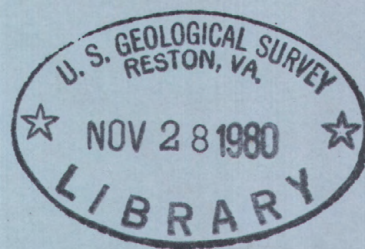


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Water Resources Data for Texas

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-79-2

WATER YEAR 1979

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

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Water Resources Data for Texas

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-79-2

WATER YEAR 1979

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. W. Menard, Director

For additional information write to
District Chief, Water Resources Division
300 East 8th Street
Austin, Texas 78701

1980

Preface

This report was prepared by the U.S. Geological Survey in cooperation with the State of Texas and other agencies by personnel of the Texas district of the Water Resources Division under the supervision of I. D. Yost, District Chief, and Alfred Clebsch, Jr., Regional Hydrologist, Central Region.

This report is one of a series issued by State under the general direction of J. S. Cragwall, Jr., Chief Hydrologist, and Phil Cohen, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Texas are in three volumes as follows:

- 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

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(Formerly NTIS-35)
Department of Commerce

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WATER RESOURCES DATA FOR TEXAS, 1979

VOLUME 2

SAN JACINTO RIVER BASIN, BRAZOS RIVER BASIN, SAN BERNARD RIVER BASIN, AND INTERVENING COASTAL BASINS

INTRODUCTION

Surface-water data for Texas for the 1979 water year are presented in three volumes, appropriately identified by river basins. Data in each volume consist of records of stage, discharge, and water quality of streams and canals; and stage, contents, and water quality of lakes and reservoirs. Records for a few pertinent stations in bordering states are also included. These data represent that part of the National Water Data System operated by the U.S. Geological Survey in cooperation with State and Federal agencies in Texas.

Records of discharge (or stage) of streams and contents (or stage) of lakes and reservoirs were first published in a series of Geological Survey Water-Supply Papers entitled, "Surface Water Supply of the United States." Through water year 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1971 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow and water quality are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report TX-79-2." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

COOPERATION

Organizations that assisted in the collection of data in this report through joint funding agreements with the Geological Survey in 1979 are:

Texas Department of Water Resources, H. D. Davis, Executive Director; A. L. Black, Chairman; R. B. Gilmore, Vice-Chairman; M. T. Potts, G. E. Roney, J. H. Garrett, and G. W. McCleskey, Members.

Pecos River Commission, Horace Babcock, Federal Representative and Chairman; R. B. McGowen, Jr., Commissioner for Texas, and J. L. Cathey, Commissioner for New Mexico.

Sabine River Compact Administration, W. H. Robinson, Federal Representative and Chairman; R. J. Palmer and D. V. Cresap for Louisiana; and J. M. Syler and G. M. Smith for Texas.

City of Austin, C. B. Graves, Jr., Director, Engineering Department.

City of Dallas, Monroe McCorkle, Director, Public Works Department.

City of Fort Worth, J. L. Robinson, Director of Public Works.

City of Garland, F. G. Greene, Director of Public Works.

City of Houston, J. A. Schindewolf, Director, Department of Public Works.

City of Mesquite, G. E. Dowling, City Engineer.

Assistance in the form of funds or services was given by the following Federal agencies:

Corps of Engineers, U.S. Army.

International Boundary and Water Commission, Department of State.

Soil Conservation Service, Department of Agriculture.

Assistance in the form of funds or services was rendered by the following organizations through the Texas Department of Water Resources:

The cities of Abilene, Alice, Arlington, Austin, Brady, Cleburne, Clyde, Corpus Christi, Dallas, El Paso, Gainesville, Galveston, Graham, Houston, Nacogdoches, San Angelo, and Wichita Falls; Athens Municipal Water Authority; Bexar, Medina, and Atascosa Counties Water Control and Improvement District No. 1; Bistone Municipal Water Supply District; Brazos River Authority; Colorado River Municipal Water District; Dallas County; Dallas Power and Light Company; Dow Chemical Company; Edwards Underground Water District; Franklin County Water District; Freese and Nichols, Inc.; Greenbelt Municipal and Industrial Water Authority; Guadalupe-Blanco River Authority; Harris County Flood Control District; Houston Lighting and Power Company; Lone Star Steel Company; Lower Colorado River Authority; Lower Neches Valley Authority; MacKenzie Municipal Water Authority; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; Palo Pinto County Municipal Water District; Red Bluff Water Power Control District; Reeves County Water Improvement District No. 1; Sabine River Authority of Texas; 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 Electric Service Company; Texas Utilities Services, Inc.; Titus County Fresh Water Supply District No. 1; Tom Green County Water Control and Improvement District No. 1; Trinity River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; Upper Trinity Basin Water Quality Compact; West Central Texas Municipal Water District; Wichita County Water Improvement District No. 2; and Wood County.

HYDROLOGIC CONDITIONS

Large variations in rainfall and runoff characterize the usual hydrologic conditions in Texas. In the east, streams are usually deep with wide alluvial flood plains, and streamflow is generally perennial. Normal annual rainfall exceeds 50 inches in the extreme east and annual runoff may average as much as 15 inches. In the west, streams are generally of the arroyo type and streamflow is highly ephemeral. Normal annual rainfall is less than 8 inches in the extreme west and annual runoff averages less than 0.1 inch in many areas.

During the 1979 water year, runoff for index station Guadalupe River near Spring Branch, located in the south-central part of the State continued to be excessive for the eighth consecutive year. The other three index stations, Neches River near Rockland, located in east Texas, North Bosque River near Clifton, located in central Texas, and North Concho River near Carlsbad, located in west Texas, were in the normal runoff range for the year. Figure 1 on page 28 shows a comparison of monthly and annual mean discharges for the index stations. Conservation storage in a selected group of 63 reservoirs, with a combined conservation capacity of 30,252,000 acre-feet, increased from 78 percent of capacity in September 1978, to 86 percent of capacity in September 1979. Records from the 63 reservoirs show that 38 reservoirs increased in contents, 23 decreased, and 2 remained the same.

At the beginning of the 1979 water year, streamflow was in the deficient range in the northeastern part of the State, excessive in the coastal bend and Pecos River basin, and normal in the remainder of the State. At the end of the first quarter of the 1979 water year, streamflow conditions remained basically the same as they were at the beginning of the year, except that the deficient runoff condition of northeast Texas had expanded to include the north and north-central parts of the State, while the remainder of the State remained near normal.

Spring rainfall provided relief to the deficient parts of the State, and by the end of June streamflow was excessive in the coastal bend area and parts of East Texas, and near normal for the remainder of the State.

The year ended with deficient runoff conditions existing in the northeast, excessive conditions along the Gulf coast, and near-normal conditions in the remainder of the State.

The National Weather Service reported over 100 inches of rainfall during the 1979 water year at Alvin, Texas, located in the Chocolate Bayou basin. The streamflow station Chocolate Bayou near Alvin recorded 52.55 inches of runoff in 1979 water year. Over 25 inches of rain occurred on July 26, producing a peak discharge at the Chocolate Bayou near Alvin gaging station which exceeded the maximum since about 1939, by 291 percent.

DEFINITION OF TERMS

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

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

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

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL (milliliters) of sample.

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

Fecal streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

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

Biomass pigment ratio is the ratio of organic mass in mg/m^2 (milligrams per square meter) to the mass of chlorophyll a, in mg/m^2 .

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

Cubic foot per second (FT³/S, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second. This rate is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon 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.

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

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

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

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

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

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

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

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

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

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

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

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter

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

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

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

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emerged or submersed solid surface, such as rock or tree, upon which an organism lived.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The station numbering system is not used at miscellaneous sites where only random water-quality samples or discharge measurements are taken. The complete number for each station consists of eight digits, such as 08123800. The first two digits, 08 or 07, identify the river basin as previously published in the series of water-supply papers on the Surface Water Supply of the United States. The digits 07 indicate the Lower Mississippi River basin, and the digits 08 indicate the Western Gulf of Mexico Basins. The remaining six digits of the station number are sequential in downstream order.

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

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The basic data collected at gaging stations consist of (1) records of stage; (2) measurements of discharge of streams and canals; and (3) stage, surface area, and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement basic data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a non-recording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 5-, 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is often determined by sounding at many points.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors (based on individual discharge measurements and notes by the hydrologists or observers) are used in applying the gage heights to the rating tables.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations, the stage-discharge relation is affected by changing stage; at these stations, the rate of change in stage is used as a factor in computing discharge.

For a lake- or reservoir-gaging station, a capacity table giving the contents for any stage is prepared from a stage-area relation curve defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes in contents are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment. However, the change in contents is not affected to the same extent.

At some gaging stations, there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. For such periods, the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

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

The description of the gaging stations, except those partial-record stations published in tabular form in the back of the report, gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging stations and the drainage areas are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies (U.S. Water Resources Council, 1968). Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

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

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITIONS OF TERMS" on page 9.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow at the gaging station is given under "REMARKS." For reservoir stations, information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the statistic to have little significance. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the maximum stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations additional peak discharges are listed under EXTREMES FOR THE CURRENT YEAR; if they are all independent peaks above a selected base. The time of occurrence of the peaks and corresponding gage heights are also listed. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in separate paragraph following the table of peaks.

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

over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the significant statistics for the calendar and water years.

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

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

Accuracy of field data and computed results

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

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

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and

1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, municipal and industrial effluents consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values for cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made. Adjustments for evaporation from a reservoir are not included in the published changes in reservoir contents, unless it is so stated.

Other data available

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

Records of discharge collected by agencies other than the Geological Survey

The International Boundary and Water Commission, United States and Mexico, operates all gaging stations on the Rio Grande and near the mouth of its principal tributaries at and below El Paso, Texas. Records collected at these stations are published in annual bulletins by the Commission and may be obtained from the International Boundary and Water Commission, United States Section, P. O. Box 20003, El Paso, Texas 79998.

Collection and examination of data

Surface-water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

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

Water analysis

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

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating loads.

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean value for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

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

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

Sediment

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

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

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

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

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PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature-influential factors, field measurements, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1976. 65 p. \$1.60.
- 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. \$1.00.
- 3-A2. *Measurement of peak discharge by the slope-area methods*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 p. \$0.35.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 p. \$0.40.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 4 p. \$1.00.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 p. \$0.35.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 p. \$1.00.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 p. \$1.40.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 p. \$1.25.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 p. \$1.20.

- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 p. \$2.50.
- 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. \$2.50.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 p. \$2.10.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 p. \$1.60.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 p. \$1.20.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 p. \$0.65.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 p. \$0.75.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1975. 15 p. \$0.65.
- 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. \$10.00.
- 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. \$0.80.
- 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. \$0.90.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 p. \$9.25.
- 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. \$5.75.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 p. \$2.10.
- 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. \$1.10.

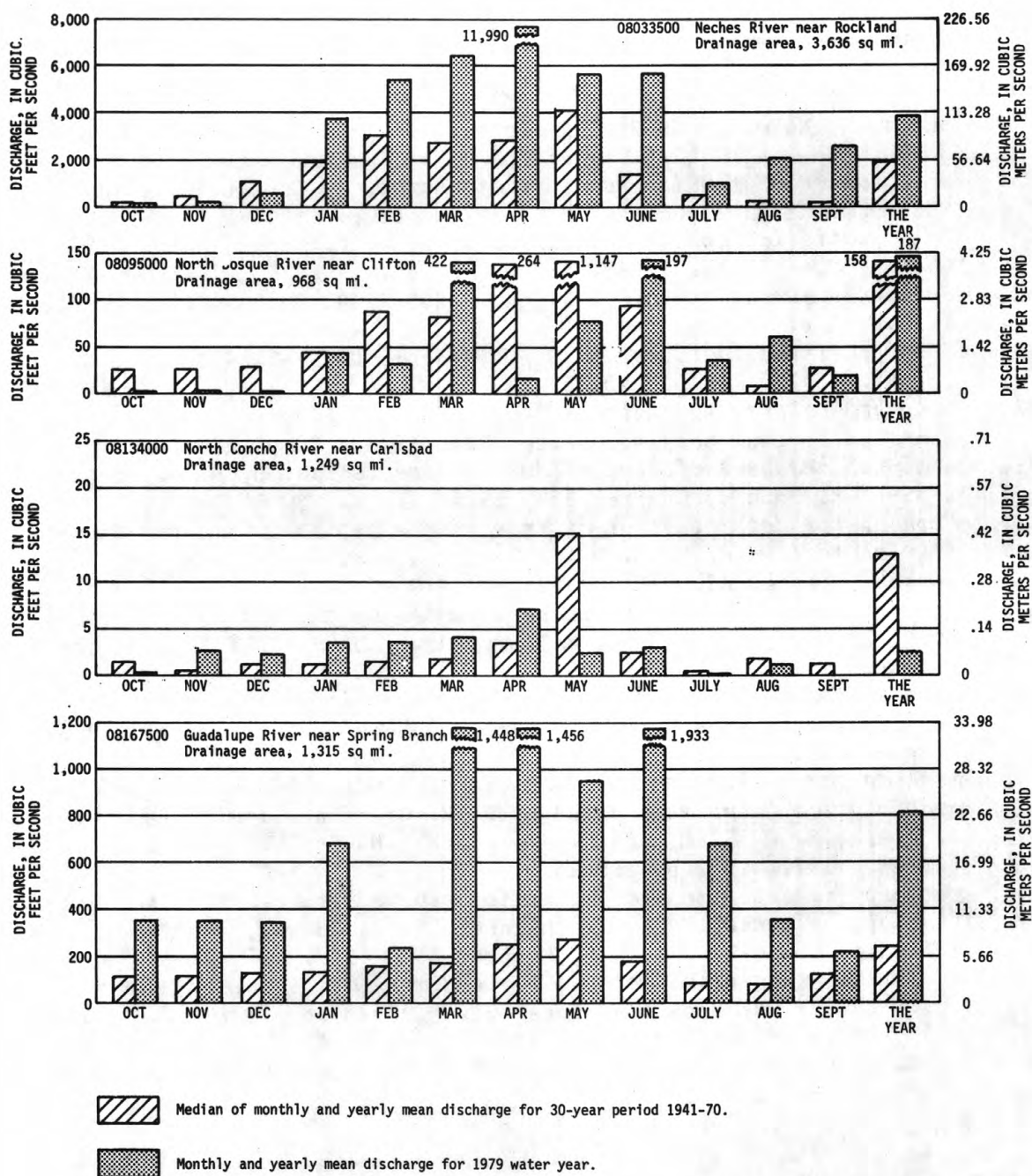


FIGURE 1.--COMPARISON OF DISCHARGE AT FOUR LONG-TERM REPRESENTATIVE GAGING STATIONS DURING THE 1979 WATER YEAR WITH MEDIAN DISCHARGE FOR THE PERIOD 1941-70

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 (43 m) upstream from centerline of dam, and 7.4 mi (11.9 km) west of Conroe.

DRAINAGE AREA.--445 mi² (1,153 km²).

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 (3,440 m) 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 used for cooling purposes at the Gulf State Utilities generating plant on Lewis Creek Reservoir near Conroe. During the current year, 3,153 acre-ft (1.42 hm³) was diverted to Lewis Creek Reservoir for that purpose. A spillway with five 40 by 30 ft (12 by 9 m) 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 (4 m) 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
Normal operating level.....	200.4	417,900
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, 476,600 acre-ft (588 hm³) Apr. 21, 1979, elevation, 203.13 ft (61.914 m); minimum since normal operating level was reached, 372,800 acre-ft (460 hm³) Nov. 26, 1978, elevation, 198.12 ft (60.387 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 476,600 acre-ft (588 hm³) Apr. 21, elevation, 203.13 ft (61.914 m); minimum, 372,800 acre-ft (460 hm³) Nov. 26, elevation, 198.12 ft (60.387 m).

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

198.0	307,500	202.0	451,600
200.0	409,600	204.0	496,500

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395900	377600	379100	404700	431800	430700	433200	434500	458700	429800	434500	428000
2	395100	377200	379300	405100	432200	431300	443700	433500	458500	429400	433500	427800
3	394700	376600	383900	406300	432000	439900	449500	435200	461500	429200	432400	427600
4	393900	376000	382800	407200	432800	433000	449300	452900	458200	429000	431800	428000
5	393700	377600	383200	408400	436900	433000	447300	459100	455100	429000	431500	427800
6	392700	378900	391500	413800	448800	433000	444400	457100	463700	428800	431300	429600
7	392100	377400	393100	422000	450800	433200	441400	454000	461500	429200	431500	429400
8	391100	376800	394700	422600	450100	432800	439700	449700	457800	429200	431300	429400
9	390100	375700	393300	424100	446300	433200	437700	443400	452900	428800	431100	428800
10	389100	375100	392900	425100	442400	434500	434500	441800	448200	428800	430900	428400
11	388700	375100	393100	426500	439000	434500	435200	439000	441600	428400	431300	428200
12	388200	374500	392700	427000	436700	434100	434100	436200	437500	428000	431300	428000
13	388200	374300	393100	428600	434300	434300	433000	434300	435200	427600	430700	427400
14	386600	374100	392900	427600	433000	434300	432400	433500	433500	427800	430500	427200
15	385900	374300	392900	427200	433000	434300	431800	432800	432000	427400	430300	426100
16	385300	374700	393300	427600	431300	437300	431300	432400	431300	427400	430500	425500
17	384500	373700	392700	428000	432000	440300	431800	432400	430900	428000	430300	425500
18	383900	373200	392700	428200	432400	440200	464200	431800	430300	428400	429600	429400
19	383400	375100	392700	439900	432200	441600	467700	431800	430300	428200	429200	440100
20	382800	374900	393700	445200	431800	441400	473700	431500	430300	428000	429000	466400
21	382000	374100	393100	445200	431100	442000	475500	431800	429800	427800	428800	473000
22	381400	373900	392900	443700	430700	443100	468400	436700	429600	427600	428400	470100
23	381600	373700	392900	442400	431500	443100	461500	440900	429200	427400	428200	465500
24	380500	373500	392900	438200	433700	442000	454700	440500	429200	427600	429600	460200
25	380100	373200	392700	435600	433500	439900	448000	437900	429000	427600	429000	454700
26	381000	376200	392700	434500	433200	438200	443500	435600	431300	429400	429000	449700
27	380500	379100	392500	432400	432200	436700	440500	433900	431500	442200	428800	445400
28	380100	378900	392300	430700	431500	435400	437100	433500	431100	442200	428600	441100
29	379300	379300	394100	430700	---	433500	437100	434300	431100	439900	428600	439200
30	378500	379300	395100	432000	---	433500	435600	443700	430700	437900	428200	437300
31	378200	---	399100	431800	---	432800	---	453800	---	436700	428200	---
MAX	395900	379300	399100	445200	450800	443100	475500	459100	463700	442200	434500	473000
MIN	378200	373200	379100	404700	430700	430700	431300	431500	429000	427400	428200	425500
(†)	198.40	198.46	199.47	201.07	201.06	201.12	201.25	202.10	201.02	201.30	200.90	201.33
(‡)	-18300	+1100	+19800	+32700	-300	+1300	+2800	+18200	-23100	+6000	-8500	+9100

CAL YR 1978 MAX 446300 MIN 373200 † +3000
WTR YR 1979 MAX 475500 MIN 373200 ‡ +40800

† Elevation, in feet, at end of month.
‡ 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 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
14...	1500	1.0	232	8.6	9.5	.90	11.9	107	77	12
14...	1502	10	232	8.6	9.0	--	11.9	106	--	--
14...	1504	20	232	8.6	9.0	--	11.9	106	--	--
14...	1506	30	232	8.3	8.0	--	11.3	98	--	--
14...	1508	40	232	8.2	8.0	--	11.1	97	--	--
14...	1510	50	232	8.2	7.5	--	10.9	94	--	--
14...	1512	58	232	8.2	7.5	--	10.9	94	77	11
JUN										
15...	0910	1.0	186	8.6	28.0	1.80	10.0	127	61	7
15...	0912	10	190	7.6	26.0	--	7.2	88	--	--
15...	0914	20	190	7.4	25.5	--	6.4	78	--	--
15...	0916	30	194	7.0	25.0	--	3.9	47	--	--
15...	0918	40	210	6.8	22.0	--	.1	1	--	--
15...	0920	55	269	7.2	18.0	--	.2	2	80	0
AUG										
17...	0832	1.0	184	7.8	29.0	1.90	6.3	82	59	4
17...	0834	10	184	7.8	29.0	--	6.0	78	--	--
17...	0836	20	184	7.3	29.0	--	3.9	51	--	--
17...	0838	30	194	7.0	27.0	--	.0	0	--	--
17...	0840	40	222	7.1	23.0	--	.0	0	--	--
17...	0842	50	255	7.1	20.0	--	.0	0	--	--
17...	0844	60	300	7.1	17.5	--	.0	0	--	--
17...	0846	69	321	7.0	17.5	--	.0	0	96	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB										
14...	27	2.4	14	.7	2.8	80	0	8.8	29	.1
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	27	2.4	14	.7	2.8	81	0	9.4	30	--
JUN										
15...	21	2.0	11	.6	2.5	62	2	8.4	15	.1
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	28	2.5	14	.7	2.8	110	0	5.0	19	--
AUG										
17...	21	1.7	10	.6	2.5	67	0	8.3	20	.1
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	34	2.7	13	.6	3.0	150	0	7.4	25	--

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	.8	124	.03	.02	--	.030	--	10	0
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	.02	.02	--	.030	--	10	0
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	1.2	127	.04	.03	--	.050	--	40	30
JUN									
15...	2.1	95	.00	.04	.03	.010	.03	50	3
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.00	.04	.03	.010	.03	30	30
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.08	.10	.03	.010	.03	30	740
15...	7.5	140	.00	.86	.15	.050	.15	420	6700
AUG									
17...	2.5	99	.01	.01	--	.010	.03	0	0
17...	--	--	--	--	--	--	--	--	--
17...	--	--	.01	.01	--	.000	.00	170	520
17...	--	--	.01	.03	--	.000	.00	130	620
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	12	186	.01	1.6	--	.260	.80	6600	7800

SAN JACINTO RIVER BASIN
LAKE CONROE NEAR CONROE, TX--Continued

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302132095333701 LAKE CONROE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1530	1.0	232	8.6	9.5	11.9	107
14...	1532	10	232	8.6	9.5	11.9	107
14...	1534	20	232	8.6	9.0	11.9	106
14...	1536	30	232	8.4	8.5	11.5	102
14...	1538	40	232	8.3	8.0	11.2	97
14...	1540	50	232	8.1	7.5	10.7	92
JUN							
15...	0845	1.0	186	8.5	27.0	9.7	121
15...	0847	10	190	7.6	26.0	7.3	89
15...	0849	20	190	7.3	25.5	6.2	75
15...	0851	30	195	6.9	24.5	3.8	45
15...	0853	40	210	6.7	22.0	.1	1
15...	0855	54	256	7.0	19.0	.2	2
AUG							
17...	0906	1.0	184	7.8	29.0	6.2	81
17...	0908	10	184	7.7	29.0	6.0	78
17...	0910	20	184	7.2	28.5	3.8	49
17...	0912	30	194	6.9	27.0	.0	0
17...	0914	40	222	6.9	23.0	.0	0
17...	0916	46	245	7.0	22.0	.0	0

302245095365301 LAKE CONROE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1437	1.0	232	8.5	9.5	11.6	105
14...	1440	10	232	8.4	9.0	11.5	103
14...	1442	20	232	8.4	9.0	11.3	101
14...	1444	29	232	8.3	8.5	11.0	97
JUN							
15...	0825	1.0	183	8.5	27.5	9.2	116
15...	0827	10	183	7.4	26.5	6.3	78
15...	0829	20	183	6.8	25.5	3.4	41
15...	0831	30	155	6.5	24.5	.2	2
AUG							
17...	0807	1.0	184	7.8	29.5	6.3	82
17...	0809	10	184	7.8	29.5	6.2	81
17...	0811	20	184	6.7	28.5	.3	4
17...	0813	29	199	6.7	27.5	.1	1

302323095341201 LAKE CONROE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1557	1.0	232	8.6	9.0	11.9	106
14...	1600	10	232	8.6	9.0	11.9	106
14...	1602	20	232	8.6	9.0	11.9	106
14...	1604	30	232	8.6	9.0	11.9	106
14...	1606	40	232	8.4	8.5	11.6	103
14...	1608	48	232	8.3	8.0	11.3	98
JUN							
15...	0955	1.0	183	8.5	27.0	9.7	121
15...	0957	10	183	8.4	26.5	9.2	114
15...	0959	20	190	7.3	25.5	6.3	76
15...	1001	30	190	6.8	24.5	2.8	33
15...	1003	40	210	6.8	22.5	.2	2
AUG							
17...	0940	1.0	182	8.0	29.5	6.6	86
17...	0942	10	182	7.9	29.0	6.5	84
17...	0944	20	182	7.1	29.0	3.1	40
17...	0946	30	200	6.8	26.5	.1	1
17...	0948	40	216	6.8	24.0	.1	1
17...	0950	49	259	6.8	22.0	.1	1

