170	870	1610	17500	9210	12900
15	12700	6140	8770	9420	4670	7570	12100	1930	4580	18700	12500	15000
16	13600	5910	9070	7170	5000	6220	11000	3530	5980	13800	8430	10600
17	12000	5320	9030	9960	4440	6820	12300	6410	7790	10600	4720	7820
18	10300	4880	8050	11500	7790	9710	15600	6480	8760	14700	5020	7030
19	12300	6410	8910	13800	5240	9340	12700	7180	9320	13800	5520	8380
20	9990	5380	7020	6340	1670	3390	10200	5230	7790	12200	7440	10200
21	10500	5560	7900	6130	1730	3870	9880	3900	6410	15100	7670	10300
22	7910	4260	6230	7010	2390	4290	15500	5020	6760	14300	7810	10700
23	10500	3450	6100	9900	3780	6380	8630	2840	5420	15800	9280	11400
24	10500	5280	7850	8970	5340	7060	13400	6810	8470	16900	10200	14200
25	8610	2870	5250	10300	5650	8040	12300	8180	10100	15600	7860	11800
26	6310	2180	4130	15100	5930	9610	17300	7160	9330	15900	9190	12200
27	12500	3730	9290	11800	1220	6690	13500	6130	8760	16700	11300	13700
28	14300	5540	9180	17100	660	2220	12400	6530	9180	15900	10900	13300
29	14700	6150	9480	7810	1610	3730	16800	8580	12200	15400	9290	12400
30	12500	5060	7590	6050	3480	4540	16200	6770	10200	11500	1120	2860
31	---	---	---	7650	2620	5440	15200	7510	10300	---	---	---
MONTH	15700	750	7300	17100	660	6440	17300	520	7070	19900	1120	11300

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	26.5	27.0	31.5	29.5	30.5	30.5	29.5	30.0	31.0	30.0	30.5
2	28.5	26.5	27.5	32.5	29.5	30.5	30.0	29.0	29.5	30.5	29.0	30.0
3	27.5	24.0	25.5	32.0	30.0	31.0	31.0	29.0	30.0	29.5	28.0	29.0
4	27.0	24.0	25.0	31.5	30.0	30.5	30.0	28.5	29.5	30.0	28.0	29.0
5	27.0	24.5	25.5	30.0	28.5	29.5	31.5	29.0	30.0	31.0	27.0	29.0
6	28.5	25.5	26.5	29.5	27.5	28.5	31.5	29.5	30.5	31.0	28.5	29.5
7	29.0	26.0	27.0	30.0	28.0	29.0	32.0	29.5	30.5	30.5	28.0	29.5
8	29.0	27.0	27.5	30.0	28.0	29.0	33.0	30.0	31.0	30.5	28.0	29.0
9	30.0	27.0	28.0	30.5	28.0	29.0	33.0	30.0	31.5	30.5	28.5	29.5
10	29.5	27.5	28.5	31.5	28.5	30.0	32.5	30.5	31.0	30.0	28.0	29.0
11	30.0	26.5	28.0	31.0	29.0	30.0	31.0	28.5	30.0	30.5	28.0	29.0
12	29.5	27.5	28.5	31.0	29.5	30.0	29.0	27.5	28.0	30.5	28.5	29.5
13	28.5	27.0	28.0	31.5	29.0	30.5	31.0	28.5	29.5	31.0	29.0	30.0
14	29.5	27.5	28.5	32.0	30.0	30.5	31.5	29.0	30.0	31.0	29.0	30.0
15	31.0	27.5	29.0	32.0	30.0	31.0	32.5	29.0	30.5	30.0	29.0	29.5
16	30.0	28.0	29.0	33.0	30.5	31.5	32.5	29.5	31.0	29.5	29.0	29.5
17	30.5	28.0	29.0	32.5	30.5	31.5	32.5	30.5	31.0	30.0	28.5	29.0
18	30.5	28.0	29.5	32.5	30.5	31.5	32.5	30.5	31.5	29.5	28.5	29.0
19	31.0	28.5	29.5	31.0	30.0	30.5	31.5	30.5	30.5	30.5	28.5	29.5
20	30.5	29.0	29.5	30.0	28.0	29.0	32.5	30.5	31.0	30.5	28.5	29.5
21	30.0	28.5	29.0	28.5	28.0	28.5	32.0	30.0	30.5	31.0	29.0	30.0
22	30.0	28.0	29.0	31.0	28.0	29.0	32.5	30.0	31.0	31.0	29.5	30.0
23	30.5	28.0	29.0	31.5	28.0	29.5	32.0	30.0	31.0	31.5	29.0	30.0
24	29.5	28.5	29.0	32.5	29.0	30.5	33.0	30.0	31.5	30.5	29.5	30.0
25	29.5	28.0	29.0	33.0	29.0	30.5	32.5	30.5	31.5	30.5	28.5	29.5
26	31.0	28.0	29.5	32.0	30.0	31.0	33.5	30.5	32.0	31.0	28.0	29.5
27	32.0	28.5	29.5	---	---	---	33.5	30.5	32.0	30.5	29.0	29.5
28	31.5	29.0	30.0	---	---	---	32.0	30.5	31.5	30.0	28.5	29.5
29	32.0	29.5	30.5	---	---	---	32.0	30.5	31.5	30.0	28.5	29.5
30	31.5	29.5	30.5	31.5	28.5	29.5	31.0	30.0	30.5	29.0	25.0	26.0
31	---	---	---	31.0	29.0	30.0	31.5	29.5	30.5	---	---	---
MONTH	32.0	24.0	28.5	33.0	27.5	30.0	33.5	27.5	30.5	31.5	25.0	29.5

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.9	.5	1.7	4.4	2.4	3.5	6.1	2.3	4.4	8.4	7.1	7.9
2	---	---	---	3.8	2.3	3.2	5.4	3.3	4.1	7.7	6.3	7.2
3	2.9	.3	1.8	3.9	2.1	2.9	4.9	2.5	4.0	7.2	5.4	6.5
4	3.3	.4	1.6	3.7	1.3	2.8	5.5	2.7	4.3	7.0	5.6	6.2
5	2.7	1.0	1.9	3.6	1.3	2.5	4.9	3.1	4.0	7.1	5.3	6.3
6	3.1	.3	1.8	3.8	1.7	3.0	5.2	3.4	4.4	6.6	5.4	6.1
7	3.1	.6	1.7	4.9	2.3	3.6	5.2	4.2	4.6	10.3	6.7	9.5
8	3.0	.6	1.6	5.1	3.4	4.3	5.0	2.3	4.0	9.9	8.8	9.6
9	2.7	1.0	1.7	4.6	3.0	3.8	3.7	1.6	2.8	10.0	8.0	9.0
10	3.4	.9	2.0	6.3	3.1	4.2	3.4	.4	1.9	9.6	8.9	9.3
11	3.4	.5	1.7	3.2	1.2	2.1	---	---	---	8.9	6.8	8.2
12	3.2	.6	1.7	2.9	.6	1.9	---	---	---	8.8	6.2	7.8
13	3.2	.4	1.6	3.9	1.1	2.5	---	---	---	7.9	6.8	7.4
14	3.5	.6	2.0	5.5	2.5	4.2	3.4	.9	2.0	7.8	6.1	7.0
15	4.0	1.3	2.4	6.3	5.4	5.7	---	---	---	7.3	6.1	6.9
16	4.1	1.6	3.1	---	---	---	---	---	---	7.3	6.1	6.8
17	4.8	1.5	2.7	---	---	---	3.2	.9	1.7	7.1	5.9	6.6
18	4.7	1.3	3.2	---	---	---	3.8	1.1	2.5	6.6	5.4	6.2
19	3.8	1.6	2.8	---	---	---	6.4	1.9	3.7	6.3	4.8	5.7
20	3.6	1.4	2.5	5.6	2.1	4.5	6.8	5.8	6.4	6.7	5.0	5.8
21	3.8	1.5	2.4	4.6	2.2	3.6	8.1	5.8	7.0	7.1	5.8	6.3
22	4.7	1.4	2.6	5.3	3.0	4.4	8.0	5.7	7.5	7.2	5.6	6.5
23	3.7	1.7	2.6	4.7	3.1	4.2	7.9	6.0	7.0	6.9	5.6	6.5
24	3.6	1.8	2.6	5.1	3.3	4.3	7.8	6.7	7.5	7.3	6.3	6.7
25	3.5	1.7	2.6	6.2	3.8	5.0	7.8	7.2	7.6	10.5	6.8	9.1
26	3.3	1.1	2.0	5.8	4.8	5.2	7.3	5.7	6.6	8.5	5.7	7.2
27	3.5	.8	2.1	6.9	4.2	5.4	9.5	6.3	7.7	8.2	5.2	6.8
28	3.1	.6	1.9	7.1	5.8	6.5	9.4	7.7	9.0	7.5	5.3	6.8
29	3.8	1.2	2.5	6.9	4.0	6.0	9.4	8.2	8.9	7.3	5.2	6.4
30	4.0	1.9	2.9	6.5	2.2	5.1	8.9	7.2	8.4	7.3	5.7	6.6
31	4.3	1.9	3.2	---	---	---	8.7	7.1	8.1	7.5	6.1	6.9
MONTH	4.8	.3	2.2	7.1	.6	4.0	9.5	.4	5.4	10.5	4.8	7.2

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

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	6.3	7.1	5.9	3.5	4.7	8.8	7.2	8.3	6.0	4.5	5.1
2	7.0	5.8	6.5	6.7	3.3	5.2	7.6	5.6	6.6	4.6	1.6	3.6
3	---	---	---	6.5	4.7	5.7	6.6	4.7	6.0	3.1	.8	2.2
4	5.5	4.6	5.1	5.3	2.6	4.2	5.7	1.9	4.3	4.4	2.9	3.7
5	6.2	5.1	5.7	4.8	3.2	4.1	5.4	3.5	4.4	4.3	2.4	3.8
6	6.2	4.8	5.5	5.7	3.3	4.2	6.4	4.2	5.6	4.6	2.9	3.9
7	6.9	5.1	6.3	---	---	---	6.3	4.5	5.8	4.3	3.0	3.8
8	7.2	5.7	6.3	5.1	2.8	4.0	6.5	5.1	5.9	4.4	3.1	3.7
9	6.6	4.8	5.8	3.9	2.5	3.4	6.4	4.7	5.7	3.8	2.6	3.2
10	6.7	4.6	5.8	3.9	2.5	3.1	5.6	3.4	4.8	3.7	.9	2.6
11	6.3	5.0	5.6	4.8	3.5	4.2	5.8	2.7	4.7	3.9	1.1	2.9
12	6.7	4.2	5.8	5.2	3.0	4.3	5.1	1.2	3.7	4.4	2.4	3.2
13	6.7	4.5	5.5	4.7	2.3	3.9	4.2	1.8	3.3	5.1	1.8	3.5
14	6.3	3.7	5.0	4.5	1.8	3.8	4.4	2.3	3.5	5.2	2.4	4.0
15	6.0	3.9	5.3	5.4	2.9	4.0	4.7	3.2	3.9	6.6	3.3	4.5
16	5.8	4.1	5.1	5.7	3.9	5.1	5.7	3.6	4.7	11.9	5.0	7.3
17	6.5	4.7	5.7	7.4	4.2	5.1	5.7	4.7	5.1	11.0	3.4	7.3
18	6.3	5.2	5.8	7.9	6.5	7.3	5.0	3.5	4.2	6.6	3.5	4.7
19	5.8	4.6	5.1	7.7	6.6	7.2	4.4	2.3	3.2	7.1	3.7	4.6
20	5.8	4.4	5.1	8.2	6.8	7.5	5.6	3.1	4.3	5.9	3.5	4.6
21	5.9	4.2	4.9	8.0	6.2	7.4	5.5	2.9	4.7	5.0	2.8	4.1
22	6.6	4.4	5.2	7.8	6.6	7.3	6.0	4.2	5.3	3.6	2.1	2.7
23	6.0	4.8	5.5	7.3	6.5	6.9	6.7	3.6	5.4	3.2	.4	1.7
24	6.2	4.6	5.3	7.2	5.0	6.2	6.1	4.7	5.4	3.6	.9	2.3
25	6.3	4.2	5.3	6.1	3.9	5.1	6.5	2.0	4.8	3.2	1.5	2.3
26	6.0	4.0	5.2	6.3	2.1	4.5	5.7	3.0	4.6	3.0	1.0	2.4
27	6.8	3.5	5.1	5.0	2.3	3.8	6.1	3.8	5.0	3.7	1.4	2.5
28	6.7	3.3	5.1	5.3	3.6	4.7	5.8	3.9	5.0	4.6	2.3	3.5
29	5.3	3.3	4.5	5.6	2.6	4.2	5.7	3.2	4.7	5.5	3.8	4.6
30	---	---	---	5.6	3.1	4.2	5.1	4.1	4.6	6.7	3.9	5.3
31	---	---	---	8.8	6.5	8.2	---	---	---	10.5	4.4	6.0
MONTH	7.8	3.3	5.5	8.8	1.8	5.1	8.8	1.2	4.9	11.9	.4	3.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.2	2.4	4.1	5.9	2.7	4.4	3.0	1.4	2.2	3.8	.9	1.9
2	5.7	2.6	3.6	7.7	2.5	5.0	2.1	.9	1.5	3.1	.3	1.8
3	4.9	1.6	3.3	6.3	3.5	4.7	3.2	.9	2.2	4.0	1.6	2.6
4	5.0	2.1	3.8	6.3	3.5	4.9	3.4	1.8	2.4	2.3	.8	1.9
5	4.2	1.8	3.1	4.3	.6	2.5	2.9	1.2	2.2	2.5	.6	1.8
6	3.3	1.0	2.3	3.0	1.6	2.3	3.2	1.2	2.2	2.6	.4	1.5
7	2.6	1.3	1.8	3.5	1.9	3.0	2.8	.3	1.5	2.8	.9	2.2
8	3.7	2.5	3.2	3.8	2.3	3.1	2.8	.2	1.3	3.1	1.9	2.4
9	4.2	2.7	3.5	3.7	1.3	2.8	2.6	.2	.7	2.7	1.6	2.1
10	4.3	1.5	3.2	3.3	1.2	2.3	4.9	.0	1.9	2.6	1.2	1.8
11	4.2	1.0	2.8	4.0	1.7	2.7	5.5	1.5	2.3	2.7	1.7	2.2
12	4.0	1.5	3.0	4.0	2.5	3.4	6.2	3.5	4.3	4.7	1.7	3.0
13	4.7	1.6	3.7	4.9	2.9	4.0	3.9	2.8	3.4	4.3	2.6	3.6
14	4.6	2.7	3.9	6.0	1.8	4.2	4.1	2.6	3.5	4.4	2.1	3.4
15	5.3	2.5	4.3	5.1	2.7	3.8	3.7	1.5	2.8	4.0	1.8	3.3
16	5.6	2.5	4.4	5.9	2.4	4.5	3.2	.2	2.1	4.7	3.7	4.3
17	5.4	2.3	4.0	6.5	1.5	4.4	3.0	.2	1.9	5.3	4.1	4.6
18	5.1	2.8	3.9	4.7	2.1	3.3	3.9	.2	2.1	5.0	2.0	3.9
19	6.1	2.7	4.0	4.4	1.1	2.9	4.5	1.3	3.1	4.6	1.6	3.6
20	7.9	3.6	5.4	2.0	.8	1.4	5.1	2.7	4.0	3.8	1.7	3.0
21	6.5	2.5	4.0	2.2	1.1	1.5	4.9	.2	2.7	3.5	1.2	2.8
22	3.8	1.8	2.7	2.2	1.1	1.7	4.0	.2	2.3	3.5	1.7	2.4
23	3.4	1.3	2.4	2.3	1.3	1.9	4.6	2.1	3.1	3.0	1.0	2.3
24	3.3	1.5	2.5	2.8	.9	2.0	3.5	1.0	2.4	2.9	.9	1.8
25	3.6	1.8	2.6	3.5	1.1	2.1	3.5	.4	1.8	2.8	1.3	2.2
26	3.4	1.4	2.5	3.2	1.1	2.4	4.3	.6	2.8	4.3	1.7	3.0
27	2.9	.5	1.7	4.4	1.7	2.6	5.6	1.5	3.8	3.9	1.2	2.8
28	2.7	.4	1.8	3.9	1.3	2.7	6.7	2.8	4.7	3.7	1.9	3.1
29	3.5	.8	2.2	2.7	1.0	1.9	6.7	2.0	4.1	5.2	1.8	3.5
30	5.9	3.1	4.6	2.5	1.1	1.8	3.8	.9	2.7	5.0	.9	3.3
31	---	---	---	2.7	1.0	1.6	3.1	.7	2.0	---	---	---
MONTH	7.9	.4	3.3	7.7	.6	3.0	6.7	.0	2.6	5.3	.3	2.7

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.--52 years, 135 ft³/s (97,810 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 and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 2	1515	*8,290	*37.98	Mar. 17	2000	7,930	37.63

Minimum daily discharge, 87 ft³/s Oct. 5, 11, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	112	94	159	118	95	231	153	100	104	162	117
2	90	124	98	112	108	1300	148	116	104	108	187	136
3	90	121	100	111	94	272	116	108	895	157	153	308
4	91	121	98	113	94	108	112	99	154	424	111	125
5	87	117	96	99	134	99	105	96	199	500	114	106
6	89	115	109	237	130	99	100	95	110	148	112	109
7	89	114	133	945	98	96	99	95	98	107	112	103
8	88	135	98	153	97	111	97	100	96	103	130	101
9	92	373	95	118	96	135	96	101	96	99	158	103
10	89	118	88	110	94	94	97	99	96	98	411	102
11	87	105	91	107	95	94	97	98	95	101	1390	108
12	89	104	91	115	94	95	97	108	94	100	480	146
13	87	104	92	125	93	91	95	102	96	98	134	124
14	89	101	96	99	95	95	95	98	104	98	152	106
15	89	220	96	102	96	96	98	97	98	118	133	162
16	93	1100	96	280	94	95	152	100	100	113	109	201
17	94	180	93	208	94	1650	160	100	107	101	118	237
18	96	108	89	115	166	888	106	100	100	104	110	110
19	98	101	895	113	109	155	96	99	99	242	155	103
20	99	102	451	103	92	111	96	99	375	260	116	101
21	96	98	2180	97	95	108	98	457	366	362	110	102
22	96	98	311	97	97	103	98	166	213	196	125	101
23	187	99	147	96	93	101	98	118	185	106	140	102
24	133	98	158	101	90	101	97	102	109	106	135	165
25	129	893	135	99	90	99	98	99	432	115	117	126
26	124	163	156	98	91	101	95	98	142	169	115	102
27	116	317	762	96	91	535	95	99	115	129	122	103
28	111	158	218	96	95	127	95	95	104	261	117	102
29	110	104	127	94	96	105	1490	98	103	125	138	260
30	115	113	109	97	---	1730	768	98	100	284	243	737
31	117	---	128	96	---	798	---	125	---	137	145	---
TOTAL	3152	5816	7530	4591	2929	9687	5325	3618	5085	5173	6054	4608
MEAN	102	194	243	148	101	312	177	117	169	167	195	154
MAX	187	1100	2180	945	166	1730	1490	457	895	500	1390	737
MIN	87	98	88	94	90	91	95	95	94	98	109	101
AC-FT	6250	11540	14940	9110	5810	19210	10560	7180	10090	10260	12010	9140

CAL YR 1987 TOTAL 95585 MEAN 262 MAX 8040 MIN 87 AC-FT 189600
WTR YR 1988 TOTAL 63568 MEAN 174 MAX 2180 MIN 87 AC-FT 126100

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. Sediment analyses: November 1969 to August 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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												
29...	1435	92	811	8.40	26.0	2	5.1	16.6	204	5.5	K12	K4
JUL												
26...	1325	201	648	8.50	31.5	14	22	14.4	197	2.6	K11	K12

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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												
29...	150	0	46	9.6	100	4	7.6	220	40	89	0.50	24
JUL												
26...	130	0	40	7.3	82	3	6.0	171	33	69	0.50	20

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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												
29...	449	15	5	3.60	1.30	4.90	3.10	1.7	4.8	4.80	9.9	3
JUL												
26...	361	50	14	2.70	1.80	4.50	0.800	1.3	2.1	1.90	11	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											
29...	140	1	2	3	6	<5	25	0.2	2	<1.0	21
JUL											
26...	120	2	2	4	15	<5	3	<0.1	1	<1.0	24

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											
29...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.30	<0.1
JUL											
26...	<0.10	0.10	<0.10	<0.5	0.3	<0.1	<0.10	<0.5	<0.50	0.20	<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 2.1 acre-ft of ground water was used for cooling purposes then released to the Bayou about 200 ft upstream from this station. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1965-78, 1980-88), 29.9 ft³/s (21,660 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 and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Mar. 2	1645	*1,320	*44.65	No other peaks greater than base discharge.			

Minimum daily discharge, 7.1 ft³/s June 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	9.9	12	15	13	9.9	32	20	10	10	12	14
2	15	9.5	11	13	10	304	20	15	10	7.6	20	15
3	14	9.5	11	13	11	92	15	14	86	7.8	18	41
4	14	10	11	13	9.8	20	13	15	17	20	13	18
5	13	9.8	10	13	11	14	13	13	11	31	11	13
6	14	9.5	11	15	11	13	14	14	8.1	15	10	13
7	13	9.6	11	87	10	13	12	12	7.8	11	10	13
8	12	10	10	17	10	12	13	12	7.6	10	11	13
9	13	14	9.6	14	10	13	14	13	7.6	12	10	12
10	12	12	9.9	13	9.6	13	13	17	7.6	12	10	12
11	11	11	9.8	13	9.5	12	12	14	8.1	12	17	13
12	11	11	10	13	9.7	13	12	13	7.8	11	15	15
13	11	11	10	13	10	13	12	13	7.8	9.4	12	21
14	11	11	9.8	12	10	12	12	13	8.3	9.5	12	15
15	13	13	10	12	11	12	12	13	8.6	9.4	11	14
16	12	87	10	25	10	13	15	13	8.3	9.1	14	15
17	11	26	10	23	10	208	15	14	7.1	9.3	11	16
18	10	12	9.6	14	11	164	13	14	7.3	9.0	10	14
19	9.5	11	29	11	11	25	13	13	7.6	17	11	14
20	10	10	30	9.9	11	15	12	12	7.4	73	12	13
21	11	11	312	9.9	11	14	12	32	8.7	40	12	15
22	11	11	48	10	11	13	11	13	8.6	17	10	16
23	12	11	15	10	10	13	12	10	8.0	11	11	14
24	12	11	14	9.9	10	13	11	9.3	7.9	9.7	12	21
25	12	188	14	10	10	13	11	10	18	9.4	11	18
26	11	39	14	9.6	9.7	14	11	10	8.9	9.7	12	14
27	10	25	133	9.3	11	13	11	9.6	8.2	15	11	14
28	9.8	20	31	9.8	11	13	11	9.6	11	27	11	13
29	10	14	14	9.7	9.9	16	109	9.9	11	11	11	15
30	9.8	14	12	9.9	---	201	100	9.9	11	14	12	51
31	10	---	14	12	---	126	---	10	---	12	15	---
TOTAL	364.1	650.8	865.7	469.0	302.2	1439.9	586	410.3	352.3	480.9	378	505
MEAN	11.7	21.7	27.9	15.1	10.4	46.4	19.5	13.2	11.7	15.5	12.2	16.8
MAX	16	188	312	87	13	304	109	32	86	73	20	51
MIN	9.5	9.5	9.6	9.3	9.5	9.9	11	9.3	7.1	7.6	10	12
AC-FT	722	1290	1720	930	599	2860	1160	814	699	954	750	1000

CAL YR 1987 TOTAL 13568.3 MEAN 37.2 MAX 1450 MIN 8.1 AC-FT 26910
WTR YR 1988 TOTAL 6804.2 MEAN 18.6 MAX 312 MIN 7.1 AC-FT 13500

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.--Records good except those for estimated daily discharges, which are poor. 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 telemeter at station.

AVERAGE DISCHARGE.--36 years, 88.3 ft³/s (63,970 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s Aug. 18, 1983, Hurricane Alicia (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 and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 17	2400	*1,410	*17.99				

Minimum daily discharge, 38 ft³/s Feb. 21, June 12, July 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	44	51	54	55	42	122	81	51	47	58	68
2	64	46	48	46	54	422	80	65	49	43	88	72
3	61	51	45	42	49	e400	70	61	234	38	68	181
4	56	54	45	43	46	76	62	61	142	47	60	73
5	53	47	42	50	55	70	62	59	60	88	51	54
6	59	48	49	58	60	67	64	61	51	84	46	50
7	60	49	51	266	49	61	60	52	57	59	43	54
8	57	52	46	82	50	70	59	57	49	45	48	52
9	61	59	42	61	53	65	59	59	47	50	53	48
10	56	53	49	56	49	63	56	64	49	51	53	46
11	51	49	51	55	48	59	55	66	41	48	69	44
12	55	46	49	54	48	57	57	63	38	50	98	48
13	54	47	47	56	48	54	57	56	40	45	67	58
14	56	48	48	48	49	53	57	47	45	43	53	57
15	59	51	43	48	51	58	55	46	43	53	46	66
16	51	251	40	78	52	56	61	47	45	45	56	66
17	47	114	42	92	54	312	70	49	42	41	53	75
18	48	56	45	e55	60	647	59	51	41	41	50	51
19	46	51	91	e52	45	109	60	50	38	56	51	51
20	58	45	137	e50	44	69	58	49	40	111	50	53
21	53	43	657	e49	38	64	57	92	47	132	50	51
22	49	47	248	e48	47	64	55	57	45	76	48	48
23	64	48	79	e48	46	61	55	52	47	60	54	55
24	62	47	61	e47	43	60	52	52	43	53	55	62
25	54	359	57	e47	43	62	51	50	127	52	51	68
26	54	139	52	e46	42	60	53	48	52	58	53	50
27	51	75	254	e46	40	58	54	44	44	84	51	44
28	49	69	136	e45	41	55	53	45	50	78	43	52
29	48	50	66	e55	43	64	206	44	49	67	54	78
30	46	53	56	47	---	262	308	45	47	58	54	158
31	45	---	54	47	---	471	---	49	---	65	57	---
TOTAL	1696	2191	2781	1871	1402	4091	2227	1722	1753	1868	1731	1933
MEAN	54.7	73.0	89.7	60.4	48.3	132	74.2	55.5	58.4	60.3	55.8	64.4
MAX	69	359	657	266	60	647	308	92	234	132	98	181
MIN	45	43	40	42	38	42	51	44	38	38	43	44
AC-FT	3360	4350	5520	3710	2780	8110	4420	3420	3480	3710	3430	3830

CAL YR 1987 TOTAL 46690 MEAN 128 MAX 3720 MIN 30 AC-FT 92610
WTR YR 1988 TOTAL 25266 MEAN 69.0 MAX 657 MIN 38 AC-FT 50120

e Estimated.

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 1987 TO SEPTEMBER 1988

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 (FTU)	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 29...	1345	41	1520	7.80	23.5	13	17	6.0	71	6.3	7300	300
JUL 26...	1145	57	1000	7.90	30.5	17	24	5.7	77	3.0	20000	190

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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 29...	150	0	44	9.4	260	10	8.6	176	360	120	0.90	18
JUL 26...	140	0	42	8.4	150	6	8.5	172	130	110	0.60	18

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 29...	927	35	1	8.10	0.600	8.70	0.560	1.4	2.0	3.50	12	2
JUL 26...	571	56	20	5.10	1.40	6.50	0.530	1.2	1.7	1.70	7.9	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)
FEB 29...	97	<1	<1	3	7	<5	55	<0.1	1	<1.0	21
JUL 26...	86	4	<1	4	12	<5	41	<0.1	1	<1.0	29

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 29...	<0.10	0.10	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	0.10	<0.1
JUL 26...	--	--	--	--	--	--	--	--	--	--	--

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 telemeter 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, 8.40 ft Nov. 25 at 0930 hours; minimum, 3.80 ft July 29, Aug. 16, 27.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.35	3.97	5.44	4.05	4.61	3.93	5.20	4.15	5.22	3.98	5.27	3.90
2	5.55	3.90	5.35	4.15	4.98	3.93	5.08	4.02	5.35	3.95	8.35	4.35
3	5.31	3.88	5.45	4.02	4.98	3.93	5.57	4.12	4.74	3.93	5.90	4.05
4	5.38	3.92	5.60	3.90	4.92	3.93	5.32	4.05	4.71	3.88	4.52	3.92
5	5.32	3.90	5.63	3.88	5.60	4.02	5.17	4.00	4.62	3.94	5.07	3.89
6	4.85	3.89	5.10	4.17	6.36	4.43	5.77	4.58	5.10	3.96	4.77	3.88
7	5.00	3.83	6.17	4.50	6.57	4.07	6.63	4.28	5.25	4.22	---	---
8	5.05	3.88	6.04	4.13	5.31	4.03	4.58	4.13	4.95	3.88	5.42	4.02
9	5.35	4.03	5.92	3.90	5.40	3.98	4.85	4.14	4.95	4.01	4.65	4.02
10	5.45	3.90	4.04	3.83	5.42	4.05	4.41	4.02	5.32	3.89	4.48	4.01
11	5.25	3.88	4.44	3.89	5.28	4.00	5.10	4.02	5.22	3.91	5.92	3.99
12	4.80	3.90	4.98	3.88	5.12	4.03	5.10	4.10	4.33	3.88	5.23	4.03
13	5.30	3.91	5.04	3.93	5.50	4.65	4.75	3.93	4.71	3.85	4.80	4.02
14	5.70	4.07	5.20	3.98	6.06	4.03	5.34	3.98	5.02	3.87	4.22	4.02
15	5.97	4.07	5.93	4.40	4.06	3.95	5.20	3.94	4.58	3.90	4.90	4.05
16	5.48	4.14	6.83	5.00	4.88	3.97	5.78	3.94	5.15	3.89	5.65	4.17
17	5.38	3.94	5.28	4.07	5.35	4.03	5.78	4.02	5.87	4.19	9.65	5.07
18	4.90	3.89	5.76	4.36	5.98	4.10	5.38	3.95	6.57	4.40	7.00	4.35
19	5.12	3.95	5.63	3.96	6.42	4.38	5.87	4.08	4.92	3.93	4.35	4.22
20	5.10	4.04	5.05	3.96	6.10	4.18	5.63	3.97	4.93	3.92	4.41	4.14
21	5.77	3.95	5.66	3.98	8.12	4.95	4.44	3.97	4.92	3.88	4.46	4.09
22	5.98	4.55	5.90	4.07	5.67	4.17	4.42	3.94	5.17	3.87	4.85	4.09
23	6.19	4.70	5.98	3.94	5.67	4.13	4.49	3.96	4.81	3.90	5.40	4.08
24	6.00	4.43	5.62	3.97	5.93	4.22	4.54	3.97	5.10	3.87	5.67	4.08
25	6.02	3.96	8.40	4.48	5.67	4.41	4.05	3.88	5.11	3.87	5.38	4.11
26	5.60	3.94	5.83	4.05	5.64	4.03	4.17	3.95	4.97	3.85	5.30	4.07
27	5.29	3.87	5.63	4.30	4.63	3.98	4.20	3.90	4.68	3.83	5.20	4.07
28	5.18	3.90	4.37	4.03	4.30	4.05	4.69	3.88	4.62	3.85	---	4.31
29	5.51	3.92	5.16	4.02	4.20	4.03	5.05	3.88	4.55	3.90	---	---
30	5.59	3.92	4.97	4.04	5.37	4.09	5.37	3.98	---	---	---	---
31	5.50	3.92	---	---	5.38	4.09	5.25	3.92	---	---	---	---
MONTH	6.19	3.83	8.40	3.83	8.12	3.93	6.63	3.88	6.57	3.83	---	---

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

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.18	4.32	6.13	4.02	5.47	3.92	5.56	4.08	5.64	4.40
2	---	4.37	6.42	4.41	5.42	3.92	5.38	3.92	6.05	4.28	6.16	4.31
3	5.57	4.27	5.84	4.08	6.03	4.22	5.33	3.93	5.25	4.05	6.84	4.41
4	6.08	4.39	4.89	3.89	6.55	4.07	5.34	3.93	5.33	4.11	5.75	3.94
5	5.62	4.10	5.10	3.91	6.00	4.23	5.43	4.02	5.07	3.98	5.40	3.93
6	4.68	4.03	5.31	3.90	5.32	4.01	5.98	4.58	5.05	3.93	5.67	4.00
7	5.08	4.06	5.93	3.90	4.97	3.91	6.21	4.52	4.77	3.93	5.67	4.03
8	5.10	4.06	5.92	4.12	5.10	3.96	6.52	4.52	4.36	3.92	5.65	4.38
9	5.03	4.03	5.41	3.92	5.03	3.94	6.50	4.61	4.90	3.93	5.96	4.26
10	4.60	4.07	5.04	3.89	5.17	3.94	5.95	4.11	5.41	3.91	5.52	4.66
11	4.10	4.06	5.00	3.95	5.25	3.94	5.95	4.02	5.87	3.90	5.37	4.19
12	4.09	4.05	5.12	4.02	5.51	3.91	5.99	4.14	5.25	3.90	5.61	4.47
13	4.38	4.07	5.42	3.94	5.95	3.98	5.72	4.07	5.32	3.87	5.61	4.47
14	4.68	4.10	5.00	3.91	6.32	4.16	5.77	4.06	5.38	4.06	5.57	4.14
15	4.96	4.08	5.04	3.92	5.95	4.07	5.62	4.02	5.23	4.17	6.47	5.25
16	5.36	4.11	4.99	3.89	5.43	3.89	5.23	4.95	4.55	3.80	7.18	5.96
17	5.99	4.30	4.87	3.87	5.25	3.88	4.87	3.91	4.92	3.83	7.59	5.94
18	5.84	4.12	4.84	3.86	5.04	3.86	5.00	3.93	4.91	3.82	7.46	4.83
19	4.85	4.05	5.03	3.83	5.15	3.87	5.89	4.01	4.87	3.83	6.35	4.09
20	5.66	4.08	5.24	3.87	5.34	3.95	6.95	4.08	4.83	3.83	5.75	3.92
21	5.90	4.12	5.05	4.00	5.52	4.19	4.65	4.02	4.85	3.82	5.64	3.92
22	5.62	4.10	4.44	3.91	5.65	4.42	4.62	3.95	4.94	3.82	5.55	3.92
23	5.45	4.03	4.45	3.88	5.51	4.36	4.66	3.92	4.94	3.85	5.35	3.92
24	5.47	4.03	4.23	3.89	5.78	4.33	4.82	3.92	4.78	3.84	5.54	3.92
25	5.09	4.06	4.47	3.92	6.63	4.45	4.82	3.88	5.18	3.82	5.17	4.02
26	5.29	4.05	5.49	4.00	5.53	4.15	4.92	3.89	5.28	3.82	5.38	3.91
27	5.03	4.05	5.13	4.01	5.28	3.98	5.72	3.90	5.45	3.80	5.25	3.90
28	5.72	4.33	5.73	3.99	5.17	3.95	5.14	3.91	5.64	3.91	5.24	3.90
29	8.69	4.90	6.30	4.56	5.61	3.92	5.38	3.80	5.30	3.98	6.56	4.61
30	7.52	5.02	6.68	4.62	5.63	3.92	5.32	3.84	5.35	3.85	6.42	4.34
31	---	---	6.60	4.72	---	---	5.58	3.87	5.50	3.92	---	---
MONTH	---	---	6.68	3.83	6.63	3.86	6.95	3.80	6.05	3.80	7.59	3.90

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.--8.26 mi². Prior to Jan. 1, 1978, 8.21 mi². Jan. 1 to Sept. 30, 1978, 7.61 mi². Oct. 1, 1978, to Sept. 30, 1987, 7.32 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.--No estimated daily discharges. Records fair. Low flow is sustained by sewage effluent. Gage-height telemeter at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 16.3 ft³/s (11,810 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)
Mar. 17	1915	*1,000	*12.48				

Minimum daily discharge, 0.12 ft³/s June 14, 15, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	.82	3.9	8.3	2.7	.29	2.4	2.0	.23	.29	1.8	2.8
2	.60	.88	3.3	3.2	2.9	72	1.2	.77	.22	.62	7.9	10
3	.74	.81	1.4	3.1	2.8	4.7	.75	.48	33	.39	4.1	98
4	.48	.74	1.1	3.0	2.7	.73	.89	.62	12	.61	26	4.7
5	.52	.66	1.1	2.8	6.8	.42	.58	.40	6.0	.75	4.8	2.2
6	.58	.62	8.1	12	3.3	.38	.57	.32	1.3	3.8	2.2	2.2
7	1.3	.68	5.7	37	2.6	.44	.35	.55	.63	3.0	1.8	2.0
8	1.4	.82	1.5	3.5	1.7	3.4	.34	.35	.39	1.6	2.2	2.5
9	1.7	.87	1.3	3.0	.91	1.4	.29	.44	.30	1.2	2.4	2.8
10	1.2	.78	1.3	2.8	1.1	.64	.38	.42	.60	1.3	3.2	2.5
11	1.0	.89	1.2	2.7	1.4	.32	.66	.35	.18	.77	3.2	2.3
12	.90	.82	.97	2.6	.88	.28	.53	.57	.14	.70	2.8	2.8
13	1.3	1.0	1.1	2.6	.76	.26	.43	.38	.15	.83	2.9	3.2
14	1.5	1.1	1.1	2.4	.89	.28	.56	.60	.12	1.2	3.5	1.7
15	1.3	2.1	1.1	2.5	1.8	.29	.72	.41	.12	1.6	2.1	4.2
16	1.2	53	2.1	13	1.4	.18	4.9	.53	.15	1.0	2.5	3.5
17	.99	2.8	1.6	4.2	3.0	110	4.2	.30	.29	.84	2.4	4.0
18	.60	1.3	2.3	2.7	4.9	21	1.3	.52	.12	.90	2.2	1.7
19	.74	1.2	23	5.9	1.7	2.1	.75	.95	.12	1.4	1.8	1.4
20	8.9	1.3	5.4	3.1	.72	.80	.43	1.0	7.4	60	1.9	1.3
21	1.2	1.1	136	2.7	.58	.46	.38	12	1.1	4.4	1.8	1.3
22	.93	.97	7.3	2.5	.42	.46	.32	1.1	.28	1.6	1.6	1.4
23	2.6	1.1	3.5	2.3	.38	.37	.74	.63	.23	1.3	8.8	1.5
24	2.6	1.5	3.1	2.2	.38	.39	.76	.47	.15	1.2	1.4	18
25	1.3	103	2.8	2.4	.33	.44	.46	.32	9.1	1.3	2.1	5.7
26	.95	4.7	2.7	2.3	.33	.63	.45	.27	20	4.2	1.8	2.0
27	1.3	14	15	2.3	.33	.58	.47	.20	4.4	9.6	2.2	1.4
28	1.2	4.1	3.8	2.4	.31	.37	1.1	.15	1.4	6.1	2.3	1.3
29	.81	2.8	2.9	2.5	.29	2.0	74	.46	.58	2.5	1.9	66
30	.74	3.1	2.7	2.6	---	90	26	.23	.35	2.0	2.4	42
31	.74	---	3.7	2.4	---	21	---	.24	---	2.1	2.2	---
TOTAL	42.03	209.56	252.07	147.0	48.31	336.61	126.91	28.03	101.05	119.10	110.2	296.4
MEAN	1.36	6.99	8.13	4.74	1.67	10.9	4.23	.90	3.37	3.84	3.55	9.88
MAX	8.9	103	136	37	6.8	110	74	12	33	60	26	98
MIN	.48	.62	.97	2.2	.29	.18	.29	.15	.12	.29	1.4	1.3
AC-FT	83	416	500	292	96	668	252	56	200	236	219	588

CAL YR 1987 TOTAL 5513.88 MEAN 15.1 MAX 865 MIN .08 AC-FT 10940
WTR YR 1988 TOTAL 1817.27 MEAN 4.97 MAX 136 MIN .12 AC-FT 3600

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.--16.1 mi². Prior to Oct. 1, 1973, 16.8 mi². Oct. 1, 1973, to Sept. 30, 1978, 14.7 mi². Oct. 1, 1978, to Sept. 30, 1987, 15.8 mi². Changes due to storm sewer relocations and addition or relocation of ditches.

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 fair except those for estimated daily discharges, which are poor. 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.--24 years, 23.6 ft³/s (17,100 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 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 17	2200	*542	*28.55				

Minimum daily discharge, 2.4 ft³/s June 19, July 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	4.1	6.7	12	6.7	5.2	30	11	4.5	2.4	5.0	e3.5
2	4.6	4.2	5.3	8.3	7.5	160	20	8.2	4.0	2.8	10	e4.5
3	4.5	4.0	3.9	7.5	7.0	76	14	7.4	35	3.8	8.6	e25
4	4.5	4.2	e5.0	7.3	6.7	16	12	6.6	60	17	32	e7.0
5	4.5	4.9	e6.0	7.2	14	12	11	6.4	13	10	7.5	e6.0
6	4.5	4.3	e10	22	12	10	10	6.2	5.9	5.4	4.8	e6.5
7	4.5	4.2	e22	117	6.7	9.0	9.3	6.1	3.6	3.7	4.0	e5.5
8	4.7	4.3	e5.6	21	6.4	13	9.0	6.3	3.4	3.5	3.7	e5.0
9	4.4	5.3	e5.0	13	6.2	9.5	8.6	6.0	3.1	2.9	3.6	e4.8
10	4.1	4.6	e4.8	10	6.4	8.3	8.3	5.8	3.1	2.5	4.1	e4.5
11	4.2	4.8	e4.8	9.2	7.0	7.9	8.1	5.7	3.4	2.8	16	e4.5
12	4.0	4.7	e4.8	10	6.1	7.4	8.0	6.3	3.6	2.9	71	e6.0
13	4.3	4.5	e4.6	12	6.0	6.2	7.8	5.9	2.8	2.7	29	e5.0
14	4.2	4.1	e4.3	8.6	6.0	6.3	7.7	5.6	4.0	2.7	6.4	4.4
15	4.1	4.9	e4.3	7.9	6.1	8.6	7.4	5.5	5.5	3.4	7.5	e4.2
16	4.1	97	e4.3	23	6.0	6.1	11	5.3	3.0	6.0	4.8	e4.2
17	4.1	13	e4.5	18	5.8	119	11	6.0	2.6	4.0	4.1	e7.0
18	4.1	5.0	e6.0	11	15	148	7.6	5.5	2.6	3.8	e4.0	e6.0
19	4.0	3.9	e70	11	8.8	18	7.2	5.6	2.4	4.1	e6.0	e5.5
20	4.0	3.5	e90	8.4	6.2	11	7.1	5.3	7.9	7.0	e5.0	e5.0
21	4.1	3.7	e170	7.4	5.7	8.9	6.8	58	8.9	12	e4.7	e4.8
22	4.1	3.3	33	6.9	5.4	7.8	6.7	14	3.8	3.7	e4.5	e4.6
23	8.9	3.4	14	7.0	5.6	7.3	e6.5	6.3	3.4	3.5	e4.2	e4.4
24	5.7	3.5	14	6.7	5.5	7.1	e6.4	5.1	2.9	3.5	e4.0	e5.0
25	4.9	79	12	6.6	5.2	6.8	6.2	4.6	17	3.6	e4.5	e6.0
26	4.7	13	11	6.6	5.0	6.5	6.0	4.6	4.5	7.8	e4.3	e5.0
27	4.9	18	85	6.4	5.2	6.2	5.8	4.3	2.9	66	e4.1	e4.5
28	4.2	9.0	26	6.4	5.3	5.9	5.6	4.0	2.8	65	e4.0	e4.4
29	4.6	5.4	12	6.5	5.3	6.5	71	4.0	2.7	11	4.8	e4.4
30	4.2	5.8	9.6	6.4	---	117	43	5.3	2.5	5.4	e4.5	e130
31	4.1	---	10	6.5	---	124	---	4.2	---	6.1	e4.1	---
TOTAL	141.0	333.6	668.5	417.8	200.8	961.5	379.1	241.1	224.8	281.0	284.8	297.2
MEAN	4.55	11.1	21.6	13.5	6.92	31.0	12.6	7.78	7.49	9.06	9.19	9.91
MAX	8.9	97	170	117	15	160	71	58	60	66	71	130
MIN	4.0	3.3	3.9	6.4	5.0	5.2	5.6	4.0	2.4	2.4	3.6	3.5
AC-FT	280	662	1330	829	398	1910	752	478	446	557	565	589

CAL YR 1987 TOTAL 8828.1 MEAN 24.2 MAX 1140 MIN 3.2 AC-FT 17510
WTR YR 1988 TOTAL 4431.2 MEAN 12.1 MAX 170 MIN 2.4 AC-FT 8790

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.

INSTRUMENTATION.--Stage-activated water sampler from July 1983 to September 1988 provided water-quality samples over selected runoff events.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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 29...	1025	5.0	825	7.50	20.0	27	26	2.7	30	6.5	580	600

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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 29...	200	0	58	13	94	3	5.6	215	62	83	0.60	15

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
FEB 29...	460	11	4	2.83	0.370	3.20	2.00	1.8	3.8	1.70	15	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)
FEB 29...	100	<1	<1	3	18	<5	78	<0.1	<1	<1.0	25

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 29...	<0.10	0.40	<0.10	<2.0	<0.1	<0.1	<0.10	<2.0	<2.0	2.5	<0.1

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.-- Records good except those for estimated daily discharges, which are poor. 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 2,060 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.--22 years (water years 1966-80, 1982-1988), 35.7 ft³/s (25,860 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)
Aug. 11	1630	*1,380	*80.17				

Minimum daily discharge, 11 ft³/s for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	18	e37	23	15	25	17	12	12	14	13
2	14	15	19	e21	17	122	19	13	12	12	19	14
3	14	14	18	e19	16	48	16	12	133	12	33	16
4	14	15	18	e19	24	e30	15	11	28	e30	16	16
5	15	15	17	e19	54	e22	14	11	15	e25	13	14
6	14	15	50	e27	32	e19	15	12	12	e50	13	14
7	14	14	61	e100	19	e18	14	12	12	e22	14	13
8	14	16	22	e31	17	e20	13	12	12	14	12	13
9	14	40	18	e27	23	e20	12	12	12	13	12	13
10	14	21	17	e23	18	e19	12	12	11	12	12	14
11	14	16	16	e21	16	e18	13	12	12	11	334	14
12	14	14	14	e19	15	e17	12	12	11	11	101	61
13	13	13	14	21	16	e16	12	12	11	12	22	36
14	13	13	13	17	17	e16	12	12	12	13	17	17
15	14	39	12	15	17	e16	12	12	12	15	17	23
16	14	122	12	28	15	e15	13	12	12	18	14	25
17	15	38	13	28	16	e200	17	12	12	14	14	23
18	15	18	13	17	52	e150	14	12	13	13	17	16
19	14	15	135	17	24	e35	12	13	14	13	31	15
20	14	15	71	16	17	e20	12	13	14	144	17	15
21	13	15	163	16	16	e16	12	100	15	50	28	14
22	13	17	42	17	15	13	12	24	13	18	17	14
23	23	17	28	16	16	13	12	14	12	15	15	13
24	19	16	25	16	15	12	12	12	12	12	21	14
25	16	301	e26	16	15	13	12	11	21	12	16	18
26	14	42	e33	16	16	12	12	12	15	12	15	14
27	13	77	e100	18	16	12	12	12	12	12	14	13
28	16	32	e35	21	15	11	12	12	12	15	14	13
29	15	19	e27	15	16	12	63	13	12	13	15	15
30	14	17	e25	16	---	146	47	12	12	13	18	45
31	15	---	e25	16	---	77	---	12	---	13	15	---
TOTAL	452	1036	1100	705	588	1173	490	480	518	651	930	558
MEAN	14.6	34.5	35.5	22.7	20.3	37.8	16.3	15.5	17.3	21.0	30.0	18.6
MAX	23	301	163	100	54	200	63	100	133	144	334	61
MIN	13	13	12	15	15	11	12	11	11	11	12	13
AC-FT	897	2050	2180	1400	1170	2330	972	952	1030	1290	1840	1110

CAL YR 1987 TOTAL 12523 MEAN 34.3 MAX 720 MIN 12 AC-FT 24840
WTR YR 1988 TOTAL 8681 MEAN 23.7 MAX 334 MIN 11 AC-FT 17220

e Estimated.

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 Co. effluent, which is obtained from ground-water sources. Gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years, 65.5 ft³/s (47,450 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)
Aug. 11	1830	*2,230	*56.67				

Minimum daily discharge, 16 ft³/s Aug. 6, 10, Sept. 7, 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	21	25	76	37	25	98	37	27	21	62	20
2	25	21	e25	36	35	432	70	27	27	25	40	18
3	24	21	e23	31	27	159	46	24	266	37	54	24
4	22	21	e25	30	37	49	38	23	117	42	31	20
5	23	22	e25	30	115	38	36	22	62	29	18	17
6	22	21	e90	46	83	34	35	22	26	63	16	17
7	22	20	e130	e500	35	32	33	22	24	103	17	16
8	23	20	e50	e94	31	39	33	23	23	28	18	17
9	23	69	e33	e50	44	38	29	22	23	22	18	16
10	22	33	25	e40	34	34	29	22	22	23	16	16
11	22	23	23	e43	31	34	28	21	22	23	695	17
12	22	21	21	e45	27	29	25	23	21	25	452	120
13	21	20	20	e52	27	28	25	22	21	23	54	111
14	21	18	21	e40	28	28	25	21	21	23	31	29
15	22	48	19	e35	30	30	28	20	24	23	31	48
16	23	385	20	e60	26	29	28	20	22	30	26	53
17	22	92	22	e90	25	538	36	21	21	23	24	41
18	23	30	23	e60	143	511	27	21	22	21	27	23
19	22	22	516	e44	55	63	23	22	23	22	55	21
20	21	21	288	e37	31	38	24	23	36	320	28	20
21	21	21	650	e34	26	31	22	307	37	190	40	20
22	20	22	124	31	26	29	25	73	31	34	28	20
23	33	23	52	28	27	28	24	33	25	24	24	19
24	30	21	58	28	27	28	23	28	22	21	30	19
25	23	795	42	27	25	28	23	27	60	20	26	25
26	22	110	58	28	26	25	22	26	32	20	22	21
27	21	168	384	27	26	24	22	27	23	22	21	18
28	23	70	98	28	25	23	23	26	20	30	21	18
29	23	29	47	27	26	25	166	26	20	22	22	19
30	21	25	36	27	---	452	165	27	20	19	26	127
31	21	---	41	28	---	452	---	26	---	19	20	---
TOTAL	709	2233	3014	1752	1135	3353	1231	1084	1140	1347	1993	970
MEAN	22.9	74.4	97.2	56.5	39.1	108	41.0	35.0	38.0	43.5	64.3	32.3
MAX	33	795	650	500	143	538	166	307	266	320	695	127
MIN	20	18	19	27	25	23	22	20	20	19	16	16
AC-FT	1410	4430	5980	3480	2250	6650	2440	2150	2260	2670	3950	1920

CAL YR 1987 TOTAL 33020 MEAN 90.5 MAX 2150 MIN 17 AC-FT 65500
WTR YR 1988 TOTAL 19961 MEAN 54.5 MAX 795 MIN 16 AC-FT 39590

e Estimated.

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 1987 TO SEPTEMBER 1988

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 (FTU)	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 29...	0905	26	961	8.20	20.0	15	22	7.3	80	4.3	2400	700
JUL 26...	0755	21	735	8.40	27.5	17	27	6.0	76	3.3	3000	1700

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET 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 29...	210	13	69	9.7	120	4	7.8	200	94	120	0.40	26
JUL 26...	140	0	44	6.2	97	4	7.8	167	42	93	0.30	22

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 29...	567	45	3	4.73	0.270	5.00	0.250	1.0	1.3	4.20	8.6	8
JUL 26...	413	57	23	3.36	0.140	3.50	0.110	1.3	1.4	2.70	7.5	8

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 29...	270	<1	<1	3	8	<5	91	<0.1	2	<1.0	13
JUL 26...	210	4	<1	4	15	<5	12	<0.1	1	<1.0	23

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 29...	<0.10	0.10	<0.10	<0.5	<0.1	<0.1	<0.10	<0.5	<0.50	<0.10	<0.1
JUL 26...	<0.10	<0.10	<0.10	<0.5	0.2	<0.1	<0.10	<0.5	<0.50	0.10	<0.1

08076180 GARNERS BAYOU NR HUMBLE, TX

LOCATION.--LAT 29°51'03", long 95°20'05", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of upstream bridge on Beltway 8, 0.2 mi downstream from Williams Gully, 1.2 mi upstream from Greens Bayou, and 4.5 mi southeast of Humble.

DRAINAGE AREA.--31.0 mi².

PERIOD OF RECORD.--February 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum, 1978 adjustment, furnished by Harris County Flood Control District.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known diversion above station. Low flow is sustained by sewage effluent from Humble suburbs. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,810 ft³/s July 9, 1987 (elevation 54.15 ft); minimum daily, 4.0 ft³/s Nov. 24, 1987.

EXTREMES FOR PERIOD FEBRUARY 1986 TO SEPTEMBER 1987.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
May 1	unknown	930	a46.9	June 8	2000	*1,300	49.07

a About.

Minimum daily discharge, 5.2 ft³/s July 13.

EXTREMES FOR 1987 WATER YEAR .--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Nov. 23	2100	1,820	51.68	Feb. 26	0800	1,930	51.90
Dec. 15	1600	1,350	49.33	June 11	2000	2,740	54.02
Dec. 23	0700	1,550	50.34	July 9	1200	*2,810	54.15
Jan. 17	1700	981	47.22				

Minimum daily discharge, 4.5 ft³/s May 27, Sept. 24.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Dec. 19	2100	969	46.85	Mar. 17	2300	*1,190	*47.89
Mar. 2	2000	1,080	47.14	Mar. 30	2200	1,150	47.60

Minimum daily discharge, 4.0 ft ³/s Nov. 24.

DISCHARGE, CUBIC FEET PER SECOND, MARCH TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	11	8.1	300	14	7.7	5.4	20
2	---	---	---	---	---	11	8.0	200	15	8.6	5.4	31
3	---	---	---	---	---	19	12	50	8.2	7.9	5.4	9.7
4	---	---	---	---	---	45	9.3	20	26	6.6	5.6	9.3
5	---	---	---	---	---	14	7.9	10	45	5.9	14	8.9
6	---	---	---	---	---	12	7.9	8.0	28	5.7	22	126
7	---	---	---	---	---	11	8.0	7.9	19	9.3	11	189
8	---	---	---	---	---	11	8.0	7.7	465	7.4	7.9	39
9	---	---	---	---	---	11	7.7	8.7	367	9.8	6.9	33
10	---	---	---	---	---	11	26	12	57	7.1	8.1	22
11	---	---	---	---	---	12	24	18	52	6.2	9.7	12
12	---	---	---	---	---	63	9.6	10	41	5.9	11	8.2
13	---	---	---	---	---	18	8.4	9.2	19	5.7	7.0	7.1
14	---	---	---	---	---	13	8.1	7.9	14	7.2	8.9	7.0
15	---	---	---	---	---	14	7.7	9.3	17	7.6	12	6.7
16	---	---	---	---	---	16	6.8	12	16	6.0	8.6	6.9
17	---	---	---	---	---	16	7.4	16	138	5.5	6.8	6.8
18	---	---	---	---	---	18	7.2	40	48	5.5	6.3	6.5
19	---	---	---	---	---	15	7.5	12	18	5.8	6.1	7.6
20	---	---	---	---	---	10	50	17	14	5.7	6.0	44
21	---	---	---	---	---	11	15	13	12	5.8	5.8	31
22	---	---	---	---	---	12	10	13	8.4	6.6	13	13
23	---	---	---	---	---	9.2	8.5	13	15	6.8	79	11
24	---	---	---	---	---	8.4	8.0	14	11	6.1	100	8.3
25	---	---	---	---	12	8.4	7.5	34	9.1	5.7	34	7.6
26	---	---	---	---	12	8.1	8.0	36	27	5.8	11	7.5
27	---	---	---	---	13	11	8.0	80	22	5.7	8.6	7.3
28	---	---	---	---	12	10	35	95	15	5.5	11	7.1
29	---	---	---	---	---	8.0	15	16	8.8	5.3	26	8.5
30	---	---	---	---	---	7.8	10	18	8.1	5.3	8.4	8.6
31	---	---	---	---	---	8.1	---	30	---	5.2	7.7	---
TOTAL	---	---	---	---	---	453.0	364.6	1137.7	1557.6	200.9	478.6	710.6
MEAN	---	---	---	---	---	14.6	12.2	36.7	51.9	6.48	15.4	23.7
MAX	---	---	---	---	---	63	50	300	465	9.8	100	189
MIN	---	---	---	---	---	7.8	6.8	7.7	8.1	5.2	5.4	6.5
AC-FT	---	---	---	---	---	899	723	2260	3090	398	949	1410

CAL YR 1985 TOTAL -- MEAN -- MAX -- MIN -- AC-FT
WTR YR 1986 TOTAL -- MEAN -- MAX -- MIN -- AC-FT

e Estimated.

08076180 GARNERS BAYOU NR HUMBLE, TX--Continued

DISCHARGE, 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	7.1	5.7	17	15	14	60	7.7	9.0	8.6	42	e20	15
2	6.6	20	15	13	23	34	e7.5	9.9	6.6	67	e10	8.7
3	7.1	18	12	56	13	24	e7.2	15	6.7	191	e8.0	7.5
4	7.2	88	12	23	11	17	e7.0	26	13	10	e9.0	7.7
5	10	105	12	16	11	15	e7.0	23	13	6.9	e8.0	6.7
6	59	20	9.2	13	10	13	35	62	5.6	253	e7.0	6.6
7	34	17	9.0	13	12	12	11	76	9.8	329	e6.5	6.5
8	75	15	11	12	12	11	7.2	15	21	156	e6.0	7.0
9	115	11	12	39	9.9	10	6.3	47	281	1580	e6.0	7.4
10	17	9.7	11	27	8.9	10	6.5	239	448	357	e10	24
11	15	9.2	10	16	9.0	13	6.0	20	1120	83	e14	24
12	408	8.7	9.8	14	9.0	12	6.6	15	1930	36	e10	22
13	301	9.0	8.6	13	9.0	10	6.7	8.2	538	21	e8.0	21
14	93	10	10	16	8.7	9.3	6.8	6.4	106	27	e7.5	8.3
15	28	8.5	622	15	45	9.2	6.8	6.1	50	18	e7.0	8.9
16	17	9.3	226	81	14	9.9	6.7	5.2	150	11	e6.5	116
17	12	9.7	62	463	10	44	6.6	6.0	140	11	e6.0	109
18	10	9.3	203	239	9.0	17	7.1	5.7	301	15	e8.0	41
19	8.6	8.2	98	73	9.1	10	6.8	5.2	74	8.1	e7.5	54
20	7.7	8.1	46	40	141	9.0	6.7	5.1	36	34	e7.0	11
21	7.9	8.4	31	29	44	8.5	6.8	4.8	20	93	e7.0	6.0
22	37	8.6	641	23	26	8.4	6.9	4.7	15	14	e7.0	5.1
23	49	564	1030	19	19	16	6.0	6.2	10	7.2	e6.5	4.7
24	30	841	197	16	55	11	4.9	12	8.7	55	e7.5	4.5
25	11	613	79	14	84	8.9	6.3	5.9	8.9	e20	e7.0	4.9
26	7.5	112	48	13	1200	8.3	6.4	5.7	7.1	e11	e8.0	4.7
27	6.5	53	35	12	247	8.1	6.6	4.5	6.5	e15	e7.0	4.8
28	5.9	43	27	12	154	8.0	7.4	4.8	5.3	e10	e6.5	72
29	5.5	27	23	12	---	8.0	9.1	98	12	e8.0	e20	33
30	5.3	22	21	12	---	8.2	8.7	68	166	e7.0	93	7.8
31	5.4	---	18	10	---	7.9	---	13	---	e7.0	73	---
TOTAL	1409.3	2691.4	3565.6	1369	2217.6	450.7	238.3	832.4	5517.8	3503.2	414.5	659.8
MEAN	45.5	89.7	115	44.2	79.2	14.5	7.94	26.9	184	113	13.4	22.0
MAX	408	841	1030	463	1200	60	35	239	1930	1580	93	116
MIN	5.3	5.7	8.6	10	8.7	7.9	4.9	4.5	5.3	6.9	6.0	4.5
AC-FT	2800	5340	7070	2720	4400	894	473	1650	10940	6950	822	1310

CAL YR 1986 TOTAL --- MEAN --- MAX --- MIN --- AC-FT ---
WTR YR 1987 TOTAL 22869.6 MEAN 62.7 MAX 1930 MIN 4.5 AC-FT 45360
e Estimated.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	4.3	e6.0	24	14	11	85	11	8.0	6.1	5.6	e6.0
2	5.7	4.5	e5.7	10	13	315	35	9.5	7.7	6.1	12	e6.0
3	5.1	4.7	e5.5	8.2	10	254	18	9.5	13	6.1	19	e6.4
4	4.9	4.5	e6.0	8.1	11	40	13	11	95	27	13	e6.2
5	4.9	4.1	e6.0	7.5	48	20	e9.5	7.3	32	18	28	e6.0
6	5.2	4.5	e14	25	29	15	e9.0	7.3	11	18	9.6	e6.0
7	4.9	4.9	30	193	12	14	e8.7	7.4	10	116	7.3	e6.0
8	4.7	4.5	e8.0	40	11	19	e8.5	7.4	9.0	10	9.8	e6.2
9	4.8	7.1	e7.0	27	15	16	e8.5	7.5	7.8	8.1	7.8	e6.0
10	5.3	5.6	e6.5	21	12	13	e8.2	7.7	7.5	7.7	10	e6.0
11	4.9	4.2	e6.2	22	12	12	e8.2	7.8	7.2	7.5	300	e6.4
12	4.8	4.1	e6.0	23	11	11	e8.0	7.3	7.1	7.2	230	e6.8
13	4.9	4.6	e5.8	26	10	11	e8.0	7.5	7.2	7.2	32	e6.4
14	4.4	4.3	7.1	21	10	11	e8.0	7.0	7.3	7.1	11	e6.4
15	4.5	4.7	8.0	18	12	11	e9.0	6.9	7.2	7.9	9.5	e9.0
16	4.3	94	7.2	30	11	11	e10	7.0	7.0	7.5	8.8	e8.0
17	4.3	22	7.1	38	11	264	e15	6.9	6.7	7.1	7.3	e7.4
18	4.8	5.9	6.7	23	85	427	e10	6.9	6.8	6.9	6.0	e7.0
19	4.9	4.1	263	21	25	43	e8.5	7.0	7.0	7.4	20	e6.6
20	4.8	e4.2	205	18	14	16	e8.0	7.1	7.1	63	e10	e6.4
21	4.7	e4.2	319	17	12	13	e7.8	73	7.3	21	e8.0	e6.2
22	5.0	e4.1	64	15	12	10	e7.7	18	7.6	11	e7.0	e6.2
23	5.9	e4.1	23	15	11	9.5	e7.6	11	7.3	9.5	e10	e6.0
24	6.3	e4.0	29	14	11	8.9	e7.5	11	7.5	8.3	e8.0	e6.0
25	5.3	282	19	14	10	7.9	e7.4	8.4	11	7.5	e7.0	e8.0
26	4.7	e20	16	14	9.7	8.4	e7.3	7.4	11	12	e6.6	e7.0
27	4.8	27	151	14	11	8.0	e7.2	7.4	7.8	34	e6.2	e6.6
28	5.3	e8.0	39	13	11	8.1	e7.0	7.5	7.1	80	e6.0	e7.0
29	4.8	e7.0	17	12	11	9.9	30	7.9	6.6	8.3	e6.0	e7.0
30	5.2	e6.5	11	13	---	277	51	7.9	6.3	6.3	e6.2	e11
31	5.1	---	11	13	---	466	---	8.0	---	5.8	e6.0	---
TOTAL	154.9	567.7	1315.8	757.8	474.7	2360.7	436.6	324.5	351.1	555.6	833.7	202.2
MEAN	5.00	18.9	42.4	24.4	16.4	76.2	14.6	10.5	11.7	17.9	26.9	6.74
MAX	6.3	282	319	193	85	466	85	73	95	116	300	11
MIN	4.3	4.0	5.5	7.5	9.7	7.9	7.0	6.9	6.3	5.8	5.6	6.0
AC-FT	307	1130	2610	1500	942	4680	866	644	696	1100	1650	401

CAL YR 1987 TOTAL 17241.7 MEAN 47.2 MAX 1930 MIN 4.0 AC-FT 34200
WTR YR 1988 TOTAL 8335.3 MEAN 22.8 MAX 466 MIN 4.0 AC-FT 16530
e Estimated.

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 the 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. Several measurements of water temperature were obtained during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years, 29.6 ft³/s (21,450 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)
Mar. 17	2130	*1,260	*56.01				

Minimum daily discharge, 4.5 ft³/s July 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	6.8	8.8	19	13	8.1	43	10	8.2	6.4	62	6.5
2	6.1	6.9	8.7	12	13	182	23	8.2	9.4	7.1	26	8.4
3	5.5	6.6	7.7	11	10	111	15	7.2	24	8.8	20	10
4	5.4	6.6	8.7	10	10	19	12	6.5	31	20	9.1	6.8
5	5.6	6.7	8.2	10	28	13	11	6.7	60	11	7.4	6.0
6	5.7	6.8	27	22	22	12	10	6.4	12	6.4	6.2	7.2
7	5.3	7.2	49	175	12	11	9.7	6.4	10	7.0	6.5	7.1
8	5.4	7.6	11	22	11	15	9.5	6.6	9.2	5.6	6.7	6.5
9	5.1	12	8.7	14	12	14	8.7	7.3	9.6	5.3	9.2	6.9
10	5.6	7.6	8.1	13	11	11	8.5	7.5	9.6	5.7	6.2	6.3
11	5.9	7.1	8.1	12	11	9.7	8.0	7.3	9.8	5.8	79	6.9
12	5.8	7.5	8.0	13	10	9.7	7.5	7.7	10	5.7	86	35
13	5.5	7.5	8.2	14	9.6	9.4	7.4	7.2	11	5.4	24	21
14	5.5	7.6	8.4	11	10	9.4	7.4	7.1	12	6.0	29	8.2
15	5.8	12	7.3	11	10	8.5	7.7	7.6	10	5.3	18	8.7
16	5.9	124	7.4	23	9.5	8.1	9.1	8.6	10	5.1	9.5	9.1
17	5.7	21	7.5	24	8.9	262	11	8.4	11	5.2	7.2	13
18	6.0	6.6	7.6	15	70	298	9.3	8.1	12	4.5	7.6	7.9
19	6.3	5.8	233	14	21	33	8.3	8.3	12	5.5	13	8.0
20	5.7	5.5	121	11	12	19	8.0	8.8	15	102	7.3	6.5
21	5.5	5.3	327	10	10	15	8.6	114	22	35	7.6	6.4
22	5.6	5.7	49	9.5	10	13	8.9	20	18	12	8.4	6.6
23	6.3	6.2	19	9.7	9.8	12	9.6	9.0	14	7.2	6.3	7.7
24	6.1	5.9	20	9.6	8.8	12	9.2	7.4	8.0	6.7	6.1	8.3
25	6.3	216	15	9.5	8.1	12	9.3	7.9	17	5.9	7.2	9.3
26	6.4	30	19	9.5	8.0	11	8.9	7.2	10	9.7	6.3	8.3
27	5.8	42	133	9.2	7.9	10	6.9	7.9	7.8	14	6.3	7.5
28	5.5	21	34	9.2	7.9	9.6	7.1	6.6	7.5	10	6.5	7.4
29	5.6	9.9	15	9.6	8.5	11	104	8.2	6.9	6.2	11	11
30	6.2	9.3	12	9.8	---	248	50	9.1	6.9	7.9	10	101
31	6.0	---	14	10	---	259	---	8.6	---	23	6.3	---
TOTAL	178.8	630.7	1219.4	561.6	393.0	1675.5	456.6	357.8	413.9	371.4	521.9	369.5
MEAN	5.77	21.0	39.3	18.1	13.6	54.0	15.2	11.5	13.8	12.0	16.8	12.3
MAX	6.4	216	327	175	70	298	104	114	60	102	86	101
MIN	5.1	5.3	7.3	9.2	7.9	8.1	6.9	6.4	6.9	4.5	6.1	6.0
AC-FT	355	1250	2420	1110	780	3320	906	710	821	737	1040	733

CAL YR 1987 TOTAL 12554.3 MEAN 34.4 MAX 835 MIN 5.1 AC-FT 24900
WTR YR 1988 TOTAL 7150.1 MEAN 19.5 MAX 327 MIN 4.5 AC-FT 14180

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.--Records poor. Discharges for 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)
Mar. 18	0400	*3,780	*17.80				

Minimum discharge not determined (affected by tides).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e680	---	---	---	---	---
2	---	---	---	---	---	e700	e230	---	---	---	---	---
3	---	---	---	---	---	e1100	---	---	---	---	---	---
4	---	---	---	---	---	e500	---	---	---	---	---	---
5	---	---	---	---	---	e150	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	e450	---
12	---	---	---	---	---	---	---	---	---	---	1500	---
13	---	---	---	---	---	---	---	---	---	---	e400	---
14	---	---	---	---	---	---	---	---	---	---	e140	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	e430	---	---	---	---	---	---
18	---	---	---	---	---	e2240	---	---	---	---	---	---
19	---	---	e700	---	---	e510	---	---	---	---	---	---
20	---	---	e1200	---	---	e180	---	---	---	---	---	---
21	---	---	e1400	---	---	---	---	---	---	---	---	---
22	---	---	e1100	---	---	---	---	---	---	---	---	---
23	---	---	e250	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	e900	---	---	---	---	---	---	---	---	---	---
26	---	e1100	---	---	---	---	---	---	---	---	---	---
27	---	e350	---	---	---	---	---	---	---	---	---	---
28	---	e300	---	---	---	---	---	---	---	---	---	---
29	---	e100	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	e750	---	---	---	---	---	---
31	---	---	---	---	---	2220	---	---	---	---	---	---
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 fair. 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.--37 years (water years 1948-59, 1964-88), 36.8 ft³/s (26,660 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)
Dec. 21	1600	*270	*6.87				

Minimum daily discharge, 0.19 ft³/s Sept. 26, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	4.1	4.7	7.3	3.0	3.7	64	41	6.6	13	13	2.8
2	15	3.9	3.3	3.8	2.7	31	38	26	8.2	13	17	3.2
3	9.2	3.6	2.5	2.2	2.6	54	22	11	27	13	19	29
4	7.1	3.6	2.9	1.6	2.5	25	12	3.5	42	16	14	12
5	6.7	3.6	2.3	2.0	2.8	12	6.6	2.0	32	27	13	6.3
6	6.6	3.6	2.2	2.6	3.4	6.8	4.0	1.6	25	33	12	4.2
7	6.7	3.5	2.8	25	2.6	4.8	2.9	1.7	18	30	11	3.2
8	6.6	2.5	2.6	15	2.7	4.4	2.8	2.7	12	27	9.8	2.8
9	6.3	2.1	2.1	9.0	2.7	5.2	3.1	6.0	8.1	23	8.8	2.2
10	6.6	2.1	2.1	6.4	2.7	4.1	3.2	6.8	5.1	21	7.9	2.0
11	6.9	2.1	2.6	4.8	2.8	3.4	3.1	6.3	4.0	19	7.6	2.0
12	7.4	3.9	2.9	3.9	2.7	2.8	3.2	15	4.2	16	9.4	1.9
13	6.7	3.6	2.9	3.8	3.8	2.2	3.5	11	4.0	14	15	1.7
14	6.3	3.4	.76	2.6	4.0	2.0	3.6	4.0	6.6	13	21	1.5
15	6.5	3.2	.39	2.4	3.6	2.4	3.7	8.3	9.1	11	17	1.4
16	6.7	9.9	1.3	3.1	3.2	2.8	4.0	6.8	7.9	11	16	1.5
17	6.5	7.0	3.0	10	3.8	32	5.4	4.4	6.2	12	15	2.9
18	7.0	2.3	3.4	8.0	4.1	167	4.1	2.1	5.5	14	16	3.0
19	7.5	1.3	4.2	7.1	4.3	74	3.2	1.9	6.3	14	14	2.2
20	7.3	1.1	7.4	5.4	4.2	37	2.6	2.1	7.0	28	10	2.0
21	7.1	1.1	154	4.0	3.8	22	2.8	5.1	8.0	36	8.0	1.8
22	6.7	1.1	203	2.9	3.5	14	3.5	11	10	28	8.5	1.2
23	9.0	.52	84	3.2	3.4	9.7	3.4	13	11	24	7.3	.71
24	9.2	.39	35	2.5	3.1	8.2	3.4	6.4	11	20	5.6	.40
25	8.3	43	20	2.1	3.0	7.0	3.4	3.8	24	16	4.1	.25
26	8.5	21	14	2.8	14	6.3	3.4	3.5	28	15	2.9	.19
27	9.7	14	17	2.9	6.8	5.9	3.4	4.6	24	14	2.6	.21
28	8.0	13	27	2.4	3.9	5.8	3.8	5.8	19	15	2.5	.19
29	7.0	9.1	18	1.9	4.0	5.1	17	6.6	17	15	2.6	.26
30	5.6	6.5	11	2.8	---	24	50	7.0	14	15	2.7	9.8
31	4.6	---	7.1	2.9	---	93	---	7.6	---	14	3.0	---
TOTAL	257.3	180.11	646.45	156.4	109.7	677.6	289.1	238.6	410.8	580	316.3	102.81
MEAN	8.30	6.00	20.9	5.05	3.78	21.9	9.64	7.70	13.7	18.7	10.2	3.43
MAX	34	43	203	25	14	167	64	41	42	36	21	29
MIN	4.6	.39	.39	1.6	2.5	2.0	2.6	1.6	4.0	11	2.5	.19
AC-FT	510	357	1280	310	218	1340	573	473	815	1150	627	204

CAL YR 1987 TOTAL 15049.46 MEAN 41.2 MAX 1130 MIN .39 AC-FT 29850
WTR YR 1988 TOTAL 3965.17 MEAN 10.8 MAX 203 MIN .19 AC-FT 7860

08077635 TAYLOR LAKE NEAR SEABROOK, TX

LOCATION.--Lat 29°35'27", long 95°02'29", Harris County, Hydrologic Unit 12040204, near left bank, on remnants of old concrete bridge, 30 ft downstream from new Red Bluff Road bridge, 0.8 mi west of State Highway 146, 1.9 mi upstream from Clear Lake, and 2.1 mi north-northwest of Seabrook.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--March 1986 to March 1987 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below National Geodetic Vertical Datum, 1983 adjustment.

REMARKS.--Records good. Gage heights usually reflect tidal fluctuations, but may reflect effects of runoff during periods of heavy rainfall.

EXTREMES FOR PERIOD MARCH TO SEPTEMBER 1986.--Maximum gage height for period, 12.99 ft May 17 at 1900 hours; minimum, 9.01 ft Aug. 19.

EXTREMES FOR PERIOD OCTOBER 1986 TO MARCH 1987.--Maximum gage height for period, 13.11 ft Dec. 23 at 0315 hours; minimum, 8.11 ft Mar. 31.

GAGE HEIGHT, FEET, MARCH TO SEPTEMBER 1986

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	11.03	9.65
7	---	---	---	---	---	---	---	---	---	---	11.10	9.45
8	---	---	---	---	---	---	---	---	---	---	11.30	10.21
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	11.03	10.02
17	---	---	---	---	---	---	---	---	---	---	12.07	10.07
18	---	---	---	---	---	---	---	---	---	---	11.88	11.00
19	---	---	---	---	---	---	---	---	---	---	11.33	9.52
20	---	---	---	---	---	---	---	---	---	---	10.48	9.14
21	---	---	---	---	---	---	---	---	---	---	10.67	9.12
22	---	---	---	---	---	---	---	---	---	---	10.96	9.90
23	---	---	---	---	---	---	---	---	---	---	10.88	9.88
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	10.83	10.17
28	---	---	---	---	---	---	---	---	---	---	10.71	9.67
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08077635 TAYLOR LAKE NEAR SEABROOK, TX--Continued

GAGE HEIGHT, FEET, MARCH TO SEPTEMBER 1986

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	11.82	10.68	11.79	11.39	11.53	10.43	10.57	9.39	11.70	10.50
2	---	---	11.89	10.49	11.62	11.00	11.35	10.01	10.58	9.21	11.90	10.54
3	12.74	11.10	11.62	10.78	11.72	10.79	10.95	9.71	11.04	9.21	11.70	10.79
4	12.73	11.31	11.58	10.91	11.82	10.66	11.16	9.53	11.07	9.70	11.52	10.63
5	11.84	10.92	11.89	11.22	12.14	10.94	11.44	9.86	11.40	9.88	11.22	10.53
6	11.60	10.65	11.95	11.20	12.08	10.84	11.56	9.93	11.29	9.94	11.18	10.59
7	11.30	10.64	12.15	11.07	11.88	10.54	11.36	9.89	11.12	10.00	11.42	10.76
8	---	---	12.16	10.97	12.19	10.40	11.23	9.75	11.08	10.00	11.36	10.47
9	---	---	12.08	10.95	12.10	10.74	11.51	9.86	11.09	10.40	11.50	10.45
10	---	---	11.99	10.81	12.10	10.61	11.43	10.26	10.91	10.39	11.93	10.69
11	---	---	11.90	10.70	11.80	10.62	11.15	10.09	10.83	9.99	12.09	10.46
12	---	---	11.64	10.23	11.30	9.92	11.34	10.40	11.06	9.86	11.68	10.00
13	---	---	11.56	10.07	11.35	9.85	11.36	10.57	11.17	9.96	11.52	10.02
14	---	---	11.92	10.23	11.08	9.91	11.11	10.38	11.35	10.02	11.67	10.03
15	---	---	12.43	11.00	11.22	10.22	11.00	9.97	11.43	10.00	11.78	10.38
16	11.18	10.06	12.69	11.49	11.15	10.58	11.04	9.78	11.22	9.87	11.58	10.56
17	11.86	10.06	12.99	11.74	11.17	10.57	11.02	9.62	11.03	9.62	11.83	10.72
18	12.10	10.95	12.25	10.68	11.45	10.22	11.04	9.49	10.47	9.37	11.83	11.06
19	11.99	10.96	10.93	10.02	11.42	10.02	11.02	9.43	10.89	9.01	11.77	11.14
20	11.96	10.21	11.36	10.37	11.50	9.94	10.82	9.16	10.59	9.57	11.76	11.15
21	10.59	9.85	11.60	10.63	11.52	9.77	10.96	9.21	11.10	9.62	11.93	10.96
22	10.77	10.04	12.12	10.61	11.77	9.88	10.98	9.37	11.16	10.23	11.93	11.06
23	11.35	10.32	12.42	10.91	11.81	10.00	10.82	9.49	11.49	10.76	12.00	10.88
24	11.35	10.42	12.13	10.57	11.70	10.04	10.76	9.60	10.93	10.11	12.16	11.09
25	11.74	10.21	11.97	10.37	12.79	10.30	10.65	9.83	10.93	9.88	12.26	11.06
26	11.82	10.26	11.52	10.08	12.69	11.09	10.54	9.87	10.95	9.86	12.30	11.00
27	12.14	10.46	11.68	10.00	11.87	10.89	10.40	9.78	11.02	9.80	11.99	10.79
28	11.84	10.31	11.36	9.92	11.22	10.48	10.43	9.46	11.36	9.87	12.30	10.79
29	12.01	10.17	11.49	9.93	11.11	10.60	10.45	9.41	11.13	9.88	12.58	11.12
30	12.05	10.56	11.63	10.37	11.49	10.52	10.43	9.26	11.52	10.13	12.41	11.35
31	---	---	11.76	11.00	---	---	10.53	9.25	11.88	10.28	---	---
MONTH	---	---	13	9.9	13	9.8	12	9.2	12	9.0	13	10

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1986 TO MARCH 1987

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.13	11.13	11.79	10.62	12.12	10.36	11.63	9.99	11.77	10.62	10.33	9.51
2	12.36	11.22	12.15	11.06	11.29	9.06	11.23	10.13	11.14	9.96	10.83	9.88
3	12.59	11.87	12.23	10.96	10.53	9.12	12.39	9.56	10.87	9.96	10.87	10.29
4	12.13	11.20	12.65	11.42	11.63	10.11	9.53	8.36	11.69	10.36	10.95	10.00
5	11.80	10.89	12.46	9.84	11.76	10.37	11.02	8.99	11.81	10.87	11.29	9.94
6	11.77	10.56	11.50	10.17	11.89	10.61	11.40	10.94	11.69	9.86	11.45	9.94
7	11.87	10.77	12.27	10.91	11.97	10.63	11.35	10.42	10.10	8.31	12.07	10.42
8	12.33	11.06	11.95	10.54	11.63	10.57	11.52	10.02	10.52	9.23	12.01	10.26
9	12.39	10.52	11.64	10.24	11.53	10.24	11.57	10.37	11.21	9.68	11.21	9.73
10	11.83	10.55	11.83	10.39	10.83	9.69	11.00	9.12	11.22	9.88	11.21	9.63
11	12.44	10.86	11.63	10.63	11.06	10.03	10.32	8.76	11.07	9.68	---	---
12	12.46	10.93	11.36	10.67	10.95	9.35	10.38	8.96	10.94	9.54	11.10	9.88
13	11.37	10.61	10.80	9.20	11.22	9.65	10.62	9.29	10.75	9.62	11.08	9.88
14	11.52	10.53	11.65	10.39	12.00	10.62	11.55	10.22	11.06	10.03	11.44	10.77
15	11.43	10.90	11.84	10.41	12.10	11.35	11.89	10.31	11.59	9.86	11.54	10.95
16	11.63	10.93	11.89	10.59	11.72	10.11	11.76	10.87	9.94	9.14	12.38	11.14
17	11.60	10.77	11.73	10.23	11.24	9.98	11.99	11.52	9.96	9.53	12.57	11.89
18	11.60	10.53	11.67	10.31	11.51	10.40	12.00	9.39	10.43	9.32	11.99	11.22
19	11.61	10.53	11.66	10.21	11.13	9.87	9.58	8.86	12.05	10.30	11.88	10.66
20	12.07	11.09	11.82	10.12	11.20	10.03	10.62	9.60	12.05	10.63	12.06	10.47
21	12.34	11.31	11.64	10.82	11.55	10.43	10.91	10.33	11.14	9.61	12.05	10.63
22	12.71	11.68	12.25	10.69	12.96	11.32	10.99	8.74	11.14	9.46	12.44	10.59
23	12.61	11.51	11.99	10.86	13.11	10.56	10.90	8.93	11.52	9.30	12.44	11.12
24	12.49	10.17	12.39	11.11	11.11	9.97	11.13	9.79	11.98	11.13	11.80	10.14
25	11.04	9.93	12.52	10.75	11.34	10.53	11.05	8.92	11.99	10.32	12.00	10.41
26	11.35	10.23	11.00	10.00	11.42	10.37	10.40	8.52	12.40	11.32	12.05	10.90
27	11.49	10.40	11.20	10.53	11.54	10.33	10.93	9.33	11.94	11.08	11.92	10.38
28	11.64	10.55	11.41	10.59	11.52	9.85	10.99	9.42	11.88	9.88	11.68	11.01
29	11.43	10.57	11.61	10.41	11.65	10.01	11.03	9.49	---	---	11.51	9.39
30	11.43	10.62	11.97	10.37	11.52	9.80	10.90	9.36	---	---	9.36	8.16
31	11.89	11.32	---	---	11.62	9.98	11.03	9.98	---	---	10.14	8.11
MONTH	13	9.9	13	9.2	13	9.1	12	8.4	12	8.3	---	---

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), 2.6 ft Apr. 30 at 1500 hours; minimum, -2.6 ft Apr. 12. Maximum elevation (Galveston Bay), 3.2 ft Sept. 16 at 0800 hours and Sept. 17 at 0800 hours; minimum, -2.7 ft Apr. 12.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	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	1.1	1.0	-.1	1.2	1.2	.5	.6	.6	-.7	1.0	1.0	-.6
2	1.3	1.3	-.3	1.0	1.0	.5	.7	.8	-.6	.8	.9	-.5
3	1.0	.9	-.4	1.1	1.1	.4	.8	.8	-.6	1.3	1.3	.0
4	1.1	1.0	-.4	1.3	1.4	.0	.8	.8	-.7	1.1	1.0	-.6
5	.9	.8	.1	1.4	1.4	.1	.8	1.2	-.4	.8	.8	.2
6	.7	.5	.1	1.6	1.6	.3	1.6	1.6	.4	1.5	1.6	.7
7	.6	.6	-.3	1.8	1.8	.6	1.9	1.8	-.2	1.9	1.7	-.3
8	.7	.8	-.4	1.9	1.9	.4	1.2	1.2	-.2	.2	.3	-.8
9	1.2	1.2	.1	1.8	1.8	-.4	1.3	1.3	-.1	.8	.7	-.2
10	1.4	1.3	-.1	.1	.1	-1.9	1.3	1.3	.0	.4	.4	-.2
11	1.3	1.3	-.3	.2	.3	-.7	1.0	1.0	-.4	.8	.8	-.1
12	1.0	.8	-.5	.9	.9	-.3	.9	.8	.0	.9	.8	.2
13	1.0	.9	-.1	.8	.8	-.2	1.3	1.3	.7	.9	.8	-.7
14	1.4	1.3	.2	1.1	1.1	.4	1.5	1.5	.0	1.1	1.1	-.1
15	1.7	1.7	.4	1.6	1.7	.8	.5	.0	-1.7	1.2	1.1	.0
16	1.4	1.3	.3	1.8	2.3	1.1	.7	.8	-.7	1.5	1.7	-.1
17	1.2	1.1	-.1	1.2	1.2	.0	1.1	1.2	-.3	1.7	1.8	-.1
18	.8	.7	.0	1.7	1.6	-.5	1.5	1.6	-.1	1.2	1.3	-.3
19	.9	.8	.2	1.7	1.6	-.2	1.6	1.6	.1	1.6	1.7	.4
20	.8	.8	.2	.9	.9	-.6	1.6	1.6	-.5	1.6	1.7	-.5
21	1.4	1.4	.2	1.0	1.3	-.4	1.1	1.1	-.4	.3	.3	-.6
22	1.6	1.6	.8	1.6	1.6	.2	1.3	1.3	-.3	.5	.4	-.6
23	1.9	1.9	.9	1.8	1.8	.0	1.4	1.4	.1	.3	.3	-.5
24	1.9	1.9	.5	1.5	1.5	.0	1.7	1.6	.3	.7	.7	-.6
25	1.7	1.8	-.2	2.0	2.0	.5	1.5	1.4	.4	-.3	-.6	-1.9
26	1.5	1.5	.1	1.5	1.5	.0	1.3	1.3	.1	-.3	-.2	-1.6
27	1.3	1.3	-.4	1.6	1.6	.0	.3	.3	-.5	.0	.0	-1.5
28	1.1	1.1	-.3	.3	.2	-.6	.1	.0	-.8	.4	.4	-1.1
29	1.2	1.2	-.1	.9	.8	-.2	.0	.1	-1.6	.7	.8	-.7
30	1.3	1.3	.0	.8	.8	.2	1.0	1.1	-.3	1.0	1.0	-.1
31	1.2	1.2	.2	---	---	---	1.1	1.1	.0	1.1	1.1	-.2
MONTH	1.9	1.9	-.5	2.0	2.3	-1.9	1.9	1.8	-1.7	1.9	1.8	-1.9

08077650 MOSES LAKE-GALVESTON BAY NEAR TEXAS CITY, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	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	1.1	1.1	-.1	.8	.9	-.4	1.5	1.5	.9	1.8	1.8	.8
2	1.2	1.2	.0	1.3	1.4	.3	1.2	1.3	.5	2.0	2.0	.5
3	.7	.7	-.4	1.3	1.4	.1	1.2	1.2	.3	1.6	1.7	.3
4	.7	.6	-.7	.3	.3	-.7	1.5	1.5	.7	1.1	.8	-.3
5	.9	.8	.0	.7	.7	.1	1.2	1.2	.1	.7	.7	-1.0
6	.9	.8	.0	.6	.5	.2	.7	.5	-.2	.9	.9	-.5
7	1.0	.9	.6	.8	.8	-.1	.6	.6	-.8	1.2	1.2	-.5
8	.8	.8	.2	1.1	1.1	.1	.7	.8	-.7	1.3	1.3	.0
9	.7	.7	.2	.6	.3	-.5	.6	.7	-.5	1.2	1.1	-.1
10	1.2	1.2	.0	.5	.5	-1.0	.3	.2	-1.1	.8	.8	-.1
11	1.1	1.1	-1.0	1.4	1.4	.3	-.9	-1.1	-2.5	.6	.6	-.1
12	.0	.1	-1.5	1.2	1.0	.0	-1.4	-1.3	-2.7	.9	.9	.2
13	.5	.6	-1.0	.8	.8	-.9	-.6	-.4	-1.3	1.1	1.1	-.3
14	.9	.9	-.7	.7	.7	-1.4	.0	.0	-.6	.6	.6	-.5
15	.9	.9	-1.1	.3	.5	-.9	.2	.2	-.4	.7	.7	-.8
16	.6	.9	-.9	.9	1.1	-.1	.7	.7	-.4	.8	.8	-.7
17	1.2	1.3	.4	1.5	1.5	.7	1.4	1.5	-.1	.6	.6	-.8
18	1.9	1.9	.9	1.2	1.2	-2.2	1.4	1.4	-.1	.5	.5	-.9
19	1.0	1.0	-.3	-.9	-.9	-2.2	.7	.7	-.9	.7	.7	-.9
20	.6	.6	-.2	-.3	-.2	-1.3	1.0	1.1	-.7	.8	.8	-.6
21	.4	.3	-.3	-.2	-.2	-1.1	1.3	1.4	-.4	.8	.9	-.4
22	.7	.8	-.6	.2	.2	-1.2	1.1	1.2	.1	.3	.3	-.6
23	.8	.8	-.3	.8	.8	-.9	1.1	1.2	-.2	.1	-.3	-.9
24	.9	.9	-.4	1.0	1.0	-.4	1.0	1.0	-.3	.1	.1	-.4
25	.9	.9	-.3	1.0	1.0	-.1	.8	.7	-.2	.3	.2	-.5
26	.9	.9	-.3	.7	.7	-.4	.6	.6	-.4	.8	.8	.0
27	.7	.7	-.6	.6	.7	-.6	.6	.6	-.1	.9	.8	-.1
28	.5	.5	-.8	1.1	1.1	.1	1.3	1.2	.6	1.3	1.2	-.1
29	.5	.5	-.6	1.1	1.2	.2	2.4	2.8	.9	1.7	1.7	.5
30	---	---	---	.6	.6	-.2	2.6	3.0	1.2	2.0	2.0	.5
31	---	---	---	1.2	1.2	.8	---	---	---	2.0	2.0	.5
MONTH	1.9	1.9	-1.5	1.5	1.5	-2.2	2.6	3.0	-2.7	2.0	2.0	-1.0

	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	1.6	1.7	.1	1.0	1.0	-.4	.9	1.0	.2	1.5	1.5	.5
2	1.2	1.2	-.3	.9	.9	-.4	.9	.9	.4	1.9	1.9	.5
3	1.3	1.4	-.6	.8	.8	-.2	.8	.8	.2	2.2	2.1	.7
4	1.3	1.4	-.3	.7	.8	-.2	1.0	1.0	-.2	1.7	1.7	.0
5	1.2	1.2	.1	.8	.8	.1	.9	.9	-.4	1.4	1.3	.2
6	1.1	1.1	.0	1.1	1.1	.6	.8	.8	.9	1.6	1.6	.3
7	.8	.7	-.1	1.8	1.7	.8	.7	.5	-1.3	1.5	1.6	.5
8	.8	.8	-.1	2.1	2.2	1.0	.1	.1	-1.3	1.6	1.6	.6
9	.7	.7	-.3	1.7	2.2	.5	.6	.7	-1.3	1.8	1.8	.6
10	.8	.8	-.6	1.5	1.6	-.2	.6	.6	-.5	1.5	1.4	.6
11	1.1	1.0	-.3	1.3	1.4	-.2	1.2	1.3	-.8	1.0	1.1	.5
12	1.2	1.2	-.2	1.3	1.4	-.2	1.0	1.0	-.1	1.2	1.3	.9
13	1.6	1.6	.4	1.3	1.3	-.2	1.0	1.0	.0	1.3	1.3	.7
14	1.8	1.8	.3	1.2	1.2	-.1	1.2	1.2	.4	1.3	1.8	.5
15	1.6	1.6	.3	1.1	1.1	-.2	1.0	1.0	-.6	.8	2.7	1.8
16	1.2	1.2	.0	.8	.8	-.2	.5	.5	-.1	.7	3.2	2.2
17	.9	.9	-.2	.5	.5	-.3	.6	.7	-.2	.7	3.2	2.1
18	.8	.8	-.3	.5	.5	-.3	.7	.7	-.4	1.1	3.0	1.0
19	.8	.8	-.3	.8	.8	.2	.7	.7	-.5	2.0	2.1	.3
20	1.0	.9	.1	.8	.8	.0	.6	.7	-.7	1.5	1.6	.0
21	1.0	1.0	.3	.5	.5	-.5	.6	.7	-.8	1.4	1.5	-.2
22	1.2	1.2	.7	.6	.6	-.6	.7	.8	-.7	1.3	1.3	-.1
23	1.0	1.0	.6	.5	.5	-.7	.7	.8	-.8	1.1	1.1	-.1
24	1.7	1.7	.7	.6	.6	-.9	.6	.7	-.9	.8	.9	-.1
25	2.0	2.1	.2	.6	.7	-.8	.8	.9	-.8	.6	.6	-.1
26	1.2	1.2	-.2	.7	.7	-.9	.9	.9	-.5	.8	.8	.0
27	1.1	1.1	-.6	.7	.7	-.9	1.0	1.0	-.4	.8	.9	-.2
28	.9	1.0	-.7	.9	.9	-.8	1.2	1.2	.1	.9	1.0	-.5
29	.9	.9	-.7	1.0	1.0	-.6	1.0	1.0	.3	1.2	1.2	-.2
30	1.0	1.1	-.6	1.0	1.0	-.3	1.0	.9	.0	1.4	1.4	.1
31	---	---	---	1.1	1.1	-.1	1.0	.9	.1	---	---	---
MONTH	2.0	2.1	-.7	2.1	2.2	-.9	1.2	1.3	-1.3	2.2	3.2	-.5

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 September 1988 (discontinued).

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 floodwaters 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, 2.85 ft Apr. 29 at 1700 hours; minimum, -2.19 ft Apr. 12.

ELEVATION, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.51	-.55	.37	-.01	-.11	-.85	.09	-1.46	.51	-.64	.14	-.97
2	.62	-.73	.27	.10	-.25	-.86	.74	-1.02	.65	-.67	.72	-.30
3	.23	-.87	.27	.06	-.17	-.90	.81	-.42	-.01	-.91	.69	-.66
4	.46	-.76	.32	-.20	-.15	-1.00	.40	-1.15	-.07	-1.36	-.33	-1.16
5	.36	-.50	.69	-.22	.24	-.66	.43	-.69	.29	-.41	.12	-.77
6	-.08	-.51	.92	.12	.66	.27	1.30	.14	.44	-.29	.03	-.71
7	.09	-.76	1.10	.07	.85	-.69	1.55	-.95	.57	-.24	.25	-.68
8	.13	-.72	1.11	-.11	.47	-.73	-.24	-1.21	.22	-.58	.47	-.50
9	.44	-.39	1.11	-.75	.52	-.61	.14	-.75	.21	-.46	-.30	-1.09
10	.54	-.53	-.56	-1.99	.54	-.50	-.23	-.82	.65	-.78	-.15	-1.53
11	.45	-.75	-.24	-1.02	.36	-.80	.11	-.75	.02	-1.80	.81	-.94
12	.17	-.77	.10	-.72	.23	-.64	.14	-.49	-.63	-1.81	.43	-.62
13	.17	-.48	.04	-.68	.85	.23	-.17	-1.50	-.11	-1.78	.14	-1.36
14	.44	-.25	.18	-.32	.90	-.96	.50	-.76	.12	-1.18	-.06	-1.78
15	.82	-.09	.91	.17	-.79	-1.95	.45	-.89	.03	-1.69	-.13	-1.32
16	.41	-.15	1.13	.49	.12	-1.26	1.32	-.59	.23	-1.36	.45	-.61
17	.18	-.48	.62	-.18	.56	-.85	1.12	-.78	.77	-.58	.88	.00
18	-.17	-.48	.69	.06	.96	-.40	.91	-.91	1.45	.08	-.10	-2.05
19	.03	-.44	.74	-.50	1.03	-.03	1.09	-.43	.43	-.85	-1.36	-2.17
20	.02	-.19	.08	-.91	.64	-1.22	.88	-1.21	.04	-.98	-.89	-2.04
21	.55	-.15	.26	-.74	.67	-.97	-.07	-1.43	-.36	-.96	-.76	-1.94
22	.80	.58	.69	-.11	.76	-.92	-.27	-1.24	.09	-1.37	-.39	-1.74
23	.98	.60	.81	-.25	.89	-.47	-.24	-.99	.06	-1.05	.18	-1.48
24	.99	.40	.45	-.33	.99	-.31	-.05	-.87	.31	-1.29	.31	-.93
25	.96	-.31	1.03	-.02	.84	-.20	-1.16	-2.18	.31	-1.04	.28	-.76
26	.72	-.35	.68	-.38	.68	-.67	-.87	-2.13	.05	-1.02	.03	-1.05
27	.44	-.55	.50	-.29	-.42	-1.08	-.60	-2.08	-.11	-1.21	.22	-1.21
28	.36	-.36	-.17	-1.00	-.68	-1.34	-.26	-1.67	-.06	-1.45	.61	-.44
29	.40	-.35	-.05	-.87	-.39	-2.06	.25	-1.21	-.07	-1.21	.60	-.51
30	.30	-.38	.02	-.21	.46	-.99	.60	-.63	---	---	.10	-.70
31	.33	-.25	---	---	.41	-.67	.46	-.69	---	---	.84	-.06
MONTH	.99	-.87	1.13	-1.99	1.03	-2.06	1.55	-2.18	1.45	-1.81	.88	-2.17

YEAR MAXIMUM 2.85 MINIMUM -2.19

08077690 HIGHLAND BAYOU DIVERSION CHANNEL NEAR HITCHCOCK, TX--Continued

ELEVATION, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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	1.05	.09	1.32	.09	1.08	-.34	.49	-.94	.40	-.38	.87	.13
2	.56	-.36	1.43	.00	.65	-.77	.33	-1.01	.30	-.18	1.78	.00
3	.62	-.50	1.19	-.25	.70	-1.23	.23	-.93	.22	-.44	1.81	.41
4	.91	-.20	.20	-.77	1.03	-.86	.10	-.77	.37	-.67	1.25	-.38
5	.56	-.50	.12	-1.42	.58	-.49	.18	-.40	.22	-.93	1.01	.00
6	.05	-1.08	.46	-1.05	.52	-.46	.61	.00	.21	-1.24	1.08	-.11
7	.12	-1.36	.80	-.89	.14	-.66	1.06	.32	-.14	-1.51	1.06	.00
8	.08	-1.37	.77	-.49	.22	-.61	1.53	.63	-.62	-1.67	1.09	.03
9	.09	-1.18	.39	-.59	.07	-.85	1.57	.18	.24	-1.85	1.30	.07
10	-.78	-1.77	.17	-.77	.15	-1.03	.94	-.64	.11	-1.21	.97	.10
11	-1.52	-2.18	.05	-.67	.47	-.76	.78	-.65	.44	-.95	.52	.03
12	-1.86	-2.19	.27	-.23	.62	-.71	.72	-.55	.40	-.71	.76	.19
13	-.95	-2.03	.54	-.90	.96	-.49	.62	-.62	.44	-.59	.82	.27
14	-.56	-1.20	.04	-1.15	1.20	-.22	.61	-.65	.60	-.25	1.01	.01
15	-.33	-1.17	.15	-1.18	1.09	-.25	.44	-.57	.35	-.30	2.20	1.03
16	.26	-1.11	.27	-1.10	.66	-.55	.18	-.73	-.14	-.66	2.82	1.72
17	.82	-.78	.05	-1.20	.44	-.75	-.09	-.83	.19	-.49	2.82	1.66
18	.73	-.96	-.04	-1.35	.24	-.91	-.08	-.95	.16	-.83	2.44	.61
19	.07	-1.39	.14	-1.36	.22	-.87	.28	-.56	.14	-.93	1.40	-.25
20	.50	-1.20	.27	-1.05	.42	-.52	.15	-.64	.07	-1.07	.97	-.50
21	.65	-.88	.28	-1.39	.51	-.34	-.15	-1.03	.05	-1.13	.79	-.53
22	.53	-.46	-.29	-.98	.71	-.05	-.06	-.99	.12	-1.08	.70	-.46
23	.55	-.64	-.69	-1.56	.52	-.06	-.17	-1.14	.14	-1.15	.57	-.46
24	.44	-.90	-.55	-1.17	1.09	.25	-.01	-1.30	.00	-1.18	.30	-.63
25	.01	-.86	-.37	-1.01	1.60	-.30	-.06	-1.34	.35	-1.25	.19	-.80
26	.07	-.76	.33	-.54	.56	-.73	.04	-1.29	.44	-1.03	.33	-.63
27	.04	-.64	.27	-.62	.51	-1.00	.09	-1.31	.63	-.76	.33	-.59
28	.66	-.20	.75	-.41	.38	-1.08	.37	-1.44	.71	-.45	.32	-.69
29	2.85	.42	1.18	.05	.39	-1.18	.47	-1.10	.52	-.25	.55	-.53
30	2.28	.62	1.47	.03	.49	-1.10	.47	-.87	.38	-.46	.74	-.37
31	---	---	1.47	.11	---	---	.56	-.74	.57	-.29	---	---
MONTH	2.85	-2.19	1.47	-1.56	1.60	-1.23	1.57	-1.44	.71	-1.85	2.82	-.80

YEAR MAXIMUM 2.85 MINIMUM -2.19

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX

LOCATION.--Lat 29°20'44", long 94°57'47", Galveston County, Hydrologic Unit 12040204, in the LaMarque Levee pumping station on the LaMarque hurricane protection levee, one orifice located landward and one seaward, 0.5 mi southwest of Interstate Highway 45, 0.9 mi south of LaMarque, 4.8 mi northwest of Virginia Point. Supplementary gage (station 08077752): Lat 29°20'26", long 94°51'00", 4,000 ft southeast along LaMarque Levee from LaMarque Levee Pumping Station.

PERIOD OF RECORD.--November 1986 to current year.

GAGE.--Data loggers and pressure transducers. Datum of gages are National Geodetic Vertical Datum, 1978 adjustment (levels by Galveston County Engineer).

REMARKS.--Records good. Landward orifice records elevation of flood runoff behind levee. This runoff is pumped into Jones Bay. Only maximum landward elevations equal or exceeding, -3.0 ft are shown. Seaward records are tidal but influenced by runoff in Highlands Bayou. Telemeter and rain gage located at station. Supplementary gage: Landward orifice records elevation of flood runoff behind levee. A channel connects site to pumping station. Water will be pumped, or drained by gravity, into Jones Bay depending on elevation of seaward water-surface. Only elevations equal or exceeding -2.0 ft are shown. Telemeter and barometer at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (landward) 0.4 ft Nov. 25, 1986; maximum elevation (seaward) 3.3 ft Dec. 23, 1986; minimum, -2.0 ft Apr. 11, 1988. Supplementary gage: Maximum elevation (landward) 0.4 ft Sept. 3, 1988; minimum not determined.

EXTREMES FOR PERIOD NOVEMBER 1986 TO SEPTEMBER 1987.--Maximum elevation (landward), 0.4 ft Nov. 25 at 0145 hours; maximum elevation (seaward), 3.3 ft Dec. 23 at 0015 hours; minimum, -1.5 ft Jan. 4 at 1845 hours. Supplemental gage: Maximum elevation (landward), 0.0 ft Nov. 25 at 0245 hours; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (landward) 0.1 ft Sept. 3 at 0645 hours; maximum elevation (seaward) 3.1 ft Sept. 16 at 0830 hours; minimum, -2.0 ft Apr. 11 at 1930 hours. Supplemental gage: Maximum elevation (landward) 0.4 ft Sept. 3 at 0830 hours; minimum not determined.

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

	OCTOBER				NOVEMBER				DECEMBER			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX
1	---	---	---	---	---	---	---	---	---	1.8	.1	---
2	---	---	---	---	---	---	---	---	---	1.1	-1.0	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	1.6	.4	---
6	---	---	---	---	---	---	---	---	---	1.7	.6	---
7	---	---	---	---	---	---	---	---	---	1.8	.8	---
8	---	---	---	---	---	1.6	.3	---	---	1.5	.6	---
9	---	---	---	---	---	1.2	-.1	---	---	1.4	.4	---
10	---	---	---	---	---	1.4	.4	---	---	1.1	-.1	---
11	---	---	---	---	---	1.3	.5	---	---	1.3	.5	---
12	---	---	---	---	---	1.1	.3	---	---	1.0	-.4	---
13	---	---	---	---	---	.5	-.3	---	---	1.3	-.3	---
14	---	---	---	---	---	1.3	.2	---	---	2.0	.7	---
15	---	---	---	---	---	1.6	.3	---	-2.5	2.1	1.1	-1.7
16	---	---	---	---	---	1.5	.4	---	-2.9	1.5	.1	---
17	---	---	---	---	---	1.3	.1	---	---	1.1	.0	---
18	---	---	---	---	---	1.3	.0	---	---	1.4	.3	---
19	---	---	---	---	---	1.2	.0	---	---	1.2	-.1	---
20	---	---	---	---	---	1.4	-.2	---	---	1.1	.1	---
21	---	---	---	---	---	1.5	.5	---	---	1.4	.5	---
22	---	---	---	---	---	1.9	.5	---	-1.4	3.2	1.4	-.7
23	---	---	---	---	---	1.6	.6	---	-2.1	3.3	.5	-1.6
24	---	---	---	---	-.6	1.7	.7	-.9	---	1.0	-.1	---
25	---	---	---	---	.4	2.1	.3	.0	---	1.1	.5	---
26	---	---	---	---	---	.5	-.4	---	---	1.3	.3	---
27	---	---	---	---	---	1.0	.2	---	---	1.3	.3	---
28	---	---	---	---	---	1.3	.6	---	---	1.6	.1	---
29	---	---	---	---	---	1.5	.4	---	---	1.6	.2	---
30	---	---	---	---	---	1.7	.2	---	---	1.5	-.1	---
31	---	---	---	---	---	---	---	---	---	1.6	.1	---

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX--Continued

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

	JANUARY				FEBRUARY				MARCH			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX
1	---	1.6	.1	---	---	1.6	.8	---	---	.2	-.6	---
2	---	1.6	.1	---	---	.8	.0	---	---	.6	-.4	---
3	---	2.3	-.3	---	---	.7	-.1	---	---	.7	.1	---
4	---	-.3	-1.5	---	---	1.4	.2	---	---	.7	-.1	---
5	---	1.1	-.7	---	---	1.7	.8	---	---	1.1	-.2	---
6	---	1.3	.7	---	---	1.6	.0	---	---	1.2	.0	---
7	---	1.2	.5	---	---	.2	-1.3	---	---	1.9	.5	---
8	---	1.4	.1	---	---	.2	-.7	---	---	1.7	.6	---
9	---	1.4	.4	---	---	1.1	-.3	---	---	.9	-.3	---
10	---	.9	-.5	---	---	1.0	.0	---	---	.9	-.3	---
11	---	.2	-1.0	---	---	.8	-.2	---	---	1.1	.3	---
12	---	.4	-.9	---	---	.7	-.4	---	---	1.0	.1	---
13	---	.7	-.5	---	---	.6	-.3	---	---	1.0	.1	---
14	---	1.7	.3	---	---	1.0	.1	---	---	1.3	.7	---
15	---	1.8	.5	---	---	1.4	.0	---	---	1.5	.9	---
16	-2.6	1.6	.8	---	---	.0	-.9	---	---	2.0	1.0	---
17	-1.6	2.0	1.4	-1.1	---	.1	-.4	---	---	2.6	1.7	---
18	---	2.0	-.2	---	---	.3	-.5	---	---	1.9	1.0	---
19	---	-.2	-1.2	---	---	1.7	.0	---	---	1.7	.7	---
20	---	.6	-.4	---	---	1.6	.9	---	---	1.8	.6	---
21	---	1.2	.5	---	---	1.2	.0	---	---	1.8	.7	---
22	---	1.1	-1.0	---	---	1.2	-.3	---	---	2.3	.6	---
23	---	.6	-1.2	---	---	1.5	-.6	---	---	2.0	1.1	---
24	---	1.0	-.2	---	---	1.9	.8	---	---	1.6	.3	---
25	---	.8	-.8	---	-.8	1.9	.4	---	---	1.9	.4	---
26	---	.4	-1.3	---	-.5	2.1	1.0	-.4	---	1.9	1.0	---
27	---	.8	-.6	---	---	1.7	.8	---	---	1.9	.7	---
28	---	.9	-.4	---	---	1.7	.0	---	---	1.6	.9	---
29	---	.8	-.5	---	---	---	---	---	---	1.2	.0	---
30	---	.7	-.6	---	---	---	---	---	---	.0	-1.2	---
31	---	1.1	.0	---	---	---	---	---	---	.0	-1.3	---

	APRIL				MAY				JUNE			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX
1	---	.5	-.7	---	---	.7	-.5	---	---	1.3	.3	---
2	---	.7	-.3	---	---	1.1	-.2	---	---	1.4	.3	---
3	---	.5	-.7	---	---	1.6	.2	---	---	1.3	.3	---
4	---	.9	-.4	---	---	1.5	.7	---	---	1.1	.0	---
5	---	1.3	.1	---	---	1.0	.1	---	---	1.2	.4	---
6	---	.8	-.2	---	---	.9	-.1	---	---	1.2	.7	---
7	---	.4	-.5	---	---	.7	-.3	---	---	1.7	.9	---
8	---	.2	-.7	---	---	.4	-.2	---	-2.0	2.2	1.1	---
9	---	.2	-.6	---	---	.7	.1	---	---	2.5	1.1	---
10	---	.3	-.2	---	---	.6	.0	---	---	2.4	.9	---
11	---	.5	-.1	---	---	.7	-.1	---	---	2.5	1.0	---
12	---	.9	.4	---	---	.9	-.1	---	---	2.4	1.0	---
13	---	1.5	.6	---	---	1.0	.0	---	---	1.7	.6	---
14	---	.6	-.7	---	---	1.0	-.3	---	---	1.3	.0	---
15	---	.4	-.9	---	---	.8	-.4	---	---	1.3	.0	---
16	---	.3	-.6	---	---	.7	-.6	---	---	1.2	.0	---
17	---	.8	-.6	---	---	.9	-.6	---	---	1.1	.2	---
18	---	.7	-.4	---	---	.8	-.3	---	---	.9	.2	---
19	---	.7	-.4	---	---	1.1	-.3	---	---	.6	.2	---
20	---	.7	-.4	---	---	.9	.2	---	---	1.0	.2	---
21	---	.4	-.5	---	---	.8	.3	---	---	1.2	.1	---
22	---	.1	-1.0	---	---	.7	.1	---	---	1.2	.1	---
23	---	.1	-.6	---	---	.8	.1	---	---	1.4	.2	---
24	---	.2	-.5	---	---	.9	.1	---	---	1.3	.1	---
25	---	.3	-.4	---	---	1.2	.1	---	---	1.0	-.1	---
26	---	.2	-.4	---	---	1.7	.2	---	---	.6	-.5	---
27	---	.2	-.5	---	---	2.2	.8	---	---	1.3	-.4	---
28	---	.1	-.7	---	---	2.4	1.2	---	---	1.7	.3	---
29	---	.2	-.9	---	---	2.2	1.2	---	---	1.9	.7	---
30	---	.5	-.7	---	---	1.7	.7	---	---	1.6	.6	---
31	---	---	---	---	---	1.5	.4	---	---	---	---	---

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX--Continued

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

	JULY				AUGUST				SEPTEMBER			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MIN	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPPLE-MENTARY MAX
1	---	1.0	.2	---	---	.6	.1	---	---	1.5	.4	---
2	---	.9	.2	---	---	.5	-.2	---	---	1.6	.2	---
3	---	1.0	.4	---	---	.7	-.3	---	---	1.4	.1	---
4	---	1.0	.2	---	---	.8	-.3	---	---	1.3	.1	---
5	---	1.1	.2	---	---	---	---	---	---	1.5	.1	---
6	---	1.3	.3	---	---	---	---	---	---	1.6	.3	---
7	---	1.7	.4	---	---	---	---	---	---	1.3	.4	---
8	-.8	2.3	.6	---	---	---	---	---	---	1.0	.3	---
9	---	1.8	.6	---	---	---	---	---	---	.9	.2	---
10	---	1.9	.4	---	---	---	---	---	---	.8	.1	---
11	---	1.8	.4	---	---	---	---	---	---	.8	.0	---
12	---	1.6	.4	---	---	---	---	---	---	.9	-.1	---
13	---	1.3	.3	---	---	.4	-.1	---	---	1.1	-.2	---
14	---	.7	-.1	---	---	.4	-.2	---	---	1.1	.0	---
15	---	.7	-.1	---	---	.6	-.3	---	---	1.2	.2	---
16	---	.7	.1	---	---	.7	-.4	---	---	1.4	.2	---
17	---	.9	.3	---	---	.6	-.5	---	---	1.2	.2	---
18	---	1.1	.2	---	---	.7	-.5	---	---	1.2	.1	---
19	---	1.2	.4	---	---	.7	-.4	---	---	1.0	.0	---
20	---	1.9	.7	---	---	.7	-.4	---	---	1.2	-.1	---
21	---	1.9	.6	---	---	.8	-.3	---	---	1.6	.5	---
22	---	1.5	.4	---	---	.7	-.2	---	---	1.3	.6	---
23	---	1.7	.3	---	---	.8	-.4	---	---	1.4	.5	---
24	---	2.0	.6	---	---	.9	-.1	---	---	1.2	.6	---
25	---	1.8	.7	---	---	1.1	.3	---	---	1.2	.5	---
26	---	1.6	.6	---	---	1.0	.4	---	---	1.3	.5	---
27	---	1.3	.4	---	---	.8	.4	---	---	1.7	.6	---
28	---	1.1	.2	---	---	.5	.0	---	-1.8	2.1	1.3	-.5
29	---	.8	.2	---	---	.8	.2	---	-2.1	1.8	.0	-1.4
30	---	.7	.1	---	---	1.2	.4	---	---	1.2	-.2	---
31	---	.6	.1	---	-1.2	1.6	.3	-.9	---	---	---	---

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	OCTOBER				NOVEMBER				DECEMBER			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	1.3	.1	---	---	1.3	.6	---	---	.8	-.3	---
2	---	1.4	.1	---	---	1.2	.7	---	---	.9	-.3	---
3	---	.9	-.1	---	---	1.2	.6	---	---	.9	-.2	---
4	---	1.2	-.1	---	---	1.5	.2	---	---	.9	-.4	---
5	---	1.1	.3	---	---	1.5	.3	---	---	1.4	.0	---
6	---	.7	.1	---	---	1.8	.7	---	---	1.8	1.0	---
7	---	.8	-.1	---	---	2.1	.9	---	---	2.1	.2	---
8	---	.9	-.1	---	---	2.1	.7	---	---	1.3	.2	---
9	---	1.3	.3	---	---	2.0	-.1	---	---	1.4	.2	---
10	---	1.3	.2	---	---	.1	-1.5	---	---	1.4	.3	---
11	---	1.3	-.1	---	---	.5	-.8	---	---	1.0	.0	---
12	---	1.0	-.2	---	---	1.1	.0	---	---	.7	.1	---
13	---	1.0	.1	---	---	1.0	.1	---	---	1.3	.7	---
14	---	1.5	.4	---	---	1.2	.5	---	---	1.5	.2	---
15	---	1.9	.7	---	---	1.9	1.0	---	---	.2	-.9	---
16	---	1.4	.4	---	---	2.4	1.3	---	---	.7	-.4	---
17	---	1.2	.1	---	---	1.6	.4	---	---	1.2	.0	---
18	---	.8	.1	---	---	1.8	.8	---	---	1.6	.5	---
19	---	1.0	.2	---	---	1.8	.3	---	---	1.6	.8	---
20	---	.9	.4	---	---	1.1	-.1	---	---	1.3	-.1	---
21	---	1.6	.4	---	---	1.4	.0	---	---	1.2	.1	---
22	---	1.8	1.1	---	---	1.9	.6	---	---	1.4	.0	---
23	---	2.1	1.2	---	---	2.0	.5	---	---	1.3	.3	---
24	---	2.0	.9	---	---	1.6	.4	---	---	1.5	.5	---
25	---	1.9	.3	---	-2.4	2.3	.9	---	---	1.4	.5	---
26	---	1.7	.3	---	---	1.8	.4	---	---	1.2	.1	---
27	---	1.3	-.1	---	-2.9	1.6	.5	---	---	.3	-.3	---
28	---	1.3	.1	---	---	.9	-.4	---	---	.1	-.5	---
29	---	1.4	.2	---	---	1.1	-.1	---	---	.2	-1.2	---
30	---	1.4	.2	---	---	1.1	.4	---	---	1.1	-.1	---
31	---	1.3	.4	---	---	---	---	---	---	1.1	.2	---
MAX	---	2.1	1.2	---	---	2.4	1.3	---	---	2.1	1.0	---
MIN	---	.7	-.2	---	---	.1	-1.5	---	---	.1	-1.2	---

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

JANUARY

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	.8	-.4	---
2	---	1.3	-.1	---
3	---	1.5	.5	---
4	---	1.1	-.2	---
5	---	1.0	.2	---
6	---	1.8	.9	---
7	-2.9	2.0	.1	---
8	---	.5	-.3	---
9	---	.8	.2	---
10	---	.6	.0	---
11	---	.9	.2	---
12	---	.9	.4	---
13	---	.6	-.5	---
14	---	1.2	.1	---
15	---	1.2	.1	---
16	---	1.7	.4	---
17	---	1.8	.3	---
18	---	1.4	.1	---
19	---	1.7	.5	---
20	---	1.4	-.2	---
21	---	.6	-.5	---
22	---	.5	-.4	---
23	---	.4	-.1	---
24	---	.6	.0	---
25	---	.0	-1.6	---
26	-2.9	-.2	-1.3	---
27	---	---	---	---
28	---	---	---	---
29	---	.9	-.3	---
30	---	1.1	.3	---
31	---	1.2	.1	---
MAX	---	---	---	---
MIN	---	---	---	---

FEBRUARY

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	1.1	.2	---
2	---	1.3	.2	---
3	---	.7	.0	---
4	---	.6	-.5	---
5	---	.8	.2	---
6	---	1.0	.5	---
7	---	1.2	.7	---
8	---	.9	.3	---
9	---	.9	.3	---
10	---	1.3	.2	---
11	---	1.1	-.6	---
12	---	.2	-1.0	---
13	---	.6	-.7	---
14	---	.8	-.1	---
15	---	.7	-.6	---
16	---	.8	-.4	---
17	---	1.3	.4	---
18	---	2.0	.9	---
19	---	1.0	.1	---
20	---	.7	-.1	---
21	---	.4	-.1	---
22	---	.7	-.4	---
23	---	.7	-.1	---
24	---	1.0	-.3	---
25	---	.9	-.1	---
26	---	.8	-.1	---
27	---	.6	-.3	---
28	---	.5	-.5	---
29	---	.6	-.3	---
30	---	---	---	---
31	---	---	---	---
MAX	---	2.0	.9	---
MIN	---	.2	-1.0	---

MARCH

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	.8	-.2	---
2	---	1.3	.5	---
3	---	1.3	.2	---
4	---	.3	-.3	---
5	---	.7	.1	---
6	---	.7	.3	---
7	---	.9	.1	---
8	---	1.0	.3	---
9	---	.5	-.2	---
10	---	.6	-.6	---
11	---	1.4	.0	---
12	---	1.3	.3	---
13	---	.7	-.5	---
14	---	.5	-.8	---
15	---	.5	-.4	---
16	---	1.0	.3	---
17	-2.4	1.5	1.0	---
18	-2.4	1.1	-.9	---
19	---	-.7	-1.2	---
20	---	-.1	-1.0	---
21	---	.0	-.9	---
22	---	.2	-.8	---
23	---	.8	-.5	---
24	---	.9	-.1	---
25	---	.9	.1	---
26	---	.7	-.3	---
27	---	.7	-.3	---
28	---	1.1	.3	---
29	---	1.1	.3	---
30	---	.7	.1	---
31	---	1.3	.6	---
MAX	---	1.5	1.0	---
MIN	---	-.7	-1.2	---

APRIL

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	1.5	1.0	---
2	---	1.1	.5	---
3	---	1.1	.3	---
4	---	1.4	.7	---
5	---	1.1	.3	---
6	---	.5	-.2	---
7	---	.6	-.4	---
8	---	.7	-.4	---
9	---	.6	-.3	---
10	---	.3	-.7	---
11	---	-.7	-2.0	---
12	---	-1.5	-1.9	---
13	---	-.3	-1.5	---
14	---	.1	-.4	---
15	---	.3	-.3	---
16	---	.7	-.3	---
17	---	1.4	.1	---
18	---	1.2	.3	---
19	---	.6	-.4	---
20	---	1.0	-.3	---
21	---	1.2	.0	---
22	---	1.0	.3	---
23	---	1.0	.1	---
24	---	.9	-.1	---
25	---	.8	-.1	---
26	---	.6	.0	---
27	---	.6	.0	---
28	---	1.2	.4	---
29	-.4	2.6	1.0	-.2
30	-1.8	2.6	1.3	-1.1
31	---	---	---	---
MAX	---	2.6	1.3	---
MIN	---	-1.5	-2.0	---

MAY

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	1.7	.8	---
2	---	1.8	.7	---
3	---	1.6	.6	---
4	---	.7	.1	---
5	---	.7	-.5	---
6	---	.9	-.2	---
7	---	1.2	.0	---
8	---	1.2	.3	---
9	---	1.1	.2	---
10	---	.6	.0	---
11	---	.6	.1	---
12	---	.7	.3	---
13	---	1.0	.0	---
14	---	.6	-.2	---
15	---	.7	-.4	---
16	---	.8	-.3	---
17	---	.6	-.4	---
18	---	.5	-.5	---
19	---	.7	-.5	---
20	---	.8	-.2	---
21	---	.7	-.1	---
22	---	.4	-.3	---
23	---	.3	-.6	---
24	---	.0	-.4	---
25	---	.2	-.3	---
26	---	.8	.0	---
27	---	.8	.1	---
28	---	1.3	.1	---
29	---	1.7	.7	---
30	---	1.9	.7	---
31	---	1.9	.9	---
MAX	---	1.9	.9	---
MIN	---	.0	-.6	---

JUNE

DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	1.5	.6	---
2	---	1.1	.1	---
3	---	1.0	.0	---
4	---	1.3	.0	---
5	---	1.1	.2	---
6	---	1.0	.2	---
7	---	.8	.0	---
8	---	.8	.1	---
9	---	---	---	---
10	---	---	---	---
11	---	---	---	---
12	---	---	---	---
13	---	---	---	---
14	---	---	---	---
15	---	---	---	---
16	---	---	---	---
17	---	---	---	---
18	---	---	---	---
19	---	---	---	---
20	---	---	---	---
21	---	---	---	---
22	---	---	---	---
23	---	---	---	---
24	---	---	---	---
25	---	---	---	---
26	---	---	---	---
27	---	---	---	---
28	---	---	---	---
29	---	---	---	---
30	---	---	---	---
31	---	---	---	---
MAX	---	---	---	---
MIN	---	---	---	---

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	JULY				AUGUST				SEPTEMBER			
DAY	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX	LAND-WARD MAX	SEA-WARD MAX	SEA-WARD MIN	SUPP. MAX
1	---	---	---	---	---	.9	---	---	---	1.3	.7	---
2	---	---	---	---	---	.8	.4	---	---	2.0	.7	---
3	---	---	---	---	---	.8	.2	---	.1	2.2	1.1	.4
4	---	---	---	---	---	.9	.1	-1.5	---	1.6	.2	---
5	---	---	---	---	---	.7	-.2	---	---	1.4	.4	---
6	---	---	---	---	---	.7	-.4	---	---	1.5	.6	---
7	---	---	---	---	---	.4	-.5	---	---	1.5	.6	---
8	---	---	---	---	---	.0	-.8	---	---	1.5	.7	---
9	---	---	---	---	---	.7	-1.0	---	---	1.6	.7	---
10	---	---	---	---	---	.7	-.3	---	---	1.4	.8	---
11	---	---	---	---	-.1	1.0	.0	---	---	1.0	.7	---
12	---	---	---	---	---	.9	.1	---	---	1.2	.7	---
13	---	---	---	---	---	.9	.1	---	---	1.3	.7	---
14	---	---	---	---	---	1.1	.4	---	---	1.4	.6	---
15	---	---	---	---	---	.8	.4	---	---	2.4	1.4	---
16	---	---	---	---	---	.4	.0	---	---	3.1	2.2	---
17	---	---	---	---	---	.6	.2	---	---	3.0	2.1	---
18	---	---	---	---	---	.7	-.1	---	---	2.8	1.2	---
19	---	---	---	---	---	.6	-.2	---	---	1.9	.5	---
20	---	---	---	---	---	.6	-.3	---	---	1.5	.2	---
21	---	---	---	---	---	.6	-.3	---	---	1.3	.2	---
22	---	---	---	---	---	.7	-.3	---	---	1.2	.2	---
23	---	---	---	---	---	.7	-.3	---	---	1.0	.3	---
24	---	---	---	---	---	.6	-.4	---	---	.9	.2	---
25	---	---	---	---	---	.8	-.5	---	---	.7	.0	---
26	---	---	---	---	---	.9	-.2	---	---	.8	.0	---
27	---	---	---	---	---	1.1	.0	---	---	.9	.0	---
28	---	---	---	---	---	1.2	.3	---	---	.9	.0	---
29	---	---	---	---	---	.9	.4	---	---	1.2	.2	---
30	---	---	---	---	---	.9	.2	---	---	1.3	.3	---
31	---	---	---	---	---	1.0	.3	---	---	---	---	---
MAX	---	---	---	---	---	1.2	.4	---	---	3.1	2.2	---
MIN	---	---	---	---	---	.0	-3.9	---	---	.7	.0	---

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 0.31 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. May 3, 1959, to Sept. 30, 1987, present site, at datum 10.00 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. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years (water years 1948-57, 1960-88), 107 ft³/s (77,520 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s July 26, 1979 (gage height, 33.88 ft); no flow at times. Flood of Oct. 8, 1949, reached a stage of 31.45 ft, present site and datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1939, reached a stage of 32.5 ft, present site and 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)
Apr. 30	1100	*995	*21.44				

Minimum daily discharge, 0.23 ft³/s Nov. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	1.3	27	21	5.4	5.8	45	501	40	40	71	52
2	13	1.5	18	19	4.1	19	32	148	43	44	73	74
3	7.7	1.1	12	14	4.1	82	22	65	56	42	80	653
4	4.4	1.1	9.3	11	4.2	50	15	33	77	52	75	391
5	2.9	.94	7.9	9.3	4.8	26	12	18	82	75	70	160
6	1.9	.72	6.9	8.2	5.7	18	9.2	14	59	111	64	74
7	1.3	.37	9.4	28	6.1	14	6.8	13	44	107	66	44
8	1.3	.26	8.0	29	6.5	29	6.5	20	37	328	62	27
9	1.9	.23	6.6	20	6.5	69	7.8	26	31	321	65	22
10	2.0	.42	4.9	15	6.5	30	5.8	24	31	154	62	21
11	4.1	.62	4.5	12	6.4	19	4.0	26	27	83	75	20
12	5.2	.87	4.2	11	5.4	14	3.1	32	35	56	78	21
13	6.3	1.0	3.7	9.8	4.6	11	3.2	41	35	44	80	17
14	7.5	1.2	3.3	8.5	5.3	8.8	4.4	47	46	43	75	14
15	7.7	1.4	2.1	7.7	6.1	7.4	4.3	25	48	48	87	10
16	7.8	11	2.1	8.6	4.8	7.0	4.0	26	52	55	82	7.6
17	8.6	16	2.1	11	4.4	52	9.0	22	39	54	62	6.2
18	11	8.3	2.2	13	26	446	4.1	22	40	47	53	6.6
19	11	5.2	2.8	18	42	180	4.6	26	34	53	53	6.9
20	10	2.9	3.2	14	22	71	6.2	23	41	85	49	5.9
21	9.6	1.6	135	11	14	37	6.4	25	47	92	49	4.4
22	7.5	1.4	337	8.9	9.8	22	3.0	28	55	89	44	2.6
23	5.9	1.0	136	7.9	8.1	16	1.6	33	59	68	42	4.9
24	5.3	.91	69	7.4	8.6	13	.71	25	61	59	53	4.1
25	6.2	88	46	6.5	7.0	11	.34	13	78	53	51	11
26	5.5	110	33	5.6	5.7	8.8	3.6	10	72	48	45	14
27	3.5	189	24	5.5	5.8	8.2	8.2	16	69	55	46	16
28	2.3	232	21	5.2	6.4	7.2	11	23	60	66	44	17
29	1.6	82	17	5.2	6.2	6.5	204	30	49	73	43	20
30	1.2	44	14	5.5	---	7.4	934	41	44	75	43	63
31	1.1	---	12	5.7	---	28	---	40	---	73	43	---
TOTAL	188.3	806.34	984.2	362.5	252.5	1324.1	1381.85	1436	1491	2593	1885	1790.2
MEAN	6.07	26.9	31.7	11.7	8.71	42.7	46.1	46.3	49.7	83.6	60.8	59.7
MAX	23	232	337	29	42	446	934	501	82	328	87	653
MIN	1.1	.23	2.1	5.2	4.1	5.8	.34	10	27	40	42	2.6
AC-FT	373	1600	1950	719	501	2630	2740	2850	2960	5140	3740	3550

CAL YR 1987 TOTAL 22994.44 MEAN 63.0 MAX 1400 MIN .23 AC-FT 45610
WTR YR 1988 TOTAL 14494.99 MEAN 39.6 MAX 934 MIN .23 AC-FT 28750

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.--Records fair except those for estimated daily discharges and those above 100 ft³/s, which are poor. No known diversion above station.

AVERAGE DISCHARGE.--5 years, 37.4 ft³/s (27,100 acre-ft/yr).

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)
Sept. 18	1000	*741	a*5.70				

a From observer reading.

Minimum daily discharge, no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	10	10	10	14	15	38	18	28	47	.00	118
2	6.3	12	7.1	10	15	55	23	15	22	69	.00	30
3	8.0	9.0	8.0	16	19	36	23	15	24	85	.66	126
4	5.0	9.0	10	12	14	45	21	21	26	32	3.9	176
5	3.0	10	11	e11	11	36	36	14	28	30	e.82	79
6	3.9	11	11	e10	19	24	58	9.0	21	32	.36	43
7	3.0	11	9.0	e8.0	36	14	50	8.0	5.6	28	.36	30
8	1.4	12	6.3	e8.0	32	12	28	7.1	2.6	43	.00	22
9	1.4	10	9.0	e7.0	28	12	36	6.3	1.6	43	.00	22
10	1.9	8.0	10	e6.0	30	15	40	8.6	1.6	70	.59	10
11	3.0	11	10	e15	24	14	50	85	e1.6	58	.00	5.6
12	2.6	9.0	9.0	24	28	16	38	14	1.4	40	.00	5.0
13	3.4	11	11	26	36	19	47	15	e1.2	38	.00	5.0
14	5.0	12	11	18	30	24	36	24	.98	32	.93	3.9
15	7.1	10	15	18	16	21	28	24	.98	21	.67	4.4
16	7.1	6.3	26	16	15	15	23	14	1.2	21	.00	4.4
17	10	8.0	14	10	11	23	167	9.0	.55	16	.00	e3.9
18	16	8.0	21	10	12	32	45	7.1	.28	7.1	.00	224
19	15	10	21	12	15	30	28	10	1.6	5.0	7.0	26
20	15	8.0	19	11	12	23	28	4.4	.36	2.6	9.0	19
21	14	5.6	24	14	12	16	32	5.0	.00	1.4	5.0	19
22	11	6.3	21	14	12	12	28	11	.00	.68	3.0	19
23	8.0	5.6	19	12	12	14	26	22	.00	e.17	.55	19
24	9.0	8.0	15	14	14	14	28	24	.00	.00	.28	28
25	14	10	12	12	15	14	21	26	.00	.00	2.2	28
26	16	9.0	8.0	11	16	16	18	19	34	.24	.82	32
27	18	11	14	14	16	16	15	6.3	30	.00	2.6	32
28	14	12	11	15	16	12	18	12	22	.00	14	30
29	11	12	7.1	14	12	14	15	24	36	.00	15	34
30	10	11	11	14	---	19	15	34	47	.00	5.6	26
31	9.0	---	10	16	---	19	---	40	---	.00	3.9	---
TOTAL	260.1	285.8	400.5	408.0	542	647	1059	551.8	339.55	722.19	77.24	1224.2
MEAN	8.39	9.53	12.9	13.2	18.7	20.9	35.3	17.8	11.3	23.3	2.49	40.8
MAX	18	12	26	26	36	55	167	85	47	85	15	224
MIN	1.4	5.6	6.3	6.0	11	12	15	4.4	.00	.00	.00	3.9
AC-FT	516	567	794	809	1080	1280	2100	1090	673	1430	153	2430

CAL YR 1987 TOTAL 13070.8 MEAN 35.8 MAX 1070 MIN 1.4 AC-FT 25930
WTR YR 1988 TOTAL 6517.38 MEAN 17.8 MAX 224 MIN .00 AC-FT 12930

e Estimated.

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, 4,250 microsiemens May 10; minimum daily 905 microsiemens Sept. 18.
WATER TEMPERATURES: Maximum daily, 33.0°C June 18; minimum daily, 0.0°C Dec. 25, 27, Jan. 4, 6, 7, 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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									
06...	1135	4.5	2620	19.0	520	200	59	91	370
NOV									
17...	1005	8.6	2560	6.0	530	180	72	85	360
JAN									
20...	1045	14	2610	0.0	540	160	73	86	340
MAR									
08...	1000	15	2800	7.0	530	140	64	90	390
APR									
26...	0855	17	2990	12.0	620	250	67	110	430
JUN									
14...	1015	1.0	3360	24.0	720	370	73	130	510

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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...	7	18	326	430	430	4.0	16	1610
NOV								
17...	7	16	352	380	400	3.6	16	1540
JAN								
20...	7	22	377	400	320	4.4	24	1500
MAR								
08...	7	23	392	440	430	1.7	16	1690
APR								
26...	8	16	374	470	520	3.0	19	1860
JUN								
14...	8	17	346	560	610	4.7	15	2130

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	260.1	2380	1440	1010	390	275	360	252	520
NOV.	1987	285.8	2450	1490	1150	400	312	370	288	530
DEC.	1987	400.5	2330	1410	1520	380	416	350	378	510
JAN.	1988	408.0	2470	1500	1660	410	450	380	417	540
FEB.	1988	542	2570	1570	2300	420	622	400	584	560
MAR.	1988	647	2770	1710	2980	460	799	440	770	600
APR.	1988	1059	2590	1590	4550	430	1220	410	1160	560
MAY	1988	551.8	2730	1690	2520	450	673	440	654	590
JUNE	1988	339.55	2800	1730	1590	460	424	450	411	600
JULY	1988	722.19	2470	1500	2930	410	796	380	739	540
AUG.	1988	77.24	2810	1740	363	470	97	450	94	600
SEPT	1988	1224.2	2010	1200	3980	330	1090	290	973	440
TOTAL		6517.38	**	**	26600	**	7180	**	6720	**
WTD.AVG.		18	2470	1510	**	410	**	380	**	540

08079575 NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR POST, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2460	2320	2490	2460	2530	2640	2420	3110	2580	2660	---	1680
2	2570	2350	2470	2430	2520	2200	2600	3380	2680	1860	---	1640
3	2510	2360	2450	2410	2510	2720	2630	3320	2710	2490	1680	1980
4	2500	2330	2450	2420	2520	2610	2660	3180	2670	2520	2780	2350
5	2680	2410	2430	2390	2230	2600	2660	3400	2640	2590	2850	2380
6	2670	2360	2430	2560	2510	2650	2600	3490	2810	2600	3120	2480
7	2720	2320	2390	2600	2470	2780	2680	3360	2940	2630	3290	2510
8	2810	2390	2440	2550	2430	2800	2800	3540	2930	2150	---	2500
9	2760	2380	2420	2550	2470	2780	2850	3650	3280	2530	---	2460
10	2750	2400	2370	2550	2510	2870	2800	4250	3340	2440	1950	2750
11	2800	2410	2460	2140	2480	2910	2950	1910	3120	2380	---	2710
12	2790	2490	2480	2180	2510	2870	2940	3110	3220	2540	---	2830
13	2780	2490	2490	2410	2570	2810	2990	3080	3520	2620	---	2820
14	2760	2480	2340	2410	2630	2920	2990	2880	3450	2660	1900	2880
15	2550	2480	2490	2430	2620	2980	2950	2860	3430	2670	2290	2830
16	2610	2530	2260	2430	2580	2910	2980	3000	3310	2650	---	2970
17	2510	2520	2330	2440	2620	2710	1600	3070	3560	2790	---	2980
18	2190	2490	2310	2470	2650	2810	2500	3160	3570	3040	---	905
19	2170	2510	2220	2500	2670	2720	2570	2920	3440	3060	2320	1730
20	2250	2520	2410	2520	2670	2750	2620	2180	3460	3190	2660	2400
21	2320	2560	2240	2450	2690	2850	2610	2670	---	3260	2790	2460
22	2350	2560	2230	2510	2740	2920	2690	2700	---	3360	2980	2500
23	2360	2540	2210	2610	2740	2940	2690	2700	---	3330	3040	2560
24	2290	2530	2220	2650	2730	2950	2650	2710	---	---	3270	2430
25	2340	2520	2160	2530	2760	2960	2920	2670	---	---	3760	2450
26	2270	2510	2290	2600	2730	2920	3210	2850	3560	2170	3110	2420
27	2210	2490	2230	2640	2730	3000	3100	2980	2600	---	3000	2450
28	2260	2510	2270	2650	2730	3110	3050	2970	2830	---	2920	2430
29	2300	2470	2330	2610	2710	3060	3250	1540	2760	---	2850	2450
30	2320	2520	2400	2590	---	3010	3140	2460	2600	---	2980	2550
31	2330	---	2380	2540	---	3010	---	2680	---	---	3000	---
MEAN	2490	2460	2360	2490	2600	2830	2770	2960	3080	2670	2790	2420

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	16.5	10.0	2.0	6.0	19.0	9.0	18.0	28.0	29.5	---	24.5
2	24.5	21.0	14.0	2.0	4.0	12.0	6.0	18.0	25.0	23.0	---	24.0
3	17.0	22.0	17.0	5.0	5.0	8.0	25.0	20.0	23.0	28.0	26.0	28.0
4	17.0	23.0	16.0	.0	5.0	18.0	22.0	20.0	19.0	27.5	20.0	21.0
5	22.0	18.0	8.0	2.0	3.0	6.0	19.0	19.0	21.0	26.0	---	25.0
6	21.0	18.0	12.0	.0	2.0	12.0	22.0	20.0	27.0	29.5	27.0	25.0
7	22.0	16.0	14.0	.0	6.0	17.0	20.5	21.0	28.0	28.0	27.0	24.0
8	20.0	15.0	10.5	3.0	12.0	13.5	25.0	17.0	28.5	27.0	---	25.0
9	27.0	10.0	11.0	1.0	13.0	20.0	11.0	22.0	23.0	27.0	---	28.0
10	15.0	12.0	12.0	1.5	10.0	17.0	12.0	20.5	27.0	23.0	---	23.0
11	12.0	10.0	12.0	.0	7.0	14.5	18.0	19.0	21.0	29.0	---	17.0
12	24.5	11.5	4.0	5.0	14.0	5.0	23.0	25.0	23.0	30.0	---	26.0
13	21.0	15.0	3.0	4.5	8.0	9.0	23.0	26.0	24.0	31.0	---	26.0
14	22.0	11.0	3.0	7.0	9.0	17.0	19.0	20.0	25.0	29.0	28.0	24.5
15	22.0	13.0	1.0	10.0	3.5	15.0	28.0	25.0	25.0	32.5	25.0	29.5
16	24.0	10.0	4.0	5.0	18.5	15.0	13.0	25.0	32.0	30.0	---	26.0
17	14.0	13.0	7.0	8.0	13.0	6.0	15.5	27.0	31.0	29.0	---	---
18	16.0	7.0	5.0	10.0	14.0	13.0	19.0	24.0	33.0	30.0	---	24.0
19	23.0	12.0	10.0	7.0	10.0	10.5	20.0	24.0	30.0	26.0	28.0	25.5
20	17.0	4.0	6.0	2.5	7.0	12.0	23.0	23.0	31.0	27.0	24.0	28.0
21	18.0	9.0	13.0	7.0	15.0	23.0	23.0	16.0	---	27.0	26.0	27.5
22	21.0	9.5	10.0	9.0	14.0	21.0	18.0	16.0	---	23.0	28.0	26.0
23	20.0	15.0	14.0	5.0	16.0	23.0	21.0	24.5	---	29.0	29.0	17.0
24	17.0	13.0	7.0	7.0	15.0	21.0	15.0	27.0	---	---	25.0	22.0
25	20.0	11.5	.0	8.0	18.0	22.0	24.0	21.0	---	---	26.0	24.0
26	21.0	6.0	11.0	12.0	20.0	7.0	22.0	25.0	25.0	25.0	30.5	28.0
27	18.0	11.0	.0	12.0	10.0	25.0	19.0	27.0	24.0	---	19.0	25.0
28	22.0	6.0	4.0	13.0	14.0	20.0	18.0	25.0	26.0	---	18.0	26.0
29	22.5	5.0	5.0	15.0	19.0	18.0	23.0	21.0	32.0	---	20.0	18.0
30	26.0	9.0	6.0	12.0	---	17.0	19.0	21.0	27.0	---	25.0	20.0
31	20.0	---	20.0	10.0	---	18.0	---	20.0	---	---	26.0	---
MEAN	20.5	12.5	8.5	6.0	10.5	15.5	19.0	22.0	26.5	28.0	25.0	24.5

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.--Records poor.

AVERAGE DISCHARGE.--26 years (water years 1963-88), 27.6 ft³/s (1.54 in/yr), 20,000 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)
Sept. 18	1600	*3,600	a*8.74	No other peak greater than base discharge.			

a From floodmarks.

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	22	.00	.00	.07	.00	.00
2	.00	.00	.00	.00	.00	.05	2.1	.00	.00	218	.00	14
3	.00	.00	.00	.00	e.01	e.05	.01	.00	.00	21	.00	.00
4	.00	.00	.00	.00	e.01	e.03	.00	.00	.00	15	.00	.00
5	.00	.00	.00	.00	.00	e.03	.00	.00	.00	2.2	.00	.00
6	.00	.00	.00	.00	.00	e.02	.00	.00	.00	.18	.00	.00
7	.00	.00	.00	.00	.00	e.02	.00	.00	.00	.01	.00	.00
8	.00	.00	.00	e.03	.00	.01	.00	.00	.00	49	.00	.00
9	.00	.00	.00	e.02	.00	.00	.00	.00	.00	16	.00	.00
10	.00	.00	.00	e.01	.00	.00	.00	.00	.00	154	.00	.00
11	.00	.00	.00	e.01	.00	.00	.00	20	.00	107	.03	.00
12	.00	.00	.00	e.01	.00	.00	.00	34	.00	6.4	.00	.00
13	.00	.00	.00	e.01	.00	.00	.00	9.5	.00	.98	.00	.00
14	.00	.00	.00	e.01	.00	.00	.00	.02	.00	.10	.00	.02
15	.00	.00	.00	e.01	.00	.00	.00	.00	.00	.01	.00	.00
16	.00	.00	.00	e.01	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	e.01	.00	.00	3.1	.00	6.6	.00	.00	.00
18	.00	.00	.00	e.01	.00	.00	4.8	.00	.00	.00	1.2	905
19	.00	.00	.00	e.01	.00	.00	.52	.00	.00	.00	.00	124
20	.00	.00	.00	.01	.00	.00	.00	.00	.00	.03	.05	5.1
21	.00	.00	.00	e.01	.00	.00	.00	.00	.00	.00	.00	.44
22	.00	.00	.00	e.01	.00	.00	.00	.00	.00	.00	.00	.10
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	60
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.9
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00	.44
27	.00	.00	.00	.00	.00	.00	.00	.00	213	.00	.00	.30
28	.00	.00	.00	.00	.00	.00	.00	.00	36	.00	.00	.23
29	.00	.00	.00	.00	.00	.00	.00	10	2.0	.00	.00	.13
30	.00	.00	.00	.00	---	.00	.00	5.2	.30	.00	.00	.13
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.18	0.02	0.21	32.53	78.72	257.90	590.09	1.28	1117.89
MEAN	.00	.00	.00	.006	.001	.007	1.08	2.54	8.60	19.0	.041	37.3
MAX	.00	.00	.00	.03	.01	.05	22	34	213	218	1.2	905
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	.0	.4	.04	.4	65	156	512	1170	2.5	2220
CFSM	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00	.03
IN.	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00	.03

CAL YR 1987 TOTAL 8821.89 MEAN 24.2 MAX 2590 MIN .00 AC-FT 17500 CFSM .02 IN. .22
WTR YR 1988 TOTAL 2078.82 MEAN 5.68 MAX 905 MIN .00 AC-FT 4120 CFSM .00 IN. .05

e Estimated.

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses: December 1964 to September 1965, 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 23,000 microsiemens Mar. 8; minimum daily 690 microsiemens July 2.
WATER TEMPERATURE: Maximum daily 30.0°C July 3; minimum daily, 0.0 °C Jan. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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)
JAN 20...	0830	0.01	20500	0.0	1400	1200	340	140	4200
MAR 08...	1205	0.01	23000	9.0	1600	1400	370	160	4900

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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...	50	15	257	840	6500	1.0	11	12200
MAR 08...	55	16	167	950	8000	1.0	2.6	14500

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	0.00	*	*	0.00	*	0.00	*	0.00	*
NOV.	1987	0.00	*	*	0.00	*	0.00	*	0.00	*
DEC.	1987	0.00	*	*	0.00	*	0.00	*	0.00	*
JAN.	1988	0.18	19200	11800	5.7	6400	3.1	860	0.4	*
FEB.	1988	0.02	15500	9420	0.5	5100	0.3	660	0.04	*
MAR.	1988	0.21	15200	9240	5.2	5000	2.8	650	0.4	*
APR.	1988	32.53	1640	947	83	500	44	56	4.9	100
MAY	1988	78.72	2770	1610	343	850	181	98	21	170
JUNE	1988	257.90	933	538	375	280	197	32	22	57
JULY	1988	590.09	1130	652	1040	340	546	39	61	69
AUG.	1988	1.28	804	464	1.6	240	0.8	27	0.09	49
SEPT	1988	1117.89	907	524	1580	270	830	31	93	55
TOTAL		2078.82	**	**	3400	**	1800	**	203	**
WTD.AVG.		5.7	1060	612	**	320	**	36	**	65

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	---	---	1420	---	---	12000	---	---
2				---	---	12700	2780	---	---	690	---	718
3				---	15000	13000	3500	---	---	1240	---	---
4				---	16000	14500	---	---	---	1570	---	---
5				---	---	16000	---	---	---	1900	---	---
6				---	---	18000	---	---	---	4930	---	---
7				---	---	20000	---	---	---	6750	---	---
8				17000	---	23000	---	---	---	2930	---	---
9				18000	---	---	---	---	---	1040	---	---
10				19000	---	---	---	---	---	1250	---	---
11				19100	---	---	---	4970	---	875	3650	---
12				19500	---	---	---	1380	---	1520	---	---
13				19600	---	---	---	4010	---	3030	---	---
14				19700	---	---	---	5500	---	4920	---	954
15				19800	---	---	---	---	---	9160	---	---
16				19900	---	---	---	---	---	---	---	---
17				20000	---	---	1820	---	965	---	---	---
18				20200	---	---	1970	---	---	---	706	804
19				20400	---	---	2000	---	---	---	---	826
20				20500	---	---	---	---	---	1360	1440	2080
21				20400	---	---	---	---	---	---	---	4320
22				20200	---	---	---	---	---	---	---	5940
23				---	---	---	---	---	---	---	---	2300
24				---	---	---	---	---	---	---	---	1140
25				---	---	---	---	---	---	---	---	4200
26				---	---	---	---	---	---	2450	---	6820
27				---	---	---	---	---	895	---	---	7700
28				---	---	---	---	---	1060	---	---	9290
29				---	---	---	---	1740	1750	---	---	12000
30				---	---	---	---	3060	6500	---	---	11100
31				---	---	---	---	---	---	---	---	---
MEAN				19600	15500	16700	2250	3440	2230	3390	1930	4680

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---		---	11.0	---	---	22.0	---	---
2				---		9.0	19.0	---	---	25.5	---	22.0
3				---		---	---	---	---	30.0	---	20.0
4				---		---	---	---	---	---	---	---
5				---		---	---	---	---	27.0	---	---
6				---		---	---	---	---	27.0	---	---
7				---		---	---	---	---	23.0	---	---
8				---		9.0	---	---	---	24.0	---	---
9				---		---	---	---	---	23.5	---	---
10				---		---	---	---	---	22.0	---	---
11				---		---	---	18.0	---	23.5	26.0	---
12				---		---	---	20.0	---	23.5	---	---
13				---		---	---	23.0	---	24.0	---	---
14				---		---	---	---	---	22.5	---	24.0
15				---		---	---	---	---	23.0	---	---
16				---		---	---	---	---	---	---	---
17				---		---	16.0	---	26.0	---	---	---
18				---		---	11.0	---	---	---	27.0	23.0
19				---		---	---	---	---	---	---	19.5
20				.0		---	---	---	---	21.0	23.0	21.5
21				---		---	---	---	---	---	---	25.0
22				---		---	---	---	---	---	---	24.0
23				---		---	---	---	---	---	---	26.0
24				---		---	---	---	---	---	---	17.0
25				---		---	---	---	---	---	---	16.0
26				---		---	---	---	---	26.0	---	17.5
27				---		---	---	---	21.5	---	---	19.0
28				---		---	---	---	26.0	---	---	19.0
29				---		---	---	23.5	26.5	---	---	15.0
30				---		---	---	20.5	24.0	---	---	12.0
31				---		---	---	---	---	---	---	---
MEAN				.0		9.0	14.5	21.0	25.0	24.0	25.5	20.0

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, Dec. 20 to Jan. 26, which are poor. There are small diversions above station for oil field operations.

AVERAGE DISCHARGE.--59 years (water years 1925-34, 1940-88), 160 ft³/s (1.17 in/yr), 115,900 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)
Sept. 18	1730	*3,790	*7.21				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	.80	3.3	13	12	11	4.3	8.4	4.8	133	7.8	.00
2	13	.92	3.3	13	12	12	4.4	6.6	5.2	1060	5.5	.00
3	12	.96	3.3	12	13	14	3.8	4.7	2.8	1050	3.6	.00
4	11	.90	3.3	12	13	14	6.4	4.1	1.1	974	3.0	.00
5	9.9	.90	3.5	12	14	17	22	3.0	.72	404	2.2	.00
6	9.3	.87	4.1	12	15	23	23	3.6	.50	396	2.6	.00
7	8.4	.79	4.3	11	15	20	19	145	.20	171	3.6	.00
8	6.6	.76	4.2	11	18	18	15	48	.02	87	2.8	.00
9	5.6	.91	3.6	10	19	18	12	14	.00	56	1.1	.00
10	4.9	1.1	3.6	10	19	18	12	7.3	.00	66	.80	.00
11	4.7	1.1	4.1	11	19	15	12	5.9	.00	332	.80	.00
12	4.4	1.1	4.4	11	19	13	11	7.2	.00	594	.90	.00
13	4.4	1.3	4.3	12	20	13	10	6.2	.00	554	2.5	.00
14	4.2	1.6	6.7	12	20	12	9.2	4.5	.00	312	1.2	.00
15	3.6	1.7	7.3	12	20	12	8.0	18	1.5	142	.44	.00
16	3.5	1.5	8.0	12	20	10	7.6	27	1.8	76	.24	.00
17	3.2	1.2	8.4	17	19	15	14	20	.00	45	.14	3.0
18	3.0	1.3	8.8	21	20	17	16	12	.00	30	2.4	889
19	2.9	1.5	9.2	16	23	17	18	11	.00	94	1.4	1450
20	2.1	1.6	9.2	12	23	14	19	20	.00	893	.00	935
21	1.7	1.9	8.8	14	20	10	34	16	.00	110	.00	312
22	1.6	2.0	8.4	20	16	8.1	35	17	.00	117	.00	174
23	1.8	2.0	8.4	17	15	6.8	37	33	.00	129	.00	121
24	2.1	2.3	9.2	16	13	6.1	26	20	.00	66	.00	83
25	2.1	2.6	23	16	11	5.4	19	20	.00	39	.00	57
26	1.9	2.7	25	15	11	4.7	15	15	.09	29	.00	45
27	1.3	3.3	15	15	10	4.4	11	10	52	21	.00	69
28	1.0	3.3	15	14	10	4.1	11	6.7	852	16	.00	49
29	.91	3.3	14	14	10	3.3	10	4.7	497	33	.00	35
30	.87	3.3	14	12	---	6.2	9.6	4.8	353	16	.00	28
31	.79	---	13	12	---	4.2	---	3.3	---	10	.00	---
TOTAL	147.77	49.51	260.7	417	469	366.3	454.3	527.0	1772.73	8055	43.02	4250.00
MEAN	4.77	1.65	8.41	13.5	16.2	11.8	15.1	17.0	59.1	260	1.39	142
MAX	15	3.3	25	21	23	23	37	145	852	1060	7.8	1450
MIN	.79	.76	3.3	10	10	3.3	3.8	3.0	.00	10	.00	.00
AC-FT	293	98	517	827	930	727	901	1050	3520	15980	85	8430
CFSM	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.00	.02
IN.	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.00	.02

CAL YR 1987 TOTAL 54242.48 MEAN 149 MAX 13200 MIN .76 AC-FT 107600 CFSM .02 IN. .23
WTR YR 1988 TOTAL 16812.33 MEAN 45.9 MAX 1450 MIN .00 AC-FT 33350 CFSM .01 IN. .07

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, 10,000 microsiemens Mar. 29; minimum daily, 1,480 microsiemens July 20.
WATER TEMPERATURE: Maximum daily, 35.0°C Aug. 9, 10, 13; minimum daily, 2.0°C Feb. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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 TOTAL (MG/L AS CACO3)
NOV 04...	0930	4.1	8010	7.80	16.0	2.1	11.1	122	1.4	24	28	2200
JAN 27...	1300	15	6680	8.20	9.5	7.2	11.9	111	1.2	K8	K2	1700
MAR 09...	1105	18	5680	8.10	10.5	6.6	11.3	109	1.0	32	K14	1200
MAY 25...	0905	18	4380	8.10	20.0	330	11.6	137	1.0	92	160	1300
JUN 29...	1150	480	1760	7.80	27.5	2300	12.2	165	1.8	480	2700	570
AUG 10...	1150	2.0	7750	8.10	29.0	4.0	8.4	119	0.9	54	82	2100

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 WAT WH TOT FET 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 04...	2100	630	160	1100	11	13	140	1900	1900	0.60	11	6050
JAN 27...	1500	480	110	930	10	15	165	1400	1500	1.6	10	4590
MAR 09...	1100	340	93	800	10	4.0	117	1300	1100	1.4	5.3	4040
MAY 25...	1200	390	79	540	7	11	79	1400	750	0.80	8.5	3290
JUN 29...	520	180	30	150	3	6.2	57	590	190	0.40	7.3	1220
AUG 10...	2000	590	150	1100	11	10	110	1800	1700	0.60	14	5820

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)
NOV 04...	5810	<0.010	<0.100	0.170	0.180	0.03	0.20	0.010	<0.010	0.020	0.06	18
JAN 27...	4550	<0.010	<0.100	0.080	0.080	0.52	0.60	0.030	<0.010	<0.010	--	72
MAR 09...	3710	<0.010	<0.100	0.090	0.060	0.41	0.50	<0.010	<0.010	<0.010	--	32
MAY 25...	3230	<0.010	<0.100	0.140	0.100	0.56	0.70	0.020	0.020	<0.010	--	560
JUN 29...	1190	--	--	0.470	--	1.0	1.5	1.00	0.010	--	--	5480
AUG 10...	5440	<0.010	<0.100	0.180	0.210	0.62	0.80	0.020	0.020	<0.010	--	64

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
NOV 04...	0.20	71	<10	2	<100	<10	1	4	2	1	40
JAN 27...	2.9	94	<10	2	200	<10	1	1	<1	<1	20
MAR 09...	1.6	95	--	--	--	--	--	--	--	--	--
MAY 25...	27	100	<10	4	<100	<10	<1	2	1	1	30
JUN 29...	7100	92	--	--	--	--	--	--	--	--	--
AUG 10...	0.35	94	30	4	<100	<10	<1	2	<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)
NOV 04...	<5	170	250	0.1	4	3	2	1.0	9800	26	20
JAN 27...	<5	170	90	0.5	9	<1	1	1.0	8300	30	<10
MAR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 25...	<5	90	20	<0.1	4	2	2	<1.0	5300	17	<10
JUN 29...	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	<5	160	300	<0.1	6	1	<1	<1.0	6500	36	10

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	147.77	7590	5170	2060	1800	702	1600	626	1900
NOV.	1987	49.51	8810	6040	807	2100	285	1800	238	2200
DEC.	1987	260.7	6330	4280	3010	1400	996	1300	937	1600
JAN.	1988	417	6660	4500	5070	1500	1670	1400	1580	1600
FEB.	1988	469	6650	4500	5690	1500	1880	1400	1770	1600
MAR.	1988	366.3	7610	5180	5120	1800	1750	1600	1550	1900
APR.	1988	454.3	6140	4150	5080	1400	1670	1300	1590	1500
MAY	1988	527.0	5760	3890	5530	1300	1790	1200	1740	1400
JUNE	1988	1772.73	2330	1530	7330	430	2060	530	2530	530
JULY	1988	8055	2040	1340	29200	370	8070	470	10100	470
AUG.	1988	43.02	6750	4570	531	1500	177	1400	164	1700
SEPT	1988	4250.00	2070	1360	15600	380	4330	470	5430	470
TOTAL		16812.33	**	**	85100	**	25400	**	28300	**
WTD.AVG.		46	2820	1870	**	560	**	620	**	660

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 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6290	8240	9360	5500	7170	7850	9260	7890	6600	2260	4730	---
2	6590	8180	9350	5600	7150	7970	9360	8630	6860	2220	5440	---
3	6900	8080	9340	5700	7250	8010	9270	9030	8620	2210	6100	---
4	7150	8180	9330	5710	7200	8030	9240	9420	8660	1950	6710	---
5	7330	8270	9320	5720	7000	8390	6600	9410	8640	1670	6930	---
6	7570	8290	9340	5780	6900	6710	4470	9600	9340	1660	7690	---
7	7750	8340	9350	5850	6780	6640	4170	7530	9360	1810	7710	---
8	8010	8310	9340	6000	6790	6650	5300	4430	9370	1980	7710	---
9	8130	8030	9330	6500	6820	6650	5340	6100	---	2440	7850	---
10	8240	8140	9330	7000	6570	6650	6400	6130	---	2890	7780	---
11	8290	8050	9340	7200	5890	6650	6420	6130	---	2570	7770	---
12	8240	8200	9350	7600	5870	6630	6930	5950	---	2150	7880	---
13	8290	8340	9360	7650	5810	6650	7260	6000	---	1570	8350	---
14	8350	8400	8200	7680	5870	7180	7730	6050	---	1560	9320	---
15	8300	8410	7600	7700	5860	7200	7850	4620	9350	2180	9120	---
16	8370	8740	6200	7750	5930	7220	7870	4140	9360	2200	9020	---
17	8320	8890	6150	6750	5920	7220	8210	4130	---	2560	8790	9730
18	8330	8740	6050	6800	6020	7580	8460	4510	---	2570	7700	2710
19	8340	8740	5500	7200	6030	7980	8460	4490	---	2500	7760	2000
20	8570	8750	5800	7400	6420	8460	7400	4750	---	1480	---	1600
21	8480	9130	5900	7600	7150	8500	4960	4390	---	2740	---	1630
22	8410	9100	6000	6250	7190	8980	4880	4490	---	2410	---	1640
23	8260	9060	6100	6300	7410	9000	4500	4500	---	2400	---	1730
24	8200	9060	6200	6350	7420	8980	4480	4020	---	2650	---	1950
25	8270	9070	5800	6400	7530	9050	5500	4360	---	2770	---	2120
26	8310	9100	4500	6450	7530	9500	5530	5250	6870	4830	---	2420
27	8390	9060	4700	6560	7820	9310	5900	5290	3710	4910	---	2800
28	8450	9080	5100	6710	7830	9830	7250	5580	2490	4900	---	3130
29	8400	9360	5200	6860	7840	10000	7280	5770	1810	3840	---	3830
30	8370	9360	5300	7010	---	9930	7840	6920	2170	3800	---	3690
31	8310	---	5400	7160	---	9680	---	7510	---	4660	---	---
MEAN	8040	8620	7330	6670	6790	8030	6800	6030	6880	2660	7600	2930

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	21.0			8.0	21.0	20.0	25.0	29.0	31.0	27.0	---
2	25.0	24.0			---	15.0	24.0	21.0	26.0	26.0	33.0	---
3	25.0	26.0			5.0	14.0	28.0	21.0	25.0	26.0	33.0	---
4	26.0	25.0			3.0	15.0	26.0	25.0	26.0	30.0	32.0	---
5	25.0	21.0			2.0	18.0	26.0	28.0	24.0	31.0	32.0	---
6	26.0	21.0			3.0	21.0	26.0	31.0	27.0	30.0	33.0	---
7	27.0	---			15.0	22.0	23.0	30.0	28.0	31.0	33.0	---
8	26.0	---			15.0	21.0	20.0	19.0	30.0	29.0	34.0	---
9	28.0	---			9.0	21.0	16.0	20.0	---	30.0	35.0	---
10	22.0	---			7.0	22.0	16.0	21.0	---	25.0	35.0	---
11	20.0	---			12.0	23.0	22.0	22.0	---	24.0	26.0	---
12	24.0	---			14.0	14.0	25.0	22.0	---	31.0	28.0	---
13	26.0	---			15.0	12.0	28.0	24.0	---	30.0	35.0	---
14	23.0	---			15.0	15.0	25.0	25.0	---	29.0	31.0	---
15	22.0	---			15.0	17.0	25.0	28.0	---	31.0	34.0	---
16	25.0	---			15.0	15.0	23.0	30.0	---	32.0	30.0	---
17	24.0	8.0			17.0	8.0	24.0	31.0	---	31.0	31.0	26.0
18	23.0	8.0			12.0	12.0	23.0	29.0	---	32.0	---	24.0
19	25.0	16.0			14.0	17.0	26.0	21.0	---	32.0	---	23.0
20	21.0	18.0			14.0	18.0	27.0	24.0	---	25.0	---	26.0
21	18.0	12.0			18.0	19.0	27.0	25.0	---	29.0	---	28.0
22	23.0	13.0			18.0	23.0	23.0	26.0	---	29.0	---	27.0
23	24.0	20.0			16.0	25.0	23.0	26.0	---	28.0	---	27.0
24	22.0	19.0			17.0	23.0	15.0	26.0	---	28.0	---	27.0
25	25.0	14.0			16.0	18.0	23.0	24.0	---	27.0	---	27.0
26	25.0	15.0			15.0	23.0	23.0	29.0	29.0	30.0	---	27.0
27	21.0	12.0			20.0	25.0	24.0	31.0	25.0	31.0	---	28.0
28	21.0	11.0			21.0	28.0	23.0	22.0	26.0	34.0	---	29.0
29	23.0	10.0			---	22.0	23.0	26.0	31.0	32.0	---	18.0
30	26.0	12.0			---	23.0	25.0	25.0	30.0	27.0	---	23.0
31	24.0	---			---	20.0	---	22.0	---	29.0	---	---
MEAN	24.0	16.5			13.0	19.0	23.5	25.0	27.5	29.5	32.0	25.5

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.--Records good except those for estimated daily discharges, which are fair below 5 ft³/s and poor above. 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.--24 years, 8.53 ft³/s (6,180 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, 500 ft³/s (from flow through culvert computation) Sept. 19, time unknown (gage height, 12.46 ft, from floodmark); minimum daily, 0.03 ft³/s Aug. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.0	3.9	7.5	5.4	4.5	14	3.1	1.0	1.2	.04	e.20
2	2.0	2.1	3.9	6.6	5.2	6.4	8.9	2.9	2.2	37	.04	e.40
3	1.8	2.1	4.0	6.8	5.1	11	6.5	2.7	2.6	19	.05	e.60
4	1.7	2.3	3.9	6.6	5.2	8.7	5.9	2.6	.95	4.7	.10	e.20
5	1.7	2.7	3.9	6.2	5.7	6.7	5.0	2.4	.70	1.7	.09	e.18
6	1.7	2.8	4.2	6.8	5.8	6.1	4.1	2.2	.61	1.1	.06	e.16
7	1.7	3.2	4.4	5.7	5.9	5.6	3.6	2.1	.57	.67	.04	e.14
8	1.6	3.2	4.2	5.6	6.4	5.0	3.3	2.0	.52	.68	.04	e.12
9	1.5	3.2	4.3	5.8	6.5	4.7	3.3	2.1	.42	10	.03	e.10
10	1.6	3.1	4.3	5.5	6.2	4.9	3.4	1.9	.34	18	.04	e.08
11	1.7	2.9	4.5	5.9	5.6	5.0	3.4	2.2	.32	13	e.04	e.07
12	1.8	2.8	4.7	7.2	4.9	4.9	3.5	2.3	.32	19	e.06	e.06
13	1.9	2.7	4.8	8.1	5.3	4.6	3.8	2.0	.29	4.6	e.06	e.05
14	2.3	2.7	5.6	7.6	4.9	4.5	3.6	1.9	.27	1.7	e.08	e.20
15	2.2	2.7	5.8	7.0	4.4	4.6	3.5	1.8	13	.96	e.10	e.15
16	2.1	2.7	5.1	7.1	4.1	4.8	3.3	1.7	2.9	.47	.11	e.10
17	1.8	3.0	5.1	7.1	4.4	5.8	6.1	1.5	1.3	.28	.10	e.08
18	1.7	3.2	5.8	6.6	4.4	5.9	14	1.4	1.1	.21	.16	e35
19	2.0	3.6	7.0	6.5	4.2	5.6	11	1.6	1.0	.16	.20	e150
20	2.0	3.8	7.0	5.8	4.2	6.0	7.3	2.5	.86	.12	.32	e40
21	1.6	3.8	6.0	5.0	4.1	5.9	5.6	1.9	.71	.10	.24	e10
22	1.6	3.6	5.8	5.1	4.1	5.8	4.8	1.5	.70	.10	.17	e5.0
23	1.6	3.8	5.8	5.2	4.1	6.1	4.1	1.3	.64	.09	.13	e6.0
24	1.7	3.7	5.9	5.4	4.1	6.1	3.4	1.3	.57	.08	e.10	e2.0
25	1.8	3.8	8.5	5.2	4.0	5.6	3.0	1.2	33	.07	e.08	e2.0
26	1.8	3.9	7.3	4.9	4.2	5.5	3.1	1.2	12	.07	e.08	e2.0
27	1.9	3.9	6.1	4.9	4.3	5.5	2.8	1.0	2.1	.07	e.08	e2.0
28	1.9	3.9	6.7	4.6	4.5	5.6	2.7	.90	11	.06	e.08	e2.0
29	2.1	4.1	7.0	4.9	4.3	5.4	2.6	1.1	8.0	.06	e.08	e1.8
30	2.2	4.1	7.6	5.1	---	5.3	2.9	.95	2.1	.06	e.15	e1.8
31	2.2	---	8.4	5.4	---	5.1	---	.83	---	.04	e.10	---
TOTAL	57.5	95.4	171.5	187.7	141.5	177.2	152.5	56.08	102.09	135.35	3.05	262.49
MEAN	1.85	3.18	5.53	6.05	4.88	5.72	5.08	1.81	3.40	4.37	.098	8.75
MAX	2.3	4.1	8.5	8.1	6.5	11	14	3.1	33	37	.32	150
MIN	1.5	2.0	3.9	4.6	4.0	4.5	2.6	.83	.27	.04	.03	.05
AC-FT	114	189	340	372	281	351	302	111	202	268	6.0	521

CAL YR 1987 TOTAL 11083.07 MEAN 30.4 MAX 2280 MIN .35 AC-FT 21980
WTR YR 1988 TOTAL 1542.36 MEAN 4.21 MAX 150 MIN .03 AC-FT 3060

e Estimated.

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. Daily discharges below 160 ft³/s were based on a graph of once daily wire-weight gage readings. There are no large diversion above Station. Some regulation by White River Reservoir (capacity, 44,900 acre-ft), 106 mi upstream.

AVERAGE DISCHARGE.--49 years (water years 1940-88), 107 ft³/s (77,520 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)
Sept. 18	1800	*1,080	*4.73				

Minimum daily discharge, 0.04 ft³/s May 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e1.2	3.6	e18	7.8	6.5	8.5	e.89	.56	4.5	.25	.12
2	8.5	1.2	2.9	17	7.1	31	14	.76	.56	270	.41	51
3	7.8	1.2	3.2	e16	7.8	33	e10	1.2	.48	e100	.30	10
4	e5.9	1.8	5.9	14	9.2	23	6.5	1.0	.89	e58	.21	e.45
5	4.0	1.0	5.4	13	11	23	4.9	.76	e.41	23	.18	e.12
6	5.9	.89	e4.9	12	14	e18	4.9	.65	.30	6.5	.18	.10
7	5.9	4.0	3.6	e11	e14	15	2.9	e.41	.25	2.6	e.18	.12
8	4.4	e14	2.9	10	13	14	2.6	.21	.18	4.0	.18	.15
9	4.0	4.0	2.3	9.2	11	10	4.0	.10	.06	6.5	.21	.12
10	3.6	1.0	2.0	e8.5	11	10	e4.0	.12	.10	e7.8	.35	.09
11	e4.0	e1.8	2.0	10	9.2	8.5	4.4	.86	.12	87	20	e.09
12	e3.6	2.3	2.0	17	8.5	6.5	4.4	2.8	e.12	98	3.2	.10
13	2.9	2.9	e2.9	18	7.1	e5.9	4.0	1.2	.10	154	.89	.10
14	2.6	4.0	7.1	16	e6.5	5.4	4.0	.89	.10	94	e.35	.18
15	1.8	e4.4	13	13	e5.9	5.4	3.6	e.41	24	46	.21	.12
16	1.0	5.4	8.5	11	5.4	7.1	2.0	.15	35	19	.18	.10
17	1.6	4.9	9.2	e11	5.4	12	125	.09	1.2	e11	.18	.10
18	e1.4	4.9	11	e10	5.9	15	32	.04	.12	5.4	34	363
19	1.4	5.4	10	9.2	6.5	12	26	.18	e.09	3.6	33	246
20	1.4	e5.4	e11	7.1	7.1	e9.2	23	4.1	.15	22	43	162
21	1.2	e4.9	11	4.4	e6.5	8.5	13	14	.09	49	e4.5	87
22	1.0	e3.2	10	6.5	5.4	7.1	13	e29	.06	11	.48	51
23	1.2	2.6	9.2	9.2	4.4	5.4	13	35	.05	2.0	.21	69
24	1.4	2.0	9.2	e9.2	4.4	5.4	e7.1	22	.06	e2.9	.18	44
25	e1.6	2.3	e44	8.5	4.4	4.9	2.9	15	66	8.5	.15	e29
26	1.6	e2.9	38	8.5	4.9	3.6	2.0	7.8	247	4.0	.12	22
27	1.4	1.8	e19	9.2	5.4	e4.0	3.6	4.9	154	1.8	.12	13
28	.76	2.0	16	6.5	e4.9	4.4	2.9	3.2	107	1.0	e.10	6.5
29	.76	e4.4	17	6.5	4.4	2.9	2.3	e2.3	70	.65	.10	6.5
30	1.2	6.5	18	7.1	---	4.0	1.8	e1.8	15	.41	.12	5.9
31	1.4	---	18	e7.8	---	4.0	---	.89	---	e.25	.10	---
TOTAL	96.22	104.29	322.8	334.4	218.1	324.7	352.3	152.71	724.05	1104.41	143.64	1167.96
MEAN	3.10	3.48	10.4	10.8	7.52	10.5	11.7	4.93	24.1	35.6	4.63	38.9
MAX	11	14	44	18	14	33	125	35	247	270	43	363
MIN	.76	.89	2.0	4.4	4.4	2.9	1.8	.04	.05	.25	.10	.09
AC-FT	191	207	640	663	433	644	699	303	1440	2190	285	2320

CAL YR 1987 TOTAL 44140.71 MEAN 121 MAX 7460 MIN .76 AC-FT 87550
WTR YR 1988 TOTAL 5045.58 MEAN 13.8 MAX 363 MIN .04 AC-FT 10010

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 June 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 1987 TO SEPTEMBER 1988

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 (FTU)	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 TOTAL (MG/L AS CACO3)
NOV 04...	1220	2.3	62000	7.90	21.0	1.8	8.2	125	1.8	26	42	3400
JAN 27...	1000	9.7	35100	8.00	1.5	1.5	14.4	123	1.9	20	21	2600
MAY 25...	1215	17	21000	8.20	23.5	0.90	11.3	151	1.0	54	110	1700
AUG 10...	0930	0.56	54200	7.80	26.5	9.4	8.2	132	1.6	50	76	3700

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 WAT WH TOT FET 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 04...	3300	880	290	14000	110	40	115	2600	23000	0.40	4.2	45000
JAN 27...	2500	690	220	8500	75	28	143	2500	13000	0.40	6.7	26000
MAY 25...	1600	480	120	4500	49	5.1	91	1700	6800	0.60	7.9	13800
AUG 10...	3600	920	330	13000	97	41	133	3300	21000	<0.10	11	38800

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-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)
NOV 04...	40900	--	--	0.260	--	0.14	0.40	0.020	0.010	--	--	112
JAN 27...	25000	<0.010	0.740	0.240	0.220	0.36	0.60	0.010	<0.010	<0.010	--	6
MAY 25...	13700	0.010	<0.100	0.160	0.130	0.54	0.70	0.020	0.010	<0.010	--	45
AUG 10...	38700	0.020	<0.100	0.660	0.760	0.04	0.70	0.020	0.050	0.020	0.06	30

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 04...	0.70	99	20	2	500	<10	<1	2	<1	1	230
JAN 27...	0.16	88	<10	1	200	<10	<1	2	<1	<1	110
MAY 25...	2.1	95	<10	4	100	<10	<1	<1	2	<1	60
AUG 10...	0.04	97	40	5	100	<10	<1	3	1	1	240

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 04...	<5	180	450	0.3	5	2	13	<1.0	17000	330	<100
JAN 27...	<5	140	190	0.6	5	<1	8	<1.0	11000	190	20
MAY 25...	<5	100	60	<0.1	4	4	4	1.0	6900	65	10
AUG 10...	<5	160	900	<0.1	5	2	8	1.0	20000	200	30

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.--Records good except those for estimated daily discharges, which are fair. There are small diversions upstream from station for irrigation and oil field operation. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950. Gage-height telemeter at station via Handar data collection platform.

AVERAGE DISCHARGE.--64 years (water years 1925-88), 374 ft³/s (271,000 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)
Sept. 19	1440	*7,410	*8.14				

Minimum discharge, no flow Sept. 9-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	20	28	68	53	39	33	28	62	e455	27	.08
2	74	22	28	65	59	62	29	22	74	e474	21	12
3	69	22	28	63	60	50	27	17	55	e915	21	11
4	66	22	28	61	56	115	26	13	20	e841	16	1.7
5	59	21	29	61	63	97	21	11	17	e865	13	.18
6	57	21	30	65	67	85	20	10	16	818	11	.07
7	55	21	30	65	71	62	24	8.6	12	443	9.0	.03
8	53	19	27	58	69	49	23	8.5	8.4	237	6.5	.02
9	51	19	26	e55	66	49	20	5.2	4.7	207	8.5	.00
10	45	18	26	e50	63	51	32	33	2.7	210	9.3	.00
11	41	20	27	e50	57	50	32	35	1.9	436	15	.00
12	41	21	27	e62	69	48	35	41	1.5	318	125	.00
13	40	22	28	74	63	46	35	30	1.2	247	83	5.1
14	39	24	33	69	57	43	32	20	.97	316	40	.22
15	37	26	34	69	56	42	28	12	1.9	516	20	.08
16	36	26	33	71	52	38	27	7.6	1.7	355	10	.02
17	36	24	34	70	51	37	35	6.1	5.2	244	5.9	87
18	36	22	37	69	51	37	41	3.6	6.8	177	4.1	1770
19	34	23	52	65	50	38	61	5.2	.86	146	3.0	4920
20	29	22	45	63	49	40	55	14	.34	109	17	3040
21	28	23	44	63	48	39	60	19	.52	73	8.4	2880
22	27	24	43	65	47	40	51	19	.49	313	20	1590
23	29	24	46	67	44	39	46	33	.15	317	30	926
24	30	25	45	62	44	37	45	37	.10	129	15	724
25	28	23	77	60	43	34	44	27	2.1	92	8.9	422
26	26	23	82	60	42	30	43	24	26	114	6.0	314
27	24	26	65	58	39	32	34	24	11	115	3.0	238
28	23	27	68	58	38	32	30	29	23	73	3.3	177
29	23	27	69	59	35	23	29	26	147	55	1.0	140
30	22	28	74	58	---	23	29	21	166	42	.73	133
31	20	---	71	56	---	26	---	20	---	34	.21	---
TOTAL	1264	685	1314	1939	1562	1433	1047	609.8	670.53	9686	561.84	17391.50
MEAN	40.8	22.8	42.4	62.5	53.9	46.2	34.9	19.7	22.4	312	18.1	580
MAX	86	28	82	74	71	115	61	41	166	915	125	4920
MIN	20	18	26	50	35	23	20	3.6	.10	34	.21	.00
AC-FT	2510	1360	2610	3850	3100	2840	2080	1210	1330	19210	1110	34500

CAL YR 1987 TOTAL 177374 MEAN 486 MAX 20700 MIN 18 AC-FT 351800
WTR YR 1988 TOTAL 38163.67 MEAN 104 MAX 4920 MIN .00 AC-FT 75700

e Estimated.

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 Swptember 1977. Sediment analyses: October 1974 to September 1977. Pesticide analyses: April 1975 to August 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, 29,600 microsiemens Apr. 25; minimum daily, 670 microsiemens Sept. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (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 02...	1030	78	10800	7.70	18.0	1400	1300	370	110
DEC 07...	1025	30	14100	7.90	9.0	1600	1400	420	130
MAR 11...	0930	50	19400	8.00	11.0	2400	2200	640	190
APR 19...	1110	57	12300	8.00	14.5	1700	1500	440	140
JUL 14...	1015	294	4140	8.20	27.5	780	740	240	44
AUG 22...	1110	2.3	7570	7.90	29.0	1200	1100	340	89
SEP 19...	1315	7310	1660	7.80	22.5	360	310	110	20

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 02...	2000	24	13	102	1400	3000	1.1	12	6970
DEC 07...	2400	27	12	167	720	4000	0.60	5.3	7790
MAR 11...	3900	36	16	136	2000	6200	0.60	2.8	13000
APR 19...	2200	24	10	144	1600	3400	0.90	5.5	7880
JUL 14...	590	10	8.7	46	690	870	0.50	9.2	2480
AUG 22...	1300	17	10	82	1300	1800	0.80	8.1	4900
SEP 19...	210	5	5.7	46	320	310	0.40	7.2	1010

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	1264	11300	7240	24700	3200	10900	1400	4610	*
NOV.	1987	685	11700	7490	13900	3300	6150	1400	2570	*
DEC.	1987	1314	14900	9700	34400	4400	15600	1700	5950	*
JAN.	1988	1939	16600	10900	57100	5000	26100	1800	9510	*
FEB.	1988	1562	15700	10300	43500	4700	19800	1700	7360	*
MAR.	1988	1433	15300	10000	38800	4600	17800	1700	6460	*
APR.	1988	1047	18600	12400	35000	5800	16300	1900	5450	*
MAY	1988	609.8	13400	8740	14400	4000	6510	1500	2510	*
JUNE	1988	670.53	9720	6210	11200	2700	4950	1200	2140	1400
JULY	1988	9686	5730	3590	93900	1500	40200	740	19400	870
AUG.	1988	561.84	6730	4230	6420	1800	2770	860	1300	1000
SEPT	1988	17391.50	2570	1580	74300	660	31100	350	16300	410
TOTAL		38163.67	**	**	447000	**	198000	**	83500	**
WTD.AVG.		104	6780	4340	**	1900	**	810	**	960

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9850	11600	12600	16500	14800	15000	17400	12600	12000	11200	8350	8620
2	9730	11500	12700	18400	13600	13600	17000	14100	6880	7030	8370	6410
3	9800	11500	12800	17500	14200	12200	17000	15600	4290	6440	8400	6390
4	9780	11400	13300	17600	13800	7000	17300	15800	13000	5500	10500	6390
5	10300	11500	13400	17600	13800	7050	17700	16100	13500	5290	9970	7100
6	11000	11500	13400	16900	13800	8750	17700	16300	13500	4790	9980	7920
7	11300	11500	13500	16200	14200	15000	18100	16500	14300	4280	10000	8150
8	11800	11500	14100	16300	14800	25600	20500	16800	13800	4280	10100	7820
9	10600	11300	14500	16500	15200	23400	20500	16700	13200	5280	10100	---
10	12300	11300	14400	13200	16200	21300	21200	19200	13200	5590	10500	---
11	12300	11300	14500	13200	17300	18000	26300	16600	13700	3600	9800	---
12	12200	11200	14400	13200	17500	18000	19000	9200	14000	3010	6280	---
13	12200	11200	14300	16600	18400	17700	19100	9400	14500	7500	3520	6820
14	12100	11100	13800	15700	22200	17300	16300	9500	14400	6750	4230	8370
15	12100	11100	13900	18200	19100	16700	16000	9800	15000	8920	4590	8400
16	12100	10600	13900	18200	19400	15100	15500	10000	14000	8200	5400	8400
17	12100	11200	14400	17600	17100	15000	13200	11200	12600	7500	6200	6000
18	12000	11500	14800	17000	14400	14800	13000	11300	12600	4700	6210	670
19	11800	11600	14700	18100	15900	14800	12800	11000	12900	4530	6910	1660
20	12000	11600	14900	19200	15900	15400	12200	10800	13200	5200	7640	2310
21	12000	11800	15100	19200	15100	16000	15500	10900	12000	6500	6900	3790
22	12000	12100	15300	18000	15100	16000	19700	12400	12800	3000	6590	2450
23	12000	12100	15300	18000	15100	16300	24000	10200	13800	2780	8580	3120
24	11900	12100	19900	16400	15100	17000	26000	9600	15100	2780	6180	2800
25	11800	12300	16000	16000	15000	18000	29600	9600	15100	3210	6600	4230
26	11900	12300	13400	15800	14200	19600	25200	8700	11300	3300	7320	4510
27	11900	12300	13900	15100	14500	21600	21000	13900	11200	3000	7320	4790
28	12000	12300	16800	15100	14700	19000	17600	13900	11200	5880	7900	5440
29	12000	12500	16500	15000	15100	18700	15700	24100	7450	5940	8520	8320
30	12000	12700	16000	14500	---	18500	15700	20900	11000	7080	8620	10200
31	12000	---	16000	14800	---	16900	---	18200	---	8350	8620	---
MEAN	11600	11700	14600	16500	15700	16400	18600	13600	12500	5530	7750	5810

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	12.0	---	8.0	---	13.0	22.0	---	29.0	---	---
2	24.0	---	---	4.0	4.0	---	---	---	28.0	---	34.0	28.0
3	22.0	16.0	---	4.0	3.0	7.0	25.0	25.0	20.0	30.0	35.0	28.0
4	22.0	25.0	15.0	---	3.5	---	---	---	---	---	28.0	28.0
5	---	20.0	16.0	2.0	---	15.0	21.0	---	25.0	28.0	27.0	---
6	15.0	19.0	18.0	---	5.0	12.0	26.0	---	27.0	---	27.0	32.0
7	---	20.0	---	.0	2.0	22.0	27.0	---	24.0	32.0	---	25.0
8	17.0	17.0	14.0	---	---	16.0	27.0	---	---	31.0	27.0	21.0
9	19.0	11.0	13.0	.0	7.0	---	17.0	23.0	28.0	30.0	27.0	---
10	13.0	13.0	13.0	.0	---	20.0	19.0	26.0	26.0	---	38.0	---
11	12.0	---	15.0	.0	6.0	18.0	20.0	20.0	15.0	27.0	---	---
12	15.0	15.5	---	4.0	12.0	18.0	26.0	26.0	---	35.0	36.0	---
13	19.0	16.0	---	5.0	9.0	---	27.0	25.0	---	---	27.0	25.0
14	---	9.0	---	7.0	14.0	18.0	27.0	---	28.0	30.0	30.0	30.0
15	19.0	20.0	---	11.5	12.0	19.0	---	---	---	31.0	36.0	---
16	19.0	15.0	5.0	8.0	17.0	6.0	26.0	31.0	---	---	---	---
17	23.0	9.5	---	---	11.0	---	20.0	30.0	---	---	27.0	---
18	---	---	---	7.0	5.5	7.0	17.0	26.0	---	27.0	26.0	25.0
19	19.0	13.0	---	---	12.0	19.0	22.0	---	---	27.0	30.0	---
20	20.0	15.0	---	5.0	7.0	---	27.0	20.0	---	25.0	35.0	25.0
21	---	7.0	---	.0	15.0	21.0	---	19.0	---	---	---	27.0
22	15.0	11.0	11.0	1.0	---	21.0	27.0	18.0	36.0	30.0	35.0	30.0
23	20.0	---	---	3.0	15.0	25.0	27.0	---	33.0	34.0	36.0	29.0
24	25.0	20.0	9.0	9.0	15.0	---	---	22.0	35.0	28.0	35.0	22.0
25	18.0	12.0	---	---	---	24.0	---	23.0	34.0	25.0	---	29.0
26	---	10.0	3.0	11.0	10.0	---	25.0	28.0	---	---	30.0	---
27	17.0	---	5.0	12.0	12.0	22.0	25.0	25.0	32.0	---	30.0	30.0
28	20.0	8.0	6.0	15.0	20.0	20.0	26.0	23.0	34.0	35.0	---	24.0
29	---	---	---	---	19.0	---	---	23.0	30.0	36.0	28.0	20.0
30	24.0	11.0	---	10.0	---	21.0	---	23.0	31.0	35.0	25.0	22.0
31	25.0	---	5.0	---	---	14.0	---	19.0	---	36.0	---	---
MEAN	19.0	14.5	10.5	5.5	10.0	17.5	23.5	23.5	28.5	30.5	31.0	26.5

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.--No estimated daily discharge. Records good. There are no known diversions upstream from station.