SAN JACINTO RIVER BASIN
LAKE CONROE NEAR CONROE, TX--Continued

302320095334001 LAKE CONROE SITE CL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1612	1.0	232	8.4	9.0	11.5	103
14...	1614	10	232	8.4	9.0	11.5	103
14...	1616	20	232	8.4	8.5	11.5	102
14...	1618	34	232	8.4	8.5	11.5	102
JUN							
15...	1010	1.0	183	8.6	27.5	9.6	121
15...	1012	10	183	8.5	26.5	9.2	114
15...	1014	20	190	7.3	25.5	6.3	76
15...	1016	30	190	7.0	25.5	3.3	39
15...	1018	40	214	6.8	22.0	.1	1
15...	1020	50	233	7.0	20.0	.1	1
15...	1022	58	240	7.0	20.0	.2	2
AUG							
17...	0925	1.0	182	7.9	29.0	6.5	84
17...	0927	10	182	7.9	29.0	6.4	83
17...	0929	20	182	7.2	29.0	4.0	52
17...	0931	34	200	6.8	26.5	.1	1

302448095374101 LAKE CONROE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1631	1.0	232	8.6	11.5	11.5	108
14...	1633	10	232	8.5	11.0	11.5	107
14...	1635	20	232	8.1	8.5	10.8	96
14...	1638	27	232	8.2	8.5	11.0	97
JUN							
15...	1030	1.0	177	8.6	28.0	9.2	116
15...	1032	10	177	7.0	26.0	4.6	56
15...	1034	20	177	6.9	25.5	4.2	51
15...	1036	27	150	6.6	25.0	.1	1
AUG							
17...	1004	1.0	181	8.2	30.0	7.1	93
17...	1006	10	181	8.2	30.0	6.9	91
17...	1008	20	181	6.9	29.0	1.4	18
17...	1010	30	215	6.6	26.5	.1	1
17...	1012	38	254	6.5	25.0	.1	1

302607095360901 LAKE CONROE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
14...	1657	1.0	227	8.3	9.0	.90	11.6	104	77	17
14...	1700	10	227	8.3	9.0	--	11.6	104	--	--
14...	1702	20	227	8.3	9.0	--	11.6	104	--	--
14...	1704	30	219	8.2	8.5	--	11.5	102	--	--
14...	1706	39	219	7.9	8.0	--	10.4	90	72	12
JUN										
15...	1050	1.0	177	8.7	28.0	1.50	9.9	125	58	6
15...	1052	10	177	8.1	26.5	--	8.1	100	--	--
15...	1054	20	177	7.1	25.5	--	5.4	65	--	--
15...	1056	30	188	6.7	24.0	--	1.2	14	--	--
15...	1058	43	222	6.9	22.0	--	.2	2	72	0
AUG										
17...	1030	1.0	180	8.1	30.0	2.00	6.8	89	57	3
17...	1032	10	180	7.9	29.5	--	6.6	86	--	--
17...	1034	20	180	7.3	29.0	--	4.8	62	--	--
17...	1036	30	202	6.8	26.0	--	.1	1	--	--
17...	1038	43	253	6.6	23.0	--	.1	1	76	0

SAN JACINTO RIVER BASIN

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LAKE CONROE NEAR CONROE, TX--Continued

302607095360901 LAKE CONROE SITE EC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
14...	27	2.4	14	.7	2.7	74	0	8.6	27
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	25	2.2	13	.7	2.7	73	0	7.6	28
JUN									
15...	20	1.9	11	.6	2.4	59	2	7.1	15
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	25	2.3	12	.6	2.6	88	0	7.1	16
AUG									
17...	20	1.7	11	.6	2.5	66	0	7.4	19
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	27	2.1	12	.6	2.8	110	0	10	21

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	1.5	120	.03	.01	--	.040	--	30	0
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	3.4	118	.11	.04	--	.060	--	130	20
JUN									
15...	2.0	91	.00	.03	.06	.020	.06	30	10
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.06	.07	.06	.020	.06	70	120
15...	6.1	118	.00	.43	.31	.100	.31	1100	2500
AUG									
17...	2.7	97	.01	.12	--	.020	.06	0	40
17...	--	--	--	--	--	--	--	--	--
17...	--	--	.01	.01	--	.040	.12	80	160
17...	--	--	.01	.20	--	.050	.15	510	1100
17...	9.7	147	.01	1.8	--	.420	1.3	4800	3600

302714095372201 LAKE CONROE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1720	1.0	227	8.3	9.0	11.6	104
14...	1722	10	227	8.2	8.5	11.3	100
14...	1724	20	227	7.8	8.0	10.2	89
14...	1726	28	227	7.8	8.0	9.8	85
JUN							
15...	1120	1.0	170	8.7	28.0	9.5	120
15...	1122	10	170	6.8	25.5	3.4	41
15...	1124	24	120	6.2	24.5	.1	1
AUG							
17...	1055	1.0	180	8.1	30.0	6.7	88
17...	1057	10	180	8.0	30.0	6.3	83
17...	1059	23	180	6.7	29.0	.1	1

SAN JACINTO RIVER BASIN
LAKE CONROE NEAR CONROE, TX--Continued

303129095360501 LAKE CONROE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
14...	1755	1.0	146	7.2	13.0	.30	8.8	86	49	12
14...	1758	10	130	7.0	11.5	--	8.0	75	--	--
14...	1800	20	107	6.9	8.5	--	7.8	69	--	--
14...	1802	28	107	6.9	8.5	--	7.8	69	35	7
JUN										
15...	1155	1.0	124	8.2	29.5	1.20	9.0	118	41	3
15...	1157	10	129	6.4	25.5	--	.2	2	--	--
15...	1159	20	153	6.4	25.0	--	.1	1	--	--
15...	1201	33	160	6.5	25.0	--	.1	1	52	1
AUG										
17...	1130	1.0	177	7.7	30.5	1.00	6.6	87	54	2
17...	1132	10	177	7.1	30.0	--	4.8	63	--	--
17...	1134	20	181	6.5	29.0	--	.1	1	54	1

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
14...	17	1.5	8.6	.5	2.8	45	0	10	19
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	12	1.1	6.3	.5	2.5	34	0	10	9.0
JUN									
15...	14	1.4	6.4	.4	2.4	46	0	7.1	10
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	18	1.8	8.1	.5	2.6	63	0	8.4	13
AUG									
17...	19	1.7	11	.6	2.5	64	0	7.2	19
17...	--	--	--	--	--	--	--	--	--
17...	19	1.6	11	.7	2.5	65	0	8.9	19

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	9.3	91	.08	.08	--	.130	--	250	30
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	9.1	67	.04	.05	--	.130	--	300	20
JUN									
15...	6.8	71	.00	.03	.21	.070	.21	140	20
15...	--	--	.02	.06	.49	.160	.49	560	300
15...	--	--	--	--	--	--	--	--	--
15...	7.9	93	.01	.41	.95	.310	.95	1500	780
AUG									
17...	4.4	96	.01	.07	--	.030	.09	10	20
17...	--	--	.02	.01	--	.060	.18	90	150
17...	9.0	105	.01	.30	--	.220	.67	960	640

SAN JACINTO RIVER BASIN
LAKE CONROE NEAR CONROE, TX--Continued

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302127095335501 LAKE CONROE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
FEB							
14...	1500	1.0	1	0	0	10	1
14...	1506	30	--	--	--	--	--
14...	1512	58	1	0	0	10	1
JUN							
15...	0910	1.0	1	70	<1	0	0
15...	0914	20	--	--	--	--	--
15...	0918	40	--	--	--	--	--
15...	0920	55	13	200	1	0	0
AUG							
17...	0832	1.0	1	0	1	0	0
17...	0836	20	--	--	--	--	--
17...	0838	30	--	--	--	--	--
17...	0846	69	22	200	<1	10	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
FEB							
14...	10	0	0	.0	0	0	0
14...	10	--	0	--	--	--	--
14...	40	0	30	.0	0	0	10
JUN							
15...	50	0	3	.0	0	0	<3
15...	30	--	30	--	--	--	--
15...	30	--	740	--	--	--	--
15...	420	0	6700	.0	0	0	<3
AUG							
17...	0	0	0	.2	.0	0	2
17...	170	--	520	--	--	--	--
17...	130	--	620	--	--	--	--
17...	6600	0	7800	.0	0	0	5

SAN JACINTO RIVER BASIN
LAKE CONROE NEAR CONROE, TX--Continued

302127095335501 LAKE CONROE SITE AC

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 14, 79 1501	JUN 15, 79 0911	AUG 17, 79 0833
TOTAL CELLS/ML	7600	9200	74000
DIVERSITY: DIVISION	0.3	0.1	0.3
..CLASS	0.3	0.1	0.3
..ORDER	0.4	0.1	0.5
...FAMILY	0.4	0.1	1.5
....GENUS	0.5	0.1	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....COELASTRACEAE						
.....COELASTRUM	--	-	--	-	420	1
....HYDRODICTYACEAE						
.....PEDIASTRUM	--	-	*	0	--	-
....OOCYSTACEAE						
.....ANKISTRODESMUS	160	2	--	-	*	0
.....DICTYOSPHAERIUM	--	-	--	-	420	1
.....KIRCHNERIELLA	--	-	*	0	--	-
.....OOCYSTIS	130	2	--	-	--	-
.....SELENASTRUM	--	-	--	-	*	0
.....TETRAEDRON	--	-	--	-	*	0
.....TREUBARIA	--	-	--	-	*	0
....SCENEDESMACEAE						
.....SCENEDESMUS	65	1	--	-	520	1
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	*	0	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	*	0
....CHLOROGONIUM	--	-	*	0	--	-
...VOLVOCAEAE						
....PANDORINA	--	-	--	-	840	1
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
.....CYCLOTELLA	65	1	--	-	*	0
.....MELOSIRA	7000#	93	--	-	*	0
...PENNALES						
....FRAGILARIACEAE						
.....ASTERIONELLA	65	1	--	-	--	-
....NAVICULACEAE						
.....NAVICULA	*	0	--	-	--	-
....NITZSCHIACEAE						
.....NITZSCHIA	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....AGMENELLUM	--	-	--	-	*	0
....ANACYSTIS	--	-	--	-	1900	3
...HORMOGONALES						
....NOSTOCAEAE						
.....ANABAENA	--	-	9100#	99	520	1
....OSCILLATORIAEAE						
.....OSCILLATORIA	--	-	--	-	30000#	41
....RIVULARIAEAE						
.....RAPHIDIOPSIS	--	-	--	-	38000#	51
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
....GLENODINIACEAE						
.....GLENODINIUM	--	-	--	-	*	0

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

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

LAKE CONROE NEAR CONROE, TX--Continued

303129095360501 LAKE CONROE SITE GC

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 14, 79 1756	JUN 15, 79 1156	AUG 17, 79 1131
TOTAL CELLS/ML	2100	15000	120000
DIVERSITY: DIVISION	1.3	1.6	0.2
..CLASS	1.3	1.6	0.2
..ORDER	2.0	2.1	0.5
...FAMILY	2.6	3.0	1.8
....GENUS	3.2	3.3	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....COELASTRACEAE						
.....COELASTRUM	38	2	590	4	--	-
....HYDRODICTYACEAE						
.....PEDIASTRUM	--	-	290	2	--	-
....MICRACTINACEAE						
.....GOLENKINIA	--	-	150	1	*	0
....OOCYSTACEAE						
.....ANKISTRODESMUS	170	8	330	2	--	-
.....DICTYOSPHAERIUM	--	-	440	3	--	-
.....KIRCHNERIELLA	--	-	180	1	--	-
.....OOCYSTIS	--	-	--	-	*	0
....SELENASTRUM	--	-	*	0	--	-
....TETRAEDRON	*	0	*	0	--	-
....TREUBARIA	--	-	*	0	*	0
....SCENEDESMACEAE						
.....SCENEDESMUS	75	4	590	4	880	1
....VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	--	-	--	-	*	0
....CHLAMYDOMONAS	--	-	950	6	*	0
....VOLVOCAEAE						
....GONIUM	--	-	590	4	--	-
....PANDORINA	--	-	590	4	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISACEAE						
.....CYCLOTELLA	260	13	620	4	*	0
.....MELOSIRA	790#	38	1100	7	*	0
....PENNALES						
....ACHNANTHACEAE						
.....COCONEIS	120	6	--	-	--	-
....CYMBELLACEAE						
.....CYMBELLA	*	0	--	-	--	-
.....EPITHEMIA	*	0	--	-	--	-
....FRAGILARIACEAE						
.....FRAGILARIA	85	4	--	-	--	-
.....SYNEDRA	28	1	--	-	--	-
....NAVICULACEAE						
.....NAVICULA	94	4	--	-	--	-
....NITZSCHACEAE						
.....NITZSCHIA	75	4	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
.....CHROOMONAS	--	-	*	0	--	-
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....AGMENELLUM	75	4	--	-	4000	3
....ANACYSTIS	110	5	440	3	2300	2
....HORMOGONALES						
....NOSTOCACEAE						
.....ANABAENA	--	-	5900#	38	--	-
....ANABAENOPSIS	--	-	--	-	14000	12
....OSCILLATORIACEAE						
.....LYNGBYA	--	-	--	-	8800	7
....OSCILLATORIA	94	4	1800	12	34000#	27
....RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	--	-	58000#	47

SAN JACINTO RIVER BASIN

LAKE CONROE NEAR CONROE, TX--Continued

303129095360501 LAKE CONROE SITE GC--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 14, 79 1756		JUN 15, 79 1156		AUG 17, 79 1131	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	*	0	*	0
.....TRACHELOMONAS	47	2	330	2	*	0
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
....GYMNODINIACEAE						
.....GYMNODINIUM	--	-	*	0	--	-
...PERIDINIALES						
....GLENODINIACEAE						
.....GLENODINIUM	--	-	--	-	*	0
....PERIDINIACEAE						
.....PERIDINIUM	--	-	110	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JACINTO RIVER BASIN

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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 (189 m) downstream from centerline of dam on West Fork San Jacinto River, 770 ft (235 m) downstream from service outlet tower, 3.0 mi (4.8 km) upstream from State Highway 105, and 7.4 mi (11.9 km) west of Conroe.

DRAINAGE AREA.--445 mi² (1,153 km²).

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

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 138.48 ft (42.209 m) National Geodetic Vertical Datum of 1929 (levels by San Jacinto River Authority).

REMARKS.--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.--6 years, 12.8 ft³/s (0.362 m³/s), 9,270 acre-ft/yr (11.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 339 ft³/s (9.60 m³/s) Feb. 19-25, 1974; many days with no controlled releases.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 154 ft³/s (4.36 m³/s) Oct. 4, 5, and Nov. 26; maximum gage height, 11.24 ft (3.426 m) Apr. 21; no controlled releases for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	150	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	154	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	154	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	152	151	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	152	151	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	151	151	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	151	151	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	150	151	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	150	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	151	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	152	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	152	154	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	152	62	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	152	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	152	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	152	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	152	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	4699	4011.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	152	134	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	154	154	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	150	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	9320	7960	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1978	TOTAL	16043.00	MEAN 44.0	MAX 154	MIN .00	AC-FT 31820						
WTR YR 1979	TOTAL	8710.00	MEAN 23.9	MAX 154	MIN .00	AC-FT 17280						

SAN JACINTO RIVER BASIN

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 (4.8 km) downstream from Lake Conroe Dam, and 5.9 mi (9.5 km) west of Conroe.

DRAINAGE AREA.--451 mi² (1,168 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 116.06 ft (35.375 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Discharge is outflow from Lake Conroe. Floodflows may include local runoff. Discharge estimated during periods of backwater.

AVERAGE DISCHARGE.--7 years (water years 1973-79), 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, 6,000 ft³/s (170 m³/s) Apr. 21, 1979, gage height, 33.22 ft (10.126 m); maximum gage height, 33.49 ft (10.208 m) Apr. 18, 1979 (backwater from local runoff); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1940 reached a stage of 41.94 ft (12.783 m), from information by the State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge estimated, 6000 ft³/s (170 m³/s) Apr. 21, gage height, 33.22 ft (10.126 m); maximum gage height, 33.49 ft (10.208 m) Apr. 18, 1979 (backwater from local runoff); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	153	.00	.00	267	453	500	867	2250	1.6	860	.60
2	153	153	.00	.00	318	54	800	858	2560	1.6	620	.32
3	154	153	.00	.00	607	4.8	1800	606	2330	1.3	398	.60
4	154	153	.00	.00	655	4.8	1700	1130	2660	1.3	226	.92
5	154	153	.00	.00	1120	4.3	1700	1760	2670	.92	6.2	.92
6	155	152	.00	.00	1610	4.3	1700	2150	2860	.92	1.3	1.3
7	155	151	.00	.00	2000	4.8	1700	2160	3190	.92	.92	1.6
8	155	150	.00	.00	2270	4.3	1200	2140	2790	.92	.60	1.6
9	155	150	.00	.00	2300	4.3	1050	2130	2740	.92	.60	1.6
10	154	150	.00	8.8	2210	5.9	900	2120	2730	.92	.60	1.6
11	155	151	.00	93	2010	6.5	850	1930	2690	.60	.92	1.6
12	155	151	.00	15	1750	91	750	1280	2240	.60	.92	1.6
13	155	151	.00	.50	1330	180	500	815	1230	.32	.60	1.3
14	155	151	.00	.16	860	183	400	499	656	.32	.32	1.3
15	155	152	.00	.00	853	182	300	173	495	.60	.32	1.3
16	155	151	.00	.00	777	197	150	13	170	.60	.92	.32
17	155	151	.00	18	663	450	100	5.1	9.3	.60	.92	.00
18	154	151	.00	216	674	713	2200	2.0	1.3	1.3	.60	2.0
19	154	151	.00	985	641	829	3200	2.0	1.3	1.3	.60	240
20	154	151	.00	1310	635	845	3870	1.6	1.3	1.3	.60	1820
21	154	151	.00	1500	633	840	5000	1.6	1.3	.92	.60	2540
22	154	150	.00	1520	589	1090	5320	399	1.3	.92	.60	2820
23	154	150	.00	1810	325	1130	4160	1660	1.3	1.3	.60	2880
24	154	151	.00	1760	509	1030	3430	1560	1.3	.92	.75	2760
25	154	151	.00	1520	683	1010	3390	1390	1.3	.92	.92	2680
26	154	150	.00	1300	644	887	2800	1050	2.0	16	.92	2460
27	154	90	.00	1310	641	784	1960	714	2.5	982	.60	2130
28	153	3.0	.00	683	640	782	1280	382	2.5	1400	.60	2020
29	153	.00	.00	176	---	779	875	317	2.0	1360	.60	1150
30	153	.00	.00	326	---	700	859	431	2.0	1310	.60	1090
31	153	---	.00	285	---	600	---	1590	---	882	.60	---
TOTAL	4780	4025.00	.00	14836.46	28214	13853.0	54444	30136.3	34291.7	5973.84	2128.33	24610.48
MEAN	154	134	.000	479	1008	447	1815	972	1143	193	68.7	820
MAX	155	153	.00	1810	2300	1130	5320	2160	3190	1400	860	2880
MIN	153	.00	.00	.00	267	4.3	100	1.6	1.3	.32	.32	.00
AC-FT	9480	7980	.00	29430	55960	27480	108000	59780	68020	11850	4220	48810
CAL YR 1978	TOTAL	38612.85	MEAN	106	MAX	1690	MIN	.00	AC-FT	76590		
WTR YR 1979	TOTAL	217293.11	MEAN	595	MAX	5320	MIN	.00	AC-FT	431000		

SAN JACINTO RIVER BASIN

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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 current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT 18...	1115	154	240	7.3	21.5	20	9.0	7.9	92	.7	88	17
DEC 11...	1530	2.0	280	6.8	7.5	60	20	9.4	81	.7	87	9
FEB 20...	1445	635	230	7.8	8.5	80	10	11.7	104	2.5	74	6
APR 20...	1330	3740	220	6.7	19.0	25	8.2	9.2	102	.9	72	15
JUN 25...	1430	19	400	7.0	27.0	10	5.1	4.1	52	1.3	130	5
AUG 14...	1020	19	370	7.5	28.0	30	14	1.2	15	1.4	140	22

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT 18...	31	2.5	13	.6	3.0	86	0	10	27	.2	3.4
DEC 11...	30	3.0	16	.7	2.5	96	0	7.7	33	.1	11
FEB 20...	26	2.3	13	.7	2.4	84	0	8.2	23	.2	.6
APR 20...	25	2.2	12	.6	2.8	70	0	4.4	24	.2	3.6
JUN 25...	45	3.7	19	.7	2.9	150	0	11	34	.2	14
AUG 14...	48	4.0	17	.6	2.4	140	0	4.8	35	.1	14

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	133	18	13	.03	.01	.04	.07	.47	.54	.03	6.4
DEC 11...	151	23	9	.11	.01	.12	.02	.50	.52	.06	7.5
FEB 20...	117	24	18	.06	.00	.06	.01	.53	.54	.02	8.0
APR 20...	109	9	9	.08	.00	.08	.01	.41	.42	.02	7.7
JUN 25...	204	13	13	.10	.06	.16	.05	.51	.56	.04	4.3
AUG 14...	195	37	0	.05	.02	.07	.01	.48	.49	.03	6.6

SAN JACINTO RIVER BASIN

08067650 WEST FORK SAN JACINTO RIVER BELOW LAKE CONROE NEAR CONROE, TX--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
DEC 11...	1530	1	90	<1	0	1
APR 20...	1330	2	100	0	0	0
AUG 14...	1020	1	0	1	0	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 11...	130	1	270	.0	0	0	10
APR 20...	80	0	0	.0	0	0	10
AUG 14...	30	0	220	.0	0	0	10

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
DEC 11...	1530	.0	--	.00	.0	.00	.00	.00	.00
APR 20...	1330	.0	.00	.00	.0	.00	.00	.00	.01
AUG 14...	1020	.0	.00	.00	.0	.00	.00	.00	.00

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)	METHYL PARA- THION, TOTAL (UG/L)
DEC 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR 20...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 14...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DEC 11...	.00	.00	.00	0	.00	.00	.01	.25
APR 20...	.00	.00	.00	0	.00	.07	.01	.01
AUG 14...	.00	.00	.00	0	.00	.00	.00	.00

SAN JACINTO RIVER BASIN

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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 (13.4 km) southwest of Conroe.

DRAINAGE AREA.--291 mi² (754 km²).

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 12...	1035	3.3	237	6.9	21.0	62	16	21	2.4	19
NOV 21...	1055	19	183	6.7	14.5	38	14	12	2.0	16
JAN 11...	1240	362	152	6.7	6.5	44	8	15	1.6	8.2
JUN 01...	1240	1800	149	6.3	25.0	48	10	17	1.4	7.4
JUL 12...	1650	25	277	6.6	27.5	82	26	28	3.0	19
AUG 29...	1335	17	168	6.2	26.0	39	13	13	1.6	14

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 12...	1.0	.0	56	0	4.3	38	.1	22	134
NOV 21...	1.1	2.2	30	0	2.9	34	.1	19	103
JAN 11...	.5	2.9	44	0	6.0	16	.1	10	82
JUN 01...	.5	3.0	47	0	6.9	12	.1	11	82
JUL 12...	.9	1.8	69	0	9.1	38	.2	17	150
AUG 29...	1.0	1.8	32	0	7.2	26	.1	15	94

SAN JACINTO RIVER BASIN

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 (91 m) upstream from Missouri Pacific Railroad Co. bridge, 3.5 mi (5.6 km) downstream from Lake Creek, 4.2 mi (6.8 km) south of Conroe, and at mile 79 (127 km).

DRAINAGE AREA (revised).--828 mi² (2,145 km²).

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. Datum of gage is 95.03 ft (28.965 m) National Geodetic Vertical Datum of 1929. May 7, 1924, to Sept. 30, 1927, nonrecording gage at railroad bridge 285 ft (87 m) downstream at datum 30.10 ft (9.174 m) higher. July 13, 1939, to Sept. 30, 1963, water-stage recorder at datum 5.0 ft (1.52 m) higher.

REMARKS.--Water-discharge records good. Regulated since Jan. 9, 1973, by Lake Conroe (station 08067600), capacity 532,000 acre-ft (656 hm³), 14.5 mi (23.3 km) upstream. No large diversions above station.