AVERAGE DISCHARGE.--25 years (water years 1964-88), 7.50 ft³/s (0.98 in/yr), 5,430 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)
Sept. 19	1500	*2,310	*14.27	No other peak greater than base discharge.			

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.14	.02	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.01	.0	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.0	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.62	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.95	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.72	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	33	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.3	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.2	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00	19
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.00	108
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	1380
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	557
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	70
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.9
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9
25	.00	.00	1.1	.00	.00	.00	.00	.00	.00	.00	.00	1.5
26	.00	.00	.21	.00	.00	.00	.00	.00	.00	.00	.00	.82
27	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00	.52
28	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.44
29	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.37
30	.00	.00	.02	.00	---	.00	.00	.00	.00	.00	.00	.33
31	.00	---	.01	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	1.60	0.00	0.00	0.00	0.00	0.00	0.15	67.11	0.00	2162.78
MEAN	.00	.00	.052	.00	.00	.00	.00	.00	.005	2.16	.00	72.1
MAX	.00	.00	1.1	.00	.00	.00	.00	.00	.14	33	.00	1380
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	3.2	.0	.0	.0	.0	.0	.3	133	.0	4290
CFSM	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.69
IN.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.77

CAL YR 1987 TOTAL 5140.79 MEAN 14.1 MAX 1320 MIN .00 AC-FT 10200 CFSM .14 IN. 1.84
WTR YR 1988 TOTAL 2231.64 MEAN 6.10 MAX 1380 MIN .00 AC-FT 4430 CFSM .06 IN. .80

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, 29,110 acre-ft Oct. 1 at 1400 hours (elevation, 1,333.08 ft); minimum, 21,250 acre-feet Sept. 17 (elevation, 1,329.01 ft).

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

1,329.0	21,230	1,331.0	24,800	1,333.0	28,930
1,330.0	22,950	1,332.0	26,800	1,334.0	31,240

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29050	27910	27060	27250	26910	26700	25860	24920	23970	22990	23100	21680
2	28910	27890	27060	27270	26970	26660	25820	24820	24040	23080	23040	21680
3	28890	27860	27030	27250	26970	26620	25800	24800	24000	23040	22990	21680
4	28870	27860	27030	27200	26910	26640	25780	24760	23990	23020	22950	21710
5	28800	27780	27060	27160	26930	26640	25680	24740	23970	22990	22930	21680
6	28780	27760	27010	27250	26950	26640	25680	24710	23930	22900	22900	21610
7	28720	27720	27010	27230	26950	26600	25680	24710	23930	22880	22850	21590
8	28720	27550	26950	27180	26990	26540	25600	24600	23870	22800	22810	21520
9	28650	27500	26950	27160	26970	26560	25500	24540	23780	22780	22710	21470
10	28500	27460	26930	27160	26840	26520	25500	24520	23730	23060	22690	21450
11	28460	27460	26890	27290	26890	26460	25460	24490	23690	23560	22620	21400
12	28460	27480	26860	27160	26930	26400	25460	24470	23630	23930	22610	21350
13	28440	27460	26800	27160	26990	26320	25440	24410	23540	24060	22590	21330
14	28420	27440	26840	27160	26910	26340	25420	24390	23490	24020	22540	21320
15	28420	27420	26800	27250	26910	26280	25360	24360	23430	24000	22470	21320
16	28350	27330	26840	27230	26890	26280	25360	24300	23410	23950	22430	21300
17	28330	27310	26860	27230	26840	26200	25460	24240	23430	23870	22370	21510
18	28330	27230	26860	27230	26820	26200	25400	24210	23360	23800	22330	23190
19	28230	27250	27030	27160	26820	26220	25360	24190	23320	23780	22280	26540
20	28160	27290	26990	27100	26800	26240	25400	24230	23280	23710	22300	28780
21	28160	27270	27030	27100	26860	26220	25380	24170	23250	23650	22240	29020
22	28140	27230	27030	27080	26720	26220	25340	24100	23170	23600	22180	29050
23	28120	27270	27030	27080	26720	26180	25240	24040	23120	23520	22110	29050
24	28120	27180	26950	27030	26720	26140	25240	23990	23080	23450	22090	28980
25	28160	27140	27310	27030	26740	26120	25160	23990	23020	23410	22040	28910
26	28100	27140	27310	27010	26680	26040	25040	23950	23060	23410	21990	28870
27	28040	27080	27350	27060	26700	26080	25020	23910	23060	23380	21900	28800
28	28040	27100	27310	27060	26700	26040	25000	23860	23080	23300	21800	28700
29	27990	27100	27290	27060	26680	25900	24960	23820	23100	23250	21780	28650
30	28010	27030	27330	27060	---	25880	24940	23800	23060	23210	21750	28630
31	27970	---	27270	27060	---	25820	---	23930	---	23170	21730	---
MAX	29050	27910	27350	27290	26990	26700	25860	24920	24040	24060	23100	29050
MIN	27970	27030	26800	27010	26680	25820	24940	23800	23020	22780	21730	21300
(†)	1332.55	1332.11	1332.22	1332.12	1331.94	1331.51	1331.07	1330.53	1330.06	1330.12	1329.29	1332.86
(⊕)	-1100	-940	+240	-210	-380	-860	-880	-1010	-870	+110	-1440	+6900
(††)	111	92.9	96.3	103	92.2	98.9	113	134	137	134	160	122

CAL YR 1987 MAX 35680 MIN 22090 (⊕) +5150 (††) ----
WTR YR 1988 MAX 29050 MIN 21300 (⊕) -440 (††) 1394

(†) Elevation, in feet, at end of month.
(⊕) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use by the North Central Texas Municipal Water Authority.

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.--26 years (water years 1963-88), 10.8 ft³/s (0.64 in/yr), 7,820 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)
June 28	1630	366	9.54	July 3	0030	*587	*10.95

Minimum daily discharge, 0.70 ft³/s Aug. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.5	3.1	3.2	3.9	3.9	4.2	2.2	1.4	3.5	1.2	.76
2	2.4	2.5	3.1	3.3	3.8	4.0	4.2	2.2	1.3	183	1.2	.95
3	2.4	2.5	3.1	3.2	3.9	3.9	4.2	2.0	1.3	320	1.1	.95
4	2.4	2.6	3.1	3.2	3.7	3.9	4.2	2.0	1.3	37	1.1	.88
5	2.4	2.6	3.1	3.3	3.8	3.9	4.2	2.0	1.3	6.9	1.1	.84
6	2.4	2.6	3.1	3.4	3.8	3.9	4.1	2.1	1.2	3.4	1.1	.80
7	2.4	2.6	3.1	3.3	3.9	4.0	4.0	2.1	1.2	2.7	1.3	.75
8	2.4	2.6	3.1	3.4	3.9	3.9	4.0	2.0	1.2	2.3	1.5	.81
9	2.4	2.6	3.0	3.4	3.9	3.9	3.9	1.9	1.1	2.1	1.2	.81
10	2.4	2.6	3.0	3.4	3.7	3.9	4.0	1.9	1.1	2.1	1.1	.80
11	2.4	2.6	3.1	3.4	3.6	3.9	3.8	2.0	1.1	21	1.1	.79
12	2.4	2.7	3.1	3.4	3.7	3.9	3.8	2.0	1.1	58	1.0	.79
13	2.4	2.7	3.0	3.5	3.6	4.0	3.8	2.5	1.0	7.6	.98	.89
14	2.4	2.7	3.2	3.5	3.6	3.9	3.8	2.4	1.1	2.8	.94	.89
15	2.4	2.7	3.1	3.5	3.6	4.0	3.8	2.0	1.1	2.2	.94	.84
16	2.4	2.7	3.1	3.6	3.6	4.0	3.7	1.7	1.0	2.0	.91	.83
17	2.4	2.7	3.1	3.7	3.6	4.2	3.9	1.6	1.0	1.8	.89	.89
18	2.4	2.7	3.2	3.8	3.8	4.2	3.5	1.6	1.0	1.7	.93	7.1
19	2.5	2.8	3.3	3.7	3.8	4.2	3.3	1.6	1.0	1.6	.95	8.2
20	2.4	2.8	3.2	3.5	3.8	4.2	3.1	1.7	1.0	1.6	.97	5.1
21	2.4	2.8	3.2	3.4	3.8	4.2	2.8	2.3	1.0	1.5	.93	2.7
22	2.4	2.9	3.2	3.4	3.8	4.1	2.5	11	.99	1.5	.94	1.6
23	2.4	2.9	3.2	3.5	3.7	4.1	2.3	2.5	.98	1.5	.91	1.4
24	2.5	3.0	3.1	3.4	3.6	4.2	2.2	1.8	1.0	1.5	.91	1.2
25	2.5	3.0	3.8	3.5	3.7	4.2	2.2	1.6	.98	1.4	.90	1.2
26	2.4	3.0	3.7	3.6	3.8	4.2	2.2	1.5	14	1.4	.89	1.1
27	2.5	3.0	3.5	3.6	3.9	4.2	2.1	1.4	7.5	1.3	.88	1.1
28	2.5	3.1	3.4	3.7	3.9	4.2	2.1	1.4	169	1.7	.83	1.1
29	2.5	3.1	3.3	3.8	3.8	4.1	2.2	1.4	35	1.7	.84	1.1
30	2.5	3.1	3.3	3.9	---	4.1	2.2	1.4	13	1.4	.82	1.1
31	2.5	---	3.3	3.9	---	4.2	---	1.4	---	1.3	.70	---
TOTAL	75.2	82.7	99.2	108.4	109.0	125.5	100.3	67.2	266.25	679.5	31.06	48.27
MEAN	2.43	2.76	3.20	3.50	3.76	4.05	3.34	2.17	8.87	21.9	1.00	1.61
MAX	2.5	3.1	3.8	3.9	3.9	4.2	4.2	11	169	320	1.5	8.2
MIN	2.4	2.5	3.0	3.2	3.6	3.9	2.1	1.4	.98	1.3	.70	.75
AC-FT	149	164	197	215	216	249	199	133	528	1350	62	96
CFSM	.01	.01	.01	.02	.02	.02	.01	.01	.04	.10	.00	.01
IN.	.01	.01	.02	.02	.02	.02	.02	.01	.04	.11	.01	.01

CAL YR 1987 TOTAL 3628.3 MEAN 9.94 MAX 221 MIN 2.4 AC-FT 7200 CFSM .04 IN. .59
WTR YR 1988 TOTAL 1792.58 MEAN 4.90 MAX 320 MIN .70 AC-FT 3560 CFSM .02 IN. .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.--21 years, 58.8 ft³/s (42,600 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)
July 5	1100	1,070	12.37	Sept. 19	1300	*1,740	*14.04

Minimum daily discharge, 0.89 ft³/s Aug. 28, 29, Sept. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	15	26	18	14	20	15	22	101	8.2	2.2
2	15	13	16	25	18	16	20	15	107	63	16	1.4
3	15	13	17	23	18	16	18	14	99	220	14	1.1
4	14	13	18	22	18	16	15	11	35	719	12	.89
5	15	15	19	22	18	16	15	11	25	756	11	.99
6	15	14	19	21	18	17	15	11	19	112	14	3.1
7	14	14	17	21	19	17	13	10	16	63	14	4.4
8	14	15	15	21	19	17	13	8.4	14	52	14	5.2
9	13	13	15	21	19	17	13	6.9	12	39	18	7.3
10	13	12	15	21	18	17	14	3.4	11	33	23	6.5
11	12	12	15	21	19	17	14	6.1	9.9	44	20	5.0
12	12	12	15	21	17	16	14	7.4	7.5	52	20	5.0
13	12	12	15	21	14	16	14	8.2	6.3	78	36	8.5
14	12	12	17	20	12	16	13	15	6.3	76	12	10
15	12	13	18	19	10	16	14	15	6.2	47	7.6	16
16	13	14	18	18	16	16	14	12	7.8	34	7.3	4.3
17	13	14	18	18	12	19	24	11	8.2	27	5.0	56
18	12	14	19	18	10	21	28	11	8.2	22	3.3	918
19	13	14	75	18	11	22	28	11	7.5	24	4.2	1550
20	13	14	107	18	11	22	29	21	6.6	71	5.1	1430
21	12	14	62	18	11	21	30	27	6.2	30	5.9	939
22	12	14	40	18	11	20	27	28	5.7	20	3.6	95
23	13	14	28	18	11	20	22	23	5.1	18	2.5	60
24	14	14	24	18	9.4	20	17	24	4.6	15	2.8	48
25	15	16	78	18	11	20	16	31	4.4	13	2.7	41
26	15	14	167	18	11	19	15	21	18	13	2.1	34
27	15	15	134	18	12	18	12	15	19	12	1.0	29
28	14	15	65	18	14	22	11	11	52	12	.89	25
29	13	15	42	18	14	21	12	9.2	268	16	.89	23
30	12	15	32	18	---	20	15	7.4	235	11	1.9	23
31	12	---	29	18	---	19	---	12	---	8.7	2.7	---
TOTAL	415	412	1184	613	419.4	564	525	432.0	1052.5	2801.7	291.68	5352.88
MEAN	13.4	13.7	38.2	19.8	14.5	18.2	17.5	13.9	35.1	90.4	9.41	178
MAX	16	16	167	26	19	22	30	31	268	756	36	1550
MIN	12	12	15	18	9.4	14	11	3.4	4.4	8.7	.89	.89
AC-FT	823	817	2350	1220	832	1120	1040	857	2090	5560	579	10620

CAL YR 1987 TOTAL 28090.8 MEAN 77.0 MAX 1680 MIN 8.5 AC-FT 55720
WTR YR 1988 TOTAL 14063.16 MEAN 38.4 MAX 1550 MIN .89 AC-FT 27890

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.--No estimated daily discharges. Records fair. No known diversions above station.

AVERAGE DISCHARGE.--20 years (water years 1969-88), 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)
Dec. 20	0630	351	7.81	June 28	1230	302	6.92
Dec. 26	1400	609	10.37	Sept. 19	0100	*762	*11.32

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.52	1.3	7.7	4.5	3.4	2.7	2.7	103	5.9	.00	.00
2	1.2	.49	1.4	6.5	4.5	3.6	2.8	2.8	114	2.8	.00	.00
3	.91	.48	1.5	6.5	4.5	3.9	3.0	2.5	92	9.2	.00	.00
4	.79	.46	1.5	6.2	4.5	4.1	2.7	2.2	36	78	.00	.00
5	.79	.46	1.4	5.9	4.5	4.1	2.4	1.9	9.5	41	.00	.00
6	.77	.49	1.3	5.7	4.5	3.8	2.2	1.8	4.6	14	.00	.00
7	.70	.57	2.5	6.0	4.6	3.6	2.1	1.5	3.1	5.6	.00	.00
8	.62	.54	1.5	6.1	5.1	3.6	1.9	1.5	2.6	2.6	.00	.00
9	.62	.58	1.4	5.7	5.3	3.4	2.0	1.6	2.2	1.7	.00	.00
10	.58	.58	1.3	5.5	5.3	3.2	2.9	1.4	1.9	5.5	.00	.00
11	.58	.58	1.3	5.4	5.2	3.2	2.5	1.9	1.7	17	.00	.00
12	.55	.58	1.2	5.6	4.8	3.3	2.5	2.1	1.5	22	.00	.00
13	.56	.73	1.4	5.7	4.4	3.4	2.6	2.0	1.2	7.5	.00	.00
14	.62	.84	1.7	5.0	4.6	3.4	2.5	2.3	1.1	2.7	.00	.00
15	.55	.99	1.9	4.5	4.3	3.3	3.1	2.0	.98	3.1	.00	.00
16	.57	1.2	2.2	5.2	3.9	3.8	3.0	1.6	.87	1.2	.00	.00
17	.56	2.0	1.8	5.3	3.7	5.7	23	1.2	.77	.74	.00	38
18	.64	1.3	1.8	5.3	3.8	7.1	45	.88	.72	.51	.00	652
19	.82	.97	118	5.0	4.5	7.4	16	.73	.57	.48	.00	406
20	.89	.89	204	4.5	4.9	6.3	9.0	90	.51	.71	.00	58
21	.79	.90	20	4.3	4.6	5.1	6.0	63	.45	.35	.00	12
22	.67	.96	7.1	4.0	4.0	4.5	4.7	20	.37	.45	.00	3.5
23	.71	.89	4.8	4.2	3.7	4.3	3.6	6.6	.29	.38	.00	1.7
24	.74	1.1	3.4	4.6	3.5	4.1	3.1	3.6	.22	.34	.00	1.1
25	.83	1.1	211	4.5	3.7	3.9	2.6	2.5	.21	.29	.00	2.7
26	.84	1.1	524	4.4	3.4	3.7	2.4	2.1	5.3	.21	.00	1.5
27	.71	1.2	80	3.9	3.4	3.5	2.1	1.7	16	.12	.00	.53
28	.69	1.2	34	4.1	3.5	3.6	2.0	1.5	232	.06	.00	.30
29	.67	1.2	20	4.3	3.5	3.2	2.2	1.4	69	.03	.00	.27
30	.62	1.3	13	4.4	---	2.7	2.9	1.3	15	.01	.00	4.1
31	.60	---	9.4	4.5	---	2.5	---	6.8	---	.01	.00	---
TOTAL	22.99	26.20	1277.1	160.5	124.7	124.7	165.5	235.11	717.66	224.49	0.00	1181.70
MEAN	.74	.87	41.2	5.18	4.30	4.02	5.52	7.58	23.9	7.24	.00	39.4
MAX	1.8	2.0	524	7.7	5.3	7.4	45	90	232	78	.00	652
MIN	.55	.46	1.2	3.9	3.4	2.5	1.9	.73	.21	.01	.00	.00
AC-FT	46	52	2530	318	247	247	328	466	1420	445	.0	2340
CFSM	.00	.00	.20	.03	.02	.02	.03	.04	.12	.04	.00	.19
IN.	.00	.00	.23	.03	.02	.02	.03	.04	.13	.04	.00	.21

CAL YR 1987 TOTAL 9282.10 MEAN 25.4 MAX 1050 MIN .41 AC-FT 18410 CFSM .12 IN. 1.68
WTR YR 1988 TOTAL 4260.65 MEAN 11.6 MAX 652 MIN .00 AC-FT 8450 CFSM .06 IN. .77

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 oil field 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); 50 years (water years 1939-88) partially regulated, 83.4 ft³/s (60,420 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, 1,660 ft³/s Sept. 19 at 1000 hours (gage height, 7.26 ft); minimum daily, 2.1 ft³/s Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	20	34	29	26	25	18	38	174	9.1	4.2
2	17	19	20	32	29	27	24	17	195	68	9.9	4.6
3	15	20	21	30	29	27	25	17	364	68	10	4.8
4	14	19	21	29	28	27	25	17	98	362	8.7	3.8
5	14	19	21	28	28	27	26	16	37	43	8.5	2.8
6	14	19	21	28	29	28	24	15	23	92	7.4	2.2
7	14	17	21	28	29	27	22	15	17	77	7.7	2.1
8	14	18	21	28	30	27	21	15	15	53	7.3	2.7
9	14	18	21	28	30	26	20	14	13	40	7.1	3.6
10	15	17	21	27	29	24	22	13	12	32	9.0	3.3
11	15	17	21	27	28	24	21	12	11	40	9.9	4.3
12	15	18	20	27	29	23	21	14	10	59	10	4.5
13	16	19	20	27	28	23	21	14	9.7	52	17	3.3
14	17	20	22	27	27	22	21	15	8.6	91	21	3.1
15	18	21	23	26	27	22	23	17	8.4	53	11	7.9
16	19	21	22	26	27	23	22	17	8.6	36	8.1	14
17	19	21	22	28	29	27	45	15	8.6	27	8.0	7.8
18	19	22	23	29	26	28	56	14	8.0	21	7.9	708
19	20	21	81	28	27	28	47	15	7.6	20	6.8	1200
20	21	21	303	27	27	28	33	46	8.4	40	6.5	646
21	20	22	121	27	28	28	31	162	7.5	54	7.0	340
22	20	20	53	26	27	27	28	47	7.6	22	7.9	105
23	21	21	34	26	26	27	25	30	7.3	19	6.2	69
24	22	22	27	27	25	27	22	23	6.7	16	5.8	50
25	22	24	171	26	24	27	19	23	5.9	14	5.8	41
26	23	24	745	27	25	26	18	23	10	14	5.8	37
27	22	21	461	27	25	25	17	18	76	13	5.4	31
28	21	20	129	27	25	26	16	15	135	12	3.9	26
29	20	20	64	27	26	28	17	14	402	12	3.7	25
30	21	20	45	28	---	26	17	13	257	12	3.7	21
31	19	---	38	28	---	25	---	13	---	10	3.5	---
TOTAL	561	600	2653	860	796	806	754	717	1815.9	1646	249.6	3378.0
MEAN	18.1	20.0	85.6	27.7	27.4	26.0	25.1	23.1	60.5	53.1	8.05	113
MAX	23	24	745	34	30	28	56	162	402	362	21	1200
MIN	14	17	20	26	24	22	16	12	5.9	10	3.5	2.1
AC-FT	1110	1190	5260	1710	1580	1600	1500	1420	3600	3260	495	6700

CAL YR 1987 TOTAL 62316 MEAN 171 MAX 3080 MIN 14 AC-FT 123600
WTR YR 1988 TOTAL 14836.5 MEAN 40.5 MAX 1200 MIN 2.1 AC-FT 29430

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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 03...	1515	18	1530	8.20	22.0	12.2	148	4.0	290	150
JAN 28...	0830	16	1760	8.10	8.0	10.2	90	4.6	340	130
MAR 08...	1530	13	1980	8.30	15.0	12.1	127	4.2	360	200
MAY 26...	0930	20	1530	7.80	22.5	12.2	148	3.0	310	160
JUN 29...	0830	28	1380	7.90	26.0	11.8	155	2.6	280	160
AUG 10...	1540	10	1520	8.20	32.0	12.0	175	2.3	270	160

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 WAT WH TOT FET 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 03...	56	36	210	6	16	141	210	260	1.2
JAN 28...	68	41	220	5	14	213	230	290	1.5
MAR 08...	70	45	250	6	29	156	270	330	1.6
MAY 26...	63	36	190	5	10	148	190	250	1.2
JUN 29...	62	30	160	4	11	122	160	240	0.60
AUG 10...	52	34	190	5	15	115	200	260	1.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
NOV 03...	6.3	880	10.7	0.330	11.0	0.070	1.7	1.8	8.00
JAN 28...	9.9	1000	2.60	1.70	4.30	12.0	1.0	13	6.50
MAR 08...	5.6	1090	6.06	0.340	6.40	0.220	1.6	1.8	--
MAY 26...	9.0	838	13.9	0.140	14.0	0.120	1.5	1.6	5.50
JUN 29...	9.9	747	10.9	0.060	11.0	0.090	1.3	1.4	3.70
AUG 10...	5.6	827	15.9	0.050	16.0	0.030	1.6	1.6	4.80

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.--Records good except those for periods computed from wire-weight readings, which are fair. There are three small diversions upstream from station.

AVERAGE DISCHARGE.--26 years, 34.4 ft³/s (0.98 in/yr), 24,930 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)
Dec. 25	2030	405	12.10	Sept. 21	0630	*2,080	*21.37

Minimum discharge, 0.01 ft³/s Sept. 8-14, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.1	2.3	6.6	3.2	2.5	2.3	2.3	1.4	13	.60	.03
2	2.0	1.5	1.6	5.3	3.1	2.8	2.2	1.5	14	13	1.0	.03
3	2.0	1.5	1.6	4.9	3.0	2.7	2.0	1.1	93	98	.72	.03
4	1.7	1.5	1.9	4.5	2.8	2.5	2.0	1.0	92	81	.72	.03
5	1.6	.81	1.9	4.0	3.1	2.6	2.0	.88	27	42	.60	.03
6	1.5	.79	2.1	4.0	3.3	2.4	1.6	.84	12	30	.60	.02
7	.99	.82	2.0	3.7	3.3	2.3	1.5	1.5	6.8	21	.42	.02
8	.98	.73	2.1	3.6	3.1	2.3	1.4	1.2	4.1	16	.28	.01
9	.60	.68	2.4	3.6	3.3	2.3	1.6	.73	2.9	12	.28	.01
10	.57	.72	2.1	3.6	3.2	2.2	2.4	3.8	1.7	9.6	.35	.01
11	.57	.73	1.8	4.2	3.2	2.2	2.2	7.6	1.0	16	13	.01
12	.49	.88	1.7	3.9	2.9	2.3	1.8	5.6	.53	32	5.5	.01
13	.47	1.2	1.7	3.7	3.0	2.3	1.7	3.8	.36	14	1.0	.01
14	.26	1.2	2.8	3.7	3.1	2.1	1.7	2.9	.25	9.9	.23	.01
15	.16	1.6	2.9	3.6	3.0	2.2	1.7	2.0	.25	4.4	.11	.02
16	.51	.86	2.6	3.6	2.9	2.2	1.7	1.5	3.1	2.6	.07	.01
17	.63	2.0	2.6	3.6	3.0	2.9	3.6	1.2	3.4	1.2	.06	2.2
18	.30	1.1	2.6	3.6	3.2	2.7	3.7	.76	.75	.60	.06	217
19	.39	1.1	88	3.6	3.1	2.7	3.3	.46	.27	.60	.06	971
20	.41	.79	31	3.5	2.9	2.7	7.8	4.1	.58	17	.06	1560
21	.27	.64	7.7	3.1	2.8	2.6	6.0	12	.41	69	.06	1570
22	.20	.50	5.7	3.1	3.6	2.6	5.3	5.9	.24	22	.05	215
23	.28	.72	3.7	3.1	2.6	2.7	4.6	2.3	.14	8.0	.06	62
24	.46	1.3	2.9	3.4	2.6	2.7	4.0	1.7	.12	3.6	.07	43
25	.50	1.2	191	3.4	2.7	2.3	3.0	2.6	.09	1.9	.06	36
26	.42	1.7	239	3.1	2.7	2.4	2.3	2.3	18	.72	.04	32
27	.47	1.7	57	2.9	2.8	2.4	1.8	1.6	69	.42	.04	27
28	.35	1.5	28	2.9	2.7	2.4	1.8	.98	220	.28	.04	23
29	.37	1.6	19	3.0	2.4	2.1	1.8	.92	138	.28	.04	19
30	.33	2.1	12	3.1	---	2.0	2.7	.74	30	.35	.04	16
31	.73	---	8.7	3.2	---	2.0	---	.96	---	.50	.04	---
TOTAL	22.61	34.57	732.4	115.1	86.6	75.1	81.5	76.77	741.39	540.95	26.26	4793.49
MEAN	.73	1.15	23.6	3.71	2.99	2.42	2.72	2.48	24.7	17.4	.85	160
MAX	2.1	2.1	239	6.6	3.6	2.9	7.8	12	220	98	13	1570
MIN	.16	.50	1.6	2.9	2.4	2.0	1.4	.46	.09	.28	.04	.01
AC-FT	45	69	1450	228	172	149	162	152	1470	1070	52	9510
CFSM	.00	.00	.05	.01	.01	.01	.01	.01	.05	.04	.00	.33
IN.	.00	.00	.06	.01	.01	.01	.01	.01	.06	.04	.00	.37

CAL YR 1987 TOTAL 12166.48 MEAN 33.3 MAX 1320 MIN .16 AC-FT 24130 CFSM .07 IN. .95
WTR YR 1988 TOTAL 7326.74 MEAN 20.0 MAX 1570 MIN .01 AC-FT 14530 CFSM .04 IN. .57

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 oil field operation that materially affect low flow. Gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years (water years 1925-88), 225 ft³/s (163,000 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)
Sept. 20	1100	*2,470	*10.13				

Minimum discharge, 3.3 ft³/s Sept. 9, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	31	43	135	53	46	39	43	38	343	22	4.6
2	83	29	40	114	55	46	37	43	40	231	21	4.6
3	55	27	40	107	54	45	35	43	51	178	21	6.2
4	40	28	42	96	54	64	35	42	228	129	23	6.6
5	33	29	46	89	57	55	30	47	370	268	21	8.7
6	29	27	44	83	56	48	30	47	194	273	17	7.5
7	27	29	43	e77	54	49	38	45	114	123	17	5.7
8	28	30	46	e72	53	45	36	47	80	95	15	4.7
9	28	28	45	e72	55	40	34	43	62	115	13	3.9
10	28	28	41	e74	54	42	36	49	52	86	11	4.5
11	28	27	43	e75	55	39	35	53	42	90	8.7	4.1
12	27	27	43	77	57	37	30	53	35	78	7.6	5.2
13	24	25	43	73	56	36	25	50	28	63	7.8	6.1
14	22	28	49	75	59	36	25	50	25	79	8.2	11
15	23	36	49	74	54	32	27	45	25	99	6.7	10
16	24	38	49	71	53	34	26	44	23	89	5.6	10
17	21	38	50	70	49	40	46	49	21	88	5.5	9.3
18	23	41	53	71	50	38	53	47	21	67	5.7	25
19	24	41	159	65	52	39	51	45	25	57	13	301
20	23	41	190	59	58	46	102	52	22	60	18	2240
21	22	41	348	e58	57	49	91	47	17	40	17	2100
22	22	40	341	60	55	50	78	44	14	32	13	1530
23	22	40	175	59	50	50	65	168	14	91	12	559
24	23	38	129	58	49	49	57	103	13	88	9.6	248
25	29	39	249	54	48	48	56	78	11	61	7.2	173
26	30	40	650	49	46	48	51	64	11	45	5.9	127
27	27	34	1410	44	48	44	46	50	13	40	5.1	105
28	28	34	842	45	46	43	41	43	14	34	5.7	91
29	29	36	322	46	47	38	42	39	165	30	5.6	78
30	29	43	211	53	---	32	41	37	359	28	5.2	71
31	27	---	159	53	---	36	---	36	---	25	4.9	---
TOTAL	1012	1013	5994	2208	1534	1344	1338	1646	2127	3125	359.0	7760.7
MEAN	32.6	33.8	193	71.2	52.9	43.4	44.6	53.1	70.9	101	11.6	259
MAX	134	43	1410	135	59	64	102	168	370	343	23	2240
MIN	21	25	40	44	46	32	25	36	11	25	4.9	3.9
AC-FT	2010	2010	11890	4380	3040	2670	2650	3260	4220	6200	712	15390

CAL YR 1987 TOTAL 130622 MEAN 358 MAX 8050 MIN 17 AC-FT 259100
WTR YR 1988 TOTAL 29460.7 MEAN 80.5 MAX 2240 MIN 3.9 AC-FT 58440

e Estimated.

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX

LOCATION.--Lat 32°42'27", long 99°16'29", Shackelford County, Hydrologic Unit 12060105, on left bank at downstream side 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.--25 years (water years 1964-88), 6.32 ft³/s (2.18 in/yr), 4,580 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)
Dec. 25	1930	*118	*3.38	No other peak greater than base discharge.			

Minimum daily discharge, 0.03 ft³/s Sept. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.42	.37	.76	.46	.48	.38	.61	.63	.23	.09	.09
2	.40	.42	.37	.68	.46	.49	.34	.58	.50	.23	.09	.10
3	.35	.42	.37	.64	.46	.46	.34	.51	.39	.22	.09	.11
4	.34	.39	.37	.61	.46	.46	.34	.46	.37	.22	.08	.09
5	.34	.37	.37	.61	.46	.46	.32	.51	.36	.23	.07	.08
6	.34	.37	.37	.61	.46	.46	.30	.56	.32	.21	.09	.07
7	.34	.41	.37	.61	.46	.46	.32	.56	.30	.19	.09	.07
8	.34	.45	.35	.61	.46	.44	.34	.51	.30	.19	.08	.07
9	.34	.46	.34	.61	.46	.42	.34	.46	.32	.19	.08	.07
10	.34	.46	.34	.61	.49	.43	.36	.46	.33	.19	.08	.07
11	.34	.46	.34	.61	.51	.42	.35	.46	.30	.25	.08	.07
12	.34	.43	.34	.59	.51	.36	.34	.48	.26	.27	.08	.07
13	.36	.44	.34	.56	.51	.37	.34	.51	.24	.28	.08	.07
14	.37	.48	.34	.56	.48	.37	.35	.51	.23	.30	.08	.08
15	.42	1.2	.34	.56	.46	.40	.37	.51	.22	.28	.08	.08
16	.44	1.1	.34	.56	.46	.44	.37	.49	.22	.26	.08	.08
17	.42	.64	.34	.56	.45	.80	9.2	.46	.22	.23	.08	.09
18	.42	.51	.34	.54	.44	.86	1.6	.45	.22	.17	.09	.09
19	.42	.46	14	.51	.46	.55	.77	.42	.21	.15	.10	.09
20	.42	.43	1.4	.49	.46	.48	.56	3.1	.19	.15	.08	.09
21	.42	.41	.67	.46	.46	.46	.56	1.9	.18	.15	.09	.09
22	.42	.37	.51	.46	.46	.46	.53	.43	.16	.15	.09	.09
23	.42	.37	.51	.46	.46	.46	.51	.34	.17	.14	.09	.09
24	.42	.42	.55	.46	.46	.43	.50	.32	.16	.12	.09	.08
25	.42	1.4	51	.46	.46	.37	.46	.30	.15	.12	.08	.08
26	.42	.72	23	.46	.46	.37	.49	.30	.22	.11	.08	.07
27	.42	.49	3.1	.46	.46	.41	.54	.30	.24	.10	.08	.04
28	.42	.44	1.3	.46	.46	.46	.56	.30	.24	.09	.07	.03
29	.42	.42	.98	.49	.46	.37	.57	.30	.24	.09	.07	.03
30	.42	.40	.83	.51	---	.35	.61	.30	.24	.09	.07	.03
31	.42	---	.81	.47	---	.37	---	.32	---	.09	.08	---
TOTAL	12.11	15.76	105.00	17.04	13.51	14.12	22.96	17.72	8.13	5.69	2.56	2.26
MEAN	.39	.53	3.39	.55	.47	.46	.77	.57	.27	.18	.083	.075
MAX	.44	1.4	51	.76	.51	.86	9.2	3.1	.63	.30	.10	.11
MIN	.34	.37	.34	.46	.44	.35	.30	.30	.15	.09	.07	.03
AC-FT	24	31	208	34	27	28	46	35	16	11	5.1	4.5
CFSM	.01	.01	.09	.01	.01	.01	.02	.01	.01	.00	.00	.00
IN.	.01	.01	.10	.02	.01	.01	.02	.02	.01	.01	.00	.00

CAL YR 1987 TOTAL 2999.33 MEAN 8.22 MAX 315 MIN .34 AC-FT 5950 CFSM .21 IN. 2.84
WTR YR 1988 TOTAL 236.86 MEAN .65 MAX 51 MIN .03 AC-FT 470 CFSM .02 IN. .22

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, 4,970 microsiemens Sept. 19; minimum daily, 2,040 microsiemens Dec. 25.
WATER TEMPERATURE: Maximum daily, 31.0°C July 16, 18; minimum daily, 5.0°C Jan. 8, 12, 24, Feb. 4, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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									
15...	0945	0.37	4410	19.0	930	740	240	81	550
DEC									
02...	0910	0.38	4400	9.0	1100	890	290	88	500
JAN									
28...	0810	0.46	4150	7.5	790	590	210	64	490
MAR									
09...	0845	0.43	4320	10.5	860	700	220	76	540
APR									
28...	0920	0.57	3080	17.5	680	500	180	57	360
JUN									
21...	0930	0.19	3910	26.0	850	660	220	73	480

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
15...	8	3.4	192	170	1300	0.40	13	2470
DEC								
02...	7	3.8	200	130	1300	0.30	11	2440
JAN								
28...	8	3.9	202	150	1100	0.30	7.1	2150
MAR								
09...	8	3.2	167	180	1200	0.40	5.9	2330
APR								
28...	6	3.3	187	120	810	0.40	9.9	1650
JUN								
21...	7	3.2	187	140	1100	0.70	13	2140

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	12.11	4400	2420	79	1300	43	140	4.4	970
NOV.	1987	15.76	4510	2490	106	1300	57	140	5.9	990
DEC.	1987	105.00	2410	1310	372	660	188	77	22	510
JAN.	1988	17.04	3660	2010	92	1100	48	110	5.2	790
FEB.	1988	13.51	4250	2340	85	1300	46	130	4.8	930
MAR.	1988	14.12	4330	2380	91	1300	49	130	5.1	950
APR.	1988	22.96	3170	1730	107	900	56	100	6.2	680
MAY	1988	17.72	3720	2040	97	1100	51	120	5.5	810
JUNE	1988	8.13	3710	2030	45	1100	23	120	2.5	800
JULY	1988	5.69	4220	2320	36	1200	19	130	2.0	930
AUG.	1988	2.56	4570	2520	17	1400	9.4	140	1.0	1000
SEPT	1988	2.26	4840	2670	16	1500	8.9	150	0.9	1100
TOTAL		236.86	**	**	1100	**	598	**	65	**
WTD.AVG.		0.65	3270	1790	**	930	**	100	**	710

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4200	4510	4170	2530	4150	4220	4310	3220	3390	3860	4400	4830
2	4270	4500	4210	2580	4150	4190	4120	3280	3410	3910	4420	4710
3	4340	4490	4240	3220	4240	4220	3940	3340	3470	4110	4440	4700
4	4260	4470	4230	2590	4210	4210	4360	3400	3500	4140	4470	4720
5	4180	4450	4290	2910	4170	4230	3730	3380	3600	4160	4490	4730
6	4380	4440	4130	3240	4280	4230	3720	3480	3600	4170	4450	4740
7	4240	4430	4120	3280	4280	4250	4000	3470	3600	4170	4460	4750
8	4290	4420	4160	3380	4290	4260	4280	3660	3610	4160	4470	4760
9	4510	4490	4210	3390	4220	4320	4370	3660	3620	4160	4480	4770
10	4200	4590	4180	3710	4270	4300	4380	3610	3680	4120	4490	4780
11	4400	4480	4150	3640	4300	4310	4330	3690	3690	4170	4500	4800
12	4380	4550	4140	3650	4250	4370	4400	3700	3760	4180	4510	4810
13	4360	4590	4140	3820	4260	4320	4350	3730	3670	4180	4500	4820
14	4350	4560	4130	3860	4270	4360	4360	3830	3790	4210	4490	4830
15	4380	4530	4120	3910	4260	4310	4380	3830	3820	4250	4500	4840
16	4400	4570	4190	3900	4260	4350	3400	3850	3820	4260	4490	4850
17	4430	4580	4200	4020	4170	4370	2880	3910	3840	4260	4500	4860
18	4420	4490	4120	4040	4250	4400	2830	3970	3860	4370	4510	4880
19	4410	4490	3450	4050	4270	4430	2840	3980	3890	4360	4560	4970
20	4420	4560	2800	4050	4230	4430	2460	3830	3900	4370	4610	4960
21	4450	4550	2140	4070	4260	4450	2450	4150	3910	4360	4620	4950
22	4440	4500	2110	4090	4240	4420	2440	3850	3920	4370	4640	4940
23	4450	4600	2130	4070	4320	4420	2770	3760	3930	4360	4660	4930
24	4540	4590	2150	4120	4280	4400	2780	3800	3920	4390	4680	4920
25	4500	4460	2040	4120	4290	4410	3070	3670	3910	4360	4700	4910
26	4510	4450	2140	4200	4280	4400	2790	3610	3930	4430	4720	4900
27	4470	4500	2390	4190	4290	4410	3070	3620	3940	4420	4740	4880
28	4480	4510	2370	4170	4280	4130	3080	3610	3940	4410	4760	4860
29	4480	4490	2380	4210	4270	4400	3100	3600	3940	4420	4780	4850
30	4490	4480	2400	4190	---	4140	3150	3310	4030	4410	4800	4840
31	4500	---	2480	4170	---	4400	---	3560	---	4400	4820	---
MEAN	4390	4510	3420	3720	4250	4320	3540	3660	3760	4250	4570	4840

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	---	14.0	10.0	10.0	15.0	18.0	22.0	21.0	29.0	28.0	---
2	---	---	14.0	7.0	9.0	13.0	---	20.0	24.0	27.0	---	---
3	20.0	---	12.0	---	6.0	10.0	16.0	---	23.0	26.0	---	---
4	---	---	12.0	8.0	5.0	12.0	16.0	21.0	23.0	29.0	---	---
5	22.0	---	10.0	---	7.0	11.0	17.0	24.0	26.0	28.0	28.0	---
6	20.0	---	12.0	5.0	7.0	14.0	16.0	23.0	27.0	27.0	30.0	---
7	21.0	---	14.0	6.0	8.0	14.0	---	25.0	27.0	28.0	---	---
8	22.0	17.0	13.0	5.0	6.0	15.0	17.0	19.0	26.0	26.0	---	---
9	23.0	15.0	10.0	6.0	5.0	12.0	18.0	21.0	28.0	28.0	---	---
10	20.0	12.0	---	7.0	8.0	14.0	17.0	24.0	24.0	25.0	---	---
11	23.0	15.0	10.0	6.0	10.0	12.0	20.0	23.0	24.0	27.0	---	---
12	---	16.0	12.0	5.0	9.0	10.0	21.0	21.0	24.0	28.0	---	---
13	21.0	14.0	---	8.0	---	10.0	20.0	24.0	23.0	30.0	---	---
14	22.0	15.0	14.0	---	10.0	12.0	---	25.0	27.0	29.0	---	---
15	20.0	16.0	7.0	7.0	11.0	10.0	---	24.0	26.0	30.0	---	---
16	---	14.0	15.0	8.0	10.0	10.0	---	26.0	24.0	31.0	---	---
17	17.0	14.0	12.0	6.0	10.0	9.0	21.0	23.0	25.0	30.0	---	---
18	---	14.0	10.0	7.0	8.0	8.0	20.0	26.0	26.0	31.0	27.0	24.0
19	18.0	15.0	12.0	---	14.0	14.0	18.0	25.0	27.0	28.0	---	27.0
20	18.0	16.0	12.0	7.0	15.0	16.0	16.0	21.0	---	30.0	28.0	26.0
21	17.0	16.0	12.0	6.0	14.0	18.0	18.0	20.0	26.0	---	---	28.0
22	19.0	12.0	12.0	6.0	15.0	17.0	20.0	18.0	---	26.0	---	---
23	22.0	17.0	---	7.0	12.0	20.0	20.0	20.0	---	27.0	---	---
24	21.0	14.0	10.0	5.0	15.0	21.0	18.0	22.0	---	29.0	---	---
25	19.0	12.0	7.0	6.0	15.0	---	19.0	24.0	---	28.0	---	---
26	20.0	10.0	6.0	8.0	14.0	20.0	21.0	26.0	26.0	29.0	---	---
27	18.0	12.0	8.0	12.0	16.0	18.0	21.0	25.0	28.0	---	---	---
28	18.0	---	6.0	10.0	---	18.0	18.0	25.0	30.0	---	---	---
29	22.0	---	---	12.0	15.0	18.0	24.0	23.0	28.0	---	---	---
30	---	10.0	7.0	---	---	15.0	20.0	19.0	30.0	---	---	25.0
31	23.0	---	8.0	12.0	---	13.0	---	24.0	---	28.0	26.0	---
MEAN	20.5	14.0	11.0	7.5	10.5	14.0	19.0	23.0	25.5	28.0	28.0	26.0

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.--22 years, 62.0 ft³/s (1.37 in/yr), 44,920 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)
Dec. 25	1930	*263	*5.68				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	.09	1.2	4.6	1.9	.93	.73	.69	.35	.00	.00	.00
2	.86	.05	1.1	4.1	1.9	.91	.78	.55	.44	.00	.00	.00
3	.03	.02	1.0	3.7	1.9	.95	.78	.51	2.4	.00	.00	.00
4	.00	.01	1.3	3.5	1.9	1.0	.61	.57	4.8	11	.00	.00
5	.00	.02	1.3	3.2	2.0	1.1	.48	.50	2.0	5.9	.00	.00
6	.00	.01	1.1	2.9	1.9	1.0	.41	.40	1.4	1.9	.00	.00
7	.00	.00	1.0	2.9	1.7	1.1	.41	.31	.91	.97	.00	.00
8	.01	.02	.82	2.5	1.2	1.1	.34	.22	.57	.64	.00	.00
9	.03	.00	.53	2.5	1.5	1.1	.30	.20	.35	.46	.00	.00
10	.10	.00	.41	2.5	2.2	1.1	.63	.27	.30	.26	.00	.00
11	.11	.00	.41	2.4	1.7	1.1	.51	.23	.28	.35	.00	.00
12	.05	.01	.41	2.3	1.6	1.1	.43	.22	.22	.26	.00	.00
13	.01	.01	.41	2.2	1.6	.94	.41	.26	.16	.22	.00	.00
14	.01	.05	.52	2.2	1.5	.77	.41	.23	.12	.44	.00	.00
15	.02	1.2	.62	2.2	1.4	.77	.66	.15	.08	.65	.00	.00
16	.10	2.2	.61	2.2	1.3	.74	.61	.10	.08	.50	.00	.00
17	.23	2.2	.61	2.2	1.5	.90	4.2	.19	.08	.32	.00	.00
18	.31	2.9	.66	2.2	1.8	1.2	11	.16	.06	.18	.00	.00
19	.36	2.5	15	2.3	1.7	1.2	9.9	.07	.03	.07	.00	.00
20	.42	1.8	19	2.2	1.6	1.5	5.0	.32	.01	.07	.00	.00
21	.41	1.5	9.5	1.8	1.4	1.5	2.9	.85	.00	.05	.00	.00
22	.41	1.3	4.9	1.9	1.4	1.3	2.1	.59	.00	.03	.00	.00
23	.41	1.2	3.2	1.8	1.3	1.2	1.5	.45	.00	.02	.00	.00
24	.46	1.1	2.7	1.8	1.3	1.1	1.1	.41	.00	.00	.00	.00
25	.55	1.2	77	1.8	1.2	1.0	.89	.41	.00	.00	.00	.00
26	.52	1.8	138	1.8	1.2	.96	.80	.39	.00	.00	.00	.00
27	.58	1.8	24	1.8	1.1	.84	.72	.31	.00	.00	.00	.00
28	.72	2.0	15	1.7	.93	.77	.72	.22	.00	.00	.00	.00
29	.72	1.9	8.9	1.6	.96	.81	.78	.20	.00	.00	.00	.00
30	.56	1.4	6.5	1.8	---	.72	.73	.14	.00	.00	.00	.00
31	.26	---	5.2	2.0	---	.62	---	.23	---	.00	.00	---
TOTAL	9.10	28.29	342.91	74.6	44.59	31.33	50.84	10.35	14.64	24.29	0.00	0.00
MEAN	.29	.94	11.1	2.41	1.54	1.01	1.69	.33	.49	.78	.00	.00
MAX	.86	2.9	138	4.6	2.2	1.5	11	.85	4.8	11	.00	.00
MIN	.00	.00	.41	1.6	.93	.62	.30	.07	.00	.00	.00	.00
AC-FT	18	56	680	148	88	62	101	21	29	48	.0	.0
CFSM	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
IN.	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1987 TOTAL 19939.80 MEAN 54.6 MAX 2370 MIN .00 AC-FT 39550 CFSM .09 IN. 1.21
WTR YR 1988 TOTAL 630.94 MEAN 1.72 MAX 138 MIN .00 AC-FT 1250 CFSM .00 IN. .04

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.--Estimated mean specific conductance values and interruptions in the mean temperature values were due to malfunctions of the instrument. 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, 1983-88): Maximum, 37.5°C July 20, 1986; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 6,950 microsiemens Nov. 15; minimum, 1,140 microsiemens Dec. 26.
WATER TEMPERATURE: Maximum, 33.0°C July 12; minimum, 0.0°C on several days during January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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									
15...	1245	0.02	3930	19.0	630	510	160	57	600
DEC									
02...	1015	1.1	3700	8.5	760	590	190	69	480
JAN									
28...	0910	1.8	2700	6.5	610	430	160	50	370
MAR									
09...	1105	1.1	3300	13.0	690	530	170	64	430
APR									
28...	1020	0.85	3610	18.5	690	530	170	64	500

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
15...	11	5.4	125	180	1100	0.40	5.8	2180
DEC								
02...	8	5.0	172	230	1000	0.30	6.8	2080
JAN								
28...	7	4.9	177	150	730	0.30	4.3	1580
MAR								
09...	7	4.5	157	230	850	0.30	2.1	1850
APR								
28...	9	5.4	154	320	900	0.40	3.8	2060

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	9.10	4000	2240	55	1100	27	220	5.4	830
NOV.	1987	28.29	4040	2260	173	1100	86	220	17	840
DEC.	1987	342.91	1860	1030	956	480	443	110	103	410
JAN.	1988	74.6	2190	1220	245	570	114	130	26	480
FEB.	1988	44.59	2940	1640	197	780	94	170	20	630
MAR.	1988	31.33	3440	1920	162	940	79	190	16	730
APR.	1988	50.84	3690	2060	283	1000	139	210	28	770
MAY	1988	10.35	4040	2260	63	1100	32	220	6.2	840
JUNE	1988	14.64	3560	1990	78	970	39	200	7.9	750
JULY	1988	24.29	3220	1790	118	870	57	180	12	680
AUG.	1988	0.00	*	*	0.00	*	0.00	*	0.00	*
SEPT	1988	0.00	*	*	0.00	*	0.00	*	0.00	*
TOTAL		630.94	**	**	2300	**	1110	**	242	**
WTD.AVG.		1.7	2460	1370	**	650	**	140	**	530

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	3140	4570	4390	4460	3700	3640	3680	1900	1680	1780
2	---	---	2860	4840	4360	4540	3740	3680	3710	1800	1750	1790
3	---	---	2990	4780	4420	4550	3740	3660	3710	1770	1630	1680
4	---	---	---	5060	4420	4640	3700	3560	3650	1810	1650	1720
5	---	---	---	5100	4620	4900	3600	3560	3580	1830	1750	1790
6	---	---	---	5000	4520	4760	3620	3560	3600	1930	1810	1860
7	---	---	---	---	---	---	3660	3500	3610	1950	1870	1900
8	---	---	3430	4840	4560	4750	3700	3640	3660	1990	1950	1960
9	---	---	3480	---	---	---	3700	3640	3670	2050	1990	2020
10	---	---	3650	---	---	---	3700	3640	3680	2090	2050	2080
11	---	---	3530	---	---	---	3700	3640	3680	2150	2090	2120
12	---	---	3630	5280	4820	4980	3700	3620	3680	2210	2130	2150
13	---	---	3730	5560	4840	5080	3720	3580	3680	2250	2170	2210
14	---	---	3620	5430	4970	5180	3720	3600	3680	2290	2230	2260
15	---	---	3790	6950	5010	5470	3640	3520	3590	2310	2270	2290
16	4020	3520	3680	5090	4390	4670	3640	3480	3580	2350	2310	2330
17	3960	3540	3710	4430	4110	4240	3600	3540	3560	2370	2310	2350
18	4420	3740	3900	4130	3870	4010	3600	3520	3560	2410	2370	2380
19	4380	3740	3970	4070	3910	4000	3620	2640	3000	2470	2390	2420
20	4400	3880	4090	4030	3970	4000	2860	2460	2630	2490	2450	2470
21	4530	3910	4080	4030	3990	4000	2500	2140	2270	2550	2470	2510
22	4450	3910	4170	4030	3970	4000	2480	2320	2410	2570	2530	2540
23	4710	4130	4400	3990	3930	3960	2640	2460	2560	2630	2570	2600
24	4830	4050	4400	4070	3770	3950	2760	2620	2700	2650	2570	2610
25	4550	4110	4320	4070	3860	3970	2740	1480	2220	2690	2630	2660
26	4550	4070	4190	3880	3800	3850	1820	1140	1380	2730	2690	2700
27	4790	4170	4410	3800	3640	3700	1280	1220	1260	2750	2710	2730
28	4830	4290	4480	3700	3620	3670	1680	1140	1420	2750	2690	2720
29	4810	4290	4450	3660	3620	3650	1680	1420	1480	2750	2710	2730
30	4570	4330	4410	3680	3620	3650	1560	1380	1450	2750	2710	2740
31	4630	4370	4480	---	---	---	1760	1480	1630	2750	2730	2740
MONTH	4830	3520	3890	6950	3620	4330	3740	1140	2970	2750	1630	2290

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2790	2750	2760	3140	3000	3100	3920	3760	3830	3620	3360	3460
2	2830	2770	2800	3180	3080	3130	3850	3750	3800	3780	3200	3560
3	2850	2790	2820	3240	3140	3170	3850	3690	3790	3880	3520	3730
4	2910	2830	2860	3220	3140	3170	3900	3800	3850	3980	3700	3860
5	2950	2750	2890	3220	3160	3190	4090	3840	3910	---	---	3940
6	2950	2770	2900	3220	3140	3190	4190	3910	4020	---	---	4020
7	3050	2770	2940	3260	3180	3220	4210	3900	4060	---	---	4040
8	3050	2890	2970	3300	3200	3250	4300	3980	4130	---	---	4080
9	2950	2750	2910	3360	3280	3300	4410	4030	4210	---	---	4100
10	2930	2750	2870	3370	3300	3330	4340	4090	4170	---	---	4060
11	2970	2750	2890	3390	3330	3370	4420	4120	4240	---	---	4090
12	2990	2770	2920	3460	3350	3400	4460	4060	4300	---	---	4130
13	2930	2870	2900	3580	3440	3470	4430	3970	4230	---	---	4110
14	2950	2750	2920	3630	3470	3550	4350	4010	4190	---	---	4200
15	2990	2910	2960	3690	3510	3580	4240	4140	4190	---	---	4250
16	3010	2950	2980	3640	3420	3590	4220	4140	4180	---	---	4300
17	2990	2950	2980	3700	3500	3610	4250	3630	3930	---	---	4280
18	2990	2950	2970	3630	3510	3560	3740	3600	3660	---	---	4350
19	3010	2930	2980	3590	3470	3530	3640	3400	3500	---	---	4410
20	3020	2940	2990	3540	3460	3500	3470	3400	3450	---	---	4150
21	3020	2980	2990	3520	3480	3500	3550	3450	3490	4280	3980	4090
22	3040	2960	3000	3530	3490	3500	3600	3520	3540	4280	3980	4170
23	3060	3000	3020	3530	3500	3520	3690	3560	3610	---	---	4220
24	3080	3020	3050	3560	3480	3530	3890	3670	3720	---	---	4250
25	3100	3020	3060	3610	3510	3560	4000	3770	3900	---	---	4260
26	3100	3000	3060	3670	3590	3620	4140	3780	3980	---	---	4230
27	3120	3040	3070	3690	3600	3650	4160	3880	4040	---	---	4220
28	3120	3040	3080	3710	3640	3670	4170	3460	3720	---	---	4240
29	3120	3060	3090	3790	3670	3730	4050	3110	3570	---	---	4260
30	---	---	---	3880	3750	3780	3630	3320	3460	---	---	4270
31	---	---	---	3860	3800	3830	---	---	---	---	---	4220
MONTH	3120	2750	2950	3880	3000	3450	4460	3110	3890	4280	3200	4110

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	4180	---	---	---						
2	4480	4020	4150	---	---	---						
3	4260	3620	3990	---	---	---						
4	3610	3510	3600	---	---	3200						
5	3510	3210	3420	3320	2960	3070						
6	3270	3110	3200	---	---	3210						
7	3230	3110	3170	---	---	3260						
8	---	---	3230	---	---	3350						
9	---	---	3270	---	---	3390						
10	---	---	3330	---	---	3420						
11	---	---	3290	---	---	3380						
12	---	---	3320	---	---	3410						
13	---	---	3410	---	---	3450						
14	---	---	3300	---	---	3420						
15	---	---	3230	---	---	3380						
16	---	---	3280	---	---	3430						
17	---	---	3340	---	---	3520						
18	---	---	3390	---	---	3640						
19	---	---	3440	---	---	3730						
20	---	---	3470	---	---	3800						
21	---	---	---	---	---	3860						
22	---	---	---	---	---	3910						
23	---	---	---	---	---	3940						
24	---	---	---	---	---	---						
25	---	---	---	---	---	---						
26	---	---	---	---	---	---						
27	---	---	---	---	---	---						
28	---	---	---	---	---	---						
29	---	---	---	---	---	---						
30	---	---	---	---	---	---						
31	---	---	---	---	---	---						
MONTH	4480	3110	3450	3320	2960	3490						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.5	10.5	13.0	17.0	12.5	15.0	19.5	15.0	16.5	23.0	18.5	21.0
2	10.5	8.0	9.0	18.5	13.5	16.0	19.0	13.0	16.0	22.5	18.5	20.5
3	8.0	6.5	7.5	13.0	10.5	12.0	19.5	14.0	17.0	24.5	17.0	20.5
4	6.5	5.0	5.5	14.5	8.5	11.5	21.0	15.5	18.5	26.5	17.5	21.5
5	5.0	3.0	4.5	16.5	11.0	13.5	22.5	18.5	20.5	24.0	18.5	21.5
6	6.0	2.5	4.0	15.0	10.0	13.0	24.0	16.0	20.0	23.5	19.5	21.5
7	5.5	3.5	4.5	16.5	12.5	14.5	21.5	16.0	19.0	24.5	20.0	22.5
8	9.0	4.0	6.5	15.5	12.5	14.0	20.0	17.0	18.5	24.5	20.5	22.5
9	7.0	7.0	7.0	17.0	11.0	13.5	21.5	16.5	18.5	28.0	19.0	22.5
10	10.0	6.0	7.5	16.5	10.5	13.5	19.5	15.0	16.5	28.0	20.0	24.0
11	7.0	3.0	5.5	17.5	12.5	14.5	20.0	13.5	16.5	25.0	21.0	22.5
12	9.0	4.0	6.5	17.5	12.0	14.5	21.5	13.0	17.0	25.5	20.0	23.0
13	11.0	6.5	8.5	15.0	10.5	12.5	22.5	14.0	18.0	25.5	21.0	23.5
14	12.5	8.5	10.5	15.5	8.0	11.5	22.0	16.0	19.5	26.0	21.5	24.0
15	11.5	7.5	10.0	14.0	8.0	11.0	26.5	18.5	22.0	26.5	22.0	24.5
16	13.0	8.0	10.5	11.5	11.0	11.5	22.5	19.0	21.0	30.5	23.0	26.0
17	11.5	10.0	11.0	11.0	7.5	10.0	22.5	19.0	20.5	29.0	24.0	26.5
18	10.5	9.0	10.0	12.0	6.5	9.0	20.0	17.0	18.5	27.5	24.0	25.5
19	12.0	8.0	10.0	14.5	7.0	10.5	21.0	15.5	18.0	25.5	23.0	24.0
20	12.5	8.0	10.5	15.5	9.5	12.5	23.0	17.5	20.0	24.0	21.0	22.5
21	13.0	8.5	11.0	16.5	11.0	14.0	22.5	19.0	21.0	24.0	19.5	21.5
22	14.0	9.5	12.0	18.5	13.0	16.0	24.0	20.0	22.0	23.5	18.0	20.5
23	13.0	9.5	11.5	20.5	15.5	18.0	25.5	19.5	22.5	25.0	18.0	21.5
24	11.5	8.0	10.0	21.5	16.5	18.5	23.0	18.5	20.5	29.0	20.5	24.0
25	13.0	8.0	11.0	22.0	15.5	18.5	25.0	18.0	21.0	27.5	21.0	24.5
26	15.5	11.5	13.5	21.5	16.0	18.5	24.0	18.5	21.0	28.0	21.5	24.5
27	17.0	13.0	14.5	21.0	16.0	18.0	23.5	17.0	20.0	25.5	21.5	24.0
28	16.5	11.0	14.0	23.0	18.0	20.5	22.5	17.5	20.5	25.5	22.0	24.0
29	16.5	13.0	15.0	20.0	16.0	18.5	24.5	19.5	21.5	25.5	22.5	24.0
30	---	---	---	20.0	13.5	16.5	22.0	19.5	21.0	25.0	22.5	24.0
31	---	---	---	17.0	15.5	16.0	---	---	---	25.5	22.5	23.5
MONTH	17.0	2.5	9.5	23.0	6.5	14.5	26.5	13.0	19.5	30.5	17.0	23.0

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

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.--26 years (water years 1963-88), 27.0 ft³/s (1.31 in/yr), 19,560 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)
June 1	0800	*1,110	*8.03				

Minimum discharge, no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.07	.09	.01	.05	.09	.29	.08	473	.04	.00	.00
2	.02	.07	.10	.00	.04	.13	.29	.07	e25	.03	.00	.00
3	.01	.07	.10	.01	.04	.15	.20	.07	e15	55	.00	.00
4	.01	.07	.09	.02	.05	.15	.13	.07	e39	19	.00	.00
5	.01	.07	.09	.02	.05	.14	.13	.07	e1.1	.29	.00	.00
6	.01	.07	.09	.03	.05	.13	e.12	.07	e.40	.05	.00	.00
7	.01	.07	.09	.04	.06	.13	e.11	.07	e.34	.04	.00	.00
8	.01	.08	.09	.04	.07	.13	e.10	.06	e.29	.04	.00	.00
9	.01	.07	.09	.04	.06	.11	e.09	.04	e.25	.04	.00	.00
10	.01	.07	.09	.04	.04	.09	e.08	.04	e.25	.22	.00	.00
11	.01	.07	.09	.03	.04	.09	e.08	.04	e.21	2.2	.00	.00
12	.01	.07	.09	.04	.03	.09	e.07	.04	e.18	.40	.00	.00
13	.02	.07	.09	.04	.03	.08	e.07	.04	e.13	e.21	.00	.00
14	.03	.07	.07	.04	.05	.07	e.07	.04	e.11	e.13	.00	.00
15	.03	.14	.07	.05	.05	.08	e.06	.03	e.09	e.40	.00	.00
16	.03	.20	.07	.05	.05	.09	e.06	.03	e.05	e.40	.00	.00
17	.03	.16	.07	.04	.05	.33	e.06	.03	e.04	e.07	.00	.00
18	.03	.12	.09	.04	.04	.32	.27	.03	e.04	e.05	.00	.00
19	.06	.10	3.0	.05	.04	.24	e.11	.02	e.03	e.18	.00	.00
20	.06	.09	.35	.05	.04	.19	e.11	.50	e.03	e.25	.00	.00
21	.05	.09	.06	.05	.04	.15	e.10	.46	.02	e.11	.00	.00
22	.05	.09	.02	.05	.04	.15	e.10	.13	.02	e.05	.00	.00
23	.05	.09	.01	.06	.05	.17	e.09	.10	.02	e.04	.00	.00
24	.05	.09	.00	.07	.05	.18	e.09	.07	.02	e.03	.00	.00
25	.05	.11	31	.07	.05	.17	e.08	.05	.01	e.02	.00	.00
26	.05	.11	17	.06	.04	.15	e.07	.05	.03	e.01	.00	.00
27	.05	.11	.88	.04	.04	.15	e.06	.05	55	.00	.00	.00
28	.05	.11	.17	.04	.07	.20	.05	.05	142	.00	.00	.00
29	.05	.11	.07	.04	.09	.21	.07	.05	.72	.00	.00	.00
30	.06	.11	.04	.04	---	.21	.09	.04	.15	.00	.00	.00
31	.07	---	.02	.05	---	.24	---	.20	---	.00	.00	---
TOTAL	1.01	2.82	54.18	1.25	1.40	4.81	3.30	2.69	753.53	79.30	0.00	0.00
MEAN	.033	.094	1.75	.040	.048	.16	.11	.087	25.1	2.56	.00	.00
MAX	.07	.20	31	.07	.09	.33	.29	.50	473	55	.00	.00
MIN	.01	.07	.00	.00	.03	.07	.05	.02	.01	.00	.00	.00
AC-FT	2.0	5.6	107	2.5	2.8	9.5	6.5	5.3	1490	157	.0	.0
CFSM	.00	.00	.01	.00	.00	.00	.00	.00	.09	.01	.00	.00
IN.	.00	.00	.01	.00	.00	.00	.00	.00	.10	.01	.00	.00

CAL YR 1987 TOTAL 9724.06 MEAN 26.6 MAX 2220 MIN .00 AC-FT 19290 CFSM .10 IN. 1.29
WTR YR 1988 TOTAL 904.29 MEAN 2.47 MAX 473 MIN .00 AC-FT 1790 CFSM .01 IN. .12

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.--Estimated mean specific conductance values and interruptions in the mean temperature values were due to malfunctions of the instrument. 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 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, 19,500 microsiemens May 15-17; minimum, 1,150 microsiemens Dec. 25.
WATER TEMPERATURE: Maximum, 36.0°C June 22, 23; minimum, 2.0°C Jan. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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 15...	1645	0.03	12200	21.0	2000	1900	580	140	2000
DEC 02...	1345	0.11	10800	9.0	1700	1500	480	110	1700
JAN 28...	1310	0.04	10200	10.0	1600	1400	490	100	1600
MAR 09...	1340	0.12	12200	14.5	2000	1900	590	140	2000
APR 28...	1405	0.05	13600	24.0	2300	2100	670	150	2400
JUN 21...	1505	0.02	9130	34.5	1500	1300	430	94	1300

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 15...	20	6.0	100	710	3800	0.20	5.4	7300
DEC 02...	19	5.5	195	740	3200	0.20	7.0	6360
JAN 28...	18	4.8	221	640	3100	0.20	2.8	6070
MAR 09...	20	4.4	164	840	3900	0.20	0.50	7570
APR 28...	23	4.9	154	910	4400	0.30	1.6	8630
JUN 21...	15	6.8	114	510	2600	0.40	--	5010

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	1.01	12600	7640	21	4100	11	660	1.8	*
NOV.	1987	2.82	11100	6670	51	3600	27	590	4.5	*
DEC.	1987	54.18	3890	2250	329	1200	171	210	31	680
JAN.	1988	1.25	9090	5410	18	2900	9.7	480	1.6	1600
FEB.	1988	1.40	10800	6510	25	3500	13	570	2.2	*
MAR.	1988	4.81	12800	7810	101	4200	55	670	8.8	*
APR.	1988	3.30	14400	8820	79	4800	43	750	6.7	*
MAY	1988	2.69	14000	8590	62	4700	34	730	5.3	*
JUNE	1988	753.53	2760	1590	3240	820	1670	150	305	480
JULY	1988	79.30	6500	3800	814	2000	426	350	75	1100
AUG.	1988	0.00	*	*	0.00	*	0.00	*	0.00	*
SEPT	1988	0.00	*	*	0.00	*	0.00	*	0.00	*
TOTAL		904.29	**	**	4700	**	2460	**	441	**
WTD.AVG.		2.5	3340	1940	**	1000	**	180	**	590

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	10000	13000	12800	12900	11100	10400	10800	6010	3870	5250
2	---	---	10100	12900	12800	12900	10800	10600	10700	---	---	---
3	---	---	10100	12900	12700	12900	10900	10300	10600	7140	6140	6430
4	---	---	10300	13000	12800	12900	10900	10700	10800	7870	6630	7180
5	---	---	10200	13100	12800	13000	10800	10400	10600	8330	7410	7860
6	---	---	10300	13100	13000	13100	10700	10400	10500	8640	7040	8030
7	---	---	10400	13100	12900	13000	10900	10400	10600	7500	4040	5860
8	---	---	10400	13100	12400	12800	11200	10800	11000	7870	7510	7720
9	---	---	10500	12600	12400	12500	11200	10800	11000	8040	7650	7830
10	---	---	10600	13000	12600	12800	11400	11000	11200	8140	7640	8050
11	---	---	10500	13100	12700	12900	11300	11100	11200	8070	7360	7800
12	---	---	10200	13200	12700	13000	11300	11100	11200	7530	6890	7250
13	---	---	11500	13100	12800	12900	11500	11200	11300	9080	7550	8180
14	---	---	12000	12900	12700	12800	11700	10400	11400	8960	8540	8780
15	---	---	12200	12700	11300	11900	11500	10900	11200	9330	8810	9030
16	12600	12100	12300	11700	8690	10200	11300	10600	11000	9370	8830	9050
17	12800	12500	12700	10300	8570	9340	10800	10200	10400	9680	8920	9320
18	13000	12700	12800	9710	8630	9100	10600	10200	10400	9970	9660	9810
19	13000	12700	12900	9360	8630	9030	10100	3620	6660	9790	9150	9550
20	13400	13000	13200	9600	9020	9300	4640	3240	3860	9740	9100	9420
21	13500	13300	13400	9820	9480	9630	5530	4450	4820	9920	9500	9640
22	13500	13400	13400	9910	9470	9740	6350	5770	6060	9750	9030	9400
23	13500	13400	13400	9930	9770	9870	7400	6290	6680	9830	9330	9600
24	13400	13200	13300	10200	9910	10000	---	---	---	9840	9220	9540
25	13300	13000	13200	10200	10000	10100	7590	1150	4590	10200	9660	9880
26	13200	12800	13100	10300	10100	10200	1920	1190	1610	10500	9530	10100
27	13200	12700	13000	10500	10200	10400	1940	1660	1760	10500	10200	10300
28	13100	12800	13000	10800	10300	10600	2070	1710	1850	---	---	10400
29	13100	12800	13000	10800	10500	10700	2390	2090	2230	10500	10300	10400
30	13000	12900	13000	11100	10300	10800	11000	2270	3060	10800	10500	10700
31	13000	12800	12900	---	---	---	3790	2880	3270	11000	10700	10800
MONTH	13500	12100	11900	13200	8570	11400	11700	1150	8080	11000	3870	8770

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11000	9960	10600	13100	12400	12700	14800	14200	14500	15000	14000	14800
2	10700	10300	10600	13200	11200	12800	14500	14000	14300	15400	14900	15200
3	10800	10500	10600	12800	11200	12200	14900	14100	14600	15600	15200	15500
4	10900	10300	10500	12800	12300	12700	---	---	14800	16000	15400	15700
5	10700	10300	10500	12800	12100	12600	---	---	14800	16100	15900	16100
6	10300	9550	10000	12500	11500	12100	---	---	14700	16800	16200	16400
7	10000	9580	9750	12600	12300	12400	---	---	14700	16900	16400	16700
8	10200	9720	9920	12400	12100	12300	---	---	14800	17500	16800	17000
9	10200	9510	10000	12900	12200	12500	---	---	14900	17600	16900	17300
10	10400	9590	10000	13100	12700	12900	---	---	14900	17600	17400	17600
11	11100	10400	10600	13200	13100	13100	---	---	14800	18000	17600	17800
12	11600	11000	11400	13500	12900	13100	---	---	14800	18600	17900	18100
13	11400	10700	11000	14100	13400	13600	---	---	14900	18900	18300	18500
14	10900	10000	10700	14100	13500	13900	---	---	14900	19300	18600	18800
15	11400	10800	11000	14200	13700	14000	---	---	15000	19500	18800	19000
16	11600	11100	11400	14400	14100	14200	---	---	15100	19500	19000	19200
17	11400	10700	11200	14900	10700	12700	---	---	15200	19500	19300	19400
18	11200	10500	10900	12700	11600	12000	---	---	14400	---	---	18500
19	11400	9250	10600	12500	10500	11500	---	---	13800	---	---	17600
20	10500	9990	10200	11500	10600	11100	---	---	13600	---	---	14200
21	10300	9830	10100	11500	11100	11300	---	---	13600	---	---	13200
22	10700	10100	10400	12100	11500	11700	---	---	13700	---	---	11500
23	11200	10700	10900	12600	12100	12300	---	---	13700	10500	10200	10400
24	11600	10900	11100	13000	12400	12600	---	---	13500	10800	10400	10600
25	11900	11500	11700	13400	12800	13000	---	---	13600	11200	10600	10800
26	11800	11500	11700	14000	13200	13500	---	---	13600	11000	10700	10900
27	12100	11400	11600	14200	13600	13900	---	---	13700	11200	10300	10900
28	12000	11800	11900	14400	14200	14300	---	---	13800	11100	9830	11000
29	12600	12000	12300	14300	14100	14200	14400	13800	14100	---	---	10600
30	---	---	---	14700	13900	14300	14600	14200	14300	---	---	10900
31	---	---	---	14600	14400	14500	---	---	---	---	---	11000
MONTH	12600	9250	10800	14900	10500	12900	14900	13800	14400	19500	9830	15000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	1700			7500						
2	---	---	3000			8500						
3	---	---	3500			6800						
4	---	---	2000			5500						
5	---	---	4500			6200						
6	---	---	5000			6400						
7	---	---	5500			6800						
8	---	---	6000			7200						
9	---	---	7000			8000						
10	---	---	7500			7500						
11	---	---	7500			6300						
12	---	---	8000			7000						
13	---	---	8500			7200						
14	---	---	8800			7600						
15	---	---	8800			7200						
16	---	---	8900			7200						
17	---	---	8900			8000						
18	---	---	9000			8400						
19	---	---	9000			8000						
20	---	---	9000			7500						
21	---	---	9120			8000						
22	9650	8930	9270			8400						
23	10000	9430	9700			9000						
24	10500	9890	10100			9400						
25	10700	10300	10500			9600						
26	11000	9300	10400			9800						
27	---	---	8620			---						
28	---	---	4000			---						
29	---	---	6500			---						
30	---	---	7000			---						
31	---	---	---			---						
MONTH	11000	8930	7240			7650						

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.0	11.0	14.0	19.5	13.0	15.5	21.5	16.5	18.5	26.5	19.5	22.5
2	11.0	7.5	8.5	19.5	15.0	17.5	22.5	14.5	17.5	24.5	18.5	22.0
3	7.5	7.0	7.0	14.5	11.5	13.0	22.5	15.0	19.0	27.0	18.5	22.0
4	6.5	5.5	6.0	15.5	9.5	12.0	---	---	---	27.5	19.5	23.0
5	6.0	3.5	5.5	17.5	11.5	14.0	---	---	---	29.0	22.0	24.5
6	6.5	2.5	4.5	17.0	10.5	13.5	---	---	---	29.0	22.5	25.0
7	7.0	6.0	6.5	17.5	13.5	15.0	---	---	---	28.0	23.0	25.5
8	11.0	6.5	8.0	17.0	14.0	15.5	---	---	---	29.0	20.5	24.0
9	9.0	8.5	9.0	18.5	11.5	14.5	---	---	---	29.0	21.5	25.0
10	12.0	7.0	9.5	18.0	12.0	14.5	---	---	---	25.5	21.5	23.5
11	7.0	4.0	5.5	18.5	14.5	16.5	---	---	---	27.5	22.0	25.0
12	10.0	6.0	8.0	18.5	12.0	15.0	---	---	---	31.0	21.0	26.5
13	12.0	7.5	10.0	16.0	11.0	13.5	---	---	---	31.0	20.5	26.5
14	15.0	10.0	12.0	16.5	8.0	12.0	---	---	---	32.5	20.5	27.5
15	12.0	8.5	10.5	15.5	8.5	12.0	---	---	---	33.0	21.0	28.5
16	14.0	9.0	11.5	13.0	12.0	12.5	---	---	---	31.5	21.0	27.5
17	12.0	11.5	12.0	12.5	8.0	11.0	---	---	---	28.0	24.5	26.0
18	11.5	10.0	11.0	16.0	6.5	10.5	---	---	---	25.0	21.5	23.0
19	13.5	6.5	10.0	17.5	5.0	12.0	---	---	---	27.0	19.0	23.0
20	14.0	7.5	10.5	17.5	11.0	14.0	---	---	---	23.5	18.0	21.0
21	14.0	8.5	11.0	20.0	13.5	16.5	---	---	---	28.0	19.0	23.5
22	14.5	10.0	12.0	22.0	15.5	18.5	---	---	---	31.0	20.0	26.0
23	15.0	10.0	12.0	23.5	17.5	20.5	---	---	---	28.5	23.5	26.0
24	12.0	8.5	10.5	25.0	19.0	21.5	---	---	---	31.0	20.0	26.0
25	15.0	9.0	12.0	23.5	16.5	20.0	---	---	---	30.5	23.5	26.5
26	16.5	12.5	14.0	23.5	17.0	20.0	---	---	---	29.0	24.5	26.5
27	20.0	13.5	15.5	23.5	17.0	20.0	---	---	---	29.5	25.5	27.0
28	18.0	12.0	15.0	25.0	20.0	22.0	---	---	---	27.5	24.5	26.0
29	17.0	13.5	15.0	22.5	18.0	20.5	27.0	21.5	23.5	25.0	21.5	22.5
30	---	---	---	21.5	14.0	17.5	22.5	20.0	22.0	23.0	22.0	22.5
31	---	---	---	17.5	16.5	17.0	---	---	---	---	---	---
MONTH	20.0	2.5	10.0	25.0	5.0	15.5	27.0	14.5	20.0	33.0	18.0	25.0

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	27.5	26.0	27.0						
2	---	---	---	27.5	26.5	26.5						
3	---	---	---	26.5	25.5	26.0						
4	---	---	---	26.5	25.5	26.0						
5	---	---	---	27.0	25.5	26.5						
6	---	---	---	27.0	26.0	26.5						
7	---	---	---	27.0	26.0	26.5						
8	---	---	---	26.5	25.5	26.0						
9	---	---	---	26.5	25.0	26.0						
10	---	---	---	26.5	25.5	26.0						
11	---	---	---	26.0	25.5	25.5						
12	---	---	---	27.0	25.0	26.0						
13	---	---	---	27.5	26.0	27.0						
14	---	---	---	27.5	26.5	27.0						
15	---	---	---	27.5	26.5	27.0						
16	---	---	---	27.5	26.5	27.0						
17	---	---	---	27.5	26.5	27.0						
18	---	---	---	28.0	26.5	27.0						
19	---	---	---	28.0	26.5	27.5						
20	---	---	---	27.5	26.5	27.0						
21	---	---	---	26.5	25.0	26.0						
22	36.0	27.5	31.0	26.5	24.5	25.5						
23	36.0	27.5	31.5	26.0	24.5	25.5						
24	35.0	27.5	31.5	27.0	25.0	26.0						
25	33.5	28.0	30.5	26.5	25.5	26.0						
26	33.5	27.5	29.5	27.5	25.5	26.5						
27	33.0	24.5	28.5	---	---	---						
28	26.5	25.5	26.0	---	---	---						
29	27.0	26.0	26.5	---	---	---						
30	27.5	26.0	27.0	---	---	---						
31	---	---	---	---	---	---						
MONTH	36.0	24.5	29.0	28.0	24.5	26.5						

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, 280,800 acre-ft Oct. 1, 2 (elevation, 1,180.47 ft); minimum, 233,800 acre-ft Sept. 29 (elevation, 1,176.90 ft).

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

1,176.0	222,800	1,179.0	260,700
1,177.0	235,000	1,181.0	288,300

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280800	273400	269500	273000	271100	270400	265800	263100	258100	255200	247100	239400
2	280000	273300	269200	273300	271400	269700	265700	262300	258700	255500	246700	238900
3	279800	273400	269300	273300	271800	269700	265800	262000	259300	255100	246200	240000
4	279600	272800	269300	273000	271600	269900	265700	261900	259900	254900	246100	238500
5	279000	272400	269500	272700	271600	269700	265200	261900	259800	254800	245700	238300
6	279000	272400	269500	272700	271800	270000	265300	261600	259800	254700	245600	237900
7	279000	272200	269500	272700	271800	269200	265000	261600	259700	254400	245300	237500
8	278600	272000	268900	272600	272000	269200	264900	260800	259700	254700	245100	237000
9	278100	271800	269100	272400	271900	269100	263800	260400	259000	254700	244400	237000
10	277300	271500	269100	272400	270600	269500	264200	261400	258700	254700	244400	236600
11	276900	271400	268700	273700	271000	268500	263900	260200	258500	255700	244700	236500
12	276900	271400	268500	272200	271400	268100	263900	260200	258500	255300	245000	236400
13	276900	271100	268000	272600	271800	267400	263700	260200	258100	253900	244800	236000
14	276500	271000	268500	272700	271100	267900	263500	260000	257700	253600	244400	235900
15	276300	271100	268100	273100	271200	267900	263700	259800	257300	253900	244200	236100
16	275600	271100	268100	272800	271200	267400	263500	259500	256900	252800	243800	235800
17	275900	271100	268300	272700	270800	267000	264700	259500	257400	252400	243300	235600
18	275800	270400	268500	273000	271000	267200	264100	259100	257000	251900	243800	236300
19	275200	270700	271100	272400	271100	267400	264500	259000	256900	251400	242900	235800
20	275000	270700	271000	272400	271200	267300	264300	260300	256900	251100	243300	235600
21	275200	270400	271500	272200	271400	267300	264500	260000	256200	251800	242800	235800
22	274500	270600	271600	272400	269900	267200	264100	259300	256000	250900	242700	235600
23	274500	270600	271800	272000	270400	267200	263900	259700	255700	250400	242200	235300
24	274600	270400	270600	271900	270600	266800	263700	258600	255300	249700	242100	234900
25	274600	270000	273100	271800	270600	266900	263300	258600	254400	249200	241900	234800
26	274200	270000	273500	271900	270700	266800	262700	258600	254700	249200	241200	234600
27	273800	270000	273900	271900	270600	266800	262300	258500	254800	249000	241000	234500
28	274100	269700	273500	271800	270700	267000	262500	258200	255700	248600	240300	234300
29	273800	269700	273800	272600	270300	265700	263000	257600	256000	248300	240000	233900
30	274100	269700	273500	272600	---	266200	263300	257600	255700	247700	239800	234000
31	273500	---	273100	272700	---	266200	---	257400	---	247700	239700	---
MAX	280800	273400	273900	273700	272000	270400	265800	263100	259900	255700	247100	240000
MIN	273500	269700	268000	271800	269900	265700	262300	257400	254400	247700	239700	233900
(↑)	1179.95	1179.67	1179.92	1179.89	1179.71	1179.41	1179.19	1178.75	1178.62	1178.01	1177.37	1176.92
(Φ)	-7300	-3800	+3400	-400	-2400	-4100	-2900	-5900	-1700	-8000	-8000	-5700

CAL YR 1987 MAX 304300 MIN 234100 (Φ) +38500
WTR YR 1988 MAX 280800 MIN 233900 (Φ) -46800

(↑) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
24...	1000	1.00	982	8.10	8.0	1.80	10.3	89	240
24...	1002	10.0	985	8.10	8.0	--	10.3	89	--
24...	1004	20.0	989	8.10	8.0	--	10.3	89	--
24...	1006	30.0	990	8.10	8.0	--	10.3	89	--
24...	1008	40.0	990	8.10	8.0	--	10.3	89	--
24...	1010	50.0	995	8.10	8.0	--	10.3	89	--
24...	1012	60.0	995	8.10	8.0	--	10.3	89	--
24...	1014	66.0	996	8.10	8.0	--	10.3	89	250
AUG									
22...	1405	1.00	1110	8.10	30.5	2.40	6.6	93	250
22...	1407	10.0	1110	8.10	30.0	--	6.6	92	--
22...	1409	20.0	1110	8.10	29.5	--	6.6	92	--
22...	1411	30.0	1110	8.10	29.5	--	6.5	90	--
22...	1413	40.0	1100	7.30	26.5	--	3.0	39	--
22...	1415	50.0	1090	7.30	24.0	--	2.9	36	--
22...	1417	63.0	1090	7.30	23.0	--	2.8	34	250

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
24...	130	68	18	99	3	7.1	112	53	220
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	140	70	19	110	3	7.4	112	53	220
AUG									
22...	150	67	21	110	3	8.0	102	49	250
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	110	66	20	110	3	7.5	133	41	220

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)
FEB								
24...	0.40	3.3	536	<0.100	0.40	<0.010	<3	3
24...	--	--	--	--	--	--	--	--
24...	--	--	--	<0.100	0.30	0.030	10	<10
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	3.4	552	<0.100	0.40	<0.010	<3	2
AUG								
22...	0.40	5.2	572	<0.100	0.60	0.010	7	28
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	--	--	--	<0.100	0.70	0.010	20	50
22...	--	--	--	<0.100	0.60	0.010	20	390
22...	--	--	--	--	--	--	--	--
22...	--	7.5	554	<0.100	1.1	0.030	790	1300

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324649099000501 - HUBBARD CR RES SITE P09

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
24...	1345	1.00	992	8.10	8.5	1.90	10.1	89	250
24...	1347	10.0	990	8.10	8.5	--	10.1	89	--
24...	1349	20.0	988	8.10	8.5	--	10.1	89	--
24...	1351	30.0	988	8.10	8.5	--	10.1	89	--
24...	1353	40.0	988	8.10	8.5	--	10.1	89	--
24...	1355	46.0	987	8.10	8.5	--	10.1	89	260
AUG									
22...	1710	1.00	1110	8.10	29.5	1.10	6.5	90	230
22...	1712	10.0	1110	8.10	29.0	--	6.4	88	--
22...	1714	20.0	1110	7.60	28.0	--	4.9	66	--
22...	1716	30.0	1110	7.50	27.5	--	4.1	55	--
22...	1718	44.0	1100	7.40	24.5	--	3.1	39	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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
24...	130	69	18	100	3	7.3	112	42
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	150	71	19	100	3	7.3	108	53
AUG								
22...	120	59	20	110	3	7.9	105	51
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
22...	110	65	20	110	3	7.6	133	40

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)
FEB								
24...	200	3.3	507	<0.100	0.50	<0.010	<3	3
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	--	--	--	<0.100	0.30	0.030	20	10
24...	--	--	--	--	--	--	--	--
24...	210	3.3	528	<0.100	0.50	0.010	5	3
AUG								
22...	250	4.6	565	<0.100	0.50	<0.010	<3	9
22...	--	--	--	<0.100	0.60	0.010	20	30
22...	--	--	--	<0.100	0.70	0.010	20	90
22...	--	--	--	--	--	--	--	--
22...	240	7.3	572	<0.100	0.90	0.010	310	2200

324606099000201 - HUBBARD CR RES SITE P10

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
24...	0935	1.00	998	8.00	8.5	10.0	88
24...	0937	10.0	992	8.00	8.5	10.0	88
24...	0939	20.0	992	8.00	8.5	10.0	88
24...	0941	33.0	991	8.00	8.5	10.0	88
AUG							
22...	1340	1.00	1110	8.00	30.0	6.4	90
22...	1342	10.0	1110	8.00	29.0	6.3	87
22...	1344	20.0	1110	7.60	28.5	5.1	70
22...	1346	34.0	1110	7.40	27.0	3.2	42

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324514099010201 - HUBBARD CR RES SITE P11

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
24...	1415	1.00	996	8.10	9.0	10.0	89
24...	1417	10.0	996	8.10	9.0	9.9	88
24...	1419	20.0	996	8.10	9.0	9.9	88
24...	1421	27.0	996	8.10	9.0	9.9	88
AUG							
23...	0856	1.00	1110	8.00	28.5	6.3	86
23...	0858	10.0	1110	7.90	28.0	6.2	84
23...	0900	24.0	1110	7.40	27.5	3.7	50

324301099001701 - HUBBARD CR RES SITE P12

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
24...	1430	1.00	1120	8.00	10.5	0.60	9.4	87	280
24...	1432	10.0	1120	8.00	10.0	--	9.3	85	--
24...	1434	14.0	1120	8.00	10.0	--	9.3	85	260
AUG									
23...	0922	1.00	1120	7.80	28.5	0.20	6.1	83	250
23...	0924	11.0	1090	7.50	28.5	--	4.3	58	260

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
24...	160	80	19	120	3	7.2	118	49
24...	--	--	--	--	--	--	--	--
24...	150	76	18	110	3	7.2	118	47
AUG								
23...	140	67	20	110	3	8.0	113	50
23...	150	71	21	110	3	8.0	112	49

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)
FEB								
24...	240	2.2	588	<0.100	0.60	<0.010	3	9
24...	--	--	--	<0.100	0.50	0.010	10	20
24...	240	2.3	571	<0.100	0.50	0.010	8	7
AUG								
23...	250	5.8	579	<0.100	0.40	0.020	23	33
23...	240	5.6	572	<0.100	0.70	0.030	9	230

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324949098594301 - HUBBARD CR RES SITE P13

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
24...	1310	1.00	984	8.10	8.5	10.2	90
24...	1312	10.0	984	8.10	8.5	10.3	90
24...	1314	20.0	985	8.10	8.0	10.3	89
24...	1316	30.0	985	8.10	8.0	10.2	88
24...	1318	40.0	985	8.10	8.0	10.2	88
24...	1320	48.0	990	8.10	8.0	10.2	88
AUG							
22...	1440	1.00	1110	8.10	30.0	6.7	94
22...	1442	10.0	1110	8.10	29.5	6.7	93
22...	1444	20.0	1110	8.10	29.5	6.7	93
22...	1446	30.0	1100	8.10	29.0	6.5	89
22...	1448	40.0	1100	7.30	26.0	2.9	38
22...	1450	50.0	1090	7.30	23.5	3.0	37
22...	1452	58.0	1090	7.30	23.5	3.1	39

324802099021601 - HUBBARD CR RES SITE P15

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
24...	1045	1.00	992	8.10	8.5	10.1	88
24...	1047	10.0	992	8.10	8.5	10.1	88
24...	1049	20.0	995	8.10	8.0	10.1	87
24...	1051	30.0	995	8.10	8.0	10.2	88
24...	1053	37.0	995	8.10	8.0	10.1	87
AUG							
22...	1510	1.00	1120	8.10	30.0	6.6	92
22...	1512	10.0	1120	8.10	29.5	6.5	90
22...	1514	20.0	1110	8.00	29.0	6.3	87
22...	1516	28.0	1110	7.40	28.5	4.0	55

324653099032401 - HUBBARD CR RES SITE P16

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
24...	1110	1.00	1000	8.10	9.0	0.80	9.7	86	250
24...	1112	10.0	1000	8.10	9.0	--	9.7	86	--
24...	1114	22.0	1000	8.10	9.0	--	9.6	85	250
AUG									
22...	1532	1.00	1140	8.00	30.0	0.30	6.5	91	230
22...	1534	10.0	1130	8.00	29.0	--	6.1	84	--
22...	1536	20.0	1130	7.90	28.5	--	6.1	83	250

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
24...	130	69	18	100	3	7.1	113	43
24...	--	--	--	--	--	--	--	--
24...	130	69	18	98	3	7.2	113	43
AUG								
22...	130	60	20	110	3	8.2	105	51
22...	--	--	--	--	--	--	--	--
22...	140	64	21	120	3	8.1	103	52

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324653099032401 - HUBBARD CR RES SITE P16--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB								
24...	210	2.9	518	<0.100	0.50	0.010	<3	3
24...	--	--	--	<0.100	0.50	0.020	<10	10
24...	200	3.0	506	<0.100	0.60	0.010	<3	3
AUG								
22...	260	5.0	577	<0.100	0.60	0.020	13	2
22...	--	--	--	<0.100	0.60	0.020	20	10
22...	260	5.3	592	<0.100	0.50	<0.010	16	23

324608099042101 - HUBBARD CR RES SITE P17

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
24...	1145	1.00	1150	8.00	10.0	8.9	81
24...	1147	10.0	1220	8.00	10.0	8.5	77
24...	1149	21.0	1240	8.00	10.0	8.3	76
AUG							
22...	1600	1.00	1270	7.90	31.0	6.3	90
22...	1602	10.0	1190	7.30	29.0	4.1	56
22...	1604	18.0	1190	7.30	29.0	3.1	43

324541099053601 - HUBBARD CR RES SITE P18

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
24...	1200	1.00	1460	8.10	10.5	0.90	9.5	88	340
24...	1202	10.0	1540	8.00	10.0	--	8.9	81	--
24...	1204	18.0	1660	8.00	10.0	--	7.9	72	380
AUG									
22...	1620	1.00	1660	8.10	32.0	0.50	7.0	102	320
22...	1622	10.0	1570	7.30	29.5	--	3.2	44	--
22...	1624	15.0	1610	7.30	29.5	--	3.0	42	330

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
24...	200	90	27	160	4	5.9	136	96
24...	--	--	--	--	--	--	--	--
24...	230	100	31	180	4	6.0	143	110
AUG								
22...	200	77	30	170	4	8.3	113	84
22...	--	--	--	--	--	--	--	--
22...	210	85	29	170	4	8.4	118	78

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324541099053601 - HUBBARD CR RES SITE P18--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
FEB								
24...	330	2.9	793	<0.100	0.50	0.010	<3	3
24...	--	--	--	<0.100	0.70	0.010	10	20
24...	380	3.5	899	<0.100	1.1	0.010	4	34
AUG								
22...	390	6.8	834	<0.100	0.70	0.040	11	19
22...	--	--	--	<0.100	0.80	0.040	30	240
22...	380	7.2	829	<0.100	1.0	0.050	39	400

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 oil field operations. For statement regarding regulation by Soil Conservation Service floodwater-structures, see station 08080950. Gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 820 ft³/s (594,100 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)
Sept. 20	1550	*5,080	*12.79				

Minimum discharge, 6.1 ft³/s Sept. 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	63	72	354	113	104	78	121	142	286	106	8.6
2	136	61	72	311	118	106	72	108	138	402	82	8.2
3	181	60	75	277	121	108	73	85	122	398	80	14
4	168	59	77	254	118	100	76	86	188	446	67	54
5	143	60	76	232	124	110	68	78	177	550	55	76
6	124	58	75	220	123	118	63	73	397	1010	48	34
7	111	57	76	211	126	165	61	67	296	906	41	22
8	101	59	78	198	129	160	59	62	202	724	37	16
9	96	58	77	190	133	152	54	56	135	492	36	13
10	88	60	76	174	126	140	64	51	97	378	32	11
11	84	58	76	160	129	118	68	47	75	867	32	9.1
12	83	60	76	165	126	108	69	47	60	621	44	7.9
13	80	57	74	167	124	100	71	45	50	820	182	6.9
14	83	61	81	189	120	98	69	50	43	481	87	7.9
15	77	63	86	199	129	96	70	57	38	358	53	12
16	76	68	92	188	131	90	67	57	34	336	67	24
17	67	68	96	164	124	91	89	50	34	434	47	123
18	72	73	102	155	124	96	131	43	36	388	35	122
19	81	77	301	167	120	94	143	38	32	367	28	335
20	72	68	505	152	116	97	132	44	32	637	23	4050
21	65	73	569	153	118	94	120	56	28	234	35	4810
22	65	70	435	133	122	92	165	85	26	210	34	4540
23	62	71	489	132	112	93	159	62	27	181	20	3480
24	64	72	322	129	112	97	148	47	24	173	15	1720
25	66	94	463	120	110	93	135	145	20	339	13	1100
26	63	80	2170	121	110	91	109	114	20	281	11	859
27	61	74	1770	127	106	90	97	93	27	221	11	637
28	62	73	1610	118	104	90	91	85	20	190	8.8	516
29	69	73	1110	117	100	76	90	72	186	180	9.5	522
30	65	71	643	113	---	76	89	61	156	167	10	875
31	67	---	454	111	---	73	---	69	---	142	9.7	---
TOTAL	2784	1999	12278	5501	3468	3216	2780	2154	2862	13219	1359.0	24013.6
MEAN	89.8	66.6	396	177	120	104	92.7	69.5	95.4	426	43.8	800
MAX	181	94	2170	354	133	165	165	145	397	1010	182	4810
MIN	61	57	72	111	100	73	54	38	20	142	8.8	6.9
AC-FT	5520	3970	24350	10910	6880	6380	5510	4270	5680	26220	2700	47630

CAL YR 1987 TOTAL 348990 MEAN 956 MAX 21900 MIN 57 AC-FT 692200
WTR YR 1988 TOTAL 75633.6 MEAN 207 MAX 4810 MIN 6.9 AC-FT 150000

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 1987 TO SEPTEMBER 1988

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 (FTU)	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 TOTAL (MG/L AS CACO3)
DEC 04...	1020	69	6980	8.00	10.0	5.9	12.1	114	2.1	K35	K18	1000
JAN 28...	1055	125	9980	8.10	7.0	8.4	19.3	169	1.2	92	290	1000
MAR 15...	0940	97	10100	8.30	13.0	3.8	12.4	126	3.6	<1	<1	1300
MAY 11...	1115	51	9770	8.20	22.5	0.80	7.9	98	4.4	600	K56	1500
JUL 21...	0935	240	4650	8.30	26.0	2700	7.3	95	--	860	660	720
AUG 25...	0935	20	5050	7.80	26.0	100	5.7	75	1.4	K59	260	730

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 WAT WH TOT FET 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)
DEC 04...	880	250	100	1000	14	9.6	165	1000	1500	0.70	3.2	4400
JAN 28...	870	260	86	1600	23	10	138	880	2500	0.50	3.1	5880
MAR 15...	1200	330	120	1700	21	11	159	1300	2500	0.60	1.7	6310
MAY 11...	1400	330	170	1600	18	7.0	166	1400	2300	0.80	3.8	6250
JUL 21...	600	200	53	730	12	9.6	116	680	1100	0.90	8.0	2880
AUG 25...	620	190	62	790	13	9.6	111	690	1100	0.60	5.6	3050

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-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)
DEC 04...	3970	<0.010	<0.100	0.020	0.030	0.38	0.40	0.020	0.030	0.010	0.03	12
JAN 28...	5420	<0.010	0.230	0.100	0.080	0.50	0.60	0.120	0.080	0.090	0.28	9
MAR 15...	6070	<0.010	<0.100	0.080	0.090	0.82	0.90	0.180	0.120	0.090	0.28	452
MAY 11...	5920	<0.010	0.300	0.110	0.120	0.99	1.1	0.190	0.120	0.090	0.28	53
JUL 21...	2860	<0.010	0.870	0.060	0.050	0.84	0.90	0.140	0.060	0.050	0.15	5400
AUG 25...	2920	<0.010	<0.100	0.030	0.060	0.77	0.80	0.100	0.010	0.010	0.03	117

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)
DEC 04...	2.2	77	<10	2	<100	<10	1	6	1	4	20
JAN 28...	3.0	90	--	--	--	--	--	--	--	--	--
MAR 15...	118	19	<10	2	300	<10	1	2	<1	2	30
MAY 11...	7.3	79	10	4	100	<10	1	2	2	1	30
JUL 21...	3500	100	--	--	--	--	--	--	--	--	--
AUG 25...	6.3	98	20	3	100	<10	1	<1	<1	1	20

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
DEC 04...	<5	100	40	0.3	4	4	1	<1.0	5800	24	10
JAN 28...	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	<5	110	70	1.9	7	1	2	<1.0	7800	41	10
MAY 11...	<5	130	90	0.5	4	4	1	<1.0	6400	42	20
JUL 21...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	<5	60	100	<0.1	2	1	<1	<1.0	3400	20	10

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.--30 years (water years 1959-88), 3.97 ft³/s (2.23 in/yr), 2,880 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)
May 31	1845	410	6.64	Sept. 17	1940	323	5.63
June 3	0015	*948	*10.29				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	.00	.00	.04	.00	.00	.00	.00	116	.00	.00	.00
2	.00	.00	.00	.01	.00	.00	.00	.00	176	.00	.00	.00
3	.00	.00	.00	.01	.00	.00	.00	.00	305	.0	.00	.00
4	.00	.00	.00	.0	.00	.00	.00	.00	43	.0	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	4.6	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.43	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.01	.11	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	37	.11	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.0	16	.02	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.0	3.1
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.16	.00	17
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	1.3
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.0	.00	.11
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	59
19	.00	.00	15	.00	.00	.00	.00	.00	.00	.00	.00	6.2
20	.00	.00	7.9	.00	.00	.00	.00	.00	.00	2.7	.00	1.5
21	.00	.00	1.4	.00	.00	.00	.00	.00	.00	1.8	.00	.24
22	.00	.00	.27	.00	.00	.00	.00	.00	.00	.49	.00	.03
23	.00	.00	.06	.00	.00	.00	.00	.00	.00	.08	.00	.01
24	.00	.00	.01	.00	.00	.00	.00	.00	.00	.01	.00	.0
25	.00	.00	75	.00	.00	.00	.00	.00	.00	.0	.00	.00
26	.00	.00	82	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	7.0	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	1.9	.00	.00	.00	.00	.00	.00	.00	.00	5.7
29	.00	.00	.73	.00	.00	.00	.00	.00	.00	.00	.00	64
30	.00	.00	.29	.00	---	.00	.00	.00	.00	.00	.00	5.7
31	.00	---	.10	.00	---	.00	---	72	---	.00	.00	---
TOTAL	0.00	0.00	191.66	0.06	0.00	0.00	0.00	72.00	646.55	59.47	0.13	228.89
MEAN	.00	.00	6.18	.002	.00	.00	.00	2.32	21.6	1.92	.004	7.63
MAX	.00	.00	82	.04	.00	.00	.00	72	305	37	.11	65
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	380	.1	.0	.0	.0	143	1280	118	.3	454
CFSM	.00	.00	.26	.00	.00	.00	.00	.10	.89	.08	.00	.32
IN.	.00	.00	.29	.00	.00	.00	.00	.11	.99	.09	.00	.35

CAL YR 1987 TOTAL 1837.22 MEAN 5.03 MAX 273 MIN .00 AC-FT 3640 CFSM .21 IN. 2.82
WTR YR 1988 TOTAL 1198.76 MEAN 3.28 MAX 305 MIN .00 AC-FT 2380 CFSM .14 IN. 1.84

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 1.30 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, 23,390 acre-ft May 1, 1980 (gage height, 1,061.23 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,820 acre-ft June 5 at 1600 hours (gage height, 1,074.66 ft); minimum, 46,440 acre-ft Dec. 17 (gage height, 1,072.09 ft).

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

1,072.0	46,220	1,074.0	51,140
1,073.0	48,660	1,075.0	53,680

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48780	47370	46810	50790	50420	49970	49110	48290	49030	51340	50200	48070
2	48780	47320	46780	50820	50420	50020	49080	48220	50300	51190	50100	48290
3	48680	47240	46780	50820	50420	49950	49110	48150	52440	51290	50050	48340
4	48640	47240	46780	50790	50370	49950	49060	48120	52710	51270	50000	48220
5	48610	47150	46780	50770	50400	49920	49010	48070	52710	51120	49920	48170
6	48540	47050	46780	50770	50320	49880	48910	47980	52690	51190	49850	48100
7	48490	47050	46730	50720	50370	49970	48880	47900	52660	50990	49750	48030
8	48390	46980	46730	50720	50350	49850	48780	47900	52560	50890	49700	47980
9	48340	47030	46710	50670	50320	49800	48780	47810	52540	50840	49730	47900
10	48270	46830	46660	50640	50320	49800	48710	47780	52380	50970	49580	47850
11	48200	46810	46630	50640	50250	49750	48610	47730	52330	51550	49780	47780
12	48120	46760	46630	50640	50300	49680	48590	47710	52280	51600	49680	47680
13	48070	46760	46630	50620	50270	49600	48590	47660	52180	51550	49630	47850
14	48050	46730	46590	50590	50270	49580	48560	47590	52110	51570	49530	48070
15	48000	46760	46560	50640	50220	49630	48510	47510	52050	51390	49500	48070
16	47980	46760	46510	50720	50220	49500	48460	47460	52000	51340	49380	48030
17	47900	46760	46460	50640	50250	49530	48730	47420	51950	51240	49280	49080
18	47850	46660	46460	50690	50200	49480	48730	47290	51880	51170	49260	49500
19	47900	46680	47420	50640	50200	49450	48710	47200	51800	51190	49160	49550
20	47810	46630	47590	50620	50150	49450	48730	47200	51720	51190	49080	49580
21	47730	46610	47660	50590	50150	49430	48680	47100	51650	51140	49060	49530
22	47590	46630	47640	50540	50170	49380	48640	47000	51550	51070	48930	49480
23	47680	46630	47640	50570	50070	49380	48590	46950	51500	50940	48910	49480
24	47640	47100	47680	50500	50050	49350	48640	46950	51420	50890	48780	49380
25	47610	47000	49130	50470	50020	49330	48540	46880	51340	50820	48680	49330
26	47560	46950	50590	50500	50050	49280	48490	46830	51320	50770	48610	49260
27	47490	46930	50840	50500	50000	49210	48460	46780	51240	50690	48510	49210
28	47460	46880	50890	50500	50050	49400	48440	46660	51340	50540	48370	49300
29	47460	46850	50840	50500	49970	49160	48370	46560	51370	50500	48290	50200
30	47440	46830	50870	50500	---	49110	48340	46560	51390	50400	48220	50690
31	47420	---	50820	50500	---	49180	---	48170	---	50300	48150	---
MAX	48780	47370	50890	50820	50420	50020	49110	48290	52710	51600	50200	50690
MIN	47420	46610	46460	50470	49970	49110	48340	46560	49030	50300	48150	47680
(†)	1072.49	1072.25	1073.87	1073.74	1073.53	1073.21	1072.87	1072.80	1074.10	1073.66	1072.79	1073.82
(ϕ)	-1390	-590	+3990	-320	-530	-790	-840	-170	+3220	-1090	-2150	+2540

CAL YR 1987 MAX 57340 MIN 46460 (ϕ) -3230
WTR YR 1988 MAX 52710 MIN 46460 (ϕ) +1880

(†) Gage height, 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.--Records good except those for estimated daily discharge, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--23 years (water years 1966-88), 11.7 ft³/s (1.64 in/yr), 8,480 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)
Sept. 17	unknown	*233	*6.63				

Minimum discharge, no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.13	.24	.01	.05	.08	.07	.06	3.4	.00	.08	.01
2	.03	.17	.15	.01	.05	.08	.10	.06	.71	.00	.07	.01
3	.03	.19	.14	.01	.05	.05	.05	.05	9.2	.03	.03	.02
4	.03	.18	.09	.01	.05	.07	.02	.06	11	1.6	.04	.01
5	.03	.19	.11	.01	.05	.08	.02	.08	4.1	.13	.06	.01
6	.03	.17	.11	.01	.05	.08	.04	.07	1.1	.00	.14	.01
7	.03	.22	.12	.01	.05	.08	.03	.05	.34	.00	.13	.0
8	.03	.47	.13	.01	.05	.08	.02	.05	.11	.00	.15	.00
9	.04	.38	.12	.02	.05	.08	.01	.06	.11	.00	.11	.00
10	.05	.20	.11	.01	.05	.10	.01	.04	.08	.0	.10	.00
11	.05	.13	.11	.01	.05	.11	.01	.02	.08	20	.07	.0
12	.05	.11	.11	.01	.05	.10	.01	.02	.08	9.9	.08	.00
13	.05	.13	.11	.01	.05	.06	.01	.02	.06	2.3	.05	.00
14	.05	.17	.11	.01	.05	.07	.01	.02	.06	.42	.05	.00
15	.05	.44	.11	.01	.05	.07	.03	.03	.05	.13	.02	.00
16	.05	.54	.11	.01	.05	.05	.03	.03	.07	.13	.01	.00
17	.05	.39	.11	.02	.07	.08	.10	.03	.10	.18	.01	e38
18	.05	.39	.11	.02	.10	.08	.08	.02	.11	.19	.01	e86
19	.05	.39	.31	.02	.06	.08	.08	.03	.08	.24	.01	e13
20	.05	.40	.11	.02	.05	.08	.10	.07	.12	.27	.02	e3.1
21	.05	.39	.11	.02	.05	.08	.13	.04	.14	.24	.02	e.89
22	.05	.39	.11	.02	.05	.08	.14	.05	.07	.23	.02	.01
23	.05	.39	.11	.02	.05	.09	.11	.05	.05	.25	.01	.01
24	.05	.40	.11	.02	.05	.10	.10	.05	.08	.27	.01	.03
25	.05	.47	2.6	.02	.06	.05	.11	.03	.12	.25	.01	.03
26	.05	.47	9.4	.02	.08	.05	.11	.02	.17	.25	.01	.05
27	.05	.47	2.6	.02	.08	.05	.07	.01	.11	.16	.01	.04
28	.05	.47	.61	.03	.08	.05	.03	.03	.11	.04	.01	.03
29	.05	.41	.15	.03	.08	.04	.08	.06	.09	.02	.01	.21
30	.08	.39	.04	.03	---	.04	.02	.05	.02	.02	.01	.17
31	.11	---	.02	.04	---	.05	---	.10	---	.03	.01	---
TOTAL	1.48	9.64	18.48	0.52	1.66	2.24	1.73	1.36	31.92	37.28	1.37	141.64
MEAN	.048	.32	.60	.017	.057	.072	.058	.044	1.06	1.20	.044	4.72
MAX	.11	.54	9.4	.04	.10	.11	.14	.10	11	20	.15	86
MIN	.03	.11	.02	.01	.05	.04	.01	.01	.02	.00	.01	.00
AC-FT	2.9	19	37	1.0	3.3	4.4	3.4	2.7	63	74	2.7	281
CFSM	.00	.00	.01	.00	.00	.00	.00	.00	.01	.01	.00	.05
IN.	.00	.00	.01	.00	.00	.00	.00	.00	.01	.01	.00	.05

CAL YR 1987 TOTAL 2417.45 MEAN 6.62 MAX 666 MIN .00 AC-FT 4800 CFSM .07 IN. .93
WTR YR 1988 TOTAL 249.32 MEAN .68 MAX 86 MIN .00 AC-FT 495 CFSM .01 IN. .10

e Estimated.

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 contents observed, 273,000 acre-ft Feb. 19 to Mar. 17, 1953 (gage height, 967.0 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 422,500 acre-ft Sept. 30 at 1700 hours (gage height, 990.21 ft); minimum, 361,700 acre-ft Dec. 18 (gage height, 985.11 ft).

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

985.0	360,500	989.0	407,200
987.0	383,300	991.0	432,700

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	377200	369200	366200	377600	376900	378700	374300	370100	371900	377500	394400	387700
2	376800	369200	366100	377500	376800	378400	374100	370400	376600	377300	394500	387700
3	376700	369100	366200	377700	377200	376800	374300	370200	378900	377600	394200	387700
4	376700	369300	366200	376900	377200	376300	374000	370100	379200	378400	394300	387000
5	376900	369100	366900	376900	377300	375800	373900	369900	379600	379500	394200	386700
6	376700	369100	366400	377400	377000	375300	373700	369700	379700	380400	394300	386400
7	376000	368800	366300	377500	377400	375800	373800	369600	380200	382000	394200	386000
8	375100	368200	366700	377600	377500	375200	373600	369600	380600	383300	393900	385500
9	374600	367900	366300	377700	377600	375100	373800	369600	380700	382800	393700	385500
10	374400	367200	366400	377300	378000	374500	373200	369200	380700	384100	393300	385300
11	372400	366900	366500	376800	377600	374900	373100	369000	380600	386400	396300	385200
12	372500	366500	366300	376700	378100	374700	373100	369100	380300	388300	395800	384600
13	372500	366500	366000	375400	378100	374300	373100	368700	380300	389400	395600	384500
14	372300	366400	363700	374900	378300	373600	373000	368600	380100	390500	395500	384500
15	372300	367100	362700	375500	378300	373800	372200	368500	380100	391200	395600	384400
16	372200	366900	362700	375800	378400	373700	372200	368300	380400	391700	395300	384100
17	372200	366800	361800	376000	379100	373900	372700	368000	379900	391900	394700	385200
18	372000	367000	362000	376000	379100	373400	371300	367400	379700	392400	395000	385100
19	372400	366700	362300	376600	378800	373600	370200	367400	379500	393300	394700	385200
20	371900	366700	362500	376000	378900	373700	370400	368900	379100	393600	394400	385900
21	371500	366500	363400	375900	379100	373600	370400	369300	378900	394600	394300	391900
22	371600	366800	364400	376000	380200	373700	370500	368900	378700	394900	393900	399200
23	371600	366900	365400	376300	378700	373800	370500	368600	378300	394500	392400	407100
24	371700	367300	366700	376300	378400	373700	370500	368300	378200	394500	390400	412200
25	371700	366900	369500	375900	378300	373800	370500	368200	378000	394400	390400	415800
26	371400	366700	370400	376000	378400	373700	370800	368300	377700	395000	389900	417800
27	371000	367000	374700	376100	378300	373900	370500	368100	377800	395200	389400	419000
28	370000	366800	377300	376200	378500	373200	370400	367900	377600	394900	389100	420400
29	369800	366300	377500	376600	378800	373400	370800	367600	377500	394900	388700	421500
30	369300	366300	376700	376500	---	373200	370500	367600	377500	395000	388400	422100
31	369300	---	376900	376800	---	373300	---	371600	---	394600	388000	---
MAX	377200	369300	377500	377700	380200	378700	374300	371600	380700	395200	396300	422100
MIN	369300	366300	361800	374900	376800	373200	370200	367400	371900	377300	388000	384100
(†)	985.79	985.52	986.45	986.44	986.61	986.14	985.89	985.99	986.50	987.96	987.40	990.18
(ϕ)	-8400	-3000	+10600	-100	+2000	-5500	-2800	+1100	+5900	+17100	-6600	+34100

CAL YR 1987 MAX 560100 MIN 361800 (ϕ) -170500
WTR YR 1988 MAX 422100 MIN 361800 (ϕ) +44400

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

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 1987 TO SEPTEMBER 1988

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							
25...	1245	1.00	3100	8.20	10.5	9.9	91
25...	1247	10.0	3110	8.20	9.5	9.8	88
25...	1249	20.0	3120	8.10	9.0	9.7	86
25...	1251	30.0	3120	8.10	9.0	9.5	84
25...	1253	40.0	3130	8.10	9.0	9.4	84
25...	1255	52.0	3140	8.00	8.5	9.0	79
MAY							
19...	1108	1.00	3410	8.40	23.5	7.8	97
19...	1110	10.0	3410	8.40	22.5	8.0	98
19...	1112	20.0	3410	8.30	20.5	7.5	88
19...	1114	30.0	3400	8.30	19.5	6.9	79
19...	1116	40.0	3390	8.10	17.0	5.7	62
19...	1118	50.0	3390	8.00	15.0	5.0	52
AUG							
23...	1652	1.00	3710	8.30	31.5	6.8	97
23...	1654	10.0	3710	8.40	30.0	7.1	99
23...	1656	20.0	3710	8.40	29.5	7.0	97
23...	1658	30.0	3650	7.60	27.0	3.7	49
23...	1700	40.0	3560	7.60	21.5	3.4	41
23...	1702	53.0	3510	7.70	18.0	3.3	37

325218098254101 - POSSUM KINGDOM LK SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
25...	1210	1.00	3140	8.20	10.0	3.10	9.9	90	610
25...	1212	10.0	3150	8.20	9.5	--	10.0	90	--
25...	1214	20.0	3150	8.20	9.0	--	9.7	86	--
25...	1216	30.0	3180	8.10	9.0	--	9.4	84	--
25...	1218	40.0	3180	8.10	9.0	--	9.3	83	--
25...	1220	50.0	3180	8.10	8.5	--	9.1	80	--
25...	1222	60.0	3180	8.10	8.5	--	9.0	79	--
25...	1224	70.0	3180	8.10	8.5	--	8.9	78	--
25...	1226	84.0	3180	8.10	8.5	--	8.8	77	610
MAY									
19...	1030	1.00	3420	8.40	23.5	2.90	7.7	96	600
19...	1032	10.0	3420	8.40	23.0	--	7.8	96	--
19...	1034	20.0	3390	8.30	20.0	--	7.5	87	--
19...	1036	30.0	3390	8.30	19.0	--	6.8	77	--
19...	1038	40.0	3390	8.20	16.5	--	5.6	61	--
19...	1040	50.0	3390	8.10	14.0	--	4.9	50	--
19...	1042	60.0	3390	8.00	13.0	--	4.3	43	--
19...	1044	70.0	3460	8.00	12.5	--	3.4	34	--
19...	1046	80.0	3500	7.90	12.0	--	3.0	29	--
19...	1048	90.0	3530	7.80	12.0	--	2.4	24	610
AUG									
23...	1615	1.00	3720	8.30	31.5	2.70	6.8	97	610
23...	1617	10.0	3720	8.40	30.0	--	7.1	99	--
23...	1619	20.0	3730	8.30	29.5	--	6.7	93	--
23...	1621	30.0	3660	7.60	27.0	--	3.8	50	--
23...	1623	40.0	3560	7.60	21.0	--	3.3	39	--
23...	1625	50.0	3500	7.70	18.0	--	3.3	37	--
23...	1627	60.0	3510	7.80	16.0	--	3.3	35	--
23...	1629	70.0	3520	7.90	15.0	--	3.3	34	--
23...	1631	80.0	3530	7.90	14.5	--	3.2	33	--
23...	1633	92.0	3530	7.80	14.0	--	3.1	32	630

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325218098254101 - POSSUM KINGDOM LK SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
FEB									
25...	490	160	50	460	8	8.4	113	480	670
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	490	160	50	510	9	8.5	113	480	730
MAY									
19...	490	160	49	510	9	8.0	113	520	760
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	490	160	51	520	9	8.2	125	530	790
AUG									
23...	510	150	58	550	10	8.6	100	550	840
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	500	160	57	520	9	8.3	132	500	790

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
25...	0.50	7.2	1910	<0.100	0.50	0.020	10	<10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	0.100	0.50	0.010	10	10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	0.100	0.60	0.010	10	10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	7.5	2020	<0.100	0.70	0.020	10	<10
MAY								
19...	0.50	7.3	2080	<0.100	0.50	<0.010	20	<10
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	<0.100	0.40	0.020	20	20
19...	--	--	--	0.100	0.30	0.010	20	<10
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
19...	--	9.4	2140	0.200	0.90	0.100	20	550
AUG								
23...	0.50	6.1	2220	<0.100	0.60	0.010	10	<10
23...	--	--	--	--	--	--	--	--
23...	--	--	--	<0.100	0.70	0.050	30	30
23...	--	--	--	<0.100	0.70	0.010	30	<10
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	11	2130	<0.100	1.1	0.180	40	620

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325250098275301 - POSSUM KINGDOM LK SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1145	1.00	3140	8.30	10.0	10.0	91
25...	1147	10.0	3140	8.30	9.5	9.9	89
25...	1149	20.0	3140	8.30	9.0	9.8	87
25...	1151	30.0	3140	8.30	9.0	9.8	87
25...	1153	40.0	3160	8.30	9.0	9.9	88
25...	1155	54.0	3170	8.30	9.0	9.7	86
MAY							
19...	1006	1.00	3430	8.40	24.0	7.6	95
19...	1008	10.0	3430	8.40	23.0	7.8	96
19...	1010	20.0	3530	8.30	21.0	7.2	85
19...	1012	30.0	3630	8.10	19.0	5.6	64
19...	1014	40.0	3630	7.90	16.5	4.2	45
19...	1016	51.0	3590	7.80	15.0	3.7	39
AUG							
23...	1544	1.00	3740	8.30	31.5	6.9	99
23...	1546	10.0	3740	8.40	30.5	7.1	100
23...	1548	20.0	3740	7.70	28.5	4.4	60
23...	1550	30.0	3710	7.50	26.5	3.5	46
23...	1552	40.0	3710	7.60	22.0	3.4	41
23...	1554	50.0	3740	7.60	19.0	3.6	41
23...	1556	64.0	3680	7.70	16.5	3.3	36

325256098275301 - POSSUM KINGDOM LK SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1120	1.00	3160	8.30	10.0	10.0	91
25...	1122	10.0	3160	8.30	9.5	10.0	90
25...	1124	20.0	3160	8.30	9.5	10.0	90
25...	1126	30.0	3160	8.30	9.0	9.9	88
25...	1128	40.0	3150	8.30	9.0	10.0	89
25...	1130	50.0	3150	8.30	9.0	9.9	88
25...	1132	60.0	3160	8.30	9.0	9.8	87
25...	1134	70.0	3160	8.30	9.0	9.9	88
25...	1136	79.0	3170	8.20	8.5	9.1	80
MAY							
19...	0940	1.00	3420	8.40	23.5	7.5	93
19...	0942	10.0	3420	8.40	23.0	7.6	94
19...	0944	20.0	3440	8.40	22.0	7.6	92
19...	0946	30.0	3600	8.10	18.5	5.4	61
19...	0948	40.0	3600	8.00	16.5	4.3	47
19...	0950	50.0	3560	8.00	15.0	4.0	42
19...	0952	60.0	3580	7.90	13.5	3.2	32
19...	0954	70.0	3590	7.80	13.0	2.5	25
19...	0956	81.0	3590	7.80	12.5	2.4	24
AUG							
23...	1518	1.00	3730	8.30	31.5	6.7	96
23...	1520	10.0	3730	8.30	30.0	6.8	95
23...	1522	20.0	3730	7.70	28.5	5.0	68
23...	1524	30.0	3730	7.50	26.0	4.2	55
23...	1526	40.0	3730	7.60	21.5	4.4	53
23...	1528	50.0	3730	7.70	19.0	4.6	52
23...	1530	60.0	3700	7.70	17.0	5.3	58
23...	1532	70.0	3660	7.70	16.0	3.3	35
23...	1534	84.0	2990	7.70	14.5	3.3	34

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325129098311801 - POSSUM KINGDOM LK SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1020	1.00	3230	8.30	9.0	10.6	94
25...	1022	10.0	3230	8.30	8.5	10.6	93
25...	1024	20.0	3230	8.30	8.5	10.6	93
25...	1026	30.0	3230	8.30	8.5	10.6	93
25...	1028	40.0	3230	8.30	8.5	10.4	91
25...	1030	50.0	3340	8.30	8.0	8.9	77
25...	1032	62.0	3660	8.30	8.0	6.5	57
MAY							
19...	0902	1.00	3500	8.30	23.0	7.5	92
19...	0904	10.0	3550	8.30	23.0	7.5	92
19...	0906	20.0	3600	8.30	22.5	7.5	92
19...	0908	30.0	3750	8.10	20.5	5.9	69
19...	0910	40.0	4160	7.80	19.0	3.7	42
19...	0912	50.0	3950	7.70	16.0	2.4	26
19...	0914	62.0	3770	7.70	14.5	2.2	23
AUG							
23...	1440	1.00	3850	8.30	31.0	6.7	95
23...	1442	10.0	3830	8.30	30.0	7.0	98
23...	1444	20.0	3820	8.30	29.5	6.6	91
23...	1446	30.0	3950	7.50	26.0	3.2	42
23...	1448	40.0	3980	7.50	23.0	3.1	38
23...	1450	50.0	3960	7.60	18.5	3.1	35
23...	1452	65.0	3800	7.60	16.5	3.1	33

325327098314001 - POSSUM KINGDOM LK SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
25...	0945	1.00	3240	8.40	9.5	1.50	11.0	99	610
25...	0947	10.0	3240	8.40	9.0	--	10.8	96	--
25...	0949	20.0	3240	8.40	9.0	--	10.7	95	--
25...	0951	30.0	3240	8.30	9.0	--	10.4	93	--
25...	0953	40.0	3500	8.30	9.0	--	8.5	76	--
25...	0955	51.0	3720	8.20	9.0	--	7.2	64	630
MAY									
18...	1525	1.00	3680	8.30	25.5	1.80	7.4	96	640
18...	1527	10.0	3670	8.30	25.0	--	7.4	95	--
18...	1529	20.0	3660	8.30	24.5	--	7.3	93	--
18...	1531	30.0	4150	8.10	21.0	--	5.1	61	--
18...	1533	40.0	4260	7.80	19.0	--	2.9	33	--
18...	1535	50.0	4010	7.70	16.5	--	2.1	23	--
18...	1537	56.0	3950	7.70	16.0	--	2.1	23	680
AUG									
23...	1400	1.00	3910	8.30	31.5	1.70	7.0	100	650
23...	1402	10.0	3900	8.30	30.5	--	6.9	97	--
23...	1404	20.0	3940	7.70	29.5	--	4.9	68	--
23...	1406	30.0	4090	7.40	26.5	--	3.1	41	--
23...	1408	40.0	4130	7.40	22.0	--	3.1	37	--
23...	1410	50.0	4050	7.40	19.0	--	3.0	34	--
23...	1412	60.0	3940	7.40	17.5	--	3.0	33	680

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325327098314001 - POSSUM KINGDOM LK SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
25...	500	160	52	490	9	8.4	115	500
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	510	160	56	510	9	8.2	121	540
MAY								
18...	520	170	52	550	10	8.3	119	540
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	560	180	57	610	11	8.2	130	580
AUG								
23...	570	160	62	600	11	8.9	84	580
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	520	170	62	590	10	8.6	156	540

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)
FEB								
25...	770	6.6	2060	<0.100	0.60	0.010	10	10
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	<0.100	0.80	0.020	10	30
25...	--	--	--	0.100	0.50	0.020	10	30
25...	900	5.4	2250	<0.100	0.80	0.050	10	70
MAY								
18...	830	6.5	2230	<0.100	0.60	0.010	<10	<10
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	<0.100	0.50	0.010	20	20
18...	--	--	--	0.300	0.40	0.030	20	90
18...	--	--	--	--	--	--	--	--
18...	860	7.5	2380	0.300	1.4	0.260	30	550
AUG								
23...	890	6.0	2360	<0.100	0.60	0.010	20	<10
23...	--	--	--	<0.100	0.60	0.020	30	20
23...	--	--	--	<0.100	0.60	0.020	40	70
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	890	10	2360	<0.100	1.7	0.320	110	580

325347098265701 - POSSUM KINGDOM LK SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1440	1.00	3420	8.50	11.5	10.3	97
25...	1442	10.0	3390	8.50	10.0	10.4	95
25...	1444	20.0	3440	8.40	10.0	9.6	88
25...	1446	30.0	3510	8.40	10.0	9.0	82
25...	1448	42.0	3570	8.40	10.0	8.7	79
MAY							
18...	1400	1.00	4000	8.30	24.5	7.3	93
18...	1402	10.0	4010	8.20	23.5	6.9	86
18...	1404	20.0	4180	8.10	23.0	5.8	72
18...	1406	30.0	4630	7.80	22.5	4.2	51
18...	1408	38.0	4810	7.70	22.5	3.6	44
AUG							
24...	0855	1.00	3920	8.50	30.5	7.0	98
24...	0857	10.0	3920	8.30	29.5	6.5	90
24...	0859	20.0	3920	8.00	29.0	5.5	75
24...	0901	30.0	4050	7.30	27.0	3.3	44
24...	0903	42.0	4230	7.30	21.5	3.2	38

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325557098264401 - POSSUM KINGDOM LK SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1610	1.00	3640	8.60	10.5	10.9	101
25...	1612	10.0	3760	8.50	10.0	9.4	86
25...	1614	25.0	5230	8.30	10.5	7.6	71
MAY							
18...	1425	1.00	4150	8.30	26.0	7.2	94
18...	1427	10.0	4240	8.10	24.5	5.9	75
18...	1429	20.0	4740	7.90	24.5	4.7	60
18...	1431	25.0	5050	7.80	24.5	3.9	50
AUG							
24...	0925	1.00	3900	8.50	30.5	6.8	95
24...	0927	10.0	3910	8.40	30.0	6.6	92
24...	0929	20.0	3920	7.80	29.5	4.9	68
24...	0931	27.0	3990	7.30	28.0	3.4	46

325715098250501 - POSSUM KINGDOM LK SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
FEB									
25...	1505	1.00	3750	8.60	12.0	1.00	10.4	100	640
25...	1507	10.0	4330	8.50	10.5	--	9.6	89	--
25...	1509	17.0	4890	8.40	10.5	--	8.8	82	680
MAY									
18...	1446	1.00	4510	8.30	26.5	0.60	7.1	94	720
18...	1448	10.0	5320	8.00	25.5	--	4.9	64	--
18...	1450	15.0	6200	7.90	26.0	--	4.6	61	860
AUG									
24...	0945	1.00	3940	8.40	30.5	0.60	6.7	94	600
24...	0947	10.0	3940	8.30	30.5	--	6.3	88	--
24...	0949	16.0	3960	7.60	30.0	--	3.6	50	580

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
FEB								
25...	530	160	59	490	9	8.2	118	540
25...	--	--	--	--	--	--	--	--
25...	550	150	73	800	14	8.5	125	650
MAY								
18...	600	180	65	710	12	8.7	116	660
18...	--	--	--	--	--	--	--	--
18...	740	210	82	1000	15	9.9	126	850
AUG								
24...	530	140	60	600	11	9.0	63	600
24...	--	--	--	--	--	--	--	--
24...	510	140	57	600	11	9.2	72	600

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB								
25...	730	5.0	2060	<0.100	0.80	0.050	10	<10
25...	--	--	--	<0.100	0.70	0.030	10	30
25...	1100	3.7	2860	<0.100	0.80	0.050	10	50
MAY								
18...	1100	5.2	2800	<0.100	0.60	0.020	20	<10
18...	--	--	--	<0.100	0.70	3.00	30	80
18...	1400	6.4	3630	<0.100	1.4	0.040	20	150
AUG								
24...	910	6.8	2360	<0.100	0.60	0.040	10	<10
24...	--	--	--	<0.100	1.1	0.040	30	20
24...	910	7.4	2370	<0.100	0.80	0.050	10	100

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325047098291201 - POSSUM KINGDOM LK SITE P03

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1325	1.00	3200	8.30	10.5	10.7	99
25...	1327	10.0	3200	8.30	9.0	10.6	94
25...	1329	20.0	3200	8.30	9.0	10.1	90
25...	1331	30.0	3200	8.30	9.0	10.1	90
25...	1333	40.0	3200	8.30	9.0	9.8	87
25...	1335	51.0	3200	8.20	8.5	9.0	79
MAY							
19...	1140	1.00	3480	8.40	23.5	7.9	98
19...	1142	10.0	3490	8.40	22.5	8.1	99
19...	1144	20.0	3500	8.20	21.5	6.9	83
19...	1146	30.0	3590	8.00	19.5	5.0	58
19...	1148	40.0	3620	7.80	18.0	4.0	45
19...	1150	48.0	3640	7.70	16.5	2.9	31
AUG							
23...	1726	1.00	3810	8.30	31.0	6.8	97
23...	1728	10.0	3810	8.30	29.5	7.0	97
23...	1730	20.0	3820	8.00	29.0	6.0	82
23...	1732	30.0	3860	7.50	27.0	3.5	46
23...	1734	40.0	3820	7.50	21.5	3.4	41
23...	1736	51.0	3820	7.50	19.0	3.4	39

325125098323701 - POSSUM KINGDOM LK SITE P05

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1050	1.00	3230	8.20	9.0	10.2	91
25...	1052	9.00	3240	8.20	8.5	10.0	88
MAY							
19...	1216	1.00	3620	8.30	24.0	7.4	93
19...	1218	10.0	3620	8.20	23.5	6.5	81
19...	1220	17.0	3610	8.10	23.0	6.1	75
AUG							
23...	1805	1.00	3900	8.20	31.0	6.6	94
23...	1807	10.0	3900	7.90	29.0	5.7	78
23...	1809	19.0	3900	7.40	28.5	3.9	53

325301098342901 - POSSUM KINGDOM LK SITE P07

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1410	1.00	3270	8.30	11.0	11.1	104
25...	1412	10.0	3280	8.20	9.0	10.5	94
25...	1414	20.0	3280	8.20	9.0	9.9	88
25...	1416	30.0	3280	8.10	8.5	9.3	82
25...	1418	40.0	3280	8.10	8.5	8.9	78
25...	1420	52.0	3420	8.10	8.0	5.9	51
MAY							
19...	1240	1.00	3670	8.30	25.0	7.2	92
19...	1242	10.0	3670	8.30	25.0	7.1	91
19...	1244	20.0	3670	8.30	24.0	7.0	88
19...	1246	30.0	3670	7.80	20.0	3.2	37
19...	1248	40.0	3760	7.70	18.0	2.4	27
19...	1250	50.0	3830	7.70	16.5	2.4	26
AUG							
23...	1825	1.00	3920	8.50	31.0	7.6	108
23...	1827	10.0	3920	8.40	30.0	6.8	95
23...	1829	20.0	3920	7.70	29.0	4.9	67
23...	1831	30.0	3950	7.40	25.5	3.4	44
23...	1833	40.0	3980	7.40	22.0	3.3	40
23...	1835	52.0	4010	7.40	19.5	3.4	39

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325915098243001 - POSSUM KINGDOM LK SITE P09

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
25...	1540	1.00	4470	8.50	13.0	9.9	97
25...	1542	10.0	4500	8.40	10.5	8.7	81
25...	1544	17.0	5680	8.30	11.0	7.4	70

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, 3,860 microsiemens Sept. 26-28, 30; minimum daily, 2,530 microsiemens Oct. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (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									
29...	1340	360	3430	8.50	21.0	630	570	170	51
DEC									
17...	1235	569	3260	7.70	11.5	610	500	160	50
MAR									
21...	1300	25	3530	8.10	14.5	630	540	170	50
MAY									
09...	1320	68	3490	8.40	19.0	600	480	150	54
AUG									
08...	1125	25	3530	8.40	24.5	630	500	160	55

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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...	480	9	8.3	62	480	780	0.50	8.5	2020
DEC									
17...	480	9	9.9	110	490	740	0.50	7.3	2000
MAR									
21...	540	10	7.8	87	510	790	0.50	4.8	2130
MAY									
09...	520	10	7.8	115	510	790	0.40	6.0	2110
AUG									
08...	520	9	7.9	124	520	800	0.40	6.5	2140

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	4161	2810	1660	18700	650	7250	350	3980	500
NOV.	1987	2526	3210	1900	13000	750	5120	410	2780	560
DEC.	1987	7883	3160	1870	39800	740	15700	400	8540	550
JAN.	1988	4651	3170	1880	23600	740	9290	400	5060	550
FEB.	1988	2108	3310	1960	11200	780	4420	420	2400	570
MAR.	1988	4249	3300	1960	22400	770	8880	420	4820	570
APR.	1988	2311	3530	2100	13100	840	5220	450	2820	600
MAY	1988	818	3470	2060	4550	820	1810	440	979	590
JUNE	1988	990	3490	2080	5550	830	2210	450	1190	600
JULY	1988	1336	3640	2170	7830	870	3140	470	1690	620
AUG.	1988	2359	3660	2180	13900	880	5580	470	3000	620
SEPT	1988	750	3820	2280	4610	920	1860	490	997	640
TOTAL		34142	**	**	178000	**	70500	**	38300	**
WTD.AVG.		93	3260	1930	**	760	**	410	**	560

08088600 BRAZOS RIVER AT MORRIS SHEPPARD DAM NEAR GRAFORD, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2620	3170	3200	3240	3310	3290	3370	3490	3550	3610	3680	3700
2	2620	3180	3210	3330	3330	3290	3390	3420	3450	3630	3640	3720
3	2530	3160	3210	3150	3330	3290	3410	3420	3450	3660	3600	3760
4	2750	3240	3230	3150	3340	3290	3440	3430	3420	3650	3600	3790
5	2670	3110	3240	3150	3340	3290	3470	3490	3450	3640	3600	3800
6	2690	3200	3270	3150	3340	3290	3500	3420	3440	3630	3610	3810
7	2710	3250	3300	3150	3350	3290	3520	3430	3450	3620	3620	3810
8	2720	3250	3120	3150	3350	3300	3520	3490	3470	3610	3630	3810
9	2700	3240	3120	3150	3350	3300	3520	3470	3460	3620	3630	3800
10	2680	3320	3130	3150	3330	3300	3520	3460	3460	3630	3640	3820
11	2700	3340	3140	3150	3340	3300	3530	3440	3440	3650	3640	3820
12	2740	3170	3150	3150	3340	3300	3530	3440	3420	3660	3630	3810
13	2770	3140	3150	3150	3300	3300	3530	3520	3420	3530	3630	3810
14	2800	3120	3150	3150	3350	3300	3530	3440	3540	3660	3670	3810
15	2840	3120	3160	3150	3340	3300	3530	3460	3460	3680	3670	3830
16	2880	3130	3170	3150	3310	3300	3540	3450	3470	3680	3660	3830
17	2910	3130	3160	3150	3300	3300	3540	3450	3480	3680	3640	3840
18	2930	3120	3160	3140	3290	3310	3530	3450	3480	3680	3650	3810
19	2930	3120	3160	3140	3290	3310	3530	3450	3490	3680	3660	3820
20	2930	3110	3160	3150	3300	3310	3530	3470	3490	3680	3670	3830
21	2990	3110	3160	3150	3300	3320	3530	3470	3490	3680	3670	3830
22	3000	3110	3180	3150	3300	3320	3530	3460	3470	3670	3670	3850
23	3020	3120	3150	3150	3290	3330	3540	3460	3470	3690	3670	3850
24	3030	3130	3130	3150	3290	3330	3550	3470	3470	3680	3670	3850
25	3030	3130	3140	3150	3290	3320	3540	3480	3470	3690	3670	3850
26	3030	3110	3160	3160	3300	3320	3550	3490	3490	3690	3680	3860
27	3070	3130	3160	3160	3300	3320	3550	3510	3510	3700	3680	3860
28	3070	3140	3160	3160	3290	3330	3560	3510	3510	3700	3680	3860
29	3070	3160	3160	3150	3290	3340	3560	3500	3470	3700	3690	3850
30	3080	3180	3160	3160	---	3330	3560	3510	3510	3700	3690	3860
31	3080	---	3170	3320	---	3320	---	3530	---	3710	3690	---
MEAN	2860	3160	3170	3160	3320	3310	3520	3470	3470	3660	3650	3820

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	23.0	---	15.0	14.0	15.0	---	---	21.0	24.0	---	---
2	25.0	23.0	---	14.0	13.0	---	---	17.0	21.0	---	27.0	---
3	24.0	24.0	---	13.0	11.0	---	---	---	21.0	26.0	26.0	---
4	25.0	23.0	---	---	9.0	14.0	---	17.0	21.0	26.0	---	28.0
5	25.0	21.0	21.0	---	---	15.0	---	21.0	21.0	24.0	---	27.0
6	---	21.0	24.0	---	---	12.0	---	17.0	21.0	---	28.0	27.0
7	23.0	23.0	20.0	12.5	---	---	17.0	17.0	21.0	23.0	---	27.0
8	24.0	23.0	21.0	---	9.0	---	15.0	21.0	22.0	24.0	26.0	---
9	---	20.0	---	13.0	9.0	12.0	14.0	---	22.0	---	28.0	26.0
10	24.0	19.0	---	10.0	10.0	15.5	14.0	---	22.0	---	27.0	26.5
11	---	20.0	---	12.0	18.0	13.0	14.5	18.0	---	---	---	26.5
12	---	19.0	18.0	11.0	10.0	12.0	15.0	18.0	21.0	28.0	---	26.5
13	---	---	---	13.0	12.0	12.0	---	21.0	21.0	22.0	26.0	26.5
14	---	19.0	14.0	13.0	10.0	12.0	---	18.0	21.0	26.0	25.0	26.0
15	25.0	---	17.0	---	9.5	12.0	15.0	20.5	22.0	25.0	28.0	26.0
16	---	15.5	14.5	10.0	10.0	12.0	---	18.5	---	---	24.0	---
17	---	---	16.0	10.0	---	14.0	---	20.0	22.0	---	26.5	26.5
18	21.5	17.0	---	10.0	10.0	12.0	17.0	19.0	23.0	---	---	26.0
19	21.5	---	14.0	12.0	13.0	13.0	15.5	19.0	23.0	---	---	25.0
20	21.5	17.0	13.5	14.0	9.5	---	---	19.0	23.0	---	28.0	26.0
21	19.5	---	15.0	---	13.0	13.0	16.0	---	22.0	26.0	---	26.0
22	---	20.0	14.5	14.0	13.0	14.0	---	---	23.5	26.0	---	22.0
23	22.0	18.0	---	---	13.0	17.0	17.0	20.0	24.0	27.0	---	24.0
24	22.0	18.0	21.0	12.0	---	---	16.0	20.0	---	26.0	---	26.5
25	---	19.0	---	11.0	---	---	16.0	21.0	23.0	27.0	26.0	26.0
26	21.5	18.0	11.0	11.5	---	12.0	17.0	20.0	---	26.0	---	26.0
27	21.5	---	---	---	13.0	14.0	16.0	20.0	25.0	27.0	---	---
28	21.5	18.0	---	13.0	14.0	---	17.0	21.0	25.0	---	---	24.0
29	21.5	---	15.0	13.5	13.0	16.0	---	21.0	23.0	---	---	24.0
30	23.5	---	12.0	14.0	---	---	16.0	21.0	25.0	27.0	---	24.0
31	23.0	---	12.0	12.0	---	14.0	---	21.0	---	26.5	---	---
MEAN	23.0	20.0	16.5	12.5	11.5	13.5	16.0	19.5	22.5	25.5	26.5	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 fair. No estimated daily 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); 48 years (water years 1941-88) regulated, 919 ft³/s (665,800 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, 3,000 ft³/s Dec. 31 at 0040 hours (gage height, 3.97 ft); minimum daily, 16 ft³/s Sept. 11-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	47	55	217	31	62	83	26	309	20	19	25
2	385	35	34	73	37	70	55	23	401	19	19	24
3	79	30	27	409	164	834	38	21	226	23	20	22
4	41	28	27	203	74	403	30	21	107	38	20	21
5	31	28	29	650	37	378	24	21	61	31	20	20
6	27	27	30	115	51	411	24	22	43	26	21	19
7	25	27	31	57	86	161	24	22	37	19	22	18
8	206	28	29	34	43	64	23	24	33	18	22	18
9	333	788	29	28	29	140	21	22	29	18	22	18
10	413	120	29	26	29	106	23	25	26	407	22	18
11	80	81	28	680	29	182	22	42	24	115	27	16
12	694	209	27	259	28	67	20	33	22	83	99	16
13	91	157	26	499	25	34	20	26	22	61	83	16
14	46	50	480	395	25	462	21	25	22	47	67	16
15	35	44	1170	203	29	125	22	23	24	46	60	16
16	32	45	202	61	164	55	306	21	24	42	50	16
17	31	120	172	31	82	159	101	22	24	38	39	25
18	30	55	343	26	127	159	45	22	24	31	29	73
19	31	33	221	24	243	65	812	22	24	25	25	71
20	31	28	734	50	215	36	282	43	21	138	24	60
21	31	27	98	195	86	28	70	59	21	70	23	51
22	28	25	51	159	60	27	36	50	21	55	22	38
23	28	24	36	53	36	27	27	35	22	47	22	29
24	31	25	27	27	187	30	23	30	22	37	634	26
25	34	24	57	81	323	30	20	28	22	23	670	23
26	32	24	116	193	191	28	20	27	25	22	112	21
27	166	24	71	62	85	30	19	26	26	21	76	21
28	334	24	44	30	70	29	19	26	27	20	65	21
29	189	73	955	27	60	25	20	30	28	20	49	82
30	293	213	1510	27	---	35	25	36	27	20	35	71
31	95	---	1050	28	---	152	---	102	---	19	27	---
TOTAL	3930	2463	7738	4922	2646	4414	2275	955	1744	1599	2445	911
MEAN	127	82.1	250	159	91.2	142	75.8	30.8	58.1	51.6	78.9	30.4
MAX	694	788	1510	680	323	834	812	102	401	407	670	82
MIN	25	24	26	24	25	25	19	21	21	18	19	16
AC-FT	7800	4890	15350	9760	5250	8760	4510	1890	3460	3170	4850	1810

CAL YR 1987 TOTAL 518762 MEAN 1421 MAX 16800 MIN 24 AC-FT 1029000
WTR YR 1988 TOTAL 36042 MEAN 98.5 MAX 1510 MIN 16 AC-FT 71490

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 mark).

REMARKS.--No estimated daily discharges. Records good. Flow is largely regulated by releases from Possum Kingdom Lake (station 08088500) and Lake Palo Pinto on Palo Pinto Creek. 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 oil field operations. Gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years (water years 1969-88), 959 ft³/s (694,800 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, 4,410 ft³/s June 4 at 0300 hours (gage height, 8.38 ft); minimum daily, 2.3 ft³/s Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	174	50	1470	67	83	26	35	3000	32	21	81
2	54	185	47	696	53	60	25	34	1100	22	17	63
3	43	125	99.6	374	50	46	26	30	1730	28	11	53
4	48	89	103	213	45	36	59	26	3060	34	7.9	57
5	149	65	80	237	43	190	56	24	930	73	11	74
6	107	52	70	292	45	326	41	21	439	52	18	68
7	74	45	61	524	78	255	33	19	258	32	14	43
8	53	45	50	261	74	317	27	18	184	21	11	31
9	42	46	44	169	58	244	24	17	144	16	8.5	25
10	34	41	41	126	47	152	23	17	113	19	4.7	22
11	86	263	39	103	48	105	22	14	94	101	2.6	18
12	283	234	38	86	55	80	17	12	76	153	2.3	21
13	195	151	38	289	45	79	16	12	66	226	7.3	15
14	381	113	40	336	42	105	16	10	55	164	21	11
15	211	169	38	343	40	92	16	9.8	45	123	26	17
16	138	185	312	376	33	110	14	40	40	98	43	17
17	97	134	624	290	31	208	19	50	37	81	69	30
18	76	104	326	177	31	147	22	26	32	65	61	144
19	69	85	221	122	33	105	74	23	29	47	45	130
20	56	76	333	92	53	86	88	24	26	39	33	86
21	51	96	419	75	65	115	320	100	22	32	31	72
22	46	86	463	66	111	91	302	71	20	28	29	55
23	42	74	233	61	126	73	168	71	16	34	18	45
24	41	65	159	89	84	59	114	50	14	77	13	38
25	41	70	128	126	63	47	91	37	9.6	67	9.5	35
26	42	69	185	97	50	37	70	34	11	53	146	37
27	34	69	173	75	38	34	52	29	17	52	468	24
28	32	68	142	63	146	32	42	24	24	39	241	15
29	30	61	179	107	121	30	36	21	50	33	159	21
30	34	59	138	101	---	25	36	17	60	29	115	42
31	198	---	860	80	---	26	---	28	---	23	91	---
TOTAL	2856	3098	5733.6	7516	1775	3395	1875	943.8	11701.6	1893	1754.8	1390
MEAN	92.1	103	185	242	61.2	110	62.5	30.4	390	61.1	56.6	46.3
MAX	381	263	860	1470	146	326	320	100	3060	226	468	144
MIN	30	41	38	61	31	25	14	9.8	9.6	16	2.3	11
AC-FT	5660	6140	11370	14910	3520	6730	3720	1870	23210	3750	3480	2760

CAL YR 1987 TOTAL 552754.6 MEAN 1514 MAX 16500 MIN 30 AC-FT 1096000
WTR YR 1988 TOTAL 43931.8 MEAN 120 MAX 3060 MIN 2.3 AC-FT 87140

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, 3,710 microsiemens May 15; minimum daily, 565 microsiemens June 1.
WATER TEMPERATURE: Maximum daily, 37.0°C July 1; minimum daily, 2.0°C Jan. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (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									
29...	1240	33	2990	--	--	550	430	140	48
JAN									
27...	1235	76	3110	--	--	570	450	150	48
MAR									
23...	1200	74	3330	7.40	22.0	570	460	150	48
MAY									
04...	1345	28	3570	--	25.0	650	530	160	61
AUG									
03...	0915	13	2830	--	--	470	390	110	47

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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...	420	8	7.7	122	420	660	0.50	4.3	1770
JAN									
27...	440	8	8.7	120	480	670	0.40	2.5	1870
MAR									
23...	480	9	7.4	113	490	750	0.40	0.60	1990
MAY									
04...	530	9	9.2	119	540	820	0.40	0.80	2190
AUG									
03...	440	9	8.6	74	390	650	0.40	3.7	1690

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	2856	3180	1870	14400	740	5680	400	3070	560
NOV.	1987	3098	3140	1840	15400	730	6070	390	3280	550
DEC.	1987	5734	2960	1740	27000	680	10600	370	5750	520
JAN.	1988	7516	2510	1480	30000	570	11600	320	6420	450
FEB.	1988	1775	3170	1860	8940	730	3520	400	1900	550
MAR.	1988	3395	3360	1970	18100	780	7150	420	3840	580
APR.	1988	1875	3500	2050	10400	820	4140	440	2210	600
MAY	1988	943.8	3060	1800	4580	710	1800	380	974	530
JUNE	1988	11701.6	911	544	17200	200	6310	120	3720	180
JULY	1988	1893	2080	1230	6280	470	2400	260	1350	380
AUG.	1988	1754.8	3280	1930	9140	760	3610	410	1940	570
SEPT	1988	1390	2710	1600	5990	620	2330	340	1280	480
TOTAL		43932.2	**	**	167000	**	65200	**	35700	**
WTD.AVG.		120	2400	1410	**	550	**	300	**	430

08090800 BRAZOS RIVER NEAR DENNIS, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3100	3130	2740	1860	3180	3240	3230	3490	565	1620	3040	3470
2	3120	3230	2830	2080	3170	3260	3260	3520	654	1420	2920	3470
3	3140	3190	2920	2000	3150	3220	3310	3580	1190	1370	2820	3430
4	3130	3190	2980	2100	3140	3240	3370	3570	941	1460	2810	3390
5	3250	3170	2890	1860	3120	3270	3430	3580	810	1720	2820	3400
6	3120	3180	2880	1690	3120	3370	3440	3580	992	1780	2920	3270
7	3110	3140	2930	1350	3110	3380	3420	3570	1050	1760	3020	3220
8	3100	3070	2970	3070	3120	3370	3400	3590	1100	1540	3070	3250
9	3100	3030	3040	3120	3130	3380	3400	3610	1160	1390	3040	3110
10	3120	3100	3040	3170	3100	3370	3410	3620	1300	1370	3040	3050
11	3150	3290	3060	3130	3070	3390	3430	3640	1410	1170	3060	2960
12	3290	3350	3040	3120	3070	3390	3450	3660	1460	1540	3060	2870
13	3180	3410	3030	3210	3090	3410	3470	3670	1570	1650	3050	2900
14	3260	3360	3010	3200	3130	3440	3460	3700	1670	1880	2990	2940
15	3230	3110	2940	3230	3140	3440	3450	3710	1750	1950	2990	2900
16	3210	3160	3250	3230	3150	3420	3450	3580	1820	1950	2980	2950
17	3170	3080	3300	3250	3150	3370	3430	3360	1880	1990	2770	2890
18	3190	2980	3290	3240	3060	3320	3430	2950	1930	2550	2750	2290
19	3160	3080	3010	3200	3030	3340	3530	2490	1990	2630	2830	1550
20	3140	3100	2920	3220	3110	3310	3560	2470	2010	2700	2930	1700
21	3140	3150	3030	3180	3100	3350	3630	2570	2040	2770	3020	1850
22	3120	3200	3060	3170	3160	3360	3470	2430	2080	2750	3120	2350
23	3060	3050	3090	3160	3220	3360	3530	2250	2120	2790	3140	2680
24	2960	3020	3080	3170	3260	3330	3580	3060	2160	2830	3180	2800
25	3030	2660	3000	3240	3270	3290	3440	3230	2190	2780	3240	2880
26	3040	2960	2740	3200	3280	3310	3550	3240	2190	3110	3350	2870
27	3050	2820	1970	3160	3280	3340	3540	2890	2190	3110	3460	2870
28	3040	2840	2220	3140	3320	3340	3560	2870	2050	3140	3400	2880
29	3030	2720	2660	3200	3240	3350	3480	2850	2130	3160	3450	2790
30	3020	2700	2570	3220	---	3350	3480	2990	1930	3180	3490	2730
31	3240	---	2860	3200	---	3350	---	2610	---	3170	3480	---
MEAN	3130	3080	2910	2880	3150	3340	3450	3220	1610	2200	3070	2860

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	22.5	13.0	4.0	17.0	20.5	21.0	24.0	22.0	37.0	---	30.0
2	27.0	22.0	14.0	4.5	9.0	19.0	21.5	20.0	23.0	28.0	31.0	26.0
3	24.0	22.0	14.5	7.5	---	13.0	24.0	24.0	25.0	32.0	32.0	26.5
4	---	19.0	15.0	5.5	---	17.0	24.5	25.0	22.0	27.0	33.5	29.5
5	---	21.0	16.5	5.0	4.0	10.5	25.5	27.5	22.0	34.5	32.5	29.0
6	---	19.5	18.0	3.0	7.0	---	24.5	19.0	28.5	34.5	34.0	30.0
7	---	19.0	17.0	2.0	7.0	17.0	25.5	20.5	31.0	27.0	35.0	29.0
8	---	18.0	17.0	3.0	12.0	15.0	24.5	---	32.5	31.0	35.5	28.5
9	25.0	13.0	16.0	---	10.5	16.0	25.0	28.0	27.0	33.0	34.5	30.5
10	28.0	14.0	15.0	10.0	13.5	18.0	20.0	20.5	30.5	32.5	33.5	30.0
11	---	9.5	16.0	5.0	8.5	22.0	19.0	25.0	31.0	27.0	35.0	30.0
12	21.0	13.0	11.0	10.0	11.0	---	20.0	21.0	30.0	31.5	28.5	31.0
13	21.0	14.0	10.0	6.0	15.0	15.0	23.0	26.0	30.0	33.5	33.5	31.5
14	22.0	16.0	7.5	7.0	14.0	14.0	19.5	24.0	32.0	34.0	34.0	30.0
15	21.0	15.0	8.0	8.0	14.0	16.5	22.0	30.0	32.5	34.0	33.0	31.0
16	24.0	14.0	8.0	11.0	16.5	12.0	24.0	31.5	---	29.0	34.5	32.0
17	---	15.0	5.5	12.0	13.0	10.0	23.0	32.0	32.0	35.0	32.0	26.0
18	23.0	12.0	7.0	11.5	11.0	10.0	18.0	---	30.5	30.0	35.0	28.0
19	22.0	13.0	11.0	13.0	15.0	15.0	20.0	29.5	34.0	32.0	34.0	---
20	22.0	---	10.0	10.0	14.0	19.0	24.0	27.0	34.0	30.0	---	---
21	19.0	14.0	11.5	10.0	12.0	20.0	24.5	25.0	34.0	33.5	34.0	---
22	17.0	16.0	13.0	10.0	15.0	21.5	---	21.0	34.0	34.5	35.0	---
23	18.0	19.0	11.0	10.5	15.0	23.0	21.0	25.5	34.5	33.0	35.0	---
24	21.0	20.0	12.0	10.0	14.0	26.5	24.0	28.0	34.0	33.0	32.0	---
25	23.0	15.0	8.0	9.0	17.0	24.0	26.0	27.5	32.5	31.5	34.0	---
26	25.0	13.0	5.0	10.0	17.0	22.5	26.0	29.0	33.0	34.0	32.0	---
27	22.0	8.0	7.0	12.0	13.0	23.0	24.5	23.5	33.5	35.0	32.0	---
28	22.0	12.5	6.5	14.5	19.5	23.0	25.0	28.0	28.0	35.0	31.0	---
29	23.0	10.0	5.5	15.0	18.5	17.0	22.0	28.0	35.0	34.0	26.5	---
30	24.0	12.0	6.0	16.0	---	17.5	21.0	27.0	34.0	---	29.0	---
31	23.0	---	6.0	18.0	---	15.5	---	26.0	---	32.0	30.0	---
MEAN	22.5	15.5	11.0	9.0	13.0	17.5	23.0	25.5	30.5	32.5	33.0	29.5

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 Brazos River Authority), corrected.

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. 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. Stage 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	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, 152,400 acre-ft Jan. 1 at 2000 hours (elevation, 692.87 ft); minimum, 128,100 acre-ft Sept. 15 (elevation, 689.85 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 (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148300	147900	148300	152100	149700	149800	148200	146800	149100	145200	139600	131700
2	148300	148300	148100	150300	149100	149200	148100	146800	148800	145000	139100	131300
3	147900	148300	148100	149400	149400	148500	147800	146700	148300	145000	138700	131300
4	147600	148500	148100	149200	149100	148300	147600	146500	150600	144800	138500	130700
5	147900	148500	148100	149300	149100	148600	148300	146400	148000	144700	138100	130500
6	147700	148300	148300	149100	148800	149200	147700	146200	148200	144300	137900	130300
7	147700	148300	148100	148300	148800	150600	147600	145600	148700	143800	137500	129800
8	147100	148800	148200	148200	148800	149100	147400	145900	148800	143800	137100	129500
9	147100	148600	148000	148400	149000	149200	147800	145800	149100	143500	136700	129500
10	147400	148200	147900	148400	149800	149000	147200	145600	148900	143100	136100	129200
11	147100	148100	147800	148300	148800	149700	146800	145300	148800	144200	136000	128800
12	147100	148500	147800	148800	148800	149400	146700	145000	148500	144400	135400	128400
13	147300	148800	147400	148800	148700	149400	146500	144600	148300	144700	134900	128400
14	147900	148900	147500	148400	149200	149300	146200	144300	148100	144800	134800	128500
15	148300	150000	147100	148600	148800	149200	146200	144000	148000	144700	134600	128100
16	148900	148800	147100	149700	148800	149400	145900	144000	148100	144500	134600	128200
17	148500	147600	148200	149400	148900	149200	146200	143900	147900	144300	134300	129200
18	148900	148100	148800	149400	149200	148700	146100	143500	147800	144200	134100	129200
19	149200	147600	149100	149500	148900	148700	145800	143200	147500	143900	134000	129500
20	148800	147600	149200	149000	148900	148700	145800	142900	147200	143900	133600	129300
21	148500	147400	149600	149000	148800	148500	146000	143000	147000	143600	133200	129300
22	148300	147600	149700	148800	149800	148400	146800	142800	146700	143300	132900	129100
23	148300	147600	149500	149000	149000	148500	147300	142700	146400	142900	132500	128900
24	148300	148800	149400	148900	149000	148800	147800	142400	146500	142400	132300	128900
25	148300	148300	149200	148600	149000	148800	147300	142100	146000	142000	132000	128900
26	148400	148300	149400	148700	149100	148700	147700	142000	145900	141800	131700	128600
27	148300	148400	149000	148600	149300	148200	147100	141300	145600	141100	132000	128600
28	147900	148300	149400	148600	149400	148100	146900	140800	145800	140700	132600	128200
29	147700	148300	149300	148400	149800	148200	146300	140300	145400	140400	132400	130400
30	147400	148400	149400	148600	---	147900	147100	140100	145200	140100	132300	130400
31	146900	---	150700	148900	---	147700	---	140600	---	139800	132000	---
MAX	149200	150000	150700	152100	149800	150600	148300	146800	150600	145200	139600	131700
MIN	146900	147400	147100	148200	148700	147700	145800	140100	145200	139800	131700	128100
(†)	692.23	692.41	692.68	692.47	692.57	692.32	692.25	691.46	692.03	691.36	690.37	690.16
(ϕ)	-1500	+1500	+2300	-1800	+900	-2100	-600	-6500	+4600	-5400	-7800	-1600

CAL YR 1987 MAX 151700 MIN 136800 (ϕ) +700
WTR YR 1988 MAX 152100 MIN 128100 (ϕ) -18000

(†) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
28...	0900	1.00	2820	8.60	7.5	0.90	11.4	97	550
28...	0902	10.0	2820	8.60	7.5	--	11.4	97	--
28...	0904	20.0	2820	8.60	7.5	--	11.4	97	--
28...	0906	30.0	2820	8.50	7.5	--	11.4	97	--
28...	0908	40.0	2820	8.50	7.5	--	11.4	97	--
28...	0910	50.0	2820	8.50	7.5	--	11.4	97	--
28...	0912	60.0	2820	8.50	7.5	--	11.1	94	--
28...	0914	67.0	2820	8.40	7.5	--	10.7	91	520
MAY									
04...	0835	1.00	2940	8.20	19.5	0.90	8.1	91	560
04...	0837	10.0	2940	8.20	19.5	--	8.0	90	--
04...	0839	20.0	2940	8.20	19.5	--	8.0	90	--
04...	0841	30.0	2940	8.20	19.0	--	8.0	89	--
04...	0843	40.0	2940	8.10	19.0	--	7.7	85	--
04...	0845	50.0	2920	7.40	17.0	--	4.0	43	--
04...	0847	60.0	2920	7.40	17.0	--	3.8	40	--
04...	0849	65.0	2920	7.40	17.0	--	3.7	39	550
AUG									
03...	0830	1.00	2950	8.20	28.5	2.00	6.5	86	540
03...	0832	10.0	2950	8.20	28.5	--	6.5	86	--
03...	0834	20.0	2950	8.20	28.5	--	6.4	85	--
03...	0836	25.0	2950	8.20	28.5	--	6.2	82	--
03...	0838	30.0	3010	7.30	26.0	--	0	0	--
03...	0840	40.0	3030	7.30	22.5	--	0	0	--
03...	0842	50.0	3030	7.30	21.5	--	0	0	--
03...	0844	63.0	3010	7.20	20.5	--	0	0	600

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
28...	440	140	49	400	8	8.1	112	450	640
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	410	130	48	420	8	8.1	112	430	630
MAY									
04...	440	140	50	410	8	10	121	460	670
04...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	430	140	49	420	8	9.7	124	450	650
AUG									
03...	460	130	53	430	8	7.6	84	440	660
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	420	150	54	430	8	7.7	174	420	670

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322227097412101 - LAKE GRANBURY SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
28...	0.40	6.0	1760	<0.100	0.50	0.030	20	<10
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	--	--	--	<0.100	0.60	0.020	20	<10
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	--	6.0	1740	<0.100	0.60	0.030	20	30
MAY								
04...	0.40	5.0	1820	<0.100	0.40	0.020	<10	<10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	<0.100	0.50	0.020	20	<10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	6.0	1800	<0.100	0.50	0.020	<10	90
AUG								
03...	0.40	3.8	1780	<0.100	1.1	0.020	20	<10
03...	--	--	--	--	--	--	--	--
03...	--	--	--	<0.100	0.50	0.020	20	20
03...	--	--	--	--	--	--	--	--
03...	--	--	--	<0.100	0.60	0.020	60	620
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	10	1850	<0.100	2.4	0.250	100	890

322231097412001 - LAKE GRANBURY SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	0835	1.00	2820	8.50	7.5	11.6	98
28...	0837	10.0	2820	8.50	7.5	11.6	98
28...	0839	20.0	2820	8.50	7.5	11.6	98
28...	0841	30.0	2820	8.50	7.5	11.6	98
28...	0843	40.0	2820	8.50	7.5	11.6	98
28...	0845	50.0	2820	8.50	7.5	11.4	96
28...	0847	56.0	2820	8.40	7.5	11.3	96
MAY							
04...	0812	1.00	2940	8.20	19.5	8.3	93
04...	0814	10.0	2940	8.20	19.5	8.3	93
04...	0816	20.0	2940	8.20	19.5	8.3	93
04...	0818	30.0	2940	8.20	19.0	8.2	91
04...	0820	40.0	2920	8.10	19.0	7.9	88
04...	0822	50.0	2920	7.40	17.0	3.4	36
04...	0824	56.0	2920	7.40	17.0	3.3	35
AUG							
03...	0805	1.00	2940	8.20	28.5	6.5	86
03...	0807	10.0	2940	8.20	28.5	6.4	85
03...	0809	20.0	2950	8.20	28.5	6.3	84
03...	0811	30.0	2990	7.30	26.5	0	0
03...	0813	40.0	3030	7.30	22.5	0	0
03...	0815	50.0	3020	7.30	21.5	0	0
03...	0817	57.0	3020	7.20	20.5	0	0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322345097421901 - LAKE GRANBURY SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	0925	1.00	2820	8.60	8.0	11.7	100
28...	0927	10.0	2820	8.60	8.0	11.7	100
28...	0929	20.0	2820	8.60	8.0	11.7	100
28...	0931	30.0	2820	8.60	8.0	11.6	100
MAY							
04...	0905	1.00	2950	8.20	20.0	8.3	94
04...	0907	10.0	2950	8.20	19.5	8.2	92
04...	0909	20.0	2940	8.20	19.5	8.1	91
04...	0911	30.0	2940	8.00	19.0	7.2	80
AUG							
03...	0915	1.00	2940	8.40	29.0	7.2	96
03...	0917	10.0	2940	8.40	29.0	7.2	96
03...	0919	20.0	2940	8.40	29.0	7.1	95
03...	0921	30.0	2980	7.20	26.0	0	0

322341097420601 - LAKE GRANBURY SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	0940	1.00	2820	8.60	8.0	11.5	99
28...	0942	10.0	2820	8.60	8.0	11.5	99
28...	0944	20.0	2820	8.60	8.0	11.5	99
28...	0946	30.0	2820	8.60	8.0	11.5	99
28...	0948	40.0	2820	8.60	8.0	11.3	97
28...	0950	50.0	2820	8.50	8.0	10.8	93
28...	0952	60.0	2820	8.50	7.5	10.8	92
28...	0954	64.0	2820	8.50	7.5	10.5	89
MAY							
04...	0915	1.00	2950	8.20	20.0	8.5	96
04...	0917	10.0	2950	8.20	19.5	8.3	93
04...	0919	20.0	2940	8.10	19.5	8.0	89
04...	0921	30.0	2940	8.10	19.0	7.5	83
04...	0923	40.0	2920	7.50	18.0	4.2	45
04...	0925	50.0	2920	7.40	17.0	3.3	35
04...	0927	63.0	2920	7.40	17.0	3.3	35
AUG							
03...	0935	1.00	2930	8.30	29.5	7.0	95
03...	0937	10.0	2930	8.30	29.5	7.0	95
03...	0939	20.0	2930	8.40	29.0	7.0	94
03...	0941	25.0	2930	8.30	29.0	6.9	92
03...	0943	30.0	3010	7.20	25.5	0	0
03...	0945	40.0	3040	7.30	23.0	0	0
03...	0947	50.0	3040	7.30	21.5	0	0
03...	0949	60.0	3020	7.20	20.5	0	0

322337097415401 - LAKE GRANBURY SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1000	1.00	2820	8.60	8.5	11.6	101
28...	1002	10.0	2820	8.60	8.0	11.6	100
28...	1004	20.0	2820	8.60	8.0	11.6	100
28...	1006	30.0	2820	8.60	8.0	11.5	99
28...	1008	41.0	2820	8.50	8.0	10.8	93
MAY							
04...	0930	1.00	2950	8.20	20.0	8.4	95
04...	0932	10.0	2950	8.20	19.5	8.3	93
04...	0934	20.0	2950	8.10	19.5	8.1	90
04...	0936	30.0	2940	8.00	19.0	7.3	81
04...	0938	38.0	2940	7.70	18.5	5.4	59
AUG							
03...	0955	1.00	2920	8.40	29.5	7.0	95
03...	0957	10.0	2930	8.30	29.5	7.0	95
03...	0959	20.0	2940	8.30	29.0	7.0	94
03...	1001	30.0	3000	7.20	25.5	0	0
03...	1003	42.0	3040	7.20	22.5	0	0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322537097414501 - LAKE GRANBURY SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1020	1.00	2820	8.60	9.5	11.7	104
28...	1022	10.0	2770	8.60	9.0	11.7	103
28...	1024	15.0	2770	8.60	9.0	11.7	103
MAY							
04...	0948	1.00	2940	8.10	19.5	8.0	89
04...	0950	10.0	2940	8.10	19.5	7.9	88
04...	0952	15.0	2940	8.10	19.5	7.8	87
AUG							
03...	1020	1.00	2860	8.30	29.5	6.6	89
03...	1022	13.0	2860	8.20	29.0	5.8	78

322422097423901 - LAKE GRANBURY SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1035	1.00	2830	8.50	11.0	11.0	101
28...	1037	10.0	2830	8.50	10.5	10.9	99
28...	1039	20.0	2830	8.40	8.5	10.1	88
28...	1041	30.0	2830	8.40	8.5	9.8	85
28...	1043	40.0	2830	8.40	8.0	10.3	88
28...	1045	50.0	2830	8.40	8.0	10.2	88
28...	1047	56.0	2830	8.40	8.0	10.2	88
MAY							
04...	1002	1.00	2960	8.10	20.5	8.1	92
04...	1004	10.0	2960	8.10	20.0	7.9	89
04...	1006	20.0	2960	8.10	20.0	7.9	89
04...	1008	30.0	2960	7.80	19.5	6.2	69
04...	1010	40.0	2930	7.30	17.5	2.5	27
04...	1012	50.0	2930	7.30	17.0	2.3	24
04...	1014	55.0	2930	7.30	17.0	2.3	24
AUG							
03...	1035	1.00	2850	8.00	32.0	5.5	77
03...	1037	10.0	2890	8.00	30.5	5.3	73
03...	1039	20.0	2710	7.40	29.5	1.2	16
03...	1041	25.0	2710	7.30	28.5	0	0
03...	1043	30.0	2910	7.20	25.5	0	0
03...	1045	40.0	3050	7.20	22.5	0	0
03...	1047	52.0	3050	7.20	21.0	0	0

322437097423901 - LAKE GRANBURY SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1050	1.00	2830	8.50	11.0	11.0	101
28...	1052	10.0	2830	8.50	11.0	10.9	100
28...	1054	20.0	2830	8.40	9.0	10.0	88
MAY							
04...	1020	1.00	2960	8.10	20.5	8.2	93
04...	1022	10.0	2960	8.10	20.0	8.0	90
04...	1024	22.0	2960	8.10	20.0	8.0	90
AUG							
03...	1100	1.00	2850	8.00	32.0	5.5	77
03...	1102	10.0	2880	8.00	30.5	5.5	76
03...	1104	19.0	2750	7.40	30.0	1.6	22

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322458097443101 - LAKE GRANBURY SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1115	1.00	2830	8.40	10.0	11.2	101
28...	1117	10.0	2830	8.40	10.0	11.2	101
28...	1119	20.0	2830	8.40	9.5	11.2	100
28...	1121	30.0	2830	8.40	8.5	11.1	96
28...	1123	40.0	2830	8.30	8.0	11.0	94
28...	1125	52.0	2830	8.20	7.5	10.9	92
MAY							
04...	1030	1.00	2970	8.10	20.5	8.1	92
04...	1032	10.0	2970	8.10	20.0	8.0	90
04...	1034	20.0	2970	8.10	20.0	7.9	89
04...	1036	30.0	2970	7.60	19.0	4.8	53
04...	1038	40.0	2950	7.30	17.5	2.5	27
04...	1040	51.0	2950	7.30	17.5	2.3	25
AUG							
03...	1110	1.00	2850	8.20	31.0	6.7	93
03...	1112	10.0	2840	8.20	31.0	6.6	91
03...	1113	20.0	2830	8.20	30.5	6.4	88
03...	1114	25.0	2710	7.90	29.0	4.1	55
03...	1116	30.0	2720	7.30	27.0	0	0
03...	1118	40.0	3000	7.20	23.5	0	0
03...	1120	48.0	3050	7.20	22.0	0	0

322619097463301 - LAKE GRANBURY SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
28...	1140	1.00	2830	8.50	7.5	1.00	11.5	97	480
28...	1142	10.0	2830	8.50	7.0	--	11.5	96	--
28...	1144	20.0	2830	8.50	7.0	--	11.3	94	--
28...	1146	30.0	2830	8.40	7.0	--	11.1	93	--
28...	1148	40.0	2830	8.40	7.0	--	10.9	91	540
MAY									
04...	1050	1.00	3020	8.10	20.5	0.80	8.2	93	580
04...	1052	10.0	3020	8.10	20.5	--	8.2	93	--
04...	1054	20.0	3020	7.90	20.0	--	6.7	75	--
04...	1056	30.0	3020	7.70	20.0	--	5.7	64	--
04...	1058	41.0	3020	7.40	19.0	--	3.4	38	580
AUG									
03...	1140	1.00	2620	8.40	30.0	0.80	6.7	91	490
03...	1142	10.0	2580	8.20	29.5	--	6.1	82	--
03...	1144	20.0	2580	8.20	29.5	--	6.0	81	--
03...	1146	30.0	2530	8.20	29.0	--	5.0	67	--
03...	1148	37.0	2950	7.10	23.5	--	0	0	560

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
28...	360	110	51	420	9	7.7	121	430
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
28...	420	140	46	400	8	7.5	121	420
MAY								
04...	450	150	50	440	8	9.9	127	470
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	450	150	49	440	8	10	128	460
AUG								
03...	410	120	47	380	8	7.3	85	380
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	380	140	51	420	8	7.6	185	390

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322619097463301 - LAKE GRANBURY SITE FC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
28...	650	6.1	1750	<0.100	0.60	0.030	20	20
28...	--	--	--	--	--	--	--	--
28...	--	--	--	<0.100	0.70	0.030	20	<10
28...	--	--	--	--	--	--	--	--
28...	660	6.1	1750	<0.100	0.70	0.030	20	20
MAY								
04...	680	4.6	1880	<0.100	0.50	0.030	<10	<10
04...	--	--	--	--	--	--	--	--
04...	--	--	--	<0.100	0.50	0.030	10	10
04...	--	--	--	--	--	--	--	--
04...	660	5.8	1850	<0.100	0.60	0.030	<10	160
AUG								
03...	580	4.7	1570	<0.100	0.70	0.030	20	10
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	--	--	<0.100	0.70	0.020	40	150
03...	640	10	1770	<0.100	3.0	0.250	70	1300

322703097451401 - LAKE GRANBURY SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1320	1.00	2860	8.50	8.0	11.1	96
28...	1322	13.0	2860	8.30	8.0	11.0	95
MAY							
04...	1210	1.00	3040	8.20	21.5	8.7	101
04...	1212	13.0	3040	8.10	20.5	8.1	92
AUG							
03...	1305	1.00	2390	8.30	30.0	7.0	95
03...	1307	12.0	2430	8.20	29.5	6.0	81

322834097470801 - LAKE GRANBURY SITE HC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1340	1.00	2870	8.60	7.0	0.80	10.8
28...	1342	10.0	2870	8.60	7.0	--	10.7
28...	1344	20.0	2870	8.60	7.0	--	10.4
28...	1346	32.0	2870	8.50	6.5	--	10.0
MAY							
04...	1225	1.00	3140	8.20	21.0	0.40	8.2
04...	1227	10.0	3140	8.20	20.5	--	7.8
04...	1229	20.0	3120	8.10	20.0	--	7.6
04...	1231	31.0	3120	8.10	20.0	--	7.3
AUG							
03...	1320	1.00	1850	8.40	30.5	0.50	7.7
03...	1322	10.0	1870	8.00	29.0	--	5.2
03...	1324	20.0	1830	7.90	29.0	--	4.4
03...	1326	29.0	1850	7.70	29.0	--	2.0

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

322834097470801 - LAKE GRANBURY SITE HC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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-PHOROUS TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN						
28...	91	<0.100	0.50	0.030	20	<10
28...	90	--	--	--	--	--
28...	87	<0.100	0.70	0.030	<10	<10
28...	83	<0.100	0.80	0.030	20	10
MAY						
04...	94	<0.100	0.50	0.020	10	10
04...	89	<0.100	0.50	0.020	10	10
04...	86	--	--	--	--	--
04...	82	<0.100	0.30	0.030	10	60
AUG						
03...	105	<0.100	0.70	0.030	40	<10
03...	69	--	--	--	--	--
03...	59	<0.100	0.60	0.030	20	20
03...	27	<0.100	0.80	0.030	30	320

322819097483201 - LAKE GRANBURY SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1355	1.00	2890	8.50	7.5	11.0	94
28...	1357	10.0	2890	8.40	7.5	10.9	93
28...	1359	17.0	2890	8.40	7.5	10.9	93
MAY							
04...	1245	1.00	3140	8.30	21.0	8.6	99
04...	1247	10.0	3140	8.10	20.0	7.3	82
04...	1249	16.0	3140	8.10	19.5	7.3	82
AUG							
03...	1400	1.00	1720	8.30	29.5	7.4	100
03...	1402	10.0	1750	7.90	28.5	4.5	60
03...	1404	15.0	1760	7.80	28.0	3.8	50

323318097480101 - LAKE GRANBURY SITE JC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
28...	1430	1.00	3050	8.30	8.5	12.0	105
28...	1432	10.0	3050	8.20	8.5	12.1	106
28...	1434	23.0	3050	8.20	8.0	12.0	103
MAY							
04...	1300	1.00	3340	8.10	22.0	7.9	93
04...	1302	10.0	3290	8.00	20.0	7.0	79
04...	1304	22.0	3230	7.90	19.5	6.2	69
AUG							
03...	1430	1.00	1610	8.00	30.0	6.3	85
03...	1432	10.0	1610	7.80	29.0	3.9	52
03...	1434	20.0	1610	7.70	28.0	3.6	47

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

323435097492001 - LAKE GRANBURY SITE KC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
28...	1500	1.00	3110	8.50	9.0	0.70	12.7	112	570
28...	1502	10.0	3110	8.50	8.0	--	12.1	104	--
28...	1504	15.0	3110	8.40	8.0	--	11.4	98	560
MAY									
04...	1315	1.00	3510	8.10	22.5	0.50	7.9	94	630
04...	1317	14.0	3510	7.80	21.0	--	6.5	75	620
AUG									
03...	1450	1.00	1910	8.40	31.5	0.30	8.3	116	320
03...	1452	13.0	2100	7.40	30.0	--	2.5	34	370

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
28...	450	150	47	470	9	8.6	119	490
28...	--	--	--	--	--	--	--	--
28...	440	150	46	470	9	8.5	120	480
MAY								
04...	510	160	55	520	9	5.0	117	530
04...	500	160	53	520	9	12	118	550
AUG								
03...	230	80	30	260	6	7.4	95	250
03...	280	93	34	290	7	7.5	97	270

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								
28...	710	4.2	1950	<0.100	0.40	0.020	20	10
28...	--	--	--	--	--	--	--	--
28...	710	4.2	1940	<0.100	0.60	0.050	20	20
MAY								
04...	820	1.6	2160	<0.100	0.60	0.020	260	<10
04...	810	1.7	2180	<0.100	0.80	0.030	<10	30
AUG								
03...	410	5.9	1100	<0.100	1.8	0.060	3	17
03...	460	6.1	1220	<0.100	1.8	0.050	20	290

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.

PERIOD OF RECORD.--October 1923 to current year.
Water-quality records.--Chemical analyses: August to November 1946. Chemical and biochemical analyses: October 1980 to June 1987.

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.--Records good except those for estimated daily discharges, which are fair. 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 oil field 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); 19 years (water years 1970-88) regulated, 991 ft³/s (718,000 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, 3,790 ft³/s June 2 at 1700 hours (gage height, 8.49 ft); minimum daily, 5.3 ft³/s Aug. 31 and Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	47	60	54	54	54	73	40	161	106	23	5.3
2	23	67	54	1010	50	55	58	37	2720	59	33	16
3	16	76	55	1230	49	664	53	35	3040	45	39	20
4	15	53	54	881	50	289	52	34	1170	45	33	22
5	13	39	52	351	56	88	48	34	3150	41	23	25
6	12	38	56	116	55	61	47	33	1310	35	21	19
7	33	42	56	642	57	54	46	33	363	33	13	11
8	32	62	51	858	54	55	46	40	107	35	18	7.0
9	23	61	46	298	54	657	45	35	55	49	35	6.9
10	18	65	53	92	54	308	45	29	37	69	42	6.0
11	13	72	51	58	48	86	43	30	e35	57	48	5.7
12	12	59	50	53	50	60	44	26	e35	44	40	6.7
13	13	54	51	54	73	55	50	27	e35	43	22	11
14	67	55	53	52	59	54	44	27	e34	43	16	12
15	52	66	54	396	54	53	42	27	e34	43	19	7.0
16	41	86	65	156	52	54	41	27	e34	43	13	23
17	39	1420	74	90	52	55	47	24	e34	43	7.3	43
18	47	294	57	446	57	608	47	24	e33	41	5.5	55
19	65	94	92	320	62	285	50	23	e33	36	18	33
20	76	81	679	336	57	85	42	32	e33	35	27	21
21	49	66	383	162	56	60	39	34	33	36	30	15
22	37	54	136	106	64	62	39	28	e35	46	30	12
23	43	52	640	66	122	76	39	25	e37	46	23	11
24	49	56	365	64	62	60	45	22	e39	41	23	27
25	52	71	502	55	64	57	38	16	e39	42	23	29
26	45	65	670	59	58	61	36	12	e41	45	19	20
27	33	67	284	57	56	56	36	8.9	43	45	12	11
28	25	66	256	53	55	54	36	8.4	e44	45	19	25
29	21	64	124	54	54	59	38	11	e59	42	15	80
30	33	65	66	53	---	125	42	113	94	36	7.9	81
31	47	---	60	55	---	99	---	51	---	25	5.3	---
TOTAL	1079	3457	5249	8277	1688	4449	1351	946.3	12917	1394	703.0	666.6
MEAN	34.8	115	169	267	58.2	144	45.0	30.5	431	45.0	22.7	22.2
MAX	76	1420	679	1230	122	664	73	113	3150	106	48	81
MIN	12	38	46	52	48	53	36	8.4	33	25	5.3	5.3
AC-FT	2140	6860	10410	16420	3350	8820	2680	1880	25620	2760	1390	1320

CAL YR 1987 TOTAL 621774.9 MEAN 1703 MAX 19300 MIN 8.5 AC-FT 1233000
WTR YR 1988 TOTAL 42176.9 MEAN 115 MAX 3150 MIN 5.3 AC-FT 83660

e Estimated.

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, 148,500 acre-ft June 3 at 1500 hours (elevation, 774.25 ft); minimum, 144,000 acre-ft Nov. 13-14 (elevation, 772.84 ft).

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

772.00	141,300	774.00	147,700
773.00	144,500	775.00	151,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146300	144600	144200	146200	147700	147200	146400	145700	147700	147300	146800	147800
2	146200	144500	144200	146200	147600	147100	146400	145700	148400	147300	147000	147800
3	144500	144500	144300	146300	147600	147100	146300	145500	148500	147300	147100	147900
4	146000	144500	144300	146300	147600	147100	146300	145500	148400	147200	147100	147900
5	145900	144500	144400	146300	147600	147000	146300	145500	148400	147100	147200	147900
6	145800	144400	144500	146500	147500	147000	146300	145400	148400	147000	147200	147900
7	145700	144300	144500	146500	147500	147000	146300	145400	148400	147000	147300	147900
8	145600	144300	144500	146600	147500	147000	146200	145400	148300	146900	147400	148000
9	145600	144200	144600	146600	147500	146900	146200	145400	148300	146800	147500	148000
10	145500	144100	144600	146600	147500	146800	146000	145400	148200	146900	147600	148000
11	145400	144100	144700	146700	147400	146800	145900	145400	148100	147000	147800	148000
12	145400	144000	144700	146700	147400	146800	145900	145400	148000	146900	147900	148000
13	145300	144000	144800	146700	147300	146700	145800	145300	147900	146800	148000	147900
14	145200	144000	144800	146800	147300	146600	145800	145300	147900	146800	148000	147900
15	145200	144200	144800	146900	147300	146600	145800	145200	147800	146800	147900	147800
16	145100	144300	144800	147000	147300	146600	145700	145200	147800	146800	147800	147800
17	145100	144300	144800	147000	147300	146600	145900	145300	147700	146700	147800	147800
18	145200	144400	145000	147100	147300	146500	145800	145400	147600	146700	147800	147900
19	145200	144300	145300	147200	147300	146500	145700	145500	147600	146700	147800	147900
20	145100	144300	145300	147200	147300	146400	145700	145600	147300	146600	147800	147800
21	145000	144200	145400	147300	147300	146400	145700	145800	147200	146600	147800	147800
22	144900	144200	145400	147300	147300	146400	145700	145700	147200	146500	147800	147700
23	144900	144200	145500	147300	147200	146400	145700	145700	147100	146400	147800	147600
24	144900	144400	145600	147400	147200	146400	145600	145700	147100	146400	147900	147500
25	144900	144300	145900	147400	147200	146400	145600	145700	147000	146500	147900	147500
26	144800	144300	145900	147500	147200	146400	145500	145800	147000	146500	147900	147400
27	144800	144300	146000	147600	147200	146400	145400	145900	147100	146600	147900	147300
28	144700	144200	146000	147700	147200	146400	145400	146000	147500	146600	147900	147200
29	144700	144200	146000	147700	147200	146400	145800	146000	147400	146600	147800	147700
30	144600	144100	146100	147700	---	146400	145800	146100	147400	146600	147800	147900
31	144600	---	146100	147700	---	146400	---	146200	---	146700	147800	---
MAX	146300	144600	146100	147700	147700	147200	146400	146200	148500	147300	148000	148000
MIN	144500	144000	144200	146200	147200	146400	145400	145200	147000	146400	146800	147200
(†)	773.04	772.89	773.51	774.01	773.83	773.60	773.41	773.54	773.90	773.69	774.03	774.07
(ϕ)	-1700	-500	+2000	+1600	-500	-800	-600	+400	+1200	-700	+1100	+100

CAL YR 1987 MAX 156900 MIN 144000 (ϕ) -3400
WTR YR 1988 MAX 148500 MIN 144000 (ϕ) +1600

(†) 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.--12 years (water years 1977-88) 9.34 ft³/s (6,770 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, 309 ft³/s June 1 at 0315 hours (gage height, 4.54 ft); minimum, 1.1 ft³/s Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	4.3	4.0	4.9	4.3	3.7	7.0	4.0	59	4.3	5.5	7.0
2	2.7	4.3	4.0	4.6	4.3	3.7	7.0	3.7	64	4.2	6.1	7.0
3	2.7	4.3	4.1	4.6	4.3	3.7	7.0	6.6	7.1	4.3	6.1	7.0
4	2.7	4.3	4.3	4.6	4.3	3.7	6.8	7.0	5.2	4.3	6.1	7.0
5	2.7	4.3	4.1	4.6	4.3	3.7	6.6	7.0	4.7	4.3	6.0	6.8
6	2.6	4.2	4.3	4.6	4.3	3.7	6.3	7.0	4.9	4.4	5.7	6.1
7	2.7	4.8	4.3	4.6	4.3	3.7	6.0	7.0	4.9	4.6	5.7	5.7
8	2.7	4.7	4.3	4.6	4.3	3.4	5.7	7.8	5.2	4.6	5.6	5.6
9	2.7	4.6	4.3	4.6	4.0	3.4	5.7	7.0	5.3	4.6	7.1	5.3
10	2.7	4.5	4.3	4.6	4.0	3.4	5.3	7.0	5.3	4.5	11	5.3
11	2.7	4.3	4.3	4.3	4.2	3.4	5.1	7.0	5.3	4.8	8.3	5.3
12	2.8	4.3	4.3	4.3	4.3	3.4	5.3	7.0	5.3	4.4	7.1	6.8
13	3.8	4.3	4.3	4.3	4.3	3.7	5.3	6.3	5.3	4.0	6.6	10
14	4.7	4.2	4.3	4.3	4.5	4.1	5.1	6.6	5.3	4.0	6.3	10
15	4.2	4.6	4.9	4.3	4.6	4.3	4.9	7.3	5.2	4.0	7.0	10
16	1.9	4.1	4.9	4.3	4.8	4.3	4.9	7.8	4.9	4.0	6.6	10
17	3.6	2.8	4.9	4.2	4.8	4.6	5.2	7.4	4.9	4.0	6.5	12
18	3.3	3.7	4.9	4.0	5.0	4.6	5.2	6.9	4.9	4.0	6.5	11
19	2.2	4.3	7.3	4.0	4.8	4.6	4.9	6.5	4.9	6.3	6.5	11
20	3.7	4.3	5.2	4.0	4.1	4.6	5.7	6.8	5.1	8.2	6.5	11
21	3.7	4.1	4.9	4.0	2.8	5.0	5.1	7.3	5.3	7.9	6.8	11
22	3.7	4.0	4.9	4.0	2.7	5.6	4.8	6.5	5.3	7.9	6.5	11
23	3.1	3.7	4.9	4.0	3.2	5.3	4.5	6.5	5.3	7.1	6.5	11
24	5.7	3.7	4.9	4.0	3.2	5.5	4.6	6.3	5.3	5.4	6.5	11
25	6.1	5.1	5.3	4.0	3.3	6.1	4.8	5.7	5.3	5.2	6.5	10
26	6.3	4.3	6.4	4.0	4.0	6.1	4.5	6.1	5.7	4.8	6.5	10
27	6.4	4.3	5.3	4.1	3.9	5.7	4.8	6.1	5.4	4.6	6.5	10
28	4.4	4.3	5.0	4.3	3.7	5.7	4.6	6.1	15	4.8	6.5	10
29	4.3	4.3	4.9	4.3	3.7	6.4	4.1	6.0	4.9	4.9	7.1	37
30	4.3	4.2	4.9	4.3	---	6.7	5.6	5.7	4.3	4.9	7.4	20
31	4.5	---	4.9	4.3	---	7.0	---	6.1	---	4.9	7.3	---
TOTAL	112.3	127.2	147.6	133.6	118.3	142.8	162.4	202.1	278.5	154.2	206.9	300.9
MEAN	3.62	4.24	4.76	4.31	4.08	4.61	5.41	6.52	9.28	4.97	6.67	10.0
MAX	6.4	5.1	7.3	4.9	5.0	7.0	7.0	7.8	64	8.2	11	37
MIN	1.9	2.8	4.0	4.0	2.7	3.4	4.1	3.7	4.3	4.0	5.5	5.3
AC-FT	223	252	293	265	235	283	322	401	552	306	410	597

CAL YR 1987 TOTAL 12143.2 MEAN 33.3 MAX 952 MIN 1.7 AC-FT 24090
WTR YR 1988 TOTAL 2086.8 MEAN 5.70 MAX 64 MIN 1.9 AC-FT 4140

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.