AVERAGE DISCHARGE.--36 years (water years 1925-27, 1940-72) prior to regulation by Lake Conroe, 477 ft³/s (13.51 m³/s), 345,600 acre-ft/yr (426 hm³/yr); 7 years (water years 1973-79) regulated, 657 ft³/s (18.61 m³/s), 476,000 acre-ft/yr (587 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s (3,120 m³/s) Nov. 25, 1940, gage height, 30.85 ft (9.403 m), present datum, from rating curve extended above 43,000 ft³/s (1,220 m³/s) on basis of velocity-area studies; no flow June 14, 1956, 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 (9.20 m), present site and datum, from information by Missouri Pacific Railroad Co., discharge 101,000 ft³/s (2,860 m³/s), from rating curve as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,500 ft³/s (1,090 m³/s) Apr. 18, gage height, 24.71 ft (7.532 m); minimum daily, 33 ft³/s (0.93 m³/s) Sept. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	167	184	1200	488	780	766	1120	3650	60	957	60
2	179	167	126	1040	785	386	697	1200	8200	54	803	55
3	177	166	119	952	964	440	4810	1050	6840	51	493	55
4	179	166	241	1020	1010	465	4500	1870	4730	47	435	61
5	178	166	216	599	2000	288	4670	3180	4870	45	176	186
6	177	221	268	824	3810	221	3570	6910	4820	47	117	111
7	175	187	1150	3040	4600	194	2250	6010	8000	50	114	175
8	174	177	854	1970	7020	162	1770	3610	12900	66	303	91
9	173	174	500	2220	5760	142	1240	2510	8370	112	253	64
10	171	172	302	1520	3530	132	1160	2220	5020	67	147	52
11	162	172	184	786	2430	165	970	2100	3270	81	111	46
12	172	171	140	559	1900	161	800	1700	2580	70	101	42
13	171	170	116	420	1720	336	768	1090	1600	57	86	40
14	69	171	102	414	1120	345	568	942	862	54	86	38
15	68	173	94	305	1050	330	451	535	699	62	82	36
16	169	171	89	204	1000	324	252	342	415	48	131	33
17	167	178	83	173	892	461	135	244	183	43	141	35
18	166	174	78	264	1160	1460	14900	215	135	91	89	147
19	166	193	75	4030	1130	2920	17800	196	118	110	70	1010
20	169	289	73	5420	1190	2370	15300	181	106	103	62	8610
21	167	224	70	3900	1140	1500	11400	172	97	59	57	9740
22	164	211	67	3400	1000	1530	9330	345	89	101	55	11000
23	166	211	65	2710	725	2190	8240	1450	82	104	55	8590
24	166	232	63	2170	677	2310	5460	1960	82	68	51	5530
25	166	218	61	1760	945	1970	4040	2600	96	64	166	3400
26	177	433	59	1460	1190	1370	3460	2330	105	204	136	2670
27	173	1090	57	1450	1130	1030	2230	1180	102	2280	81	2090
28	169	877	57	1240	940	940	1670	849	94	2710	66	1980
29	167	642	83	373	---	911	1160	507	89	1980	63	1320
30	167	339	275	564	---	862	1170	785	72	1670	54	1070
31	167	---	534	597	---	800	---	2260	---	1200	52	---
TOTAL	5292	8102	6385	46584	51306	27495	125537	51663	78276	11758	5593	58337
MEAN	171	270	206	1503	1832	887	4185	1667	2609	379	180	1945
MAX	181	1090	1150	5420	7020	2920	17800	6910	12900	2710	957	11000
MIN	162	166	57	173	488	132	135	172	72	43	51	33
AC-FT	10500	16070	12660	92400	101800	54540	249000	102500	155300	23320	11090	115700
CAL YR 1978	TOTAL	97759	MEAN	268	MAX	4670	MIN 14	AC-FT	193900			
WTR YR 1979	TOTAL	476328	MEAN	1305	MAX	17800	MIN 33	AC-FT	944800			

SAN JACINTO RIVER BASIN

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08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1961 to current year. Sediment records: October 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to current year.

WATER TEMPERATURES: October 1961 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, 763 micromhos Apr. 20, 1971; minimum daily, 52 micromhos May 12, 1972.

WATER TEMPERATURES: Maximum daily, 36.0°C Aug. 6, 1964, July 9, 1967; minimum daily, 0.0°C Dec. 22, 1963, Jan. 31, 1968.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 400 micromhos July 25; minimum daily, 60 micromhos Apr. 19.

WATER TEMPERATURES: Maximum daily, 32.0°C July 16.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 18...	0950	166	240	7.2	18.0	20	9.0	7.3	79	.7	39
NOV 06...	1315	256	210	7.3	20.5	50	60	6.6	75	2.9	7100
DEC 11...	1235	178	230	6.9	7.0	110	50	10.2	86	1.0	470
JAN 17...	0915	173	250	7.5	10.0	120	40	10.4	95	1.7	58
FEB 08...	1010	7320	163	7.1	6.5	140	60	11.7	98	2.6	1000
MAR 12...	1245	148	310	7.1	14.5	120	45	8.9	90	1.3	18
APR 23...	1240	8370	198	7.2	20.5	50	19	8.2	93	1.0	150
MAY 07...	1250	5890	158	6.9	20.5	80	53	7.3	83	2.4	150
JUN 25...	1620	85	330	7.0	29.0	30	22	4.8	63	3.1	5800
JUL 24...	0935	70	380	7.2	27.5	40	10	5.9	76	2.1	180
AUG 14...	1420	72	230	7.5	27.5	70	17	7.2	92	2.4	5900
SEP 19...	1335	329	142	7.0	28.0	70	70	7.8	100	3.5	25000

DATE	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 18...	30	77	8	27	2.4	14	.7	2.9	85	0	6.2
NOV 06...	2200	64	12	22	2.3	15	.8	3.1	64	0	7.2
DEC 11...	270	67	8	23	2.4	16	.8	3.1	72	0	9.8
JAN 17...	24	68	11	23	2.6	18	.9	2.9	70	0	11
FEB 08...	3900	58	13	20	1.9	8.9	.5	2.4	54	0	7.0
MAR 12...	14	86	22	29	3.3	25	1.2	2.4	78	0	10
APR 23...	1100	66	17	23	2.1	11	.6	2.9	60	0	8.6
MAY 07...	170	54	0	19	1.6	8.0	.5	2.7	68	0	6.2
JUN 25...	10	71	0	24	2.8	26	1.3	2.9	88	0	11
JUL 24...	--	110	26	37	3.9	29	1.2	3.3	100	0	9.8
AUG 14...	3800	62	7	21	2.4	18	1.0	2.3	67	0	10
SEP 19...	7700	43	8	14	1.9	12	.8	2.4	42	0	8.3

SAN JACINTO RIVER BASIN

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, 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)
OCT 18...	27	.2	5.0	145	127	14	8	.07	.01	.08	.06
NOV 06...	28	.1	5.6	133	115	88	26	.04	.01	.05	.01
DEC 11...	26	.1	14	152	130	83	11	.12	.01	.13	.01
JAN 17...	34	.1	15	152	141	53	11	.21	.04	.25	.20
FEB 08...	16	.1	4.2	111	87	108	16	.05	.06	.11	.02
MAR 12...	44	.1	16	175	169	31	2	.06	.02	.08	.10
APR 23...	19	.2	3.6	120	100	27	4	.11	.00	.11	.03
MAY 07...	11	.2	3.1	110	85	51	24	.13	.02	.15	.05
JUN 25...	30	.1	17	177	157	39	18	.11	.02	.13	.01
JUL 24...	61	.2	20	226	214	21	7	.07	.08	.15	.17
AUG 14...	28	.1	18	--	133	28	17	.04	.04	.08	.25
SEP 19...	21	.1	11	104	91	119	7	.06	.04	.10	.19

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	.60	.66	.66	.080	.040	7.5	--	--	10	4.5	97
NOV 06...	.79	.80	.69	.110	.040	9.0	--	--	96	66	81
DEC 11...	.70	.71	.60	.210	.150	--	9.8	1.2	48	23	98
JAN 17...	.80	1.0	.78	.180	.100	9.3	--	--	39	18	97
FEB 08...	.73	.75	1.1	.150	.080	11	--	--	143	2830	60
MAR 12...	.53	.63	.52	.080	.080	--	8.6	1.0	24	9.6	76
APR 23...	1.3	1.3	1.1	.050	.000	10	--	--	59	1330	45
MAY 07...	.68	.73	.78	.070	.060	14	--	--	73	1160	78
JUN 25...	.47	.48	.50	.190	.120	9.0	--	--	39	9.0	98
JUL 24...	.62	.79	.53	.350	.190	8.2	--	--	49	9.3	98
AUG 14...	.73	.98	.86	.310	.210	--	--	1.3	83	16	77
SEP 19...	1.0	1.2	--	.210	--	15	--	--	140	124	97

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 11...	1235	2	1	100	30	70	0	0	3	0
MAR 12...	1245	2	1	100	0	100	2	1	<1	10
AUG 14...	1420	2	1	0	0	0	1	0	2	10

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
DEC 11...	0	0	2	0	<3	5	1	4	1300	1200
MAR 12...	10	0	0	0	<3	10	4	6	1000	730
AUG 14...	10	0	2	2	0	2	1	1	1200	1100

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
DEC 11...	90	3	3	0	120	120	4	.0	.0	.0
MAR 12...	270	36	31	5	100	20	80	.0	.0	.0
AUG 14...	120	5	5	0	170	40	130	.1	.1	.0

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 11...	1	1	0	10	10	0	10	1	9
MAR 12...	0	0	0	0	0	0	40	30	9
AUG 14...	0	0	0	0	0	0	0	0	10

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
NOV 06...	1315	ND	--	ND	ND	ND	ND	ND	--	1.0	ND
FEB 08...	1010	ND	--	ND	--	ND	--	ND	--	--	ND
MAY 07...	1250	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
AUG 14...	1420	--	--	ND	--	ND	--	ND	--	--	ND

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)
NOV 06...	--	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 08...	--	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 07...	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 14...	--	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 08...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 14...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 08...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 14...	ND	--	ND	--	ND	--	ND	--	ND	--

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 6,78 1315	MAR 12,79 1245	MAY 7,79 1250	JUN 25,79 1620	JUL 24,79 0935	AUG 14,79 1420
TOTAL CELLS/ML	3600	5600	3200	16000	8300	13000
DIVERSITY: DIVISION	1.2	1.3	1.1	1.3	1.5	0.6
...CLASS	1.2	1.3	1.1	1.3	1.5	0.6
...ORDER	2.0	1.6	1.8	2.1	1.9	1.5
...FAMILY	2.3	1.7	2.1	2.7	2.6	1.5
...GENUS	2.7	2.0	2.4	3.1	3.5	1.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
...SCHROEDERIA	--	-	--	-	29	1	--	-	130	2	--	-
...COELASTRACEAE												
...COELASTRUM	--	-	--	-	120	4	--	-	--	-	--	-
...HYDRODICTYACEAE												
...PEDIATRUM	--	-	--	-	--	-	110	1	540	6	--	-
...MICRACTINIACEAE												
...MICRACTINIUM	--	-	--	-	58	2	--	-	--	-	--	-
...OOCYSTACEAE												
...ANKISTRODESMUS	88	2	110	2	86	3	290	2	200	2	--	-
...DICTYOSPHAERIUM	--	-	--	-	350	11	--	-	800	10	--	-
...GLOEOACTINIUM	--	-	--	-	--	-	--	-	67	1	--	-
...KIRCHNERIELLA	--	-	*	0	29	1	110	1	340	4	--	-
...OOCYST'S	--	-	--	-	86	3	110	1	*	0	--	-
...SELEN. SPUM	--	-	--	-	--	-	370	2	*	0	*	0
...TETRAL. I	44	1	--	-	--	-	--	-	*	0	--	-
...TREUBERELLA	--	-	--	-	--	-	*	0	67	1	--	-
...WESTERELLA	--	-	--	-	--	-	--	-	130	2	--	-
...SCENESMACEAE												
...ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	310	2
...CRUCIGENIA	180	5	--	-	--	-	800	5	130	2	--	-
...SCENESMUS	180	5	260	5	58	2	1500	9	1100	13	390	3
...ACTINASTRUM	--	-	--	-	--	-	340	2	--	-	150	1
...TETRASPORALES												
...COCCONYXACEAE												
...ELAKOTOTRIX	--	-	--	-	29	1	--	-	230	3	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	--	-	150	3	--	-	*	0	--	-	77	1
...PHACOTACEAE												
...PTEROMONAS	--	-	--	-	--	-	*	0	--	-	--	-
...ZYGNEMATALES												
...DESMIDIACEAE												
...CLOSTERIUM	--	-	--	-	86	3	--	-	--	-	--	-
...EUASTRUM	88	2	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISACEAE												
...CYCLOTILLA	--	-	280	5	58	2	260	2	1500#	18	--	-
...MELOSIRA	--	-	3300#	59	--	-	520	3	1200	14	--	-
...PENNALES												
...ACHNANTHACEAE												
...ACHNANTHES	88	2	--	-	--	-	--	-	--	-	--	-
...COCCONEIS	44	1	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
...SYNEDRA	--	-	--	-	*	0	--	-	--	-	--	-
...NAVICULACEAE												
...NAVICULA	130	4	*	0	--	-	*	0	*	0	120	1
...NITZSCHIA	130	4	170	3	*	0	980	6	67	1	150	1
...XANTHOPHYCEAE												
...HETEROCOCCALES												
...CHLOROTHECIACEAE												
...OPHIOCYTUM	--	-	--	-	--	-	*	0	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOMONADACEAE												
...CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-	*	0

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

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

SAN JACINTO RIVER BASIN

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08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 6,78 1315	MAR 12,79 1245	MAY 7,79 1250	JUN 25,79 1620	JUL 24,79 0935	AUG 14,79 1420
ORGANISM	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCACEAE						
...CHROOCOCCACEAE						
....AGMENELLUM	-- --	-- --	-- --	-- --	-- --	620 5
....ANACYSTIS	1500# 43	1200# 21	1800# 56	3600# 22	370 4	4400# 33
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	-- --	-- --	370 12	2000 12	-- --	-- --
...OSCILLATORIACEAE						
....LYNCBYA	350 10	-- --	-- --	5200# 31	1300# 16	6900# 52
...OSCILLATORIA	700# 20	-- --	-- --			
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	44 1	38 1	* 0	* 0	-- --	-- --
...PHACUS	-- --	-- --	-- --	* 0	-- --	-- --
...TRACHELOMONAS	-- --	110 2	* 0	* 0	* 0	-- --
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	-- --	-- --	-- --	-- --	-- --	* 0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	5292	252	130	1890	28	399	7	100	72
NOV. 1978.....	8102	221	120	2590	24	532	6	132	63
DEC. 1978.....	6385	211	110	1950	26	447	6	98	60
JAN. 1979.....	46584	123	66	8270	14	1740	3	427	35
FEB. 1979.....	51306	175	93	12900	19	2680	5	660	50
MAR. 1979.....	27495	146	78	5810	17	1250	4	302	42
APR. 1979.....	125537	125	67	22800	14	4670	4	1200	36
MAY 1979.....	51663	172	92	12900	19	2640	5	648	49
JUNE 1979.....	78276	151	81	17200	17	3560	4	845	41
JULY 1979.....	11758	144	77	2440	16	518	4	128	41
AUG. 1979.....	5593	197	110	1600	22	330	5	79	56
SEPT 1979.....	58337	119	64	10000	13	2050	3	534	34
TOTAL	476328	**	**	100000	**	20800	**	5150	**
WTD.AVG.	1310	146	78	**	16	**	4.1	**	41

SAN JACINTO RIVER BASIN

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	247	265	110	350	180	210	230	130	308	180	203
2	252	244	295	125	250	245	220	210	100	289	194	193
3	252	245	325	140	230	220	95	225	120	300	198	201
4	251	249	300	120	220	200	100	175	150	294	198	215
5	250	259	315	150	210	255	95	150	160	289	219	152
6	252	210	275	130	195	280	115	125	168	254	234	180
7	251	245	125	75	180	300	130	158	149	250	217	136
8	250	247	150	100	163	310	140	165	127	246	150	182
9	250	249	180	85	170	330	155	175	160	166	175	195
10	250	250	205	95	175	340	170	185	187	222	199	205
11	249	246	230	120	170	305	180	190	197	217	205	223
12	250	247	240	145	185	310	195	200	201	242	210	233
13	250	249	250	175	190	280	205	210	205	264	212	238
14	251	249	240	210	205	275	220	215	210	268	225	239
15	252	248	265	230	215	290	235	225	214	241	221	233
16	253	255	275	240	220	295	250	235	219	246	172	259
17	252	263	280	250	225	210	260	240	245	262	155	237
18	255	262	290	210	120	140	75	250	258	251	216	207
19	253	263	285	100	120	100	60	260	271	221	282	90
20	253	265	290	70	110	105	70	265	286	262	241	61
21	252	260	300	80	120	115	110	275	280	244	252	75
22	252	262	305	105	140	115	185	250	280	282	267	104
23	252	257	295	120	150	105	198	200	281	361	271	135
24	253	258	300	150	160	100	202	175	293	395	217	148
25	252	258	305	170	135	110	205	140	341	400	185	172
26	252	200	310	185	110	120	210	150	226	175	199	175
27	253	134	310	210	130	135	214	185	273	120	220	180
28	253	164	315	230	150	150	220	210	270	100	217	181
29	252	220	300	265	---	165	222	240	280	110	223	181
30	252	257	220	300	---	180	227	215	295	140	225	182
31	250	---	150	325	---	195	---	150	---	165	221	---
MEAN	252	242	264	162	179	208	172	203	219	245	213	181

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	23.0							---	29.0	---	27.5
2	24.0	23.0							---	30.0	29.0	28.0
3	23.0	23.0							---	31.0	28.5	27.5
4	24.0	21.5							---	30.0	29.5	26.5
5	24.0	20.0							---	28.0	30.0	25.5
6	24.0	20.0							26.0	29.0	31.5	25.0
7	24.0	18.0							25.5	---	28.0	27.5
8	29.0	16.0							26.0	26.0	26.5	28.5
9	25.0	15.0							26.5	25.5	27.5	---
10	24.0	16.0							25.5	30.0	28.0	28.0
11	24.0	16.0							25.5	30.0	---	26.0
12	24.0	16.0							25.5	28.0	---	26.0
13	24.0	16.0							26.5	28.0	28.0	24.5
14	21.5	16.0							27.0	28.5	28.0	25.0
15	18.5	16.0							26.0	30.0	27.5	25.5
16	18.5	17.0							26.5	32.0	26.5	26.0
17	19.0	16.0							28.0	30.5	27.0	22.5
18	21.0	16.0							28.5	27.5	30.0	23.0
19	22.5	16.0							27.0	28.5	29.0	23.0
20	18.0	16.0							29.0	26.0	28.5	23.5
21	19.0	16.0							28.0	30.0	30.0	---
22	20.5	16.0							29.5	30.0	27.0	24.0
23	23.0	16.0							29.0	31.0	30.0	24.5
24	20.0	15.0							29.0	28.0	27.0	24.0
25	21.0	15.0							29.0	---	27.5	24.5
26	21.0	15.0							29.5	25.5	28.0	---
27	22.0	15.0							25.5	---	27.0	---
28	22.0	15.0							30.0	---	29.0	---
29	22.0	15.0							31.5	---	28.0	---
30	22.0	14.0							---	---	28.0	---
31	25.0	---							---	---	26.5	---
MEAN	22.5	17.0							27.5	29.0	28.5	25.5

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 downstream side of bridge on Riley-Fussell Road, 1.1 mi (1.8 km) northeast of Spring, 2.7 mi (4.3 km) downstream from Missouri Pacific Railroad bridge, 3.6 mi (5.8 km) downstream from former station 08068500 at Interstate Highway 45, 6.9 mi (11.1 km) upstream from Cypress Creek, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--419 mi² (1,085 km²).

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

Water-quality records: Chemical analyses: September 1961 to April 1964. Sediment records: December 1965 to September 1975.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 62.17 ft (18.949 m) 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 (5.8 km) upstream at different datum. Oct. 2, 1965, to Feb. 19, 1976, water-stage recorder at former site at datum 10.93 ft (3.331 m) higher; unadjusted for land-surface subsidence.

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

AVERAGE DISCHARGE.--40 years, 219 ft³/s (6.202 m³/s), 7.10 in/yr (180 mm/yr), 158,700 acre-ft/yr (196 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,700 ft³/s (1,210 m³/s) Nov. 25, 1940, gage height, 33.60 ft (10.241 m), former site and datum, from graph based on gage readings; minimum, 1.1 ft³/s (0.031 m³/s) Oct. 23, 24, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1879, 34.3 ft (10.45 m), former site and datum, May 30, 1929, discharge 48,300 ft³/s (1,370 m³/s), from floodmarks identified by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	0400	4,420	125	May 24	1300	2,570	72.8
Jan. 20	0600	9,730	276	June 4	0700	3,660	104
Feb. 7	1400	5,580	158	June 8	2300	8,350	236
Apr. 4	2400	8,080	229	July 29	1100	3,130	88.6
Apr. 19	1100	*14,000	396	Sept. 21	2100	11,800	334
May 6	1700	3,760	106				

Minimum discharge, 11 ft³/s (0.31 m³/s) Nov. 2-4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	12	178	1030	192	129	249	344	1280	53	208	50
2	17	12	105	1420	174	118	509	267	2490	51	152	66
3	18	11	76	1280	190	190	3360	390	2650	58	127	51
4	16	11	95	888	356	544	5820	949	3440	64	106	53
5	15	12	179	310	1480	642	6440	1970	2570	70	9*	51
6	15	34	166	622	3450	354	2460	3360	1360	77	82	51
7	15	31	178	2670	5320	219	716	2460	1140	89	76	164
8	14	23	575	4100	4880	156	348	839	5260	141	69	135
9	14	19	1270	4130	2900	122	252	302	5840	281	65	70
10	14	17	882	2090	1150	109	209	205	1850	367	80	50
11	13	17	260	713	455	106	182	173	531	211	75	42
12	13	17	119	664	324	103	159	159	265	194	65	38
13	13	16	86	809	265	109	142	138	193	168	60	35
14	1	15	69	669	223	103	127	130	155	119	64	35
15	1	15	57	324	198	95	112	118	133	105	66	34
16	13	14	49	209	187	86	101	109	113	95	79	34
17	13	19	44	170	223	80	94	103	98	89	61	35
18	13	19	41	156	561	84	2160	94	88	101	58	50
19	13	23	37	3760	803	107	12000	88	81	145	55	764
20	12	93	34	9270	613	127	9470	82	77	115	49	6290
21	12	136	32	8590	392	360	8870	79	72	95	49	10700
22	12	95	30	4870	297	939	4590	135	70	91	45	9790
23	12	50	28	1920	274	1690	2190	589	67	96	43	4260
24	12	33	27	608	297	1820	962	2220	62	91	41	1420
25	12	25	26	306	285	1430	423	1160	59	109	40	445
26	12	189	24	265	249	425	268	259	58	164	42	242
27	12	879	23	287	181	223	231	130	57	565	67	177
28	12	1010	22	298	149	164	203	96	57	2130	51	145
29	12	1620	28	231	---	133	228	121	68	2930	45	129
30	12	824	103	185	---	114	291	240	61	1610	44	117
31	12	---	407	171	---	410	---	587	---	421	45	---
TOTAL	417	5291	5250	53015	26068	11291	63166	17896	30245	10895	2200	35523
MEAN	13.5	176	169	1710	931	364	2106	577	1008	351	71.0	1184
MAX	18	1620	1270	9270	5320	1820	12000	3360	5840	2930	208	10700
MIN	12	11	22	156	149	80	94	79	57	51	40	34
CFSM	.03	.42	.40	4.08	2.22	.87	5.03	1.38	2.41	.84	.17	2.83
IN	.04	.47	.47	4.71	2.31	1.00	5.61	1.59	2.69	.97	.20	3.15
AC-FT	827	10490	10410	105200	51710	22400	125300	35500	59990	21610	4360	70460
CAL YR 1978	TOTAL	67245	MEAN 184	MAX	7230	MIN 11	CFSM .44	IN 5.97	AC-FT 133400			
WTR YR 1979	TOTAL	261257	MEAN 716	MAX	12000	MIN 11	CFSM 1.71	IN 23.20	AC-FT 518200			

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 (5.3 km) downstream from gage (station 08068700), 5.6 mi (9.0 km) southeast of Hockley, and 6.3 mi (10.1 km) upstream from gage (station 08068740).

DRAINAGE AREA.--110 mi² (285 km²).