PERIOD OF RECORD.--December 1951 to current year. Prior to October 1970, published as Whitney Reservoir. Prior to October 1980, published as Whitney Lake.
Water-quality records.--Chemical analyses: March 1960 to September 1987. Chemical and biochemical analyses: September 1970 to August 1987.

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, 542,000 acre-ft Oct. 2 (elevation, 529.20 ft); minimum daily, 411,700 acre-ft Sept. 28 (elevation, 522.04 ft).

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

522.0	411,200	526.0	479,000	529.0	538,000
524.0	444,100	528.0	517,400	530.0	559,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541600	512400	499000	484100	468800	455200	454200	434800	445100	463400	436200	425100
2	541800	512200	497400	482500	468100	456500	453600	434900	465400	462800	435200	424600
3	540500	511800	497300	482500	467400	466000	453300	434800	469500	462000	434900	424300
4	540100	511600	496700	481700	466300	466000	452800	434600	476200	461000	434800	424000
5	540300	510800	496300	481700	465400	455900	452600	434300	481400	460300	434600	423700
6	539700	510400	497100	481500	464700	455000	452500	434100	484500	459400	434400	423300
7	539000	509400	497100	480600	464400	454500	451900	434100	485300	458600	433900	422900
8	536500	512600	497300	480100	463700	454500	451800	434400	484700	457700	433600	421600
9	535900	511800	497300	478600	463200	454200	451800	434600	484900	456900	433300	417500
10	535900	510600	496500	476700	462500	453800	451600	434300	483800	456200	432800	416000
11	536100	509200	497100	476000	461600	455300	450900	434100	483600	455500	433100	415300
12	532600	508300	496700	476200	461000	455200	450400	433900	482500	455200	431800	415000
13	530700	507900	495800	474200	460800	455000	449700	433800	481500	454500	432100	414900
14	530100	507700	492000	473800	460400	454000	449100	433400	481000	453500	431500	414700
15	528900	510800	488800	473600	459800	453300	448400	433300	480100	452600	431500	414200
16	529300	511600	487500	474000	459300	453100	447700	434600	479500	451800	431000	414200
17	528400	511400	486200	474700	460800	455000	447000	434600	478600	450600	430800	414400
18	526400	513900	485800	474200	462000	453500	446000	434400	477500	449200	430600	414400
19	525100	511000	487500	474200	461500	453100	444600	434400	476500	448200	430300	414400
20	523500	510000	486800	474000	461100	453300	443300	434600	475300	447200	429800	414000
21	521200	508100	487700	473400	460300	453000	442100	434400	473800	446800	429300	413700
22	520000	508600	487100	472700	459600	452500	441400	434300	472500	445700	429000	413500
23	518800	507500	486600	472500	459300	452600	440600	433900	471300	444500	428700	413200
24	518300	506700	489600	471600	458600	453300	439400	433600	470600	443300	428200	413000
25	517300	506700	490300	470600	458100	453100	438400	433400	469300	442300	427900	412700
26	516100	507100	492200	469700	457600	452600	437700	433100	468800	441100	427600	412200
27	515300	505900	492200	469000	457400	452100	436400	432800	467500	440100	426900	411900
28	514100	503800	492000	468100	456700	451300	435200	432300	467000	439100	427200	411700
29	513000	501800	489800	468200	456400	453800	435100	432100	465300	438100	426300	419400
30	513000	500700	486200	468600	---	453300	435100	432000	464000	437100	425900	421900
31	512800	---	486600	468400	---	453300	---	434100	---	436100	425500	---
MAX	541800	513900	499000	484100	468800	466000	454200	434900	485300	463400	436200	425100
MIN	512800	500700	485800	468100	456400	451300	435100	432000	445100	436100	425500	411700
(†)	527.79	527.17	526.42	525.43	524.73	524.55	523.47	523.41	525.18	523.53	522.88	522.66
(Φ)	-29130	-12170	-14100	-17590	-12060	-3061	-18220	-991	+29960	-27970	-10290	-3570

CAL YR 1987 MAX 789100 MIN 485800 (Φ) -153200
WTR YR 1988 MAX 541800 MIN 411700 (Φ) -120100

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

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, 2,080 microsiemens on several days during year; minimum daily, 1,660 microsiemens June 2.
WATER TEMPERATURE: Maximum daily, 25.0°C Sept. 27; minimum daily, 7.0°C Jan. 11, 13, 15, Feb. 5-7, 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (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 17...	1240	592	2020	--	17.0	380	260	100	31
JAN 11...	1335	1190	2030	--	--	380	250	100	31
FEB 23...	0830	56	2050	7.70	9.0	380	250	100	31
APR 05...	1545	61	2040	--	15.0	380	260	100	32
MAY 24...	1132	668	2060	--	22.0	380	270	100	32
JUL 11...	1415	427	2050	--	22.5	320	220	73	34

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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 17...	270	6	6.7	117	270	390	0.50	7.5	1150
JAN 11...	260	6	7.1	130	270	400	0.30	7.2	1150
FEB 23...	270	6	5.5	125	280	430	0.30	7.1	1200
APR 05...	260	6	5.5	126	270	420	0.30	6.6	1170
MAY 24...	270	6	6.0	107	270	430	0.40	7.2	1180
JUL 11...	280	7	6.0	107	270	410	0.30	7.8	1150

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	14299	2040	1170	45000	440	16900	240	9330	370
NOV.	1987	13406	2060	1170	42500	440	16000	240	8820	370
DEC.	1987	19518	2050	1170	61800	440	23200	240	12800	370
JAN.	1988	18446	2050	1170	58200	440	21800	240	12100	370
FEB.	1988	12490	2060	1180	39800	440	14900	240	8250	370
MAR.	1988	7873	2030	1160	24700	440	9260	240	5120	360
APR.	1988	9484	2060	1170	30100	440	11300	240	6240	370
MAY	1988	402.1	2070	1180	1290	450	484	250	267	370
JUNE	1988	14369	2010	1150	44500	430	16700	240	9220	360
JULY	1988	13698	1940	1100	40800	410	15200	230	8420	350
AUG.	1988	1906	2040	1160	5990	440	2250	240	1240	360
SEPT	1988	4731	2050	1170	14900	440	5610	240	3100	370
TOTAL		130622.1	**	**	409000	**	154000	**	84900	**
WTD.AVG.		357	2030	1160	**	440	**	240	**	360

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	2030	2040	2040	2040	2040	2050	2070	2010	1960	2030	2040
2	2000	2060	2060	2040	2060	2040	2050	2070	1660	1950	2040	2030
3	2000	2050	2050	2050	2060	2030	2050	2070	2060	1950	2040	2030
4	2030	2050	2050	2050	2040	2040	2050	2080	2000	1950	2040	2050
5	2010	2060	2040	2030	2060	2040	2050	2070	2050	1940	2040	2060
6	2030	2050	2050	2050	2050	2040	2050	2070	2040	1950	2050	2040
7	2020	2060	2040	2040	2070	2040	2050	2070	2040	1940	2040	2040
8	2020	2080	2030	2050	2060	2040	2040	2070	2050	1940	2040	2030
9	2020	2070	2050	1970	2080	2050	2050	2070	2040	1940	2040	2050
10	2010	2060	2070	2050	2060	2040	2050	2070	2040	1940	2040	2050
11	2030	2060	2060	2040	2050	2040	2050	2080	2040	1940	2040	2040
12	2030	2060	2050	2050	2080	2030	2060	2070	2040	1930	2040	2040
13	2030	2060	2050	2060	2070	2040	2050	2080	2050	1930	2040	2040
14	2040	2070	2050	2050	2080	2040	2050	2070	2050	1930	2050	2050
15	2030	2070	2050	2060	2070	2040	2050	2070	2040	1940	2050	2050
16	2030	2060	2070	2060	2080	2050	2060	2020	2040	1930	2040	2040
17	2040	2050	2050	2060	2070	2050	2060	2070	2030	1940	2040	2050
18	2040	2060	2070	2060	2060	2040	2050	2070	2040	1930	2050	2040
19	2050	2050	2040	2060	2070	2050	2060	2070	2040	1930	2040	2040
20	2050	2060	2060	2050	2060	2040	2060	2070	2040	1930	2060	2060
21	2050	2050	2060	2060	2060	2040	2060	2080	2030	1940	2050	2060
22	2050	2050	2050	2060	2070	2040	2060	2080	2040	1930	2040	2060
23	2050	2050	2050	2060	2060	2030	2060	2080	2040	1930	2050	2070
24	2050	2050	2040	2060	2070	2030	2060	2080	2040	1930	2040	2070
25	2050	2040	2050	2060	2060	2030	2060	2070	2040	1930	2050	2080
26	2060	2050	2050	2060	2060	2040	2060	2080	1950	1930	2040	2080
27	2060	2050	2040	2060	2060	2040	2060	2070	2040	1930	2050	2070
28	2060	2060	2060	2060	2070	2040	2060	2080	2040	1930	2040	2070
29	2060	2050	2050	2060	2060	1910	2060	2070	2040	1930	2050	1980
30	2060	2050	2050	2060	---	2040	2050	2070	2030	1930	2060	2030
31	2060	---	2070	2060	---	2030	---	2070	---	1920	2060	---
MEAN	2040	2060	2050	2050	2060	2040	2050	2070	2020	1940	2040	2050

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

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

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, to 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); 37 years (water-years 1952-88) regulated, unadjusted, 1,403 ft³/s (1,016,000 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, 4,940 ft³/s Dec. 14 at 1800 hours (gage height, 12.03 ft); minimum daily, 8.7 ft³/s May 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	213	726	921	334	413	211	15	43	413	471	14
2	28	213	727	1170	461	497	212	13	922	388	467	13
3	20	211	406	1080	433	436	205	13	530	401	271	16
4	18	211	600	1610	431	353	192	10	602	408	44	15
5	20	212	62	676	453	258	195	9.6	366	401	32	14
6	23	209	44	594	431	352	190	9.2	310	401	27	13
7	23	206	41	847	390	391	174	9.2	356	404	29	12
8	104	302	41	1010	448	233	181	11	354	417	31	49
9	1330	494	41	1130	420	296	177	9.2	332	419	27	2520
10	422	326	407	1630	402	296	35	8.7	383	425	21	1400
11	317	222	65	745	432	228	28	11	185	427	23	38
12	741	360	46	65	456	215	308	12	191	431	30	20
13	723	353	265	666	416	143	40	11	353	443	23	20
14	705	365	2760	577	444	342	236	12	362	429	22	20
15	722	409	1050	387	430	355	358	11	356	439	20	22
16	80	426	972	64	378	195	505	13	356	443	17	21
17	510	392	513	57	517	265	520	13	359	540	25	22
18	921	563	620	387	768	377	517	9.3	355	561	42	21
19	915	704	1340	418	359	146	490	8.9	364	561	24	23
20	893	751	890	382	393	46	523	11	560	559	20	23
21	919	734	80	411	420	188	500	17	659	340	20	22
22	848	65	527	456	453	204	498	17	654	249	17	22
23	850	530	590	408	438	210	482	16	649	541	14	23
24	442	753	77	432	445	66	485	16	668	455	13	23
25	416	495	503	450	420	207	492	16	577	452	12	19
26	811	230	1560	388	418	48	483	16	807	453	13	21
27	348	559	101	388	252	195	473	16	655	454	33	26
28	287	964	596	396	348	202	478	17	684	453	19	27
29	231	1150	936	234	500	306	275	17	664	464	30	92
30	208	784	2160	232	---	211	21	17	713	463	49	160
31	211	---	772	235	---	199	---	17	---	464	20	---
TOTAL	14299	13406	19518	18446	12490	7873	9484	402.1	14369	13698	1906	4731
MEAN	461	447	630	595	431	254	316	13.0	479	442	61.5	158
MAX	1330	1150	2760	1630	768	497	523	17	922	561	471	2520
MIN	18	65	41	57	252	46	21	8.7	43	249	12	12
AC-FT	28360	26590	38710	36590	24770	15620	18810	798	28500	27170	3780	9380

CAL YR 1987 TOTAL 901162 MEAN 2469 MAX 17300 MIN 18 AC-FT 1787000
WTR YR 1988 TOTAL 130622.1 MEAN 357 MAX 2760 MIN 8.7 AC-FT 259100

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV												
17...	1520	16	605	7.30	11.5	47	160	9.1	84	--	210	130
JAN												
06...	1220	5.3	1250	7.90	4.5	13	2.3	12.0	94	1.5	510	220
FEB												
23...	1145	7.5	1090	8.10	11.5	9	4.3	9.9	92	0.5	420	180
APR												
05...	1350	5.0	1290	7.90	21.0	4	23	7.3	84	1.0	490	200
MAY												
24...	0935	0.17	1620	8.00	19.0	8	5.1	5.8	64	0.5	590	190

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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											
17...	80	3.0	38	1	5.6	85	150	22	0.40	11	361
JAN											
06...	180	14	92	2	3.9	285	310	68	0.60	13	853
FEB											
23...	150	12	75	2	4.7	249	240	65	0.50	10	707
APR											
05...	170	16	93	2	4.6	293	290	86	0.60	11	847
MAY											
24...	190	28	140	3	3.1	397	360	110	0.80	15	1080

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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											
17...	113	17	8.20	1.60	9.80	0.030	1.7	1.7	0.090	16	--
JAN											
06...	<1	<1	3.05	0.050	3.10	0.070	0.33	0.40	0.030	4.6	1
FEB											
23...	11	<1	3.31	0.290	3.60	0.040	0.56	0.60	0.040	7.4	--
APR											
05...	62	29	0.660	0.040	0.700	0.180	0.92	1.1	0.030	8.3	2
MAY											
24...	13	3	--	<0.010	0.100	0.070	0.43	0.50	0.080	4.9	--

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											
17...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	97	1	4	3	10	<5	240	<0.1	<1	<1.0	5
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	110	<1	<1	2	8	<5	220	<0.1	<1	<1.0	<3
MAY											
24...	--	--	--	--	--	--	--	--	--	--	--

08093250 HACKBERRY CREEK AT HILLSBORO, TX

LOCATION (REVISED).--Lat 32°00'20", long 97°08'58", Hill County, Hydrologic Unit 12060202, 63 ft downstream from centerline of highway and 13 ft to right of 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.--9 years (water years 1980-88), 21.4 ft³/s (15,500 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)
Nov. 25	0830	994	13.21				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	.00	4.1	33	8.5	9.1	28	2.0	34	.00	.00	.00
2	.00	.00	3.2	27	7.4	101	21	1.4	40	.00	.00	.00
3	.00	.00	2.9	28	6.8	97	12	1.1	8.1	.00	.00	.00
4	.00	.00	2.5	26	8.8	39	8.6	.51	49	.00	.00	.00
5	.00	.00	2.3	23	8.5	22	7.2	.34	6.3	.00	.00	.00
6	.00	.00	3.1	23	6.8	17	5.5	.17	.70	.00	.00	.00
7	.00	.00	2.6	32	7.3	15	4.8	.09	.18	.00	.00	.00
8	.00	.06	2.3	e21	9.4	13	4.4	.05	.03	.00	.00	.00
9	.00	.81	1.9	20	9.9	12	3.9	.07	.01	.00	.00	.00
10	.00	1.7	1.8	19	8.9	10	3.7	.05	.00	.00	.00	.00
11	.00	2.0	1.8	18	9.5	8.9	3.5	.02	.00	.00	.00	.00
12	.00	1.4	1.6	20	8.4	16	3.0	.0	.00	.00	.00	.00
13	.00	1.2	1.5	16	7.9	9.8	2.8	.00	.00	.00	.00	.00
14	.00	1.0	2.5	14	7.7	7.2	2.7	.00	.00	.00	.00	.00
15	.00	7.2	2.6	15	6.7	6.4	2.6	.00	.00	.00	.00	.00
16	.00	91	2.0	15	5.5	6.1	2.6	.00	.06	.00	.00	.00
17	.00	36	1.8	16	12	20	2.9	.00	.01	.00	.00	.00
18	.00	12	1.5	14	314	33	5.2	.00	.00	.00	.00	.00
19	.0	7.6	425	13	119	13	3.8	.00	.00	.00	.00	.00
20	.0	5.2	188	12	48	10	2.9	.00	.00	.00	.00	.00
21	.00	3.9	41	11	30	11	2.6	.00	.00	.00	.00	.00
22	.00	3.6	23	10	22	8.0	2.2	.00	.00	.00	.00	.00
23	.00	2.9	15	10	17	7.2	2.1	.00	.00	.00	.00	.00
24	.00	3.1	33	9.7	14	6.8	2.0	.00	.00	.00	.00	.00
25	.00	393	40	8.4	13	6.1	1.8	.00	.00	.00	.00	.00
26	.00	32	187	7.6	12	5.1	1.5	.00	.00	.00	.00	.00
27	.00	26	227	7.8	12	4.5	1.4	.00	.00	.00	.00	.00
28	.00	20	132	7.4	11	4.2	1.1	.00	.00	.00	.00	.00
29	.00	8.2	53	7.1	9.8	129	1.7	.00	.00	.00	.00	.00
30	.00	5.7	46	7.6	---	51	2.3	.00	.00	.00	.00	.00
31	.00	---	43	8.6	---	20	---	.00	---	.00	.00	---
TOTAL	0.00	665.57	1495.0	500.2	761.8	718.4	149.8	5.80	138.39	0.00	0.00	0.00
MEAN	.00	22.2	48.2	16.1	26.3	23.2	4.99	.19	4.61	.00	.00	.00
MAX	.00	393	425	33	314	129	28	2.0	49	.00	.00	.00
MIN	.00	.00	1.5	7.1	5.5	4.2	1.1	.00	.00	.00	.00	.00
AC-FT	.0	1320	2970	992	1510	1420	297	12	274	.0	.0	.0

CAL YR 1987 TOTAL 14815.77 MEAN 40.6 MAX 1330 MIN .00 AC-FT 29390
WTR YR 1988 TOTAL 4434.96 MEAN 12.1 MAX 425 MIN .00 AC-FT 8800

e Estimated.

08093250 HACKBERRY CREEK AT HILLSBORO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 17...	1030	36	485	7.90	12.0	28	170	9.6	90	1.0	170	75
JAN 05...	1600	21	800	8.30	4.5	4	13	13.6	105	1.8	320	100
FEB 23...	1550	17	754	8.30	13.0	4	16	10.2	98	1.0	290	120
APR 05...	1145	7.7	964	8.30	24.0	--	--	10.2	124	1.2	350	150

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 WAT WH TOT FET 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 17...	63	2.3	29	1	3.9	92	110	18	0.50	9.6	291
JAN 05...	120	3.9	48	1	2.8	212	170	24	0.50	8.4	505
FEB 23...	110	3.9	42	1	3.5	176	150	26	0.50	4.4	446
APR 05...	130	5.1	73	2	2.8	193	260	40	0.60	4.1	631

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 17...	378	39	4.75	0.350	5.10	0.020	0.88	0.90	0.070	13	--
JAN 05...	22	33	4.98	0.020	5.00	0.070	0.33	0.40	0.080	4.0	2
FEB 23...	31	5	3.98	0.220	4.20	0.020	0.58	0.60	0.050	6.0	--
APR 05...	--	--	2.35	0.050	2.40	0.070	0.53	0.60	0.190	7.3	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)
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	54	2	2	2	11	<5	15	<0.1	1	<1.0	6
FEB 23...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	66	<1	<1	3	3	<5	20	<0.1	<1	<1.0	<3

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 07...	0925	0.74	792	7.50	17.0	6	18	5.5	58	2.7	190	13
NOV 20...	1145	5.8	711	7.60	11.5	46	31	10.5	97	0.8	240	110
JAN 05...	0945	23	710	8.00	3.5	17	17	12.7	95	1.8	290	100
FEB 22...	1445	21	720	8.10	14.5	4	38	9.7	98	1.0	290	120
APR 04...	1500	10	838	7.90	24.5	9	32	9.2	112	1.1	290	120
MAY 23...	1350	1.1	858	7.60	26.0	12	4.1	7.5	94	4.9	200	29
JUL 13...	1115	0.95	828	7.30	27.0	23	7.4	2.8	36	7.1	180	6
AUG 25...	1050	1.6	826	7.20	28.5	32	3.0	3.6	47	2.1	180	2

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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...	69	4.0	81	3	14	176	100	78	0.40	14	466
NOV 20...	89	3.6	49	1	6.2	130	160	35	0.50	10	431
JAN 05...	110	3.7	38	1	3.6	190	130	22	0.40	8.2	430
FEB 22...	110	4.0	44	1	4.0	172	150	29	0.50	5.7	450
APR 04...	110	4.8	57	2	3.9	174	190	43	0.50	5.0	519
MAY 23...	76	3.6	86	3	11	176	130	79	0.50	8.3	500
JUL 13...	67	3.8	84	3	9.0	177	110	78	0.40	9.3	468
AUG 25...	66	4.1	85	3	13	180	100	80	0.40	9.4	466

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 07...	36	14	0.050	0.150	0.200	2.00	1.7	3.7	5.20	12	3
NOV 20...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	16	<1	4.27	0.030	4.30	0.110	0.69	0.80	0.330	4.3	2
FEB 22...	69	7	4.25	0.250	4.50	0.050	0.45	0.50	0.250	6.6	--
APR 04...	65	26	1.76	0.040	1.80	0.120	0.68	0.80	0.480	6.4	2
MAY 23...	28	8	0.020	0.580	0.600	4.30	0.30	4.6	0.040	12	--
JUL 13...	55	8	0.080	0.120	0.200	4.90	1.3	6.2	3.50	13	5
AUG 25...	23	7	0.050	0.150	0.200	6.70	0.80	7.5	2.90	16	--

08093260 HACKBERRY CREEK BELOW HILLSBORO, TX--Continued
(Low-flow partial-record station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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											
07...	31	<1	<10	5	18	<5	85	<0.1	<1	1.0	25
NOV											
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	46	1	2	3	8	<5	14	0.4	1	<1.0	9
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	58	<1	<1	2	4	<5	25	<0.1	<1	<1.0	<3
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	44	<1	<1	2	19	<5	210	0.2	<1	<1.0	7
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--

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 daily contents (observed), 66,360 acre-ft Dec. 27 (elevation, 541.40 ft); minimum daily (observed), 45,680 acre-ft Sept. 27 (elevation, 535.36 ft).

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

535.0	44,620	539.0	57,450	541.0	64,800
537.0	50,740	540.0	61,040	542.0	68,760

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51940	50740	55270	64460	52390	53790	54190	52070	51480	51810	49410	47210
2	51870	50710	55270	63840	52390	54760	53950	52070	52330	51740	49380	47150
3	51770	50710	55270	63160	52360	55140	53650	52030	52620	51680	49340	47150
4	51680	50680	55270	62520	52330	55140	53350	52000	53050	51610	49250	47000
5	51610	50640	55240	61890	52300	55070	53090	51970	53150	51580	49190	46940
6	51510	50550	55750	61340	52260	55000	52790	51900	53150	51510	49160	46850
7	51510	50480	55860	60710	52260	54860	52590	51870	53120	51450	49090	46760
8	51320	51350	55820	60060	52260	54860	52560	51870	53050	51380	49030	46700
9	51320	51420	55750	59410	52330	54730	52560	51840	53020	51320	48970	46640
10	51350	51290	55680	58760	52330	54530	52530	51810	52920	51260	48880	46580
11	51290	51220	55650	58120	52360	54390	52460	51770	52820	51220	48780	46490
12	51190	51190	55580	57490	52330	54390	52390	51740	52720	51000	48690	46460
13	51090	51160	55580	56820	52300	54360	52360	51680	52660	50960	48660	46430
14	51030	51090	55440	56170	52430	54160	52360	51610	52590	50870	48530	46340
15	50960	51970	55340	55480	52390	53950	52330	51550	52530	50800	48500	46340
16	50960	52820	55270	54860	52360	53790	52330	51550	52530	50710	48410	46280
17	50960	52950	55200	54260	52990	54020	52360	51510	52460	50680	48350	46280
18	50900	53120	55140	53650	55170	53850	52330	51450	52390	50580	48280	46100
19	51000	53020	57240	52990	55720	53750	52300	51380	52330	50550	48220	46190
20	51130	52990	57980	52690	55580	53580	52260	51380	52260	50450	48130	46100
21	51030	52920	57980	52660	55340	53450	52230	51350	52200	50360	48070	46040
22	50960	52950	57880	52590	55240	53320	52260	51290	52100	50260	47950	45980
23	51000	52920	57560	52530	54900	53250	52230	51190	52070	50170	47880	45920
24	51000	53050	57600	52460	54590	53190	52200	51160	52000	50040	47850	45890
25	50960	54970	58090	52430	54290	53050	52200	51090	51940	49980	47790	45800
26	51000	55070	65420	52390	54090	52890	52160	51030	52070	49910	47670	45740
27	50930	55240	66360	52390	53990	52690	52100	50960	52070	49790	47550	45680
28	50840	55270	66240	52360	53820	52560	52100	50870	52030	49720	47550	45680
29	50800	55270	66130	52330	53790	54360	52130	50800	51940	49630	47430	46520
30	50740	55310	65660	52260	---	54420	52130	50740	51870	49560	47330	47180
31	50710	---	65070	52390	---	54220	---	50770	---	49500	47270	---
MAX	51940	55310	66360	64460	55720	55140	54190	52070	53150	51810	49410	47210
MIN	50710	50480	55140	52260	52260	52560	52100	50740	51480	49500	47270	45680
(†)	536.99	538.38	541.07	537.51	537.93	538.06	537.43	537.01	537.35	536.61	535.89	535.86
(ϕ)	-1358	+4598	+9767	-12680	-1392	+437	-2091	-1360	+1099	-2369	-2229	-91

CAL YR 1987 MAX 84200 MIN 49560 (ϕ) +9560
WTR YR 1988 MAX 66360 MIN 45680 (ϕ) -5000

(†) 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 1987 TO SEPTEMBER 1988

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							
15...	1036	1.00	378	8.80	5.5	9.8	78
15...	1038	10.0	378	8.80	5.5	9.8	78
15...	1040	23.0	378	8.80	5.5	9.9	79
MAY							
04...	1002	1.00	453	8.20	20.0	8.0	88
04...	1004	10.0	453	8.10	20.0	8.0	88
04...	1006	21.0	453	8.10	20.0	8.0	88
AUG							
24...	1026	1.00	450	7.90	29.5	5.9	78
24...	1028	10.0	449	7.90	29.0	5.6	74
24...	1030	20.0	452	7.50	29.0	4.2	55
24...	1032	25.0	454	7.50	29.0	3.8	50
24...	1034	29.0	454	7.20	28.0	0.6	8

315358097122601 - AQUILLA LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
15...	1002	1.00	380	8.80	5.5	1.60	9.9	79	K2	<1	160
15...	1003	1.00	--	--	--	--	--	--	--	--	--
15...	1004	10.0	381	8.80	5.5	--	9.9	79	--	--	--
15...	1006	20.0	381	8.80	5.5	--	9.9	79	--	--	--
15...	1008	30.0	381	8.80	5.5	--	10.0	80	--	--	--
15...	1010	40.0	383	8.80	5.5	--	10.0	80	--	--	--
15...	1012	47.0	383	8.80	5.5	--	10.0	80	--	--	160
MAY											
04...	0936	1.00	453	8.10	20.0	2.80	7.6	84	<1	K6	170
04...	0937	1.00	--	--	--	--	--	--	--	--	--
04...	0938	10.0	455	8.10	20.0	--	7.6	84	--	--	--
04...	0940	20.0	455	8.00	19.5	--	7.1	78	--	--	--
04...	0942	30.0	455	7.60	19.5	--	6.4	70	--	--	--
04...	0944	40.0	456	7.40	18.5	--	3.4	36	--	--	--
04...	0946	47.0	458	7.30	18.5	--	1.4	15	--	--	170
AUG											
24...	0916	1.00	448	7.90	29.0	1.50	6.1	80	K14	>800	150
24...	0917	1.00	--	--	--	--	--	--	--	--	--
24...	0918	10.0	448	7.80	29.0	--	5.8	76	--	--	--
24...	0920	20.0	448	7.60	28.5	--	4.8	63	--	--	--
24...	0922	25.0	447	7.30	28.0	--	1.6	21	--	--	--
24...	0924	30.0	456	7.20	27.5	--	0.6	8	--	--	--
24...	0926	43.0	473	7.00	22.5	--	0.6	7	--	--	160

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315358097122601 - AQUILLA LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET 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											
15...	39	57	3.4	22	0.8	6.2	118	60	15	0.30	5.3
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	118	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	36	57	3.4	22	0.8	6.1	121	63	15	--	5.3
MAY											
04...	48	62	3.9	27	0.9	4.8	123	75	18	0.50	1.4
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	39	61	3.8	26	0.9	5.6	129	80	17	--	2.8
AUG											
24...	39	54	4.1	30	1	5.3	113	75	20	0.40	3.3
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	45	57	4.0	29	1	5.2	114	41	18	--	6.1

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
15...	240	--	--	0.500	--	--	0.50	0.020	6	<1
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	0.500	--	--	0.50	0.020	<10	<10
15...	--	--	--	--	--	--	--	--	--	--
15...	244	--	--	0.500	--	--	0.60	0.020	6	2
MAY										
04...	266	0.570	0.030	0.600	0.030	0.57	0.60	0.020	<3	<1
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	0.560	0.040	0.600	0.070	0.43	0.50	0.020	<10	20
04...	--	0.530	0.070	0.600	0.080	0.42	0.50	0.030	<10	50
04...	274	0.610	0.090	0.700	0.090	0.21	0.30	0.030	3	80
AUG										
24...	260	--	<0.010	<0.100	0.030	0.47	0.50	0.020	7	7
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	0.020	<0.100	0.040	0.46	0.50	0.030	20	70
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	<0.010	<0.100	0.340	0.66	1.0	0.040	60	510
24...	231	--	<0.010	<0.100	1.90	0.60	2.5	0.140	510	2300

315402097115401 - AQUILLA LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
15...	1046	1.00	378	8.80	5.5	9.9	79
15...	1048	10.0	378	8.80	5.5	9.9	79
15...	1050	16.0	379	8.80	5.5	9.9	79
MAY							
04...	1010	1.00	453	8.20	20.5	8.1	90
04...	1012	14.0	453	8.10	20.0	8.1	89
AUG							
24...	1012	1.00	449	7.90	29.5	6.0	80
24...	1014	10.0	449	7.90	29.0	5.8	76
24...	1016	18.0	449	7.70	29.0	4.6	61

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315601097111501 - AQUILLA LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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									
15...	1152	1.00	368	8.70	6.0	1.90	9.5	77	--
15...	1154	10.0	368	8.70	5.5	--	9.5	76	--
15...	1156	20.0	368	8.70	5.5	--	9.6	76	--
15...	1158	34.0	368	8.70	5.5	--	9.6	76	--
MAY									
04...	1117	1.00	454	8.10	20.5	2.80	8.1	90	0.570
04...	1119	10.0	454	7.90	20.0	--	7.8	86	--
04...	1121	20.0	454	7.70	20.0	--	6.8	75	0.570
04...	1123	30.0	459	7.60	19.5	--	4.6	50	--
04...	1125	38.0	463	7.90	19.5	--	3.4	37	0.470
AUG									
24...	1142	1.00	451	8.10	30.0	1.20	6.6	88	--
24...	1144	10.0	441	8.00	29.5	--	5.6	74	--
24...	1146	20.0	443	7.40	29.0	--	1.8	24	--
24...	1148	25.0	443	7.30	28.5	--	1.0	13	--
24...	1150	34.0	455	7.20	28.0	--	1.0	13	--

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								
15...	--	0.800	--	--	0.50	0.030	<10	<10
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	0.800	--	--	0.50	0.030	<10	<10
MAY								
04...	0.030	0.600	0.030	2.0	2.0	0.030	30	<10
04...	--	--	--	--	--	--	--	--
04...	0.030	0.600	0.080	0.42	0.50	0.010	<10	30
04...	--	--	--	--	--	--	--	--
04...	0.030	0.500	0.220	0.68	0.90	0.040	10	170
AUG								
24...	<0.010	<0.100	0.030	0.67	0.70	0.020	<10	10
24...	<0.010	<0.100	0.020	0.68	0.70	0.020	<10	20
24...	0.020	<0.100	0.070	0.63	0.70	0.020	<10	150
24...	--	--	--	--	--	--	--	--
24...	<0.010	<0.100	0.190	0.51	0.70	0.040	160	790

315649097103701 - AQUILLA LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
15...	1212	1.00	350	8.60	5.5	0.70	9.0	72	K6	K8	150
15...	1213	1.00	--	--	--	--	--	--	--	--	--
15...	1214	11.0	355	8.70	5.5	--	9.2	73	--	--	150
MAY											
04...	1150	1.00	454	7.70	21.5	2.80	8.8	100	K4	<1	170
04...	1151	1.00	--	--	--	--	--	--	--	--	--
04...	1152	10.0	459	8.10	20.5	--	4.7	52	--	--	170
AUG											
24...	1204	1.00	459	8.00	31.0	1.00	6.4	87	35	>800	150
24...	1205	1.00	--	--	--	--	--	--	--	--	--
24...	1206	7.00	459	7.70	31.0	--	5.4	74	--	--	150

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315649097103701 - AQUILLA LAKE SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN										
15...	39	54	2.6	20	0.8	5.0	107	56	13	6.9
15...	--	--	--	--	--	--	--	--	--	--
15...	39	55	2.7	20	0.7	5.1	110	61	13	6.6
MAY										
04...	50	63	3.6	27	0.9	5.2	122	83	17	1.3
04...	--	--	--	--	--	--	--	--	--	--
04...	52	64	3.6	27	0.9	5.3	123	78	17	2.0
AUG										
24...	43	55	4.1	30	1	5.8	111	79	20	3.4
24...	--	--	--	--	--	--	--	--	--	--
24...	46	55	4.1	30	1	5.7	108	79	20	3.5

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (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, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
JAN										
15...	222	--	--	1.80	--	--	0.50	0.050	10	3
15...	--	--	--	--	--	--	--	--	--	--
15...	229	--	--	1.50	--	--	0.50	0.040	10	4
MAY										
04...	273	0.480	0.020	0.500	0.070	0.53	0.60	0.020	5	1
04...	--	--	--	--	--	--	--	--	--	--
04...	271	--	0.010	<0.100	0.050	0.55	0.60	0.030	7	7
AUG										
24...	264	--	<0.010	<0.100	0.070	0.63	0.70	0.020	9	2
24...	--	--	--	--	--	--	--	--	--	--
24...	262	--	<0.010	<0.100	0.030	0.47	0.50	0.020	<3	4

315518097123401 - AQUILLA LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
JAN									
15...	1102	1.00	373	8.80	6.0	1.80	9.8	79	--
15...	1104	10.0	373	8.70	5.5	--	9.8	78	--
15...	1106	20.0	373	8.70	5.5	--	9.8	78	--
15...	1108	30.0	373	8.80	5.5	--	9.8	78	--
15...	1110	37.0	373	8.80	5.5	--	9.8	78	--
MAY									
04...	1022	1.00	458	8.10	20.0	3.80	8.0	88	0.480
04...	1024	10.0	453	8.00	20.0	--	7.6	84	--
04...	1026	20.0	453	7.80	19.5	--	7.0	77	0.570
04...	1028	30.0	460	7.80	19.5	--	5.8	63	0.570
04...	1030	37.0	453	8.10	19.0	--	1.4	15	0.280
AUG									
24...	1042	1.00	448	8.10	30.0	1.60	6.8	91	--
24...	1044	10.0	448	8.10	29.5	--	5.1	68	--
24...	1046	20.0	452	7.40	29.0	--	4.0	53	--
24...	1048	25.0	458	7.20	28.5	--	0.6	8	--
24...	1050	34.0	494	6.90	27.0	--	0.6	8	--

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315518097123401 - AQUILLA LAKE SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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								
15...	--	0.600	--	--	0.50	0.030	<10	<10
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	0.500	--	--	0.60	0.020	<10	<10
MAY								
04...	0.020	0.500	0.020	0.48	0.50	0.020	<10	<10
04...	--	--	--	--	--	--	--	--
04...	0.030	0.600	0.050	0.45	0.50	0.020	<10	<10
04...	0.030	0.600	0.080	0.92	1.0	0.020	<10	110
04...	0.020	0.300	0.300	0.80	1.1	0.030	10	1100
AUG								
24...	<0.010	<0.100	0.030	0.57	0.60	0.020	<10	<10
24...	<0.010	<0.100	0.030	0.47	0.50	0.030	<10	20
24...	<0.010	<0.100	0.050	0.45	0.50	0.030	20	90
24...	--	--	--	--	--	--	--	--
24...	<0.010	<0.100	2.00	0.60	2.6	0.310	1400	1300

315748097144901 - AQUILLA LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
15...	1116	1.00	373	8.80	6.0	1.80	9.7	78	K7	K3	160
15...	1117	1.00	--	--	--	--	--	--	--	--	--
15...	1118	10.0	373	8.80	6.0	--	9.6	77	--	--	160
MAY											
04...	1047	1.00	454	8.10	20.5	4.00	8.2	91	<1	<1	170
04...	1048	1.00	--	--	--	--	--	--	--	--	--
04...	1049	10.0	454	7.90	20.0	--	7.6	84	--	--	--
04...	1051	18.0	454	8.10	20.0	--	6.4	71	--	--	170
AUG											
24...	1112	1.00	451	8.20	30.5	1.30	7.0	95	K4	>800	150
24...	1113	1.00	--	--	--	--	--	--	--	--	--
24...	1114	14.0	451	8.00	30.5	--	6.2	84	--	--	150

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 WAT WH TOT FET 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										
15...	36	57	3.4	22	0.8	6.2	121	59	15	5.1
15...	--	--	--	--	--	--	--	--	--	--
15...	36	57	3.5	22	0.8	5.6	121	58	15	5.1
MAY										
04...	44	61	3.9	27	0.9	5.3	125	82	18	1.4
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	42	61	3.7	26	0.9	4.4	126	78	18	1.7
AUG										
24...	44	54	4.2	30	1	5.8	108	79	20	3.4
24...	--	--	--	--	--	--	--	--	--	--
24...	41	53	4.2	30	1	5.7	109	75	19	3.4

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

315748097144901 - AQUILLA LAKE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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										
15...	240	--	--	0.400	--	--	0.50	0.020	6	3
15...	--	--	--	--	--	--	--	--	--	--
15...	239	--	--	0.400	--	--	0.50	0.020	8	3
MAY										
04...	274	0.480	0.020	0.500	0.020	0.48	0.50	0.020	<3	<1
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	268	0.480	0.020	0.500	0.030	1.3	1.3	0.020	<3	16
AUG										
24...	261	--	<0.010	<0.100	0.040	0.46	0.50	0.030	38	2
24...	--	--	--	--	--	--	--	--	--	--
24...	256	--	<0.010	<0.100	0.020	0.58	0.60	0.020	6	<1

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses September 1987 to October 1988

Date	1-15-88
Time	1003
TOTAL CELLS/mL	31,870
NUMBER OF SPECIES	38
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	67
Ankistrodesmus falcatus var. *mirabilis*	67
Ankistrodesmus falcatus var. *stipulatus*	1756
Ankistrodesmus nannoselene	203
Carteria sp.	405
Chlorococcum sp.	67
Chodatella quadriseta	67
Coelastrum microporum	203
Crucigenia tetrapedia	67
Golenkinia radiata	405
Mesotaenium sp.	135
Nephrocytium sp.	270
Scenedesmus armatus	135
Tetrastrum staurogeniaeforme	810
CHRYSOPHYTA (Golden-brown algae)	
Small chrysophyte flagellate	67
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	810
Aphanocapsa delicatissima	2566
Aphanothece sp.	135
Chroococcus dispersus	270
Dactylococcopsis fascicularis	20,396
Gomphosphaeria lacustris	1081
Merismopedia sp.	270
Microcystis sp.	338
Oscillatoria limnetica	67
Synechococcus sp.	203
EUGLENOPHYTA (Euglenoids)	
Trachelomonas sp.	67
CRYPTOPHYTA (Cryptomonads)	
Rhodomonas minuta	135
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	46
Cyclotella stelligera	3
Melosira granulata var. *angustissima*	410
Melosira lirata	77
Rhizosolenia longiseta	3
Order Pennales	
Nitzschia acicularis	13
Nitzschia palea	27
Nitzschia sp.	24
Surirella ovata var. *pinnata*	8
Synedra delicatissima	3
Synedra filiformis var. *exilis* ?	194

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses September 1987 to October 1988

Date	1-15-88
Time	1213
TOTAL CELLS/mL	19,380
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	675
Carteria sp.	270
Chlorococcum sp.	270
Chodatella quadriseta	270
Cosmarium sp.	135
Crucigenia tetrapedia	270
Golenkinia radiata	203
Mesotaenium sp.	135
Nephrocytium sp.	405
Tetrastrum staurogeniaeforme	68
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	1148
Aphanocapsa delicatissima	7699
Aphanothece sp.	473
Chroococcus dispersus	270
Dactylococcopsis fascicularis	1756
Merismopedia sp.	540
Synechococcus sp.	2769
EUGLENOPHYTA (Euglenoids)	
Trachelomonas sp.	68
CRYPTOPHYTA (Cryptomonads)	
Rhodomonas minuta	270
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	3
Cyclotella ocellata	66
Melosira granulata var. *angustissima*	333
Melosira lirata	198
Stephanodiscus dubius	7
Order Pennales	
Achnanthes minutissima	40
Amphora ovalis var. *pediculus*	13
Cymbella turgidula?	13
Fragilaria vaucheriae	13
Navicula bicephala	13
Navicula sp.	13
Nitzschia acicularis	53
Nitzschia sublinearis	171
Nitzschia sp.	26
Surirella ovata var. *pinnata*	13
Synedra acus	79
Synedra filiformis var. *exilis*	606
Synedra rumpens var. *familiaris*	26

Aquilla Lake EC (315748097144901)

Phytoplankton Analyses September 1987 to October 1988

Date	1-15-88
Time	1117
TOTAL CELLS/mL	21,378
NUMBER OF SPECIES	39
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	135
Ankistrodesmus falcatus var. *mirabilis*	90
Ankistrodesmus nannoselene	270
Chlamydomonas sp.	180
Chlorococcum sp.	270
Chodatella quadriseta	180
Crucigenia quadrata	225
Gloeothece linearis	450
Mesotaenium sp.	180
Nephrocytium sp.	180
Scenedesmus armatus	180
Scenedesmus quadricauda	540
Tetrastrum staurogeniaeforme	900
Tetraedron trigonum	45
CHRYSOPHYTA (Golden-brown algae)	
Small chrysophyte flagellate	225
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	1035
Aphanocapsa delicatissima	6798
Aphanothece sp.	990
Chroococcus dispersus	405
Dactylococcopsis acicularis	225
Dactylococcopsis fascicularis	2701
Gomphosphaeria lacustris	1125
Synechococcus sp.	1305
EUGLENOPHYTA (Euglenoids)	
Trachelomonas sp.	45
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	8
Cyclotella ocellata	184
Cyclotella stelligera	8
Melosira granulata var. *angustissima*	728
Melosira lirata	152
Order Pennales	
Achnanthes minutissima	11
Cymbella minuta var. *silesica*	23
Fragilaria vaucheriae	11
Hantzschia sp.	11
Nitzschia acicularis	114
Nitzschia palea	183
Nitzschia sp.	80
Surirella ovata var. *pinnata*	11
Synedra delicatissima	11
Synedra filiformis var. *exilis*	1164

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses September 1987 to October 1988

Date	5-4-88
Time	0937
TOTAL CELLS/mL	28,247
NUMBER OF SPECIES	22
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	113
Chlorococcum sp.	225
Scenedesmus armatus	900
Scenedesmus bijuga	900
Tetraedron minimum	113
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	18458
Aphanothece nidulans	2026
Aphanothece saxicola	450
Chroococcus dispersus	450
Chroococcus multicoloratus	788
Chroococcus pallidus	675
Dactylococcopsis fascicularis	225
Synechococcus sp.	900
EUGLENOPHYTA (Euglenoids)	
Phacus orbicularis	113
Trachelomonas sp.	113
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata var. *angustissima*	1631
Melosira lirata	28
Stephanodiscus dubius	28
Order Pennales	
Navicula aikensis	18
Nitzschia acicularis	18
Nitzschia subacicularis	18
Synedra filiformis var. *exilis*	57

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses September 1987 to October 1988

Date	5-4-88
Time	1151
TOTAL CELLS/mL	80,913
NUMBER OF SPECIES	54
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	876
Chlamydomonas sp.	250
Chodatella subsalsa	876
Chlorococcum sp.	500
Crucigenia tetrapedia	250
Franceia ovalis	500
Gloeocystis sp.	125
Golenkinia radiata	250
Kirchneriella lunaris	625
Mesotaenium sp.	876
Nephrocytium limneticum	500
Oocystis sp.	125
Scenedesmus abundans	375
Scenedesmus armatus	750
Scenedesmus quadricauda	1250
Sphaerocystis schroeteri	500
Tetraedron minimum	125
Tetrastrum staurogeniaeforme	125
CHRYSOPHYTA (Golden-brown algae)	
Kephyrion ovum	125
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	32142
Aphanothece nidulans	1501
Aphanothece saxicola	8254
Chroococcus dispersus	2251
Chroococcus multicoloratus	4127
Dactylococcopsis fascicularis	500
Gomphosphaeria lacustris	1376
Lyngbya nana	8629
Microcystis sp.	7129
Oscillatoria sp.	250
Pseudoanabaena sp.	876
Synechococcus sp.	2500
PYRRHOPHYTA (Dinoflagellates)	
Peridinium sp.	125
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	250
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	21
Melosira granulata var. *angustissima*	1188
Melosira lirata	21
Rhizosolenia longiseta	42
Stephanodiscus dubius	354
Order Pennales	
Achnanthes deflexa	11
Achnanthes minutissima	55
Cymbella minuta	11
Fragilaria vaucheriae	33
Navicula aikensis	11
Navicula rhyncocephala	11
Navicula sp.	11
Nitzschia acicularis	44
Nitzschia denticula	33
Nitzschia palea	11
Nitzschia subacicularis	22
Nitzschia sp.	11
Pleurosigma sp.	11
Synedra filiformis var. *exilis*	55
Synedra sp. 1	33
Synedra sp. 2	11

Aquilla Lake EC (315748097144901)

Phytoplankton Analyses September 1987 to October 1988

Date	5-4-88
Time	1048
TOTAL CELLS/mL	71,924
NUMBER OF SPECIES	34
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	225
Ankistrodesmus falcatus	113
Chlorococcum sp.	675
Chodatella subsalsa	338
Heteromastix sp.	113
Mesotaenium sp.	338
Pediastrum simplex	2701
Scenedesmus quadricauda	450
Treubaria setigera	113
CHRYSOPHYTA (Golden-brown algae)	
Kephyrion ovum	338
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	21834
Aphanocapsa sp.	14856
Aphanothece saxicola	675
Chroococcus dispersus	1130
Chroococcus multicoloratus	5853
Dactylococcopsis fascicularis	900
Gomphosphaeria lacustris	5740
Lyngbya nana	12830
Pseudoanabaena sp.	450
Spirulina sp.	225
Synechococcus sp.	1013
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	113
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	225
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	**19**
Melosira granulata* var. *angustissima	**325**
Melosira lirata	**25**
Stephanodiscus dubius	**81**
Order Pennales	
Achnanthes minutissima	**12**
Navicula pupula* var. *rectangularis	**12**
Navicula rhyncocephala	**24**
***Navicula* sp.**	**12**
Nitzschia acicularis	**118**
Nitzschia palea	**24**
Synedra filiformis* var. *exilis	**24**

Aquilla Lake AC (315358097122601)

Phytoplankton Analyses September 1987 to October 1988

Date	8-24-88
Time	0917
TOTAL CELLS/mL	46,218
NUMBER OF SPECIES	39
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	147
Ankistrodesmus falcatus var. *mirabilis*	294
Chlamydomonas globosa?	221
Chlamydomonas sp. 1	147
Chlamydomonas sp. 2	147
Chlorococcum sp.	147
Cosmarium sp.	1472
Crucigenia tetrapedia	1178
Euastrum sp.	147
Gonium sociale	589
Mesotaenium sp.?	294
Nephrocytium sp.	294
Pediastrum simplex	515
Scenedesmus dimorphus	294
Staurastrum sp.	147
Tetraedron muticum	74
Tetrastrum staurogeniformae	294
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	589
CYANOPHYTA (blue-green algae)	
Aphanocapsa elachista	2649
Chroococcus dispersus	8390
Dactylococcopsis fascicularis	2282
Merismopedia punctata	8611
Oscillatoria limnetica	1840
Synechococcus sp.	7433
EUGLENOPHYTA (euglenoid algae)	
Phacus sp.	147
Trachelomonas volvocina	74
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	221
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	221
Cyclotella stelligera	442
Melosira italica	147
Stephanodiscus vestibulis	294
Order Pennales	
Achnanthes minutissima	736
Nitzschia acicularis	368
Nitzschia holsatica	368
Nitzschia palea	147
Nitzschia subacicularis	221
Synedra delicatula	3165
Synedra filiformis var. *exilis*	221
Synedra radians	1251

Aquilla Lake CC (315649097103701)

Phytoplankton Analyses September 1987 to October 1988

Date	8-24-88
Time	1205
TOTAL CELLS/mL	54,883
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	354
Chlamydomonas sp.	885
Mesotaenium sp.	354
Scenedesmus quadricauda	354
Staurastrum sp.	708
Tetraedron muticum	531
CHRYSOPHYTA (golden-brown algae)	
Mallomonas sp.	177
small chrysophyte flagellates	1416
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	18590
Merismopedia tenuissima	2833
Synechococcus sp.	21069
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	177
Euglena sp.	531
Trachelomonas volvocina	885
Trachelomonas sp.	354
PYRRHOPHYTA (dinoflagellates)	
unidentified dinoflagellates	177
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	531
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	354
Cyclotella stelligera	177
Stephanodiscus vestibulis	177
Order Pennales	
Achnanthes minutissima	354
Cymbella prostrata var. *auerswaldii*	177
Navicula sp.	177
Nitzschia denticula	177
Nitzschia holsatica	354
Synedra delicatula	2125
Synedra radians	885

08093350 AQUILLA LAKE ABOVE AQUILLA, TX--Continued

Aquilla Lake EC (315748097144901)

Phytoplankton Analyses September 1987 to October 1988

Date	8-24-88
Time	1113
TOTAL CELLS/mL	51,467
NUMBER OF SPECIES	51
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	129
Ankistrodesmus falcatus var. *mirabilis*	129
Chlamydomonas globosa?	65
Chlamydomonas sp. 1	129
Chlamydomonas sp. 2	129
Chlorococcum sp.	129
Cosmarium sp. 1	647
Cosmarium sp. 2	647
Crucigenia tetrapedia	1034
Gleothece linearis	259
Kirchneriella contorta	388
Mesotaenium sp.	65
Nephrocytium sp.	517
Oocystis sp.	259
Pediastrum duplex	517
Pediastrum simplex	517
Pediastrum tetras	259
Scenedesmus abundans	259
Scenedesmus quadricauda	259
Staurastrum sp.	259
Tetraedron trigonum	129
Tetrastrum staurogeniformae	259
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	517
CYANOPHYTA (blue-green algae)	
Anabaena sp.	647
Aphanocapsa delicatissima	4590
Aphanocapsa sp.	1875
Chroococcus dispersus	3944
Merismopedia punctata	14676
Oscillatoria limnetica	1358
Synechococcus sp.	8922
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	129
Phacus sp.	453
Trachelomonas volvocina	194
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	194
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	388
Cyclotella ocellata	65
Cyclotella stelligera	647
Melosira granulata var. *angustissima*	129
Melosira italica	129
Stephanodiscus vestibulis	453
Order Pennales	
Achnanthes linearis	259
Achnanthes minutissima	453
Anomoeoneis vitrea	65
Cymbella prostrata var. *auerswaldii*	129
Navicula cryptocephala var. *exilis*	65
Navicula pupula	65
Nitzschia acicularis	194
Nitzschia filiformis	323
Nitzschia holsatica	194
Synedra delicatula	2715
Synedra radians	711

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.--No estimated daily discharges. Records 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. Several observations of water temperature were made during the year.

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, 8.65 ft Dec. 30; minimum daily, 0.04 ft³/s Aug. 22-26 and Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.13	.20	---	25	.32	---	.17	.35	.07	.07	.07
2	.09	.14	.19	---	25	.48	---	.17	.55	.08	.07	.07
3	.09	.14	.19	---	25	.30	---	.16	.17	.08	.08	.06
4	.09	.14	.17	---	25	46	---	.15	.24	.09	.08	.06
5	.09	.15	.17	---	10	91	---	.15	.12	.11	.07	.05
6	.09	.15	.28	---	.29	94	---	.14	.10	.09	.07	.05
7	.08	.15	.25	---	.27	93	---	.15	.11	.09	.08	.04
8	.07	.85	14	---	.27	92	17	.16	.12	.09	.08	.05
9	.07	.32	29	---	.27	92	.32	.16	.12	.08	.08	.05
10	.07	.19	29	---	.26	92	.25	.16	.12	.07	.07	.05
11	.07	.18	29	---	.25	92	.24	.15	.12	.08	.09	.05
12	.07	.18	30	---	.23	92	.22	.15	.10	.09	.09	.05
13	.06	.18	30	---	.23	92	.23	.15	.09	.08	.08	.05
14	.06	.18	30	---	.23	92	.23	.14	.09	.10	.07	.05
15	.07	.46	30	---	.21	92	.23	.13	.09	.14	.07	.05
16	.07	.45	30	---	.19	90	.23	.15	.09	.10	.07	.05
17	.07	.23	30	---	.62	89	.24	.14	.09	.08	.07	.05
18	.07	.21	30	---	.65	89	.24	.13	.10	.07	.07	.05
19	.10	.20	30	---	44	89	.22	.13	.10	.06	.07	.05
20	.10	.19	30	38	---	89	.20	.14	.10	.06	.07	.05
21	.07	.19	30	28	---	89	.19	.16	.10	.05	.07	.05
22	.07	.19	75	28	57	89	.20	.12	.10	.04	.05	.05
23	.08	.19	---	28	---	89	.20	.12	.10	.04	.06	.05
24	.10	.20	126	28	---	89	.18	.12	.10	.04	.05	.05
25	.11	.52	---	28	---	89	.19	.11	.10	.04	.05	.05
26	.11	.25	---	14	106	89	.19	.12	.16	.04	.05	.05
27	.11	.28	---	.29	104	89	.18	.16	.12	.05	.05	.05
28	.11	.24	---	9.5	104	69	.17	.14	.10	.05	.05	.04
29	.11	.23	---	25	68	28	.24	.14	.09	.05	.05	.49
30	.12	.22	---	25	---	---	.20	.13	.09	.05	.05	.37
31	.12	---	---	25	---	---	---	.14	---	.06	.05	---
TOTAL	2.68	7.33	---	---	---	---	---	4.44	4.03	2.22	2.08	2.30
MEAN	.086	.24	---	---	---	---	---	.14	.13	.072	.067	.077
MAX	.12	.85	---	---	---	---	---	.17	.55	.14	.09	.49
MIN	.06	.13	---	---	---	---	---	.11	.09	.04	.05	.04
AC-FT	5.3	15	---	---	---	---	---	8.8	8.0	4.4	4.1	4.6

CAL YR 1987 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1988 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; 6 years (water years 1983-88), regulated, unadjusted, 60.3 ft3/s (43,690 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, 2,770 ft³/s Dec. 26 at 0900 hours (gage height, 22.30 ft); no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	e.04	6.2	419	31	7.6	208	8.9	13	.13	.00	.00
2	.02	e.04	5.9	416	31	75	192	6.2	214	.09	.00	.00
3	.00	e.04	5.6	415	30	57	183	5.2	17	.07	.00	.00
4	.0	e.04	5.2	413	30	44	181	3.6	48	.11	.00	.00
5	.02	e.04	4.7	409	21	86	179	.94	.89	.17	.00	.00
6	.03	e.04	135	409	5.4	83	178	1.1	.28	.22	.00	.00
7	.04	e.04	135	416	4.8	82	115	1.0	.19	.23	.00	.00
8	e.05	e.04	20	405	4.6	82	23	1.1	.14	.22	.00	.00
9	e.05	e180	35	403	5.0	83	4.2	.90	.11	.23	.00	.00
10	e.05	e24	34	404	5.0	80	2.9	.77	.10	.22	.00	.00
11	e.05	e2.9	34	403	5.0	80	2.5	.66	.08	.21	.00	.00
12	e.05	e2.3	34	401	4.8	81	3.9	.63	.09	.23	.00	.00
13	e.05	e2.0	34	396	4.7	79	4.4	.55	.12	.24	.00	.00
14	e.05	e1.8	34	393	4.9	79	4.8	.51	.14	.22	.00	.00
15	e.05	e1.7	34	391	4.3	78	5.0	.56	.14	.14	.00	.00
16	e.04	e61	34	391	3.7	78	4.8	.48	.17	.07	.00	.00
17	e.04	e13	34	389	84	144	5.0	.41	.18	.04	.00	.00
18	e.04	7.3	34	386	712	122	9.1	.36	.18	.04	.00	.00
19	e.04	6.5	378	384	124	85	10	.31	.18	.02	.00	.00
20	e.04	4.6	143	224	199	82	9.3	.29	.17	.00	.00	.00
21	e.04	3.6	67	37	191	80	8.4	.34	.15	.00	.00	.00
22	e.04	3.4	103	37	137	79	7.3	.33	.13	.00	.00	.00
23	e.04	3.5	231	37	183	79	9.5	.33	.13	.00	.00	.00
24	e.04	3.3	255	37	180	79	9.4	.36	.16	.00	.00	.00
25	e.04	266	291	36	179	79	7.1	.37	.17	.00	.00	.00
26	e.04	21	1340	27	141	77	5.8	.34	.22	.00	.00	.00
27	e.04	24	403	7.5	102	76	4.7	.32	.21	.00	.00	.00
28	e.04	17	232	10	102	66	4.0	.34	.19	.00	.00	.00
29	e.04	9.3	167	31	82	433	5.4	.38	.18	.00	.00	.92
30	e.04	7.8	311	31	---	112	8.6	.40	.15	.00	.00	54
31	e.04	---	421	31	---	190	---	.40	---	.00	.00	---
TOTAL	1.18	666.32	5000.6	8188.5	2611.2	2937.6	1395.1	38.38	296.85	2.90	0.00	54.92
MEAN	.038	22.2	161	264	90.0	94.8	46.5	1.24	9.89	.094	.00	1.83
MAX	.05	266	1340	419	712	433	208	8.9	214	.24	.00	54
MIN	.00	.04	4.7	7.5	3.7	7.6	2.5	.29	.08	.00	.00	.00
AC-FT	2.3	1320	9920	16240	5180	5830	2770	76	589	5.8	.0	109

CAL YR 1987 TOTAL 48571.58 MEAN 133 MAX 1340 MIN .00 AC-FT 96340
WTR YR 1988 TOTAL 21193.55 MEAN 57.9 MAX 1340 MIN .00 AC-FT 42040

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT												
07...	1615	0.04	937	7.60	19.0	2	3.6	8.9	97	0.4	350	110
NOV												
18...	1440	6.1	377	7.70	12.5	140	95	9.9	93	0.6	160	59
JAN												
12...	1130	401	388	8.30	5.0	8	3.6	14.2	112	2.4	150	34
FEB												
24...	1408	181	430	8.60	10.5	9	7.6	11.6	104	0.9	170	38
APR												
06...	1340	178	457	8.30	18.0	5	18	9.6	102	1.3	170	48
MAY												
25...	1115	0.38	1030	7.80	22.0	2	3.7	9.0	104	0.7	380	140
JUL												
12...	1345	0.24	830	7.70	28.5	11	9.8	7.4	97	1.8	300	110

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 WAT WH TOT FET 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...	120	12	63	2	3.0	244	170	48	0.50	8.2	571
NOV											
18...	59	2.2	16	0.6	3.2	98	74	15	0.40	8.8	237
JAN											
12...	54	3.4	23	0.9	5.7	115	64	15	0.40	5.5	240
FEB											
24...	61	3.3	23	0.8	5.2	128	67	16	0.40	1.6	254
APR											
06...	64	3.6	25	0.9	4.5	127	74	17	0.40	1.3	266
MAY											
25...	130	13	74	2	3.3	238	220	61	0.50	7.1	652
JUL											
12...	100	12	56	1	3.1	194	160	44	0.40	6.0	498

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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-PHOROUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)
OCT											
07...	12	10	1.48	0.020	1.50	0.050	0.35	0.40	0.030	3.6	1
NOV											
18...	125	12	1.76	0.040	1.80	0.010	0.59	0.60	0.050	8.1	--
JAN											
12...	3	<1	0.780	0.020	0.800	0.020	0.48	0.50	0.040	6.4	2
FEB											
24...	18	1	0.980	0.020	1.00	0.020	0.98	1.0	0.020	8.0	--
APR											
06...	35	15	0.880	0.020	0.900	0.040	0.76	0.80	0.110	11	1
MAY											
25...	9	<1	1.48	0.020	1.50	0.070	--	<0.20	0.010	3.0	--
JUL											
12...	32	7	0.780	0.020	0.800	0.070	1.3	1.4	0.050	4.3	1

08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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											
07...	96	<1	<10	2	4	<5	51	0.1	4	1.0	22
NOV											
18...	--	--	--	--	--	--	--	--	--	--	--
JAN											
12...	53	<1	<1	4	11	<5	5	<0.1	<1	<1.0	<3
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	59	<1	<1	2	8	<5	7	<0.1	<1	<1.0	4
MAY											
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
12...	110	<1	<1	4	<3	<5	34	0.3	3	<1.0	6

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 except those for estimated daily discharges, which are poor. Flow is affected at times by discharge from flood-dentention pools of 40 floodwater-retarding structures with a 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 the 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); 15 years (water years 1974-88) regulated, 34.3 ft³/s (24,850 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, 10,400 ft³/s June 1 at 0800 hours (gage height, 19.30 ft); no flow Sept. 13-16, 21, and 25-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	4.2	4.9	4.6	4.3	3.2	2.9	4.2	3610	4.5	1.2	.29
2	5.6	4.2	4.2	4.5	4.2	3.2	2.1	3.7	470	4.3	1.2	.26
3	5.4	4.2	3.9	4.5	4.2	3.2	2.0	3.1	442	5.4	1.1	.26
4	5.2	3.9	3.6	4.5	4.2	3.2	2.9	3.2	268	4.8	1.1	.25
5	5.1	3.9	3.6	4.5	4.3	3.1	2.7	3.0	e170	4.6	.91	.26
6	5.1	3.8	4.0	4.5	4.4	3.1	2.4	2.9	e125	4.5	.88	.22
7	5.0	3.8	4.7	4.5	4.5	3.1	2.4	2.9	e82	4.5	.77	.09
8	4.8	5.1	4.6	4.3	4.5	3.1	2.4	3.6	e58	4.4	.77	.06
9	4.6	4.2	4.5	4.2	4.6	2.8	2.5	3.3	e44	4.2	.66	.04
10	4.6	3.7	4.5	4.2	4.7	2.2	2.3	3.3	e34	4.0	.66	.04
11	4.6	3.7	4.5	4.2	4.9	2.4	2.6	3.7	e28	23	.63	.03
12	4.6	3.6	4.3	4.3	4.8	2.5	2.4	4.0	e22	86	.60	.02
13	4.6	3.6	4.2	4.3	4.8	2.5	2.1	3.3	e18	23	.55	.0
14	4.5	3.4	4.1	4.3	4.8	2.5	2.1	2.9	e16	9.8	.45	.00
15	4.1	6.8	4.0	4.3	4.4	2.3	2.0	2.6	e13	7.4	.60	.00
16	4.1	15	4.0	4.3	4.2	2.1	1.9	3.6	e11	5.4	.80	.00
17	4.1	9.5	4.0	4.4	4.2	2.5	2.2	3.8	e9.0	4.4	.81	.02
18	3.8	8.1	4.0	4.5	4.9	2.8	4.9	2.8	e8.6	3.8	.67	.19
19	3.5	7.2	5.6	4.5	4.9	2.8	5.6	2.5	e7.0	3.4	.66	.09
20	4.0	6.5	9.1	4.4	4.6	2.8	4.6	3.3	e6.0	3.2	.68	.01
21	4.3	5.9	7.5	4.3	3.8	3.0	4.8	6.7	e5.2	2.9	.71	.00
22	3.7	5.0	6.1	4.3	3.2	2.9	4.0	6.9	e4.8	2.8	.66	.03
23	3.6	5.0	5.3	4.2	3.1	3.0	2.9	6.0	e5.4	2.5	.66	.05
24	3.7	4.9	5.0	4.2	3.4	3.0	2.9	5.1	e5.2	2.0	.65	.03
25	5.5	5.0	5.0	4.2	2.9	3.1	2.9	4.3	e7.0	2.0	.51	.0
26	4.3	5.1	5.0	4.2	2.8	2.8	2.8	4.1	e5.6	1.8	.38	.00
27	4.2	5.3	5.8	4.2	3.1	2.5	2.5	3.9	e4.7	1.7	.33	.00
28	4.3	5.5	6.1	4.3	3.3	2.5	2.5	3.4	4.3	1.5	.33	.00
29	4.3	5.5	5.3	4.4	3.2	3.4	2.9	3.2	4.7	1.4	.33	2.3
30	4.1	5.4	4.9	4.3	---	3.0	3.1	3.0	4.5	1.4	.34	18
31	4.1	---	4.6	4.2	---	2.8	---	3.2	---	1.2	.35	---
TOTAL	139.2	161.0	150.9	134.6	119.2	87.4	86.3	115.5	5493.0	235.8	20.95	22.54
MEAN	4.49	5.37	4.87	4.34	4.11	2.82	2.88	3.73	183	7.61	.68	.75
MAX	5.8	15	9.1	4.6	4.9	3.4	5.6	6.9	3610	86	1.2	18
MIN	3.5	3.4	3.6	4.2	2.8	2.1	1.9	2.5	4.3	1.2	.33	.00
AC-FT	276	319	299	267	236	173	171	229	10900	468	42	45

CAL YR 1987 TOTAL 37244.4 MEAN 102 MAX 4250 MIN 3.4 AC-FT 73870
WTR YR 1988 TOTAL 6766.39 MEAN 18.5 MAX 3610 MIN .00 AC-FT 13420

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.--No estimated daily discharges. Records good. 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); 21 years (water years 1968-88) regulated, 158 ft³/s (114,500 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)
June 1	1330	*28,400	*26.82	No other peak greater than base discharge.			

Minimum daily discharge, 1.9 ft³/s Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	11	20	30	26	22	27	12	16400	13	3.7	3.0
2	9.4	11	20	27	25	23	26	11	2630	13	4.3	3.3
3	9.2	11	20	26	25	24	24	11	1410	20	4.3	3.2
4	9.0	11	20	25	25	26	21	9.7	1300	21	4.2	2.7
5	9.1	9.9	21	24	25	26	19	8.9	971	29	3.9	2.5
6	9.0	9.4	22	25	25	25	17	8.5	756	16	3.8	2.5
7	9.1	9.3	21	25	26	23	16	8.4	509	13	3.4	2.5
8	9.4	13	19	24	27	23	15	9.2	357	12	3.3	2.5
9	9.8	25	19	24	27	23	14	9.7	245	11	3.2	2.7
10	10	79	19	23	29	22	12	9.4	175	11	3.2	2.9
11	10	39	19	23	28	22	11	8.4	127	11	3.4	3.0
12	11	26	19	24	26	23	12	8.2	96	15	3.7	3.0
13	11	21	20	23	26	21	12	7.8	77	10	3.2	3.5
14	12	19	21	23	27	19	12	7.7	63	48	3.0	4.0
15	12	25	20	23	25	19	11	7.5	47	34	3.0	3.5
16	12	33	20	23	25	18	12	8.4	38	23	2.8	3.6
17	13	43	20	24	28	19	12	9.4	33	16	2.6	4.0
18	12	50	20	23	41	21	12	8.6	30	12	2.5	5.8
19	13	44	49	24	71	20	11	8.2	29	11	2.4	4.5
20	12	33	113	23	51	20	11	8.2	27	9.9	2.4	4.7
21	12	28	67	22	39	20	11	8.0	22	8.9	2.2	3.6
22	12	25	53	23	36	19	11	8.5	18	8.0	2.1	3.2
23	13	22	44	22	30	19	13	11	15	7.4	2.1	2.5
24	14	21	40	22	26	20	16	13	14	6.3	2.1	2.7
25	15	21	35	22	24	19	14	10	14	5.9	2.1	3.3
26	17	19	79	22	23	18	13	8.5	19	5.5	2.0	3.8
27	14	20	63	22	23	18	11	7.3	14	4.8	2.1	4.0
28	13	20	45	22	22	16	10	6.7	13	4.7	1.9	4.1
29	12	20	36	22	22	20	11	6.5	13	4.2	2.0	549
30	13	20	32	23	---	20	11	7.3	13	4.0	2.0	562
31	13	---	32	25	---	23	---	40	---	3.7	2.3	---
TOTAL	359.5	738.6	1048	733	853	651	428	307.0	25475	412.3	89.2	1205.6
MEAN	11.6	24.6	33.8	23.6	29.4	21.0	14.3	9.90	849	13.3	2.88	40.2
MAX	17	79	113	30	71	26	27	40	16400	48	4.3	562
MIN	9.0	9.3	19	22	22	16	10	6.5	13	3.7	1.9	2.5
AC-FT	713	1470	2080	1450	1690	1290	849	609	50530	818	177	2390

CAL YR 1987 TOTAL 96552.2 MEAN 265 MAX 12100 MIN 9.0 AC-FT 191500
WTR YR 1988 TOTAL 32300.2 MEAN 88.3 MAX 16400 MIN 1.9 AC-FT 64070

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.--Records good except those for estimated daily discharges, which are poor. 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); 21 years (water years 1968-88) regulated, 192 ft³/s (139,100 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)
June 1	2330	*24,500	*32.70	No other peak greater than base discharge.			

Minimum daily discharges, 4.3 ft³/s Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	27	43	39	33	e41	20	11700	20	9.9	5.9
2	24	20	27	41	38	35	e38	19	6060	21	12	6.0
3	23	20	26	41	38	46	e35	18	1800	21	14	5.8
4	22	20	27	38	38	38	e31	18	1620	31	12	5.3
5	22	20	27	37	38	38	e29	17	1270	32	11	4.9
6	22	19	28	37	38	38	e27	16	1020	31	11	4.9
7	21	20	29	39	39	e38	e25	16	773	23	11	4.9
8	21	36	28	37	41	e36	e23	17	534	21	11	5.2
9	20	48	27	36	43	e35	e21	16	354	20	11	5.5
10	20	68	26	36	43	e34	e18	17	227	18	10	6.2
11	19	50	26	35	43	e33	e16	16	166	18	10	6.2
12	19	32	26	35	42	e34	e17	16	113	107	11	6.0
13	19	26	27	35	41	e31	e17	15	86	34	10	8.5
14	19	24	29	34	41	e28	e17	14	72	27	9.7	7.0
15	18	46	29	34	39	e28	e17	14	60	36	8.5	6.6
16	19	65	27	34	37	e27	e17	18	50	28	8.3	6.8
17	18	49	28	35	41	e29	e17	18	45	25	8.6	8.0
18	18	53	28	35	380	e31	e17	16	41	22	8.4	23
19	19	53	126	35	149	e30	e16	16	38	20	8.0	10
20	19	41	164	35	95	e30	e16	16	37	18	7.6	7.1
21	18	35	105	34	60	e30	e16	20	33	17	7.5	7.1
22	18	32	71	35	48	e30	e16	16	30	16	7.0	6.5
23	19	30	56	34	42	e30	e20	15	27	15	7.1	5.5
24	20	28	54	34	35	e30	e25	17	25	14	6.8	4.9
25	20	37	45	34	33	e28	e25	20	23	13	6.2	4.5
26	21	28	167	34	33	e27	22	18	35	13	6.1	4.4
27	22	28	108	34	33	e27	21	16	27	12	5.7	4.3
28	20	28	72	34	32	e25	19	15	23	12	5.7	4.3
29	20	26	54	35	32	e27	20	15	21	11	5.7	593
30	20	27	48	37	---	e29	21	17	21	11	5.9	1110
31	21	---	46	38	---	e34	---	14	---	11	5.7	---
TOTAL	625	1030	1608	1115	1651	989	660	516	26331	718	272.4	1888.3
MEAN	20.2	34.3	51.9	36.0	56.9	31.9	22.0	16.6	878	23.2	8.79	62.9
MAX	24	68	167	43	380	46	41	20	11700	107	14	1110
MIN	18	19	26	34	32	25	16	14	21	11	5.7	4.3
AC-FT	1240	2040	3190	2210	3270	1960	1310	1020	52230	1420	540	3750

CAL YR 1987 TOTAL 109428 MEAN 300 MAX 9980 MIN 18 AC-FT 217100
WTR YR 1988 TOTAL 37403.7 MEAN 102 MAX 11700 MIN 4.3 AC-FT 74190

e Estimated.

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 daily contents, 182,700 acre-ft June 3 (elevation, 459.44 ft); minimum daily, 127,000 acre-ft Sept. 28 (elevation, 451.84 ft).

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

451.0	121,400	455.0	149,200	459.0	179,200
453.0	135,000	457.0	163,900	460.0	187,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138600	133900	137000	148500	149800	151400	150800	148900	160600	148700	140300	132400
2	138400	133800	136900	148800	149900	151900	150800	148800	181100	148500	140000	132200
3	138100	133800	137000	149200	150000	151400	150600	148800	182700	148200	139800	132400
4	137900	133600	137000	149500	149900	150900	150600	148700	182000	148000	139600	132000
5	137600	133500	137000	149700	150000	150300	150600	148600	178700	147900	139200	131700
6	137400	133300	137100	150200	150100	149800	150300	148500	174900	147700	138900	131400
7	137200	133200	137100	150600	150100	149600	150200	148400	170300	147500	138600	131100
8	136800	134200	137100	150700	150200	150000	150100	148300	166400	147200	138300	130900
9	136500	134200	137100	150900	150300	150100	149800	148400	163700	147000	137900	130600
10	136500	133900	137100	151000	150400	150100	149600	148400	161400	146700	137600	130400
11	136200	133900	137100	151300	150500	150300	149400	148400	158900	146500	137600	130200
12	135800	133900	137000	151600	150600	150300	149300	148300	156200	146700	137400	130200
13	135600	133800	137000	151800	150600	150300	149100	148200	154700	146700	137200	130000
14	135300	133800	137100	151900	150700	150300	149000	148000	153800	146400	137000	129800
15	135100	134700	137000	151800	150700	150300	148900	147900	153200	146200	136700	129600
16	135000	136000	136900	151800	150700	150300	148900	148000	152100	145900	136500	129500
17	134900	136000	136700	151700	151700	151200	149300	147800	151300	145700	136300	129300
18	134700	136100	136900	151600	153600	151100	149200	147600	150700	145300	136100	129100
19	135200	136000	137700	151500	154400	150900	149200	147500	150100	144900	135800	129000
20	135000	136000	137900	151200	154700	150900	149000	147600	149700	144700	135500	128900
21	134800	136000	138100	150900	154700	150600	149000	147600	149500	144300	135200	128700
22	134700	136000	138300	150600	154900	150600	149000	147500	149200	144000	134900	128500
23	134700	136100	138400	150400	154900	150600	149000	147200	149000	143700	134700	128300
24	134700	136100	138600	150200	154700	150500	149000	147000	148800	143200	134700	128000
25	134700	136500	139800	149900	154100	150400	148900	146800	148500	142900	134400	127800
26	134600	136500	145600	149700	153600	150300	148800	146600	149800	142500	134200	127600
27	134400	137000	146500	149400	153100	150100	148800	146400	149700	142000	133800	127300
28	134300	137000	147200	149300	152600	149900	148800	146200	149500	141700	133500	127000
29	134200	137000	147500	149400	152000	150600	148800	146000	149200	141200	133200	129200
30	134000	137000	147900	149500	---	150500	148900	145900	148900	140900	132900	132500
31	133900	---	148300	149800	---	150500	---	145700	---	140600	132600	---
MAX	138600	137000	148300	151900	154900	151900	150800	148900	182700	148700	140300	132500
MIN	133900	133200	136700	148500	149800	149600	148800	145700	148500	140600	132600	127000
(†)	452.84	453.28	454.88	455.08	455.39	455.18	454.96	454.52	454.96	453.80	452.66	452.64
(ϕ)	-5024	+3062	+11370	+1446	+2253	-1527	-1594	-3168	+3168	-8290	-7962	-138

CAL YR 1987 MAX 204600 MIN 133200 (ϕ) -12500
WTR YR 1988 MAX 182700 MIN 127000 (ϕ) -6400

(†) 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 is 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 oil field operations that will not appreciably affect flow. Flow is affected at times by discharge from the flood-detention pools of eleven floodwater-retarding struc- 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. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--42 years (water years 1899-1940) unregulated, 2,560 ft³/s (1,855,000 acre-ft/yr); 48 years (water years 1941-88) regulated, 2,166 ft³/s (1,569,000 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, 7,660 ft³/s Dec. 26 at 2100 hours (gage height, 11.92 ft); minimum daily, 0.12 ft³/s Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	527	163	759	957	223	30	242	405	243	687	791	1.9
2	333	142	565	1680	165	779	607	423	2730	414	362	4.1
3	136	114	583	1760	204	1800	1020	151	3060	363	420	19
4	101	114	548	2350	296	666	367	75	3470	405	246	2.0
5	91	160	467	1490	735	776	287	58	3330	379	5.2	.81
6	68	135	111	1100	668	1570	247	20	3160	371	1.7	24
7	6.7	202	123	1490	410	614	364	38	3100	366	.12	31
8	2.2	327	135	1400	117	479	406	9.8	3510	367	276	32
9	2.4	879	38	1560	98	128	375	6.7	1270	352	162	177
10	4.9	325	25	1720	117	189	838	12	1660	740	4.1	2080
11	12	291	158	1850	329	312	274	6.4	1930	1570	10	361
12	32	195	198	1270	415	401	385	5.3	1750	581	88	94
13	278	276	136	566	333	457	176	4.7	1330	597	69	20
14	522	355	351	902	473	219	12	4.6	910	363	63	146
15	588	428	2450	762	454	394	8.7	4.3	941	332	52	149
16	526	2060	706	1410	90	246	111	4.6	926	377	33	5.6
17	151	806	741	855	489	527	1160	5.1	749	385	41	2.5
18	289	635	538	407	2590	439	505	3.8	637	186	28	2.7
19	1050	571	702	723	2590	366	264	3.6	597	7.5	31	5.6
20	893	513	2050	891	1530	861	204	10	467	5.7	31	57
21	479	813	2080	498	924	535	181	34	636	276	46	30
22	621	598	779	362	258	219	477	6.2	694	123	38	37
23	692	180	13	724	569	237	510	13	687	333	21	44
24	694	425	14	1230	869	440	476	9.8	688	335	40	79
25	404	864	27	691	694	429	1170	3.9	696	801	28	77
26	192	805	5380	957	1110	13	670	3.5	1240	348	40	60
27	452	392	3020	1390	1330	1020	461	3.1	1190	512	44	38
28	303	562	922	820	915	285	426	2.5	510	340	44	42
29	199	1050	1040	405	356	517	246	8.9	275	36	30	358
30	190	1090	1490	308	---	803	29	7.6	669	324	2.7	1320
31	154	---	2310	230	---	640	---	5.0	---	344	.42	---
TOTAL	9993.2	15470	28459	32758	19351	16391	12498.7	1348.4	43055	12620.2	3048.24	5300.21
MEAN	322	516	918	1057	667	529	417	43.5	1435	407	98.3	177
MAX	1050	2060	5380	2350	2590	1800	1170	423	3510	1570	791	2080
MIN	2.2	114	13	230	90	13	8.7	2.5	243	5.7	.12	.81
AC-FT	19820	30680	56450	64980	38380	32510	24790	2670	85400	25030	6050	10510

CAL YR 1987 TOTAL 1074471.2 MEAN 2944 MAX 22500 MIN 2.2 AC-FT 2131000
WTR YR 1988 TOTAL 200292.95 MEAN 547 MAX 5380 MIN .12 AC-FT 397300

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.--Records good except those for estimated daily discharges, which are fair. 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 about 52 miles 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 funoff from 238 mi² in the Aquilla, Tehuacana, Castleman Creeks, and Cow Bayou basins. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--23 years, 2,453 ft³/s (1,777,000 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, 9,240 ft³/s Dec. 27 at 1400 hours (gage height, 9.00 ft); minimum daily 53 ft³/s Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519	257	1060	1980	463	727	935	259	123	506	390	83
2	e545	266	903	1180	402	379	638	170	219	674	588	83
3	e458	271	765	1520	433	888	576	516	3130	497	659	83
4	e382	274	664	1660	352	2380	1090	372	3300	536	256	81
5	e316	226	751	2100	380	1600	664	227	4110	479	507	81
6	e259	251	709	1400	635	1010	501	180	3550	454	217	84
7	222	276	451	1140	868	1550	411	160	3270	434	128	83
8	206	264	269	1390	641	889	445	137	3130	420	98	82
9	171	443	347	1440	478	780	515	150	3690	417	88	79
10	160	756	270	1450	274	403	582	144	1540	425	302	80
11	153	645	226	1540	307	374	734	e126	1310	517	182	1180
12	144	313	210	1640	323	449	635	e126	1650	1910	113	748
13	140	457	313	1190	616	610	400	123	1450	1470	91	264
14	162	300	333	876	553	565	496	115	1230	1580	92	170
15	387	498	312	895	551	610	247	105	948	929	114	123
16	529	628	2030	896	726	468	170	101	935	506	111	169
17	597	2040	851	1220	326	532	150	101	900	453	108	185
18	337	1160	891	1030	480	1040	811	99	828	470	92	99
19	261	545	721	641	3920	1490	833	96	693	436	82	71
20	801	836	879	763	3650	1000	407	100	676	228	80	62
21	862	535	1860	892	2160	1030	470	748	622	173	81	58
22	521	879	2050	803	1340	867	258	318	674	159	79	54
23	620	836	1210	355	819	498	490	215	703	359	77	55
24	672	439	406	805	623	419	578	144	727	219	86	68
25	694	476	264	1200	973	504	564	114	732	366	85	65
26	534	821	1250	985	800	694	976	114	752	565	82	53
27	411	997	8470	795	1110	280	673	106	1080	640	79	72
28	357	696	5620	1360	1290	615	677	95	1100	253	78	81
29	466	718	3390	966	1020	722	492	93	694	588	78	70
30	332	1060	1920	637	---	685	539	95	575	209	76	79
31	323	---	1960	540	---	1080	---	95	---	174	80	---
TOTAL	12541	18163	41355	35289	26513	25138	16957	5544	44341	17046	5179	4545
MEAN	405	605	1334	1138	914	811	565	179	1478	550	167	151
MAX	862	2040	8470	2100	3920	2380	1090	748	4110	1910	659	1180
MIN	140	226	210	355	274	280	150	93	123	159	76	53
AC-FT	24880	36030	82030	70000	52590	49860	33630	11000	87950	33810	10270	9020

CAL YR 1987 TOTAL 1305854 MEAN 3578 MAX 34200 MIN 140 AC-FT 2590000
WTR YR 1988 TOTAL 252611 MEAN 690 MAX 8470 MIN 53 AC-FT 501100

e Estimated.

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, 2,030 microsiemens Dec. 18-19; minimum daily, 354 microsiemens June 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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 TOTAL (MG/L AS CACO3)
OCT 28...	1420	400	1820	7.60	20.5	6.0	9.9	111	2.0	29	K1	380
NOV 24...	1310	427	1080	8.10	19.5	--	--	--	--	--	--	250
FEB 17...	1305	231	1690	8.20	14.5	1.7	11.2	111	1.8	K64	K7	360
MAR 02...	1405	359	975	8.20	18.0	--	--	--	--	--	--	230
MAY 24...	1425	128	620	7.80	29.0	28	9.4	124	1.7	K240	K40	210
JUN 07...	1310	3510	477	7.80	26.0	--	--	--	--	--	--	140
SEP 01...	1425	90	1660	8.00	30.5	7.0	8.4	114	1.7	K5	K10	340

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 WAT WH TOT FET 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 28...	240	100	31	230	5	6.5	143	240	350	0.40	6.3	1120
NOV 24...	140	75	16	120	3	5.2	116	140	190	0.40	8.2	--
FEB 17...	210	99	27	210	5	6.0	149	230	300	0.40	0.69	1010
MAR 02...	92	71	14	110	3	3.9	143	120	150	0.30	3.4	--
MAY 24...	83	56	17	44	1	3.8	128	69	72	0.40	9.2	349
JUN 07...	35	45	7.0	37	1	3.6	106	46	50	0.20	7.5	--
SEP 01...	170	79	34	210	5	4.6	168	230	300	0.30	12	960

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 28...	1050	0.540	0.020	0.560	0.090	0.230	0.51	0.60	0.150	--	--	--
NOV 24...	624	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	967	0.540	0.030	0.570	0.030	0.060	0.47	0.50	0.180	0.180	0.120	0.37
MAR 02...	558	--	--	--	--	--	--	--	--	--	--	--
MAY 24...	353	0.580	0.050	0.630	0.120	0.150	1.1	1.2	0.240	0.210	0.190	0.58
JUN 07...	260	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	972	--	<0.010	<0.100	0.010	0.020	0.99	1.0	0.140	0.120	0.080	0.25

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SEDIMENT, SUSPENDED (MG/L)	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 28...	13	14	47	<10	2	120	<0.5	<1	1	<3	<1	<3
NOV 24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	6	3.7	88	10	1	120	<0.5	<1	<1	<3	1	12
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 24...	54	19	78	20	3	61	<0.5	<1	<1	<3	2	8
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	10	2.4	92	<10	6	120	<0.5	<1	<1	<3	1	<3

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 28...	<5	30	21	<0.1	<10	<1	<1	<1.0	1500	<6	<3
NOV 24...	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	<5	30	31	<0.1	<10	<1	7	<1.0	1400	<6	11
MAR 02...	--	--	--	--	--	--	--	--	--	--	--
MAY 24...	<5	17	2	<0.1	<10	<1	<1	<1.0	1000	<6	<3
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	<5	31	34	<0.1	<10	<1	1	<1.0	1300	<6	7

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	12541	1700	971	32900	350	11800	190	6590	330
NOV.	1987	18163	1520	870	42700	300	14700	170	8500	310
DEC.	1987	41355	1170	665	74200	220	24800	130	14700	250
JAN.	1988	35289	1210	687	65500	220	20500	140	12900	270
FEB.	1988	26513	1120	638	45700	200	14400	130	9010	250
MAR.	1988	25138	958	543	36900	160	10600	110	7190	230
APR.	1988	16957	1160	661	30300	210	9520	130	5970	260
MAY	1988	5544	1270	724	10800	240	3540	140	2150	270
JUNE	1988	44341	748	424	50700	120	14300	83	9880	190
JULY	1988	17046	1470	840	38700	290	13100	170	7700	310
AUG.	1988	5179	1660	949	13300	340	4710	190	2660	330
SEPT	1988	4545	1550	884	10800	300	3730	180	2160	320
TOTAL		252611	**	**	452000	**	146000	**	89400	**
WTD.AVG.		690	1160	663	**	210	**	130	**	260

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1840	1740	1800	1770	1730	1760	1520	1180	1380	967	704	836
2	1770	1680	1750	1760	1740	1750	1320	1130	1240	1130	954	1040
3	1710	1540	1620	1760	1720	1740	1590	1320	1460	1220	1110	1150
4	1670	1530	1590	1750	1700	1730	1710	1600	1650	1250	1110	1180
5	1700	1670	1680	1730	1690	1720	1760	1730	1740	1160	971	1070
6	1760	1690	1720	1730	1680	1700	1780	1740	1770	1220	1140	1190
7	1790	1710	1760	1700	1660	1690	1820	1770	1810	1220	1160	1190
8	1730	1700	1720	1720	1570	1670	1800	1770	1790	1260	1180	1230
9	1700	1670	1680	1610	1550	1580	1820	1770	1800	1190	1110	1170
10	1690	1670	1680	1620	1580	1610	1810	1790	1800	1190	1030	1080
11	1700	1680	1680	1690	1630	1660	1810	1780	1790	1430	1100	1290
12	1680	1670	1680	1620	1570	1600	1780	1730	1750	1530	1420	1460
13	1670	1620	1660	1560	1500	1530	1780	1700	1750	1560	1480	1510
14	1660	1600	1630	1600	1530	1550	1690	1600	1640	1610	1520	1570
15	1640	1520	1580	1640	1600	1620	1720	1680	1700	1630	1560	1590
16	1510	1270	1420	1650	1610	1630	1870	1620	1780	1630	1480	1560
17	1530	1270	1410	1610	1290	1510	1780	1680	1700	1490	1090	1370
18	1690	1540	1630	1330	1220	1250	2030	1800	1940	1310	1080	1220
19	1740	1700	1710	1480	1330	1410	2030	1920	1980	1320	1260	1290
20	1820	1740	1790	1500	1390	1470	2000	1920	1970	1380	1270	1350
21	1800	1680	1760	1380	1330	1360	2000	1730	1890	1260	1090	1140
22	1700	1600	1660	1320	1140	1220	1890	1580	1800	1100	984	1030
23	1710	1600	1660	1130	1030	1070	1700	1590	1670	984	945	966
24	1780	1710	1760	1230	1050	1120	1700	1670	1690	935	845	884
25	1770	1760	1760	1500	1240	1350	1700	1670	1690	978	814	895
26	1810	1770	1780	1640	1510	1580	1670	1040	1420	1080	938	989
27	1830	1800	1810	1780	1650	1740	1100	603	949	1190	1100	1140
28	1810	1780	1800	1740	1720	1730	566	372	426	1440	1220	1310
29	1800	1770	1790	1740	1720	1730	426	360	387	1430	1320	1370
30	1780	1750	1770	1730	1530	1660	544	426	466	1480	1450	1460
31	1770	1720	1750	---	---	---	830	557	665	1460	1340	1400
MONTH	1840	1270	1690	1780	1030	1560	2030	360	1530	1630	704	1220

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1390	1360	1380	978	956	966	900	870	890	1670	1630	1650
2	1390	1360	1370	977	950	965	900	860	877	1630	1580	1610
3	1480	1370	1430	990	890	957	1000	890	930	1620	1560	1600
4	1550	1480	1520	900	670	762	1090	860	987	1610	1520	1590
5	1560	1530	1550	770	650	705	880	780	810	1550	1410	1490
6	1560	1500	1530	980	790	881	880	810	847	1630	1520	1580
7	1540	1480	1490	1020	900	975	890	860	874	1630	1600	1620
8	1670	1550	1610	890	820	848	900	860	877	1630	1610	1620
9	1680	1650	1670	830	800	812	920	880	907	1620	1570	1600
10	1660	1620	1650	880	840	863	930	900	915	1560	1530	1550
11	1640	1590	1620	970	870	912	980	930	957	1530	1490	1510
12	1610	1570	1600	1030	970	1010	980	970	973	1500	1470	1480
13	1600	1520	1570	1040	960	989	990	970	982	1490	1450	1470
14	1620	1520	1580	1010	960	980	1010	970	988	1490	1460	1480
15	1660	1620	1640	1170	1020	1090	1030	1000	1010	1470	1230	1420
16	1700	1600	1650	1260	1170	1220	1050	1020	1030	1460	1310	1410
17	1700	1650	1690	1300	1220	1270	1050	990	1040	1490	1270	1440
18	1650	1590	1630	1230	950	1130	1070	970	1010	1450	1300	1390
19	1650	1000	1370	1040	860	952	1130	1000	1070	1450	1370	1420
20	929	464	688	1000	850	914	1130	1110	1120	1430	1250	1400
21	528	475	516	1050	1020	1030	1190	1100	1140	1340	435	960
22	675	538	598	1240	1050	1160	1350	1210	1290	532	444	477
23	780	686	725	1280	1240	1270	1460	1340	1380	569	444	494
24	843	748	799	1260	1190	1240	1550	1460	1500	692	568	622
25	896	801	850	1190	1060	1130	1620	1470	1560	832	692	756
26	1070	896	1010	1070	990	1020	1740	1530	1660	952	832	887
27	1090	1020	1060	1050	1000	1020	1790	1750	1760	1040	952	999
28	1060	947	1000	1060	1040	1050	1800	1770	1780	1130	931	1080
29	968	936	952	1080	920	1010	1780	1650	1720	1160	1100	1110
30	---	---	---	910	880	887	1700	1650	1680	1130	1100	1120
31	---	---	---	920	850	884	---	---	---	1120	1070	1100
MONTH	1700	464	1300	1300	650	997	1800	780	1150	1670	435	1290

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1100	1030	1060	1720	1660	1690	1750	1670	1710	1700	1430	1620
2	1020	991	1010	1730	1650	1690	1730	1670	1700	1700	1470	1630
3	1180	841	969	1720	1630	1680	1690	1640	1660	1700	1470	1650
4	1200	494	876	1690	1520	1580	1690	1660	1670	1690	1450	1630
5	494	354	412	1620	1320	1500	1790	1600	1740	1680	1450	1590
6	435	362	397	1720	1600	1650	1780	1690	1750	1670	1440	1600
7	499	399	455	1740	1700	1720	1750	1550	1700	1640	1430	1580
8	512	399	464	1760	1710	1740	1750	1580	1710	1630	1420	1570
9	520	361	454	1760	1720	1740	1740	1540	1690	1610	1390	1550
10	823	361	606	1740	1680	1710	1750	1560	1690	1590	1360	1520
11	833	729	789	1700	1640	1670	1730	1570	1690	1600	1400	1510
12	752	512	606	1630	1220	1560	1700	1540	1650	1450	1400	1420
13	668	534	623	1090	884	958	1650	1430	1590	1500	1450	1470
14	755	599	678	1310	1100	1240	1650	1430	1580	1540	1490	1510
15	709	628	665	1260	1170	1230	1640	1420	1580	1560	1530	1540
16	617	451	575	1270	1150	1190	1700	1470	1630	1610	1550	1570
17	735	516	603	1450	1280	1380	1690	1460	1610	1700	1620	1670
18	901	723	802	1530	1460	1500	1650	1460	1570	1700	1660	1690
19	1030	810	907	1530	1460	1510	1590	1480	1540	1700	1680	1690
20	1040	885	989	1450	1290	1350	1530	1370	1480	1700	1680	1700
21	1040	895	1000	1350	1280	1330	1530	1400	1470	1690	1680	1690
22	1070	981	1020	1340	1190	1280	1590	1480	1530	1690	1670	1680
23	1190	1070	1150	1370	1080	1230	1640	1450	1560	1680	1650	1670
24	1230	1190	1210	1480	1300	1370	1630	1450	1570	1660	1630	1650
25	1380	1220	1280	1610	1410	1480	1660	1370	1580	1660	1610	1640
26	1580	1390	1480	1650	1360	1500	1680	1450	1620	1660	1630	1650
27	1730	1580	1660	1730	1590	1680	1680	1430	1600	1670	1640	1660
28	1740	1620	1690	1720	1700	1710	1680	1490	1620	1680	1660	1670
29	1700	1610	1660	1800	1710	1750	1680	1440	1600	1680	1660	1670
30	1700	1650	1680	1770	1730	1750	1670	1430	1620	1650	1510	1580
31	---	---	---	1760	1710	1740	1690	1460	1620	---	---	---
MONTH	1740	354	926	1800	884	1520	1790	1370	1620	1700	1360	1610

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 daily contents, 105,500 acre-ft June 5 (elevation, 1,170.29 ft); minimum daily, 49,020 acre-ft May 30 (elevation, 1,159.61 ft).