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

GAGE.--Water-stage recorder. Concrete weir located 0.9 mi (1.4 km) downstream from gage. Datum of gage is 100.00 ft (30.480 m) National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records fair. Diversions and return flow for irrigation occur upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,370 ft³/s (67.1 m³/s) Jan. 20, 1979, gage height, 61.05 ft (18.608 m); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in June 1960 reached a stage of 62.0 ft (18.90 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Nov. 28	0600	888	25.1	57.10	17.404	Apr. 21	1100	1,580	44.7	59.46	18.123
Jan. 8	0400	1,240	35.1	58.64	17.873	May 5	2000	992	28.1	57.50	17.526
Jan. 20	1500	*2,370	67.1	61.05	18.608	May 23	2300	1,800	51.0	59.95	18.267
Feb. 7	1200	1,470	41.6	59.17	18.035	June 4	unknown	1,450	41.1	unknown	--
Apr. 4	unknown	1,200	34.0	unknown	--	Sept. 22	1100	2,140	60.6	60.62	18.477

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	.00	141	503	25	7.3	10	41	300	4.4	76	4.6
2	4.7	.00	91	607	17	6.0	90	283	600	2.3	56	4.1
3	3.3	.00	72	323	33	90	900	434	1000	.00	44	3.5
4	3.7	.00	138	157	128	187	1150	620	1300	1.7	35	2.2
5	3.9	.00	113	141	817	54	700	954	1300	2.9	30	3.3
6	3.2	.85	74	517	1270	20	200	700	750	3.5	11	8.1
7	2.5	34	251	1170	1450	13	100	260	320	6.2	4.4	15
8	2.1	14	524	1200	1230	8.1	60	126	150	28	3.2	10
9	1.8	7.3	261	818	570	5.7	30	58	60	21	2.6	7.2
10	2.4	4.2	115	335	194	4.7	20	32	25	7.4	1.2	5.2
11	3.8	2.7	76	350	116	4.1	12	16	15	5.2	8.3	5.0
12	2.8	1.8	49	440	80	3.6	8.0	12	10	11	9.4	5.3
13	2.4	1.3	31	224	58	3.1	5.0	2.1	7.9	8.4	6.2	4.9
14	2.6	.98	22	123	40	2.8	3.5	1.4	5.4	134	6.7	4.3
15	3.1	1.8	19	78	30	2.2	2.8	1.0	2.6	98	6.9	4.1
16	2.9	2.0	17	62	22	2.1	2.3	.00	.00	66	5.5	3.6
17	1.8	2.4	14	52	32	2.0	1.7	.55	2.0	49	5.3	4.7
18	1.3	1.8	9.6	47	180	1.9	43	1.9	3.2	55	1.1	24
19	1.1	6.0	7.8	1110	123	2.0	197	2.1	3.0	54	1.4	326
20	1.0	76	6.9	2240	61	23	1040	1.7	2.1	116	2.0	1550
21	4.4	78	6.4	2140	43	94	1540	1.2	.00	106	.63	1840
22	6.3	29	5.2	1600	40	303	1280	453	.00	71	.01	2120
23	4.0	13	4.5	694	40	531	676	1590	.00	47	2.6	1830
24	1.9	7.7	4.1	234	66	220	200	1640	.00	47	1.1	1330
25	.87	5.2	3.6	138	55	80	97	1140	.03	49	1.9	850
26	.71	254	3.1	114	21	40	47	372	4.9	98	.61	350
27	.74	800	2.8	107	13	22	25	128	3.5	658	.84	163
28	.57	827	2.3	74	9.5	15	14	63	2.8	650	4.3	115
29	.52	515	39	50	---	10	40	65	4.5	435	2.9	84
30	.43	247	304	46	---	8.0	89	111	4.8	147	.89	62
31	.35	---	410	44	---	8.0	---	179	---	78	.04	---
TOTAL	77.59	2933.03	2817.3	15738	6763.5	1773.6	8583.3	9288.95	5876.73	3060.00	332.02	10734.96
MEAN	2.50	97.8	90.9	508	242	57.2	286	300	196	98.7	10.7	358
MAX	6.4	827	524	2240	1450	531	1540	1640	1300	658	76	2120
MIN	.35	.00	2.3	44	9.5	1.9	1.7	.00	.00	.00	.01	.46
AC-FT	154	5820	5590	31220	13420	3520	17020	18420	11660	6070	659	21290
CAL YR 1978	TOTAL	17266.27	MEAN	47.3	MAX	1060	MIN	.00	AC-FT	34250		
WTR YR 1979	TOTAL	67978.98	MEAN	186	MAX	2240	MIN	.00	AC-FT	134800		

SAN JACINTO RIVER BASIN

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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 (2.3 km) southwest of Cypress, and 6.3 mi (10.1 km) downstream from gage (station 08068720).

DRAINAGE AREA.--131 mi² (339 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 100.00 ft (30.480 m) National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records fair. Diversions and return flow for irrigation occur upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s (73.3 m³/s) Sept. 22, 1979, gage height, 46.33 ft (14.121 m); no flow for many days (result of pumping for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1908, about 49 ft (14.9 m) in 1937, from information by local resident.

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

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage (ft)	height (m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage (ft)	height (m)
Nov. 27	0800	1,100	31.2	42.50	12.954	Apr. 22	1700	2,030	57.5	45.27	13.798
Jan. 7	2100	1,820	51.5	44.82	13.661	May 6	0500	1,240	35.1	43.09	13.134
Jan. 20	1500	2,400	68.0	45.99	14.018	May 24	2300	2,150	60.9	45.53	13.878
Feb. 7	1200	1,880	53.2	44.95	13.701	June 5	0200	1,860	52.7	44.91	13.689
Apr. 4	1500	1,390	39.4	43.65	13.305	Sept. 22	2400	*2,590	73.3	46.33	14.121

Minimum discharge, no flow Nov. 3-5 and Aug. 11, 12 (result of dam in channel).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	.16	205	705	52	16	11	61	310	7.8	84	2.1
2	17	.05	115	737	37	14	162	191	664	5.6	59	13
3	14	.00	92	480	57	68	1060	521	1380	.75	49	4.6
4	13	.00	165	206	182	228	1360	666	1780	3.2	34	4.3
5	12	.00	163	170	1060	74	1240	1130	1800	5.6	32	3.6
6	14	7.1	99	690	1660	32	465	1200	1100	5.6	19	15
7	14	37	249	1690	1860	20	131	610	550	7.4	9.4	35
8	11	20	597	1750	1760	16	54	171	250	24	8.4	20
9	9.8	14	394	1380	981	12	39	79	100	24	6.6	11
10	14	10	150	559	309	11	25	43	50	11	3.0	6.5
11	12	7.1	87	440	193	9.7	18	23	30	6.5	.00	4.5
12	7.7	5.2	64	538	134	8.5	14	20	18	12	.00	3.6
13	5.9	3.5	36	335	88	7.5	11	7.2	11	13	60	3.1
14	4.4	2.5	31	164	62	6.4	8.6	1.8	8.5	129	12	2.8
15	4.9	4.6	30	91	50	5.2	6.3	6.4	5.8	116	10	2.3
16	5.8	3.5	34	67	46	4.3	5.0	.64	.81	67	8.6	1.9
17	3.8	5.1	27	55	61	4.1	4.0	.42	1.0	46	9.3	2.9
18	2.3	2.6	19	48	234	3.8	110	2.8	4.3	47	2.4	23
19	1.7	8.0	15	1380	169	4.0	393	3.2	3.2	41	.68	481
20	1.2	71	15	2330	87	9.0	992	2.6	4.2	105	.78	2090
21	4.8	104	17	2290	61	89	1610	2.5	1.2	107	6.0	2500
22	11	37	16	2130	55	308	1970	292	.75	68	17	2530
23	8.1	18	14	1600	53	539	1550	1300	.29	41	18	2550
24	4.8	12	12	428	74	369	363	2030	.41	40	7.7	2380
25	1.6	8.7	11	231	75	94	148	2080	3.2	46	3.7	2020
26	.45	328	9.8	193	33	41	77	1050	8.4	80	6.1	794
27	.41	1080	8.4	176	22	23	43	197	4.8	786	3.1	256
28	.24	1060	9.1	125	19	16	24	86	3.5	919	4.6	156
29	2.4	733	35	83	---	12	47	80	7.8	603	6.1	106
30	.94	389	306	81	---	8.8	110	129	9.2	225	2.5	73
31	.35	---	514	75	---	9.5	---	193	---	113	.38	---
TOTAL	223.59	3971.11	3539.3	21227	9474	2063.8	12060.9	12179.56	8110.36	3705.45	483.34	16095.2
MEAN	7.21	132	114	685	338	66.6	402	393	270	120	15.6	537
MAX	20	1080	597	2330	1860	539	1970	2080	1800	919	84	2550
MIN	.24	.00	8.4	48	19	3.8	4.0	.42	.29	.75	.00	1.9
AC-FT	443	7880	7020	42100	18790	4090	23920	24160	16090	7350	959	31920
CAL YR 1978	TOTAL	25810.96	MEAN	70.7	MAX	1740	MIN	.00	AC-FT	51200		
WTR YR 1979	TOTAL	93133.61	MEAN	255	MAX	2550	MIN	.00	AC-FT	184700		

SAN JACINTO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical and biochemical analyses: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV 08...	0950	17	385	7.2	15.5	180	50	7.7	79	5.8	49	9
JAN 24...	1130	409	111	7.4	7.0	240	95	10.8	92	3.1	19	1
APR 12...	0930	13	169	7.0	22.5	250	140	7.0	82	3.4	37	0
20...	1010	1300	77	6.8	21.0	150	220	6.1	70	5.0	16	5

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 08...	14	3.3	44	2.7	12	48	0	20	69	.2	8.6
JAN 24...	5.3	1.4	12	1.2	3.0	22	0	8.9	18	.1	3.9
APR 12...	11	2.3	14	1.0	3.0	50	0	11	19	.2	3.0
20...	4.9	1.0	6.1	.7	2.6	14	0	11	9.2	.2	2.3

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 08...	195	80	20	.16	.01	.17	.07	1.5	1.6	.34	18
JAN 24...	64	154	26	.02	.04	.06	.16	1.2	1.4	.18	14
APR 12...	89	135	38	.23	.14	.37	.11	1.5	1.6	.31	16
20...	45	316	88	.22	.02	.24	.25	2.1	2.3	.33	19

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 08...	0950	2	0	1	0	3	200
JAN 24...	1130	1	0	0	0	2	180
APR 12...	0930	2	100	1	0	2	620
20...	1010	1	0	0	10	4	740

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 08...	15	0	10	1	0	10
JAN 24...	0	0	.0	0	0	0
APR 12...	3	10	.0	0	0	10
20...	0	0	.0	0	0	0

SAN JACINTO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 08...	0950	.0	.00	.00	.0	.00	.00	.00	.00
JAN 24...	1130	.0	--	.00	.0	.00	.00	.00	.00
APR 12...	0930	.0	--	.00	.0	.00	.00	.00	.00
20...	1010	.0	--	.00	.0	.00	.00	.00	.00

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)	METHYL PARA- THION, TOTAL (UG/L)
NOV 08...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN 24...	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00
20...	.01	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 08...	.00	.00	.00	0	.00	.05	.02	.00
JAN 24...	.00	.00	.00	0	.00	.01	.00	.00
APR 12...	.00	.00	.00	0	.00	.00	.00	.00
20...	.00	.00	.00	0	.00	.42	.00	.00

08069000 CYPRESS CREEK NEAR WESTFIELD, TX

LOCATION.--Lat 30°02'08", long 95°25'43", Harris County, Hydrologic Unit 12040102, near left bank at downstream side of bridge on Interstate Highway 45 and U.S. Highway 75, 0.9 mi (1.4 km) upstream from Senger Gully, 1.8 mi (2.9 km) northwest of Westfield, 2.0 mi (3.2 km) upstream from Missouri Pacific Railroad Co. bridge, and 11.0 mi (17.7 km) upstream from mouth.

DRAINAGE AREA.--285 mi² (738 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 63.89 ft (19.474 m) 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 (3.658 m) higher.

REMARKS.--Water-discharge records good. No large diversion above station. Low flow is maintained by sewage effluent. Channel below gage was rectified in 1950-51 and 1975.

AVERAGE DISCHARGE.--35 years, 158 ft³/s (4.475 m³/s), 114,500 acre-ft/yr (141 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s (626 m³/s) Oct. 8, 1949, gage height, 33.44 ft (10.193 m), present datum, from rating curve extended above 11,000 ft³/s (312 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 34 ft (10.4 m), present datum, in May 1929, discharge 26,000 ft³/s (736 m³/s), from information by local resident. Flood in November 1940 reached a stage of about 32 ft (9.8 m), present datum, discharge 15,000 ft³/s (425 m³/s), from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 26	1900	1,940 54.9	16.91 5.154	Apr. 18	2000	4,120 117	23.14 7.053
Jan. 8	2300	2,530 71.6	18.81 1.733	May 25	0900	2,260 64.0	17.95 5.471
Jan. 22	0100	4,350 123	23.70 7.224	June 5	2400	1,830 51.8	16.51 5.032
Feb. 7	0900	3,000 85.0	20.17 6.148	Sept. 20	0400	*4,490 127	26.64 8.120
Apr. 3	2100	2,270 64.3	18.00 5.486				

Minimum daily discharge, 5.5 ft³/s (0.16 m³/s) Nov. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	5.5	470	1160	105	47	74	149	406	23	152	31
2	28	7.4	227	1260	86	43	313	93	689	23	116	26
3	23	7.3	142	1000	168	61	1670	228	762	25	90	19
4	19	8.7	152	581	289	141	2070	1280	1370	52	68	20
5	19	10	199	350	1440	251	1800	1390	1740	57	50	29
6	28	166	207	992	2700	110	1370	1510	1800	26	71	66
7	16	39	231	1910	2980	60	686	1260	1490	302	76	417
8	18	43	395	2380	2790	49	202	729	670	212	24	307
9	18	34	613	2380	2110	43	106	229	232	51	21	71
10	14	25	456	1630	1250	38	68	104	116	44	26	36
11	14	25	178	937	457	36	50	64	69	38	24	23
12	20	29	101	673	245	33	41	45	49	181	16	18
13	18	15	74	646	170	31	32	36	38	188	14	15
14	13	12	50	403	129	30	27	25	32	195	43	14
15	14	11	42	197	115	28	23	19	27	154	135	12
16	15	9.8	37	120	82	28	20	18	25	127	193	11
17	15	25	38	96	158	28	19	16	21	88	79	36
18	13	15	31	84	369	26	1250	14	20	88	25	340
19	6.9	135	28	1160	427	47	2700	14	20	69	18	1980
20	12	139	24	3010	259	120	2540	15	20	185	27	4210
21	11	118	21	4070	151	171	2190	16	21	306	17	3430
22	9.8	130	20	4100	121	654	2190	522	22	150	54	3280
23	18	63	18	2960	128	712	1970	820	19	95	22	2970
24	15	36	17	1970	127	687	1590	1800	19	63	11	2300
25	11	26	16	743	120	449	628	2190	23	279	18	1890
26	9.6	803	15	380	103	141	215	1830	29	261	12	1600
27	8.4	1270	16	302	64	74	116	1200	20	273	12	951
28	8.0	1410	16	228	52	50	73	320	22	957	17	363
29	7.2	1450	106	158	---	40	192	290	20	1040	21	197
30	7.6	921	153	177	---	33	154	288	22	713	25	135
31	7.4	---	494	148	---	121	---	441	---	304	24	---
TOTAL	474.9	6988.7	4587	36205	17195	4382	24379	16955	9813	6569	1501	24797
MEAN	15.3	233	148	1168	614	141	813	547	327	212	48.4	827
MAX	38	1450	613	4100	2980	712	2700	2190	1800	1040	193	4210
MIN	6.9	5.5	15	84	52	26	19	14	19	23	11	11
AC-FT	942	13860	9100	71810	34110	8690	48360	33630	19460	13030	2980	49180
CAL YR 1978	TOTAL	54236.1	MEAN 149	MAX 3860	MIN 5.5	AC-FT 107600						
WTR YR 1979	TOTAL	153846.6	MEAN 421	MAX 4210	MIN 5.5	AC-FT 305200						

SAN JACINTO RIVER BASIN

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Sediment records: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JAN 10...	1640	1570	--	201	852
APR 25...	1300	486	24.5	251	329
JUN 06...	1230	1810	27.0	183	894
JUL 11...	1330	39	28.0	114	12

SAN JACINTO RIVER BASIN

08069200 CYPRESS CREEK NEAR HUMBLE, TX
(Low-flow partial-record station)

LOCATION---Lat 30°01'49", long 95°19'47", Harris County, Hydrologic Unit 12040102, 500 ft (150 m) north of end of dirt extension of Tetlar Road, about 2 mi (3 km) upstream from mouth, and 4.7 mi (7.6 km) northwest of Humble.

DRAINAGE AREA---319 mi² (826 km²).

PERIOD OF RECORD---Occasional discharge measurements and water-quality data: October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
NOV 08...	1515	45	447	6.9	17.0	280	300	6.0	64	6.8	72	0
JAN 24...	1510	2100	102	7.4	10.5	220	90	9.3	86	3.2	20	0
APR 12...	1305	54	312	7.1	23.0	250	85	5.1	61	8.0	64	0
JUL 19...	1245	81	440	6.9	29.0	200	320	6.1	80	4.2	58	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 08...	23	3.6	57	2.9	9.4	120	0	21	53	.4	13
JAN 24...	5.6	1.4	9.0	.9	2.9	25	0	8.2	14	.1	4.4
APR 12...	20	3.5	33	1.8	4.3	120	0	13	31	.3	4.8
JUL 19...	18	3.1	61	3.5	4.1	78	0	15	81	.3	13

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 08...	240	556	88	1.4	.30	1.7	1.2	3.0	4.2	3.30	15
JAN 24...	58	212	18	.02	.04	.06	.14	1.1	1.2	.230	--
APR 12...	170	72	28	.84	.56	1.4	1.0	1.5	2.5	1.50	18
JUL 19...	234	356	34	.68	.52	1.2	.43	.36	.79	.600	14

SAN JACINTO RIVER BASIN

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08069200 CYPRESS CREEK NEAR HUMBLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 08...	1515	10	0	1	0	3	70
JAN 24...	1510	1	0	0	0	2	200
APR 12...	1305	2	100	1	0	1	780
JUL 19...	1245	2	100	<1	0	2	380

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 08...	10	10	.0	1	0	20
JAN 24...	0	0	.0	0	0	10
APR 12...	1	10	.0	0	0	10
JUL 19...	3	3	.0	0	0	6

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV 08...	1515	.0	.00	.00	.1	.00	.00	.00	.79	.00	.00	.00
JAN 24...	1510	.0	--	.00	.0	.00	.00	.00	.01	.00	.00	.00
APR 12...	1305	.0	--	.00	.0	.00	.00	.00	.30	.00	.00	.00
JUL 19...	1245	.1	.00	.00	.0	.00	.00	.00	.36	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 08...	.00	.01	.63	.26	.00	.00	.03	0	.00	.00	.00	.00
JAN 24...	.00	.00	.00	.00	.00	.00	.00	0	.00	.01	.01	.00
APR 12...	.00	.00	.01	.33	.00	.00	.00	0	.00	.08	.00	.00
JUL 19...	.00	.00	.00	.06	.00	.00	.02	0	.00	.03	.01	.00

SAN JACINTO RIVER BASIN

08069500 WEST FORK SAN JACINTO RIVER NEAR HUMBLE, TX

LOCATION.--Lat 30°01'37", long 95°15'28", Harris County, Hydrologic Unit 12040101, on right bank at bridge on U.S. Highway 59, 970 ft (296 m) upstream from Texas and New Orleans Railroad Co. bridge, 0.5 mi (0.8 km) downstream from Spring Creek, and 2.5 mi (4.0 km) north of Humble.

DRAINAGE AREA.--1,741 mi² (4,509 km²).

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 (9.306 m) National Geodetic Vertical Datum of 1929. Prior to July 17, 1933, nonrecording gage at site 1,800 ft (549 m) downstream at same datum. July 17, 1933, to Mar. 5, 1939, nonrecording gage at present site and datum.

REMARKS.--Station discontinued as a streamflow station Sept. 30, 1954, due to backwater from Lake Houston. No large diversion above station.

AVERAGE DISCHARGE.--26 years (water years 1929-54), 1,097 ft³/s (31.1 m³/s), 794,800 acre-ft/yr (980 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--1928-54: Maximum discharge, 187,000 ft³/s (5,300 m³/s) May 31, 1929, Nov. 25, 26, 1940; maximum gage height, 32.7 ft (9.97 m) 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 (0.31 m³/s) Aug. 31, Sept. 1, 2, 1951.

1954-79: Maximum gage height since first appreciable storage at Lake Houston, 25.15 ft (7.666 m) Apr. 19, 1979; minimum since first appreciable storage at Lake Houston, 5.5 ft (1.68 m) 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, 25.15 ft (7.666 m) Apr. 19; minimum not determined.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.71	9.69	13.10	14.27	13.12	13.23	13.53					---
2	10.68	9.66	13.00	14.39	13.27	13.11	14.42					---
3	10.65	9.64	12.82	14.18	13.47	12.99	18.62					---
4	10.64	9.60	12.88	13.76	13.93	13.23	19.10					---
5	10.61	9.58	12.97	13.65	16.15	13.27	18.50					---
6	10.56	9.83	12.99	15.00	18.50	13.09	16.40					---
7	10.52	9.71	13.14	16.92	18.65	12.99	14.70					---
8	10.47	9.69	13.38	16.56	18.56	12.98	14.00					---
9	10.46	9.67	13.58	16.48	17.77	12.95	13.57					---
10	10.42	9.65	13.34	15.13	15.78	12.82	13.47					---
11	10.41	9.63	13.06	13.99	14.57	12.83	13.32					---
12	10.40	9.63	12.94	13.23	14.03	12.86	13.15					---
13	10.37	9.57	12.87	13.43	13.87	12.90	13.08					---
14	10.32	9.63	12.81	13.25	13.48	12.90	13.02					---
15	10.30	9.55	12.78	13.10	13.35	12.91	---					---
16	10.26	9.52	12.71	13.01	13.21	12.94	---					---
17	---	9.53	12.66	12.95	13.42	13.09	---					---
18	---	9.51	12.64	12.95	14.00	13.30	---					---
19	10.17	10.43	12.65	19.10	14.05	14.08	24.50					16.87
20	10.15	10.13	12.54	19.66	13.85	14.07	21.65					21.07
21	10.12	9.97	12.52	19.08	13.67	14.08	20.60					20.97
22	10.09	9.96	12.49	18.12	13.52	15.34	19.50					20.62
23	10.02	10.05	12.47	16.42	13.75	15.34	18.45					19.19
24	9.98	10.06	12.39	15.24	13.46	15.25	16.88					17.25
25	9.97	9.95	12.37	14.21	13.42	14.57	15.43					15.58
26	9.88	12.45	12.34	13.83	13.52	13.84	14.93					---
27	9.86	13.10	12.31	13.68	13.47	13.46	14.13					---
28	9.83	13.36	12.30	13.62	13.33	13.35	13.79					---
29	9.79	13.96	12.36	13.17	---	13.28	13.67					---
30	9.76	13.40	12.46	13.16	---	13.23	13.55					---
31	9.72	---	12.91	13.13	---	13.56	---					---
MAX	---	13.96	13.58	19.66	18.65	15.34	---					---
MIN	---	9.51	12.30	12.95	13.12	12.82	---					---

NOTE.--No gage-height record May 1 to Sept. 5.

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 (570 m) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi (1.9 km) west of Cleveland, and 4.3 mi (6.9 km) downstream from Winter Creek.

DRAINAGE AREA.--325 mi² (842 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 107.98 ft (32.912 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1955, at site 1,800 ft (549 m) upstream at datum 5.00 ft (1.524 m) higher.

REMARKS.--Water-discharge records good except those for period of no gage-height record, Oct. 1 to Nov. 12, May 7, 8, which are poor. No large diversion above station. The National Weather Service rain gage and gage-height telemeter located at station.

AVERAGE DISCHARGE.--40 years, 227 ft³/s (6.429 m³/s), 9.49 in/yr (241 mm/yr), 164,500 acre-ft/yr (203 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft³/s (1,670 m³/s) Nov. 24, 1940, gage height, 24.1 ft (7.35 m) present site and datum, from rating curve extended above 27,000 ft³/s (765 m³/s); minimum daily, 3.0 ft³/s (0.085 m³/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 (7.19 m), present site and datum, discharge 53,500 ft³/s (1,520 m³/s), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	0900	3,150	89.2	May 6	1700	3,990	113
Jan. 21	2100	4,600	130	June 5	0200	3,120	88.4
Feb. 8	0300	4,960	140	July 29	0900	5,140	146
Apr. 4	1900	4,300	122	Sept. 21	1900	*7,930	225
Apr. 22	1700	5,010	142				
			16.55				5.044

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 8-10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	15	62	554	475	172	533	236	1100	67	480	69
2	15	15	44	1010	464	149	800	194	1490	56	254	63
3	15	15	68	1370	316	390	2390	202	2320	50	152	57
4	14	15	122	1520	346	363	3710	610	2690	48	117	57
5	14	15	157	446	805	237	3580	1390	2740	46	97	64
6	14	22	216	392	1650	165	2030	3490	1510	53	85	67
7	14	40	107	1350	3050	128	483	2500	1070	98	76	75
8	13	35	199	1950	4560	113	272	800	1170	141	72	61
9	13	25	712	3010	3150	103	221	281	705	164	103	56
10	13	22	729	2080	1550	101	186	194	276	164	191	57
11	15	20	266	488	461	132	163	156	174	121	82	56
12	15	18	111	342	336	191	164	166	131	87	78	52
13	15	17	76	383	290	204	138	148	110	64	69	49
14	14	17	59	280	262	144	128	115	96	57	65	47
15	14	17	51	187	242	115	111	98	86	81	75	44
16	14	17	46	145	222	119	95	89	78	180	63	42
17	14	18	42	130	243	264	95	81	72	97	64	41
18	14	20	38	127	604	780	872	76	68	79	56	60
19	14	28	36	1780	846	1080	1860	72	69	181	51	256
20	15	51	36	1900	887	1060	2320	66	67	226	48	1870
21	15	58	34	3760	535	1160	3950	64	61	96	49	6560
22	14	35	32	3740	334	1420	4660	75	63	77	49	5850
23	14	32	30	1970	459	1350	3800	105	61	60	46	3500
24	14	34	30	488	707	963	2230	88	59	54	42	1590
25	14	29	29	287	774	462	705	91	73	59	74	294
26	14	50	27	275	707	234	326	70	96	150	82	184
27	22	208	27	335	343	168	235	58	169	667	64	144
28	18	189	26	262	214	139	185	53	193	1780	60	125
29	16	142	31	222	---	125	167	62	155	4940	50	109
30	15	98	110	204	---	117	226	413	90	3930	77	97
31	15	---	147	243	---	1030	---	1040	---	2190	111	---
TOTAL	456	1317	3700	31230	24832	13178	36635	13083	17042	16063	2982	21596
MEAN	14.7	43.9	119	1007	887	425	1221	422	568	518	96.2	720
MAX	22	208	729	3760	4560	1420	4660	3490	2740	4940	480	6560
MIN	13	15	26	127	214	101	95	53	59	46	42	41
CFSM	.05	.14	.37	3.10	2.73	1.31	3.76	1.30	1.75	1.59	.30	2.22
IN	.05	.15	.42	3.57	2.84	1.51	4.19	1.50	1.95	1.84	.34	2.47
AC-FT	904	2610	7340	61940	49250	26140	72670	25950	33800	31860	5910	42840

CAL YR 1978 TOTAL 46122 MEAN 126 MAX 2270 MIN 10 CFMS .39 IN 5.28 AC-FT 91480
WTR YR 1979 TOTAL 182114 MEAN 499 MAX 6560 MIN 13 CFMS 1.54 IN 20.84 AC-FT 361200

NOTE.--No gage-height record Oct. 1 to Nov. 12.

SAN JACINTO RIVER BASIN

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 04...	1515	14	224	7.0	24.0	35	9	12	1.3	24
NOV 15...	1230	17	218	6.9	21.0	30	17	8.4	2.1	27
JAN 09...	--	3010	78	5.9	4.0	24	7	7.7	1.1	4.3
FEB 13...	1640	282	210	6.7	12.5	51	20	17	2.0	17
MAR 26...	1600	217	202	6.3	18.0	54	16	18	2.1	14
JUN 21...	1435	61	269	6.8	28.0	61	19	20	2.6	24

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 04...	1.8	1.6	32	0	4.4	44	.1	13	116
NOV 15...	2.2	1.3	15	0	2.3	53	.1	13	115
JAN 09...	.4	2.2	20	0	7.1	7.4	.1	5.9	46
FEB 13...	1.0	1.5	38	0	10	33	.1	12	111
MAR 26...	.8	1.9	46	0	9.8	28	.1	13	110
JUN 21...	1.3	1.6	51	0	6.5	48	.1	17	145

SAN JACINTO RIVER BASIN

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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 (6 km) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 8 mi (13 km) west of Splendora.

DRAINAGE AREA.--105 mi² (272 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1312. Water-quality records: Sediment records: December 1965 to September 1975.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 118.44 ft (36.101 m) National Geodetic Vertical Datum of 1929. Prior to June 17, 1965, at site 170 ft (52 m) upstream at datum 5.00 ft (1.524 m) higher.

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

AVERAGE DISCHARGE.--36 years, 75.8 ft³/s (2.147 m³/s), 9.80 in/yr (249 mm/yr), 54,920 acre-ft/yr (67.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) June 14, 1973, gage height, 26.30 ft (8.016 m); minimum, 4.1 ft³/s (0.12 m³/s) Oct. 26, 1956, caused by construction upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, 27.0 ft (8.23 m) in November 1940, present site and datum, from information by local resident. Flood in May 1935 reached a stage of 24.3 ft (7.41 m), present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 7	about 2200	2,820 79.9	15.67 4.776	Apr. 18	1800	*6,490 184	20.39 6.215
Jan. 20	1100	3,790 107	17.57 5.355	Apr. 21	1700	2,480 70.2	14.85 4.526
Feb. 7	1500	2,830 80.1	15.69 4.782	May 5	1600	2,600 73.6	15.14 4.615
Apr. 4	0100	2,970 84.1	16.00 4.877	July 28	1400	3,690 105	17.40 5.304
				Sept. 21	0800	3,780 107	17.55 5.349

Minimum discharge, 12 ft³/s (0.34 m³/s) Oct. 8-10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	13	24	918	69	59	121	77	539	27	70	46
2	14	13	21	1120	60	56	302	120	365	26	61	42
3	14	13	21	138	80	117	1600	108	554	25	55	44
4	13	13	330	70	109	136	1600	355	113	25	50	44
5	13	13	126	58	468	72	189	1880	74	26	47	66
6	13	20	40	300	1330	59	111	428	123	35	44	56
7	13	29	316	2000	2240	54	85	133	726	41	43	134
8	13	21	788	1100	559	51	77	99	645	74	50	55
9	12	16	178	158	166	49	73	81	100	54	59	39
10	12	15	69	112	113	48	64	71	69	38	46	33
11	14	14	45	128	96	73	60	64	57	37	42	31
12	14	14	37	201	87	72	58	60	49	32	45	30
13	14	14	32	114	81	57	52	55	45	30	43	29
14	13	15	30	87	77	51	46	50	40	28	40	28
15	13	15	28	71	74	47	43	47	37	43	76	27
16	13	15	27	67	69	56	41	44	34	38	79	26
17	13	16	25	67	77	388	41	42	32	29	43	26
18	13	17	24	68	310	152	2560	40	32	71	39	38
19	13	19	23	1370	249	83	3710	38	31	70	36	279
20	14	37	23	3080	110	137	1480	37	30	42	45	1620
21	14	38	23	1340	91	315	2060	37	29	32	59	3060
22	13	27	21	196	84	376	1070	45	29	31	38	485
23	13	22	20	122	82	298	269	70	28	26	38	116
24	13	20	20	93	161	125	186	47	34	26	38	83
25	13	19	20	80	137	82	136	39	31	84	68	67
26	14	46	19	77	81	68	106	36	33	181	54	58
27	19	271	19	86	66	61	89	34	109	759	42	53
28	15	69	19	71	62	58	78	33	57	2820	42	49
29	14	34	21	61	---	55	78	35	36	913	35	47
30	13	29	90	63	---	55	98	91	30	133	34	45
31	13	---	105	85	---	159	---	484	---	85	33	---
TOTAL	419	917	2584	13501	7188	3469	6483	4780	4111	5881	1494	6756
MEAN	13.5	30.6	83.4	436	257	112	549	154	137	190	48.2	225
MAX	19	271	788	3080	2240	388	3710	1880	726	2820	79	3060
MIN	12	13	19	58	60	47	41	33	28	25	33	26
CFSM	.13	.29	.79	4.15	2.45	1.07	5.23	1.47	1.31	1.81	.46	2.14
IN.	.15	.32	.92	4.78	2.55	1.23	5.84	1.69	1.46	2.08	.53	2.39
AC-FT	831	1820	5130	26780	14260	6880	2690	9480	8150	11660	2960	13400
CAL YR 1978	TOTAL	19789	MEAN	54.2	MAX	1310	MIN	11	CFSM	.52	IN	7.01
WTR YR 1979	TOTAL	67583	MEAN	185	MAX	3710	MIN	12	CFSM	1.76	IN	23.94
									AC-FT	39250	AC-FT	134100

SAN JACINTO RIVER BASIN

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 (30 m) upstream from Lake Houston Dam, 4.0 mi (6.4 km) north of Sheldon, 4.6 mi (7.4 km) upstream from bridge on U.S. Highway 90, and 18 mi (29.0 km) northeast of Houston.

DRAINAGE AREA.--2,828 mi² (7,325 km²).

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

Water-quality records: Chemical analyses: October 1969 to September 1978.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at dam is 0.70 ft (0.213 m) 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 (963 m) 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 by 20.5 ft (5.5 by 6.2 m), that can be used for control of releases below gage heights of 44.5 ft (13.56 m) and above 28.0 ft (8.53 m). In addition, there is a 36-inch-diameter (914 mm) 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 (268 hm³) Apr. 19, 1979, gage height, 49.50 ft (15.088 m); minimum since first filling of lake in August 1954, 53,380 acre-ft (65.8 hm³) Dec. 1, 1971, gage height, 34.08 ft (10.388 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 217,700 acre-ft (268 hm³) Apr. 19, gage height, 49.50 ft (15.088 m); minimum, 114,600 acre-ft (141 hm³) Nov. 19, gage height, 41.66 ft (12.698 m).

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

41.0	107,900	46.0	165,900
42.5	123,600	48.0	194,200
44.0	140,700	49.5	217,700

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128400	117300	155900	157300	156300	157000	160700	157600	164600	152100	161800	157100
2	128200	116900	154800	160400	157100	156700	159800	157600	171700	151600	158500	156400
3	127900	116500	154700	160800	158200	156300	173300	157600	172200	151000	157000	155700
4	127700	116100	153800	159900	159500	156800	175800	162300	171000	150600	155900	155200
5	127500	115600	155000	160100	165900	158100	175200	166200	170100	150300	155000	155000
6	127100	117600	155300	163300	173300	156700	171000	168500	169000	150200	155000	155200
7	126500	117300	155300	164000	175900	155800	179100	170500	168000	150300	154400	156700
8	125900	116700	156300	163000	175400	155200	161300	166900	171600	152700	155700	156600
9	125600	116500	156200	163800	173000	155000	159100	161900	172400	153900	155400	155200
10	125400	116300	157300	165000	168700	153800	157300	159900	166300	154000	155000	154100
11	125300	116200	156300	162600	163300	153800	157700	159100	161500	153800	154900	153500
12	125000	115900	155000	159600	160500	154100	156800	157800	159900	153900	154100	152600
13	125000	115900	154700	157800	159100	154700	156300	156800	158400	155800	153800	151300
14	124400	115800	154100	156800	158200	154800	155800	156300	157000	155000	153600	150800
15	124100	115700	153800	156300	158000	154700	155300	155700	156100	155300	153500	149400
16	123700	115900	153100	155700	156300	154400	155000	155000	155400	156700	154100	148500
17	123400	115200	152400	155200	157300	154400	155700	154500	154800	156700	154400	149000
18	123200	114800	152100	154800	159500	156400	181600	154100	154500	155900	153900	151000
19	122800	115800	151700	154400	160800	159400	214400	153900	154100	156100	153600	165300
20	122200	117600	152500	155300	160300	161000	192400	153800	153500	156600	153400	186200
21	122000	118300	150400	178700	159500	161900	188200	153800	153300	156300	153100	185000
22	121600	119000	150100	174800	159300	165900	180900	154900	152700	155500	153500	184700
23	121400	119400	149900	169200	160800	166900	176300	156400	152200	155200	152900	178300
24	120800	119700	148700	165000	160800	165400	171700	160100	151800	153800	152600	171900
25	120400	119700	148500	161700	158700	163600	166700	161700	151700	159500	152200	166900
26	120500	126200	148300	159500	159000	160900	163000	161300	152600	162200	152400	162800
27	119800	135600	147600	158200	158900	158900	160800	159500	152900	165400	152500	160800
28	119200	142900	147300	157800	158000	157700	158900	157300	153000	168500	154100	159100
29	118800	152100	147800	157200	---	156600	158500	156700	152700	168700	153900	158400
30	118300	156600	148700	157500	---	156300	157800	157600	152400	167800	153500	157200
31	117700	---	151500	156300	---	158700	---	160900	---	164600	153300	---
MAX	128400	156600	157300	178700	175900	166900	214400	170500	172400	168700	161800	186200
MIN	117700	114800	147300	154400	156300	153800	155000	153800	151700	150200	152200	148500
(†)	41.94	45.27	44.87	45.25	45.38	45.44	45.37	45.61	44.94	45.90	45.01	45.32
(‡)	-11000	+38900	-5100	+4500	+1700	+700	-900	+3100	-8500	+12200	-11300	+3900
(††)	22300	22450	21620	21660	17380	18480	17730	19960	20870	22880	23430	19920

CAL YR 1978 MAX 172900 MIN 108900 ‡ +7900 †† 267760
WTR YR 1979 MAX 214400 MIN 114800 ‡ +28500 †† 248680

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, by the San Jacinto River Authority and the city of Houston.

SAN JACINTO RIVER BASIN

65

08072020 LAKE HOUSTON PLANT INTAKE AT GALENA PARK, TX

LOCATION---Lat 29°44'01", long 95°12'58", Harris County, Hydrologic Unit 12040104, at city of Houston municipal water plant intake from Lake Houston West Canal and 1 mi (2 km) east of Galena Park.

DRAINAGE AREA--2,828 mi² (7,325 km²).

PERIOD OF RECORD---Periodic chemical analyses: May 1972 to current year. Pesticide analyses: May 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

				ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS (D)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)				
DATE	TIME												
OCT 17...	1350												
		LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)						
		OCT 17...	0	10	.0	0	0	10					
DATE	TIME	PCB, TOTAL (UG/L)	NAPHTHALENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	
OCT 17...	1350	.0	.00	.00	.0	.00	.00	.00	.01	.00	.00	.00	
DATE	TIME	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 17...	.00	.00	.00	.00	.00	.00	.00	.00	0	.00	.01	.01	.00

SAN JACINTO RIVER BASIN

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 (0.5 km) downstream from Southern Pacific Railway Co. bridge, 1.5 mi (2.4 km) east of Sheldon, 4.6 mi (7.4 km) downstream from Lake Houston, and 21 mi (34 km) northeast of Houston.

DRAINAGE AREA.--2,879 mi² (7,457 km²).

PERIOD OF RECORD.--February 1970 to current year (elevations only prior to 1973, beginning 1973 gage heights only).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 0.69 ft (6.210 m) below National Geodetic Vertical Datum of 1929, adjustment of 1973. Prior records unadjusted for land-surface subsidence.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 20.12 ft (6.133 m) June 15, 1973; minimum elevation, -2.36 ft (-0.719 m) Feb. 13, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1875, 31.5 ft (9.60 m) Nov. 26, 1940, at site 0.3 mi (0.5 km) upstream at Southern Pacific Railway Co. bridge.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 19.65 ft (5.989 m) Apr. 20; minimum, -1.37 ft (-0.418 m) Dec. 9.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
1	-	-	2.55	1.11	2.87	1.06	-	-	-	-	2.14	0.67	3.40	1.65	-	-	3.30	1.59	2.00	0.86	2.80	1.80	-	-
2	-	-	2.42	.57	3.28	1.57	-	-	-	-	2.81	1.08	3.06	1.80	3.67	-	6.34	3.40	2.33	.97	2.50	1.20	-	-
3	-	-	2.16	.56	3.20	.84	-	-	-	-	2.63	1.00	5.74	1.80	3.51	2.00	6.33	6.02	2.20	.94	3.54	1.00	3.22	1.58
4	-	-	2.16	.56	1.27	-.46	-	-	-	-	1.03	-.71	7.17	5.74	3.07	1.89	6.02	5.48	1.98	.72	3.45	.80	3.08	1.43
5	-	-	2.82	1.43	1.97	.87	-	-	-	-	1.97	.02	7.14	7.04	3.46	1.88	5.48	4.98	2.07	.45	2.43	.70	2.82	1.15
6	-	-	2.94	.53	2.75	1.75	-	-	-	-	2.03	.46	7.14	5.60	4.60	3.24	5.13	4.68	1.98	.24	2.25	.47	2.85	.96
7	-	-	1.50	-.30	3.10	1.36	-	-	-	-	1.70	.07	5.60	3.85	5.30	4.37	4.75	4.04	2.20	.32	2.85	.25	2.72	.95
8	-	-	1.58	.71	2.08	-.22	-	-	-	-	1.60	-.42	3.85	2.40	5.30	4.48	4.98	3.72	2.28	.45	2.86	.53	2.80	1.34
9	-	-	2.18	.94	-.22	1.37	-	-	-	-	2.35	1.16	2.96	1.40	4.48	3.75	6.50	5.00	2.58	.47	2.80	1.03	2.80	1.40
10	-	-	2.53	1.23	1.57	1.15	-	-	-	-	1.75	-.15	3.32	1.91	4.80	2.90	6.10	3.24	3.00	.65	2.50	1.04	2.83	1.26
11	-	-	2.55	1.37	1.99	.39	-	-	-	-	1.52	.02	4.46	2.86	3.55	2.23	3.24	1.88	2.99	.96	2.40	.91	3.12	1.92
12	-	-	2.80	1.02	1.61	.01	-	-	-	-	1.86	.29	3.15	2.11	2.47	1.00	3.00	1.08	2.99	1.00	2.05	.80	3.45	1.83
13	-	-	2.92	1.46	1.85	-	-	-	-	-	1.95	.84	2.64	1.36	2.34	.80	2.88	1.24	3.24	1.10	-	-	3.12	1.57
14	-	-	2.93	1.49	-	-	-	-	-	-	1.75	.30	2.43	.66	2.67	.70	2.70	.82	3.26	1.40	-	-	3.61	1.80
15	-	-	2.67	.93	-	-	-	-	-	-	2.80	.66	2.50	.85	2.53	.88	3.09	1.17	2.77	1.38	-	-	3.10	1.72
16	-	-	2.61	1.06	-	-	-	-	-	-	2.82	1.75	3.12	1.05	2.47	.57	2.94	1.15	2.19	.87	2.22	.55	2.77	1.62
17	-	-	1.98	.05	-	-	-	-	-	-	3.16	1.33	3.68	1.57	2.41	.67	2.98	1.58	2.05	.62	2.40	.80	3.17	1.52
18	-	-	2.35	.69	-	-	-	-	-	-	3.57	2.15	6.75	1.75	2.68	.64	3.15	1.58	2.27	.53	-	-	3.74	1.76
19	-	-	2.46	1.21	-	-	-	-	-	-	4.23	1.78	19.55	6.75	2.97	1.13	2.97	1.78	2.45	.75	-	-	5.93	2.53
20	-	-	2.91	1.24	-	-	-	-	2.95	1.70	3.80	2.37	19.65	16.40	2.66	1.35	2.83	1.30	2.38	.68	2.42	.80	12.25	5.93
21	-	-	2.51	1.04	-	-	-	-	2.89	1.92	3.30	1.88	16.40	13.50	2.98	1.59	2.53	.93	2.26	.62	2.52	.82	13.05	12.25
22	-	-	2.47	1.53	-	-	-	-	2.70	1.28	3.83	2.20	13.50	11.10	3.14	1.63	2.47	.47	2.63	.62	2.20	.74	12.80	10.60
23	-	-	2.67	1.27	-	-	-	-	2.83	1.22	3.74	2.37	11.10	8.75	2.35	.87	2.54	.58	4.12	1.20	2.26	.75	-	-
24	-	-	2.32	1.20	-	-	-	-	3.19	1.78	2.37	1.90	8.75	6.40	1.88	.20	2.52	.70	3.87	2.47	2.45	.79	-	-
25	-	-	2.22	1.23	-	-	-	-	1.90	-.93	2.20	1.32	6.40	4.50	2.14	.77	2.03	.26	4.97	1.18	2.51	1.01	-	-
26	-	-	3.17	1.64	-	-	-	-	1.25	-.67	2.55	1.55	4.50	-	2.95	1.46	2.15	.16	6.67	4.55	2.56	1.27	-	-
27	-	-	2.47	.39	-	-	-	-	2.21	1.02	2.58	1.32	-	-	2.88	1.47	2.05	.30	4.91	3.78	2.52	-	-	-
28	-	-	2.23	.24	-	1.26	-	-	2.38	1.04	2.80	1.29	-	-	2.67	.88	2.07	.47	4.90	4.10	-	-	-	-
29	-	-	2.62	.90	3.41	-	-	-	-	-	3.30	1.69	-	-	2.87	.84	2.28	.70	4.92	4.40	-	-	-	-
30	2.42	0.83	2.44	.82	-	-	-	-	-----	-----	3.50	1.87	-	-	3.50	1.21	1.94	.52	4.44	3.99	-	-	-	-
31	2.57	1.04	-----	-----	-	-	-	-	-----	-----	3.15	1.60	-----	-----	3.86	1.71	-----	-----	4.12	2.80	-	-	-----	-----

NOTE.--No gage-height record Oct. 1-29 and Dec. 13 to Feb. 19.

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 (4.0 km) downstream from confluence of Willow Fork and Cane Island Branch of Buffalo Bayou, and 3.1 mi (5.0 km) southeast of Katy.

DRAINAGE AREA.--63.3 mi² (163.9 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 75.02 ft (22.866 m) National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records good except those for periods of no gage-height record, which are poor. Diversions and return of irrigation water from area above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft³/s (82.7 m³/s) Sept. 20, 1979, gage height, 37.54 ft (11.442 m); minimum daily, 0.88 ft³/s (0.025 m³/s) Mar. 18, 1978.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1977.--Maximum discharge, 177 ft³/s (5.01 m³/s) Sept. 19, gage height, 27.56 ft (8.400 m), no peak above base of 750 ft³/s (21.2 m³/s); minimum daily, 2.9 ft³/s (0.082 m³/s) Sept. 7.

EXTREMES FOR WATER YEAR 1978.--Peak discharge above base of 750 ft³/s (21.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 19	0500	*1,240	35.1	33.22	10.125
June 3	1500	769	21.8	31.20	9.510
June 7	0800	1,080	30.6	32.57	9.927

Minimum daily discharge, 0.88 ft³/s (0.025 m³/s) Mar. 18.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 750 ft³/s (21.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 1	1200	968	27.4	32.12	9.790	Feb. 6	0900	1,060	30.0	32.51	9.909
Jan. 6	2400	1,160	32.9	32.93	10.037	May 4	1100	1,060	30.0	32.51	9.909
Jan. 20	1000	817	23.1	31.43	9.580	Sept. 20	about 0600	*2,920	82.7	37.54	11.442

Minimum daily discharge, 0.97 ft³/s (0.027 m³/s) Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										8.0	15	4.4
2										7.5	7.4	4.7
3										7.0	6.5	4.0
4										6.5	5.5	4.1
5										6.0	10	3.5
6										35	19	3.1
7										31	16	2.9
8										38	13	8.7
9										29	8.1	6.2
10										24	7.4	5.9
11										17	7.2	7.1
12										21	6.4	8.5
13										23	5.1	12
14										27	5.7	29
15										31	6.4	27
16										46	7.1	17
17										27	4.3	14
18										45	5.4	13
19										50	4.3	53
20										56	3.8	67
21										64	4.2	32
22										46	4.5	21
23										45	3.6	16
24										30	3.9	17
25										22	4.3	13
26										26	4.3	8.1
27										28	3.5	7.7
28										34	6.8	20
29										27	5.4	24
30										18	4.2	24
31										18	4.3	---
TOTAL										893.0	212.6	477.9
MEAN										28.8	6.86	15.9
MAX										64	19	67
MIN										6.0	3.5	2.9
AC-FT										1770	422	948

WTR YR 1977 TOTAL - MEAN - MAX - MIN - AC-FT -

SAN JACINTO RIVER BASIN

08072300 BUFFALO BAYOU NEAR KATY, TX--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	4.3	21	1.2	24	1.7	1.2	1.3	2.8	16	26	3.5
2	17	33	12	2.3	25	1.4	1.0	1.3	97	9.2	30	4.5
3	13	25	5.7	2.0	16	1.2	1.0	9.0	384	8.2	21	50
4	17	11	3.0	1.5	9.4	1.1	1.0	4.9	156	6.5	16	35
5	27	5.0	2.1	1.5	5.6	1.0	1.1	3.0	73	7.4	13	25
6	16	2.8	1.5	1.6	3.6	1.1	1.6	2.7	141	12	11	18
7	13	2.0	1.5	1.6	12	90	2.1	1.8	841	15	18	15
8	12	18	1.3	1.9	317	38	4.4	1.6	502	13	17	25
9	13	33	1.1	1.5	154	11	6.7	1.8	188	11	15	22
10	8.1	17	1.1	1.3	79	4.7	2.3	1.9	82	8.3	9.2	100
11	8.5	7.4	1.2	67	35	2.9	5.0	2.1	38	7.6	5.0	200
12	9.0	3.6	1.5	164	109	2.4	6.8	1.3	21	20	3.6	300
13	8.0	2.3	92	53	295	1.9	3.4	.95	13	21	3.7	270
14	7.5	1.8	77	19	111	1.5	2.1	1.3	18	18	7.8	290
15	6.8	1.6	28	9.0	44	1.5	2.0	2.4	20	27	28	150
16	7.0	1.4	12	167	34	1.1	1.5	1.8	11	31	11	100
17	6.5	1.4	6.0	238	46	1.2	1.2	1.4	6.8	34	5.8	75
18	5.9	1.4	3.7	307	71	.88	1.1	1.3	4.7	35	5.4	55
19	4.6	1.3	3.2	1000	28	1.3	1.1	.97	4.3	32	5.6	47
20	4.0	1.4	2.0	379	13	1.0	1.2	2.5	5.0	28	5.5	47
21	3.3	14	1.7	170	7.6	1.0	1.1	1.2	5.9	23	4.2	50
22	3.5	10	1.4	108	5.6	1.0	1.6	1.2	6.1	22	3.7	51
23	3.5	5.6	1.3	84	3.2	1.0	6.5	1.3	4.7	34	4.0	53
24	2.8	3.4	1.2	94	2.4	1.9	4.5	1.3	4.9	36	3.5	44
25	3.0	2.7	1.2	106	3.0	1.4	3.4	1.4	5.0	61	3.2	34
26	3.2	2.0	1.1	74	2.5	1.1	11	3.7	4.9	55	2.8	60
27	2.9	1.6	1.5	40	2.2	1.1	5.9	9.2	5.4	40	2.5	80
28	2.1	1.5	1.1	25	2.1	1.2	3.2	2.7	3.5	27	2.5	88
29	1.8	12	1.9	14	---	1.1	1.6	4.2	22	26	2.5	70
30	1.6	34	1.8	8.8	---	2.3	1.3	2.4	23	21	3.5	41
31	1.4	---	1.3	7.6	---	1.7	---	1.9	---	26	4.5	---
TOTAL	256.0	261.5	292.4	3150.8	1460.2	181.68	87.9	75.82	2694.0	731.2	294.5	2403.0
MEAN	8.26	8.72	9.43	102	52.2	5.86	2.93	2.45	89.8	23.6	9.50	80.1
MAX	27	34	92	1000	317	90	11	9.2	841	61	30	300
MIN	1.4	1.3	1.1	1.2	2.1	.88	1.0	.95	2.8	6.5	2.5	3.5
AC-FT	508	519	580	6250	2900	360	174	150	5340	1450	584	4770
WTR YR 1978	TOTAL	11889.00	MEAN	32.6	MAX	1000	MIN	.88	AC-FT	23580		