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

1,159.0	46,590	1,165.0	74,250	1,169.0	97,270
1,161.0	54,890	1,167.0	85,300	1,171.0	110,150
1,163.0	64,110				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57880	55160	54800	54890	54630	54280	53280	51370	85930	84040	64210	54370
2	57790	55110	54800	54850	54590	54460	53200	51330	95360	83300	63820	54190
3	57570	55110	54800	54850	54590	54280	53160	51250	102200	82900	63300	54020
4	57430	55070	54760	54850	54590	54190	53070	51120	104700	82220	62770	53670
5	57340	54980	54760	54850	54590	54150	53070	51000	105500	81550	62340	53410
6	57300	54850	54850	54940	54540	54110	53030	50870	105300	80660	61870	53160
7	57120	54850	54720	54890	54500	54060	52940	50790	104500	79770	61440	52900
8	56850	54890	54800	54850	54500	54020	52860	50960	103600	79050	61110	52640
9	56850	54890	54760	54850	54500	53930	52810	50830	102600	78280	60830	52430
10	56760	54630	54720	54800	54500	53890	52640	50790	101500	77520	60510	52260
11	56670	54540	54720	54800	54460	53890	52520	50710	100400	78010	60270	52010
12	56490	54500	54630	54850	54460	53800	52390	50580	99330	77360	59950	51840
13	56310	54460	54630	54850	54410	53720	52340	50460	98320	76710	59720	51540
14	56220	54460	54630	54800	54410	53630	52260	50330	97270	76010	59480	51210
15	56090	54850	54500	54760	54410	53500	52220	50210	96280	75310	59160	51040
16	56090	54980	54460	54800	54410	53410	52130	50130	95300	74510	58930	50830
17	55950	54940	54410	54800	54540	53590	52300	50000	94260	73770	58610	51040
18	55780	54980	54460	54850	54540	53590	52260	49840	93220	72930	58380	50870
19	56000	54850	54760	54890	54460	53460	52130	49920	92130	72360	58060	50870
20	55780	54850	54760	54800	54500	53370	52010	50210	91110	71470	57840	50710
21	55690	54760	54800	54720	54410	53280	51960	50290	90220	70650	57520	50580
22	55550	54760	54800	54720	54410	53240	51880	50210	89440	69880	57250	50420
23	55550	54720	54800	54670	54370	53280	51920	49960	88740	69060	56940	50330
24	55600	54850	54980	54670	54320	53280	51880	49800	88030	68300	56710	50170
25	55550	54850	55020	54630	54280	53240	51840	49720	87620	67700	56400	50040
26	55550	54940	55020	54590	54280	53200	51710	49590	87210	67250	56130	49880
27	55470	54940	54940	54590	54280	53160	51580	49430	86630	66710	55820	49720
28	55380	54850	54890	54540	54280	53110	51500	49350	85990	66160	55600	49590
29	55290	54850	54850	54540	54280	53240	51460	49180	85360	65670	55240	50090
30	55160	54850	54850	54590	---	53200	51420	49020	84720	65180	54980	50000
31	55200	---	54890	54630	---	53200	---	52090	---	64740	54720	---
MAX	57880	55160	55020	54940	54630	54460	53280	52090	105500	84040	64210	54370
MIN	55160	54460	54410	54540	54280	53110	51420	49020	84720	64740	54720	49590
(†)	1161.07	1160.99	1161.00	1160.94	1160.86	1160.61	1160.19	1160.35	1166.90	1163.13	1160.96	1159.85
(Φ)	-2819	-352	+44	-263	-349	-1082	-1783	+674	+32630	-19980	-10026	-4714

CAL YR 1987 MAX 149700 MIN 54410 (Φ) -4640
WTR YR 1988 MAX 105500 MIN 49020 (Φ) -8020

(†) 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.--No estimated daily discharges. Records good. 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); 25 years (water years 1964-88); regulated, 93.4 ft³/s (67,670 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, 2,410 ft³/s June 1 at 0600 hours (gage height, 13.86 ft); minimum daily, 0.73 ft³/s Feb. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	3.5	1.4	1.5	2.8	5.0	7.3	3.1	1220	261	142	58
2	30	2.2	1.4	1.9	2.8	5.4	6.8	6.6	36	296	141	57
3	30	2.2	1.4	1.8	2.9	5.8	6.7	14	45	299	142	58
4	30	2.3	2.1	1.7	1.2	6.1	5.4	13	47	297	142	60
5	28	2.1	2.3	1.6	.73	6.0	4.5	13	48	314	144	61
6	22	2.7	2.1	1.6	1.0	5.7	4.7	13	304	366	145	58
7	23	3.1	1.7	1.6	3.2	5.9	3.9	14	662	364	145	50
8	24	4.0	1.8	1.4	3.8	6.3	3.5	14	660	360	106	50
9	24	3.9	1.8	1.4	3.6	6.5	3.7	12	652	356	60	52
10	25	4.1	1.6	1.5	1.7	6.3	3.6	9.3	642	352	59	53
11	24	3.7	1.6	1.4	2.2	6.1	3.9	9.1	637	380	59	52
12	23	3.5	1.6	1.7	2.3	5.7	3.1	5.8	630	364	46	51
13	23	4.0	1.6	1.7	2.4	6.2	2.1	6.6	620	356	56	51
14	24	5.1	1.3	1.6	2.4	6.5	1.6	10	614	351	56	51
15	24	9.3	1.4	9.6	2.0	6.6	1.4	10	608	351	55	50
16	26	9.2	1.0	3.5	2.4	5.0	4.9	10	601	352	55	46
17	25	5.8	1.1	2.4	2.2	5.9	5.9	11	596	353	55	38
18	26	5.5	1.2	2.1	3.4	6.1	5.9	16	588	351	56	36
19	18	3.8	4.0	2.4	4.2	6.0	4.0	16	581	350	56	26
20	3.1	4.2	1.8	1.9	4.2	5.5	3.4	19	576	342	56	11
21	2.5	4.8	1.0	1.9	4.5	5.5	2.3	14	508	338	56	14
22	2.4	4.7	.91	2.6	4.7	4.9	2.1	6.0	332	340	56	28
23	2.3	3.4	.99	2.6	4.6	5.7	3.4	5.6	246	341	56	29
24	2.7	3.4	1.5	2.7	4.5	5.9	3.4	5.1	244	340	55	29
25	3.1	4.2	1.6	2.6	4.9	5.7	8.8	5.1	240	285	55	28
26	3.3	3.1	2.4	2.8	4.7	4.9	19	4.9	239	125	56	28
27	2.9	4.0	2.0	2.6	5.1	4.9	18	8.4	233	145	55	27
28	2.9	2.8	1.5	2.7	4.7	6.1	17	18	239	146	56	26
29	3.1	1.9	1.5	2.8	4.6	7.6	16	16	241	146	57	22
30	3.7	1.5	1.6	2.9	---	7.3	11	16	240	143	57	9.5
31	3.9	---	1.6	2.8	---	6.6	---	27	---	144	58	---
TOTAL	514.9	118.0	50.80	73.3	93.73	183.7	187.3	351.6	13129	9308	2393	1209.5
MEAN	16.6	3.93	1.64	2.36	3.23	5.93	6.24	11.3	438	300	77.2	40.3
MAX	30	9.3	4.0	9.6	5.1	7.6	19	27	1220	380	145	61
MIN	2.3	1.5	.91	1.4	.73	4.9	1.4	3.1	36	125	46	9.5
AC-FT	1020	234	101	145	186	364	372	697	26040	18460	4750	2400

CAL YR 1987 TOTAL 81153.06 MEAN 222 MAX 1370 MIN .03 AC-FT 161000
WTR YR 1988 TOTAL 27612.83 MEAN 75.4 MAX 1220 MIN .73 AC-FT 54770

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.--No estimated daily discharges. Records good. Since 1960, at least 10 percent of the drainage area above this station has been regulated by Proctor Lake (station 08099400) 54 miles 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. Several observations of water temperature were made during the year. Gage-height telemeter was removed from station on Mar. 7, 1985.

AVERAGE DISCHARGE.--6 years (water years 1926-31) unregulated, 130 ft³/s (94,180 acre-ft/yr); 28 years (water years 1961-88) regulated, 142 ft³/s (102,900 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, 11,100 ft³/s June 2 at 0800 hours (gage height, 31.13 ft); minimum daily, 0.95 ft³/s May 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	9.8	15	14	15	14	14	13	4690	286	151	24
2	34	9.3	14	14	15	14	14	16	8620	297	148	21
3	36	9.4	13	14	15	14	12	12	3820	321	138	24
4	35	9.2	13	15	16	13	11	7.4	1060	328	138	28
5	34	11	12	15	16	13	11	4.7	543	325	144	31
6	31	9.5	12	15	16	14	9.9	2.9	323	316	134	31
7	27	9.5	12	15	15	14	9.2	4.9	268	342	138	26
8	24	12	14	15	16	14	7.7	6.5	591	349	144	22
9	20	13	13	15	15	13	6.5	8.1	626	345	134	13
10	18	11	13	15	15	13	5.6	6.9	613	341	59	12
11	19	12	13	15	16	13	5.5	7.5	598	371	39	12
12	19	12	13	14	16	13	5.0	8.0	593	550	33	16
13	19	11	13	14	16	12	4.9	5.5	578	420	31	20
14	19	12	13	14	15	12	5.1	3.3	572	371	28	17
15	19	15	13	14	14	11	5.3	2.0	566	359	33	18
16	17	19	13	14	14	11	4.9	2.9	558	352	36	18
17	16	17	12	15	15	11	4.5	3.0	549	348	28	24
18	16	19	13	24	16	10	4.4	2.6	542	346	28	42
19	16	19	18	20	17	9.7	5.4	2.0	534	337	30	40
20	19	16	20	16	17	9.1	4.9	2.1	527	328	26	37
21	20	14	19	15	16	8.8	4.8	2.4	520	324	29	30
22	17	13	23	14	17	9.1	6.2	23	495	318	33	14
23	14	11	20	14	16	10	6.5	23	401	311	36	7.3
24	12	11	18	14	14	9.3	5.3	12	311	309	26	4.2
25	12	11	16	14	14	8.5	4.5	7.0	293	307	26	15
26	12	11	18	14	14	7.8	3.5	4.5	298	303	26	16
27	11	13	17	14	14	6.6	2.6	3.4	317	178	22	14
28	11	14	16	14	14	8.2	2.1	2.6	298	149	15	10
29	11	15	16	14	14	8.7	4.9	1.9	294	150	16	56
30	10	15	16	14	---	14	13	.97	290	147	29	24
31	10	---	15	15	---	11	---	.95	---	151	24	---
TOTAL	617	383.7	466	463	443	349.8	204.2	203.02	30288	9679	1922	666.5
MEAN	19.9	12.8	15.0	14.9	15.3	11.3	6.81	6.55	1010	312	62.0	22.2
MAX	39	19	23	24	17	14	14	23	8620	550	151	56
MIN	10	9.2	12	14	14	6.6	2.1	.95	268	147	15	4.2
AC-FT	1220	761	924	918	879	694	405	403	60080	19200	3810	1320

CAL YR 1987 TOTAL 129466.7 MEAN 355 MAX 4530 MIN 9.2 AC-FT 256800
WTR YR 1988 TOTAL 45685.22 MEAN 125 MAX 8620 MIN .95 AC-FT 90620

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 oil field 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. Gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years, 232 ft³/s (168,100 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, 7,470 ft³/s June 5 at 0700 hours (gage height, 24.23 ft); minimum daily, 7.1 ft³/s May 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	17	21	24	28	27	20	11	264	297	154	21
2	53	18	22	25	29	28	21	10	2490	292	156	25
3	43	18	23	27	29	31	23	10	4280	293	156	28
4	33	18	24	24	29	30	22	9.9	5890	309	155	27
5	29	18	26	23	29	30	22	12	5940	319	144	25
6	29	17	26	23	29	30	22	18	969	322	142	23
7	30	17	25	23	29	29	21	17	511	317	143	25
8	30	35	25	24	29	29	20	15	334	314	137	29
9	30	25	31	24	30	27	19	13	414	332	139	31
10	28	19	28	24	30	26	19	11	630	335	142	28
11	26	22	24	23	31	26	18	10	615	336	138	26
12	23	20	23	23	32	24	17	9.8	590	349	86	22
13	20	18	23	23	32	23	16	8.7	575	462	54	18
14	19	19	23	23	32	22	15	8.3	566	515	46	16
15	19	26	23	23	32	21	15	8.5	551	374	40	15
16	20	34	24	22	32	21	15	12	539	356	38	18
17	21	27	24	23	33	26	15	12	529	348	36	23
18	22	24	24	23	196	31	14	11	518	343	37	27
19	25	27	36	24	181	24	13	10	506	340	38	25
20	24	28	70	24	67	22	13	8.8	494	335	33	30
21	21	27	51	28	46	21	13	8.7	488	329	32	42
22	21	27	41	34	37	21	12	8.6	477	322	32	37
23	21	28	32	31	32	20	15	7.9	464	319	31	33
24	25	28	29	28	30	19	12	7.5	423	312	30	30
25	27	33	29	27	29	18	11	7.1	344	305	33	23
26	26	23	53	25	28	18	11	15	317	306	34	17
27	22	23	38	24	28	18	10	22	306	303	30	14
28	20	22	29	24	28	18	11	18	311	277	27	11
29	17	22	29	24	27	21	11	14	314	170	27	527
30	17	21	27	25	---	21	12	14	303	157	26	223
31	17	---	26	26	---	21	---	12	---	157	24	---
TOTAL	809	701	929	768	1244	743	478	360.8	30952	9845	2340	1439
MEAN	26.1	23.4	30.0	24.8	42.9	24.0	15.9	11.6	1032	318	75.5	48.0
MAX	53	35	70	34	196	31	23	22	5940	515	156	527
MIN	17	17	21	22	27	18	10	7.1	264	157	24	11
AC-FT	1600	1390	1840	1520	2470	1470	948	716	61390	19530	4640	2850

CAL YR 1987 TOTAL 182821 MEAN 501 MAX 6300 MIN 17 AC-FT 362600
WTR YR 1988 TOTAL 50608.8 MEAN 138 MAX 5940 MIN 7.1 AC-FT 100400

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 Bee House 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. Satellite telemeter at station.

AVERAGE DISCHARGE.--38 years, 81.5 ft³/s (2.43 in/yr), 59,050 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)
June 1	2400	*1,760	*8.25				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.2	5.0	16	6.1	6.8	17	2.1	243	.36	.00	.00
2	2.8	2.2	4.8	14	6.1	9.4	12	2.0	446	.20	.00	.00
3	2.2	2.2	4.8	15	6.1	12	9.3	1.8	569	.13	.00	.00
4	1.9	2.3	5.0	15	5.6	13	7.6	1.5	175	.10	.00	.00
5	1.9	2.4	5.6	15	5.4	11	7.2	1.3	81	.08	.00	.00
6	1.7	2.0	6.5	14	5.4	9.4	6.2	1.1	61	.07	.00	.00
7	1.5	2.0	6.3	15	5.4	7.8	5.1	.91	48	.05	.00	.00
8	1.5	11	6.3	12	5.4	7.8	4.5	.90	39	.04	.00	.00
9	1.4	23	6.8	12	5.4	6.6	4.9	.90	31	.04	.00	.00
10	1.2	13	6.5	11	5.8	6.1	5.3	.76	24	.03	.00	.00
11	1.3	11	5.7	10	6.6	6.1	4.5	.84	15	.04	.00	.00
12	1.1	8.3	5.4	10	6.8	5.6	3.9	1.0	8.9	.09	.00	.00
13	1.2	7.2	4.8	9.4	6.8	4.8	3.2	.94	6.0	.09	.00	.00
14	1.2	5.6	4.3	9.2	7.0	4.3	3.0	.82	4.6	.16	.00	.00
15	1.3	5.7	4.3	8.5	6.4	4.1	3.4	.64	3.2	.11	.00	.00
16	1.4	11	7.5	8.3	6.1	3.8	3.2	1.3	2.3	.07	.00	.00
17	1.3	12	10	8.3	6.3	6.1	2.9	1.5	1.7	.04	.00	.00
18	1.1	9.6	10	8.3	50	15	2.6	.87	1.4	.03	.00	.00
19	1.3	19	37	7.9	71	14	2.4	.59	.99	.03	.00	10
20	2.4	15	79	6.9	46	8.1	2.4	.44	.72	.03	.00	6.4
21	2.2	10	46	6.2	31	6.3	2.4	.75	.61	.02	.00	.13
22	2.0	8.4	37	6.1	22	6.1	1.9	.69	.46	.02	.00	.07
23	1.9	7.3	32	6.1	15	6.2	3.7	.48	.30	.01	.00	.05
24	2.5	6.8	26	6.2	11	6.1	3.8	.35	.20	.01	.00	.03
25	2.8	9.5	22	6.1	8.1	5.8	3.3	.24	.22	.00	.00	.03
26	3.0	5.6	34	6.1	7.2	5.7	2.8	.16	14	.00	.00	.02
27	2.4	6.0	35	5.7	6.8	6.2	2.2	.11	3.5	.00	.00	.01
28	2.3	6.1	28	5.4	6.4	5.8	1.8	.09	1.9	.00	.00	.0
29	2.2	6.1	24	5.4	6.4	12	1.7	.09	.99	.00	.00	116
30	2.2	6.1	19	5.4	---	12	1.9	.09	.59	.00	.00	53
31	2.2	---	18	6.0	---	13	---	.10	---	.00	.00	---
TOTAL	58.6	238.6	546.6	290.5	383.6	247.0	136.1	25.36	1784.58	1.85	0.00	185.74
MEAN	1.89	7.95	17.6	9.37	13.2	7.97	4.54	.82	59.5	.060	.00	6.19
MAX	3.2	23	79	16	71	15	17	2.1	569	.36	.00	116
MIN	1.1	2.0	4.3	5.4	5.4	3.8	1.7	.09	.20	.00	.00	.00
AC-FT	116	473	1080	576	761	490	270	50	3540	3.7	.0	368
CFSM	.00	.02	.04	.02	.03	.02	.01	.00	.13	.00	.00	.01
IN.	.00	.02	.04	.02	.03	.02	.01	.00	.15	.00	.00	.02

CAL YR 1987 TOTAL 58799.1 MEAN 161 MAX 5220 MIN 1.1 AC-FT 116600 CFSM .35 IN. 4.81
WTR YR 1988 TOTAL 3898.53 MEAN 10.7 MAX 569 MIN .00 AC-FT 7730 CFSM .02 IN. .32

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 oil field 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 daily contents, 467,700 acre-ft June 7 (elevation, 596.03 ft); minimum daily, 381,300 acre-ft Sept. 28 (elevation, 588.87 ft).

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

588.0	371,600	592.0	417,600	596.0	467,300
590.0	394,200	594.0	442,000	597.0	480,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441000	433200	435600	442400	442200	444800	443100	438900	429600	449200	433300	389800
2	440900	433100	435400	442200	442400	446200	442600	438900	433700	447900	430800	389600
3	440400	433000	435400	442200	442400	446200	442600	438800	441700	445700	428800	389400
4	439900	432900	435300	442200	442200	446100	442600	438500	450400	443600	426200	388600
5	439900	432500	435200	442400	442200	446100	442600	438100	458400	442200	423900	388200
6	439600	432100	435400	442500	442100	446100	442600	437800	466600	441900	421600	387800
7	438900	431900	435300	442600	442000	446000	442500	437800	467700	441900	419200	387300
8	438400	433800	435300	442500	441900	446300	442400	437800	467200	441900	417000	387000
9	438100	434200	435200	442500	442100	446300	442400	437700	465900	441600	415100	386600
10	438100	433700	435100	442400	442100	446100	442200	437500	464500	441400	413200	386300
11	437900	433500	435100	442400	442000	446000	442100	437000	463500	441600	411300	385700
12	437400	433200	434900	442400	441900	446000	441900	436300	462400	443000	410400	385600
13	437000	433000	434900	442200	441900	446000	441500	435200	461300	443400	409100	385400
14	436700	432700	434900	442000	441900	445600	441200	434100	460300	443800	407800	385000
15	436400	433600	434300	442000	441700	445200	441000	433000	459500	444600	406500	384800
16	436300	435400	434200	442400	441700	445000	441000	432400	458400	445000	405500	384500
17	436200	435300	434100	442500	442900	446200	441000	432000	457200	445300	403800	384500
18	435700	435900	434000	442500	443500	445800	440900	431400	456100	445600	402500	384000
19	435900	435300	435700	442500	443800	445300	440600	430800	454800	445800	400800	383900
20	435600	435200	435700	442500	444300	444800	440400	430500	453800	446600	399500	383800
21	435100	434900	435700	442400	444500	444500	440100	430500	452800	447200	397900	383500
22	434900	434800	435700	442400	444300	444200	440100	430200	451600	447500	396600	383200
23	434900	434800	435700	442200	444800	444100	440100	429800	451500	447600	395100	383000
24	434900	434900	436400	442200	444700	443800	439900	429600	451200	447700	394100	382800
25	434700	435600	437700	442100	444600	443700	439600	429200	450900	447900	392900	382600
26	434700	435400	441200	442100	444600	443500	439400	429000	452500	446600	392200	382200
27	434500	436200	441700	441900	444700	443100	439100	428600	452400	444000	391800	381800
28	434000	435900	441900	441900	444700	442700	439100	428300	451800	442100	391500	381300
29	433700	435900	441700	441900	444800	443600	439400	428200	450900	440100	391000	381400
30	433600	435900	441900	442000	---	443400	439300	428100	450000	438000	390700	383200
31	433500	---	442400	442200	---	443100	---	428300	---	435700	390200	---
MAX	441000	436200	442400	442600	444800	446300	443100	438900	467700	449200	433300	389800
MIN	433500	431900	434000	441900	441700	442700	439100	428100	429600	435700	390200	381300
(†)	593.31	593.51	594.03	594.02	594.23	594.09	593.78	592.89	594.64	593.49	589.65	589.04
(ϕ)	-8016	+2455	+6431	-124	+2615	-1745	-3846	-10910	+21643	-14310	-45510	-6938

CAL YR 1987 MAX 662400 MIN 431900 (ϕ) -54900
WTR YR 1988 MAX 467700 MIN 381300 (ϕ) -58300

(†) 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. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--30 years (water years 1924-53) unregulated, 659 ft³/s (477,400 acre-ft/yr); 35 years (water years 1954-88) regulated, 492 ft³/s (356,500 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, 1,260 ft³/s July 27 at 0400 hours (gage height, 5.38 ft); no flow on May 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	14	6.8	4.0	5.5	2.2	161	17	17	520	1100	59
2	49	12	6.7	1.9	4.9	4.6	166	9.9	37	882	1160	52
3	24	9.7	5.0	2.9	7.1	5.0	105	1.3	33	1180	1170	59
4	22	8.6	3.3	4.3	4.9	2.9	38	.32	25	1180	1170	63
5	23	10	3.8	4.3	4.0	3.8	31	.15	30	886	1130	54
6	22	18	4.3	4.9	4.5	3.1	33	.00	272	359	1090	48
7	24	20	5.5	3.7	3.9	2.6	32	.28	521	209	1080	54
8	26	25	6.6	3.6	5.0	3.5	33	5.1	709	207	1020	47
9	25	19	6.2	4.0	5.0	3.2	36	4.4	866	203	869	55
10	25	18	5.1	3.2	4.2	4.4	39	5.7	867	206	795	51
11	19	18	3.6	2.9	5.4	45	43	179	866	138	800	48
12	23	16	3.5	1.9	3.7	41	42	410	872	43	687	42
13	18	12	4.9	2.9	5.1	37	25	408	863	31	540	46
14	20	12	6.4	3.1	4.2	36	8.3	403	863	31	541	22
15	16	14	6.2	2.9	4.9	37	5.6	403	866	30	537	21
16	20	18	4.8	3.7	4.4	44	5.1	401	874	27	538	21
17	23	12	3.5	3.9	5.8	67	8.4	239	873	27	549	25
18	21	11	3.6	4.5	9.4	84	8.8	85	877	22	547	23
19	23	13	7.5	4.1	5.4	162	8.8	210	872	22	546	16
20	28	12	7.6	4.8	5.2	163	4.3	22	874	31	546	11
21	21	13	7.8	4.2	5.0	163	3.2	29	878	32	549	6.3
22	16	13	5.7	3.4	4.6	169	4.4	27	679	28	550	6.4
23	19	12	2.9	4.3	5.0	168	4.6	14	523	25	548	5.4
24	22	8.3	3.0	4.1	3.6	168	3.1	11	532	22	552	7.4
25	22	6.9	2.9	3.6	4.5	165	2.6	6.7	535	19	440	11
26	21	7.1	16	2.8	3.9	157	3.9	6.4	540	512	251	20
27	18	8.4	5.0	3.2	3.1	161	2.2	3.2	535	1150	34	47
28	13	9.0	3.6	3.5	2.6	159	2.4	3.4	528	1020	30	46
29	14	7.6	3.4	4.2	2.7	161	4.7	5.9	527	992	41	60
30	13	6.4	2.9	4.2	---	161	17	14	521	1040	61	61
31	15	---	4.3	4.7	---	161	---	12	---	1070	56	---
TOTAL	715	384.0	162.4	113.7	137.5	2544.3	881.4	2936.75	17875	12144	19527	1087.5
MEAN	23.1	12.8	5.24	3.67	4.74	82.1	29.4	94.7	596	392	630	36.2
MAX	70	25	16	4.9	9.4	169	166	410	878	1180	1170	63
MIN	13	6.4	2.9	1.9	2.6	2.2	2.2	.00	17	19	30	5.4
AC-FT	1420	762	322	226	273	5050	1750	5830	35460	24090	38730	2160

CAL YR 1987 TOTAL 320574.9 MEAN 878 MAX 3370 MIN 2.6 AC-FT 635900
WTR YR 1988 TOTAL 58508.55 MEAN 160 MAX 1180 MIN .00 AC-FT 116100

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

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 poor. 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.--26 years, 127 ft³/s (92,010 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)
June 3	1200	*2,460	*6.77				

Minimum daily discharge, 11 ft³/s Aug. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	34	42	50	57	53	44	32	e32	15	14	14
2	46	34	43	50	54	56	43	30	e83	14	13	15
3	45	34	44	52	51	60	37	28	e841	15	13	16
4	44	34	40	50	50	61	37	27	e449	15	14	16
5	44	34	41	49	51	61	33	25	e203	14	15	16
6	44	34	43	49	51	58	32	25	e77	17	12	15
7	43	34	44	49	52	57	30	24	e57	14	12	16
8	44	53	45	49	54	59	28	25	e48	14	11	15
9	42	95	45	49	54	58	27	24	e37	14	14	14
10	42	62	45	49	55	53	28	25	e27	14	13	14
11	42	44	46	49	55	50	26	33	e25	15	13	14
12	42	39	45	49	55	48	26	34	e24	21	15	14
13	42	37	47	46	57	45	26	27	e24	16	14	15
14	42	37	46	46	59	40	26	26	24	24	12	13
15	35	38	45	46	59	41	25	26	22	22	12	13
16	36	55	46	46	59	42	27	32	22	19	12	13
17	37	113	46	47	58	46	28	38	22	17	13	13
18	36	72	46	48	84	52	27	34	22	15	13	15
19	36	54	80	50	238	47	26	33	20	13	13	17
20	48	46	226	50	118	44	28	33	21	14	12	18
21	37	44	101	50	82	42	28	40	25	23	12	12
22	35	42	72	50	69	41	28	29	19	15	12	14
23	36	42	59	51	64	41	27	28	18	14	12	15
24	37	42	57	51	59	36	30	28	21	14	13	15
25	38	40	54	51	56	32	29	28	21	13	17	15
26	39	40	64	51	56	30	28	31	40	13	15	16
27	37	41	58	52	56	30	26	33	20	13	15	14
28	34	42	57	53	54	30	26	35	18	13	15	14
29	35	42	55	56	53	38	39	e32	16	12	15	16
30	36	42	51	56	---	38	32	e32	16	12	16	34
31	34	---	51	56	---	36	---	e32	---	13	15	---
TOTAL	1234	1400	1784	1550	1920	1425	897	929	2294	477	417	461
MEAN	39.8	46.7	57.5	50.0	66.2	46.0	29.9	30.0	76.5	15.4	13.5	15.4
MAX	48	113	226	56	238	61	44	40	841	24	17	34
MIN	34	34	40	46	50	30	25	24	16	12	11	12
AC-FT	2450	2780	3540	3070	3810	2830	1780	1840	4550	946	827	914

CAL YR 1987 TOTAL 122270 MEAN 335 MAX 7250 MIN 34 AC-FT 242500
WTR YR 1988 TOTAL 14788 MEAN 40.4 MAX 841 MIN 11 AC-FT 29330

e Estimated.

08103800 LAMPASAS RIVER NEAR KEMPNER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: March to June 1964. Chemical and biochemical analyses: October 1980 to September 1982, October 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT												
27...	1135	37	1650	7.70	20.5	2	0.30	11.3	128	1.9	400	120
DEC												
16...	1105	46	1540	8.60	7.5	2	0.40	13.0	110	0.4	400	120
FEB												
19...	0925	235	707	8.20	10.5	5	3.0	10.6	98	1.5	310	54
APR												
06...	1300	30	1400	8.20	22.5	8	8.0	10.1	119	1.1	350	98
MAY												
26...	0935	32	1930	7.80	23.0	2	3.1	8.1	97	0.6	370	150
SEP												
02...	0725	18	2610	7.60	25.5	2	2.5	5.9	74	1.5	460	260

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 WAT WH TOT FET 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...	89	42	180	4	8.2	277	30	340	0.40	8.3	864
DEC											
16...	91	42	160	4	7.1	285	32	330	0.30	5.2	838
FEB											
19...	62	37	32	0.8	2.5	254	43	53	0.40	4.3	387
APR											
06...	74	41	150	4	6.0	256	37	270	0.40	7.4	739
MAY											
26...	76	43	260	6	8.4	216	29	510	0.40	11	1070
SEP											
02...	99	52	350	7	12	205	29	700	0.20	3.3	1370

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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											
27...	3	<1	0.690	0.010	0.700	0.040	0.26	0.30	0.070	2.0	2
DEC											
16...	2	<1	--	<0.010	0.600	0.010	0.19	0.20	0.100	1.2	--
FEB											
19...	10	<1	--	<0.010	0.400	0.020	0.18	0.20	0.050	3.2	1
APR											
06...	15	8	0.180	0.020	0.200	0.090	0.41	0.50	0.150	3.1	--
MAY											
26...	16	16	--	<0.010	<0.100	0.030	0.17	0.20	0.060	3.1	2
SEP											
02...	9	<1	--	<0.010	<0.100	<0.010	--	<0.20	0.110	2.4	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)
OCT											
27...	78	<1	<10	<1	<3	<5	3	0.1	<1	<1.0	<3
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
FEB											
19...	65	<1	<1	<1	7	<5	2	<0.1	<1	<1.0	6
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
MAY											
26...	200	<1	<1	1	10	<5	<10	<0.1	<1	1.0	<10
SEP											
02...	<100	1	<1	1	<10	6	<10	0.3	<1	<1.0	10

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.--Records good except those for estimated daily discharges, which are fair. Recording rain gage at station.

AVERAGE DISCHARGE.--25 years, 10.5 ft³/s (4.28 in/yr), 7,610 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 1976-88.
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)
June 2	2400	*343	*3.67				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.23	1.1	1.6	1.3	.94	1.0	.23	.00	.00	.00	.00
2	.17	.23	.95	1.5	1.3	1.7	.84	.21	4.1	.00	.00	.00
3	.09	.25	.91	1.5	1.3	1.3	.74	.14	39	.00	.00	.00
4	.07	.27	.85	1.6	1.3	1.2	.71	.03	3.1	.00	.00	.00
5	.05	.25	.82	1.6	1.4	1.1	.69	.00	1.3	.00	.00	.00
6	.05	.22	.79	1.6	1.5	.94	.63	.00	.66	.00	.00	.00
7	.02	.21	.77	1.7	1.5	.94	.70	.00	.52	.00	.00	.00
8	.04	.82	.75	1.7	1.6	1.3	.65	.00	.26	.00	.00	.00
9	.08	2.7	.74	1.6	1.4	1.3	.69	.00	.18	.00	.00	.00
10	.11	1.3	.74	1.6	1.3	1.1	.70	.52	.00	.00	.00	.00
11	.11	.87	.74	1.5	1.1	1.0	.66	.53	.00	.00	.00	.00
12	.05	.70	.73	1.6	1.2	.87	.59	.38	.00	.00	.00	.00
13	.09	.65	.72	1.5	1.2	.77	.56	.15	.00	.00	.00	.00
14	.12	.65	.72	1.5	1.1	.79	.56	.06	.00	.00	.00	.00
15	.10	.63	.72	1.5	1.1	.74	.58	.00	.00	.00	.00	.00
16	.14	3.8	.71	1.6	1.1	.74	.58	.47	.00	.00	.00	.00
17	.10	3.3	.65	1.6	1.1	1.4	.57	.20	.00	.00	.00	.00
18	.14	1.8	.69	1.6	1.3	2.1	.46	.05	.00	.00	.00	.00
19	.21	1.3	3.7	1.6	1.2	1.4	.44	.00	.00	.00	.00	.00
20	.26	1.1	3.6	1.4	1.2	1.2	.41	.01	.00	.00	.00	.00
21	.18	1.1	1.9	1.4	1.1	1.0	.41	.18	.00	.00	.00	.00
22	.18	.99	1.5	1.3	1.1	.96	.39	.03	.00	.00	.00	.00
23	.25	.98	1.3	1.2	1.2	.94	.31	.00	.00	.00	.00	.00
24	.31	.94	1.3	1.3	1.1	.94	.26	.00	.00	.00	.00	.00
25	.35	.99	1.3	1.3	1.0	.91	.24	.00	.00	.00	.00	.00
26	.38	.94	3.4	1.3	1.0	.79	.15	.00	5.3	.00	.00	.00
27	.40	1.1	2.6	1.3	1.0	.78	.10	.00	.45	.00	.00	.00
28	.27	1.1	2.1	1.3	1.0	.71	.13	.00	.00	.00	.00	.00
29	.28	1.0	1.8	1.3	1.0	1.0	.19	.00	.00	.00	.00	.00
30	.31	1.0	1.7	1.3	---	1.1	.23	.00	.00	.00	.00	.00
31	.34	---	1.8	1.4	---	1.0	---	.00	---	.00	.00	---
TOTAL	5.46	31.42	42.10	45.8	35.0	32.96	15.17	3.19	54.87	0.00	0.00	0.00
MEAN	.18	1.05	1.36	1.48	1.21	1.06	.51	.10	1.83	.00	.00	.00
MAX	.40	3.8	3.7	1.7	1.6	2.1	1.0	.53	39	.00	.00	.00
MIN	.02	.21	.65	1.2	1.0	.71	.10	.00	.00	.00	.00	.00
AC-FT	11	62	84	91	69	65	30	6.3	109	.0	.0	.0
CFSM	.01	.03	.04	.04	.04	.03	.02	.00	.05	.00	.00	.00
IN.	.01	.04	.05	.05	.04	.04	.02	.00	.06	.00	.00	.00

CAL YR 1987 TOTAL 5104.12 MEAN 14.0 MAX 242 MIN .00 AC-FT 10120 CFSM .42 IN. 5.70
WTR YR 1988 TOTAL 265.97 MEAN .73 MAX 39 MIN .00 AC-FT 528 CFSM .02 IN. .30

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 1987 TO SEPTEMBER 1988

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 (FTU)	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 TOTAL (MG/L AS CACO3)
OCT 27...	1335	0.23	523	7.60	20.0	0.40	8.2	92	K18	47	270
DEC 16...	1325	0.58	520	7.70	8.0	0.20	11.7	101	K17	23	270
FEB 18...	0900	1.2	515	8.20	12.0	0.50	8.9	85	160	110	270

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 WAT WH TOT FET 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...	24	64	26	13	0.4	2.0	245	21	15	0.40	11
DEC 16...	34	64	27	14	0.4	1.6	239	39	16	0.40	8.7
FEB 18...	32	61	27	13	0.4	1.3	234	23	17	0.40	8.0

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-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 27...	294	302	<0.010	<0.100	0.010	0.020	0.59	0.60	<0.010	0.010	<0.010
DEC 16...	302	316	<0.010	<0.100	0.010	<0.010	--	<0.20	<0.010	<0.010	<0.010
FEB 18...	291	293	<0.010	<0.100	<0.010	0.020	--	<0.20	0.020	<0.010	0.040

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)
OCT 27...	--	6	0.00	62	<10	1	50	<0.5	<1	1	<3
DEC 16...	--	20	0.03	35	<10	<1	40	<0.5	<1	<1	<3
FEB 18...	0.12	16	0.05	64	<10	<1	44	<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)
OCT 27...	<1	<3	<5	14	<1	<0.1	<10	<1	<1	<1.0	1900
DEC 16...	1	<3	<5	10	<1	<0.1	<10	<1	<1	<1.0	1800
FEB 18...	<1	20	<5	14	1	<0.1	<10	<1	<1	<1.0	1900

DATE	VANA-DIUM, 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 NATURAL DIS-SOLVED (UG/L AS U)
OCT 27...	<6	<3	1.1	<0.4	2.4	<0.4	1.8	<0.4	0.07	0.63
DEC 16...	<6	<3	--	--	--	--	--	--	--	--
FEB 18...	<6	23	--	--	--	--	--	--	--	--

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.

WATER-DISCHARGE RECORDS

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 oil field 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 daily contents, 240,400 acre-ft Mar. 4 (elevation, 622.72 ft); minimum daily, 171,900 acre-ft Sept. 29 (elevation, 610.94 ft).

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

610.0	167,100	614.0	188,000	618.0	210,900	622.0	235,700
612.0	177,300	616.0	199,200	620.0	223,100	623.0	242,200

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236200	234700	237800	238800	237500	239600	237400	236200	220600	224400	177200	174400
2	236100	234700	237800	238500	237600	240300	237500	236200	220600	224400	177100	174400
3	235900	234800	237800	238200	237700	240300	237600	236200	222100	224300	177100	174300
4	235800	234700	237900	237900	237700	240400	237600	236100	223300	224100	177000	174000
5	235800	234700	238000	237600	237800	240000	237700	236100	223700	223400	177000	173900
6	235600	234700	238000	237400	237800	239300	237500	236000	223900	221800	176900	173800
7	235600	234500	238100	237100	237900	238500	237400	236000	223900	219800	176800	173700
8	235400	235300	238100	236700	238000	238100	237200	236100	224100	217400	176700	173500
9	235300	235300	238200	236300	238000	237300	237100	236100	224100	215100	176600	173400
10	235300	235300	238100	235900	238100	236500	236800	236000	224000	213000	176500	173300
11	235200	235300	238000	235600	238200	236300	236500	236100	223900	210800	176600	173200
12	235100	235300	237800	235600	238200	236300	236300	236000	223800	208900	176500	173300
13	235100	235300	237600	235600	238300	236300	236200	236000	223700	206500	176400	173300
14	234900	235300	237500	235700	238400	236300	236200	235900	223700	204200	176300	173200
15	234700	235800	237200	235800	238500	236300	236200	235800	223600	201700	176300	173200
16	234900	236400	237000	236000	238500	236300	236200	235800	223600	199300	176100	173100
17	234900	236500	236800	236200	238900	237100	236300	235600	223400	197000	176100	173100
18	234900	236900	236700	236300	239300	237100	236400	235300	223400	194600	176000	173000
19	234900	236900	237300	236500	239200	237200	236300	234500	223200	192100	175900	172900
20	234800	236900	237400	236500	239100	237200	236300	233300	223100	190900	175700	172900
21	234700	236900	237600	236500	238900	237100	236300	232500	223100	188500	175600	172700
22	234700	237000	237600	236600	238800	236800	236300	231000	222900	186200	175500	172700
23	234900	237100	237700	236700	238900	236600	236300	230100	222900	183800	175400	172500
24	234900	237300	237900	236700	239000	236300	236300	228800	222700	181400	175400	172400
25	235000	237400	238300	236700	239100	236300	236200	227400	222700	179100	175400	172300
26	235000	237500	239500	236800	239200	236300	236200	226200	223900	177600	175400	172200
27	234900	237800	239600	236900	239300	236400	236000	225100	224700	177600	175100	172100
28	234900	237700	239500	237000	239400	236600	236000	223900	224700	177400	175000	172000
29	234800	237800	239500	237100	239500	237000	236200	222800	224700	177400	174800	171900
30	234800	237800	239500	237300	---	237000	236300	221700	224600	177400	174600	172100
31	234700	---	239100	237400	---	237100	---	221000	---	177300	174600	---
MAX	236200	237800	239600	238800	239500	240400	237700	236200	224700	224400	177200	174400
MIN	234700	234500	236700	235600	237500	236300	236000	221000	220600	177300	174600	171900
(†)	621.85	622.32	622.53	622.26	622.59	622.22	622.09	619.67	620.25	612.00	611.47	610.99
(ϕ)	-1285	+3026	+1360	-1747	+2137	-2396	-838	-15260	+3599	-47290	-2750	-2461

CAL YR 1987 MAX 366000 MIN 234500 (ϕ) -42300
WTR YR 1988 MAX 240400 MIN 171900 (ϕ) -63900

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

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical and biochemical analyses: October 1969 to September 1982, January to August 1988.

310129097315901 - STILLHOUSE HOLLOW LAKE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
22...	0940	1.00	545	8.50	9.0	2.00	10.4	91	<1	K1	210
22...	0941	3.40	--	--	--	--	--	--	--	--	--
22...	0942	10.0	545	8.50	9.0	--	10.5	91	--	--	--
22...	0944	20.0	545	8.50	9.0	--	10.5	91	--	--	--
22...	0946	30.0	545	8.50	9.0	--	10.5	91	--	--	--
22...	0948	40.0	545	8.50	9.0	--	10.4	91	--	--	--
22...	0950	50.0	545	8.50	9.0	--	10.4	91	--	--	--
22...	0952	60.0	545	8.50	9.0	--	10.4	91	--	--	--
22...	0954	70.0	545	8.40	9.0	--	10.4	91	--	--	--
22...	0956	80.0	545	8.40	9.0	--	10.3	90	--	--	--
22...	0958	90.0	545	8.40	8.5	--	10.2	88	--	--	--
22...	1000	100	545	8.40	8.5	--	10.2	88	--	--	--
22...	1002	110	545	8.50	8.5	--	10.1	87	--	--	210
MAY											
02...	1020	1.00	573	8.20	20.0	2.70	8.2	93	<1	<1	200
02...	1021	4.50	--	--	--	--	--	--	--	--	--
02...	1022	10.0	573	8.20	20.0	--	8.2	93	--	--	--
02...	1024	20.0	573	8.20	20.0	--	8.1	92	--	--	--
02...	1026	30.0	581	8.20	18.0	--	7.8	85	--	--	--
02...	1028	40.0	581	8.20	17.0	--	7.6	81	--	--	--
02...	1030	50.0	578	8.20	15.5	--	7.4	76	--	--	--
02...	1032	60.0	573	8.20	14.0	--	7.2	72	--	--	--
02...	1034	70.0	573	8.20	13.0	--	7.0	68	--	--	--
02...	1036	80.0	573	8.10	13.0	--	6.8	66	--	--	--
02...	1038	90.0	573	8.10	13.0	--	6.5	63	--	--	--
02...	1040	100	573	8.10	12.5	--	6.4	62	--	--	--
02...	1042	110	573	8.00	12.5	--	6.2	60	--	--	--
02...	1044	120	573	8.00	12.5	--	5.9	57	--	--	210
AUG											
04...	0850	1.00	560	8.40	28.5	3.00	7.3	96	K2	120	180
04...	0851	5.00	--	--	--	--	--	--	--	--	--
04...	0852	10.0	560	8.40	28.5	--	7.3	96	--	--	--
04...	0854	20.0	560	8.30	28.0	--	7.0	91	--	--	--
04...	0856	30.0	576	7.80	27.5	--	3.0	39	--	--	--
04...	0858	40.0	584	7.60	24.0	--	1.2	15	--	--	--
04...	0900	50.0	592	7.60	22.0	--	0.4	5	--	--	--
04...	0902	60.0	592	7.60	19.0	--	0.1	1	--	--	--
04...	0904	70.0	592	7.60	17.5	--	0	0	--	--	--
04...	0906	80.0	584	7.60	16.0	--	0	0	--	--	--
04...	0908	90.0	584	7.60	15.5	--	0	0	--	--	--
04...	0910	100	584	7.60	15.0	--	0	0	--	--	--
04...	0912	110	584	7.50	15.0	--	0	0	--	--	220

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310129097315901 - STILLHOUSE HOLLOW LAKE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET 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										
22...	36	49	22	33	1	3.6	177	25	57	0.30
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	36	49	22	33	1	3.5	177	25	57	--
MAY										
02...	19	43	22	45	1	4.0	179	26	63	0.30
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	32	49	22	34	1	4.0	181	26	58	--
AUG										
04...	43	34	24	42	1	3.3	141	29	77	0.30
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	42	50	23	35	1	2.9	178	23	62	--

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310129097315901 - STILLHOUSE HOLLOW LAKE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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-PHOROUS TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
22...	9.5	306	<0.010	0.200	<0.010	--	0.50	0.010	<3	<1
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	0.200	<0.010	--	0.30	0.010	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	9.5	305	<0.010	0.200	0.020	0.18	0.20	0.010	4	2
MAY										
02...	8.1	319	<0.010	<0.100	<0.010	--	0.30	<0.010	<3	<1
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	<0.010	0.200	<0.010	--	0.40	<0.010	<10	<10
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	9.7	311	<0.010	0.300	0.020	0.38	0.40	0.010	16	8
AUG										
04...	7.7	302	<0.010	<0.100	<0.010	--	0.80	<0.010	<3	2
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.010	0.89	0.90	0.010	10	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	0.100	0.010	0.49	0.50	0.010	<10	60
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	11	314	0.010	<0.100	0.100	0.40	0.50	0.010	7	300

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310033097333001 - STILLHOUSE HOLLOW LAKE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
22...	1100	1.00	550	8.50	9.0	10.5	92
22...	1102	10.0	550	8.50	9.0	10.5	92
22...	1104	20.0	550	8.50	9.0	10.5	92
22...	1106	30.0	550	8.50	9.0	10.5	92
22...	1108	40.0	550	8.50	9.0	10.5	92
22...	1110	50.0	550	8.50	9.0	10.5	92
22...	1112	60.0	550	8.50	9.0	10.5	92
22...	1114	70.0	550	8.50	9.0	10.5	92
22...	1116	80.0	550	8.50	8.5	10.5	90
22...	1118	90.0	550	8.50	8.5	10.4	90
22...	1120	100	550	8.50	8.5	10.4	90
22...	1122	110	557	8.40	8.0	10.3	88
22...	1124	116	557	8.40	8.0	10.1	86
MAY							
02...	1120	1.00	578	8.20	20.0	8.1	92
02...	1122	10.0	578	8.20	20.0	8.1	92
02...	1124	20.0	578	8.20	19.5	8.1	91
02...	1126	30.0	590	8.20	18.0	7.5	81
02...	1128	40.0	585	8.20	16.0	7.2	75
02...	1130	50.0	583	8.10	15.0	6.7	68
02...	1132	60.0	578	8.10	14.0	6.5	65
02...	1134	70.0	578	8.10	13.5	6.4	63
02...	1136	80.0	578	8.10	13.0	6.3	61
02...	1138	90.0	578	8.00	13.0	6.3	61
02...	1140	100	578	8.00	13.0	6.1	59
02...	1142	110	578	7.90	13.0	5.8	57
AUG							
04...	0930	1.00	560	8.40	28.5	7.4	97
04...	0932	10.0	560	8.40	28.5	7.4	97
04...	0934	20.0	560	8.40	28.0	7.2	94
04...	0936	30.0	572	8.00	27.5	3.8	49
04...	0938	40.0	595	7.50	23.5	0	0
04...	0940	50.0	595	7.50	22.0	0	0
04...	0942	60.0	605	7.50	20.0	0	0
04...	0944	70.0	600	7.50	18.0	0	0
04...	0946	80.0	590	7.50	16.5	0	0
04...	0948	90.0	584	7.50	16.0	0	0
04...	0950	102	584	7.50	15.5	0	0

310128097353601 - STILLHOUSE HOLLOW LAKE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
22...	1215	1.00	550	8.40	9.5	1.70	10.9	96	<1	23	210
22...	1217	10.0	550	8.40	9.0	--	10.9	95	--	--	--
22...	1219	20.0	550	8.40	9.0	--	10.8	94	--	--	--
22...	1221	30.0	550	8.40	9.0	--	10.8	94	--	--	--
22...	1223	40.0	555	8.40	9.0	--	10.8	94	--	--	--
22...	1225	50.0	555	8.40	8.5	--	10.9	94	--	--	--
22...	1227	60.0	555	8.40	8.5	--	10.7	92	--	--	--
22...	1229	70.0	561	8.30	8.5	--	10.4	90	--	--	--
22...	1231	80.0	610	8.20	8.0	--	9.3	79	--	--	--
22...	1233	92.0	610	8.30	8.0	--	9.1	77	--	--	220
MAY											
02...	1200	1.00	580	8.20	20.5	1.80	8.0	91	K4	K1	200
02...	1202	10.0	580	8.20	20.5	--	8.0	91	--	--	--
02...	1204	20.0	580	8.20	20.5	--	8.0	91	--	--	--
02...	1206	30.0	580	8.20	20.0	--	7.9	89	--	--	--
02...	1208	40.0	610	8.00	17.0	--	6.0	64	--	--	--
02...	1210	50.0	590	8.00	15.0	--	5.8	59	--	--	--
02...	1212	60.0	588	8.00	14.5	--	5.5	55	--	--	--
02...	1214	70.0	580	7.90	14.0	--	5.4	54	--	--	--
02...	1216	80.0	580	7.90	13.5	--	5.1	50	--	--	--
02...	1218	92.0	580	7.80	13.5	--	5.0	49	--	--	210
AUG											
04...	1010	1.00	568	8.40	29.5	1.50	7.2	96	--	--	180
04...	1012	10.0	568	8.40	29.0	--	7.1	94	--	--	--
04...	1014	20.0	577	8.20	28.5	--	6.1	80	--	--	--
04...	1016	30.0	598	7.60	28.0	--	1.3	17	--	--	--
04...	1018	35.0	603	7.50	26.5	--	0	0	--	--	--
04...	1020	40.0	610	7.50	24.0	--	0	0	--	--	--
04...	1022	50.0	624	7.40	22.0	--	0	0	--	--	--
04...	1024	60.0	624	7.40	20.0	--	0	0	--	--	--
04...	1026	70.0	610	7.40	18.0	--	0	0	--	--	--
04...	1030	81.0	610	7.40	17.5	--	0	0	--	--	220

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310128097353601 - STILLHOUSE HOLLOW LAKE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET 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										
22...	34	49	22	32	1	3.5	179	25	58	9.4
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	38	52	23	40	1	3.6	187	26	71	8.6
MAY										
02...	26	44	23	38	1	3.9	179	26	65	8.3
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	31	49	22	34	1	3.9	182	26	59	9.7
AUG										
04...	43	34	24	41	1	3.3	141	26	79	7.7
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	30	51	23	37	1	3.0	192	18	69	12

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- PHOROUS TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN										
22...	306	--	<0.010	0.200	0.010	0.39	0.40	0.010	<3	<1
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	<0.010	0.200	0.010	0.29	0.30	0.010	<10	<10
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	336	0.190	0.010	0.200	0.080	0.42	0.50	0.010	5	11
MAY										
02...	316	--	<0.010	<0.100	<0.010	--	0.40	0.010	<3	<1
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	<0.010	0.200	<0.010	--	0.30	0.010	<10	<10
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	313	--	<0.010	0.300	0.020	0.38	0.40	0.010	5	5
AUG										
04...	300	--	<0.010	<0.100	<0.010	--	<0.20	0.020	<3	5
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.030	0.57	0.60	0.010	20	20
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.030	0.47	0.50	0.010	60	110
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	329	--	<0.010	<0.100	0.490	0.31	0.80	<0.010	730	380

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310130097371701 - STILLHOUSE HOLLOW LAKE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
22...	1305	1.00	564	8.40	9.0	11.1	97
22...	1307	10.0	564	8.40	8.5	11.1	96
22...	1309	20.0	564	8.40	8.5	11.0	95
22...	1311	30.0	564	8.40	8.5	11.0	95
22...	1313	40.0	569	8.40	8.5	10.9	94
22...	1315	50.0	585	8.30	8.0	10.5	89
22...	1317	60.0	671	8.20	8.0	9.5	81
22...	1319	70.0	693	8.10	8.0	8.9	76
MAY							
02...	1245	1.00	607	8.10	21.0	7.8	90
02...	1247	10.0	607	8.10	21.0	7.8	90
02...	1249	20.0	607	8.10	21.0	7.8	90
02...	1251	30.0	615	8.10	20.5	7.4	85
02...	1253	40.0	661	7.70	17.5	3.8	41
02...	1255	50.0	611	7.80	15.5	4.0	41
02...	1257	60.0	593	7.70	14.5	3.8	38
02...	1259	69.0	593	7.70	14.5	3.8	38
AUG							
04...	1055	1.00	580	8.40	29.5	7.4	99
04...	1057	10.0	580	8.40	29.5	7.3	98
04...	1059	20.0	590	8.20	29.0	5.6	74
04...	1101	25.0	603	8.00	29.0	4.1	54
04...	1103	30.0	652	7.40	28.0	0	0
04...	1105	40.0	630	7.30	24.0	0	0
04...	1107	50.0	643	7.30	21.0	0	0
04...	1109	58.0	643	7.30	20.0	0	0

310037097383201 - STILLHOUSE HOLLOW LAKE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
22...	1350	1.00	605	8.40	9.0	1.30	11.2	98	<1	K7	220
22...	1351	2.20	--	--	--	--	--	--	--	--	--
22...	1352	10.0	605	8.40	8.5	--	11.1	96	--	--	--
22...	1354	20.0	605	8.40	8.5	--	11.0	95	--	--	--
22...	1356	30.0	699	8.30	8.5	--	10.6	91	--	--	--
22...	1358	42.0	770	8.20	8.0	--	10.0	85	--	--	260
MAY											
02...	1310	1.00	689	8.00	21.0	0.90	7.5	87	K1	K1	230
02...	1311	1.50	--	--	--	--	--	--	--	--	--
02...	1312	10.0	689	8.00	21.0	--	7.5	87	--	--	--
02...	1314	20.0	689	8.00	21.0	--	7.4	85	--	--	--
02...	1316	30.0	731	7.80	20.5	--	5.6	64	--	--	--
02...	1318	41.0	654	7.40	16.5	--	1.4	15	--	--	230
AUG											
04...	1125	1.00	625	8.30	30.0	0.60	7.3	98	--	--	190
04...	1126	1.00	--	--	--	--	--	--	--	--	--
04...	1127	10.0	625	8.30	29.5	--	6.8	91	--	--	--
04...	1129	20.0	703	7.60	28.5	--	2.4	32	--	--	--
04...	1131	30.0	748	7.40	28.5	--	1.3	17	--	--	220

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

310037097383201 - STILLHOUSE HOLLOW LAKE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN										
22...	37	51	23	41	1	3.6	185	26	72	8.4
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	43	60	27	58	2	3.7	218	28	110	5.6
MAY										
02...	46	49	26	51	2	4.2	184	27	91	7.0
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	36	51	24	44	1	4.0	190	27	79	8.9
AUG										
04...	45	38	24	53	2	3.7	149	24	97	8.8
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	51	48	25	60	2	4.0	172	23	120	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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
22...	336	0.180	0.020	0.200	0.010	0.19	0.20	0.010	<3	<1
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	0.170	0.030	0.200	0.010	0.19	0.20	0.010	20	10
22...	--	--	--	--	--	--	--	--	--	--
22...	423	--	<0.010	0.200	0.060	0.34	0.40	0.020	<3	5
MAY										
02...	366	--	<0.010	<0.100	0.020	0.48	0.50	0.010	7	2
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	<0.010	<0.100	0.020	0.18	0.20	0.010	10	<10
02...	--	--	<0.010	<0.100	0.060	0.34	0.40	0.020	10	<10
02...	352	0.190	0.010	0.200	0.030	0.37	0.40	0.020	6	100
AUG										
04...	338	--	<0.010	<0.100	<0.010	--	0.80	<0.010	6	5
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	<0.010	<0.100	0.140	1.4	1.5	<0.010	20	20
04...	394	--	<0.010	<0.100	0.240	0.76	1.0	<0.010	3	39

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

Stillhouse Hollow Lake AC (310129097315901)

Phytoplankton Analyses September 1987 to October 1988

Date	1-22-88
Time	0941
TOTAL CELLS/mL	12,018
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	3.4

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	27
Chlamydomonas sp.	27
Crucigenia tetrapedia	27
Mesotaenium sp.	27
Pandorina morum	108
Phacotus lenticularis	27
Quadrigula lacustris	54
Scenedesmus armatus	540
Scenedesmus brasiliensis	216
Sphaerocystis schroeteri	162
Tetraedron minimum	54
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon sp.	27
Kephyrion sp.	27
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	6,699
Aphanocapsa elachista	270
Aphanotheca saxicola	1,864
Chroococcus sp.	297
Gloeothece linearis	54
Gomphosphaeria lacustris	297
Merismopedia tenuissima	216
Microcystis sp.	486
Synechococcus elongatus	108
Synechococcus sp.	297
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas sp.	27
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	22
Stephanodiscus hantzschii	3
Order Pennales	
Anomoeoneis vitrea	22
Navicula hustedtii	11
Navicula pelliculosa	11
Nitzschia acicularis	11

Stillhouse Hollow Lake EC (310037097383201)

Phytoplankton Analyses September 1987 to October 1988

Date	1-22-88
Time	1351
TOTAL CELLS/mL	11,716
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	2.2

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. *mirabilis*	34
Ankistrodesmus nannoselene	67
Chlorococcum sp.	34
Crucigenia tetrapedia	34
Scenedesmus armatus	135
Sphaerocystis schroeteri	304
CHRYSOPHYTA (Golden-brown algae)	
Kephyrion ovum	135
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	6,618
Aphanocapsa elachista	1,046
Aphanothece saxicola	1,520
Chroococcus sp.	67
Dactylococcopsis acicularis	67
Dactylococcopsis fascicularis	34
Microcystis sp.	1,452
Synechococcus sp.	169

Stillhouse Hollow Lake AC (310129097315901)

Phytoplankton Analyses September 1987 to October 1988

Date	5-2-88
Time	1021
TOTAL CELLS/mL	6,908
NUMBER OF SPECIES	21
DEPTH COLLECTED (ft.)	4.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Crucigenia tetrapedia	68
Kirchneriella sp.	103
Oocystis elliptica	205
Oocystis sp.	68
Pandorina morum	821
Quadrigula lacustris	34
Scenedesmus bijuga	68
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon divergens	205
Kephyrion ovum	34
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	2121
Chroococcus limneticus	890
Chroococcus multicoloratus	1266
Chroococcus sp.	274
Synechococcus elongatus	376
Synechococcus sp.	205
PYRRHOPHYTA (Dinoflagellates)	
Ceratium hirundinella	34
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	34
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	34
Order Pennales	
Achnanthes sp.	11
Nitzschia microcephala	23
Nitzschia palea	34

Stillhouse Hollow Lake EC (310037097383201)

Phytoplankton Analyses September 1987 to October 1988

Date	5-2-88
Time	1311
TOTAL CELLS/mL	8,124
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	1.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Chlamydomonas sp.	46
Crucigenia tetrapedia	183
Kirchneriella lunaris	91
Kirchneriella sp.	46
Mesotaenium sp.	365
Oocystis sp.	91
Pandorina morum	274
Quadrigula lacustris	91
Scenedesmus bijuga	183
Scenedesmus brasilensis	228
Scenedesmus quadricauda	46
Tetraedron sp.	46
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon divergens	274
Kephyrion sp.	46
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1460
Chroococcus limneticus	1004
Chroococcus multicoloratus	1232
Chroococcus sp.	456
Dactylococcopsis fascicularis	46
Gomphosphaeria lacustris	456
Synechococcus elongatus	730
Synechococcus sp.	593
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	23
Stephanodiscus dubius	23
Order Pennales	
Asterionella formosa	28
Denticula sp.	6
Diploneis elliptica	6
Fragilaria sp.	51

Stillhouse Hollow Lake AC (310129097315901)

Phytoplankton Analyses September 1987 to October 1988

Date	8-4-88
Time	0851
TOTAL CELLS/mL	1,424
NUMBER OF SPECIES	41
DEPTH COLLECTED (ft.)	5.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus sp	5
Chlamydomonas globosa?	5
Chlamydomonas sp.	34
Coelastrum cambricum	42
Cosmarium sp.	73
Crucigenia tetrapedia	42
Eudorina elegans	60
Kirchneriella sp.	5
Mesotaenium sp.?	5
Nephrocytium sp.	34
Oocystis sp.	26
Pediastrum simplex	39
Scenedesmus carinatus?	42
Scenedesmus sp.	26
Staurastrum cf. *paradoxum*	10
Tetraedron minimum	34
Tetraedron muticum	5
Tetraedron trigonum	3
Tetraedron sp.	8
CHRYSOPHYTA (golden-brown algae)	
Dinobryon sp.	8
small chrysophyte flagellates	47
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	42
Chroococcus dispersus	84
Chroococcus sp.	81
Merismopedia punctata	84
Spirulina laxa	10
Synechococcus sp.	55
EUGLENOPHYTA (euglenoid algae)	
Euglena sp.	3
Phacotus lenticularis	39
Trachelomonas volvocina	5
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium sp.	16
unidentified dinoflagellates	26
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	8
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	181
Stephanodiscus vestibulis	13
Order Pennales	
Achnanthes minutissima	5
Anomoeoneis vitrea	60
Nitzschia holsatica	13
Nitzschia palea	3
Synedra delicatissima	133
Synedra radians	10

Stillhouse Hollow Lake EC (310037097383201)

Phytoplankton Analyses September 1987 to October 1988

Date	8-4-88
Time	1126
TOTAL CELLS/mL	18,708
NUMBER OF SPECIES	35
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas globosa?	107
Chlamydomonas sp.	533
Coelastrum cambricum	427
Crucigenia tetrapedia	569
Kirchneriella sp.	107
Pediastrum simplex	356
Scenedesmus carinatus?	213
Scenedesmus quadricauda	142
Tetraedron minimum	107
Tetraedron muticum	36
Tetrastrum staurogeniformae	142
CYANOPHYTA (blue-green algae)	
Anabaena sp.	356
Aphanocapsa delicatissima	1636
Chroococcus sp.	498
Merismopedia punctata	284
Schizothrix calcicola	3165
Spirulina laxa	2169
Synechococcus sp.	2276
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	36
Euglena sp.	71
Phacotus lenticularis	391
Phacus sp.	36
Trachelomonas volvocina	36
Trachelomonas sp.	107
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium sp.	107
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	36
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	36
Stephanodiscus vestibulis	249
Order Pennales	
Achnanthes minutissima	2347
Anomoeoneis vitrea	1102
Fragilaria brevistriata var. *inflata*	107
Nitzschia holsatica	284
Nitzschia palea	71
Synedra delicatissima	391
Synedra radians	178

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.

WATER-DISCHARGE RECORDS

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, 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); 22 years (water years 1967-88) regulated, 229 ft³/s (165,900 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, 1,290 ft³/s July 20 at 0700 hours (gage height, 10.06 ft); minimum daily, 2.3 ft³/s Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	18	13	220	15	14	7.6	9.2	545	6.6	6.0	3.6
2	15	17	14	220	14	15	7.5	9.2	300	6.9	6.0	3.6
3	14	17	15	220	14	15	7.7	9.8	16	6.8	5.6	3.6
4	14	17	15	218	14	15	7.2	9.5	10	6.7	6.3	3.5
5	14	16	15	218	14	226	61	8.8	8.3	275	6.4	3.4
6	14	16	17	218	14	380	110	8.7	7.9	808	6.1	3.6
7	14	16	18	217	14	382	111	8.8	7.8	987	5.7	3.3
8	15	21	18	217	14	380	110	9.2	7.5	1180	5.3	3.3
9	18	20	19	218	14	379	110	9.1	7.5	1170	5.1	3.3
10	18	19	50	216	15	379	110	8.7	7.3	1160	5.1	3.3
11	16	19	82	216	16	192	111	8.7	7.1	1160	5.2	3.3
12	16	19	82	118	16	8.8	112	8.7	7.1	1200	5.0	3.4
13	16	19	82	16	17	8.0	60	8.7	7.1	1230	4.7	3.6
14	17	19	82	15	18	7.9	8.2	8.7	6.8	1230	4.4	3.3
15	17	20	81	15	19	7.9	7.8	9.0	6.7	1230	4.1	3.3
16	16	26	81	15	19	7.9	7.5	9.4	6.6	1220	4.1	3.4
17	16	21	81	14	19	10	7.5	147	6.8	1220	3.8	3.9
18	16	21	81	14	20	7.9	7.4	172	6.8	1210	3.8	3.9
19	16	21	83	14	103	8.1	7.1	308	6.8	1210	4.0	3.9
20	16	20	80	14	196	8.3	7.3	589	6.8	1220	3.7	3.8
21	16	20	79	13	196	108	7.7	551	6.8	1210	3.8	3.8
22	15	21	76	12	121	194	7.9	550	6.9	1200	3.8	3.7
23	15	23	76	12	13	195	7.9	549	6.7	1190	3.6	3.0
24	16	24	76	13	12	195	7.9	548	6.4	1190	3.6	2.6
25	16	24	77	14	12	105	8.1	547	6.4	1190	3.7	2.6
26	16	24	94	14	12	8.4	8.8	548	6.8	779	3.8	2.6
27	16	25	77	14	12	7.9	9.2	548	6.8	10	3.8	2.6
28	16	24	77	14	13	7.9	9.2	546	6.9	7.3	3.6	2.4
29	18	24	77	14	13	8.3	11	546	7.0	6.9	3.3	2.3
30	19	20	125	15	---	7.5	9.4	546	7.0	6.4	3.3	3.5
31	19	---	222	15	---	7.5	---	546	---	6.4	3.6	---
TOTAL	496	611	2065	2783	989	3296.3	1064.9	7385.2	1053.6	24533.0	140.3	99.4
MEAN	16.0	20.4	66.6	89.8	34.1	106	35.5	238	35.1	791	4.53	3.31
MAX	19	26	222	220	196	382	112	589	545	1230	6.4	3.9
MIN	14	16	13	12	12	7.5	7.1	8.7	6.4	6.4	3.3	2.3
AC-FT	984	1210	4100	5520	1960	6540	2110	14650	2090	48660	278	197

CAL YR 1987 TOTAL 201540 MEAN 552 MAX 5370 MIN 13 AC-FT 399800
WTR YR 1988 TOTAL 44516.7 MEAN 122 MAX 1230 MIN 2.3 AC-FT 88300

08104100 LAMPASAS RIVER NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: April 1943 to June 1944, April 1963 to August 1964. Chemical and biochemical analyses: January 1981 to August 1982, January to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JAN												
22...	1500	11	547	7.80	13.0	4	0.50	11.5	110	0.6	240	31
MAY												
02...	1415	9.5	567	7.60	19.5	1	0.40	8.6	96	0	230	36
AUG												
04...	1240	6.4	538	8.20	27.5	1	0.30	11.6	150	0.2	220	34

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 WAT WH TOT FET 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											
22...	65	20	23	0.7	2.1	214	21	37	0.30	7.3	304
MAY											
02...	58	21	27	0.8	2.7	196	22	46	0.40	9.0	304
AUG											
04...	53	22	27	0.8	2.2	189	22	47	0.40	8.1	295

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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											
22...	1	<1	--	<0.010	1.00	<0.010	--	0.20	<0.010	0.8	<1
MAY											
02...	5	<1	--	<0.010	0.500	0.020	0.18	0.20	<0.010	2.0	1
AUG											
04...	<1	<1	0.390	0.010	0.400	0.010	0.49	0.50	<0.010	2.6	<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											
22...	46	1	2	2	<3	<5	8	<0.1	<1	<1.0	<3
MAY											
02...	47	<1	<1	<1	4	<5	7	<0.1	<1	<1.0	<3
AUG											
04...	45	<1	<1	1	<3	<5	8	<0.1	<1	<1.0	<3

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); 26 years (water years 1963-88) regulated, 859 ft³/s (622,300 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, 3,450 ft³/s Dec. 26 at 1100 hours (gage height, 11.35 ft); minimum daily, 52 ft³/s Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	91	97	336	95	94	244	98	782	638	1170	100
2	157	91	95	327	94	98	251	85	775	783	1220	106
3	124	89	94	329	92	206	219	81	1520	1300	1220	107
4	112	88	94	334	92	98	123	73	890	1320	1250	93
5	112	88	94	329	92	130	114	69	307	1230	1190	88
6	109	85	99	331	90	437	205	68	280	1350	1130	84
7	102	86	96	352	92	446	210	67	703	1140	1110	79
8	101	99	93	333	94	446	207	71	790	1410	1090	75
9	100	285	92	327	92	479	209	74	1070	1430	966	73
10	99	115	93	325	91	447	212	73	1070	1440	853	74
11	98	100	147	327	94	404	211	78	1060	1440	865	73
12	98	96	159	312	97	142	212	489	1070	1550	844	75
13	99	95	162	134	96	106	207	472	1070	1570	600	78
14	99	96	166	119	93	102	115	473	1070	1280	588	70
15	97	129	165	111	91	100	96	468	1060	1260	581	58
16	96	381	163	111	88	100	91	454	1050	1250	576	57
17	97	213	163	113	88	207	90	473	1050	1230	581	60
18	98	109	166	112	150	342	100	379	1050	1230	577	69
19	96	107	328	114	150	232	86	381	1050	1220	588	67
20	100	102	376	109	277	233	84	662	1040	1330	603	60
21	101	97	211	108	285	235	79	697	1030	1370	598	56
22	96	97	187	108	275	415	78	625	924	1230	597	54
23	100	99	180	103	119	426	79	600	634	1210	640	53
24	107	97	179	97	94	424	76	598	647	1200	640	52
25	106	153	182	96	92	403	74	596	651	1200	545	54
26	103	135	1870	94	92	248	73	608	883	1220	466	53
27	97	153	465	93	92	226	71	616	686	1420	111	62
28	92	150	280	93	92	216	68	611	658	1200	93	69
29	90	104	233	93	92	284	86	614	649	1140	89	68
30	92	98	208	95	---	318	133	655	643	1150	98	167
31	93	---	334	95	---	236	---	623	---	1190	102	---
TOTAL	3247	3728	7271	5960	3381	8280	4103	11931	26162	38931	21581	2234
MEAN	105	124	235	192	117	267	137	385	872	1256	696	74.5
MAX	176	381	1870	352	285	479	251	697	1520	1570	1250	167
MIN	90	85	92	93	88	94	68	67	280	638	89	52
AC-FT	6440	7390	14420	11820	6710	16420	8140	23670	51890	77220	42810	4430

CAL YR 1987 TOTAL 636902 MEAN 1745 MAX 6150 MIN 85 AC-FT 1263000
WTR YR 1988 TOTAL 136809 MEAN 374 MAX 1870 MIN 52 AC-FT 271400

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 1987 TO SEPTEMBER 1988

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (FTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT											
27...	0900	428	7.40	17.5	6	0.30	8.7	93	2.0	210	26
DEC											
15...	0920	460	8.70	3.5	2	2.5	12.5	96	0.5	230	31
FEB											
12...	1325	470	8.00	9.5	2	2.6	11.1	99	1.0	240	28
APR											
04...	1000	437	8.20	19.0	4	1.6	8.2	91	0.7	220	31
MAY											
26...	1135	334	7.80	25.0	3	1.1	9.0	111	0.7	160	1
AUG											
31...	1250	249	7.90	31.5	5	2.3	9.4	131	1.7	120	5

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 WAT WH TOT FET 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)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	0.4	[illegible]	184	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC											
15...	59	21	11	0.3	1.8	203	22	21	0.30	8.1	266
FEB											
12...	64	19	10	0.3	1.2	210	25	12	0.30	4.5	262
APR											
04...	56	19	11	0.3	1.3	187	28	14	0.30	7.6	249
MAY											
26...	37	16	9.6	0.3	2.1	157	17	11	0.40	10	197
AUG											
31...	30	11	5.4	0.2	2.2	115	11	6.2	0.30	11	146

DATE	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE 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)
OCT											
27...	3	<1	<0.010	<0.100	0.020	0.18	0.20	0.030	2.6	1	42
DEC											
15...	<1	<1	0.010	<0.100	0.010	0.29	0.30	<0.010	1.8	--	--
FEB											
12...	4	1	<0.010	<0.100	0.010	0.19	0.20	0.010	1.3	1	42
APR											
04...	2	<1	<0.010	<0.100	0.010	0.19	0.20	<0.010	2.4	--	--
MAY											
26...	1	1	<0.010	<0.100	0.010	0.89	0.90	0.010	2.8	2	35
AUG											
31...	8	<1	<0.010	<0.100	<0.010	--	0.70	0.010	2.9	2	27

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)
OCT										
27...	<1	<10	<1	40	<5	3	<0.1	<1	1.0	5
DEC										
15...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	<1	1	<1	5	<5	1	<0.1	<1	<1.0	14
APR										
04...	--	--	--	--	--	--	--	--	--	--
MAY										
26...	<1	<1	<1	7	<5	3	<0.1	<1	<1.0	<3
AUG										
31...	<1	<1	<1	7	<5	2	<0.1	<1	<1.0	4

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

PERIOD 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 daily contents, 37,910 acre-ft June 6-8 (elevation, 791.63 ft); minimum daily, 34,250 acre-ft Sept. 28 (elevation, 788.76 ft).

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

788.0	33,330	791.0	37,080
789.0	34,540	792.0	38,410
790.0	35,790		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36800	35910	36200	36690	36770	36730	36700	36140	35750	37330	37120	35730
2	36760	35880	36190	36720	36770	36730	36690	36110	36290	37280	37080	35680
3	36720	35860	36190	36730	36760	36730	36680	36080	37810	37250	37060	35630
4	36680	35830	36190	36730	36740	36730	36660	36050	37890	37190	37020	35530
5	36630	35820	36190	36730	36730	36730	36660	36020	37900	37150	36960	35460
6	36570	35790	36180	36760	36730	36730	36650	35980	37910	37110	36920	35400
7	36570	35750	36160	36760	36730	36740	36630	35970	37910	37060	36870	35340
8	36520	36010	36150	36760	36730	36760	36610	35940	37910	37020	36830	35280
9	36500	35980	36140	36740	36730	36740	36610	35930	37900	36960	36810	35220
10	36480	35930	36120	36740	36730	36720	36610	35920	37870	36910	36760	35160
11	36430	35910	36110	36740	36700	36720	36560	36030	37860	36890	36690	35090
12	36410	35890	36080	36740	36690	36720	36550	36070	37820	37700	36640	35020
13	36360	35870	36060	36760	36690	36680	36540	36070	37790	37750	36570	34980
14	36320	35860	36030	36760	36690	36650	36510	36050	37770	37740	36540	34920
15	36300	35920	36000	36760	36690	36630	36500	36030	37750	37700	36470	34890
16	36260	36010	35960	36780	36690	36600	36480	36020	37730	37670	36420	34840
17	36250	35980	35930	36780	36720	36700	36470	36000	37690	37640	36380	34810
18	36210	36000	35920	36800	36740	36700	36430	35960	37650	37580	36440	34760
19	36200	35970	36080	36780	36740	36700	36410	35930	37620	37540	36500	34730
20	36160	35960	36080	36780	36730	36690	36390	36000	37580	37600	36470	34680
21	36110	35930	36110	36780	36730	36680	36370	36060	37540	37600	36420	34630
22	36080	35930	36110	36780	36730	36660	36340	36010	37500	37570	36380	34580
23	36110	35920	36110	36770	36720	36690	36320	35980	37480	37540	36320	34530
24	36100	35930	36160	36760	36720	36700	36290	35940	37440	37490	36260	34480
25	36080	36200	36210	36740	36700	36690	36260	35920	37400	37450	36200	34430
26	36060	36200	36590	36730	36700	36690	36230	35890	37400	37410	36140	34370
27	36050	36240	36640	36730	36720	36660	36190	35860	37440	37360	36070	34320
28	36010	36210	36660	36730	36700	36660	36190	35820	37440	37300	36000	34250
29	35970	36210	36660	36740	36730	36700	36190	35790	37420	37250	35920	34300
30	35960	36210	36680	36760	---	36690	36190	35770	37380	37230	35870	34280
31	35920	---	36690	36770	---	36690	---	35750	---	37170	35790	---
MAX	36800	36240	36690	36800	36770	36760	36700	36140	37910	37750	37120	35730
MIN	35920	35750	35920	36690	36690	36600	36190	35750	35750	36890	35790	34250
(†)	790.10	790.33	790.70	790.76	790.73	790.70	790.31	789.97	791.23	791.07	790.00	788.79
(ϕ)	-915	+294	+478	+78	-39	-39	-503	-434	+1630	-210	-1382	-1508

CAL YR 1987 MAX 86000 MIN 35750 (ϕ) -8530
WTR YR 1988 MAX 37910 MIN 34250 (ϕ) -2550

(†) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
05...	1015	1.00	412	8.20	10.0	1.50	8.2	73	30	K19	200
05...	1016	2.50	--	--	--	--	--	--	--	--	--
05...	1017	10.0	412	8.20	10.0	--	8.2	73	--	--	--
05...	1019	20.0	412	8.20	10.0	--	8.2	73	--	--	--
05...	1021	30.0	412	8.20	10.0	--	8.2	73	--	--	--
05...	1023	40.0	412	8.20	10.0	--	8.0	72	--	--	--
05...	1025	50.0	412	8.20	10.0	--	7.6	68	--	--	--
05...	1027	60.0	412	8.20	10.0	--	7.4	66	--	--	--
05...	1029	65.0	412	8.20	10.0	--	7.5	67	--	--	200
APR											
18...	0915	1.00	380	8.30	18.5	2.00	9.6	106	<1	K13	180
18...	0916	3.30	--	--	--	--	--	--	--	--	--
18...	0917	10.0	380	8.30	18.5	--	9.6	106	--	--	--
18...	0919	20.0	380	8.30	17.5	--	9.2	100	--	--	--
18...	0921	30.0	390	8.10	15.5	--	7.8	81	--	--	--
18...	0923	40.0	400	7.90	14.0	--	6.1	61	--	--	--
18...	0925	50.0	400	7.90	13.0	--	5.1	50	--	--	--
18...	0927	60.0	400	7.80	13.0	--	4.5	44	--	--	--
18...	0929	66.0	409	7.50	12.5	--	1.4	14	--	--	200
JUL											
25...	0855	1.00	330	8.20	28.5	2.30	7.4	98	K7	K1	160
25...	0856	3.80	--	--	--	--	--	--	--	--	--
25...	0857	10.0	330	8.20	28.0	--	7.4	97	--	--	--
25...	0859	20.0	330	8.20	28.0	--	7.1	93	--	--	--
25...	0901	30.0	351	7.50	22.0	--	0	0	--	--	--
25...	0903	40.0	399	7.40	17.0	--	0	0	--	--	--
25...	0905	50.0	405	7.40	16.0	--	0	0	--	--	--
25...	0907	60.0	409	7.40	16.0	--	0	0	--	--	--
25...	0909	65.0	413	7.30	15.5	--	0	0	--	--	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 WAT WH TOT FET 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											
05...	25	58	13	8.4	0.3	2.4	174	15	11	0.30	11
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	19	58	14	8.8	0.3	2.4	184	15	11	--	11
APR											
18...	15	50	14	8.9	0.3	2.0	168	17	12	0.30	8.9
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	13	56	14	8.9	0.3	2.0	185	19	12	--	10
JUL											
25...	17	39	14	8.9	0.3	2.2	138	15	12	0.20	7.0
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	4	57	14	8.4	0.3	2.1	196	12	11	--	14

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304016097433101 - LAKE GEORGETOWN SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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										
05...	223	--	<0.010	0.300	0.030	0.27	0.30	0.010	<3	3
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	<0.010	0.300	0.030	0.47	0.50	0.010	<10	<10
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	231	0.190	0.010	0.200	0.080	0.32	0.40	0.010	9	16
APR										
18...	214	--	<0.010	0.100	0.030	0.27	0.30	<0.010	<3	1
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	<0.010	0.200	0.030	0.27	0.30	<0.010	20	<10
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	233	0.290	0.010	0.300	0.040	0.36	0.40	<0.010	5	170
JUL										
25...	181	--	<0.010	<0.100	<0.010	--	0.30	0.010	<3	<1
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	<0.010	<0.100	0.010	0.49	0.50	0.010	<10	<10
25...	--	--	<0.010	<0.100	<0.010	--	0.60	0.010	30	100
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	237	--	<0.010	<0.100	0.560	0.54	1.1	0.030	900	370

304006097452501 - LAKE GEORGETOWN SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
05...	1050	1.00	411	8.30	9.5	1.50	9.4	83	21	K6	200
05...	1052	10.0	411	8.30	9.5	--	9.3	82	--	--	--
05...	1054	20.0	411	8.30	9.5	--	9.3	82	--	--	--
05...	1056	30.0	411	8.30	9.5	--	9.3	82	--	--	--
05...	1058	40.0	411	8.30	9.5	--	9.3	82	--	--	--
05...	1100	50.0	402	8.20	9.0	--	9.2	80	--	--	--
05...	1102	56.0	402	8.20	8.5	--	9.0	78	--	--	190
APR											
18...	1005	1.00	380	8.30	19.0	1.30	9.3	104	K3	K6	190
18...	1007	10.0	380	8.30	19.0	--	9.4	105	--	--	--
18...	1009	20.0	380	8.30	17.0	--	9.5	102	--	--	--
18...	1011	30.0	400	8.00	15.5	--	6.6	68	--	--	--
18...	1013	40.0	403	7.80	14.5	--	4.1	42	--	--	--
18...	1015	50.0	408	7.70	13.5	--	2.2	22	--	--	--
18...	1017	59.0	408	7.70	13.5	--	1.8	18	--	--	190
JUL											
25...	1000	1.00	330	8.20	28.5	2.00	7.6	100	K5	K5	160
25...	1002	10.0	330	8.20	28.5	--	7.6	100	--	--	--
25...	1004	20.0	330	7.90	27.5	--	5.8	75	--	--	--
25...	1006	30.0	355	7.30	21.0	--	0	0	--	--	--
25...	1008	40.0	398	7.40	17.0	--	0	0	--	--	--
25...	1010	50.0	408	7.40	16.0	--	0	0	--	--	--
25...	1012	58.0	408	7.40	16.0	--	0	0	--	--	200

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304006097452501 - LAKE GEORGETOWN SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN										
05...	15	58	13	8.4	0.3	2.4	184	15	11	11
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	14	55	13	8.0	0.3	2.4	177	15	11	9.9
APR										
18...	15	53	13	8.3	0.3	2.0	171	17	11	8.2
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	5	55	13	8.3	0.3	2.0	186	18	11	9.7
JUL										
25...	14	39	14	8.7	0.3	2.2	141	13	12	7.1
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	10	57	15	8.6	0.3	2.0	194	12	11	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)
JAN										
05...	229	--	<0.010	0.200	0.020	0.38	0.40	0.030	4	<1
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	0.190	0.010	0.200	0.020	0.48	0.50	0.010	<10	<10
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	220	0.190	0.010	0.200	0.050	0.35	0.40	0,020	6	4
APR										
18...	215	--	<0.010	0.100	0.030	0.27	0.30	<0.010	<3	<1
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	<0.010	0.200	0.040	0.26	0.30	<0.010	<10	20
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	229	--	<0.010	0.300	0.040	0.36	0.40	0.010	4	5
JUL										
25...	181	--	<0.010	<0.100	<0.010	--	0.50	0.020	6	5
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	<0.010	<0.100	<0.010	--	0.80	0.020	10	<10
25...	--	--	<0.010	<0.100	0.040	0.46	0.50	0.020	320	260
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	235	--	<0.010	<0.100	0.450	0.55	1.0	0.010	570	290

304055097471301 - LAKE GEORGETOWN SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
05...	1130	1.00	411	8.20	9.5	1.30	8.2	73	32	K9	200
05...	1131	2.10	--	--	--	--	--	--	--	--	--
05...	1132	10.0	404	8.30	9.0	--	9.7	85	--	--	--
05...	1134	20.0	404	8.30	8.5	--	9.8	85	--	--	--
05...	1136	30.0	368	8.30	8.0	--	9.0	77	--	--	180
APR											
18...	1050	1.00	389	8.20	19.5	0.90	8.2	92	K8	K3	190
18...	1051	1.50	--	--	--	--	--	--	--	--	--
18...	1052	10.0	398	8.10	17.0	--	7.8	83	--	--	--
18...	1054	20.0	398	7.90	16.0	--	6.1	64	--	--	--
18...	1056	30.0	410	7.70	15.0	--	2.4	25	--	--	200
JUL											
25...	1045	1.00	335	8.10	30.0	0.85	7.0	95	26	20	160
25...	1046	1.40	--	--	--	--	--	--	--	--	--
25...	1047	10.0	335	8.00	29.0	--	5.8	77	--	--	--
25...	1049	20.0	335	7.40	28.0	--	0	0	--	--	--
25...	1051	30.0	377	7.20	21.0	--	0	0	--	--	180

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

304055097471301 - LAKE GEORGETOWN SITE CC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN										
05...	15	58	13	8.4	0.3	2.5	184	14	11	11
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	16	51	12	7.1	0.2	2.3	161	15	9.2	8.9
APR										
18...	16	52	15	9.2	0.3	2.0	176	18	12	8.5
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	11	56	14	8.6	0.3	1.9	187	18	12	9.5
JUL										
25...	13	40	14	9.2	0.3	2.2	145	14	11	7.7
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	5	50	13	7.4	0.3	2.3	174	11	10	12

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (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, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
JAN										
05...	228	0.190	0.010	0.200	0.020	0.28	0.30	0.010	4	1
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
05...	--	0.190	0.010	0.200	0.030	0.27	0.30	0.010	<10	<10
05...	202	0.190	0.010	0.200	0.070	0.33	0.40	0.020	16	7
APR										
18...	222	0.090	0.010	0.100	0.030	0.27	0.30	<0.010	5	3
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	0.180	0.020	0.200	0.040	0.26	0.30	<0.010	<10	<10
18...	232	0.180	0.020	0.200	0.090	0.41	0.50	0.010	5	28
JUL										
25...	185	--	<0.010	<0.100	<0.010	--	0.60	0.030	4	3
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	<0.010	<0.100	<0.010	--	0.60	0.030	10	<10
25...	--	--	<0.010	<0.100	0.110	0.49	0.60	0.050	20	90
25...	212	--	<0.010	<0.100	0.760	0.74	1.5	0.040	1000	480

Georgetown Lake AC (304016097433101)

Phytoplankton Analyses September 1987 to October 1988

Date	1-5-88
Time	1016
TOTAL CELLS/mL	20,121
NUMBER OF SPECIES	25
DEPTH COLLECTED (ft.)	2.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	135
Chlamydomonas sp.	67
Crucigenia tetrapedia	67
Oocystis sp.	203
CHRYSOPHYTA (Golden-brown algae)	
Chrysochromulina parva	
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	11,008
Aphanocapsa elachista	405
Aphanothece saxicola	6,686
Chroococcus limneticus	473
Dactylococcopsis acicularis	67
Synechococcus sp.	540
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	229
Cyclotella stelligera	47
Melosira italica	17
Melosira sp.	40
Order Pennales	
Achnanthes minutissima	5
Anomoeoneis sp.	9
Cymbella microcephala var. *crassa*	13
Diploneis sp.	5
Navicula pupula var. *rectangularis*	9
Navicula sp.	5
Nitzschia palea	9
Nitzschia sp.	5
Synedra ulna	5
Synedra sp.	5

08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX--Continued

Georgetown Lake CC (304055097471301)

Phytoplankton Analyses September 1987 to October 1988

Date	1-5-88
Time	1131
TOTAL CELLS/mL	9,740
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	2.1

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	169
Ankistrodesmus nannoselene	56
Crucigenia tetrapedia	56
Dictyosphaerium pulchellum	563
Gloeocystis sp.	506
Mesotaenium sp.	56
Scenedesmus quadricauda	225
Scenedesmus serratus	225
Tetraedron minimum	56
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon sp.	56
Kephyrion ovum	169
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	732
Aphanocapsa delicatissima	2701
Aphanocapsa elachista	281
Aphanothece saxicola	394
Chroococcus limneticus	844
Chroococcus sp.	112
Microcystis sp.	844
Synechococcus sp.	1125
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	169
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	18
Cyclotella stelligera	3
Melosira italica	46
Melosira lirata	6
Melosira sp.	36
Stephanodiscus hantzschii	3
Order Pennales	
Achnanthes lanceolata var. *dubia*	14
Achnanthes minutissima	14
Anomoeoneis vitrea	76
Cymbella microcephala var. crassa	51
Cymbella sp.	14
Navicula sp.	25
Nitzschia denticula	39
Nitzschia dissipata	14
Nitzschia linearis	14
Nitzschia sp.	14
Pleurosigma salinarum	14

Georgetown Lake AC (304016097433101)

Phytoplankton Analyses September 1987 to October 1988

Date	4-18-88
Time	0916
TOTAL CELLS/mL	8,512
NUMBER OF SPECIES	19
DEPTH COLLECTED (ft.)	3.3

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Crucigenia tetrapedia	228
Golenkinia radiata	38
Kirchneriella obesa	114
Mesotaenium sp.	76
Oocystis sp.	76
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon divergens	1368
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1862
Aphanotheca sp.	1026
Chroococcus limneticus	874
Chroococcus multicoloratus	456
Chroococcus sp.	228
Marssoniella elegans	190
Merismopedia sp.	152
Synechococcus lineare	836
Synechococcus sp.	760
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	114
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	19
Cyclotella sp.	19
Order Pennales	
Asterionella formosa	76

Georgetown Lake CC (304055097471301)

Phytoplankton Analyses September 1987 to October 1988

Date	4-18-88
Time	1051
TOTAL CELLS/mL	6294
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	1.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	34
Kirchneriella lunaris	68
Kirchneriella obesa	68
Mesotaenium sp.	34
Scenedesmus bijuga	103
Scenedesmus quadricauda	137
Tetraedron trigonum var. *setigerum*	34
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon divergens	274
Kephyrion sp.	34
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	1471
Aphanothece nidulans	582
Aphanothece saxicola	376
Chroococcus limneticus	205
Chroococcus multicoloratus	992
Chroococcus sp.	137
Dactylococcopsis acicularis	137
Dactylococcopsis fascicularis	34
Gomphosphaeria lacustris	376
Synechococcus lineare	308
Synechococcus sp.	616
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	34
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	5
Melosira granulata	102
Melosira italica	30
Order Pennales	
Fragilaria construens var. *venter*	17
Navicula variostriata	17
Nitzschia denticula	69

Lake Georgetown AC (304016097433101)

Phytoplankton Analyses September 1987 to October 1988

Date	7-25-88
Time	0856
TOTAL CELLS/mL	6,201
NUMBER OF SPECIES	37
DEPTH COLLECTED (ft.)	3.8

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas globosa?	20
Chlamydomonas sp.	80
Cosmarium sp. 1	1880
Cosmarium sp. 2	40
Kirchneriella sp.	60
Pediastrum simplex	169
Scenedesmus carinatus?	40
Staurastrum sp.	20
Tetraedron minimum	90
Tetraedron muticum	10
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	60
CYANOPHYTA (blue-green algae)	
Anabaena sp.	318
Aphanocapsa delicatissima	289
Chroococcus dispersus	99
Chroococcus sp.	20
Spirulina laxa	50
Synechococcus sp.	766
EUGLENOPHYTA (euglenoid algae)	
Phacotus lenticularis	30
Phacus sp.	10
Trachelomonas volvocina	20
Trachelomonas sp.	10
PYRRHOPHYTA (dinoflagellates)	
Ceratium hirundinella	10
Glenodinium sp.	20
Gymnodinium sp.	10
unidentified dinoflagellates	30
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	20
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella ocellata	20
Stephanodiscus vestibulis	70
Order Pennales	
Achnanthes lanceolata var. *dubia*	10
Achnanthes minutissima	30
Amphora perpusilla	40
Anomoeoneis vitrea	776
Fragilaria brevistriata var. *inflata*	99
Nitzschia holsatica	10
Nitzschia sp.	10
Synedra delicatissima	945
Synedra radians	20

Lake Georgetown CC (304055097471301)

Phytoplankton Analyses September 1987 to October 1988

Date	7-25-88
Time	1046
TOTAL CELLS/mL	10,211
NUMBER OF SPECIES	40
DEPTH COLLECTED (ft.)	1.4

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Chlamydomonas sp.	174
Cosmarium sp.	1138
Crucigenia tetrapedia	506
Desmidium? sp.	253
Euastrum sp.	32
Kirchneriella sp.	395
Oocystis sp.	63
Pandorina morum	316
Pediastrum simplex	142
Scenedesmus abundans	63
Scenedesmus carinatus?	126
Tetraedron minimum	47
Tetraedron muticum	32
Tetraedron trigonum	16
Tetrastrum staurogeniformae	63
CHRYSOPHYTA (golden-brown algae)	
small chrysophyte flagellates	79
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	332
Chroococcus dispersus	316
Chroococcus sp.	174
Merismopedia punctata	126
Merismopedia tenuissima	253
Schizothrix calcicola	111
Spirulina laxa	95
Synechococcus sp.	4488
EUGLENOPHYTA (euglenoid algae)	
Euglena acus	32
Euglena sp.	47
Phacotus lenticularis	190
Trachelomonas volvocina	16
Trachelomonas sp.	16
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	32
Gymnodinium sp.	111
unidentified dinoflagellates	95
CRYPTOPHYTA (cryptomonads)	
Cryptomonas erosa	47
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	63
Cyclotella ocellata	63
Melosira italica	32
Stephanodiscus vestibulis	79
Order Pennales	
Nitzschia denticula	16
Nitzschia holsatica	16
Synedra delicatissima	16

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. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years (water years 1969-79) unregulated, 88.1 ft³/s (63,830 acre-ft/yr); 9 years (water years 1980-88) regulated, 72.9 ft³/s (52,820 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, 572 ft³/s Nov. 25 at 0130 hours (gage height, 7.09 ft); minimum daily, 1.1 ft³/s Mar. 1-2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.5	5.3	9.6	7.4	1.1	8.6	8.6	5.3	5.3	5.5	5.3
2	5.1	5.3	4.0	9.6	7.4	1.1	8.6	8.6	5.8	5.3	5.5	5.3
3	5.1	4.7	1.5	9.6	7.4	3.2	8.5	8.6	27	5.3	5.5	5.3
4	5.1	4.0	3.6	8.3	7.4	6.9	8.2	8.6	8.2	5.3	5.5	5.3
5	4.9	4.4	8.6	8.0	7.4	7.1	8.7	7.6	7.1	5.3	5.5	5.3
6	4.9	4.4	8.6	8.0	7.7	7.3	8.9	5.3	6.8	5.3	5.5	5.3
7	4.8	4.3	8.6	8.0	7.7	7.3	8.9	5.3	6.6	5.3	5.5	5.3
8	4.9	8.8	8.6	8.0	7.7	7.1	8.9	5.3	6.8	5.3	5.5	5.3
9	5.1	5.2	8.6	8.0	7.7	7.1	9.1	5.3	6.6	5.3	5.5	5.3
10	5.3	4.5	8.6	8.0	7.7	7.1	8.9	5.3	6.6	5.3	5.5	5.3
11	5.3	4.4	8.6	7.7	7.7	7.2	8.9	5.4	6.6	5.3	5.5	5.2
12	5.4	4.3	8.4	7.7	7.7	7.2	9.1	5.2	6.5	5.5	5.4	5.4
13	6.1	4.2	8.0	7.7	7.7	7.0	8.7	5.1	6.3	5.5	5.3	5.5
14	5.8	4.2	8.0	7.7	7.7	7.1	8.6	5.1	6.3	5.5	5.3	5.5
15	5.8	4.4	8.1	7.7	7.7	7.1	8.6	5.1	6.3	5.5	5.3	5.5
16	6.0	5.3	8.3	7.6	7.7	6.2	8.6	5.1	6.3	5.5	5.3	5.5
17	5.8	4.4	8.3	7.5	7.7	9.2	8.3	5.1	6.3	5.5	5.3	5.5
18	5.8	4.4	8.2	7.7	7.9	8.8	8.3	5.3	6.5	5.5	5.9	5.5
19	5.8	4.2	10	7.8	7.7	8.7	8.3	5.3	6.6	5.5	5.8	5.5
20	5.9	4.1	9.1	8.0	8.0	8.6	8.3	5.7	6.6	5.8	5.8	5.5
21	6.0	4.0	8.9	7.5	8.0	8.6	8.3	6.1	6.6	5.3	5.4	5.5
22	5.8	4.0	8.8	7.4	7.8	8.6	8.3	5.1	6.6	5.3	5.1	5.3
23	5.8	4.0	8.3	7.4	8.0	8.6	8.3	5.1	6.6	5.3	5.3	5.3
24	5.5	4.1	8.3	7.4	8.0	8.6	8.3	5.1	6.4	5.3	5.4	5.3
25	5.5	37	8.3	7.4	8.0	8.6	8.7	5.1	6.2	5.4	5.6	5.3
26	5.5	6.9	8.3	7.4	8.0	8.6	8.6	5.1	6.2	5.5	5.3	5.3
27	5.5	6.4	14	7.4	8.0	8.6	8.4	5.1	5.8	5.5	5.3	5.3
28	5.5	6.0	10	7.4	7.8	8.6	8.3	5.2	5.7	5.5	5.3	5.3
29	5.5	5.8	9.9	7.2	4.4	8.8	8.9	5.3	5.3	5.5	5.3	5.6
30	5.5	5.4	9.9	7.1	---	8.6	8.7	5.3	5.3	5.5	5.3	5.6
31	5.5	---	9.9	7.3	---	8.6	---	5.3	---	5.5	5.3	---
TOTAL	169.5	178.6	255.6	243.1	221.0	227.2	257.8	178.7	211.8	167.7	168.5	161.4
MEAN	5.47	5.95	8.25	7.84	7.62	7.33	8.59	5.76	7.06	5.41	5.44	5.38
MAX	6.1	37	14	9.6	8.0	9.2	9.1	8.6	27	5.8	5.9	5.6
MIN	4.8	4.0	1.5	7.1	4.4	1.1	8.2	5.1	5.3	5.3	5.1	5.2
AC-FT	336	354	507	482	438	451	511	354	420	333	334	320

CAL YR 1987 TOTAL 56016.16 MEAN 153 MAX 1350 MIN .71 AC-FT 111100
WTR YR 1988 TOTAL 2440.9 MEAN 6.67 MAX 37 MIN 1.1 AC-FT 4840

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN 05...	1245	9.2	426	7.90	10.0	7	1.5	--	--	--	220
APR 18...	1215	9.0	376	8.20	19.5	2	1.7	8.8	99	0.5	190
JUL 25...	1215	5.3	337	8.10	29.5	4	3.4	7.8	105	0.2	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 WAT WH TOT FET 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 05...	27	63	15	8.4	0.3	2.3	192	18	11	0.20	11
APR 18...	16	50	15	8.7	0.3	2.0	171	19	12	0.30	8.9
JUL 25...	16	40	15	9.7	0.3	2.1	146	15	12	0.20	7.5

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
JAN 05...	244	7	3	<0.010	0.500	0.020	0.58	0.60	0.010	3.1	1
APR 18...	218	20	20	<0.010	0.300	0.030	0.27	0.30	<0.010	3.6	1
JUL 25...	189	8	3	<0.010	0.200	0.030	0.37	0.40	0.010	3.6	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 05...	43	<1	<5	1	<3	<5	3	<0.1	<1	<1.0	3
APR 18...	36	<1	<1	3	<3	<5	5	<0.1	<1	<1.0	<3
JUL 25...	35	<1	<1	1	26	<5	2	<0.1	<1	<1.0	5

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.--20 years (water years 1969-88), 50.6 ft³/s (5.17 in/yr), 36,590 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)
Nov. 25	0300	*2,270	a*6.57	No other peak greater than base discharge.			

a From floodmark.