SAN JACINTO RIVER BASIN

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08072300 BUFFALO BAYOU NEAR KATY, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	.98	76	733	26	2.6	2.2	37	114	4.3	25	45
2	18	.99	46	309	20	3.3	96	43	348	4.2	80	70
3	19	.99	44	131	96	4.2	427	22	185	4.1	70	65
4	66	.99	132	90	148	2.7	188	717	114	5.5	50	60
5	31	1.0	102	120	723	2.3	80	540	163	5.3	35	70
6	21	50	71	690	956	1.9	35	227	127	9.7	25	80
7	19	49	102	907	531	1.6	18	116	66	79	35	60
8	18	16	109	431	264	1.5	12	60	36	129	40	50
9	16	7.0	78	231	142	1.5	7.4	29	21	68	100	42
10	21	4.3	37	153	80	1.4	5.0	15	15	40	80	35
11	14	2.6	21	275	49	1.4	3.7	11	11	44	60	30
12	9.7	2.0	14	180	30	1.4	3.1	12	8.0	37	40	27
13	12	1.7	11	109	20	1.7	2.6	11	6.5	30	30	23
14	7.4	1.4	9.2	70	16	1.5	2.2	7.9	7.3	50	25	21
15	4.0	1.3	16	40	13	1.3	2.0	8.2	6.8	50	22	18
16	3.9	1.2	14	30	14	1.3	2.0	5.3	5.4	38	20	16
17	3.2	2.4	9.9	26	25	1.5	5.2	3.9	4.9	64	19	20
18	3.6	1.5	6.6	20	101	1.4	92	3.4	8.6	78	18	200
19	2.6	15	5.1	404	52	12	378	4.2	4.8	56	17	1180
20	1.9	111	3.9	719	33	15	506	3.7	4.1	50	16	2560
21	1.6	52	3.1	410	23	28	181	4.0	3.0	60	16	1560
22	1.4	21	2.8	250	16	107	86	153	2.0	55	20	1100
23	1.2	19	2.7	176	12	89	40	107	4.2	50	18	712
24	1.1	8.2	2.1	104	16	23	19	46	5.3	45	17	453
25	1.6	4.1	1.8	61	15	9.2	12	17	4.7	60	16	321
26	1.5	172	1.7	54	7.8	4.4	11	8.4	7.5	80	20	266
27	1.4	564	1.6	48	4.5	2.6	7.0	5.7	16	70	25	169
28	1.2	237	1.4	30	3.2	2.0	4.6	4.6	7.8	65	30	149
29	1.0	175	31	17	---	1.7	44	15	6.1	45	25	113
30	.97	127	134	62	---	1.6	70	18	4.6	30	22	93
31	1.0	---	249	66	---	5.8	---	68	---	20	20	---
TOTAL	331.27	1650.65	1338.9	6946	3436.5	335.8	2342.0	2323.3	1317.6	1426.1	1036	9608
MEAN	10.7	55.0	43.2	224	123	10.8	78.1	74.9	43.9	46.0	33.4	320
MAX	66	564	249	907	956	107	506	717	348	129	100	2560
MIN	.97	.98	1.4	17	3.2	1.3	2.0	3.4	2.0	4.1	16	16
AC-FT	657	3270	2660	13780	6820	666	4650	4610	2610	2830	2050	19060

CAL YR 1978 TOTAL 14399.92 MEAN 39.5 MAX 1000 MIN .88 AC-FT 28560
WTR YR 1979 TOTAL 32092.12 MEAN 87.9 MAX 2560 MIN .97 AC-FT 63650

NOTE.--No gage-height record July 20 to Aug. 19 and Aug. 21 to Sept. 19.

SAN JACINTO RIVER BASIN

08072300 BUFFALO BAYOU NEAR KATY, TX--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 29°44'35", long 95°48'24", Fort Bend County, Hydrologic Unit 12040104, 2.5 mi (4.0 km) downstream from fork of Willow Fork at Buffalo Bayou and Cane Island Branch of Buffalo Bayou, 3.1 mi (5.0 km) southeast of Katy along county roads.

DRAINAGE AREA.--63.3 mi² (163.9 km²).

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
28...	1145	217	135	6.9	12.5	220	80	10.8	105	4.0
29...	1315	186	160	7.2	13.5	350	80	10.1	100	4.6
DEC										
04...	1205	143	170	7.5	10.5	1100	300	9.0	83	5.5
FEB										
05...	1315	775	78	6.9	7.5	200	120	9.5	82	3.9
06...	1240	1050	70	7.0	6.5	200	90	10.1	85	3.1
07...	1315	491	64	7.1	5.5	140	75	10.4	85	3.0
12...	1015	29	145	6.9	11.0	240	80	8.7	81	11
APR										
21...	1145	182	85	7.0	21.0	250	240	6.6	76	4.4
26...	1045	7.2	314	7.1	24.5	200	180	6.4	78	4.5
SEP										
19...	1400	1180	98	6.9	22.0	80	73	6.8	80	5.1
21...	0925	1580	96	6.9	21.5	55	8.8	5.4	61	2.1
27...	0950	169	155	6.9	24.0	70	5.7	6.4	74	3.2

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV									
28...	8700	2000	5000	33	1	9.4	2.2	11	.8
29...	7300	2500	6100	37	2	11	2.2	12	.9
DEC									
04...	100000	12000	16000	37	0	11	2.2	12	.9
FEB									
05...	14000	1300	11000	25	5	7.7	1.3	4.0	.4
06...	14000	2000	13000	19	1	5.8	1.1	3.2	.3
07...	25000	500	7000	20	4	6.2	1.1	3.3	.3
12...	12000	500	56	36	2	11	2.0	12	.9
APR									
21...	29000	980	250	26	8	8.3	1.2	4.8	.4
26...	40000	1100	250	83	16	27	3.9	26	1.2
SEP									
19...	38000	14000	5900	32	3	10	1.7	4.9	.4
21...	61000	5800	1500	28	0	8.2	1.8	6.6	.5
27...	29000	500	520	47	0	14	2.9	11	.7

SAN JACINTO RIVER BASIN

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08072300 BUFFALO BAYOU NEAR KATY, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)
NOV									
28...	6.3	38	0	8.6	18	.1	9.2	84	148
29...	6.2	42	0	8.3	19	.1	9.9	89	134
DEC									
04...	5.3	44	0	9.2	21	.2	11	94	1290
FEB									
05...	2.1	24	0	13	5.4	.1	3.6	49	280
06...	1.9	22	0	5.4	4.2	.2	3.2	36	252
07...	1.9	20	0	4.6	4.4	.1	2.9	34	150
12...	3.3	41	0	12	11	.2	3.4	75	180
APR									
21...	3.0	21	0	9.6	5.9	.2	4.8	48	244
26...	4.5	82	0	29	28	.4	10	169	137
SEP									
19...	3.9	35	0	8.3	7.1	.1	9.2	62	231
21...	3.7	38	0	5.0	9.3	.1	8.3	62	36
27...	4.9	60	0	5.7	15	.1	16	99	23

DATE	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV									
28...	24	.07	.01	.08	.06	1.1	1.2	.27	15
29...	16	.16	.01	.17	.12	1.4	1.5	.36	13
DEC									
04...	200	.28	.02	.30	.27	3.5	3.8	.76	56
FEB									
05...	76	.14	.02	.16	.16	1.1	1.3	.23	--
06...	12	.10	.04	.14	.91	.79	1.7	1.4	12
07...	14	.03	.06	.09	.32	.27	.59	.54	11
12...	44	.28	.12	.40	.22	1.2	1.4	.41	25
APR									
21...	68	.20	.08	.28	.20	1.6	1.8	.15	18
26...	46	1.6	.21	1.8	.09	1.8	1.9	1.0	19
SEP									
19...	27	.15	.04	.19	.20	1.1	1.3	.44	12
21...	0	.01	.02	.03	.05	.64	.69	.19	8.3

SAN JACINTO RIVER BASIN

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 (14 m) upstream from reservoir outlet works, 1,160 ft (354 m) upstream from Addicks-Howell county road, 1.1 mi (1.8 km) south of Addicks, and 1.2 mi (1.9 km) upstream from South Mayde Creek.

DRAINAGE AREA.--128 mi² (332 km²). Prior to August 1977, 134 mi² (347 km²). Basin boundary to change due to relocation of drainage ditches. During extreme floods, basin may receive and (or) lose runoff due to basin interchange.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to current year. On October 1973, the upper gage was converted to a flood-hydrograph partial-record station.

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

GAGE.--Water-stage recorder. Datum of gage is 0.33 ft (0.101 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--The reservoir is formed by a rolled earthfill dam 72,900 ft (22,200 m) 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 by 7 ft (2.7 by 2.1 m) wide, each controlled by a vertical slide gate. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam.....	114.0	-
Ground gage height at ends of dam.....	107.0	207,000
Design flood.....	101.9	127,900
Crest of spillway (invert).....	75.0	0

COOPERATION.--The capacity curve, furnished by the Corps of Engineers, is based on a survey made in 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,200 acre-ft (48.3 hm³) May 15, 1968, gage height, 94.60 ft (28.834 m); minimum, reservoir was dry at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,770 acre-ft (42.9 hm³) Sept. 25, gage height, 94.16 ft (28,700 m); minimum, 3.4 acre-ft (4,190 m³) Sept. 16, 17, gage height, 75.43 ft (22.991 m).

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

75.0	1.7	81.0	79	87.0	3,060
76.0	6.3	82.0	129	88.0	4,770
77.0	14	83.0	258	90.0	9,910
78.0	24	84.0	510	92.0	17,920
79.0	38	85.0	999	93.0	24,160
80.0	55	86.0	1,830	94.7	40,200

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	4.2	3530.0	657	9.4	4.1	5.4	1080.0	8.1	3.9	11.3	5.5
2	5.7	4.0	2970.0	2850	10.0	4.2	18.7	760.0	87.0	3.9	11.1	5.7
3	5.8	4.0	1650.0	3390	35.5	5.2	720.0	346.0	253.0	3.8	10.7	4.6
4	8.1	4.0	419.0	3570	99.0	4.1	2320.0	681.0	206.0	4.0	6.9	6.4
5	6.3	4.1	13.1	3460	913.0	3.9	2440.0	3610.0	103.0	4.7	5.7	6.9
6	5.7	11.8	12.7	4490	5110.0	3.8	2000.0	4620.0	92.6	4.5	12.0	5.9
7	5.6	8.1	58.6	7500	7960.0	3.7	1360.0	4530.0	29.3	150.0	6.7	8.1
8	5.5	5.6	56.7	9270	8750.0	3.7	694.0	4020.0	8.0	1030.0	7.6	11.5
9	5.5	4.6	53.3	10040	8630.0	3.6	127.0	3020.0	5.9	1210.0	40.7	7.4
10	5.6	4.2	10.3	10380	8250.0	3.6	5.2	1930.0	5.0	908.0	18.2	6.1
11	5.5	4.2	7.3	10920	7770.0	3.6	4.6	1420.0	4.6	402.0	8.4	5.3
12	5.0	4.1	6.0	11250	7170.0	3.6	4.5	1430.0	4.2	50.4	7.1	4.4
13	5.1	4.1	5.6	11250	6560.0	3.6	4.4	1430.0	4.0	6.3	5.9	4.2
14	5.0	4.0	5.7	11050	5850.0	3.6	4.0	851.0	4.0	6.7	5.3	3.6
15	4.6	3.9	6.7	10280	4940.0	3.6	3.8	30.0	4.1	7.1	5.5	3.5
16	4.4	3.8	6.0	8790	3830.0	3.6	3.8	3.9	4.0	6.1	6.2	3.5
17	4.2	4.3	5.5	7310	2910.0	3.6	3.7	3.9	4.0	6.8	6.0	4.4
18	4.2	4.1	5.0	5770	2170.0	3.6	7.4	3.6	3.9	7.8	5.3	123.0
19	4.2	7.6	4.8	4700	1360.0	14.7	271.0	3.6	4.2	9.1	6.8	5790.0
20	4.1	17.4	4.6	5830	496.0	209.0	2990.0	3.6	3.9	2.9	5.6	18860.0
21	4.1	8.1	4.5	6460	10.4	291.0	5550.0	3.7	3.7	9.1	4.9	26830.0
22	4.0	5.8	4.2	6460	6.8	425.0	6480.0	50.4	3.6	11.8	5.6	31300.0
23	4.0	5.5	4.2	6390	6.4	1020.0	6360.0	99.0	3.5	9.5	5.2	33690.0
24	3.8	4.8	4.2	5980	6.2	982.0	5680.0	17.0	4.4	7.8	4.9	34680.0
25	3.8	4.3	4.1	5450	5.8	518.0	4940.0	6.0	4.0	15.0	4.5	34380.0
26	4.2	87.8	4.0	4660	5.2	69.9	4180.0	4.8	15.0	20.2	4.7	33010.0
27	3.9	970.0	4.0	3640	4.8	5.3	3410.0	4.3	7.1	26.8	5.0	31400.0
28	3.8	2190.0	3.9	2600	4.6	4.8	2620.0	4.1	4.8	47.9	5.5	29410.0
29	3.8	2980.0	7.9	1550	---	4.4	2100.0	9.1	4.3	52.8	6.0	27340.0
30	3.9	3490.0	23.4	592	---	4.1	1670.0	6.6	4.3	30.3	5.5	25280.0
31	3.8	---	47.9	114	---	7.4	---	11.8	---	12.4	5.2	---
MAX	8.1	3490	3530	11250	8750	1020	6480	4620	253	1210	40	34680
MIN	3.8	3.8	3.9	114	4.6	3.6	3.7	3.6	3.5	3.8	4.5	3.5

CAL YR 1978 MAX 9820 MIN 3.5
WTR YR 1979 MAX 34680 MIN 3.5

SAN JACINTO RIVER BASIN

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08072500 BARKER RESERVOIR NEAR ADDICKS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical and biochemical analyses: June 1978 to current year.

294617095390501 BARKER RES LINE 10, SITE 10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR							
21...	1112	1.0	106	7.0	21.5	4.9	57
21...	1113	4.0	106	7.1	21.0	5.3	61
21...	1114	7.0	106	7.1	21.0	5.3	61
21...	1115	10	106	7.1	21.0	5.3	61
26...	0930	1.0	103	7.1	24.5	6.4	78
26...	0932	5.0	103	6.9	22.0	2.7	32
26...	0934	8.0	94	6.7	21.0	1.4	16
SEP							
21...	1225	1.0	76	6.3	23.0	5.7	66
21...	1227	9.0	80	6.3	22.5	4.2	48
26...	1310	1.0	90	6.4	23.5	2.1	24
26...	1312	6.0	90	6.3	23.0	.8	9
26...	1314	13	90	6.3	22.5	.5	6

294617095390502 BARKER RES LINE 10, SITE 20

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ PER 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)
NOV												
29...	1405	1.0	124	6.4	14.5	260	3.8	38	2.9	3100	370	500
29...	1410	10	123	6.3	14.0	360	4.0	40	2.9	3800	780	580
DEC												
04...	0935	1.0	200	7.0	13.5	220	3.8	38	3.1	4000	320	350
04...	0940	10	190	7.0	13.5	220	3.9	39	3.2	7700	270	440
FEB												
05...	1135	1.0	131	7.3	9.5	240	9.3	84	4.5	9700	3200	7800
05...	1140	10	131	7.3	9.5	280	9.3	84	4.6	--	--	--
09...	1025	1.0	73	7.0	7.5	240	9.5	82	4.0	9300	820	8300
09...	1030	16	77	7.2	7.5	240	8.8	76	3.8	--	--	--
15...	1030	1.0	83	7.1	15.0	240	8.8	90	4.0	330	62	78
15...	1035	13	81	7.0	9.0	240	8.1	72	2.7	600	52	160
21...	0850	1.0	154	7.0	9.5	200	8.2	74	5.0	3800	620	320
21...	0855	9.0	161	7.1	9.5	240	8.2	74	5.2	4100	720	290
APR												
21...	1125	1.0	106	7.0	21.5	150	4.4	51	3.4	11000	2000	3600
21...	1126	4.0	106	7.0	21.5	--	4.0	47	--	--	--	--
21...	1127	8.0	106	7.0	21.5	--	3.7	43	--	--	--	--
21...	1128	12	106	6.9	21.0	--	2.9	33	--	--	--	--
21...	1130	16	109	6.9	20.5	75	2.7	31	6.0	10000	2200	2000
26...	1000	1.0	103	6.7	24.0	75	4.7	57	3.7	7700	30	230
26...	1002	5.0	103	7.0	22.5	--	4.6	54	--	--	--	--
26...	1004	10	94	6.9	22.0	--	2.8	33	--	--	--	--
26...	1005	14	94	6.8	21.0	200	1.2	14	3.4	6700	52	720
MAY												
03...	0840	1.0	141	6.9	22.0	100	5.1	60	4.8	6700	500	800
03...	0845	10	140	6.9	22.0	270	3.1	36	4.8	12000	720	920
SEP												
21...	1242	1.0	80	6.3	23.0	120	4.7	56	1.4	6700	2000	520
21...	1244	9.0	80	6.3	22.5	100	4.1	47	.9	6700	1500	520
26...	1252	1.0	90	6.4	23.5	60	1.4	16	2.7	2500	28	66
26...	1254	5.0	95	6.4	23.5	--	.0	0	--	--	--	--
26...	1256	10	95	6.3	23.0	--	.0	0	--	--	--	--
26...	1258	15	95	6.3	23.0	--	.0	0	--	--	--	--
26...	1300	20	94	6.3	23.0	55	.0	0	2.0	2900	150	150

SAN JACINTO RIVER BASIN

BARKER RESERVOIR NEAR ADDICKS, TX--Continued

294617095390502 BARKER RES LINE 10, SITE 20--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV												
29...	32	2	9.5	2.0	8.4	.6	4.5	36	0	6.8	10	.1
29...	32	3	9.4	2.0	8.3	.6	4.4	35	0	7.2	9.9	.1
DEC												
04...	44	0	13	2.8	13	.9	6.0	54	0	9.9	18	.1
04...	44	0	13	2.8	12	.8	6.1	54	0	9.3	20	.1
FEB												
05...	35	1	11	1.9	9.3	.7	3.0	42	0	6.0	18	.2
05...	35	1	11	1.9	9.3	.7	3.0	42	0	7.1	16	.2
09...	24	2	7.4	1.4	4.0	.4	2.1	27	0	6.4	4.5	.1
09...	25	3	7.7	1.4	4.4	.4	2.1	27	0	6.3	4.8	.1
15...	25	7	7.3	1.6	4.6	.4	2.3	22	0	6.3	5.3	.1
15...	26	2	8.0	1.5	4.5	.4	2.2	30	0	4.9	5.4	.1
21...	45	1	14	2.5	11	.7	2.8	54	0	8.2	17	.1
21...	48	3	15	2.6	11	.7	2.8	55	0	8.4	19	.2
APR												
21...	28	4	8.4	1.6	6.3	.5	3.4	29	0	11	8.0	.2
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	29	6	8.9	1.6	6.7	.5	3.4	28	0	10	8.3	.3
26...	30	3	9.4	1.6	6.0	.5	2.8	33	0	5.5	6.4	.2
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	28	6	8.6	1.5	5.4	.4	2.8	27	0	7.0	5.7	.2
MAY												
03...	38	5	12	2.0	9.8	.7	2.9	41	0	11	10	.2
03...	38	4	12	1.9	9.5	.7	2.8	41	0	11	10	.2
SEP												
21...	23	2	6.7	1.5	5.8	.5	2.5	26	0	5.8	5.6	.1
21...	22	0	6.5	1.5	5.7	.5	2.5	29	0	5.3	5.7	.2
26...	33	4	9.2	2.4	.5	.0	3.1	35	0	4.6	7.1	.1
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	30	1	8.6	2.0	6.9	.6	3.0	35	0	4.6	8.2	.1
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOL- ATILE, 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												
29...	7.6	67	308	140	.19	.01	.20	.06	1.1	1.2	.270	14
29...	7.8	66	196	16	.19	.01	.20	.06	1.1	1.2	.270	13
DEC												
04...	12	101	82	22	.05	.03	.08	.05	1.1	1.1	.300	19
04...	13	103	75	19	.05	.01	.06	.05	.95	1.0	.310	21
FEB												
05...	6.2	76	320	132	.28	.04	.32	.27	1.4	1.7	.340	19
05...	6.0	75	316	100	.26	.06	.32	.26	1.3	1.6	.360	17
09...	4.4	44	92	20	.08	.06	.14	.15	.85	1.0	.300	9.9
09...	4.6	45	88	48	.09	.06	.15	.18	.92	1.1	.300	10
15...	4.6	43	76	10	.02	.02	.04	.05	.92	.97	.150	11
15...	4.6	46	72	4	.06	.02	.08	.06	.84	.90	.170	11
21...	6.8	89	102	42	.21	.04	.25	.32	1.1	1.4	.270	14
21...	6.8	93	116	38	.23	.04	.27	.36	1.1	1.5	.290	15
APR												
21...	5.0	58	206	8	.32	.10	.42	.34	1.3	1.6	.390	15
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	4.9	58	136	6	.36	.10	.46	.37	1.0	1.4	.380	--
26...	5.5	54	4	4	.08	.04	.12	.10	1.1	1.2	.270	13
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	5.2	50	14	8	.21	.06	.27	.29	1.0	1.3	.350	12
MAY												
03...	5.8	74	208	38	.18	.14	.32	.32	1.1	1.4	.370	19
03...	5.8	73	132	28	.17	.16	.33	.32	.98	1.3	.370	16
SEP												
21...	6.6	47	92	3	.10	.04	.14	.06	.77	.83	.240	4.2
21...	5.9	48	64	0	.00	.02	.02	.13	.24	.37	.220	8.5
26...	10	54	15	15	.01	.00	.01	.01	.49	.50	.160	8.0
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	8.1	59	36	23	.05	.00	.05	.06	.85	.91	.230	7.9

SAN JACINTO RIVER BASIN

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BARKER RESERVOIR NEAR ADDICKS, TX--Continued

294617095390503 BARKER RES LINE 10, SITE 30

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR							
21...	1205	1.0	106	6.7	21.5	5.0	58
21...	1207	4.0	106	6.7	21.5	4.7	55
26...	1030	1.0	103	6.9	24.5	6.2	76
26...	1032	5.0	103	6.9	23.5	6.1	73
26...	1034	10	101	7.1	21.5	6.0	70
SEP							
21...	1301	1.0	78	6.4	23.0	4.5	52
21...	1303	6.5	76	6.5	23.0	4.4	51
21...	1305	12	76	6.5	23.0	4.3	50
26...	1226	1.0	92	--	24.5	2.5	30
26...	1228	6.0	100	6.5	24.0	1.6	19
26...	1230	12	94	6.4	23.5	.2	2

294610095385400 BARKER RESERVOIR OUTFLOW

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, (COLS./ 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF PER (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT												
17...	1050	657	7.1	18.5	120	9.2	101	8.7	9700	980	390	150
DEC												
01...	1310	125	6.9	16.0	360	8.1	84	3.7	3100	220	240	31
04...	1345	170	7.6	14.0	240	7.9	79	3.4	8300	270	390	44
JAN												
30...	1130	138	7.0	6.5	240	10.7	90	2.8	4000	750	64	39
31...	1045	179	7.2	6.0	240	10.2	84	5.2	36000	3600	1200	54
FEB												
01...	1110	155	6.9	5.5	240	12.6	103	5.4	25000	1200	1100	48
05...	1240	130	7.3	10.0	240	10.6	97	4.8	12000	4000	8900	37
09...	1150	81	7.0	7.0	240	11.5	97	3.5	11000	600	4700	27
15...	1345	82	7.1	15.0	240	9.5	97	3.0	780	48	72	28
21...	1010	151	7.1	8.0	200	9.4	82	4.9	6700	680	300	45
APR												
11...	0945	401	7.2	22.5	200	6.5	76	12	32000	820	950	100
23...	1450	97	6.7	22.5	250	7.5	88	4.4	8300	200	850	29
26...	1200	95	6.9	24.5	210	7.1	87	3.1	9300	90	580	28
MAY												
03...	1045	141	6.1	22.0	250	7.4	87	4.7	14000	650	980	41
SEP												
24...	1050	90	9.8	23.0	100	7.4	84	1.9	6700	210	190	--
26...	1050	93	6.8	23.5	60	6.2	72	2.4	290	150	170	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT												
17...	2	47	7.9	68	2.4	7.8	180	0	38	84	.4	20
DEC												
01...	0	9.3	1.9	8.1	.6	4.5	38	0	8.2	14	.1	7.6
04...	1	13	2.7	11	.7	6.2	52	0	11	18	.1	11
JAN												
30...	0	12	2.3	8.8	.6	3.3	50	0	7.0	20	.2	7.5
31...	6	17	2.8	13	.8	3.9	59	0	5.6	22	.2	7.9
FEB												
01...	6	15	2.5	11	.7	3.4	51	0	5.1	21	.2	7.1
05...	3	12	1.8	8.1	.6	2.9	42	0	4.6	9.7	.2	6.2
09...	3	8.2	1.6	4.8	.4	2.2	29	0	5.6	5.1	.1	5.1
15...	3	8.4	1.6	4.6	.4	2.1	30	0	6.4	5.4	.1	4.6
21...	2	14	2.4	10	.7	2.8	52	0	8.4	18	.1	6.7
APR												
11...	6	34	4.8	33	1.4	4.2	120	0	17	50	.2	2.1
23...	7	9.3	1.5	6.3	.5	2.9	27	0	10	6.7	.2	4.9
26...	2	8.6	1.5	5.7	.5	2.7	31	0	5.3	6.3	.2	5.4
MAY												
03...	4	13	2.0	9.5	.6	2.9	45	0	11	16	.3	5.9
SEP												
24...	--	--	--	--	--	--	33	0	--	--	--	--
26...	--	--	--	--	--	--	35	0	--	--	--	--

SAN JACINTO RIVER BASIN
BARKER RESERVOIR NEAR ADDICKS, TX--Continued

294610095385400 BARKER RESERVOIR OUTFLOW
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 17...	362	64	23	1.4	.04	1.4	.11	1.3	1.4	1.70	18
DEC 01...	73	180	40	.15	.02	.17	.08	.86	.94	.280	15
04...	99	106	28	.06	.02	.08	.06	1.0	1.1	.300	18
JAN 30...	86	108	64	.09	.02	.11	.20	1.1	1.3	.280	12
31...	101	204	72	.20	.06	.26	.39	1.3	1.7	.510	15
FEB 01...	90	240	88	.20	.06	.26	.29	1.5	1.8	.340	--
05...	66	320	76	.27	.06	.33	.29	1.2	1.5	.350	17
09...	47	148	4	.10	.06	.16	.11	.41	.52	.220	13
15...	48	60	0	.09	.02	.11	.06	.81	.87	.150	11
21...	88	130	44	.20	.04	.24	.33	1.1	1.4	.260	14
APR 11...	204	352	17	.67	.43	1.1	.64	1.6	2.2	.700	20
23...	56	50	15	.21	.04	.25	.20	.78	.98	.300	14
26...	51	12	9	.12	.06	.18	.15	1.1	1.2	.360	13
MAY 03...	83	170	42	.15	.16	.31	.30	1.0	1.3	.330	15
SEP 24...	--	--	--	.00	.02	.01	.04	.52	.56	.200	7.5
26...	--	--	--	.01	.00	.01	.01	.55	.56	.180	7.2

08072730 BEAR CREEK NEAR BARKER, TX

LOCATION.--Lat 29°49'50", long 95°41'12", Harris County, Hydrologic Unit 12040104, on bank at bridge on Clay Road, 2.5 mi (4.0 km) west of State Highway 6, and 4.1 mi (6.6 km) upstream from mouth of Langham Creek.