Minimum daily discharge, 0.12 ft³/s Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.8	13	20	11	7.2	8.0	5.0	1.9	.65	.29	.68
2	4.2	3.5	12	20	10	7.4	9.0	4.1	7.4	.65	.29	.77
3	4.4	1.8	11	20	9.9	8.3	9.5	2.0	101	.65	.29	.71
4	4.0	1.0	11	18	11	7.6	7.7	1.6	21	.60	.32	.53
5	3.8	2.1	9.5	17	11	8.3	6.7	1.3	15	.53	.35	.53
6	3.8	3.3	11	16	9.9	11	5.3	1.1	11	.53	.35	.68
7	3.6	1.5	10	17	11	9.4	4.8	.92	6.8	.53	.33	.40
8	2.7	28	7.9	17	11	7.0	4.9	2.8	8.4	.53	.44	.15
9	2.4	18	8.1	16	10	7.0	6.5	2.4	6.2	.51	.35	.39
10	2.5	7.5	9.2	16	9.7	7.3	9.2	1.3	3.3	.53	.35	.42
11	2.8	5.3	9.0	15	10	8.7	7.8	1.4	3.5	.64	.42	.38
12	3.0	4.4	7.5	14	9.8	8.8	4.8	3.1	5.1	1.3	.43	.38
13	3.0	3.8	8.4	14	8.8	8.4	6.9	1.9	7.5	111	.43	.25
14	1.4	3.6	8.8	14	11	7.4	6.5	1.9	3.9	20	.43	.24
15	1.7	7.4	8.1	14	10	6.3	4.4	4.0	2.9	9.0	.41	.21
16	2.0	12	6.9	14	7.9	6.7	4.8	3.6	2.8	2.9	.35	.16
17	2.0	8.8	7.8	15	8.2	10	6.1	1.3	2.6	3.7	.35	.21
18	2.6	8.3	7.3	15	11	18	5.6	.72	1.8	2.5	10	.24
19	2.6	8.6	17	13	9.9	17	3.1	.55	2.6	1.1	1.6	.24
20	1.2	7.2	29	12	11	12	3.1	4.2	4.8	1.2	.48	.23
21	.90	7.6	21	12	12	10	2.9	17	2.2	1.1	.33	.16
22	.39	8.4	16	13	11	8.4	3.0	13	1.2	.80	.24	.15
23	.43	7.9	14	13	8.1	7.3	3.9	6.5	1.1	.73	.24	.16
24	.43	6.9	14	13	7.8	7.6	4.9	3.9	.98	.46	.36	.24
25	2.9	341	14	12	7.6	7.0	4.3	2.1	.79	.33	.45	.33
26	4.2	22	163	11	7.6	7.6	2.9	1.7	1.1	.32	.86	.21
27	1.8	21	45	11	8.3	9.4	1.6	1.3	.95	.34	.54	.14
28	3.7	16	29	10	10	8.7	1.0	1.0	3.9	.29	.52	.12
29	3.8	14	24	10	9.8	7.9	4.3	2.3	.94	.29	.75	.22
30	3.8	13	22	11	---	7.3	6.8	2.4	.72	.29	.92	.64
31	2.0	---	21	12	---	7.2	---	2.1	---	.29	.82	---
TOTAL	80.65	596.7	595.5	445	284.3	272.2	160.3	98.49	233.38	164.29	24.29	10.17
MEAN	2.60	19.9	19.2	14.4	9.80	8.78	5.34	3.18	7.78	5.30	.78	.34
MAX	4.4	341	163	20	12	18	9.5	17	101	111	10	.77
MIN	.39	1.0	6.9	10	7.6	6.3	1.0	.55	.72	.29	.24	.12
AC-FT	160	1180	1180	883	564	540	318	195	463	326	48	20
CFSM	.02	.15	.14	.11	.07	.07	.04	.02	.06	.04	.01	.00
IN.	.02	.17	.17	.12	.08	.08	.04	.03	.07	.05	.01	.00

CAL YR 1987 TOTAL 39214.45 MEAN 107 MAX 5090 MIN .39 AC-FT 77780 CFSM .81 IN. 10.97
WTR YR 1988 TOTAL 2965.27 MEAN 8.10 MAX 341 MIN .12 AC-FT 5880 CFSM .06 IN. .83

08105100 BERRY CREEK NEAR GEORGETOWN, TX

LOCATION.--Lat 30°41'28", long 97°39'21", Williamson County, Hydrologic Unit 1207U205, 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 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. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years, 26.4 ft³/s (4.31 in/yr), 19,130 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.

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. 26	1030	*911	*624				

Minimum discharge, no flow July 26 to Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	4.9	4.4	11	6.6	7.6	4.2	4.7	2.4	1.1	.00	.00
2	6.8	6.4	4.3	11	6.6	8.0	4.1	4.5	16	1.1	.00	.00
3	6.5	6.1	4.6	11	6.7	7.4	4.3	4.7	103	1.2	.00	.00
4	6.4	4.8	4.1	10	6.1	7.2	5.0	5.5	40	1.2	.00	.00
5	6.2	5.0	4.1	11	6.0	6.3	5.7	5.7	4.8	1.1	.00	.00
6	6.1	5.4	4.1	11	5.9	6.9	4.5	5.3	2.9	1.0	.00	.00
7	5.9	5.3	4.1	11	5.9	7.1	5.2	4.8	2.8	.93	.00	.00
8	5.9	11	4.0	11	5.9	9.0	4.6	3.6	2.7	.86	.00	.00
9	5.8	4.6	3.8	11	5.9	7.9	4.7	1.6	2.4	.88	.00	.00
10	5.6	4.3	3.8	11	6.0	8.5	3.7	1.4	2.2	.94	.00	.00
11	5.6	4.3	3.6	11	7.4	7.6	4.3	1.8	2.0	1.0	.00	.00
12	5.5	4.3	3.3	10	8.1	6.5	6.5	1.8	1.9	1.4	.00	.00
13	5.4	4.3	3.3	10	7.7	6.6	8.7	1.5	1.7	1.2	.00	.00
14	5.4	4.2	3.2	10	8.1	7.8	8.3	1.3	1.3	1.0	.00	.00
15	5.2	4.2	4.1	9.3	8.4	5.8	9.1	1.3	1.3	.97	.00	.00
16	5.2	7.6	4.3	9.6	9.6	4.8	6.6	1.1	1.3	.89	.00	.00
17	5.2	4.3	4.3	9.9	8.2	5.1	7.0	1.0	1.3	.78	.00	.00
18	5.5	4.3	4.3	9.9	8.6	3.9	7.4	.99	1.4	.57	.00	.00
19	5.1	4.2	8.3	9.9	9.9	4.0	6.9	1.0	1.5	.44	.00	.00
20	5.1	4.3	4.1	9.1	7.4	4.4	3.1	1.7	1.4	.68	.00	.00
21	4.9	4.2	4.7	8.9	7.4	4.4	2.5	5.4	1.4	.59	.00	.00
22	4.9	4.1	4.3	8.5	6.1	5.3	2.4	1.1	1.4	.26	.00	.00
23	5.1	4.4	4.3	9.1	5.4	4.7	3.0	1.2	1.3	.25	.00	.00
24	5.2	4.1	4.3	11	5.3	4.5	3.9	1.3	1.2	.21	.00	.00
25	4.9	15	5.3	7.9	5.5	5.1	3.9	1.8	1.2	.07	.00	.00
26	4.8	4.2	234	9.6	5.1	5.9	3.9	1.9	1.4	.00	.00	.00
27	4.8	5.5	47	9.9	6.0	4.1	4.2	2.3	1.4	.00	.00	.00
28	4.6	5.2	18	8.5	6.3	6.5	4.2	2.4	1.3	.00	.00	.00
29	4.5	5.2	13	6.9	7.0	6.3	6.2	2.3	1.4	.00	.00	.00
30	4.5	5.0	12	6.9	---	4.1	5.0	2.6	1.3	.00	.00	.00
31	4.3	---	12	6.7	---	4.2	---	2.6	---	.00	.00	---
TOTAL	168.0	160.7	443.0	301.6	199.1	187.5	153.1	80.19	207.6	20.62	0.00	0.00
MEAN	5.42	5.36	14.3	9.73	6.87	6.05	5.10	2.59	6.92	.67	.00	.00
MAX	7.1	15	234	11	9.9	9.0	9.1	5.7	103	1.4	.00	.00
MIN	4.3	4.1	3.2	6.7	5.1	3.9	2.4	.99	1.2	.00	.00	.00
AC-FT	333	319	879	598	395	372	304	159	412	41	.0	.0
CFSM	.07	.06	.17	.12	.08	.07	.06	.03	.08	.01	.00	.00
IN.	.08	.07	.20	.14	.09	.08	.07	.04	.09	.01	.00	.00

CAL YR 1987 TOTAL 17762.8 MEAN 48.7 MAX 3610 MIN 3.2 AC-FT 35230 CFSM .59 IN. 7.95
WTR YR 1988 TOTAL 1921.41 MEAN 5.25 MAX 234 MIN .00 AC-FT 3810 CFSM .06 IN. .86

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); 9 years (water years 1980-88) regulated, 203 ft³/s (147,100 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, 3,010 ft³/s June 3 at 1600 hours (gage height, 8.67 ft); minimum daily, 9.9 ft³/s Oct. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	40	62	93	67	51	50	40	34	23	12	12
2	62	41	59	89	61	47	49	39	59	21	11	13
3	48	42	57	95	60	44	50	39	1160	21	11	13
4	46	40	54	89	59	46	49	31	263	23	12	11
5	46	39	54	85	60	49	48	29	93	24	12	11
6	46	40	57	86	59	53	46	30	67	22	13	12
7	46	42	58	89	58	54	45	30	57	22	12	11
8	46	128	56	84	68	55	44	31	50	21	10	11
9	46	113	54	83	64	49	47	32	48	20	11	10
10	44	53	56	83	62	47	53	29	42	20	11	11
11	44	46	55	82	59	49	49	30	35	20	11	11
12	42	45	54	80	60	49	46	35	32	27	13	11
13	41	43	53	77	58	48	45	31	35	101	11	12
14	40	42	54	74	60	47	48	29	39	38	12	11
15	40	43	53	75	58	46	45	28	32	21	11	11
16	40	89	52	78	58	47	44	27	32	16	10	11
17	40	63	50	78	58	72	45	27	31	14	10	12
18	40	51	52	78	72	71	44	25	30	14	37	12
19	40	49	111	75	67	67	41	23	29	14	38	12
20	40	48	101	71	62	56	39	28	28	16	15	11
21	40	47	85	65	61	51	38	99	27	16	14	10
22	40	48	72	70	60	51	37	40	28	15	13	9.9
23	39	49	68	70	58	49	37	31	28	13	12	9.9
24	42	47	67	70	53	49	38	26	26	14	12	10
25	42	608	67	64	55	51	40	23	26	12	12	11
26	42	104	766	66	50	50	39	23	29	13	13	12
27	42	99	236	65	54	50	35	22	29	13	14	11
28	41	80	133	67	52	50	20	22	26	13	12	12
29	43	69	108	65	54	52	47	33	24	13	12	14
30	44	65	100	64	---	50	48	29	23	13	13	16
31	42	---	100	67	---	49	---	26	---	12	12	---
TOTAL	1342	2313	3004	2377	1727	1599	1306	987	2462	645	422	344.8
MEAN	43.3	77.1	96.9	76.7	59.6	51.6	43.5	31.8	82.1	20.8	13.6	11.5
MAX	62	608	766	95	72	72	53	99	1160	101	38	16
MIN	39	39	50	64	50	44	20	22	23	12	10	9.9
AC-FT	2660	4590	5960	4710	3430	3170	2590	1960	4880	1280	837	684

CAL YR 1987 TOTAL 140264 MEAN 384 MAX 11800 MIN 39 AC-FT 278200
WTR YR 1988 TOTAL 18528.8 MEAN 50.6 MAX 1160 MIN 9.9 AC-FT 36750

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)
NOV 02...	0915	42	556	7.70	20.0	1	1.8	7.2	80	0.4
DEC 17...	0905	50	560	8.30	6.5	6	0.60	11.3	92	0.5
FEB 12...	1120	61	553	7.80	7.5	2	0.40	11.4	96	1.2
APR 06...	0815	47	514	7.80	20.0	14	6.0	7.4	82	1.2
MAY 31...	0850	29	506	7.70	24.0	3	3.2	6.7	81	1.4
AUG 31...	1130	12	470	8.00	28.0	13	12	7.2	94	1.8

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 02...	270	30	80	16	16	0.4	1.7	236	17	22
DEC 17...	270	34	81	16	16	0.4	1.8	235	19	23
FEB 12...	270	36	83	15	15	0.4	1.4	233	22	21
APR 06...	240	24	70	15	17	0.5	1.4	213	23	23
MAY 31...	230	24	67	15	20	0.6	2.1	205	21	26
AUG 31...	190	19	48	17	24	0.8	2.2	171	19	32

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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)
NOV 02...	0.20	9.3	304	3	1	2.27	0.030	2.30	0.030	0.27
DEC 17...	0.20	6.4	304	<1	<1	2.27	0.030	2.30	<0.010	--
FEB 12...	0.30	4.3	302	5	3	2.07	0.030	2.10	0.020	0.28
APR 06...	0.30	8.3	286	6	4	1.17	0.030	1.20	0.070	0.43
MAY 31...	0.30	7.9	282	40	24	0.870	0.030	0.900	0.090	0.51
AUG 31...	0.20	11	256	21	<1	0.280	0.020	0.300	0.010	0.79

DATE	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)	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)
NOV 02...	0.30	0.040	2.6	1	49	<0.5	<1	<10	<3	<1
DEC 17...	0.20	0.150	1.5	--	--	--	--	--	--	--
FEB 12...	0.30	0.170	1.5	<1	46	--	<1	1	--	1
APR 06...	0.50	0.200	2.8	--	--	--	--	--	--	--
MAY 31...	0.60	0.240	4.5	3	45	--	<1	<1	--	<1
AUG 31...	0.80	0.320	6.4	3	35	--	3	<1	--	<1

08105300 SAN GABRIEL RIVER NEAR WEIR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	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										
02...	9	<5	5	<0.1	<10	<1	<1.0	310	<6	3
DEC										
17...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	6	<5	6	<0.1	--	<1	<1.0	--	--	4
APR										
06...	--	--	--	--	--	--	--	--	--	--
MAY										
31...	17	<5	5	<0.1	--	<1	<1.0	--	--	3
AUG										
31...	9	<5	3	<0.1	--	<1	4.0	--	--	4

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 daily contents, 75,330 acre-ft June 5 (elevation, 506.15 ft); minimum daily, 60,980 acre-ft Sept. 28-29 (elevation, 502.93 ft).

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

502.0	57,280	504.0	65,510	506.0	74,610
503.0	61,260	505.0	69,970	507.0	79,510

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66970	67010	70830	68260	66880	66170	66880	66040	67460	67050	65380	63050
2	66830	67050	70560	68170	66920	66120	66700	66120	68840	67010	65380	63010
3	66610	67140	70380	68120	66970	65900	66520	66170	74090	66920	65290	62880
4	66480	67190	70100	68030	66970	65860	66340	66170	75140	66700	65240	62710
5	66340	67230	69970	67900	67050	65950	66170	66170	75330	66880	65240	62630
6	66170	67230	69830	67900	67050	65990	65990	66170	75090	66830	65160	62540
7	65990	67230	69610	67770	67140	66170	65900	66170	74560	66700	65070	62500
8	65820	68440	69380	67630	67230	66300	65900	66260	73950	66610	64940	62460
9	65820	68710	69200	67500	67320	66340	65900	66260	73240	66520	64890	62380
10	65770	68440	68980	67320	67360	66430	65900	66260	72720	66570	64810	62340
11	65820	68210	68710	67230	67360	66520	65860	66520	71930	66660	64760	62210
12	65860	68030	68440	67050	67410	66520	65820	66700	71290	66660	64680	62130
13	65860	67810	68210	66880	67500	66520	65820	66700	70650	66700	64590	62090
14	65900	67630	68030	66740	67540	66520	65860	66700	69970	66740	64500	62040
15	65950	67540	67720	66610	67540	66570	65900	66610	69380	66740	64420	61960
16	65990	68030	67410	66520	67590	66610	65950	66610	68840	66700	64370	61880
17	66080	67900	67190	66430	67720	67230	66040	66610	68480	66700	64330	61840
18	66170	67770	66970	66300	67940	67280	66040	66520	68080	66660	64240	61840
19	66260	67500	67500	66170	67940	67410	66040	66430	67680	66520	64240	61710
20	66260	67320	67500	65950	67720	67540	65990	66880	67320	66570	64160	61630
21	66260	67140	67410	65770	67500	67590	65990	67280	66970	66520	64070	61590
22	66340	67010	67280	65770	67320	67720	65990	67230	66790	66480	63990	61510
23	66480	66880	67190	65950	67100	67900	65950	67140	66700	66390	63900	61470
24	66570	66660	67050	66040	66920	67940	65950	67050	66700	66260	63820	61340
25	66700	70600	67010	66170	66790	67720	65900	67010	66660	66120	63730	61260
26	66790	70650	68300	66260	66660	67590	65820	66970	67280	65990	63730	61180
27	66790	71240	68620	66340	66520	67410	65770	66880	67320	65820	63560	61100
28	66830	71200	68660	66430	66340	67320	65730	66790	67320	65730	63470	60980
29	66880	71060	68530	66520	66260	67230	65820	66970	67230	65600	63350	60980
30	66920	71010	68480	66700	---	67050	65990	67050	67140	65510	63260	61180
31	66970	---	68440	66740	---	66970	---	67140	---	65460	63180	---
MAX	66970	71240	70830	68260	67940	67940	66880	67280	75330	67050	65380	63050
MIN	65770	66660	66970	65770	66260	65860	65730	66040	66660	65460	63180	60980
(↑)	504.33	505.23	504.66	504.27	504.17	504.33	504.11	504.37	504.37	503.99	503.46	502.98
(Φ)	-133	+4047	-2576	-1693	-487	+709	-974	+1151	00	-1680	-2287	-1996

CAL YR 1987 MAX 184200 MIN 65730 (Φ) -37960
WTR YR 1988 MAX 75330 MIN 60980 (Φ) -5920

(↑) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
21...	0915	1.00	386	8.40	7.5	0.50	11.3	95	K2	K6	170
21...	0916	0.85	--	--	--	--	--	--	--	--	--
21...	0917	10.0	386	8.40	7.0	--	11.3	94	--	--	--
21...	0919	20.0	386	8.40	7.0	--	11.3	94	--	--	--
21...	0921	30.0	386	8.40	7.0	--	11.2	93	--	--	--
21...	0923	44.0	386	8.30	7.0	--	11.2	93	--	--	170
APR											
27...	0920	1.00	420	8.20	20.5	0.40	7.4	83	K4	K6	170
27...	0921	0.60	--	--	--	--	--	--	--	--	--
27...	0922	10.0	420	8.20	20.5	--	7.4	83	--	--	--
27...	0924	20.0	420	8.20	20.5	--	7.0	79	--	--	--
27...	0926	30.0	420	8.00	20.0	--	5.8	65	--	--	--
27...	0928	42.0	431	7.80	19.0	--	3.5	38	--	--	170
JUL											
22...	0820	1.00	344	8.00	28.0	0.60	6.5	84	<1	<1	140
22...	0821	1.00	--	--	--	--	--	--	--	--	--
22...	0822	10.0	344	8.00	28.0	--	6.2	80	--	--	--
22...	0824	20.0	344	8.00	28.0	--	6.2	80	--	--	--
22...	0826	30.0	344	8.00	28.0	--	6.4	83	--	--	--
22...	0828	42.0	392	7.20	25.0	--	0	0	--	--	160

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 WAT WH TOT FET 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											
21...	21	52	9.4	15	0.5	2.8	148	25	19	0.30	7.9
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	24	53	9.7	15	0.5	2.8	149	25	19	--	8.0
APR											
27...	20	49	11	17	0.6	2.5	148	31	23	0.30	6.8
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	19	51	11	17	0.6	2.5	154	31	22	--	7.4
JUL											
22...	26	39	9.8	18	0.7	2.6	112	26	23	0.20	8.1
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	7	47	9.9	17	0.6	2.7	151	21	22	--	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)
JAN										
21...	220	--	<0.010	1.10	<0.010	--	0.50	0.030	<3	<1
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	<0.010	1.10	<0.010	--	0.40	0.030	<10	<10
21...	--	--	--	--	--	--	--	--	--	--
21...	222	--	<0.010	1.10	0.010	0.49	0.50	0.030	7	1
APR										
27...	229	1.15	0.050	1.20	0.040	0.46	0.50	0.020	25	<1
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	1.15	0.050	1.20	0.040	0.56	0.60	0.020	20	10
27...	--	--	--	--	--	--	--	--	--	--
27...	234	0.970	0.130	1.10	0.150	0.55	0.70	0.030	7	3
JUL										
22...	194	0.250	0.050	0.300	0.030	0.57	0.60	0.030	6	4
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	0.250	0.050	0.300	0.030	0.57	0.60	0.020	10	20
22...	--	0.250	0.050	0.300	0.030	0.57	0.60	0.030	10	90
22...	225	--	<0.010	<0.100	0.860	0.64	1.5	0.120	910	1600

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

304209097195101 - GRANGER LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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							
21...	0950	1.00	386	8.50	7.5	11.2	94
21...	0952	10.0	386	8.50	7.5	11.2	94
21...	0954	20.0	386	8.50	7.5	11.1	93
21...	0956	32.0	386	8.50	7.0	11.1	92
APR							
27...	1005	1.00	420	8.20	20.5	7.4	83
27...	1007	10.0	420	8.20	20.5	7.4	83
27...	1009	20.0	420	8.20	20.5	7.4	83
27...	1011	31.0	420	8.10	20.0	6.2	69
JUL							
22...	0855	1.00	347	7.80	28.0	5.4	70
22...	0857	10.0	347	7.80	28.0	5.3	68
22...	0859	20.0	347	7.80	28.0	5.2	67
22...	0901	30.0	354	7.50	28.0	2.3	30
22...	0903	34.0	366	7.30	27.5	0	0

304206097215001 - GRANGER LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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									
21...	1005	1.00	392	8.40	7.0	0.20	11.1	92	1.17
21...	1007	10.0	392	8.40	7.0	--	11.1	92	1.17
21...	1009	20.0	392	8.40	7.0	--	11.1	92	--
21...	1011	28.0	392	8.10	7.0	--	11.0	91	1.19
APR									
27...	1030	1.00	415	8.30	21.0	0.20	7.4	84	1.15
27...	1032	10.0	415	8.30	21.0	--	7.4	84	0.950
27...	1034	20.0	425	8.10	20.0	--	5.8	65	--
27...	1036	27.0	425	8.20	20.0	--	4.4	49	1.13
JUL									
22...	1005	1.00	342	8.20	29.0	0.50	7.7	101	0.160
22...	1007	10.0	342	8.00	28.5	--	6.6	86	--
22...	1009	20.0	347	7.70	28.5	--	4.5	59	0.170
22...	1011	26.0	349	7.60	28.0	--	4.0	52	0.170

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
21...	0.030	1.20	0.010	0.49	0.50	0.030	20	<10
21...	0.030	1.20	0.010	0.29	0.30	0.030	<10	<10
21...	--	--	--	--	--	--	--	--
21...	0.010	1.20	0.020	0.38	0.40	0.020	<10	<10
APR								
27...	0.050	1.20	0.030	0.47	0.50	0.020	<10	<10
27...	0.050	1.00	0.030	0.57	0.60	0.020	<10	<10
27...	--	--	--	--	--	--	--	--
27...	0.070	1.20	0.090	0.51	0.60	0.020	10	<10
JUL								
22...	0.040	0.200	<0.010	--	0.60	0.040	20	<10
22...	--	--	--	--	--	--	--	--
22...	0.030	0.200	0.100	0.60	0.70	0.090	10	<10
22...	0.030	0.200	0.140	0.66	0.80	0.060	10	20

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

304108097215101 - GRANGER LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
21...	1030	1.00	398	8.50	7.5	0.20	11.5	97	K1	K15	180
21...	1032	10.0	398	8.50	7.5	--	11.4	96	--	--	--
21...	1034	20.0	398	8.50	7.5	--	11.4	96	--	--	--
21...	1036	30.0	398	8.50	7.5	--	11.4	96	--	--	--
21...	1038	42.0	398	8.50	7.5	--	11.4	96	--	--	180
APR											
27...	1105	1.00	419	8.20	20.5	0.30	7.5	84	K3	K19	170
27...	1107	10.0	419	8.20	20.5	--	7.4	83	--	--	--
27...	1109	20.0	419	8.20	20.5	--	7.4	83	--	--	--
27...	1111	30.0	419	8.20	20.0	--	7.1	79	--	--	--
27...	1113	41.0	443	7.90	20.0	--	4.4	49	--	--	180
JUL											
22...	0930	1.00	345	8.20	28.5	0.60	7.7	100	K2	K2	140
22...	0932	10.0	345	8.10	28.5	--	7.4	96	--	--	--
22...	0934	20.0	345	8.10	28.5	--	7.1	93	--	--	--
22...	0936	30.0	359	7.40	28.0	--	3.1	40	--	--	--
22...	0938	40.0	393	7.10	25.5	--	0	0	--	--	160

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN										
21...	27	57	10	15	0.5	2.7	157	25	19	7.9
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	24	56	10	15	0.5	2.7	157	25	19	7.9
APR										
27...	22	50	11	18	0.6	2.5	148	30	23	6.9
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	22	53	11	17	0.6	2.4	156	29	24	7.4
JUL										
22...	21	39	9.9	18	0.7	2.6	117	26	24	12
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	16	48	10	18	0.6	2.8	145	24	22	8.1

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										
21...	231	1.27	0.030	1.30	0.010	0.19	0.20	0.030	4	<1
21...	--	--	--	--	--	--	--	--	--	--
21...	--	1.27	0.030	1.30	0.010	0.79	0.80	0.030	20	10
21...	--	--	--	--	--	--	--	--	--	--
21...	230	1.27	0.030	1.30	<0.030	--	0.40	0.030	8	2
APR										
27...	230	1.15	0.050	1.20	0.040	0.56	0.60	0.020	85	2
27...	--	--	--	--	--	--	--	--	--	--
27...	--	1.15	0.050	1.20	0.040	0.36	0.40	0.020	30	10
27...	--	--	--	--	--	--	--	--	--	--
27...	237	0.990	0.110	1.10	0.190	0.51	0.70	0.030	10	18
JUL										
22...	202	0.250	0.050	0.300	<0.010	--	0.50	0.030	<3	6
22...	--	--	--	--	--	--	--	--	--	--
22...	--	0.150	0.050	0.200	<0.010	--	0.70	0.040	20	20
22...	--	0.230	0.070	0.300	0.090	0.81	0.90	0.050	20	100
22...	221	--	0.010	<0.100	0.760	0.74	1.5	0.080	<1100	1400

08105600 GRANGER LAKE NEAR GRANGER, TX--Continued

303947097231401 - GRANGER LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
21...	1055	1.00	462	8.40	8.5	0.40	11.5	99	K16	42	210
21...	1056	0.70	--	--	--	--	--	--	--	--	--
21...	1057	10.0	462	8.40	8.5	--	11.2	97	--	--	--
21...	1059	22.0	488	8.30	8.5	--	10.8	93	--	--	230
APR											
27...	1135	1.00	455	8.10	21.5	0.20	7.1	81	K4	K8	190
27...	1136	0.40	--	--	--	--	--	--	--	--	--
27...	1137	10.0	455	8.10	20.5	--	6.9	78	--	--	--
27...	1139	21.0	455	8.10	20.0	--	6.9	77	--	--	190
JUL											
22...	1030	1.00	356	8.10	28.5	0.40	7.4	96	<1	K7	150
22...	1031	0.60	--	--	--	--	--	--	--	--	--
22...	1032	10.0	351	8.10	28.0	--	7.0	90	--	--	--
22...	1034	20.0	376	7.40	27.5	--	2.2	28	--	--	150

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN										
21...	26	66	11	17	0.5	2.2	184	26	21	6.1
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	36	72	12	17	0.5	2.1	194	27	22	5.7
APR										
27...	23	55	12	19	0.6	2.2	164	29	26	7.2
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	30	55	12	19	0.6	2.2	157	32	25	7.3
JUL										
22...	21	42	10	19	0.7	2.6	125	26	24	9.0
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	20	45	10	19	0.7	2.6	134	26	24	9.7

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										
21...	260	2.17	0.030	2.20	0.010	0.39	0.40	0.050	<3	<1
21...	--	--	--	--	--	--	--	--	--	--
21...	--	2.26	0.040	2.30	0.020	0.28	0.30	0.040	20	<10
21...	274	0.970	0.010	0.980	0.040	0.46	0.50	0.050	<3	<1
APR										
27...	249	1.25	0.050	1.30	0.030	0.47	0.50	0.030	6	<1
27...	--	--	--	--	--	--	--	--	--	--
27...	--	1.25	0.050	1.30	0.040	0.66	0.70	0.040	10	<10
27...	247	1.25	0.050	1.30	0.050	0.55	0.60	0.030	8	2
JUL										
22...	208	0.150	0.050	0.200	<0.010	--	1.1	0.040	4	6
22...	--	--	--	--	--	--	--	--	--	--
22...	--	0.250	0.050	0.300	<0.010	--	0.50	0.040	10	20
22...	217	0.240	0.060	0.300	0.190	0.61	0.80	0.050	<3	160

Granger Lake AC (304132097200801)

Phytoplankton Analyses September 1987 to October 1988

Date	1-21-88
Time	0916
TOTAL CELLS/mL	28,587
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	0.85

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus var. *mirabilis*	360
Ankistrodesmus nannoselene	270
Chodatella quadriseta	45
Crucigenia tetrapedia	180
Kirchneriella lunaris	135
Mesotaenium sp.	45
Nephrocytium sp.	135
Oocystis sp.	450
Scenedesmus serratus	180
Staurastrum sp.	45
Tetraedron minimum	45
Treubaria triappendiculata	90
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	14,543
Aphanocapsa elachista	3,467
Aphanothece sp.	2,926
Chroococcus dispersus	360
Chroococcus multicoloratus	270
Chroococcus pallidus	1,305
Dactylococcopsis acicularis	45
Dactylococcopsis fascicularis	360
Synechococcus elongatus	135
Synechococcus sp.	2,521
EUGLENOPHYTA (Euglenoids)	
Trachelomonas hispida	135
Trachelomonas volvocina	45
Trachelomonas sp.	45
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	216
Cyclotella ocellata	36
Cyclotella stelligera	108
Order Pennales	
Anomoeoneis vitrea	30
Cymbella minuta	30
Nitzschia dissipata	30

Granger Lake DC (303947097231401)

Phytoplankton Analyses September 1987 to October 1988

Date	1-21-88
Time	1056
TOTAL CELLS/mL	21,202
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	540
Ankistrodesmus falcatus var. *acicularis*	135
Ankistrodesmus nannoselene	270
Chlamydomonas sp.	270
Chlorococcum sp.	67
Golenkinia radiata	67
Kirchneriella lunaris	67
Mesotaenium sp.	135
Nephrocytium sp.	203
Oocystis sp.	67
Phacotus lenticularis	67
Scenedesmus dimorphus	270
CHRYSOPHYTA (Golden-brown algae)	
Kephyrion ovum	135
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	8,374
Aphanocapsa elachista	1,418
Aphanothece saxicola	1,891
Chroococcus sp.	337
Synechococcus elongatus	405
Synechococcus sp.	5,875
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	67
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	95
Cyclotella ocellata	142
Melosira italica	142
Stephanodiscus hantzschii	95
Order Pennales	
Amphora perpusilla	7
Caloneis sp.	7
Navicula secura	7
Nitzschia dissipata	27
Nitzschia linearis	13
Stauroneis sp.	7

Granger Lake AC (304132097200801)

Phytoplankton Analyses September 1987 to October 1988

Date	4-27-88
Time	0921
TOTAL CELLS/mL	46,599
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	338
Ankistrodesmus nannoselene	169
Chlorococcum sp.	338
Chodatella subsalsa	169
Crucigenia tetrapedia	169
Kirchneriella lunaris	338
Oocystis sp.	169
Scenedesmus accuminatum	675
Scenedesmus armatus	675
Tetraedron minimum	169
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	15869
Aphanocapsa elachista	5065
Aphanothece nidulans	6922
Aphanothece sp.	3376
Chroococcus dispersus	844
Chroococcus multicoloratus	6415
Chroococcus pallidus	1351
Chroococcus varius	675
Crucigenia tetrapedia	169
Dactylococcopsis fascicularis	169
Synechococcus elongatus	338
Synechococcus sp.	844
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	338
Cryptomonas erosa	338
Rhodomonas minuta	169
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	94
Melosira granulata var. *angustissima*	113
Stephanodiscus hantzschii var. *pusillus*	131
Order Pennales	
Achnanthes minutissima	85
Cymbella sp.	85

Granger Lake DC (303947097231401)

Phytoplankton Analyses September 1987 to October 1988

Date	4-27-88
Time	1136
TOTAL CELLS/mL	51,098
NUMBER OF SPECIES	30
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	675
Ankistrodesmus nannoselene	675
Chodatella subsalsa	675
Crucigenia apiculata	338
Crucigenia tetrapedia	113
Kirchneriella lunaris	338
Nephrocytium sp.	113
Scenedesmus armatus	225
Scenedesmus brasiliensis	675
Tetrastrum staurogeniaeforme	113
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	11818
Aphanocapsa elachista	6978
Aphanotheca sp.	2926
Aphanothece nidulans	3827
Aphanothece saxicola	6528
Chroococcus dispersus	1351
Chroococcus multicoloratus	5965
Chroococcus varius	4727
Dactylococcopsis fascicularis	225
Dactylococcopsis raphidioides	450
Merismopedia tenuissima	450
Synechococcus elongatus	675
Synechococcus sp.	788
EUGLENOPHYTA (Euglenoids)	
Trachelomonas volvocina	113
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	47
Melosira granulata var. *angustissima*	47
Stephanodiscus hantzschii	130
Order Pennales	
Achnanthes sp.	45
Fragilaria sp.	45
Navicula sp.	23

Granger Lake AC (304132097200801)

Phytoplankton Analyses September 1987 to October 1988

Date	7-22-88
Time	0821
TOTAL CELLS/mL	17,940
NUMBER OF SPECIES	33
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	332
Chlamydomonas globosa?	60
Chlamydomonas sp.	30
Cosmarium sp.	121
Crucigenia tetrapedia	755
Desmidium? sp.	725
Elakatothrix sp.	60
Eudorina elegans	272
Scenedesmus carinatus?	242
Staurastrum sp.	60
Tetraedron minimum	181
Tetraedron muticum	60
Tetraedron trigonum	60
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	8883
Chroococcus dispersus	363
Chroococcus sp.	604
Merismopedia punctata	483
Merismopedia tenuissima	483
Schizothrix calcicola	332
Synechococcus sp.	2266
EUGLENOPHYTA (euglenoid algae)	
Phacotus lenticularis	332
Trachelomonas sp.	30
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium sp.	60
unidentified dinoflagellates	30
CRYPTOPHYTA (cryptomonads)	
Cryptomonas lucens	332
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	91
Cyclotella stelligera	91
Melosira granulata	60
Melosira italica	211
Stephanodiscus hantzschii	60
Stephanodiscus vestibulis	211
Order Pennales	
Nitzschia gracilis	30
Nitzschia linearis	30

Granger Lake DC (303947097231401)

Phytoplankton Analyses September 1987 to October 1988

Date	7-22-88
Time	1031
TOTAL CELLS/mL	32,038
NUMBER OF SPECIES	33
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	274
Chlamydomonas globosa?	411
Chlamydomonas sp.	548
Cosmarium sp.	479
Crucigenia apiculata	1369
Crucigenia tetrapedia	2464
Euastrum sp.	137
Eudorina elegans	1369
Pandorina morum	1095
Pediastrum simplex	1164
Scenedesmus abundans	274
Scenedesmus carinatus?	958
Tetraedron muticum	137
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	3218
Chroococcus dispersus	274
Chroococcus sp.	411
Dactylococcopsis fascicularis	479
Merismopedia punctata	548
Merismopedia tenuissima	2191
Schizothrix calcicola	616
Synechococcus sp.	7667
EUGLENOPHYTA (euglenoid algae)	
Euglena sp. 1	1575
Euglena sp. 2	68
Phacotus lenticularis	68
Phacus sp.	68
Trachelomonas sp.	137
PYRRHOPHYTA (dinoflagellates)	
Glenodinium sp.	137
Gymnodinium sp.	890
CRYPTOPHYTA (cryptomonads)	
Cryptomonas lucens	2122
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Melosira italica	137
Stephanodiscus vestibulis	548
Order Pennales	
Diploneis sp.	68
Nitzschia denticula	137

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); 9 years (water years 1980-88) regulated, 235 ft³/s (170,260 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, 364 ft³/s Nov. 25 at 0330 hours (gage height, 7.18 ft); minimum daily, 0.16 ft³/s July 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	11	174	177	56	143	141	8.4	28	27	22	6.0
2	84	10	175	177	56	144	141	7.3	34	27	5.2	5.7
3	85	10	176	176	56	134	142	7.0	36	27	5.6	6.2
4	85	11	176	177	56	80	140	7.0	33	27	5.1	6.1
5	84	11	178	176	56	11	141	7.1	30	27	5.6	5.8
6	84	11	178	175	56	11	140	7.3	176	27	5.7	5.2
7	84	11	177	175	56	9.6	94	7.5	335	27	5.3	5.4
8	84	17	177	175	56	9.3	34	8.1	336	27	4.8	5.4
9	55	71	177	176	56	2.7	33	7.1	335	27	4.0	5.1
10	11	142	177	174	57	11	32	7.9	334	27	5.5	6.2
11	11	141	177	174	57	13	33	8.6	336	26	4.8	6.3
12	10	141	176	176	57	14	33	9.2	338	27	4.9	5.5
13	9.2	141	177	177	56	14	33	13	336	26	7.6	5.7
14	8.9	141	177	175	57	13	33	27	335	19	7.8	5.9
15	9.6	142	177	176	56	15	33	28	331	1.3	6.6	6.0
16	9.6	144	176	176	56	14	33	27	278	.34	6.5	5.2
17	9.7	143	176	175	56	17	33	27	184	.31	6.9	6.2
18	9.8	146	177	175	56	15	33	26	183	.38	7.0	6.4
19	10	143	182	176	108	16	33	26	181	.24	6.4	6.2
20	11	142	178	174	176	16	32	27	181	.16	6.4	5.2
21	9.8	142	177	174	175	14	32	30	180	1.8	6.1	5.1
22	9.6	144	177	105	163	15	33	29	107	12	5.6	6.1
23	11	144	177	28	145	14	33	27	29	27	5.6	5.3
24	11	144	177	28	143	66	33	27	28	28	5.7	6.2
25	10	168	177	28	141	142	33	27	27	28	6.3	6.1
26	10	145	177	27	142	142	33	27	29	27	5.5	5.6
27	9.3	109	177	39	142	142	32	27	28	27	6.2	5.4
28	9.7	145	177	56	142	142	32	27	27	27	6.3	5.2
29	9.8	144	177	56	142	143	27	27	27	28	6.1	6.2
30	9.9	122	177	56	---	141	8.7	27	27	29	6.3	8.9
31	10	---	177	56	---	141	---	27	---	29	5.5	---
TOTAL	950.9	3136	5485	4165	2631	1804.6	1663.7	595.5	4869	634.53	198.9	175.8
MEAN	30.7	105	177	134	90.7	58.2	55.5	19.2	162	20.5	6.42	5.86
MAX	86	168	182	177	176	144	142	30	338	29	22	8.9
MIN	8.9	10	174	27	56	2.7	8.7	7.0	27	.16	4.0	5.1
AC-FT	1890	6220	10880	8260	5220	3580	3300	1180	9660	1260	395	349

CAL YR 1987 TOTAL 187736.3 MEAN 514 MAX 2800 MIN 5.9 AC-FT 372400
WTR YR 1988 TOTAL 26309.93 MEAN 71.9 MAX 338 MIN .16 AC-FT 52190

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 02...	1110	10	454	7.20	19.5	2	7.8	7.1	78	0.5	200	33
DEC 17...	1135	162	382	7.80	10.5	5	6.3	10.0	90	0.8	160	24
FEB 12...	0910	68	435	7.90	5.5	4	6.9	11.4	91	1.3	190	32
APR 05...	1250	140	415	7.80	19.0	13	30	8.5	93	1.4	180	26
MAY 31...	1145	42	420	7.50	24.0	3	24	7.3	88	1.1	170	33
AUG 31...	0950	7.4	395	7.40	26.5	2	12	6.7	85	1.6	160	27

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 02...	62	11	18	0.6	2.8	167	25	27	0.30	11	257
DEC 17...	49	9.7	15	0.5	2.9	139	22	20	0.30	8.9	211
FEB 12...	59	10	16	0.5	2.5	157	27	21	0.30	7.3	237
APR 05...	54	11	18	0.6	2.3	154	30	23	0.30	6.6	238
MAY 31...	51	11	18	0.6	1.7	140	30	23	0.40	8.1	227
AUG 31...	44	11	20	0.7	2.5	128	29	25	0.30	9.9	219

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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 02...	12	1	1.79	0.010	1.80	0.030	0.47	0.50	0.030	3.7	3
DEC 17...	14	8	--	<0.010	0.800	<0.010	--	0.50	0.030	3.8	--
FEB 12...	11	4	1.39	0.010	1.40	0.020	0.68	0.70	0.020	3.1	2
APR 05...	37	9	1.37	0.030	1.40	0.040	0.66	0.70	0.050	4.4	--
MAY 31...	33	20	1.19	0.010	1.20	0.030	0.97	1.0	0.020	4.2	3
AUG 31...	26	19	--	<0.010	0.400	0.010	0.29	0.30	0.030	3.9	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)
NOV 02...	62	<1	<10	<1	9	<5	10	<0.1	<1	<1.0	4
DEC 17...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	54	<1	<1	1	6	<5	3	<0.1	<1	<1.0	13
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 31...	53	<1	<1	1	<3	<5	<1	<0.1	<1	<1.0	<3
AUG 31...	52	<1	<1	1	200	<5	6	0.2	<1	<1.0	9

08106310 SAN GABRIEL RIVER NEAR ROCKDALE, TX

LOCATION.--Lat 30°43'39", 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 estimated daily discharges, which are fair. Flow 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. Backwater from Little River occurs at times. Several observations of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--8 years, 485 ft³/s (351,400 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, 1,930 ft³/s June 4 at 1900 hours (gage height, 14.08 ft); minimum daily, 4.4 ft³/s July 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	12	265	254	85	181	185	31	61	20	32	5.7
2	124	12	262	249	81	183	183	23	51	18	29	5.6
3	120	12	244	246	82	181	184	23	412	18	19	5.9
4	121	11	234	246	80	172	182	22	1560	18	13	6.3
5	119	10	228	248	80	64	179	20	669	19	10	5.5
6	118	10	226	243	80	31	176	19	162	20	8.8	5.5
7	117	9.5	221	242	84	27	174	16	417	19	9.1	6.0
8	117	16	220	253	82	26	90	15	414	20	8.9	6.0
9	116	47	215	249	81	26	66	16	397	21	8.6	5.5
10	47	387	213	240	82	21	64	15	386	22	7.8	5.3
11	19	306	210	236	79	20	72	13	376	23	6.8	5.4
12	16	235	208	234	79	22	76	37	371	35	7.4	5.4
13	14	201	211	231	77	21	69	58	365	34	7.1	5.8
14	14	191	207	229	76	19	66	36	363	35	6.7	5.8
15	13	196	203	228	75	17	64	45	360	25	8.0	5.3
16	13	231	203	229	74	18	61	39	357	18	8.1	5.6
17	13	298	202	229	74	26	61	35	201	11	7.8	6.2
18	13	302	203	228	80	234	61	34	174	7.2	7.2	6.6
19	13	236	251	227	87	195	58	31	174	5.4	8.7	6.1
20	16	210	599	225	250	99	56	31	174	4.5	e8.6	6.8
21	12	197	483	222	241	78	54	54	174	4.4	e7.0	8.0
22	11	192	330	216	231	69	52	82	171	6.1	e6.8	8.1
23	13	189	292	88	193	64	51	103	41	32	e6.4	6.7
24	17	188	271	60	184	62	48	71	18	39	e6.3	6.0
25	24	293	257	54	182	151	47	54	17	34	e6.6	5.7
26	19	706	255	52	180	185	44	44	17	32	e6.5	5.0
27	16	584	285	50	180	185	42	37	122	31	e6.4	5.6
28	15	463	339	70	181	184	41	34	106	31	e6.5	5.5
29	13	392	294	83	181	186	45	33	35	30	e6.7	5.3
30	11	317	274	83	---	184	40	33	23	31	e6.8	5.7
31	11	---	262	84	---	186	---	50	---	32	5.8	---
TOTAL	1435	6453.5	8167	5828	3521	3117	2591	1154	8168	695.6	294.4	177.9
MEAN	46.3	215	263	188	121	101	86.4	37.2	272	22.4	9.50	5.93
MAX	130	706	599	254	250	234	185	103	1560	39	32	8.1
MIN	11	9.5	202	50	74	17	40	13	17	4.4	5.8	5.0
AC-FT	2850	12800	16200	11560	6980	6180	5140	2290	16200	1380	584	353

CAL YR 1987 TOTAL 355437.5 MEAN 974 MAX 10300 MIN 9.5 AC-FT 705000
WTR YR 1988 TOTAL 41602.4 MEAN 114 MAX 1560 MIN 4.4 AC-FT 82520

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. Several observations of water temperature were made during the year. Satellite telemeter at station.

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, 17.10 ft June 4 at 1900 hours (maximum discharge not determined); minimum daily discharge, 26 ft³/s Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	691	141	455	695	222	278	510	182	752	686	---	69
2	365	123	441	711	232	291	488	167	---	654	---	66
3	293	106	405	703	250	288	497	138	---	---	---	66
4	265	104	378	684	248	396	439	136	---	---	---	66
5	242	102	366	683	247	272	335	129	---	---	---	66
6	235	99	384	684	248	209	299	111	---	---	---	77
7	227	105	370	671	248	494	343	105	736	---	---	62
8	220	103	365	691	248	550	294	104	---	---	---	59
9	217	173	322	691	229	558	257	102	---	---	---	59
10	178	766	318	653	228	569	252	101	---	---	---	52
11	142	522	314	641	209	528	255	103	---	---	899	52
12	138	351	343	641	201	494	264	158	---	---	900	53
13	134	287	384	624	189	258	256	466	---	---	852	58
14	132	270	382	481	187	185	246	513	---	---	649	55
15	125	299	415	429	183	168	194	556	---	---	622	61
16	115	357	409	411	208	163	141	544	---	---	607	67
17	114	---	418	396	227	179	159	547	---	---	613	75
18	122	---	394	380	223	---	162	558	---	---	609	73
19	113	441	472	386	256	749	152	468	---	---	611	77
20	119	349	---	375	445	419	155	434	---	---	620	79
21	134	326	---	365	527	356	145	777	---	---	602	73
22	121	316	685	358	556	328	140	881	---	---	595	68
23	118	314	585	248	502	498	136	848	---	---	594	62
24	117	329	536	206	361	542	130	774	680	---	586	57
25	125	425	509	198	319	621	129	738	669	---	595	55
26	131	---	---	194	293	663	126	713	678	---	525	38
27	142	---	---	190	271	510	123	704	---	---	434	26
28	137	728	---	202	268	443	121	698	---	---	136	28
29	124	729	809	215	266	426	124	696	738	---	80	41
30	120	557	688	215	---	485	138	706	707	---	68	50
31	140	---	623	218	---	585	---	758	---	---	64	---
TOTAL	5596	---	---	14239	8091	---	7010	13915	---	---	---	1790
MEAN	181	---	---	459	279	---	234	449	---	---	---	59.7
MAX	691	---	---	711	556	---	510	881	---	---	---	79
MIN	113	---	---	190	183	---	121	101	---	---	---	26
AC-FT	11100	---	---	28240	16050	---	13900	27600	---	---	---	3550

CAL YR 1987	TOTAL --	MEAN --	MAX --	MIN --	AC-FT --
WTR YR 1988	TOTAL --	MEAN --	MAX --	MIN --	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 U.S. Army 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.--No estimated daily discharges. Records good. 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); 35 years (water years 1954-88) regulated, 1,568 ft³/s (1,136,000 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, 4,290 ft³/s June 4 at 2200 hours (gage height, 12.81 ft); minimum daily, 15 ft³/s Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	661	158	434	651	194	252	465	139	634	662	1190	74
2	418	146	413	696	197	271	440	137	699	597	1190	75
3	312	120	376	683	224	275	444	107	1220	723	1240	71
4	290	116	355	665	224	356	403	94	3460	1180	1260	72
5	264	114	317	663	221	303	311	100	2670	1230	1240	74
6	256	110	344	675	221	188	256	75	822	1190	1220	75
7	250	113	336	655	220	401	282	68	640	1240	1190	72
8	244	111	324	675	225	522	273	65	1010	1100	1140	62
9	237	154	288	684	214	527	220	64	1090	1270	1140	57
10	215	640	281	648	204	544	216	65	1290	1320	1020	53
11	163	605	277	635	185	506	214	62	1280	1320	885	55
12	151	389	288	633	171	495	226	88	1280	1350	873	55
13	151	305	349	627	176	298	222	322	1290	1440	869	57
14	151	271	354	496	163	179	213	431	1280	1530	696	54
15	147	297	366	422	159	155	184	461	1280	1270	589	57
16	130	352	393	399	153	150	131	448	1290	1240	573	57
17	133	757	382	393	203	181	134	444	1220	1210	575	78
18	137	865	360	365	217	444	150	472	1180	1210	561	75
19	135	474	449	377	206	773	128	386	1160	1210	564	75
20	130	348	822	367	431	394	140	314	1160	1210	578	81
21	145	310	1100	356	496	319	131	618	1150	1270	562	81
22	142	299	712	343	546	281	126	748	1150	1350	558	72
23	139	280	585	254	508	404	121	748	1030	1250	553	66
24	137	304	528	173	349	486	114	653	658	1240	544	59
25	148	363	495	167	303	534	111	617	621	1200	538	54
26	149	652	488	161	292	600	105	589	630	1180	515	46
27	158	999	2410	159	254	483	105	584	871	1210	414	19
28	154	697	1350	162	247	402	100	576	880	1330	161	15
29	143	753	831	183	247	379	105	566	699	1230	77	19
30	138	557	675	185	---	398	107	562	662	1150	77	46
31	150	---	603	190	---	534	---	608	---	1150	67	---
TOTAL	6178	11659	17285	13742	7450	12034	6177	11211	34306	37062	22659	1806
MEAN	199	389	558	443	257	388	206	362	1144	1196	731	60.2
MAX	661	999	2410	696	546	773	465	748	3460	1530	1260	81
MIN	130	110	277	159	153	150	100	62	621	597	67	15
AC-FT	12250	23130	34280	27260	14780	23870	12250	22240	68050	73510	44940	3580

CAL YR 1987 TOTAL 1036989 MEAN 2841 MAX 14200 MIN 110 AC-FT 2057000
WTR YR 1988 TOTAL 181569 MEAN 496 MAX 3460 MIN 15 AC-FT 360100

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, 791 microsiemens Sept. 29, 30; minimum daily, 309 microsiemens June 5.
WATER TEMPERATURE: Maximum daily, 28.5°C Apr. 24; minimum daily, 4.5°C Jan. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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											
28...	1130	158	756	7.40	19.0	8.3	9.2	99	2.4	84	31
DEC											
14...	1240	354	590	8.30	12.5	21	10.2	97	1.0	180	160
FEB											
17...	0950	425	676	8.20	12.5	78	9.7	92	1.6	20	22
APR											
05...	0935	377	547	8.10	21.5	30	8.1	93	0.9	96	160
MAY											
24...	1100	756	600	7.60	21.0	77	8.5	96	0.8	240	190
JUN											
10...	1135	1310	471	7.80	24.5	--	--	--	--	--	--
SEP											
01...	1110	44	616	7.90	26.5	11	7.6	96	1.8	100	31

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
28...	300	39	87	19	51	1	4.0	258	50	53	0.50
DEC											
14...	230	20	69	14	33	1	3.7	210	21	36	0.40
FEB											
17...	270	45	83	15	45	1	3.2	225	53	48	0.40
APR											
05...	210	36	63	12	32	1	3.3	171	39	43	0.40
MAY											
24...	170	0	52	9.9	57	2	7.1	174	40	62	0.50
JUN											
10...	180	30	53	11	24	0.8	3.7	148	31	36	0.30
SEP											
01...	220	31	62	15	43	1	4.5	187	41	53	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)
OCT										
28...	8.1	448	445	3.17	3.08	0.030	0.020	3.20	3.10	0.030
DEC										
14...	8.9	344	322	2.17	1.99	0.030	0.010	2.20	2.00	0.030
FEB										
17...	1.3	399	397	2.66	2.57	0.040	0.030	2.70	2.60	0.050
APR										
05...	8.0	324	311	1.57	1.57	0.030	0.030	1.60	1.60	0.050
MAY										
24...	9.9	378	349	0.970	0.940	0.030	0.030	1.00	0.970	0.060
JUN										
10...	10	--	258	--	--	--	--	--	--	--
SEP										
01...	10	356	346	--	--	<0.010	<0.010	0.900	0.930	<0.010

08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	0.140	0.47	0.50	0.610	0.800	--	--	16	6.8	91
DEC 14...	0.030	0.37	0.40	0.420	0.380	0.300	0.92	41	39	96
FEB 17...	0.040	0.55	0.60	0.510	0.430	0.360	1.1	59	68	98
APR 05...	0.040	0.45	0.50	0.290	0.270	0.210	0.64	90	92	91
MAY 24...	0.060	0.34	0.40	0.290	0.270	0.270	0.83	218	445	95
JUN 10...	--	--	--	--	--	--	--	--	--	--
SEP 01...	0.010	--	0.50	0.270	0.260	0.200	0.61	17	2.0	98

DATE	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)	LEAD, DISSOLVED (UG/L AS PB)
OCT 28...	<10	4	78	<0.5	<1	<1	<3	1	3	<5
DEC 14...	--	--	--	--	--	--	--	--	--	--
FEB 17...	10	2	65	<0.5	1	<1	<3	1	8	<5
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 24...	160	6	86	<0.5	<1	<1	<3	2	140	<5
JUN 10...	--	--	--	--	--	--	--	--	--	--
SEP 01...	<10	5	73	<0.5	<1	<1	<3	1	8	<5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 28...	19	8	<0.1	<10	<1	1	<1.0	830	<6	<3
DEC 14...	--	--	--	--	--	--	--	--	--	--
FEB 17...	19	9	<0.1	<10	<1	1	<1.0	720	<6	11
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 24...	12	120	<0.1	<10	3	1	1.0	550	7	<3
JUN 10...	--	--	--	--	--	--	--	--	--	--
SEP 01...	15	2	<0.1	<10	1	<1	<1.0	590	<6	25

08106500 LITTLE RIVER AT CAMERON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	6178	660	370	6180	50	827	51	847	240
NOV.	1987	11659	545	303	9540	40	1260	38	1200	200
DEC.	1987	17285	507	281	13100	37	1710	34	1570	190
JAN.	1988	13742	594	331	12300	44	1630	43	1580	220
FEB.	1988	7450	651	365	7330	49	979	49	991	240
MAR.	1988	12034	608	339	11000	45	1460	44	1440	230
APR.	1988	6177	617	345	5750	46	764	45	758	230
MAY	1988	11211	599	334	10100	44	1340	43	1310	220
JUNE	1988	34306	462	255	23600	33	3060	29	2710	180
JULY	1988	37062	552	307	30700	40	4040	38	3810	210
AUG.	1988	22659	504	279	17100	36	2220	33	2020	190
SEPT	1988	1806	691	388	1890	52	254	54	264	250
TOTAL		181569	**	**	149000	**	19500	**	18500	**
WTD.AVG.		496	545	303	**	40	**	38	**	210

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	540	762	516	511	685	599	563	705	584	495	499	614
2	530	761	513	542	688	604	570	703	598	501	498	601
3	554	763	495	559	692	607	530	733	561	506	496	603
4	562	766	512	568	693	619	545	736	401	502	498	603
5	578	768	538	574	693	624	552	746	309	494	494	615
6	608	767	540	577	696	669	557	780	320	490	495	633
7	621	772	540	583	693	724	572	755	369	496	498	661
8	627	776	549	585	691	618	582	762	406	553	497	685
9	623	759	560	597	688	597	595	747	444	562	493	694
10	626	746	570	595	700	607	606	751	475	567	495	705
11	642	674	573	592	692	609	627	756	472	565	499	698
12	698	544	578	590	694	625	640	740	475	568	500	675
13	737	534	600	594	694	623	665	713	474	565	508	667
14	744	557	596	590	694	646	657	674	470	534	507	697
15	729	547	588	580	692	677	649	607	472	555	517	704
16	745	512	584	587	692	690	658	542	474	571	517	712
17	753	524	579	588	684	700	683	527	478	577	512	701
18	753	479	580	606	680	648	680	520	486	587	505	709
19	748	487	581	614	684	663	682	526	486	588	509	716
20	754	485	563	618	704	566	689	557	486	589	521	726
21	756	471	583	617	671	580	700	569	483	586	518	730
22	758	517	543	616	615	594	702	562	483	568	519	733
23	753	510	554	611	584	555	707	600	512	582	517	742
24	762	505	521	677	565	564	710	608	513	591	513	746
25	763	520	537	707	567	583	720	600	514	591	512	756
26	770	477	539	705	571	588	712	592	511	586	506	766
27	772	427	417	710	578	564	716	585	512	586	518	784
28	762	473	373	711	585	572	727	582	582	586	524	790
29	767	516	408	711	590	577	712	582	460	501	545	791
30	782	500	428	698	---	570	714	584	486	500	569	791
31	775	---	468	689	---	568	---	583	---	498	587	---
MEAN	697	597	533	616	661	614	647	646	477	550	512	702

08106500 LITTLE RIVER AT CAMERON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

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

08109000 BRAZOS RIVER NEAR BRYAN, TX

LOCATION.--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 oil field 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); 48 years (water years 1941-88) regulated, 4,817 ft³/s (3,490,000 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, 11,900 ft³/s Dec. 28 at 1000 hours (gage height, 10.20 ft); minimum daily, 121 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	581	1780	3140	961	1570	1960	1070	885	1400	1340	215
2	1270	575	1840	3270	890	1480	2000	960	947	1210	1400	188
3	1320	514	1810	2550	801	1100	1630	669	950	1280	1610	193
4	1150	504	1520	2570	756	966	1300	614	3340	1340	1950	187
5	974	466	1360	2770	758	2720	1680	774	7570	1720	1720	176
6	785	448	1380	3190	717	2650	1600	645	7070	1900	1640	167
7	687	392	1400	2790	778	1540	1170	494	4920	1780	1650	169
8	639	425	1270	2260	1180	1970	1020	414	4240	1760	1410	166
9	609	581	1010	2390	1130	2000	994	371	4420	1640	1290	166
10	574	608	790	2530	987	1590	994	334	4960	1730	1220	159
11	515	965	832	2550	743	1330	1020	315	3790	1850	1130	152
12	449	1530	717	2580	571	1140	1030	320	2640	1840	1170	161
13	380	1010	642	2670	584	1090	1310	328	3150	2650	1060	996
14	349	778	692	2390	707	1080	964	364	3040	3230	995	648
15	336	860	857	1920	881	1010	930	678	2840	3150	836	397
16	375	981	852	1570	808	992	865	723	2490	2530	711	291
17	701	1210	2080	1700	992	912	615	733	2400	1930	703	259
18	822	2380	1940	1710	881	1180	515	720	2290	1730	698	232
19	761	2740	2110	1870	714	1910	468	729	2140	1680	710	282
20	572	1430	1990	1460	3480	2820	1310	693	2000	1680	704	247
21	543	1430	2110	1300	4400	2070	927	701	1940	1580	700	210
22	1260	1120	3240	1420	3300	1640	741	1040	1880	1600	693	189
23	1010	1210	3210	1480	2310	1780	724	1560	1850	1660	684	174
24	897	1430	2770	1100	1830	1300	530	1310	1850	1480	688	158
25	949	1210	1870	968	1250	1240	777	1090	1570	1510	750	145
26	1020	1000	1320	1290	1540	1220	836	949	1500	1440	703	135
27	984	1370	3070	1770	1380	1510	933	863	1510	1540	692	129
28	803	2240	10900	1020	1390	1300	1190	820	1820	1860	588	133
29	669	1800	7080	1580	1850	979	1010	819	2190	1740	503	125
30	721	1650	4890	1710	---	1530	899	827	1760	1630	329	121
31	698	---	3500	1140	---	1640	---	822	---	1560	260	---
TOTAL	24102	33438	70832	62658	38569	47259	31942	22749	83952	55630	30537	6970
MEAN	777	1115	2285	2021	1330	1524	1065	734	2798	1795	985	232
MAX	1320	2740	10900	3270	4400	2820	2000	1560	7570	3230	1950	996
MIN	336	392	642	968	571	912	468	315	885	1210	260	121
AC-FT	47810	66320	140500	124300	76500	93740	63360	45120	166500	110300	60570	13820

CAL YR 1987 TOTAL 2614932 MEAN 7164 MAX 58800 MIN 336 AC-FT 5187000
WTR YR 1988 TOTAL 508638 MEAN 1390 MAX 10900 MIN 121 AC-FT 1009000

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 fair. Several observations of water temperature were made during the year. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--26 years, 53.3 ft³/s (3.07 in/yr), 38,620 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)
Apr. 29	1800	*112	*5.01				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	.00	5.8	7.1	9.8	6.8	8.4	26	6.8	.00	.00	.00
2	8.0	.00	4.5	6.3	9.9	7.8	9.0	19	8.6	.00	.00	.00
3	5.5	.00	3.6	8.5	9.8	8.5	11	15	10	.00	.00	.00
4	3.6	.00	3.4	10	9.7	8.1	12	13	11	.00	.00	.00
5	1.8	.00	3.2	10	9.8	9.0	12	11	12	.00	.00	.00
6	.35	.00	3.5	9.8	11	7.6	10	9.6	24	.00	.00	.00
7	.09	.00	3.3	9.3	12	6.8	9.0	8.7	20	.00	.00	.00
8	.04	.00	3.2	10	10	6.6	8.4	7.6	16	.00	.00	.00
9	.02	.00	3.7	12	9.6	6.3	8.5	6.7	12	.00	.00	.00
10	.01	.00	4.2	12	10	7.0	9.6	6.4	7.8	.00	.00	.00
11	.00	.00	4.2	12	9.7	9.0	12	6.9	6.7	.00	.00	.00
12	.00	.00	4.0	11	9.0	9.4	14	7.6	6.5	.00	.00	.00
13	.00	.00	4.0	9.5	8.5	7.4	15	7.8	5.1	.00	.00	.00
14	.00	.00	4.8	8.3	9.7	6.6	16	8.5	3.7	.00	.00	.00
15	.00	3.3	5.7	8.0	9.3	6.4	17	8.4	2.6	.00	.00	.00
16	.00	8.0	5.3	7.1	9.4	6.2	17	8.4	1.8	.00	.00	.00
17	.00	12	5.9	6.6	9.5	7.0	18	8.1	1.2	.00	.00	.00
18	.00	68	7.3	6.9	11	11	19	8.3	.59	.00	.00	.00
19	.00	38	29	7.3	13	57	23	9.7	.49	.00	.00	.00
20	.00	15	19	7.1	13	50	31	9.8	.48	.00	.00	.00
21	.00	7.8	46	6.5	13	21	25	15	.31	.00	.00	.00
22	.00	5.1	48	5.8	11	13	20	22	.18	.00	.00	.00
23	.00	3.3	25	5.3	9.6	10	16	20	.09	.00	.00	.00
24	.00	2.9	16	5.2	8.4	9.0	13	18	.05	.00	.00	.00
25	.00	3.5	14	5.5	7.5	8.1	13	15	.03	.00	.00	.00
26	.00	6.4	13	6.5	6.6	7.3	13	12	.02	.00	.00	.00
27	.00	7.1	15	8.3	6.6	7.7	15	9.5	.02	.00	.00	.00
28	.00	7.5	14	9.7	6.5	7.5	16	8.4	.01	.00	.00	.00
29	.00	7.1	11	9.2	6.8	7.4	60	6.9	.01	.00	.00	.00
30	.00	6.7	9.2	9.3	---	7.4	54	5.7	.01	.00	.00	.00
31	.00	---	8.2	9.3	---	7.7	---	5.5	---	.00	.00	---
TOTAL	32.41	201.70	347.0	259.4	279.7	350.6	524.9	344.5	158.09	0.00	0.00	0.00
MEAN	1.05	6.72	11.2	8.37	9.64	11.3	17.5	11.1	5.27	.00	.00	.00
MAX	13	68	48	12	13	57	60	26	24	.00	.00	.00
MIN	.00	.00	3.2	5.2	6.5	6.2	8.4	5.5	.01	.00	.00	.00
AC-FT	64	400	688	515	555	695	1040	683	314	.0	.0	.0
CFSM	.00	.03	.05	.04	.04	.05	.07	.05	.02	.00	.00	.00
IN.	.01	.03	.05	.04	.04	.06	.08	.05	.02	.00	.00	.00

CAL YR 1987 TOTAL 42349.44 MEAN 116 MAX 3960 MIN .00 AC-FT 84000 CFSM .49 IN. 6.68
WTR YR 1988 TOTAL 2498.30 MEAN 6.83 MAX 68 MIN .00 AC-FT 4960 CFSM .03 IN. .39

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.

PERIOD OF RECORD.--August 1962 to current year.
Water-quality records.--Chemical and biochemical analyses: November 1980 to August 1987. Sediment analyses: June 1966 to September 1975.

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.--No estimated daily discharges. Records good. Diversions above station for irrigation. Gage-height telemeter at station.

AVERAGE DISCHARGE.--26 years, 59.2 ft³/s (42,890 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)
June 1	0200	*243	*6.52				

Minimum daily discharge, 0.21 ft³/s Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	11	23	27	18	16	9.1	24	139	16	13	12
2	1.4	13	22	26	19	18	11	22	93	15	12	12
3	.91	13	21	28	23	22	22	21	128	15	12	13
4	.57	11	20	28	25	18	22	20	88	16	13	13
5	.49	11	18	27	25	15	20	20	71	16	12	12
6	.46	11	21	26	25	12	18	19	38	16	12	12
7	.23	11	20	31	25	11	18	19	28	16	12	12
8	.21	13	19	32	25	10	17	19	22	16	12	12
9	.31	18	21	29	25	9.1	17	19	19	15	12	13
10	1.3	34	20	26	25	9.7	15	19	19	15	12	12
11	5.8	24	19	25	24	8.8	15	19	18	15	12	12
12	6.7	19	21	24	23	7.9	15	19	17	16	12	12
13	4.6	17	20	25	21	6.6	14	20	16	16	12	12
14	7.0	18	20	25	22	6.6	15	21	16	15	12	12
15	9.5	25	20	25	22	6.5	14	20	16	15	12	12
16	10	44	20	25	18	6.2	13	19	16	14	12	12
17	10	84	20	27	19	14	14	20	16	14	12	12
18	10	64	20	28	27	60	15	19	15	14	18	12
19	10	33	41	27	31	71	13	19	18	14	17	10
20	10	26	75	28	32	39	6.2	18	19	13	13	10
21	10	22	105	25	29	32	5.4	25	19	14	11	12
22	11	21	48	22	26	28	6.3	36	18	13	9.7	12
23	11	20	35	24	23	28	7.2	26	18	13	9.8	12
24	11	21	31	26	19	29	6.9	20	17	13	11	12
25	12	32	33	24	22	28	6.3	20	17	13	12	12
26	12	111	40	20	23	27	6.1	19	17	13	12	12
27	9.7	77	42	23	24	23	5.2	18	17	13	11	12
28	11	40	36	22	24	14	4.4	18	17	13	11	12
29	13	32	31	22	17	11	11	18	16	13	11	12
30	14	26	28	23	---	9.8	23	18	16	13	11	14
31	16	---	28	22	---	9.2	---	39	---	13	12	---
TOTAL	222.98	902	938	792	681	606.4	385.1	653	984	446	375.5	361
MEAN	7.19	30.1	30.3	25.5	23.5	19.6	12.8	21.1	32.8	14.4	12.1	12.0
MAX	16	111	105	32	32	71	23	39	139	16	18	14
MIN	.21	11	18	20	17	6.2	4.4	18	15	13	9.7	10
AC-FT	442	1790	1860	1570	1350	1200	764	1300	1950	885	745	716

CAL YR 1987 TOTAL 37858.76 MEAN 104 MAX 2920 MIN .06 AC-FT 75090
WTR YR 1988 TOTAL 7346.98 MEAN 20.1 MAX 139 MIN .21 AC-FT 14570

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 daily contents, 165,100 acre-ft Apr. 5-7 (elevation, 238.43 ft); minimum daily, 130,200 acre-ft Sept. 30 (elevation, 235.23 ft).

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

235.0	127,900	236.0	138,200	237.0	148,900	238.0	160,100
235.5	133,000	236.5	143,500	237.5	154,400	238.5	165,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157400	152800	154800	159500	160600	162400	165000	164300	159900	159500	154400	145800
2	157100	152700	154800	159400	160600	162800	165000	164200	161500	159300	154300	145200
3	156800	152700	154800	159800	160600	162800	164800	163900	162300	159100	154100	144200
4	156600	152700	154700	159800	160600	162600	165000	163600	162800	159400	154000	143100
5	156600	152400	154900	159700	160700	162600	165100	163200	163100	159300	153900	142000
6	156500	152200	155200	160100	160700	162500	165100	162800	163200	159400	153700	141000
7	156100	152000	155200	160100	160700	162500	165100	162400	163300	159200	153400	140100
8	155700	153800	155200	160000	160700	162600	165000	162200	163300	158700	153000	139200
9	155600	153700	155100	160000	160800	162500	164800	161800	163100	158700	152900	138600
10	155500	153000	155100	160000	161000	162400	164700	161500	162900	158700	152800	138300
11	155200	152900	155200	160100	160900	162300	164500	161500	162600	158500	153100	137900
12	155000	152800	155000	160100	160800	162100	164400	161400	162300	158700	153000	137700
13	154900	152700	154900	160200	160700	161800	164200	161000	162100	158600	152800	137400
14	154600	152500	154800	160200	160800	161700	163900	160800	162100	158500	152800	137000
15	154400	153000	154700	160200	160800	161600	163800	160700	162000	158300	152400	136500
16	154400	153800	154400	160500	160900	161400	163800	160500	161700	158200	152400	136300
17	154400	153700	154400	160600	161000	163500	163900	160100	161600	158100	152300	135900
18	154300	153900	154700	160800	162200	163800	163800	159500	161400	157700	151900	135700
19	154200	153800	156500	160800	162300	163900	163500	159200	160900	157400	151800	135400
20	154000	153800	156700	160700	162300	164000	163200	158900	160900	157300	151500	134600
21	153700	153700	157400	160600	162400	164000	163000	159900	160800	157000	151300	133900
22	153500	153800	157600	160600	162300	164200	162900	159500	160500	156800	151100	133600
23	153500	153900	157900	160500	162300	164300	162800	159000	160300	156700	151000	133200
24	153500	154000	158900	160500	162200	164500	162400	158700	159900	156200	150800	132600
25	153700	154400	159200	160300	162200	164600	162100	158600	160300	156100	150600	132000
26	153500	154300	159800	160300	162200	164600	161700	158400	160300	155900	150300	131600
27	153300	155000	159500	160200	162300	164600	161500	158200	160300	155700	150100	131400
28	153100	154800	159400	160200	162300	164600	161300	158200	160200	155300	149800	131200
29	153000	154800	159300	160200	162400	164600	163000	158300	160000	155000	149100	130800
30	152900	154800	159500	160300	---	164600	163900	158400	159800	154900	148200	130200
31	152800	---	159500	160500	---	164600	---	158500	---	154700	146900	---
MAX	157400	155000	159800	160800	162400	164600	165100	164300	163300	159500	154400	145800
MIN	152800	152000	154400	159400	160600	161400	161300	158200	159800	154700	146900	130200
(†)	237.35	237.53	237.95	238.03	238.20	238.39	238.33	237.86	237.97	237.52	236.82	235.23
(ϕ)	-4720	+2012	+4759	+916	+1958	+2204	-698	-5408	+1256	-5099	-7732	-16690

CAL YR 1987 MAX 349900 MIN 152000 (ϕ) -97800
WTR YR 1988 MAX 165100 MIN 130200 (ϕ) -27300

(†) 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 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN											
26...	1100	1.00	345	7.90	8.5	0.30	10.4	88	<2	K8	100
26...	1101	0.50	--	--	--	--	--	--	--	--	--
26...	1102	10.0	345	7.90	8.5	--	10.4	88	--	--	--
26...	1104	20.0	345	7.90	8.0	--	10.5	88	--	--	--
26...	1106	27.0	345	7.60	8.0	--	10.5	88	--	--	100
APR											
26...	0830	1.00	395	7.60	21.0	0.70	7.6	86	<2	<2	110
26...	0831	1.20	--	--	--	--	--	--	--	--	--
26...	0832	10.0	395	7.50	21.0	--	7.6	86	--	--	--
26...	0834	20.0	395	7.50	21.0	--	7.6	86	--	--	--
26...	0836	27.0	395	7.40	21.0	--	7.6	86	--	--	120
JUL											
19...	0850	1.00	434	8.80	30.5	0.70	7.7	104	<2	<2	130
19...	0851	1.20	--	--	--	--	--	--	--	--	--
19...	0852	10.0	434	8.80	30.5	--	7.7	104	--	--	--
19...	0854	20.0	434	8.40	30.0	--	6.1	82	--	--	--
19...	0856	26.0	440	7.20	28.5	--	0	0	--	--	130

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN										
26...	50	30	7.2	23	1	6.8	55	52	35	0.20
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	49	30	7.1	22	1	6.9	55	53	35	--
APR										
26...	54	32	8.1	27	1	6.6	59	62	44	0.30
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	55	33	8.3	28	1	6.8	62	64	42	--
JUL										
19...	60	36	9.1	31	1	7.2	68	58	50	0.30
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	56	36	9.0	31	1	7.1	71	57	49	--

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)
JAN										
26...	13	200	<0.010	<0.100	0.040	1.3	1.3	0.070	4	2
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	<0.010	<0.100	0.050	1.0	1.1	0.030	<10	<10
26...	--	--	--	--	--	--	--	--	--	--
26...	13	200	<0.010	<0.100	0.050	1.2	1.3	0.060	<3	2
APR										
26...	0.96	216	<0.010	<0.100	0.030	0.97	1.0	0.020	25	1
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	<0.010	<0.100	0.020	0.98	1.0	0.020	10	10
26...	--	--	--	--	--	--	--	--	--	--
26...	1.0	220	<0.010	<0.100	0.040	0.76	0.80	0.030	18	41
JUL										
19...	8.0	240	<0.010	<0.100	<0.010	--	1.1	0.040	5	3
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	<0.010	<0.100	<0.010	--	1.1	0.040	<10	50
19...	9.0	242	<0.010	<0.100	0.290	1.4	1.7	0.060	28	850

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301940096315801 - SOMERVILLE LAKE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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	345	8.00	8.5	10.3	87
26...	1127	10.0	345	8.00	8.0	10.3	86
26...	1129	25.0	345	8.00	8.0	10.3	86
APR							
26...	0850	1.00	395	7.60	21.0	7.5	85
26...	0852	10.0	395	7.60	21.0	7.3	83
26...	0854	24.0	395	7.60	21.0	7.0	79
JUL							
19...	0920	1.00	434	8.80	30.5	7.8	105
19...	0922	10.0	434	8.70	30.5	7.5	101
19...	0924	24.0	440	7.20	29.0	0	0

302026096341501 - SOMERVILLE LAKE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1140	1.00	345	8.00	8.5	10.2	87
26...	1142	10.0	345	8.00	8.5	10.2	87
26...	1144	13.0	345	8.00	8.0	10.1	85
APR							
26...	0900	1.00	396	7.60	22.0	7.4	86
26...	0902	13.0	396	7.50	21.0	5.0	57
JUL							
19...	0950	1.00	434	8.60	30.5	6.7	90
19...	0952	13.0	434	8.50	30.5	6.4	86

301805096332501 - SOMERVILLE LAKE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1155	1.00	360	8.10	8.5	10.3	87
26...	1157	10.0	360	8.10	8.5	10.3	87
26...	1159	15.0	360	8.00	8.5	10.3	87
APR							
26...	0915	1.00	396	7.70	21.5	7.6	87
26...	0917	10.0	396	7.70	21.5	7.4	85
26...	0919	15.0	396	7.70	21.5	7.4	85
JUL							
19...	1005	1.00	434	8.10	29.0	6.5	85
19...	1007	10.0	434	8.10	29.0	6.3	83
19...	1009	15.0	434	8.00	29.0	6.2	81

301847096334601 - SOMERVILLE LAKE DR

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1205	1.00	354	8.10	8.5	10.3	87
26...	1207	10.0	354	8.10	8.5	10.3	87
26...	1209	20.0	354	8.10	8.5	10.3	87
APR							
26...	0925	1.00	398	7.70	22.0	7.6	88
26...	0927	10.0	398	7.60	22.0	7.4	86
26...	0929	22.0	398	7.50	21.5	5.5	63
JUL							
19...	1020	1.00	434	8.10	29.5	6.4	85
19...	1022	10.0	434	8.00	29.5	6.2	82
19...	1024	22.0	434	7.70	29.0	5.0	66

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301904096335601 - SOMERVILLE LAKE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
JAN										
26...	1220	1.00	345	8.00	8.5	0.40	10.1	86	<2	<2
26...	1222	10.0	345	8.00	8.5	--	10.1	86	--	--
26...	1224	20.0	345	8.00	8.5	--	10.0	85	--	--
26...	1226	25.0	345	8.00	8.5	--	10.0	85	--	--
APR										
26...	0930	1.00	398	7.60	21.5	0.90	7.6	87	<2	<2
26...	0932	10.0	398	7.60	21.5	--	7.4	85	--	--
26...	0934	20.0	398	7.40	20.5	--	5.2	58	--	--
26...	0936	27.0	398	7.40	20.0	--	3.9	43	--	--
JUL										
19...	1030	1.00	437	8.40	30.0	0.50	6.5	87	K7	K25
19...	1032	10.0	437	8.30	30.0	--	6.1	81	--	--
19...	1034	20.0	437	7.60	29.5	--	4.0	53	--	--
19...	1036	27.0	437	7.20	29.0	--	0	0	--	--

DATE	HARDNESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN										
26...	110	52	31	7.1	23	1	6.8	55	53	36
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	110	51	31	7.2	23	1	6.8	56	54	36
APR										
26...	120	55	33	8.3	28	1	6.7	62	65	43
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	120	55	33	8.4	28	1	6.7	62	65	43
JUL										
19...	130	62	38	9.2	32	1	7.1	71	59	50
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	130	60	38	9.2	34	1	7.1	73	58	49

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)
JAN										
26...	13	203	<0.010	<0.100	0.060	1.1	1.2	0.070	5	3
26...	--	--	<0.010	<0.100	0.060	1.1	1.2	0.040	20	10
26...	--	--	--	--	--	--	--	--	--	--
26...	13	205	<0.010	<0.100	0.060	1.3	1.4	0.060	3	3
APR										
26...	1.0	222	0.010	<0.100	0.020	0.98	1.0	0.020	20	<1
26...	--	--	0.020	<0.100	0.030	0.87	0.90	0.020	30	<10
26...	--	--	--	--	--	--	--	--	--	--
26...	2.5	224	0.010	<0.100	0.200	0.90	1.1	0.040	23	40
JUL										
19...	8.6	246	<0.010	<0.100	<0.010	--	1.1	0.040	<3	3
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	<0.010	<0.100	0.070	0.93	1.0	0.040	<10	160
19...	9.2	249	0.010	<0.100	0.390	0.91	1.3	0.070	<3	310

301817096364101 - SOMERVILLE LAKE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1245	1.00	367	8.10	8.5	10.5	89
26...	1247	10.0	367	8.10	8.5	10.5	89
26...	1249	20.0	367	8.10	8.5	10.3	87
APR							
26...	0955	1.00	410	7.30	22.5	7.4	87
26...	0957	10.0	410	7.20	22.5	7.1	83
26...	0959	20.0	410	7.10	22.0	5.0	58
JUL							
19...	1055	1.00	435	8.30	29.5	7.4	98
19...	1057	10.0	435	8.10	29.0	6.4	84
19...	1059	19.0	435	7.70	29.0	5.3	70

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301754096380801 - SOMERVILLE LAKE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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)
JAN										
26...	1300	1.00	522	8.40	8.0	0.30	10.9	91	K2	<2
26...	1301	0.50	--	--	--	--	--	--	--	--
26...	1302	10.0	522	8.30	8.0	--	10.9	91	--	--
APR										
26...	1015	1.00	535	7.60	23.5	0.40	7.6	91	<2	<2
26...	1016	0.65	--	--	--	--	--	--	--	--
26...	1017	11.0	524	7.50	23.0	--	7.1	84	--	--
JUL										
19...	1110	1.00	442	8.00	30.0	0.30	6.8	91	K4	K8
19...	1111	0.50	--	--	--	--	--	--	--	--
19...	1112	11.0	442	7.60	29.5	--	4.6	61	--	--

DATE	HARDNESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN										
26...	160	94	45	11	38	1	7.3	64	98	62
26...	--	--	--	--	--	--	--	--	--	--
26...	160	96	45	11	39	1	7.3	62	93	63
APR										
26...	150	84	42	12	41	1	7.3	71	96	65
26...	--	--	--	--	--	--	--	--	--	--
26...	150	82	43	11	39	1	7.3	71	83	58
JUL										
19...	130	65	38	9.2	33	1	7.1	68	60	51
19...	--	--	--	--	--	--	--	--	--	--
19...	130	63	38	9.2	33	1	7.2	70	59	50

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
26...	11	311	<0.010	<0.100	0.010	0.99	1.0	0.080	17	8
26...	--	--	--	--	--	--	--	--	--	--
26...	11	306	<0.010	<0.100	<0.010	--	1.2	0.070	8	9
APR										
26...	1.1	307	0.010	<0.100	0.020	0.88	0.90	0.040	12	1
26...	--	--	--	--	--	--	--	--	--	--
26...	1.0	285	0.020	<0.100	0.030	0.87	0.90	0.040	12	15
JUL										
19...	9.6	249	<0.010	<0.100	<0.010	--	1.3	0.050	<3	60
19...	--	--	--	--	--	--	--	--	--	--
19...	9.5	248	<0.010	<0.100	0.030	1.4	1.4	0.050	<3	190

08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

Somerville Lake AC (301908096313101)

Phytoplankton Analyses October 1987 to September 1988

Date	1-26-88
Time	1101
TOTAL CELLS/mL	149,952
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus nannoselene	326
Chodatella quadriseta	326
Golenkinia radiata	326
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	35609
Chroococcus pallidus	653
Lyngbya limnetica	3920
Oscillatoria subtilissima ?	107156
Synechococcus sp.	980
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	7
Cyclotella stelligera	2
Melosira granulata var. *angustissima*	7
Melosira granulata var. *angustissima* f. *spiralis*	11
Melosira lirata	52
Stephanodiscus dubius	229
Stephanodiscus hantzschii	18
Order Pennales	
Amphora sp.	8
Navicula amphibola	8
Navicula arvensis	8
Navicula cascadensis ?	16
Navicula microcephala	16
Navicula pupula var. *rectangularis*	16
Navicula sp.	8
Nitzschia acicularis	31
Nitzschia kutzingiana	39
Nitzschia palea	132
Nitzschia sp.	8
Surirella sp.	16
Synedra filiformis var. *exilis*	8
Synedra rumpens var. *fragilarioides*	16

Somerville Lake FC (301754096380801)

Phytoplankton Analyses September 1987 to October 1988

Date	1-26-88
Time	1301
TOTAL CELLS/mL	64,033
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Ankistrodesmus convolutus	2,613
Ankistrodesmus nannoselene	980
Chlamydomonas sp.	327
Chlorogonium sp.	327
Chodatella subsalsa	327
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	6,534
Aphanocapsa delicatissima	38,876
Aphanocapsa elachista	2,613
Aphanothece saxicola	1,960
Chroococcus dispersus	1,960
Chroococcus pallidus	653
Dactylococcopsis fascicularis	653
Dactylococcopsis smithii	1,306
Oscillatoria subtilissima ?	980
Synechococcus sp.	2,613
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella stelligera	11
Melosira granulata var. *angustissima*	11
Melosira lirata	484
Stephanodiscus dubius	112
Stephanodiscus hantzschii	34
Order Pennales	
Diploneis sp.	39
Navicula radiosa	131
Navicula rhyncocephala var. *amphiceros*	39
Navicula sp.	85
Nitzschia gracilis	39
Nitzschia palea	85
Nitzschia paradoxa	39
Nitzschia thermalis	39
Synedra filliformis var. *exilis*	163

Somerville Lake AC (301908096313101)

Phytoplankton Analyses October 1987 to September 1988

Date	4-26-88
Time	0831
TOTAL CELLS/mL	66,630
NUMBER OF SPECIES	27
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Carteria cordiformis	113
Chlorococcum sp.	113
Gloeocystis sp.	450
Kirchneriella lunaris	225
Oocystis pusilla	450
Phacotus lenticularis	113
Scenedesmus quadricauda	225
Schroederia judayi	113
Tetrastrum staurogeniaeforme	450
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	5402
Aphanocapsa elachista	5740
Aphanocapsa sp.	1351
Aphanothece nidulans	4952
Aphanothece saxicola	1351
Aphanothece sp.	3376
Chroococcus limneticus	5515
Chroococcus multicoloratus	8329
Chroococcus varius	2476
Chroococcus sp.	1576
Microcystis sp.	20146
Synechococcus lineare	1463
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	225
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella bodanica ?	30
Melosira granulata	2265
Melosira italica	30
Melosira lirata	121
Stephanodiscus dubius	30

Somerville Lake FC (301754096380801)

Phytoplankton Analyses October 1987 to September 1988

Date	4-26-88
Time	1016
TOTAL CELLS/mL	60,440
NUMBER OF SPECIES	28
DEPTH COLLECTED (ft.)	0.65

Organisms	Cells/mL
CHLOROPHYTA (Green algae)	
Gloeocystis sp.	225
Kirchneriella lunaris	225
Mesotaenium sp.	113
Oocystis pusilla	225
Oocystis sp.	338
Scenedesmus armatus	450
Schroederia judayi	113
CYANOPHYTA (Blue-green algae)	
Aphanizomenon flos-aquae	450
Aphanocapsa delicatissima	6640
Aphanocapsa sp.	675
Aphanothece saxicola	17220
Aphanothece sp.	6865
Chroococcus limneticus	3151
Chroococcus multicoloratus	11142
Chroococcus sp.	1238
Dactylococcopsis fascicularis	563
Gomphosphaeria lacustris	900
Merismopedia tenuissima	2026
Microcystis sp.	5740
Synechococcus sp.	225
EUGLENOPHYTA (Euglenoids)	
Trachelomonas hispida	113
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	113
Cryptomonas erosa	338
Rhodomonas minuta ?	113
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira granulata	1093
Melosira lirata	11
Stephanodiscus dubius	22
Order Pennales	
Nitzschia sp.	113

Lake Somerville AC (301908096313101)

Phytoplankton Analyses September 1987 to October 1988

Date	7-19-88
Time	0851
TOTAL CELLS/mL	51,950
NUMBER OF SPECIES	33
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus falcatus	74
Chlamydomonas globosa?	74
Chlamydomonas sp. 1	148
Chlamydomonas sp. 2	296
Scenedesmus carinatus?	148
Tetraedron trigonum	74
CYANOPHYTA (blue-green algae)	
Anabaena sp.	1482
Aphanocapsa elachista	4223
Chroococcus dispersus	5186
Chroococcus limneticus	2000
Marssoniella elegans	1778
Merismopedia punctata	4371
Schizothrix calcicola	15113
Synechococcus sp.	9038
EUGLENOPHYTA (euglenoid algae)	
Trachelomonas volvocina	1037
Trachelomonas sp.	370
PYRRHOPHYTA (dinoflagellates)	
Gymnodinium sp.	148
unidentified dinoflagellates	74
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	222
Cyclotella ocellata	148
Cyclotella pseudostelligera	1111
Melosira italica	148
Melosira granulata var. *angustissima*	148
Stephanodiscus vestibulis	1852
Order Pennales	
Navicula gregaria	148
Navicula hustedtii	148
Navicula mucicoloides	222
Nitzschia acicularis	74
Nitzschia holsatica	444
Nitzschia subacicularis	148
Nitzschia sp.	148
Synedra delicatissima	1259
Synedra radians	296

Lake Somerville FC (301754096380801)

Phytoplankton Analyses September 1987 to October 1988

Date	7-19-88
Time	1111
TOTAL CELLS/mL	815,88 8
NUMBER OF SPECIES	29
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/mL
CHLOROPHYTA (green algae)	
Ankistrodesmus sp.	9680
Chlamydomonas sp. 1	6914
Chlamydomonas sp. 2	4149
Coelastrum sphaericum	16594
Cosmarium sp.	2766
Kirchneriella lunaris?	1383
Scenedesmus longus var. *naegelii*	5531
Tetraedron muticum	2766
Tetrastrum heteracanthum	5531
CYANOPHYTA (blue-green algae)	
Aphanocapsa delicatissima	226789
Aphanocapsa elachista	70526
Chroococcus dispersus	100949
Chroococcus limneticus	47017
Dactylococcopsis fascicularis	6914
Marssoniella elegans	35954
Merismopedia punctata	30423
Merismopedia tenuissima	67760
Schizothrix calcicola	138286
Spirulina sp.	9680
BACILLARIOPHYTA (diatoms)	
Order Centrales	
Cyclotella meneghiniana	1383
Melosira italica	2766
Stephanodiscus vestibulis	2766
Order Pennales	
Navicula hustedtii	1383
Navicula mucicoloides	2766
Navicula sp.	1383
Nitzschia holsatica	9680
Nitzschia subacicularis	1383
Nitzschia sp.	1383
Synedra delicatissima	1383

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); 23 years (water years 1966-88) regulated, 290 ft³/s (210,100 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, 526 ft³/s Aug. 31 at 1500 hours (gage height, 6.35 ft); no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.4	.10	.94	.71	.83	.06	.00	3.6	.09	.30	450
2	2.5	1.3	.09	.81	.68	.82	.07	56	2.4	.07	.31	401
3	2.4	1.1	.08	.96	.65	.89	.06	139	2.2	.14	.32	411
4	2.3	1.1	.07	1.2	.60	.85	.05	140	2.0	.16	.30	410
5	2.3	1.0	.06	1.2	.63	.83	.05	142	1.9	.18	.32	409
6	2.2	1.0	.06	1.1	.69	.75	.04	142	1.8	.19	.28	402
7	2.2	1.0	.05	1.4	.67	.66	.03	141	1.9	.20	.28	397
8	2.2	1.1	.05	1.4	.66	.61	.03	142	2.0	.20	.27	393
9	2.2	1.6	.04	1.3	.67	.57	.02	144	2.0	.19	.26	326
10	2.2	1.3	.04	1.2	.71	.44	.02	144	2.0	.18	.28	124
11	2.1	1.1	.04	1.1	.71	.42	.01	152	1.8	.19	.29	115
12	2.0	.83	.04	1.1	.71	.36	.00	167	1.6	.20	.37	116
13	2.0	.66	.04	1.1	.95	.28	.00	93	1.7	.24	.37	125
14	1.9	.52	.04	1.1	.87	.21	7.5	.03	1.5	.22	.37	135
15	1.8	.41	.04	1.4	.77	.17	.25	.00	.42	.21	.37	132
16	1.7	.40	.04	1.3	.69	.13	.00	63	.17	.21	.41	131
17	1.7	.33	.04	1.3	.62	1.4	.00	153	.13	.21	.50	137
18	1.5	.28	.05	1.2	1.5	1.4	21	151	.15	.22	.46	136
19	1.4	.25	.79	1.2	2.1	.12	88	147	.28	.23	.45	146
20	1.3	.21	1.4	1.1	1.8	.08	88	147	.43	.26	.40	159
21	1.3	.19	1.2	1.0	1.5	.07	88	150	.33	.29	.41	154
22	1.2	.17	.95	.96	1.3	.07	88	145	.30	.28	.41	151
23	1.2	.16	.65	.93	1.2	.07	87	89	.29	.28	.42	153
24	1.2	.15	.55	.90	1.0	.07	87	.42	.36	.28	.44	158
25	1.2	.19	1.2	.87	.94	.07	88	.00	.21	.28	.50	157
26	1.3	.20	2.4	.86	.88	.07	87	.00	.41	.27	.50	158
27	1.6	.18	2.4	.81	1.1	.07	86	.06	.66	.27	.46	105
28	1.5	.17	2.0	.78	1.0	.06	85	1.7	.64	.28	.47	5.4
29	1.5	.13	1.5	.75	.91	.06	45	3.7	.36	.29	145	1.9
30	1.5	.11	1.2	.75	---	.05	.16	3.8	.10	.31	466	1.5
31	1.4	---	1.1	.72	---	.05	---	3.7	---	.30	508	---
TOTAL	55.4	18.54	18.31	32.74	27.22	12.53	946.35	2660.41	33.64	6.92	1129.52	6099.8
MEAN	1.79	.62	.59	1.06	.94	.40	31.5	85.8	1.12	.22	36.4	203
MAX	2.6	1.6	2.4	1.4	2.1	1.4	88	167	3.6	.31	508	450
MIN	1.2	.11	.04	.72	.60	.05	.00	.00	.10	.07	.26	1.5
AC-FT	110	37	36	65	54	25	1880	5280	67	14	2240	12100

CAL YR 1987 TOTAL 209504.35 MEAN 574 MAX 2260 MIN .04 AC-FT 415600
WTR YR 1988 TOTAL 11041.38 MEAN 30.2 MAX 508 MIN .00 AC-FT 21900

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 1987 TO SEPTEMBER 1988

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 (FTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN											
26...	1445	1.2	2500	6.80	9.5	18	16	11.9	105	7.7	700
APR											
26...	1115	78	396	7.60	21.0	4	13	7.6	86	1.2	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 WAT WH TOT FET 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											
26...	630	210	42	230	4	15	69	530	450	0.20	16
APR											
26...	62	35	8.5	28	1	8.1	61	64	45	0.30	1.2

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE 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)	ARSENIC DIS-SOLVED (UG/L AS AS)
JAN											
26...	1540	33	9	<0.010	<0.100	0.060	1.3	1.4	0.070	15	<1
APR											
26...	227	38	7	<0.010	<0.100	0.050	0.85	0.90	0.020	9.4	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)
JAN											
26...	300	<1	<1	1	20	<5	2300	<0.1	<1	<1.0	10
APR											
26...	100	<1	<1	3	14	<5	24	<0.1	<1	<1.0	5

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.--Records good except those for estimated daily discharges, which are fair. The city of Caldwell discharges sewage effluent into creek above station. Several observations of water temperature were made during the year. Satellite telemeter at station.