DRAINAGE AREA.--19.8 mi² (51.3 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 100.00 ft (30.480 m) National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records fair except those for periods of no gage-height record, which are poor. Diversions and return of irrigation water from area above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 963 ft³/s (27.3 m³/s) Sept. 20, 1979, gage height, 16.72 ft (5.096 m); no flow for many days in 1978.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1977.--Maximum discharge, 35 ft³/s (0.99 m³/s) July 20, gage height, 6.80 ft (2.073 m), no peak above base of 300 ft³/s (8.50 m³/s); minimum daily, 0.24 ft³/s (0.007 m³/s) Aug. 7.

EXTREMES FOR WATER YEAR 1978.--Peak discharge above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 19	0900	*412 11.7	12.94 3.944
June 3	2100	366 10.4	12.42 3.786
June 7	1200	402 11.4	12.83 3.911
Sept. 15	0100	313 8.86	11.79 3.594

Minimum discharge, no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 1	unknown	300 8.50	-- --
Jan. 7	unknown	388 11.0	12.67 3.862
Feb. 6	1300	372 10.5	12.49 3.807
Sept. 20	about 0900	*963 27.3	16.72 5.096

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										6.0	1.5	2.2
2										5.0	1.3	1.6
3										4.0	3.7	1.1
4										4.0	2.9	1.1
5										5.0	1.5	1.3
6										6.0	.35	1.3
7										5.0	.24	1.0
8										10	.37	1.6
9										11	.64	3.5
10										8.0	2.6	5.8
11										7.0	3.6	3.9
12										8.7	2.8	3.5
13										6.3	3.6	4.0
14										6.5	7.3	19
15										16	7.2	13
16										12	11	10
17										5.5	10	9.3
18										5.5	3.9	7.0
19										11	2.7	9.7
20										16	2.2	11
21										26	2.1	6.4
22										19	2.2	5.8
23										12	1.6	5.1
24										8.6	1.6	3.6
25										8.2	1.6	2.6
26										8.2	1.3	2.7
27										15	2.1	5.6
28										18	2.5	10
29										11	2.1	10
30										6.0	.89	13
31										3.0	1.3	---
TOTAL										293.5	88.69	175.7
MEAN										9.47	2.86	5.86
MAX										26	11	19
MIN										3.0	.24	1.0
AC-FT										582	176	349

WTR YR 1978 TOTAL - MEAN - MAX - MIN - AC-FT -

SAN JACINTO RIVER BASIN

08072730 BEAR CREEK NEAR BARKER, TX--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	.67	6.5	.00	18	.12	.00	1.2	.64	4.3	26	2.2
2	6.1	5.9	4.2	.00	16	.05	.00	.31	19	3.0	13	1.4
3	5.2	3.5	2.5	.54	8.0	.02	.06	2.0	180	3.2	7.3	.99
4	5.0	2.4	1.1	.00	5.0	.31	.00	2.6	238	2.6	5.7	1.3
5	9.1	2.1	.85	.00	3.0	.01	.00	2.1	122	3.4	7.4	2.0
6	7.5	2.2	.36	.00	2.0	.09	.00	1.8	87	2.0	7.8	1.9
7	6.5	1.8	.15	1.2	20	.01	.01	1.0	297	2.6	5.3	1.7
8	6.5	7.3	.17	6.7	100	12	.01	1.2	216	3.9	4.9	2.4
9	7.2	16	.09	3.2	60	3.6	.00	2.1	123	3.4	9.2	2.5
10	6.4	8.1	.01	1.5	30	2.0	.12	2.8	74	4.0	11	23
11	5.5	5.4	.00	12	20	1.3	1.1	1.3	28	5.0	8.4	75
12	4.8	3.6	.00	84	25	.60	.14	.29	9.2	4.2	4.1	55
13	4.6	2.4	22	34	60	.42	.12	1.5	5.5	3.6	2.7	45
14	3.4	1.3	25	15	25	.14	.19	.60	8.4	4.2	1.6	100
15	1.8	.26	10	8.1	10	.02	.07	1.3	9.1	9.0	1.9	204
16	.93	.64	6.0	68	5.0	.00	.07	1.4	5.4	4.4	1.3	85
17	.69	.46	4.1	135	8.0	.00	.46	1.0	2.0	3.4	.76	45
18	.82	.40	2.6	129	12	.00	.31	.51	2.4	5.3	.98	32
19	.94	.25	2.0	362	7.0	.00	.19	.39	1.7	8.2	.95	18
20	.86	.00	.93	181	5.0	.00	.14	.83	1.9	7.4	1.2	18
21	.50	5.1	.60	90	3.3	.00	.04	.27	1.6	7.3	1.7	20
22	.24	5.0	.42	60	1.8	.00	.02	.12	1.9	6.7	1.8	9.9
23	.25	3.0	.00	45	1.1	.00	.06	.50	1.6	5.6	2.8	6.4
24	3.7	1.3	.00	35	.70	.00	.16	1.1	1.3	5.2	3.1	5.1
25	2.5	1.3	.00	40	.50	.00	.28	.43	.87	33	2.9	4.2
26	.99	.47	.00	30	.80	.00	.16	.36	.60	12	2.5	3.2
27	.42	.00	.99	22	.50	.00	.60	.40	.93	7.7	1.9	3.0
28	.31	.50	.50	16	.27	.00	.87	2.2	5.5	6.1	1.5	2.3
29	.09	5.9	.00	12	---	.00	.06	4.0	7.3	4.9	1.4	2.7
30	.06	7.6	.73	9.0	---	.00	.22	3.3	4.0	19	1.4	4.0
31	.07	---	.00	7.0	---	.01	---	1.3	---	52	1.7	---
TOTAL	100.87	94.85	91.80	1407.24	447.97	40.69	5.46	40.21	1455.84	246.6	144.19	777.19
MEAN	3.25	3.16	2.96	45.4	16.0	1.31	.18	1.30	48.5	7.95	4.65	25.9
MAX	9.1	16	25	362	100	20	1.1	4.0	297	52	26	204
MIN	.06	.00	.00	.00	.27	.00	.00	.12	.60	2.0	.76	.99
AC-FT	200	188	182	2790	889	81	11	80	2890	489	286	1540

WTR YR 1978 TOTAL 4852.91 MEAN 13.3 MAX 362 MIN .00 AC-FT 9630

NOTE.--No gage-height record Jan. 21 to Feb. 26.

SAN JACINTO RIVER BASIN

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08072730 BEAR CREEK NEAR BARKER, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	2.2	46	220	22	1.3	4.7	8.3	13	2.7	28	12
2	4.3	3.7	31	100	13	1.1	34	7.4	100	1.1	27	17
3	15	2.8	24	50	34	1.8	175	7.1	60	.63	18	6.8
4	7.8	2.2	39	35	54	1.7	106	146	40	1.5	13	8.1
5	5.7	1.2	39	40	244	1.6	42	176	50	1.6	8.3	13
6	3.7	9.4	34	200	350	1.3	15	82	35	3.2	5.7	14
7	3.8	11	67	300	253	1.1	7.7	18	20	7.5	5.5	17
8	4.1	5.0	70	150	144	.67	5.7	9.7	10	22	5.2	17
9	3.2	4.1	57	90	85	.40	3.7	6.1	7.0	20	6.5	16
10	2.4	4.1	34	60	46	.31	2.9	3.0	5.0	6.8	7.1	9.7
11	3.0	3.7	20	90	22	.40	2.1	1.9	3.8	4.0	6.3	8.3
12	3.7	3.4	12	70	14	.22	1.4	2.0	1.3	3.4	5.4	5.2
13	3.5	2.7	9.3	40	11	.06	1.0	1.8	1.1	5.0	6.4	3.8
14	3.0	2.8	8.5	25	7.8	.09	.42	1.7	.93	6.5	6.2	4.7
15	2.4	3.0	15	15	5.6	.04	.31	.87	1.0	7.7	4.5	4.8
16	2.0	2.6	13	20	3.9	.03	.22	.64	3.2	5.7	3.2	2.0
17	2.2	2.7	9.0	17	10	.03	2.0	.87	1.0	3.3	2.3	1.1
18	2.8	2.1	7.0	10	35	.02	15	.93	1.7	.60	1.0	36
19	2.8	6.6	5.0	72	25	5.8	60	.60	1.8	.35	.68	384
20	3.3	21	4.0	240	15	15	100	.64	1.6	5.6	.50	883
21	3.1	11	3.5	175	10	25	80	.60	1.2	6.5	.47	596
22	2.0	5.6	3.0	125	8.0	84	46	56	1.2	4.8	1.5	383
23	3.2	3.9	2.7	116	6.0	51	77	46	.70	4.9	3.7	303
24	3.2	3.0	2.5	109	10	12	82	11	1.1	3.9	2.5	312
25	2.1	2.0	2.2	96	5.0	4.6	70	9.3	2.1	7.4	1.9	251
26	2.0	52	2.1	82	3.0	1.5	48	34	2.2	17	5.1	186
27	2.3	187	2.0	76	1.5	1.1	20	29	1.6	19	6.4	134
28	1.7	118	2.0	54	1.0	.72	7.8	17	.87	34	24	93
29	1.2	91	15	33	---	.38	15	11	.64	38	27	67
30	.88	72	50	58	---	.26	26	9.9	1.4	39	16	.50
31	.92	---	90	52	---	16	---	14	---	44	7.2	---
TOTAL	105.90	641.8	718.8	2820	1438.8	229.53	1050.95	713.35	370.44	327.68	256.55	3838.5
MEAN	3.42	21.4	23.2	91.0	51.4	7.40	35.0	23.0	12.3	10.6	8.28	128
MAX	15	187	90	300	350	84	175	176	100	44	28	883
MIN	.88	1.2	2.0	10	1.0	.02	.22	.60	.64	.35	.47	1.1
AC-FT	210	1270	1430	5590	2850	455	2080	1410	735	650	509	7610

CAL YR 1978 TOTAL 6031.89 MEAN 16.5 MAX 362 MIN .00 AC-FT 11960
WTR YR 1979 TOTAL 12512.30 MEAN 34.3 MAX 883 MIN .02 AC-FT 24820

NOTE.--No gage-height record Dec. 14 to Jan. 16.

SAN JACINTO RIVER BASIN

08072730 BEAR CREEK NEAR BARKER, TX--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 29°49'50", long 95°41'12", Harris County, Hydrologic Unit 12040104, 4.1 mi (6.6 km) upstream from mouth of Langham Creek and 2.5 mi (4.0 km) west along Clay Road from State Highway 6.

DRAINAGE AREA.--19.8 mi² (51.3 km²).

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
28...	1330	111	110	6.7	12.5	180	40	10.8	105	3.5
29...	1140	94	110	7.1	13.0	220	90	9.8	96	3.5
DEC										
04...	1050	35	150	7.3	11.0	220	40	8.5	79	3.6
FEB										
05...	1135	276	69	7.0	7.5	140	80	9.2	79	3.4
06...	1050	372	52	7.0	6.0	200	50	9.8	81	3.2
07...	1110	261	50	7.0	5.0	140	45	10.3	83	3.0
12...	1150	17	70	6.9	11.0	140	40	8.9	83	4.1
APR										
21...	1020	80	65	6.8	21.0	250	120	6.1	70	4.2
26...	0930	48	65	6.8	25.0	200	100	6.4	79	3.8
SEP										
19...	1235	359	68	6.7	22.0	330	800	7.4	87	5.4
21...	1035	600	77	6.8	22.0	65	17	5.1	58	2.1
27...	1155	134	108	6.9	24.0	80	4.5	4.9	57	2.8

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV									
28...	14000	1200	2700	26	0	7.2	1.9	7.7	.7
29...	14000	2600	7000	25	0	7.0	1.8	6.7	.6
DEC									
04...	25000	3900	4800	44	0	13	2.8	10	.7
FEB									
05...	10000	4200	9300	21	4	6.1	1.4	3.2	.3
06...	6700	3000	9600	17	3	5.1	1.1	2.2	.2
07...	6700	390	4400	17	3	4.9	1.1	2.2	.2
12...	2200	190	270	22	1	6.7	1.3	3.0	.3
APR									
21...	10000	720	1000	16	5	5.3	.6	3.0	.3
26...	7300	220	400	20	6	5.8	1.3	2.8	.3
SEP									
19...	29000	5100	5600	22	3	5.8	1.8	5.2	.5
21...	3100	2700	2000	21	0	5.8	1.6	4.4	.4
27...	8700	180	250	33	0	9.1	2.6	5.7	.4

SAN JACINTO RIVER BASIN

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08072730 BEAR CREEK NEAR BARKER, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SUS- PENDE (MG/L)
NOV									
28...	6.7	34	0	6.1	13	.1	8.2	68	65
29...	6.6	34	0	5.5	10	.1	8.1	63	144
DEC									
04...	8.2	56	0	6.9	15	.1	12	96	82
FEB									
05...	3.3	21	0	4.6	5.6	.1	3.5	38	130
06...	2.6	18	0	2.6	3.3	.1	2.9	29	79
07...	2.4	17	0	3.6	2.9	.1	2.6	28	57
12...	3.0	26	0	4.7	3.9	.1	1.3	37	56
APR									
21...	3.2	13	0	10	4.3	.2	4.4	37	97
26...	3.5	17	0	8.7	3.2	.2	3.4	37	49
SEP									
19...	4.0	23	0	6.8	6.2	.2	13	54	300
21...	4.5	30	0	3.8	6.7	.1	8.0	50	41
27...	4.1	43	0	4.5	7.7	.1	12	67	38

DATE	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV									
28...	33	.02	.01	.03	.04	1.2	1.2	.31	13
29...	8	.06	.01	.07	.04	1.2	1.2	.31	--
DEC									
04...	29	.05	.01	.06	.09	1.2	1.3	.42	24
FEB									
05...	8	.26	.04	.30	.18	1.3	1.5	.32	11
06...	5	.06	.02	.08	.09	.75	.84	.20	11
07...	10	.00	.06	.05	.08	.73	.81	.19	11
12...	2	.03	.08	.11	.12	.76	.88	.23	7.8
APR									
21...	12	.09	.06	.15	.26	1.4	1.7	.19	20
26...	13	.00	.02	.02	.08	1.2	1.3	.26	17
SEP									
19...	54	.04	.04	.08	.07	1.0	1.1	.19	22
21...	0	.01	.00	.01	.02	.75	.77	.22	9.4
27...	24	.06	.02	.08	.03	.19	.22	.24	8.4

SAN JACINTO RIVER BASIN

08072760 LANGHAM CREEK AT STATE HIGHWAY 6 NEAR ADDICKS, TX

LOCATION.--Lat 29°51'55", long 95°38'44", Harris County, Hydrologic Unit 12040104, 2.2 mi (3.5 km) downstream from Dinners Creek and 5.6 mi (9.0 km) north of Addicks.

DRAINAGE AREA.--25.8 mi² (66.8 km²).

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMEDIATE, (COLS./100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS./100 ML)
NOV 28...	1250	95	6.9	12.5	240	60	11.4	111	4.0	7700	4100
29...	1110	95	7.3	12.5	280	200	9.6	93	3.6	13000	6300
DEC 04...	0950	134	7.4	9.5	450	300	9.7	87	4.4	34000	6300
FEB 05...	1010	59	6.9	7.5	240	100	9.4	81	3.4	32000	8000
06...	1010	49	6.8	6.0	200	120	10.3	85	3.1	9300	9400
07...	1030	51	7.0	5.0	140	50	10.4	84	3.0	8300	5200
12...	1110	82	6.8	11.0	200	60	8.8	82	3.6	6700	260
APR 21...	0935	76	6.8	21.0	200	150	6.5	75	3.8	140000	1700
26...	0835	124	6.6	22.5	250	250	6.6	78	4.6	38000	920
SEP 19...	1145	88	7.1	22.5	140	240	6.6	78	4.2	39000	4500
21...	1130	73	6.9	22.0	55	8.6	5.2	59	2.0	9700	2300
27...	1100	125	7.0	22.5	70	17	6.2	70	2.5	35000	340

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (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)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
NOV 28...	25	0	6.8	1.9	5.8	.5	5.3	34	0	7.6	7.5	.1
29...	23	0	6.7	1.5	5.6	.5	5.2	32	0	5.2	7.1	.1
DEC 04...	32	0	9.9	1.8	8.8	.7	5.6	46	0	5.6	9.2	.1
FEB 05...	20	3	6.9	.7	3.5	.3	2.3	21	0	--	--	--
06...	16	2	4.7	1.0	2.5	.3	2.1	17	0	4.7	3.4	.1
07...	16	1	4.6	1.1	2.7	.3	2.1	18	0	3.5	3.3	.1
12...	27	4	8.4	1.4	4.9	.4	2.8	28	0	4.9	7.0	.1
APR 21...	19	8	5.8	1.0	4.6	.5	2.6	13	0	7.0	6.2	.2
26...	42	4	14	1.8	5.6	.4	3.0	47	0	8.1	6.4	.2
SEP 19...	26	2	7.8	1.6	5.4	.5	4.5	29	0	7.5	6.7	.1
21...	19	0	5.1	1.4	5.5	.6	3.8	30	0	4.5	6.0	.1
27...	40	0	12	2.4	8.6	.6	4.5	50	0	4.6	10	.1

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 28...	6.8	59	97	21	.07	.01	.08	.04	.96	1.0	.280	--
29...	6.9	54	416	64	.16	.01	.17	.04	1.4	1.4	.290	14
DEC 04...	8.4	72	704	120	.26	.02	.28	.07	1.5	1.6	.290	21
FEB 05...	--	--	396	152	.13	.02	.15	.11	1.2	1.3	.250	13
06...	2.7	30	224	16	.08	.02	.10	.10	.86	.96	.220	4.7
07...	2.7	29	93	12	.01	.06	.07	.06	.76	.82	.150	8.8
12...	2.1	45	100	10	.04	.06	.10	.07	1.0	1.1	.160	--
APR 21...	4.1	38	124	36	.14	.06	.20	.28	1.2	1.5	.260	21
26...	5.4	68	169	35	.07	.10	.17	.12	1.7	1.8	.260	25
SEP 19...	8.7	57	84	16	.09	.04	.13	.07	1.0	1.1	.330	15
21...	7.7	49	17	0	.01	.02	.03	.04	.64	.68	.240	11
27...	13	80	33	19	2.1	.02	2.1	.07	.20	.27	.340	12

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 (20 m) upstream from reservoir outlet works, 2,700 ft (823 m) upstream from U.S. Highway 90, 1.2 mi (1.9 km) east of Addicks, and 1.4 mi (2.3 km) upstream from mouth.

DRAINAGE AREA.--129 mi² (334 km²). Prior to Aug. 1, 1977, 133 mi² (344 km²). Basin boundary change to relocation of drainage ditches. During extreme floods, basin may receive and (or) loose runoff due to basin interchange.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1948 to current year. In October 1973, the upper gages were converted to flood-hydrograph partial-record stations.

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

GAGE.--Water-stage recorders. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--The reservoir is formed by a rolled earthfill dam 61,166 ft (18,643 m) 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 by 6 ft (2.4 by 1.8 m) wide, each controlled by a vertical slide gate. Runoff in excess of maximum design capacity will be discharged around both ends of dam. 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.....	123.5	-
Ground elevation at ends of dam.....	114.0	204,500
Design flood.....	113.0	188,030
Crest of spillway (invert).....	73.0	0

COOPERATION.--The capacity curve, furnished by the Corps of Engineers, was based on a survey made in 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 37,460 acre-ft (46.2 hm³) May 15, 1968, elevation, 100.02 ft (30.486 m); minimum, reservoir was dry at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1935 reached a stage of 89.9 ft (27.40 m) at bridge on U.S. Highway 90, 2,700 ft (823 m) downstream from gage, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,750 acre-ft (31.7 hm³) Sept. 25, elevation, 98.16 ft (29.919 m); minimum, reservoir was dry for many days.