AVERAGE DISCHARGE.--26 years, 65.7 ft³/s (4.58 in/yr), 47,600 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)
June 2	0930	*913	*12.83				

Minimum discharge, no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	.00	3.8	2.7	1.8	2.7	3.1	23	545	.63	.02	.00
2	.91	.00	2.5	2.0	1.6	2.9	4.4	9.0	756	.57	.00	.00
3	.84	.00	1.5	2.0	1.5	2.7	3.1	5.5	748	.52	.00	.00
4	.69	.00	1.2	1.7	1.6	5.7	3.2	3.6	143	.77	.00	.00
5	.56	.00	1.1	1.7	1.9	6.3	3.3	2.3	33	.97	.00	.00
6	.48	.00	1.5	1.8	2.4	5.7	5.5	1.7	e17	.66	.00	.00
7	.37	.00	1.1	2.1	2.9	4.8	4.2	1.9	e10	.41	.00	.00
8	.28	.00	1.0	2.4	3.2	4.1	2.7	2.2	e6.4	.31	.00	.00
9	.25	.04	.91	4.0	2.9	3.1	2.1	2.1	e4.7	.28	.00	.00
10	.23	.02	.85	2.6	2.9	2.8	1.9	1.9	e2.8	.36	.00	.00
11	.21	2.6	.96	2.0	2.8	2.6	1.9	1.7	e1.8	.38	.00	.00
12	.24	1.5	1.2	2.1	3.2	2.6	1.6	2.4	e1.6	.47	.00	.00
13	.19	.77	.84	1.6	3.4	2.1	1.1	2.2	e1.4	.96	.00	.00
14	.20	.56	.58	1.4	2.9	1.8	.76	1.7	e1.3	.66	.00	.00
15	.26	.72	.48	1.4	3.0	1.7	.77	1.5	e1.2	.95	.00	.00
16	.26	4.6	.52	1.2	3.4	1.6	1.3	1.4	1.1	1.1	.00	.00
17	.25	3.5	.98	1.2	3.0	4.5	1.8	1.5	.92	.65	.00	.00
18	.20	4.1	1.6	1.1	4.5	56	2.2	1.4	.82	.48	.00	.00
19	.13	2.8	15	.90	27	44	2.2	1.3	.75	.37	.00	.00
20	.08	1.5	77	.94	12	21	2.9	1.0	.73	.27	.00	.00
21	.05	1.0	22	.97	6.8	14	4.9	4.3	.79	.21	.00	.00
22	.02	.66	10	.97	5.2	10	5.1	2.9	.74	.17	.00	.00
23	.02	.67	8.1	.90	4.8	7.4	4.9	5.5	.70	.15	.00	.00
24	.02	.70	5.9	1.4	4.0	6.4	5.1	2.5	.59	.13	.00	.00
25	.02	.87	20	1.5	3.2	5.3	6.5	1.3	.62	.12	.00	.00
26	.00	.85	13	1.5	2.7	4.7	7.2	1.0	.65	.13	.00	.00
27	.00	.94	7.0	1.6	3.6	3.8	7.3	.73	.98	.16	.00	.00
28	.00	1.1	5.4	1.9	3.7	3.4	6.4	.63	1.1	.23	.00	.00
29	.00	2.7	4.8	2.5	2.8	3.2	159	.66	1.1	.27	.00	.00
30	.00	5.4	4.3	2.2	---	2.8	243	2.7	.79	.16	.00	.00
31	.00	---	3.8	2.0	---	2.1	---	1.6	---	.07	.00	---
TOTAL	7.62	37.60	218.92	54.28	124.7	241.8	499.43	93.12	2285.58	13.57	0.02	0.00
MEAN	.25	1.25	7.06	1.75	4.30	7.80	16.6	3.00	76.2	.44	.001	.00
MAX	.91	5.4	77	4.0	27	56	243	23	756	1.1	.02	.00
MIN	.00	.00	.48	.90	1.5	1.6	.76	.63	.59	.07	.00	.00
AC-FT	15	75	434	108	247	480	991	185	4530	27	.04	.0
CFSM	.00	.01	.04	.01	.02	.04	.09	.02	.39	.00	.00	.00
IN.	.00	.01	.04	.01	.02	.05	.10	.02	.44	.00	.00	.00

CAL YR 1987 TOTAL 23282.57 MEAN 63.8 MAX 3050 MIN .00 AC-FT 46180 CFSM .33 IN. 4.44
WTR YR 1988 TOTAL 3576.64 MEAN 9.77 MAX 756 MIN .00 AC-FT 7090 CFSM .05 IN. .68

e Estimated.

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.--No estimated gage heights. Records good. Backwater at times from the Navasota River. There are many diversions above station for irrigation, municipal, industrial, and oil field 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, 11.66 ft Dec. 29 at 0400 hours; minimum, 1.58 ft Sept. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.95	2.83	4.41	6.31	3.77	4.73	5.22	3.53	3.17	4.07	4.01	2.87
2	3.76	2.70	4.59	6.48	3.59	4.49	5.28	3.72	3.89	3.82	3.91	2.69
3	3.93	2.67	4.54	6.03	3.47	4.12	4.90	3.44	4.11	3.64	4.30	2.75
4	3.74	2.59	4.28	5.57	3.35	3.69	4.57	3.17	4.54	3.96	4.52	2.64
5	3.58	2.56	4.07	5.79	3.42	4.58	4.33	3.30	8.89	4.15	4.62	2.60
6	3.31	2.46	4.12	6.06	3.30	6.15	4.74	3.25	9.71	4.86	4.26	2.56
7	3.07	2.42	4.04	6.29	3.28	4.89	4.19	3.06	8.27	4.56	4.44	2.53
8	2.92	2.55	3.96	5.52	3.53	4.55	3.85	2.87	7.40	4.41	4.13	2.53
9	2.86	2.67	3.66	5.27	3.94	5.31	3.69	2.77	7.44	4.37	3.93	2.52
10	2.81	2.79	3.36	5.50	3.73	4.65	3.62	2.67	7.69	4.31	3.83	2.10
11	2.73	2.83	3.23	5.56	3.53	4.50	3.59	2.60	7.77	4.51	3.74	1.92
12	2.63	3.93	3.21	5.56	3.18	4.15	3.62	2.65	5.83	4.83	3.74	1.89
13	2.51	3.90	3.06	5.65	3.09	3.93	3.74	2.63	6.20	4.93	3.57	2.18
14	2.41	3.31	2.95	5.67	3.02	3.92	3.74	2.32	6.26	6.52	3.45	3.25
15	2.38	3.44	3.11	5.12	3.37	3.82	3.33	2.33	6.00	6.27	3.33	2.80
16	2.35	3.71	3.30	4.63	3.37	3.59	3.50	2.80	5.64	5.87	3.05	2.50
17	2.51	3.90	3.41	4.58	3.36	5.52	3.17	3.11	5.42	5.02	2.92	2.32
18	3.06	4.03	5.04	4.49	4.28	4.99	2.87	3.12	5.34	4.61	2.89	2.25
19	3.20	5.98	6.25	4.83	3.77	4.79	2.84	3.10	5.10	4.44	2.86	2.19
20	2.94	4.80	6.53	4.52	4.24	6.03	3.15	3.15	4.97	4.64	2.91	2.35
21	2.69	3.90	5.42	4.11	7.21	5.75	3.81	3.30	4.82	4.56	2.84	2.25
22	3.06	4.00	6.20	4.16	6.97	4.97	3.30	3.18	4.74	4.33	2.84	2.16
23	3.70	3.60	6.67	4.26	5.77	4.93	3.25	4.26	4.66	4.49	2.80	2.12
24	3.33	3.92	6.68	4.17	5.18	4.59	3.06	4.05	4.71	4.21	2.83	2.10
25	3.33	5.81	5.55	3.60	4.51	4.29	2.89	3.75	4.44	4.27	2.89	2.09
26	3.39	4.26	4.90	3.85	4.22	4.20	3.32	3.46	4.18	4.12	2.82	2.07
27	3.43	3.98	4.44	4.54	4.43	4.31	3.33	3.27	4.16	4.17	2.78	2.04
28	3.24	4.83	11.52	4.12	4.28	4.44	3.80	3.14	4.18	4.44	2.75	1.80
29	3.03	4.88	10.20	3.97	4.74	3.85	4.24	3.21	5.10	4.65	2.63	1.65
30	2.80	4.41	8.33	4.63	---	3.99	4.04	3.13	4.62	4.21	2.98	1.58
31	3.02	---	7.18	4.12	---	4.39	---	3.14	---	4.51	2.96	---
MAX	3.95	5.98	11.52	6.48	7.21	6.15	5.28	4.26	9.71	6.52	4.62	3.25
MIN	2.35	2.42	2.95	3.60	3.02	3.59	2.84	2.32	3.17	3.64	2.63	1.58

CAL YR 1987 MAX 33.33 MIN 2.35
WTR YR 1988 MAX 11.52 MIN 1.58

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.--Records good. Flow is partly regulated by 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, and oil field operation (total amount unknown). The city of Groesbeck diverts water from pool at gage for municipal use, and returns washwater and sewage effluent into river downstream from gage. Gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 94.6 ft³/s (68,540 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, 4,790 ft³/s Dec. 27 at 0100 hours (gage height, 8.01 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.21	.45	63	3.0	11	52	.00	.68	.05	.00	.00
2	.80	.16	.36	44	5.2	77	45	.00	.67	.03	.00	.00
3	.96	.36	.35	37	2.8	992	34	.02	.62	.02	.00	.00
4	1.5	.14	.35	30	3.8	427	23	.06	.61	.11	.00	.00
5	1.8	.30	.43	23	2.4	149	18	.00	.53	.24	.00	.00
6	1.1	.16	1.2	20	2.1	81	14	.00	.59	.34	.00	.00
7	1.3	.25	.85	36	1.4	53	9.9	.00	.64	.30	.00	.00
8	.52	.67	.50	50	1.3	51	7.4	.00	.47	.18	.00	.00
9	.38	.80	.48	51	1.5	55	6.5	.00	.45	.06	.00	.00
10	.25	.31	.29	42	1.7	44	9.4	.00	.46	.06	.00	.00
11	.13	.14	.61	31	9.2	34	11	.00	.46	.15	.00	.15
12	.15	.18	.70	24	1.7	33	3.8	.00	.54	1.3	.00	.09
13	.06	.13	1.1	22	1.1	23	1.6	.00	.63	.80	.00	.00
14	.13	.12	3.7	16	3.4	15	.82	.09	.50	.47	.00	.00
15	.09	.32	3.9	13	3.1	10	.22	.41	.30	.37	.00	.00
16	.14	1.2	.73	11	1.2	7.2	.20	.49	.12	.36	.00	.00
17	.13	.58	.45	12	1.3	54	.36	.65	.14	.33	.00	.00
18	.32	.31	.52	9.5	706	584	3.5	.40	.18	.34	.02	.00
19	.47	.22	16	12	1990	302	1.7	.49	.22	.08	.27	.00
20	.89	.12	65	12	776	123	.46	.65	.21	.03	.00	.00
21	.54	.15	44	6.7	217	69	.12	1.6	.24	.10	.00	.00
22	.52	.20	29	5.2	96	51	.05	.84	.28	.08	.00	.00
23	.55	.30	19	4.4	68	40	.06	.74	.14	.05	.00	.00
24	.60	.44	16	5.6	45	32	.03	.69	.17	.08	.00	.00
25	.25	.83	18	7.6	33	28	.17	.74	.26	.03	.00	.00
26	.20	.44	2520	2.6	27	23	.19	.62	.42	.02	.00	.00
27	.48	.51	3960	1.9	e24	17	.02	.44	.36	.00	.00	.00
28	.66	.34	1170	1.3	20	12	.01	.45	.22	.00	.00	.00
29	.73	.27	249	1.4	15	41	.00	.36	.31	.00	.00	.00
30	.43	.40	98	1.5	---	74	.00	.54	.09	.00	.00	.00
31	.25	---	83	2.0	---	64	---	.62	---	.00	.05	---
TOTAL	16.85	10.56	8303.97	598.7	4063.2	3576.2	243.51	10.90	11.51	5.98	0.34	0.24
MEAN	.54	.35	268	19.3	140	115	8.12	.35	.38	.19	.011	.008
MAX	1.8	1.2	3960	63	1990	992	52	1.6	.68	1.3	.27	.15
MIN	.06	.12	.29	1.3	1.1	7.2	.00	.00	.09	.00	.00	.00
AC-FT	33	21	16470	1190	8060	7090	483	22	23	12	.7	.5

CAL YR 1987 TOTAL 36400.69 MEAN 99.7 MAX 3960 MIN .00 AC-FT 72200
WTR YR 1988 TOTAL 16841.96 MEAN 46.0 MAX 3960 MIN .00 AC-FT 33410

e Estimated.

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, 570 microsiemens Nov. 29, 30, Dec. 19; minimum daily, 131 microsiemens Dec. 28, 29.
WATER TEMPERATURE: Maximum daily, 30.0°C July 18-22; minimum daily, 3.0°C Jan. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (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 14...	1200	0.10	513	20.5	250	21	93	3.7	12
DEC 29...	0800	282	131	6.0	54	3	19	1.7	6.1
FEB 29...	0800	15	269	16.5	110	13	40	2.7	11
APR 21...	1100	0.18	396	19.0	180	16	64	3.7	14

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET 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 14...	0.3	2.3	227	13	23	1.4	18	303
DEC 29...	0.4	4.5	52	14	6.2	0.20	7.3	90
FEB 29...	0.5	3.3	98	17	14	0.20	8.7	156
APR 21...	0.5	3.1	159	19	21	0.30	6.4	227

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	16.85	499	286	13	23	1.1	13	0.6	230
NOV.	1987	10.56	550	316	9.0	24	0.7	11	0.3	260
DEC.	1987	8303.97	214	121	2720	13	302	11	253	82
JAN.	1988	598.7	203	115	186	13	21	11	18	75
FEB.	1988	4063.2	237	134	1470	15	163	12	137	91
MAR.	1988	3576.2	244	138	1330	15	148	13	123	94
APR.	1988	243.51	302	171	113	18	12	14	9.2	120
MAY	1988	10.90	488	279	8.2	23	0.7	13	0.4	220
JUNE	1988	11.51	486	278	8.6	23	0.7	13	0.4	220
JULY	1988	5.98	495	283	4.6	23	0.4	13	0.2	230
AUG.	1988	0.34	450	257	0.2	22	0.02	14	0.01	200
SEPT	1988	0.24	512	293	0.2	23	0.02	12	0.01	240
TOTAL		16841.96	**	**	5900	**	650	**	542	**
WTD.AVG.		46	228	129	**	14	**	12	**	87

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	529	555	163	330	285	281	---	428	479	---	---
2	500	529	552	164	358	270	284	---	469	504	---	---
3	499	537	514	170	372	228	288	444	499	501	---	---
4	489	539	561	177	380	218	304	452	484	445	---	---
5	430	538	560	183	378	220	317	---	498	508	---	---
6	470	538	553	189	376	225	308	---	499	508	---	---
7	504	540	537	191	374	234	320	---	492	508	---	---
8	540	540	540	199	371	237	318	---	488	496	---	---
9	502	534	553	197	382	243	322	---	488	496	---	---
10	504	539	557	196	379	245	332	---	467	508	---	---
11	506	542	552	216	384	250	336	---	478	509	---	510
12	506	545	563	224	390	260	339	---	490	505	---	515
13	509	547	564	229	393	265	337	---	488	501	---	---
14	510	549	563	218	400	273	355	495	489	460	---	---
15	512	553	567	225	406	270	353	497	484	486	---	---
16	496	546	562	233	410	280	362	494	482	494	---	---
17	516	544	566	241	412	284	369	486	477	490	---	---
18	516	549	566	274	300	268	371	483	488	489	480	---
19	520	553	570	265	230	252	384	482	492	493	438	---
20	511	556	520	272	202	238	393	487	495	496	---	---
21	514	557	356	269	204	236	402	478	496	445	---	---
22	515	559	334	270	210	248	407	479	491	487	---	---
23	515	564	329	275	215	252	413	488	496	501	---	---
24	516	566	343	272	220	270	406	491	496	502	---	---
25	517	561	348	285	226	269	415	495	499	502	---	---
26	520	566	305	292	247	277	425	453	504	496	---	---
27	521	563	177	298	255	285	428	503	482	---	---	---
28	522	568	131	298	265	292	430	500	502	---	---	---
29	523	570	131	307	269	298	---	502	504	---	---	---
30	527	570	143	310	---	280	---	504	508	---	---	---
31	529	---	158	319	---	273	---	507	---	---	500	---
MEAN	508	550	446	239	322	259	357	486	488	493	473	513

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

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

08110430 BIG CREEK NEAR NEAR FREESTONE, TX

LOCATION.--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.--10 years, 37.2 ft³/s (8.85 in/yr), 26,950 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)
Dec. 27	1730	662	12.20	Mar. 19	0030	640	12.13
Mar. 3	2300	*955	*12.85				

Minimum discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.18	2.8	111	5.3	6.4	50	7.5	4.5	.07	.00	.00
2	.02	.11	2.3	48	5.7	31	38	5.3	5.6	.06	.00	.00
3	.02	.10	2.0	33	5.3	451	28	4.1	5.7	.05	.00	.00
4	.00	.10	1.7	32	5.1	675	19	3.4	5.5	.09	.00	.00
5	.01	.10	1.6	23	4.6	236	15	2.6	5.4	.25	.00	.00
6	.00	.10	160	23	4.6	66	12	2.0	4.1	.30	.00	.00
7	.00	.13	319	167	4.6	36	11	1.7	3.2	.15	.00	.00
8	.00	.44	115	172	5.1	28	9.1	1.6	2.3	.12	.00	.00
9	.00	1.8	25	110	5.7	100	8.3	1.6	1.7	.08	.00	.00
10	.00	5.5	13	34	5.8	49	7.6	1.7	1.3	.05	.00	.00
11	.00	3.2	8.4	23	6.0	28	6.8	2.4	1.0	.03	.02	.00
12	.01	2.3	5.9	19	5.8	20	6.8	2.3	.90	1.7	.01	.00
13	.00	1.9	6.9	17	6.1	15	6.2	2.1	.75	.70	.00	.00
14	.00	1.3	48	15	6.1	12	5.6	2.0	.61	.25	.00	.00
15	.00	1.5	43	11	6.0	10	5.4	1.4	.49	.69	.00	.00
16	.00	36	17	11	5.3	8.8	5.1	.73	.38	.49	.00	.00
17	.00	107	9.7	11	5.0	53	4.8	.43	.26	.26	.00	.00
18	.00	18	7.2	12	88	446	5.5	.48	.23	.13	1.2	.00
19	.01	5.7	71	12	270	496	6.3	.41	.19	.08	1.9	.00
20	.00	3.5	266	11	171	144	4.8	1.2	.17	.05	.07	.00
21	.00	2.2	209	8.3	52	54	4.2	32	.15	.02	.02	.00
22	.00	2.1	45	6.8	27	32	3.8	11	.14	.00	.00	.00
23	.01	2.0	23	6.2	17	22	3.3	5.4	.12	.00	.00	.00
24	.03	1.6	17	5.8	13	18	3.1	3.7	.10	.00	.00	.00
25	.02	156	18	5.3	10	16	2.7	2.6	.09	.00	.00	.00
26	.33	86	173	5.1	8.4	14	2.2	1.8	.28	.00	.00	.00
27	1.0	14	546	4.7	7.5	12	2.0	1.3	.15	.00	.00	.00
28	.81	7.6	422	4.4	7.0	12	1.9	1.0	.12	.00	.00	.00
29	.46	5.5	115	4.4	6.7	27	2.5	1.5	.10	.00	.00	.25
30	.32	3.7	41	4.7	---	203	7.3	5.3	.08	.00	.00	.56
31	.27	---	73	5.0	---	108	---	5.7	---	.00	.00	---
TOTAL	3.32	469.66	2807.5	955.7	769.7	3429.2	288.3	116.25	45.61	5.62	3.22	0.81
MEAN	.11	15.7	90.6	30.8	26.5	111	9.61	3.75	1.52	.18	.10	.027
MAX	1.0	156	546	172	270	675	50	32	5.7	1.7	1.9	.56
MIN	.00	.10	1.6	4.4	4.6	6.4	1.9	.41	.08	.00	.00	.00
AC-FT	6.6	932	5570	1900	1530	6800	572	231	90	11	6.4	1.6
CFSM	.00	.27	1.59	.54	.46	1.94	.17	.07	.03	.00	.00	.00
IN.	.00	.31	1.83	.62	.50	2.23	.19	.08	.03	.00	.00	.00

CAL YR 1987 TOTAL 14267.46 MEAN 39.1 MAX 612 MIN .00 AC-FT 28300 CFSM .68 IN. 9.30
WTR YR 1988 TOTAL 8894.89 MEAN 24.3 MAX 675 MIN .00 AC-FT 17640 CFSM .43 IN. 5.79

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.

REMARKS.--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, 230,100 acre-ft Feb. 20 at 2400 hours (elevation, 363.33 ft); minimum, 181,800 acre-ft Sept. 28 at 2300 hours and Sept. 29 at 0200 hours (elevation, 359.58 ft).

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

359.0	174,800	361.0	199,400	363.0	225,600
360.0	187,000	362.0	212,200	364.0	239,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193100	187500	189700	221200	224500	223700	226400	220100	219600	212700	200900	189400
2	193500	187300	189400	221100	223800	226300	225800	220100	220800	212300	200600	189400
3	192400	187300	189700	221300	224500	228200	225200	220100	220200	211800	200400	189400
4	191900	187200	189400	221600	223800	229200	224600	219800	219800	211800	200000	189000
5	192200	187000	189300	221200	223700	228500	225200	219700	219600	211500	199700	188600
6	191400	186500	190900	222700	223100	226700	223500	219200	219400	211000	199300	188200
7	191000	186100	191600	223500	223000	225200	223400	219000	219200	210600	199000	187600
8	190300	187900	192200	223800	223000	225000	223100	219000	218800	210200	198300	187500
9	190100	188700	192000	224500	223100	224200	225400	219600	218900	209700	198200	187300
10	190400	187600	191900	224200	224600	223000	222700	219200	218300	209300	197700	187100
11	190600	187000	192100	223800	223100	224100	222400	219200	217800	208500	197500	186400
12	189800	186700	191700	225400	222800	223700	222000	218900	217400	209700	197100	186200
13	189300	186500	192400	224300	222300	223800	221700	218800	217100	209400	196600	186000
14	188900	186200	193400	224100	223100	223100	221600	218300	216700	209000	196300	185900
15	188700	187700	192000	224100	222700	222700	221500	218100	216700	208700	195800	185500
16	188800	189000	191700	224500	222400	222400	221300	218100	216500	208400	195600	185400
17	188800	188800	191400	224600	223000	227000	221500	217900	216100	208000	195200	185000
18	188400	189400	191300	225000	224700	227500	221600	217500	215900	207500	195100	184500
19	189500	188700	193100	225400	228200	227600	221100	217300	215300	207000	194600	184900
20	189400	188600	195000	224600	230100	226100	220700	218300	215200	207000	194100	184300
21	188600	188100	195200	224500	228500	225400	219800	219800	214800	206200	193600	184200
22	188300	188200	195300	224200	226500	225000	220800	219300	214200	205700	193400	183900
23	188700	188100	195300	224100	226100	224600	220800	219000	214000	205200	193000	183700
24	188800	188200	196500	224100	225000	224700	221100	219000	213600	204700	192900	183700
25	188700	190300	197000	223700	224300	225200	220200	218800	214100	204300	192500	183200
26	188700	190500	200200	223700	224100	225300	220500	218300	214500	203700	191900	182800
27	188400	190400	210100	223200	224300	224700	219600	217800	214200	203100	191300	182300
28	187700	190000	218200	223100	224200	224900	219000	217700	214000	202600	191000	181900
29	187600	190000	219600	223100	224300	226700	220700	219000	213500	202300	191100	183500
30	187500	190000	220100	223100	---	226400	220500	219000	213100	202000	190400	183500
31	187300	---	221300	223500	---	226100	---	219200	---	201500	189900	---
MAX	193500	190500	221300	225400	230100	229200	226400	220100	220800	212700	200900	189400
MIN	187300	186100	189300	221100	222300	222400	219000	217300	213100	201500	189900	181900
(†)	360.03	360.25	362.69	362.85	362.91	363.04	362.63	362.53	362.07	361.17	360.24	359.72
(ϕ)	-6400	+2700	+31300	+2200	+800	+1800	-5600	-1300	-6100	-11600	-11600	-6400

CAL YR 1987 MAX 233500 MIN 186100 (ϕ) 0
WTR YR 1988 MAX 230100 MIN 181900 (ϕ) -10200

(†) Elevation, 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 1987 TO SEPTEMBER 1988

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...	1000	1.00	280	8.50	7.5	11.6	96
27...	1002	10.0	280	8.50	7.5	11.5	95
27...	1004	20.0	280	8.40	7.5	11.5	95
27...	1006	30.0	280	8.40	7.5	11.5	95
27...	1008	39.0	280	8.20	7.5	11.5	95
MAY							
03...	0905	1.00	285	7.40	19.5	7.5	83
03...	0907	10.0	285	7.40	19.5	7.4	81
03...	0909	20.0	285	7.30	19.5	7.1	78
03...	0910	30.0	285	7.20	19.5	6.8	75
03...	0912	39.0	285	6.80	19.0	4.4	48
AUG							
02...	1010	1.00	290	7.70	28.5	5.7	74
02...	1012	10.0	290	7.50	28.5	4.7	61
02...	1014	20.0	290	7.40	28.0	4.2	54
02...	1016	30.0	298	7.00	27.0	0	0
02...	1018	36.0	324	6.90	23.5	0	0

311941096191401 - LAKE LIMESTONE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
27...	1025	1.00	280	8.50	8.0	1.20	11.6	97	88
27...	1027	10.0	280	8.40	7.5	--	11.4	94	--
27...	1029	20.0	280	8.40	7.5	--	11.2	92	--
27...	1031	30.0	280	8.40	7.5	--	11.2	92	--
27...	1033	40.0	280	8.30	7.5	--	11.1	92	--
27...	1035	48.0	280	8.20	7.5	--	10.9	90	88
MAY									
03...	0940	1.00	284	7.40	19.5	0.70	7.4	81	85
03...	0942	10.0	284	7.40	19.5	--	7.3	80	--
03...	0944	20.0	284	7.40	19.5	--	7.2	79	--
03...	0946	30.0	284	7.30	19.5	--	7.0	77	--
03...	0948	40.0	293	7.10	19.0	--	5.0	54	--
03...	0950	47.0	293	6.90	18.5	--	2.6	28	92
AUG									
02...	1040	1.00	290	7.50	28.5	1.50	4.8	62	93
02...	1042	10.0	290	7.40	28.0	--	3.6	46	--
02...	1044	20.0	290	7.30	28.0	--	3.0	39	--
02...	1046	25.0	290	7.20	28.0	--	2.3	30	--
02...	1048	30.0	296	7.00	27.0	--	0	0	--
02...	1050	44.0	349	6.90	22.5	--	0	0	100

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

311941096191401 - LAKE LIMESTONE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN									
27...	16	27	5.0	18	0.9	4.9	72	22	27
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	22	27	4.9	18	0.9	4.9	66	28	27
MAY									
03...	16	26	4.9	19	0.9	5.8	69	26	29
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	16	28	5.3	20	0.9	5.9	76	25	29
AUG									
02...	18	28	5.5	20	0.9	4.7	75	24	31
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	0	31	6.0	22	1	5.2	123	13	29

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								
27...	0.20	3.9	151	<0.100	0.70	0.030	11	1
27...	--	--	--	--	--	--	--	--
27...	--	--	--	<0.100	0.60	0.030	<10	<10
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	--	3.9	153	<0.100	0.90	0.030	9	17
MAY								
03...	0.20	1.2	153	0.200	0.70	0.020	24	<1
03...	--	--	--	--	--	--	--	--
03...	--	--	--	0.200	0.40	0.030	10	90
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	3.1	163	0.200	0.70	0.050	43	890
AUG								
02...	0.30	2.9	161	<0.100	0.70	0.030	<3	12
02...	--	--	--	--	--	--	--	--
02...	--	--	--	<0.100	0.70	0.030	20	80
02...	--	--	--	--	--	--	--	--
02...	--	--	--	<0.100	0.80	0.030	170	1900
02...	--	12	204	<0.100	2.5	0.600	7100	4500

312458096205101 - LAKE LIMESTONE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
27...	1120	1.00	279	8.60	7.5	0.70	11.5	95	90
27...	1122	10.0	279	8.50	7.5	--	11.5	95	--
27...	1124	20.0	279	8.50	7.5	--	11.2	92	--
27...	1126	30.0	279	8.40	7.5	--	11.1	92	90
MAY									
03...	1015	1.00	284	7.60	20.5	0.40	7.7	86	89
03...	1017	10.0	284	7.60	20.5	--	7.7	86	--
03...	1019	20.0	284	7.60	20.5	--	7.7	86	--
03...	1021	30.0	284	7.60	20.5	--	7.6	85	88
AUG									
02...	1130	1.00	314	8.10	30.0	0.80	6.2	83	95
02...	1132	10.0	314	8.00	29.5	--	5.8	77	--
02...	1134	20.0	314	7.80	29.5	--	5.0	66	--
02...	1136	27.0	314	7.70	29.5	--	4.7	62	93

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

312458096205101 - LAKE LIMESTONE SITE BC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
27...	19	28	4.8	18	0.9	5.0	71	20
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	19	28	4.9	18	0.9	4.9	71	21
MAY								
03...	18	27	5.2	20	1	5.9	71	24
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	19	27	5.1	19	0.9	6.0	70	24
AUG								
02...	20	29	5.6	22	1	4.7	76	23
02...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
02...	15	28	5.6	24	1	4.8	78	23

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)	PHOSPHOROUS TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN								
27...	28	3.4	150	<0.100	0.80	0.040	19	3
27...	--	--	--	--	--	--	--	--
27...	--	--	--	<0.100	0.70	0.040	20	<10
27...	28	3.4	151	<0.100	1.0	0.050	25	9
MAY								
03...	30	0.58	155	0.200	0.60	0.030	22	<1
03...	--	--	--	0.200	0.60	0.030	30	<10
03...	--	--	--	--	--	--	--	--
03...	30	0.56	154	0.200	0.50	0.030	25	<1
AUG								
02...	32	3.9	166	<0.100	1.0	0.040	20	11
02...	--	--	--	--	--	--	--	--
02...	--	--	--	<0.100	0.80	0.050	30	20
02...	32	4.0	168	<0.100	1.1	0.040	4	50

312625096205901 - LAKE LIMESTONE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1145	1.00	268	8.60	7.5	11.7	96
27...	1147	10.0	268	8.50	7.5	11.5	95
27...	1149	19.0	268	8.50	7.5	11.1	92
MAY							
03...	1040	1.00	286	7.80	20.5	8.2	92
03...	1042	10.0	286	7.80	20.5	8.0	90
03...	1044	18.0	286	7.80	20.5	8.0	90
AUG							
02...	1155	1.00	314	8.40	30.5	6.6	89
02...	1157	10.0	314	8.20	30.0	6.0	80
02...	1159	17.0	314	7.90	30.0	4.8	64

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX--Continued

312622096224201 - LAKE LIMESTONE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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...	1225	1.00	230	7.80	8.0	11.3	95
27...	1227	10.0	230	7.80	7.5	10.9	90
27...	1229	21.0	230	7.70	7.5	10.9	90
MAY							
03...	1105	1.00	284	7.90	21.0	8.1	92
03...	1107	10.0	284	7.70	21.0	7.8	88
03...	1109	21.0	284	7.70	20.5	7.7	86
AUG							
02...	1215	1.00	320	8.50	30.0	7.3	98
02...	1217	10.0	348	7.70	29.0	4.2	55
02...	1219	20.0	348	7.60	29.0	3.9	51

312726096240001 - LAKE LIMESTONE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 TOTAL (MG/L AS CACO3)
JAN									
27...	1240	1.00	214	7.80	8.5	0.20	10.8	91	71
27...	1242	10.0	214	7.70	7.5	--	10.2	84	--
27...	1244	15.0	214	7.70	7.5	--	10.2	84	71
MAY									
03...	1120	1.00	300	7.70	21.0	0.30	8.0	91	97
03...	1122	10.0	300	7.60	21.0	--	7.5	85	--
03...	1124	15.0	300	7.50	21.0	--	7.2	82	94
AUG									
02...	1230	1.00	353	8.20	29.5	0.40	6.1	81	100
02...	1234	14.0	353	7.70	29.0	--	3.7	49	100

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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
JAN								
27...	6	23	3.3	12	0.6	4.6	65	14
27...	--	--	--	--	--	--	--	--
27...	5	23	3.3	12	0.6	4.7	66	16
MAY								
03...	15	31	4.8	21	1	4.2	82	23
03...	--	--	--	--	--	--	--	--
03...	14	30	4.7	21	1	5.8	80	23
AUG								
02...	17	32	5.6	26	1	5.0	86	24
02...	22	32	5.8	27	1	5.0	82	24

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	7.4	119	0.200	1.1	0.150	110	9
27...	--	--	--	--	--	--	--	--
27...	16	7.8	123	0.200	1.3	0.140	270	36
MAY								
03...	31	0.28	164	<0.100	0.70	0.050	13	<1
03...	--	--	--	--	--	--	--	--
03...	30	0.34	163	<0.100	0.70	0.060	15	19
AUG								
02...	40	6.0	190	<0.100	1.2	0.070	<3	4
02...	39	6.0	188	<0.100	1.5	0.080	4	76

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. Specific conductance (daily records): 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.--Records fair. Flow is largely regulated by Lake Mexia and Lake Limestone. There are numerous diversions above station for irrigation, municipal supply, and oil field 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; 28 years (water years 1961-88) regulated, 426 ft³/s (5.98 in/yr), 308,600 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, 1,120 ft³/s Mar. 5 at 0700 hours (gage height, 14.06 ft); minimum daily, 1.1 ft³/s Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	e5.2	8.0	26	18	22	333	47	13	78	74	70
2	65	5.5	7.6	24	17	22	349	24	14	77	74	32
3	51	5.3	7.6	24	19	516	339	19	15	76	75	7.0
4	16	5.1	7.8	23	17	998	291	17	58	80	73	5.6
5	9.6	5.7	7.9	22	20	1110	280	16	79	81	72	5.1
6	8.0	5.9	10	21	18	1040	277	15	27	79	71	4.1
7	6.9	6.1	14	34	18	878	156	19	15	78	71	3.0
8	6.5	7.5	14	38	17	537	34	16	9.8	76	70	2.5
9	6.0	14	11	60	18	459	22	14	7.0	75	70	2.4
10	5.5	12	9.7	49	17	444	19	14	5.9	75	68	2.3
11	5.1	9.2	9.1	33	17	202	27	15	4.3	74	69	2.2
12	4.7	6.6	8.9	27	30	42	29	14	4.0	75	75	2.0
13	4.4	6.2	8.8	23	19	24	18	13	3.9	76	71	2.1
14	4.4	6.4	9.3	20	18	22	16	9.0	3.8	75	69	1.9
15	4.4	11	9.2	18	18	22	16	7.5	3.7	74	69	2.3
16	4.5	28	8.9	20	18	17	16	7.1	3.8	74	68	4.2
17	4.4	35	8.5	20	18	38	17	6.9	4.5	74	68	2.8
18	4.4	16	8.9	20	31	292	17	6.7	4.4	74	68	1.9
19	4.1	8.5	17	20	39	724	16	5.8	4.1	74	68	1.7
20	4.6	6.8	29	17	457	980	16	5.4	4.3	75	68	1.6
21	4.8	6.3	21	16	917	1020	15	34	4.5	74	68	1.6
22	5.0	6.3	14	17	1010	532	16	50	30	73	68	1.5
23	5.0	6.5	22	17	843	308	16	29	81	73	67	1.4
24	6.1	6.7	20	16	647	165	15	29	75	73	67	1.3
25	6.2	13	31	17	355	42	15	17	75	73	67	1.2
26	5.9	24	49	20	256	29	15	10	87	73	66	1.1
27	5.1	16	63	17	78	25	13	8.5	79	72	66	1.2
28	5.0	10	106	17	24	23	13	7.4	76	73	66	1.2
29	e4.7	8.8	127	18	19	47	79	7.7	77	76	71	1.5
30	e4.8	8.2	43	17	---	261	131	15	77	75	71	2.2
31	e5.0	---	32	18	---	381	---	14	---	75	71	---
TOTAL	341.1	311.8	743.2	729	4993	11222	2616	513.0	946.0	2330	2159	170.9
MEAN	11.0	10.4	24.0	23.5	172	362	87.2	16.5	31.5	75.2	69.6	5.70
MAX	65	35	127	60	1010	1110	349	50	87	81	75	70
MIN	4.1	5.1	7.6	16	17	17	13	5.4	3.7	72	66	1.1
AC-FT	677	618	1470	1450	9900	22260	5190	1020	1880	4620	4280	339
CFSM	.01	.01	.02	.02	.18	.37	.09	.02	.03	.08	.07	.01
IN.	.01	.01	.03	.03	.19	.43	.10	.02	.04	.09	.08	.01

CAL YR 1987 TOTAL 103550.1 MEAN 284 MAX 4080 MIN 4.1 AC-FT 205400 CFSM .29 IN. 3.98
WTR YR 1988 TOTAL 27075.0 MEAN 74.0 MAX 1110 MIN 1.1 AC-FT 53700 CFSM .08 IN. 1.04

e Estimated.

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.--No estimated daily discharges. Records good. 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 oil field 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 1961-88) regulated, 582 ft³/s (421,700 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, 1,120 ft³/s Mar. 8 at 0400 hours (gage height, 10.06 ft); minimum daily, 0.07 ft³/s Sept. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	15	28	80	33	52	479	625	19	38	38	36
2	42	15	24	65	34	42	490	495	20	38	38	35
3	41	16	23	56	33	62	467	147	20	38	39	34
4	41	17	21	53	32	202	477	60	24	38	40	24
5	37	17	20	56	32	628	400	41	41	50	40	13
6	22	17	22	53	32	908	320	32	62	66	40	9.3
7	13	17	37	56	35	1060	292	27	50	59	38	5.4
8	9.7	17	77	81	37	1100	259	24	28	54	37	4.2
9	8.1	21	74	98	35	982	118	23	18	49	37	3.6
10	7.4	26	49	91	34	700	54	23	14	45	36	2.5
11	7.1	37	35	84	34	505	34	21	12	44	36	1.6
12	6.9	33	28	71	33	385	31	20	10	44	36	1.1
13	6.9	28	25	57	32	156	30	20	9.0	43	37	.84
14	7.0	24	28	50	36	60	30	21	8.2	42	39	.75
15	7.8	24	35	45	35	44	27	19	7.6	42	37	.66
16	8.3	51	31	41	32	38	24	17	7.2	40	35	.88
17	8.8	117	26	39	30	44	24	15	6.7	40	35	.99
18	9.3	124	24	40	38	401	24	14	6.5	40	35	.76
19	11	83	55	42	91	542	31	13	6.2	40	36	.93
20	12	51	409	42	106	704	41	12	6.6	39	35	2.0
21	12	33	252	40	169	857	34	19	6.6	39	35	1.4
22	11	25	169	36	488	984	29	62	6.4	39	35	.80
23	12	22	88	33	824	1010	25	116	6.2	38	34	.50
24	13	21	54	32	1000	679	23	76	8.0	37	34	.39
25	14	60	59	32	956	339	22	41	30	37	33	.36
26	15	98	165	31	755	147	22	28	36	37	33	.21
27	15	70	284	30	429	72	21	21	38	36	33	.13
28	15	65	258	30	240	52	19	16	47	36	33	.07
29	15	48	193	30	99	47	18	14	45	36	32	.07
30	15	34	176	30	---	81	127	14	41	37	33	.08
31	15	---	130	31	---	287	---	15	---	38	35	---
TOTAL	501.3	1226	2899	1555	5764	13170	3992	2091	640.2	1299	1114	181.52
MEAN	16.2	40.9	93.5	50.2	199	425	133	67.5	21.3	41.9	35.9	6.05
MAX	43	124	409	98	1000	1100	490	625	62	66	40	36
MIN	6.9	15	20	30	30	38	18	12	6.2	36	32	.07
AC-FT	994	2430	5750	3080	11430	26120	7920	4150	1270	2580	2210	360

CAL YR 1987 TOTAL 174695.3 MEAN 479 MAX 5940 MIN 6.9 AC-FT 346500
WTR YR 1988 TOTAL 34433.02 MEAN 94.1 MAX 1100 MIN .07 AC-FT 68300

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 poor. There are many diversions above station for irrigation, municipal, and industrial uses, and oil field 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. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 6,493 ft³/s (4,704,000 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 stream. 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 (estimated), 17,000 ft³/s Mar. 18 at time unknown (gage height, about 15.0 ft); minimum daily, 397 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	e900	1890	5080	e1670	e2300	e2100	1770	1040	2250	1870	929
2	1620	e870	1800	3940	e1450	e2400	e2100	1490	1030	1910	1730	924
3	1490	e850	1850	3760	e1340	e2400	e2500	1370	e1300	1650	1590	854
4	1470	e840	1830	3340	e1300	e2300	e2800	1440	e1500	1500	1710	800
5	1470	e840	1720	2900	e1350	e2000	e2700	1430	e1800	1600	1870	793
6	1370	e880	1670	2890	e1300	e2200	e2500	1400	e2000	1710	2030	788
7	1220	e950	1980	3210	e1300	e2500	2540	1350	e2500	2130	1840	779
8	1070	997	1670	3480	e1200	e2300	2230	1180	e4500	2250	1830	749
9	e950	1010	1540	2890	e1150	e2200	1930	1010	e5000	2080	1760	729
10	e900	1010	1430	2620	e1300	e2500	1760	916	e4200	2020	1580	717
11	e850	1000	1350	2740	e1350	e2400	1660	842	e3700	1930	1490	657
12	e850	1010	1270	2820	e1300	e2200	1580	813	e3300	2020	1420	537
13	e800	1160	1190	2760	e1250	e2100	1490	806	e3200	2230	1360	490
14	e750	1540	1210	2790	e1200	e2000	1430	798	3120	2330	1360	486
15	e700	1280	1060	2780	e1150	e2000	1510	719	3310	3160	1270	925
16	e720	1180	1030	2520	e1200	e1900	1290	648	3190	3310	1190	926
17	e750	1500	1100	2110	e1250	e3000	1230	751	2980	3160	1060	759
18	e720	1540	1180	1990	e1500	e12000	1160	905	2760	2580	976	646
19	e700	1710	2360	1990	e2200	e11000	1010	979	2700	2160	940	597
20	e800	2700	5140	2030	e2200	e7000	933	985	2560	1990	928	564
21	e950	2510	5800	1950	e2500	e4000	985	1040	2430	2140	925	553
22	e1000	1790	4100	1780	e3200	e3500	1440	1220	2310	2230	923	555
23	1020	1680	4200	1660	e3500	2860	1260	1100	2230	1980	907	555
24	1270	1490	4850	e1700	e3000	e2700	1120	1350	2160	1910	893	555
25	1170	3480	4780	e1700	e2700	e2600	1050	1560	2120	1840	882	536
26	1080	7460	3980	e1540	e2400	e2500	940	1470	2040	1750	884	525
27	1100	3130	3320	e1480	e2200	e2400	1020	1340	1830	1710	898	513
28	1110	2050	3440	e1640	e2000	e2300	1080	1200	1770	1670	868	500
29	1080	2080	9380	e1730	e2100	e2400	1300	1200	1780	1810	852	455
30	997	2240	8990	e1600	---	e2700	2140	1270	2190	2000	821	397
31	e940	---	6760	e1760	---	e2300	---	1130	---	1860	844	---
TOTAL	32727	51677	93870	77180	51560	98960	48788	35482	76550	64870	39501	19793
MEAN	1056	1723	3028	2490	1778	3192	1626	1145	2552	2093	1274	660
MAX	1810	7460	9380	5080	3500	12000	2800	1770	5000	3310	2030	929
MIN	700	840	1030	1480	1150	1900	933	648	1030	1500	821	397
AC-FT	64910	102500	186200	153100	102300	196300	96770	70380	151800	128700	78350	39260

CAL YR 1987 TOTAL 3429504 MEAN 9396 MAX 57900 MIN 700 AC-FT 6802000
WTR YR 1988 TOTAL 690958 MEAN 1888 MAX 12000 MIN 397 AC-FT 1371000

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 445 acre-ft of sewage effluent into a tributary of Mill Creek above gage. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 235 ft³/s, 8.49 in/yr (170,300 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)
Mar. 18	1900	*11,900	*14.46	May 30	2000	11,500	14.40

Minimum daily discharge (estimated), 1.5 ft³/s Sept. 14, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	12	53	96	46	40	e74	124	399	8.9	11	3.1
2	17	12	44	85	47	48	e91	54	111	8.2	11	3.2
3	15	12	41	74	47	65	e84	45	290	7.7	7.6	3.8
4	13	12	39	71	48	58	e77	37	414	7.5	6.5	3.8
5	12	12	38	71	52	48	e73	31	299	31	7.2	e2.4
6	11	12	51	69	78	43	e67	28	115	17	6.6	e2.4
7	e10	12	98	97	76	39	e60	26	69	16	5.9	e2.7
8	e10	14	66	86	65	41	56	26	51	13	5.5	e2.0
9	e9.8	30	51	78	60	41	54	27	40	11	5.2	e1.8
10	e9.6	34	42	73	58	36	52	24	33	9.1	5.0	e1.7
11	e9.5	29	40	68	55	35	51	21	29	8.0	4.8	e1.7
12	e9.2	22	38	68	51	33	48	32	26	7.7	4.8	e1.6
13	e9.1	21	36	64	48	32	46	40	23	9.9	4.1	e1.6
14	e8.9	21	37	61	47	29	46	32	21	11	e3.6	e1.5
15	8.9	21	36	59	47	29	45	26	20	11	e3.5	e1.6
16	8.9	31	35	59	46	28	45	22	18	9.9	e3.4	e1.6
17	8.9	150	33	64	44	126	e48	20	17	7.7	e3.4	3.1
18	8.9	123	35	60	89	6580	e50	19	16	6.5	e3.2	3.1
19	8.9	56	100	59	237	7190	e47	18	15	5.8	e3.1	e2.0
20	8.9	42	516	53	142	777	e45	18	13	5.8	e3.0	e1.9
21	8.5	35	1240	52	90	180	e42	20	13	46	e2.9	e1.9
22	8.3	33	598	48	68	131	e39	35	12	52	e2.8	e1.8
23	11	34	198	48	60	112	e37	41	12	35	e2.7	e1.8
24	17	46	140	51	52	98	e34	28	12	17	e4.0	e1.7
25	17	113	140	51	48	e89	e33	22	11	11	12	e1.7
26	17	410	181	47	43	e84	e31	18	11	8.3	12	e1.6
27	15	541	289	45	46	e80	30	17	11	6.8	10	e1.6
28	13	167	252	44	44	e77	28	16	10	5.9	4.6	e1.5
29	12	95	160	44	44	e74	32	16	9.9	21	4.1	e2.8
30	12	67	111	45	---	e71	128	3950	9.4	18	3.7	5.4
31	12	---	97	47	---	e68	---	5440	---	11	3.3	---
TOTAL	360.3	2219	4835	1937	1878	16382	1593	10273	2130.3	444.7	170.5	68.4
MEAN	11.6	74.0	156	62.5	64.8	528	53.1	331	71.0	14.3	5.50	2.28
MAX	20	541	1240	97	237	7190	128	5440	414	52	12	5.4
MIN	8.3	12	33	44	43	28	28	16	9.4	5.8	2.7	1.5
AC-FT	715	4400	9590	3840	3730	32490	3160	20380	4230	882	338	136
CFSM	.03	.20	.41	.17	.17	1.41	.14	.88	.19	.04	.01	.01
IN.	.04	.22	.48	.19	.19	1.62	.16	1.02	.21	.04	.02	.01

CAL YR 1987 TOTAL 108805.3 MEAN 298 MAX 17700 MIN 6.0 AC-FT 215800 CFSM .79 IN. 10.76
WTR YR 1988 TOTAL 42291.2 MEAN 116 MAX 7190 MIN 1.5 AC-FT 83880 CFSM .31 IN. 4.18

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 90 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. Considerable water is diverted above station for irrigation and municipal supply. For statement regarding regulation by upstream reservoirs and by Soil Conservation Service Flood-water-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); 48 years (water years 1941-88) regulated, 7,194 ft³/s (5,212,000 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, 17,100 ft³/s Mar. 19 at 2000 hours (gage height, 13.49 ft); minimum daily, 411 ft³/s Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2490	1330	2920	8390	2040	2670	2810	2210	4450	1290	1860	762
2	2350	1240	2830	6610	2190	2750	2370	2710	2350	1580	1810	762
3	2040	1100	2490	5340	2240	2940	2520	2230	1300	1690	1750	777
4	1780	1100	2290	4610	1890	2960	3180	1750	1190	1460	1680	854
5	1650	978	2260	4390	1740	2790	3360	1510	1660	1270	1490	820
6	1580	979	2240	3980	1730	2450	3200	1440	1870	1160	1570	735
7	1610	1010	2150	3870	1710	2020	2990	1420	2400	1150	1780	708
8	1570	1020	2140	3860	1780	2210	2760	1350	5270	1320	1900	695
9	1380	1050	2420	4190	1710	3110	2780	1340	6150	1660	1760	669
10	1250	990	2100	4130	1630	2920	2530	1210	5090	1760	1700	656
11	1160	956	1960	3600	1540	2710	2110	1070	4260	1650	1670	637
12	1150	970	1760	3360	1700	3020	1920	945	3990	1580	1630	618
13	1120	975	1650	3380	1720	3040	1830	890	4210	1570	1570	637
14	1070	1110	1480	3430	1640	2780	1720	886	4110	1580	1420	656
15	971	1230	1410	3420	1580	2510	1580	852	3140	1700	1320	662
16	861	1670	1320	3460	1490	2430	1440	834	2750	1940	1320	656
17	871	1680	1220	3440	1420	2560	1620	804	2810	2820	1210	675
18	897	1520	1170	3140	1420	3420	1520	779	2710	3160	1160	715
19	874	1710	1270	2810	1510	13800	1390	736	2530	3040	1050	867
20	845	1760	1640	2630	2140	13100	1300	780	2310	2580	951	649
21	897	1870	5690	2570	3040	6280	1130	846	2260	2250	842	514
22	1030	2550	9920	2580	2540	4120	1000	869	2150	2180	806	491
23	1100	2500	8180	2540	2750	4220	972	886	2090	2150	776	451
24	1020	2070	5840	2330	4270	3990	1190	988	1970	2220	775	436
25	1140	2180	5600	2220	4220	3470	1200	976	1850	1910	771	436
26	1290	5110	5710	2230	3490	3300	1060	1030	1750	1820	769	411
27	1420	10500	5670	2220	3060	3180	1060	1270	1710	1760	762	418
28	1340	8240	5110	2030	2840	2920	997	1220	1630	1640	762	457
29	1320	4770	4630	1880	2590	2770	1150	1070	1470	1600	771	468
30	1330	3330	6930	2070	---	2840	1940	961	1370	1610	769	497
31	1380	---	10100	2230	---	3420	---	1530	---	1720	763	---
TOTAL	40786	67498	112100	106940	63620	116700	56629	37392	82800	56820	39167	18789
MEAN	1316	2250	3616	3450	2194	3765	1888	1206	2760	1833	1263	626
MAX	2490	10500	10100	8390	4270	13800	3360	2710	6150	3160	1900	867
MIN	845	956	1170	1880	1420	2020	972	736	1190	1150	762	411
AC-FT	80900	133900	222400	212100	126200	231500	112300	74170	164200	112700	77690	37270

CAL YR 1987 TOTAL 3980134 MEAN 10900 MAX 67500 MIN 845 AC-FT 7895000
WTR YR 1988 TOTAL 799241 MEAN 2184 MAX 13800 MIN 411 AC-FT 1585000

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, 1,410 microsiemens Feb. 26; minimum daily 270 microsiemens Mar. 20.
WATER TEMPERATURE: Maximum daily; 31.0 Aug. 8; minimum daily, 6.0°C Jan. 8-12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

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 (FTU)	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...	1015	1480	997	8.00	23.0	5.6	8.6	100	1.8	580	850
FEB											
02...	0905	2170	974	8.30	17.5	14	9.2	96	0.8	80	84
MAR											
22...	1314	4030	398	8.00	15.0	220	8.5	84	1.9	1500	900
MAY											
10...	0915	1220	1190	8.10	26.0	18	7.5	93	1.0	210	40
JUN											
28...	1030	1650	586	8.60	30.5	38	8.5	114	1.3	250	150
AUG											
16...	0810	1310	848	8.50	31.0	52	7.4	101	1.2	68	44

DATE	HARD-NESS TOTAL (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 WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT											
27...	280	85	76	21	97	3	4.2	193	99	140	0.30
FEB											
02...	280	96	84	17	92	2	5.2	184	98	130	0.30
MAR											
22...	130	31	44	6.0	29	1	5.8	104	38	37	0.30
MAY											
10...	260	110	72	19	140	4	5.1	150	140	190	0.40
JUN											
28...	180	45	54	12	47	2	4.3	140	50	65	0.30
AUG											
16...	240	77	65	18	82	2	5.0	161	76	120	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)
OCT										
27...	4.6	574	559	--	--	<0.010	<0.010	<0.100	<0.100	0.040
FEB										
02...	8.2	568	549	--	--	<0.010	<0.010	0.800	0.790	0.050
MAR										
22...	6.3	243	232	0.570	0.620	0.030	0.030	0.600	0.650	0.070
MAY										
10...	7.4	691	668	0.570	0.600	0.030	0.020	0.600	0.620	0.070
JUN										
28...	7.9	331	326	0.180	0.180	0.020	0.010	0.200	0.190	<0.010
AUG										
16...	9.9	484	475	0.190	--	0.010	<0.010	0.200	0.210	0.010

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 27...	0.030	1.5	1.5	0.040	0.040	0.030	0.09	164	655	95
FEB 02...	0.050	0.55	0.60	0.150	0.130	0.100	0.31	20	117	99
MAR 22...	0.050	0.73	0.80	0.250	0.140	0.110	0.34	523	5690	96
MAY 10...	0.080	0.53	0.60	0.190	0.190	0.120	0.37	35	115	98
JUN 28...	<0.010	--	0.70	0.170	0.080	0.070	0.21	45	200	99
AUG 16...	0.010	0.39	0.40	0.110	0.100	0.090	0.28	54	191	99

DATE	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)	LEAD, DISSOLVED (UG/L AS PB)
OCT 27...	<10	4	150	<0.5	<1	<1	<3	2	8	<5
FEB 02...	--	--	--	--	--	--	--	--	--	--
MAR 22...	30	3	85	<0.5	1	<1	<3	4	41	6
MAY 10...	<10	5	140	<0.5	<1	<1	<3	1	<3	<5
JUN 28...	<10	4	91	<0.5	<1	<1	<3	2	6	7
AUG 16...	10	7	120	<0.5	2	<1	<3	4	7	<5

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 27...	24	14	<0.1	<10	<1	<1	<1.0	910	<6	<3
FEB 02...	--	--	--	--	--	--	--	--	--	--
MAR 22...	8	2	0.2	<10	5	<1	1.0	280	<6	6
MAY 10...	20	3	0.1	<10	5	<1	<1.0	860	<6	5
JUN 28...	14	1	<0.1	<10	3	<1	<1.0	500	8	<3
AUG 16...	15	2	<0.1	<10	1	<1	<1.0	760	<6	<3

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1987 TO SEPTEMBER 1988

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.	1987	40786	970	552	60800	150	16900	100	11000	250
NOV.	1987	67498	785	446	81400	130	22800	81	14700	200
DEC.	1987	112100	744	425	129000	110	32300	76	22900	200
JAN.	1988	106940	813	463	134000	120	35900	83	24000	210
FEB.	1988	63620	983	559	96100	160	27100	100	17400	250
MAR.	1988	116700	582	333	105000	77	24200	58	18400	170
APR.	1988	56629	696	398	60800	96	14600	70	10700	200
MAY	1988	37392	873	497	50200	130	13400	89	9020	230
JUNE	1988	82800	549	314	70200	70	15700	55	12300	160
JULY	1988	56820	850	484	74300	130	19500	87	13300	230
AUG.	1988	39167	773	441	46700	110	11700	78	8300	210
SEPT	1988	18789	753	430	21800	110	5440	76	3870	210
TOTAL		799241	**	**	929000	**	240000	**	166000	**
WTD.AVG.		2184	755	431	**	110	**	77	**	200

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	881	1010	423	736	1050	565	566	749	705	684	747	740
2	705	1140	583	559	986	582	605	634	316	690	712	755
3	898	1340	701	384	902	556	660	777	354	710	720	727
4	953	1320	722	360	882	590	743	754	426	790	769	700
5	931	1280	706	356	849	631	803	660	520	844	809	709
6	917	1280	803	372	875	683	639	836	598	861	915	706
7	868	1270	940	403	857	693	649	955	562	929	815	702
8	905	1270	1020	496	958	808	637	1070	549	1030	865	723
9	957	1270	992	667	1020	889	606	1130	706	1060	821	740
10	1010	1280	1060	764	1010	858	598	1200	832	1020	690	700
11	972	1260	1000	978	1000	870	632	1060	514	950	771	669
12	933	1240	905	1100	995	867	645	908	391	1050	848	664
13	920	1220	890	1080	990	600	657	930	380	884	943	669
14	930	1210	869	1010	1010	613	694	950	451	841	823	672
15	981	1220	915	1080	1020	719	739	948	440	805	722	670
16	1050	1170	953	1070	1030	687	780	940	450	790	839	673
17	1090	1100	1040	1060	1000	724	720	938	475	805	794	682
18	1110	1160	1090	1080	1010	564	715	925	468	832	741	695
19	1110	1190	1100	991	1080	606	728	960	584	861	703	714
20	1100	1160	1030	987	1100	270	755	985	631	1190	657	730
21	1060	1140	850	1020	1060	302	788	975	531	1050	659	733
22	1040	1050	658	1080	876	378	789	977	539	758	650	726
23	1010	1030	503	1080	813	451	798	922	542	801	668	793
24	1000	984	537	1090	901	582	783	917	568	759	781	835
25	1030	970	543	1120	1180	688	778	1070	562	732	786	886
26	1030	750	524	1160	1410	738	790	1050	574	686	752	908
27	990	285	788	1150	1130	717	845	867	586	731	732	892
28	1000	300	807	1140	740	636	874	740	573	731	716	1010
29	1000	317	841	1000	564	611	816	731	630	828	710	1180
30	1190	353	787	961	---	567	692	702	654	817	707	1120
31	1140	---	775	997	---	577	---	697	---	748	719	---
MEAN	991	1050	818	882	976	633	717	902	537	847	761	771

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	20.0	13.0	9.0	17.0	19.0	19.0	21.0	26.0	29.0	29.0	29.0
2	23.0	20.0	13.0	8.0	19.0	20.0	---	21.0	26.0	29.0	29.0	28.0
3	23.0	21.0	14.0	8.0	14.0	18.0	---	22.0	26.0	29.0	29.0	28.0
4	23.0	21.0	16.0	8.0	13.0	15.0	12.0	23.0	26.0	29.0	29.0	27.0
5	20.0	22.0	16.0	8.0	12.0	15.0	12.0	23.0	26.0	29.0	29.0	25.0
6	23.0	21.0	18.0	8.0	9.0	16.0	11.0	19.0	26.0	29.0	29.0	29.0
7	21.0	19.0	17.0	7.0	10.0	17.0	11.0	24.0	28.0	29.0	29.0	25.0
8	21.0	20.0	16.0	6.0	10.0	19.0	21.0	24.0	28.0	29.0	31.0	25.0
9	21.0	19.0	16.0	6.0	11.0	17.0	21.0	24.0	28.0	29.0	30.0	25.0
10	22.0	17.0	15.0	6.0	12.0	16.0	20.0	24.0	27.0	29.0	30.0	25.0
11	22.0	15.0	17.0	6.0	9.0	18.0	17.0	25.0	28.0	29.0	30.0	25.0
12	22.0	15.0	17.0	6.0	9.0	19.0	---	25.0	27.0	29.0	30.0	25.0
13	21.0	15.0	12.0	7.0	---	14.0	18.0	25.0	27.0	29.0	30.0	25.0
14	20.0	16.0	19.0	8.0	---	14.0	20.0	25.0	27.0	29.0	30.0	25.0
15	21.0	21.5	13.0	9.0	---	15.0	15.0	25.0	28.0	29.0	30.0	25.0
16	22.0	21.0	12.0	11.0	12.0	16.0	22.0	25.0	28.0	29.0	30.0	27.0
17	22.0	17.0	12.0	---	15.0	15.0	22.0	25.0	28.0	29.0	30.0	27.0
18	22.0	21.0	11.0	12.0	16.0	17.0	22.0	25.0	27.0	29.0	30.0	27.0
19	23.0	21.0	14.0	14.0	14.0	13.0	20.0	26.0	28.0	29.0	30.0	28.0
20	23.0	14.0	15.0	13.0	14.0	13.0	21.0	21.0	28.0	29.0	30.0	28.0
21	22.0	14.0	---	11.0	13.0	14.0	23.0	24.0	27.0	29.0	30.0	28.0
22	20.0	16.0	12.0	11.0	14.0	16.0	24.0	24.0	28.0	29.0	30.0	27.0
23	20.0	17.0	12.0	11.0	16.0	18.0	24.0	24.0	27.0	29.0	30.0	27.0
24	22.0	17.0	16.0	12.0	15.0	18.0	24.0	26.0	28.0	29.0	30.0	28.0
25	22.0	---	14.0	10.0	14.0	20.0	---	29.0	---	29.0	30.0	26.0
26	22.0	---	15.0	10.0	14.0	21.0	---	26.0	---	29.0	30.0	25.0
27	24.0	---	12.0	11.0	17.0	21.0	---	26.0	---	29.0	30.0	26.0
28	20.0	---	10.0	11.0	17.0	22.0	24.0	26.0	29.0	29.0	30.0	26.0
29	29.0	14.0	9.0	12.0	17.0	23.0	24.0	26.0	29.0	29.0	30.0	26.0
30	21.0	13.0	10.0	14.0	---	19.0	22.0	26.0	29.0	29.0	30.0	25.0
31	21.0	---	11.0	16.0	---	18.0	---	26.0	---	29.0	27.0	---
MEAN	22.0	18.0	14.0	9.5	13.5	17.5	19.5	24.5	27.5	29.0	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.--No estimated daily discharges. Records fair. Channel was rectified in 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.--38 years (water years 1948-49, 1953-88), 35.8 ft³/s (25,940 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 and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 21	1330	*1,940	*19.10	No other peak greater than base discharge.			

Minimum daily discharge, 0.53 ft³/s Oct. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	1.1	4.3	5.8	1.4	1.6	5.3	110	1.6	1.6	22	1.3
2	.77	1.0	2.9	4.0	1.4	2.9	5.9	36	1.4	1.5	7.5	1.5
3	.77	1.1	2.4	3.3	1.4	4.3	4.2	13	2.1	1.2	3.5	1.3
4	.73	1.1	2.0	2.8	1.5	1.9	3.0	5.0	5.3	1.5	2.5	2.3
5	.79	.91	1.9	2.5	1.4	1.6	2.5	2.6	11	2.8	2.3	1.8
6	1.0	.87	1.7	3.4	1.5	1.8	2.3	1.7	8.4	7.3	2.5	1.4
7	.75	.78	3.1	114	1.5	1.6	2.2	1.4	6.4	3.0	2.0	1.2
8	.79	1.0	2.3	34	1.6	1.6	2.1	1.4	4.4	5.9	1.9	1.4
9	.81	2.8	1.8	13	1.6	1.6	2.1	1.3	2.9	7.5	2.0	1.1
10	.81	1.5	1.7	7.3	1.5	1.4	2.0	1.3	1.9	3.7	2.2	1.0
11	.85	.99	1.8	4.5	1.6	1.5	2.0	1.2	1.6	3.6	5.9	1.1
12	.83	.91	1.4	3.2	1.5	1.6	2.1	1.5	1.4	3.5	10	1.1
13	.90	.84	1.3	2.7	1.6	1.5	2.0	1.9	1.4	2.3	12	1.2
14	.94	.85	1.3	2.5	1.7	1.6	2.0	2.1	1.3	1.4	7.7	1.1
15	.98	.99	1.2	1.8	1.6	1.5	2.1	2.1	1.3	2.2	4.8	1.0
16	1.0	29	1.4	1.9	1.6	1.6	2.1	1.8	1.5	1.6	3.9	1.0
17	1.1	6.8	1.1	2.4	1.7	105	2.4	1.5	1.9	1.7	2.5	1.3
18	1.2	1.8	1.2	2.1	1.7	312	2.2	1.4	2.3	1.7	2.1	1.3
19	1.1	1.3	15	1.8	1.8	63	2.1	1.3	2.1	2.0	1.9	1.4
20	1.2	1.0	29	1.6	1.7	21	2.1	1.2	2.1	9.7	1.8	1.7
21	1.1	1.1	882	1.4	1.7	9.0	2.1	1.5	4.0	50	2.6	1.2
22	1.0	1.0	247	1.4	1.7	5.4	2.1	2.3	3.9	39	1.5	1.3
23	1.1	1.1	82	1.4	1.7	3.8	2.1	1.9	3.9	7.6	1.7	1.3
24	1.2	1.1	36	1.5	1.6	2.9	3.5	2.0	6.4	4.4	1.3	1.3
25	1.2	184	18	1.4	1.6	2.5	5.8	3.1	6.3	2.5	1.4	1.4
26	1.1	74	28	1.3	1.7	2.2	5.5	2.0	4.6	1.9	1.5	1.5
27	.53	65	188	1.3	1.8	2.3	5.3	1.4	3.3	1.7	1.5	1.2
28	1.4	42	95	1.3	1.8	2.2	4.4	1.4	3.5	1.6	1.4	.93
29	1.0	13	31	1.3	1.7	2.2	72	1.3	2.2	1.4	1.3	1.1
30	1.1	6.8	13	1.3	---	2.3	578	1.4	1.8	172	1.3	2.4
31	1.0	---	7.6	1.4	---	7.8	---	1.8	---	185	1.3	---
TOTAL	29.92	445.74	1706.4	229.6	46.6	573.2	733.5	209.8	102.2	532.8	117.8	40.13
MEAN	.97	14.9	55.0	7.41	1.61	18.5	24.4	6.77	3.41	17.2	3.80	1.34
MAX	1.4	184	882	114	1.8	312	578	110	11	185	22	2.4
MIN	.53	.78	1.1	1.3	1.4	1.4	2.0	1.2	1.3	1.2	1.3	.93
AC-FT	59	884	3380	455	92	1140	1450	416	203	1060	234	80

CAL YR 1987 TOTAL 14484.47 MEAN 39.7 MAX 1680 MIN .53 AC-FT 28730
WTR YR 1988 TOTAL 4767.69 MEAN 13.0 MAX 882 MIN .53 AC-FT 9460

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 good except those for estimated daily discharges, which are poor. 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 Brazos River at Washington (station 08110200). Gage-height telemeter at station.

AVERAGE DISCHARGE.--17 years (water years 1968-80, 1985-88), 7,693 ft³/s (5,574,000 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, 14,600 ft³/s Mar. 20 at 1100 hours (elevation, 22.39 ft); minimum daily (estimated), 150 ft³/s Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	1500	3210	8710	2090	2190	e2800	e3100	1310	850	1050	350
2	2510	1370	2960	7250	1760	2410	e2400	e3000	3030	789	1130	405
3	2470	1100	2740	5900	1930	3350	e2500	e2300	1540	1020	1040	608
4	2130	994	2450	4880	1990	2900	e3200	e1600	1060	1070	987	864
5	1730	983	2540	4340	1730	2820	e3400	e1200	1080	919	908	897
6	1510	883	2550	4060	1760	2600	e3200	e1000	1470	803	795	725
7	1410	1090	2480	3870	1760	2250	e2900	e1000	1580	894	857	538
8	1420	1170	2300	3950	1780	1840	e2700	e940	2260	1150	1010	505
9	1390	1190	2380	4020	1900	2250	e2700	e870	4400	1560	1070	467
10	1350	993	2500	4210	1830	2740	e2400	e830	4640	1770	968	453
11	1250	936	2190	3870	1750	2390	e2000	e800	3800	1730	970	449
12	1160	930	2170	3360	1720	2560	e1800	e780	3250	1460	960	435
13	1140	939	2010	3190	1840	2790	e1700	762	3090	1280	955	486
14	1110	1130	1880	3200	1800	2660	e1600	678	3240	1030	894	639
15	1050	1260	1680	3220	1710	2260	e1500	657	2940	1030	782	788
16	973	1560	1530	3360	1650	2010	e1300	594	2190	1080	777	831
17	877	2110	1420	3470	1570	2050	e1500	542	1960	1300	810	710
18	877	1660	1320	3280	1530	3910	e1400	488	1960	1810	725	644
19	930	1450	1400	2890	1530	7160	e1100	361	1860	1980	675	710
20	987	1620	1630	2590	1620	14000	e870	260	1700	1960	700	592
21	965	1880	3340	2460	2350	9590	e570	352	1590	1770	675	472
22	1010	2130	10500	2410	2710	5240	e460	435	1590	1690	613	383
23	1140	2660	10700	2530	2100	4130	e580	482	1530	1570	553	350
24	1290	2240	7340	2430	2750	4150	e760	481	1500	1530	496	274
25	1230	2370	5700	2170	3760	3790	e820	567	1460	1420	440	e250
26	1310	3750	5580	1920	3510	3390	e650	502	1380	1150	409	e300
27	1470	7500	5660	1930	3160	3210	e590	458	1290	1040	383	e200
28	1540	9910	6030	1860	2840	e2900	e460	639	1260	927	371	e150
29	1470	6870	5120	1700	2520	e2700	e1500	554	1140	838	358	e250
30	1460	4470	4710	1880	---	e2700	e6000	440	982	811	379	e400
31	1450	---	7640	2100	---	e3400	---	387	---	828	367	---
TOTAL	43249	68648	115660	107010	60950	112340	55360	27059	62082	39059	23107	15125
MEAN	1395	2288	3731	3452	2102	3624	1845	873	2069	1260	745	504
MAX	2640	9910	10700	8710	3760	14000	6000	3100	4640	1980	1130	897
MIN	877	883	1320	1700	1530	1840	460	260	982	789	358	150
AC-FT	85780	136200	229400	212300	120900	222800	109800	53670	123100	77470	45830	30000

CAL YR 1987 TOTAL 3778387 MEAN 10350 MAX 63200 MIN 877 AC-FT 7494000
WTR YR 1988 TOTAL 729649 MEAN 1994 MAX 14000 MIN 150 AC-FT 1447000

e Estimated.

08117500 SAN BERNARD RIVER NEAR BOLING, TX

LOCATION.--Lat 29°18'48", long 95°53'38", Wharton-Fort Bend County line, Hydrologic Unit 12090401, on left bank at downstream side 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 fair. Part of low flow is drainage from areas irrigated with diversions from Colorado River. Diversions above station for irrigation and other uses. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 501 ft³/s (363,000 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. 22	0900	*4,510	*21.37	No other peak greater than base discharge.			

Minimum daily discharge, 5.0 ft³/s Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	11	228	323	22	e24	226	469	102	112	188	91
2	180	8.4	172	247	22	20	254	438	271	96	214	84
3	201	6.9	124	186	21	22	315	387	318	91	217	73
4	179	6.9	90	141	19	22	318	407	451	92	222	70
5	153	6.5	64	110	18	21	294	462	494	92	232	74
6	134	5.5	48	90	17	22	271	451	452	99	222	80
7	117	5.0	83	288	18	23	211	351	359	161	215	85
8	108	7.3	77	362	17	24	143	238	275	274	216	91
9	103	12	49	252	17	49	91	153	205	374	215	96
10	101	9.4	33	172	20	36	63	115	148	391	187	92
11	103	9.0	25	127	22	26	46	103	112	347	162	90
12	115	17	21	96	23	e24	33	92	83	281	159	91
13	121	15	18	76	23	e23	24	89	60	228	152	91
14	131	12	18	61	21	e23	19	93	63	182	130	90
15	156	10	15	50	20	e22	17	92	66	140	119	94
16	155	10	12	45	18	22	18	99	67	105	113	98
17	146	12	10	45	18	e64	21	102	73	76	114	112
18	148	15	9.0	58	21	1290	24	96	75	67	107	118
19	134	43	9.2	53	23	1440	49	88	73	73	105	126
20	107	35	67	42	e19	1230	62	86	68	82	102	131
21	85	29	1510	35	19	867	67	80	69	113	105	122
22	68	25	4260	33	e21	536	64	85	73	151	115	108
23	58	19	2840	33	19	381	68	152	83	201	117	100
24	48	14	1850	31	19	249	56	210	100	236	112	98
25	44	834	1360	33	e22	155	40	187	126	227	114	93
26	40	2100	955	36	e25	100	30	162	127	193	125	89
27	33	851	911	30	e27	69	25	141	120	192	140	89
28	25	716	1160	24	e26	47	21	114	120	199	131	87
29	27	408	862	22	e25	36	25	86	122	179	119	88
30	18	297	587	22	---	32	120	73	122	160	108	117
31	14	---	416	22	---	92	---	79	---	177	97	---
TOTAL	3206	5549.9	17883.2	3145	602	6991	3015	5780	4877	5391	4674	2868
MEAN	103	185	577	101	20.8	226	100	186	163	174	151	95.6
MAX	201	2100	4260	362	27	1440	318	469	494	391	232	131
MIN	14	5.0	9.0	22	17	20	17	73	60	67	97	70
AC-FT	6360	11010	35470	6240	1190	13870	5980	11460	9670	10690	9270	5690

CAL YR 1987 TOTAL 212626.1 MEAN 583 MAX 6980 MIN 5.0 AC-FT 421700
WTR YR 1988 TOTAL 63982.1 MEAN 175 MAX 4260 MIN 5.0 AC-FT 126900

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 1988

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)	1951-88	10-14-87	0.04
					1-27-88	.99
					4-27-88	.59
					8-17-88	.04
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.	-	1984-88	10-28-87	7.65
					12-15-87	8.31
					2- 3-88	11.9
					3-25-88	9.99
					5-10-88	4.14
					6-23-88	5.58
					8-12-88	1.04
08104310	Salado Creek below Salado Springs, Tex.	Lat 30°57'07", long 92°21'26", Bell County, on right bank downsream from low-water crossing in the Mill Creek Country Club and subdivision at at Salado.	-	1984-87†, 1988	10-28-87	27.1
					12-15-87	25.7
					2- 3-88	29.9
					3-25-88	24.5
					5-10-88	18.1
					6-23-88	19.6
					8-12-88	12.7
08104795	North Fork San Gabriel River upstream from State Highway 418 at Georgetown, Tex.	Lat 30°38'44", long 97°40'49", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	-	1984-88	10-22-87	7.84
					12-14-87	12.0
					2- 2-88	11.4
					2-23-88	12.2
					3-22-88	12.2
					5-11-88	7.72
					6-23-88	7.21
					8-12-88	5.83
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.	-	1984-88	10-27-87	2.95
					12-14-87	10.2
					2- 2-88	8.82
					2-23-88	8.88
					3-22-88	8.04
					5-11-88	3.13
					6-23-88	.86
					8-12-88	.11
08105000	San Gabriel River at Georgetown, Tex.	Lat 30°39'14", long 97°39'18", Williamson County, on left bank 100 ft downstream form 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.	399	1924-25†, 1934-73†, 1984-87†, 1988	10-28-87	32.8
					12-14-87	38.6
					2- 2-88	47.2
					2-23-88	37.9
					3-22-88	44.6
					5-11-88	30.0
					6-23-88	24.8
					8-12-88	17.2
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.	-	1984-88	10-27-87	0
					12-14-87	0
					2- 2-88	.54
					2-23-88	.32
					3-22-88	1.89
					5-11-88	0
					6-23-88	0
					8-12-88	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.	-	1986-88	10-27-87	0
					12-14-87	0
					2- 2-88	1.02
					2-23-88	.88
					3-22-88	.16
					5-11-88	.08
					6-23-88	.02
					8-12-88	.02

† Operated as a continuous-record station.
a Not applicable.

Discharge measurements made at low-flow partial-record stations during water year 1988--Continued

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Brazos River basin--Continued				
08105200	Berry Creek at State Highway 971 near Georgetown, Tex.	Lat 30°40'33", long 97°36'52", Williamson County, at downstream side of State Highway 971 bridge and 4.7 mi northeast of Georgetown.	-	1964-73, 1984-87†, 1988	10-27-87	11.3
					12-14-87	10.7
					2- 2-88	14.7
					2-23-88	14.0
					3-22-88	12.0
					5-11-88	5.36
					6-23-88	6.18
					8-12-88	2.57
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, 1964-88	10-29-87	3.6
					2-16-88	8.4
					6-30-88	1.5
					8-17-88	.68
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	1964-88	10-29-87	.004
					2-16-88	4.0
					6-30-88	.05
					8-17-88	0

† Operated as a continuous-recordd station.

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 1988

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.	a15.8	1984-88	3- 2-88	*10.48	-
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	1984-88	11-25-87	27.31	-
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 (discontinued).	26.1	1974-76, 1980-88	11-25-87	11.67	3,210
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 (discontinued).	.55	1975-76 1980-88	11-25-87	35.25	677
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 (discontinued).	34.5	1972-76 1980-88	11-25-87	15.05	4,700
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, 1979-88	11-27-87	66.94	-
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	1986-88	4-29-88	7.58	-
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	1974-88	4-29-88	*104.80	-
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	1977-88	4-29-88	17.92	235
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	1974-88	12-21-87	*98.12	-
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	1984-88	3-30-88	*40.37	1,590
08074145	Bingle Road storm sewer at Houston, Tex.	Lat 29°51'31", long 95°29'09", Harris County, 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 Rd., Houston (08074150).	.21	1980-88	3-17-88	b11.08	(c)
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	1964-88†	3-17-88	*74.80	592
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	1965-88†	3-17-88	*64.44	2,860
08074400	Lazybrook Street storm sewer at Houston, Tex.	Lat 29°48'15", long 95°26'04", Harris County, over a 54-inch storm sewer 30 ft north of the intersection of Lazybrook Street and west T.C. Jester Boulevard, Houston (discontinued).	.13	1978-88	7-27-88	--	90
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	1979-88	8-17-88	--	-
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	1977-88	3-26-88	11.86	-

* Elevation.
† Operated as a continuous-record station.
a Revised.
b Recorded pressure head; gage height for full pipe flow exceeded.
c Discharge not determined.

Annual maximum stage and (or) discharge during water year 1988--Continued

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--Continued					
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.	a8.63	1965-71, 1975-88	8-11-88	*76.19	-
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.	a12.7	1965-88	4-29-88	*69.94	1,400
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	1977-88	4-29-88	*53.18	4,080
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	1978-88	3- 2-88	*21.31	-
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.	a8.65	1965-88	8-11-88	*113.16	663
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.	a25.8	1986-88	3- 2-88	*6.50	-
		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	1984-88	4-29-88	*24.83	-
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	1985-88	9- 3-88	*19.47	-
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.	-	1966-88	9- 3-88	*7.06	-
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	1985-88	2-26-88	*5.27	-
		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 (discontinued).	-	1974-87	9-16-88	*3.59	-
		Brazos River basin					
08079300	Blackwater Draw tributary near Floyd, N. Mex.	Lat 34°14'52", long 103°44'51", Roosevelt County, 0.5 mi below section road and 10 mi west of Floyd.	b10	1963-88	c1983 c1984 c1985 c4- 9-86 c8-23-87 1988	- - - .33 (d) -	(f) (f) (f) 3 e2,720 (f)
08080600	Running Water Draw near Clovis, N. Mex.	Lat 34°31'55", long 103°12'05", Curry County, 0.25 mi upstream from State Highway 18 and 8 mi west of Clovis.	109	1953-56†, 1967-64†, 1979, 1981-88	c9-20-83 c1984 c9-30-85 c9-15-86 c5-19-87 5-30-88	3.24 - 6.97 1.07 2.99 10.54	17 (f) 4,880 2 13 7,650
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†, 1986-88	6- 1-88	9.33	4,890
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†, 1986-88	12- 6-87	7.08	2,720
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	1959-88	9-29-88	4.51	1,030

† Operated as a continuous-record station.
a Revised.
b Approximately.
c Not previously published.
d Gage height not determined.
e May not have been peak for year.
f No evidence of any flow during year.

Annual maximum stage and (or) discharge during water year 1988

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Brazos River Basin--Continued					
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	1959-88	6- 3-88	5.23	1,450
08099100	Leon River near De Leon, Tex.	Lat 32°10'25", long 98°31'58", Comanche County, 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.	479	1960-85† 1986-88	6- 1-88	13.29	3,150
08099300	Sabana River near De Leon, Tex.	Lat 32°06'50", long 98°36'19", Comanche County, 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.	264	1960-85† 1986-88	6- 1-88 6- 3-88	17.51 18.46	2,220 2,560

† Operated as a continuous-record station.

INDEX

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October 1, 1978

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

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

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

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