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

73.7	0	84.0	135	91.0	2,970
76.0	7	85.0	189	92.0	4,260
78.0	22	86.5	385	93.5	7,100
80.0	46	88.5	1,020	96.0	15,140
82.0	82	90.0	2,020	98.2	25,980

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	35.00	248.0	21.50	.0	.58	2.40	1.40	.00	3.00	.0
2	.00	.00	1.10	1000.0	3.40	.0	26.00	.75	10.40	.00	2.20	.5
3	3.20	.00	.53	873.0	22.90	.0	184.00	.00	2.70	.00	1.60	.3
4	.08	.00	1.30	319.0	41.80	.0	593.00	189.00	10.40	.00	1.20	.0
5	.00	.00	1.50	143.0	325.00	.0	551.00	1010.00	8.80	.00	1.00	.1
6	.00	24.10	10.00	553.0	2580.00	.0	294.00	1340.00	15.00	.00	.75	.1
7	.00	.58	50.40	2600.0	4850.00	.0	132.00	1030.00	4.80	132.00	.50	.8
8	.00	.00	57.90	3890.0	5390.00	.0	42.20	617.00	2.60	989.00	.38	1.2
9	.00	.00	36.50	3830.0	5030.00	.0	.63	287.00	1.20	1390.00	.25	1.2
10	.00	.00	2.00	3330.0	4180.00	.0	.00	118.00	.33	1010.00	.13	.9
11	.00	.00	5.20	2880.0	3400.00	.0	.00	72.10	.08	572.00	.05	.6
12	.00	.00	30.80	2260.0	2530.00	.0	.00	80.50	.00	227.00	.00	.4
13	.00	.00	46.80	1330.0	1690.00	.0	.00	86.10	.00	92.30	.00	.3
14	.00	.00	60.40	475.0	900.00	.0	.00	68.10	.00	3.30	.00	.1
15	.00	.00	76.90	150.0	456.00	.0	.00	1.10	.00	1.00	.00	.1
16	.00	.00	89.10	86.8	247.00	.0	.00	.00	.00	.18	.00	.0
17	.00	.00	96.90	53.6	132.00	.0	.00	.00	.00	.00	.00	7.5
18	.00	.00	102.00	16.1	118.00	.0	28.30	.00	.00	.00	.00	39.7
19	.00	10.40	105.00	61.6	82.00	24.0	139.00	.00	.00	.00	.00	2970.0
20	.00	9.30	37.60	677.0	26.70	29.2	1040.00	.00	.00	.00	.00	14310.0
21	.00	3.00	.00	1870.0	2.60	51.1	2110.00	.00	.00	.00	.00	19920.0
22	.00	1.10	.00	2160.0	.63	124.0	2610.00	59.30	.00	.50	.00	23100.0
23	.00	.28	.00	1900.0	.55	330.0	2410.00	100.00	.00	.75	.00	24690.0
24	.00	.00	.00	1410.0	.50	199.0	1940.00	48.50	.00	1.50	.00	25480.0
25	.00	.00	.00	891.0	.00	91.7	1460.00	1.00	.00	5.40	.00	25430.0
26	.00	77.20	.00	622.0	.00	2.7	949.00	1.10	.00	5.70	.00	24210.0
27	.00	508.00	.00	468.0	.00	.0	503.00	1.50	.00	8.60	.75	22890.0
28	.00	1010.00	.00	305.0	.00	.0	200.00	1.10	.00	9.30	10.00	21190.0
29	.00	666.00	.58	177.0	---	.0	121.00	21.70	.00	5.50	2.10	19420.0
30	.00	213.00	1.10	139.0	---	.0	67.70	2.60	.00	3.00	.75	17770.0
31	.00	---	51.10	123.0	---	.0	---	2.10	---	4.60	.00	---
MAX	3.2	1010	105	3890	5390	330	2610	1340	15	1390	10	25480
MIN	.00	.00	.00	16	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1978	MAX	4050	MIN	.00								
WTR YR 1979	MAX	25480	MIN	.00								

COLORADO RIVER BASIN

08127000 ELM CREEK AT BALLINGER, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	21.0	14.0	---	5.0	14.0	20.0	---	24.0	30.0	28.0	
2	21.5	20.0	15.5	2.0	7.0	14.0	18.0	16.0	24.0	27.0	30.0	
3	24.0	20.0	10.0	2.5	6.0	13.0	17.0	20.0	29.0	31.0	30.0	
4	25.0	19.0	9.0	6.0	5.0	13.0	19.0	18.0	25.0	30.0	---	
5	---	20.0	---	2.5	6.0	15.0	18.0	19.0	24.0	---	30.0	
6	24.0	19.0	9.0	---	5.0	15.0	18.0	20.0	28.0	30.0	31.0	
7	25.0	19.0	8.0	3.0	4.0	---	---	20.0	26.0	30.0	31.0	
8	21.0	16.0	8.0	4.0	5.0	16.0	20.0	---	27.0	34.0	30.0	
9	23.0	17.0	10.0	1.5	6.0	14.0	17.0	24.0	28.0	27.0	27.0	
10	23.0	---	9.0	2.0	10.0	14.0	18.0	23.0	26.0	31.0	---	
11	24.0	15.0	---	---	8.0	18.0	18.0	19.0	---	---	27.0	
12	---	15.0	7.0	4.0	---	---	17.0	22.0	28.0	33.0	29.0	
13	20.0	15.5	6.0	4.0	7.0	19.0	---	25.0	28.0	30.0	28.0	
14	23.0	15.0	---	4.0	---	15.0	17.0	23.0	29.0	30.0	29.0	
15	20.0	14.5	6.0	---	---	15.0	20.0	24.0	29.0	30.0	30.0	
16	21.0	13.0	6.0	6.0	8.0	12.0	19.0	24.0	28.0	32.0	30.0	
17	21.0	11.5	7.0	5.0	6.0	14.0	19.0	21.0	29.0	29.0	30.0	
18	21.0	---	10.0	7.0	5.0	17.0	20.0	22.0	29.0	28.0	31.0	
19	---	13.0	9.0	10.0	6.0	15.0	24.0	22.0	25.0	27.0	30.0	
20	23.0	12.0	11.0	9.0	7.0	14.0	22.0	---	30.0	25.0	---	
21	20.0	11.0	10.0	9.0	6.0	14.0	22.0	24.0	---	27.0	---	
22	20.0	13.0	7.0	7.0	1.0	16.0	20.0	23.0	30.0	28.0	---	
23	17.0	12.0	9.0	6.0	10.0	14.0	26.0	25.0	31.0	30.0	28.0	
24	18.0	13.0	10.0	7.0	9.0	---	28.0	23.0	31.0	31.0	31.0	
25	20.0	13.0	13.0	6.0	10.0	16.0	22.0	22.0	30.0	31.0	30.0	
26	21.0	12.0	8.0	---	11.0	15.0	22.0	25.0	25.0	32.0	30.0	
27	20.0	---	---	6.0	11.0	16.0	25.0	22.0	30.0	---	29.0	
28	21.0	14.0	11.0	7.0	11.0	---	22.0	---	30.0	31.0	30.0	
29	20.0	15.0	---	5.0	---	17.0	21.0	26.0	31.0	---	31.0	
30	---	10.0	9.0	5.0	---	18.0	19.0	26.0	30.0	29.0	28.0	
31	22.0	---	---	4.0	---	---	---	---	---	30.0	30.0	
MEAN	21.5	15.0	9.5	5.0	7.0	15.0	20.5	22.0	28.0	29.5	29.5	

SAN JACINTO RIVER BASIN

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ADDICKS RESERVOIR NEAR ADDICKS, TX--Continued

294729095372502 ADDICKS RES LINE 10, SITE 20--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV												
28...	27	0	8.0	1.7	6.3	.5	5.2	34	0	4.8	7.9	.1
28...	26	0	7.7	1.7	5.9	.5	5.0	34	0	4.8	7.4	.1
29...	28	0	8.1	1.8	6.4	.5	4.9	35	0	5.6	7.6	.1
29...	30	0	8.7	1.9	7.0	.6	5.9	37	0	6.5	8.9	.1
FEB												
05...	23	0	7.0	1.4	4.9	.4	2.7	28	0	4.6	8.2	.2
05...	23	0	7.0	1.4	4.9	.4	2.7	30	0	4.7	5.6	.2
09...	21	2	6.4	1.3	3.6	.3	2.3	23	0	4.6	3.9	.1
09...	21	3	6.3	1.3	3.2	.3	2.3	22	0	4.6	3.7	.1
15...	27	2	8.3	1.5	4.5	.4	2.7	30	0	5.1	5.8	.1
15...	29	1	9.0	1.7	5.2	.4	2.8	35	0	5.8	5.8	.2
APR												
21...	27	10	8.3	1.5	6.3	.5	3.2	21	0	13	6.0	.3
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	29	6	8.7	1.7	6.6	.5	3.6	28	0	10	6.8	.4
26...	30	0	9.5	1.6	5.6	.4	3.6	40	0	8.9	5.2	.2
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	31	5	9.8	1.7	5.7	.4	3.6	32	0	11	5.4	.2
MAY												
03...	71	2	23	3.3	18	.9	4.2	84	0	15	16	.3
SEP												
21...	21	0	5.9	1.4	3.1	.3	2.7	25	0	3.7	3.4	.1
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	20	0	5.8	1.4	3.1	.3	2.8	25	0	3.0	3.4	.1
26...	--	--	--	--	--	--	--	31	0	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	32	0	--	--	--

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV												
28...	6.8	58	272	84	.14	.01	.15	.05	1.2	1.2	.300	14
28...	6.6	56	268	84	.14	.01	.15	.06	1.2	1.3	.250	18
29...	6.7	58	164	64	.10	.01	.11	.06	1.1	1.2	.290	15
29...	7.8	65	112	0	.08	.01	.09	.06	.94	1.0	.310	11
FEB												
05...	4.6	47	320	96	.16	.02	.18	.12	1.2	1.3	.270	15
05...	4.6	46	328	88	.16	.02	.18	.12	1.2	1.3	.270	16
09...	3.9	37	144	4	.02	.06	.08	.06	.79	.85	.170	8.0
09...	3.6	36	102	6	.09	.06	.15	.05	.81	.86	.190	8.8
15...	3.8	47	38	2	.04	.02	.06	.09	.85	.94	.160	11
15...	4.2	52	60	8	.06	.02	.08	.12	.98	1.1	.190	11
APR												
21...	5.4	54	146	24	.29	.08	.37	.35	1.3	1.6	.220	20
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	5.3	57	--	--	.31	.10	.41	.32	1.5	1.8	.240	18
26...	5.4	60	38	19	.08	.04	.12	.13	1.3	1.4	.350	17
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	5.5	59	42	16	.10	.08	.18	.16	1.2	1.4	.310	18
MAY												
03...	8.5	130	682	--	.62	.30	.92	.68	1.7	2.4	.680	20
SEP												
21...	5.4	38	73	3	.03	.02	.05	.03	.82	.85	.190	8.3
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	5.2	37	79	4	.04	.02	.06	.06	.69	.75	.200	8.7
26...	--	--	--	--	.01	.00	.01	.01	.40	.41	.150	7.2
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	.01	.00	.01	.01	.49	.50	.190	9.0

SAN JACINTO RIVER BASIN

ADDICKS RESERVOIR NEAR ADDICKS, TX--Continued

294729095372503 ADDICKS RES LINE 10, SITE 30

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR							
21...	1350	1.0	100	7.0	21.5	5.4	63
21...	1352	5.0	100	7.0	21.0	4.9	56
21...	1353	9.0	110	7.1	20.5	4.2	48
21...	1355	13	120	7.0	20.5	3.2	36
26...	1315	1.0	100	6.9	23.0	4.6	55
26...	1317	5.0	101	6.8	21.0	3.9	45
26...	1319	10	103	6.8	20.5	4.1	47
26...	1321	14	103	6.8	20.5	.2	2
SEP							
21...	1000	1.0	60	6.1	22.5	3.2	37
21...	1002	10	62	6.1	22.5	3.4	39
21...	1004	17	68	6.2	22.5	3.3	38
26...	0946	1.0	86	6.5	24.0	4.3	51
26...	0948	6.5	85	6.5	24.0	3.5	41
26...	0950	13	85	6.0	23.0	.2	2

294706095372400 ADDICKS RESERVOIR OUTFLOW

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	
OCT 17...	0930	521	6.9	17.5	180	7.1	76	13	6700	170	270	110	
NOV 29...	1430	95	7.0	14.5	260	10.0	101	3.5	8000	800	1200	27	
DEC 01...	1355	130	7.1	15.5	260	8.4	87	3.9	2000	950	980	33	
04...	1455	180	7.1	13.5	240	8.7	860	4.6	16000	3000	3800	43	
JAN 30...	1015	142	7.2	6.5	280	11.3	95	4.5	4800	250	150	42	
FEB 05...	1515	81	7.2	9.5	240	11.2	101	4.2	10000	3700	9500	26	
09...	1350	65	7.0	8.0	200	11.4	99	3.0	9300	2300	3600	22	
16...	0910	110	7.6	13.5	240	9.9	98	3.5	4200	150	60	39	
21...	1150	175	7.8	11.0	240	9.8	92	6.8	50000	2300	600	54	
APR 11...	1045	340	7.0	21.5	150	7.4	86	5.9	36000	500	1400	88	
23...	1255	93	6.8	21.5	200	7.9	92	3.2	6700	500	950	29	
26...	1330	105	6.8	23.5	100	7.4	89	4.4	10000	56	480	32	
MAY 03...	0910	248	5.9	22.0	250	8.2	96	12	13000	680	850	72	
SEP 24...	1150	68	6.7	22.5	80	8.1	91	1.6	9300	150	170	21	
26...	1145	75	6.9	24.0	65	7.2	84	2.4	6700	270	190	--	
DATE		HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT 17...	0	37	5.3	47	1.9	7.4	170	0	13	58	.3	23	
NOV 29...	0	7.8	1.7	6.0	.5	4.9	36	0	5.3	8.8	.1	6.9	
DEC 01...	0	9.9	2.1	8.8	.7	6.1	45	0	5.5	10	.1	9.2	
04...	0	13	2.6	11	.7	6.9	64	0	6.0	16	.2	11	
JAN 30...	0	13	2.2	8.9	.6	3.9	53	0	4.8	9.7	.2	6.7	
FEB 05...	3	8.1	1.5	4.6	.4	2.9	28	0	3.3	5.4	.2	4.6	
09...	2	6.5	1.3	3.6	.3	2.3	24	0	5.1	3.8	.1	3.9	
16...	3	12	2.3	6.4	.4	2.7	45	0	4.7	6.2	.2	6.6	
21...	1	17	2.9	12	.7	3.1	65	0	8.5	19	.2	8.1	
APR 11...	0	28	4.3	29	1.3	4.0	120	0	11	26	.3	3.2	
23...	9	9.1	1.6	5.5	.4	3.3	25	0	10	5.9	.2	5.0	
26...	3	10	1.8	6.3	.5	3.3	35	0	6.0	5.8	.2	5.9	
MAY 03...	2	23	3.5	18	.9	4.1	85	0	14	23	.3	8.7	
SEP 24...	0	6.2	1.4	3.7	.4	3.2	27	0	3.3	4.4	.1	6.4	
26...	--	--	--	--	--	--	31	0	--	--	--	--	

SAN JACINTO RIVER BASIN

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ADDICKS RESERVOIR NEAR ADDICKS, TX--Continued

294706095372400 ADDICKS RESERVOIR OUTFLOW

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 17...	275	76	20	1.2	.22	1.4	1.3	1.5	2.8	2.30	13
NOV 29...	59	156	20	.09	.01	.10	.05	.95	1.0	.290	14
DEC 01...	74	192	60	.10	.03	.13	.11	.99	1.1	.430	20
04...	98	484	92	.26	.04	.30	.19	1.3	1.5	.560	22
JAN 30...	76	148	68	.19	.06	.25	.32	1.1	1.4	.340	14
FEB 05...	44	304	72	.13	.04	.17	.12	1.2	1.3	.260	17
09...	38	120	14	.04	.06	.10	.06	.90	.96	.190	11
16...	63	85	30	.08	.02	.10	.10	1.0	1.1	.140	17
21...	103	252	56	.22	.04	.26	.28	1.5	1.8	.200	19
APR 11...	165	320	19	1.1	.34	1.4	.34	1.5	1.8	.900	20
23...	54	78	26	.20	.08	.28	.36	1.1	1.5	.260	18
26...	57	19	8	.10	.06	.16	.19	1.0	1.2	.300	18
MAY 03...	137	478	94	.58	.31	.89	.73	2.1	2.8	.510	17
SEP 24...	42	36	11	.05	.00	.05	.03	.49	.52	.160	5.7
26...	--	--	--	.03	.00	.03	.02	.30	.32	.170	6.5

SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX

LOCATION.--Lat 29°45'42", long 95°36'20", Harris County, Hydrologic Unit 12040104, near right bank at bridge on Dairy-Ashford Road over rectified channel, 1.8 mi (2.9 km) downstream from South Mayde Creek, and 2.6 mi (4.2 km) southeast of Addicks.

DRAINAGE AREA.--293 mi² (759 km²), unadjusted for basin boundary changes.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.40 ft (0.427 m) 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 (370 m) to right at same datum. Feb. 2 to May 21, 1948, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. Floodflow regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) 3.2 and 3.0 mi (5.1 and 4.8 km) upstream, respectively, total capacity 315,900 acre-ft (390 hm³) Extreme low flow is sustained by drainage from irrigated lands.

AVERAGE DISCHARGE.--34 years, 205 ft³/s (5.806 m³/s), 148,500 acre-ft/yr (183 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) Aug. 29, 1945, gage height, 81.23 ft (24.759 m), former site; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 85.6 ft (26.09 m) in December 1935, adjusted to former site from floodmark 0.5 mi (0.8 km) downstream, on basis of slope of flood of Aug. 29, 1945, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,810 ft³/s (79.6 m³/s) Sept. 19, gage height, 68.15 ft (20.772 m); minimum daily, 9.4 ft³/s (0.27 m³/s) Oct. 31.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	9.6	802	759	556	34	86	573	132	24	192	131
2	41	12	552	839	167	33	103	408	267	23	193	118
3	43	13	743	1040	286	50	591	390	377	21	177	79
4	95	13	795	980	497	42	669	989	419	20	138	61
5	75	12	618	915	838	35	839	977	405	32	91	128
6	44	160	225	1140	1240	31	764	931	393	32	81	117
7	35	162	388	1240	1110	28	691	854	347	335	109	162
8	34	72	574	1060	1010	27	622	784	139	282	101	266
9	33	43	627	972	981	28	414	831	83	354	200	228
10	29	31	411	914	997	32	168	873	45	757	211	138
11	31	28	157	932	967	32	50	532	30	949	144	85
12	28	30	66	987	944	28	47	34	26	781	101	64
13	26	25	39	1060	920	24	38	29	25	384	78	51
14	26	22	42	990	891	26	34	250	25	250	65	44
15	23	22	47	936	846	27	30	550	25	97	68	40
16	19	19	47	970	799	30	28	76	30	91	110	37
17	19	23	41	973	800	29	26	33	26	74	98	65
18	23	24	35	932	778	27	90	32	40	89	74	600
19	22	47	29	853	734	138	630	34	30	102	73	1740
20	21	177	167	1090	662	565	575	33	23	124	146	1590
21	20	176	104	1040	460	746	337	34	20	112	92	443
22	18	83	30	1020	108	879	306	232	18	119	62	414
23	15	49	27	990	100	857	599	522	18	141	58	522
24	15	39	25	944	89	777	937	508	21	125	65	628
25	14	30	23	909	75	685	836	188	26	198	50	823
26	13	422	22	891	59	552	779	50	48	273	45	1710
27	15	425	22	859	48	142	746	55	100	322	49	1720
28	13	586	21	830	43	49	710	46	35	346	162	1690
29	12	891	80	791	---	38	759	138	28	359	199	1660
30	11	850	189	773	---	34	682	175	26	299	101	1640
31	9.4	---	322	702	---	103	---	120	---	237	73	---
TOTAL	877.4	4495.6	7270	29331	17005	6128	13186	11281	3227	7352	3406	16994
MEAN	28.3	150	235	946	607	198	440	364	108	237	110	566
MAX	95	891	802	1240	1240	879	937	989	419	949	211	1740
MIN	9.4	9.6	21	702	43	24	26	29	18	20	45	37
AC-FT	1740	8920	14420	58180	33730	12150	26150	22380	6400	14580	6760	33710
CAL YR 1978	TOTAL	74823.6	MEAN 205	MAX 1990	MIN 9.4	AC-FT 148400						
WTR YR 1979	TOTAL	120553.0	MEAN 330	MAX 1740	MIN 9.4	AC-FT 239100						

SAN JACINTO RIVER BASIN

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08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical, biochemical, and pesticide analyses: August 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
17...	0830	20	629	6.8	18.0	100	40	5.9	64	11
NOV										
07...	1445	153	523	7.3	17.5	120	200	7.4	80	15
28...	1435	627	135	6.9	15.0	400	200	11.4	116	4.1
29...	1015	946	125	7.2	14.0	280	120	9.0	90	3.5
DEC										
01...	1435	796	141	7.1	16.0	220	100	8.3	86	3.5
04...	0845	814	175	7.3	--	200	80	8.1	79	3.6
13...	1005	37	354	7.1	9.0	240	100	10.9	97	3.6
JAN										
23...	1010	1000	118	7.4	12.0	440	110	9.3	89	5.5
30...	1225	812	152	7.1	7.0	240	85	10.5	89	4.0
FEB										
05...	1435	850	130	7.2	8.0	240	100	9.8	85	4.5
06...	1335	1280	105	7.1	7.5	240	85	10.1	87	3.3
07...	0945	1120	95	7.1	6.5	120	100	10.2	86	3.3
09...	1455	1020	79	7.0	8.0	200	85	11.0	96	2.8
12...	0920	946	80	6.8	8.5	240	60	9.6	85	3.4
16...	1000	773	104	7.5	14.0	200	60	9.6	96	3.6
21...	0905	507	163	6.7	8.5	240	80	9.3	82	4.7
MAR										
12...	1250	27	601	7.5	16.5	30	60	7.8	82	5.8
APR										
11...	1135	50	426	7.3	22.0	150	130	6.4	75	9.6
23...	1355	766	109	6.8	22.0	250	200	7.8	92	3.8
26...	1205	781	108	6.8	23.0	200	140	7.2	86	3.9
MAY										
03...	1200	390	166	6.4	22.5	250	75	7.5	88	9.9
21...	1405	34	921	7.7	25.5	15	25	6.6	82	16
JUN										
27...	0955	135	328	7.2	27.5	80	460	5.9	76	17
SEP										
12...	1045	64	464	7.3	25.5	20	35	7.1	89	5.7
17...	1940	89	330	7.3	24.5	70	75	7.3	89	16
20...	1045	1630	87	6.9	22.5	80	61	6.7	79	3.4
24...	1300	632	102	7.0	24.0	70	41	7.0	81	2.3
26...	0935	1730	95	6.9	23.0	65	--	6.3	72	2.5

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS. PER 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	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)
OCT										
17...	2700	130	58	130	0	40	6.5	57	2.2	7.3
NOV										
07...	110000	7700	3100	--	--	--	--	--	--	--
28...	32000	8700	3200	33	0	10	2.0	7.9	.6	4.6
29...	32000	5000	3200	32	0	9.5	1.9	7.0	.5	4.9
DEC										
01...	7300	300	450	37	1	11	2.3	9.5	.7	5.6
04...	9700	2000	390	44	0	13	2.7	12	.8	6.1
13...	3000	28	40	86	8	26	5.0	32	1.5	6.0
JAN										
23...	6700	780	850	--	--	--	--	--	--	--
30...	7700	1000	620	42	0	13	2.4	10	.7	3.6
FEB										
05...	38000	7300	7800	36	0	11	2.1	8.6	.6	2.9
06...	11000	2200	6900	32	0	11	1.1	6.2	.5	2.6
07...	25000	1200	6200	31	2	9.3	1.9	5.9	.5	2.5
09...	620000	75000	6000	26	2	7.9	1.5	4.6	.4	2.2
12...	4800	200	370	26	1	7.9	1.5	4.6	.4	2.3
16...	4000	500	180	35	5	11	1.9	6.6	.5	2.4
21...	13000	980	300	49	3	15	2.7	12	.8	2.9
MAR										
12...	14000	580	12	140	0	44	8.1	61	2.2	4.7
APR										
11...	9000	160	190	110	0	35	6.2	37	1.5	4.3
23...	29000	750	1000	38	14	12	1.9	6.8	.5	3.3
26...	14000	130	460	32	4	10	1.8	6.7	.5	3.3
MAY										
03...	13000	600	720	47	0	15	2.4	12	.8	2.9
21...	16000	820	140	190	14	62	9.6	100	3.1	5.9
JUN										
27...	56000	4400	6000	67	0	21	3.5	30	1.6	5.4
SEP										
12...	4000	350	160	--	--	--	--	--	--	--
17...	49000	9300	7600	--	--	--	--	--	--	--
20...	30000	4800	2100	29	0	9.1	1.6	3.9	.3	2.6
24...	12000	600	240	31	0	9.1	2.1	6.6	.5	3.4
26...	7000	320	500	--	--	--	--	--	--	--

SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT 17...	170	0	23	73	.3	21	312	57	16	1.5
NOV 07...	--	--	--	--	--	--	--	284	156	.87
28...	40	0	6.7	9.8	.1	7.6	68	320	36	.35
29...	42	0	6.7	8.7	.1	7.4	67	164	20	.21
DEC 01...	44	0	6.1	12	.1	9.9	78	192	24	.20
04...	55	0	9.2	18	.1	18	106	156	72	.11
13...	94	0	27	36	.2	18	197	144	52	.59
JAN 23...	--	--	--	--	--	--	--	190	24	.08
30...	53	0	6.9	18	.2	7.4	88	136	52	.17
FEB 05...	46	0	5.5	9.1	.2	7.0	69	208	80	.27
06...	39	0	7.8	6.8	.1	6.4	61	168	12	.22
07...	35	0	6.4	6.2	.1	6.0	56	160	32	.14
09...	29	0	5.4	4.9	.2	4.9	46	36	3	.08
12...	30	0	5.5	5.3	.1	4.5	46	102	14	.07
16...	37	0	11	6.9	.1	5.5	64	86	22	.06
21...	56	0	8.1	19	.2	7.1	95	134	42	.25
MAR 12...	180	0	36	63	.7	19	325	105	1	1.2
APR 11...	140	0	16	47	.3	7.1	222	231	38	1.1
23...	29	0	11	9.8	.2	5.9	66	216	40	.16
26...	35	0	9.8	5.9	.2	5.8	61	54	12	.10
MAY 03...	250	--	17	--	.2	6.7	213	226	44	.27
21...	220	0	36	140	.4	16	478	64	5	.69
JUN 27...	90	0	17	32	.3	7.8	162	770	108	.59
SEP 12...	--	--	--	--	--	--	--	86	0	.72
17...	--	--	--	--	--	--	--	184	38	.56
20...	37	0	4.0	3.7	.1	7.6	51	224	3	.04
24...	44	0	5.5	7.0	.1	9.4	65	41	0	.12
26...	--	--	--	--	--	--	--	--	--	.01

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 17...	.24	1.7	.59	1.2	1.8	2.6	11	--	--
NOV 07...	.09	.96	.64	1.5	2.1	1.8	16	--	.00
28...	.01	.36	.07	1.3	1.4	.35	16	--	--
29...	.01	.22	.08	1.2	1.3	.33	15	--	--
DEC 01...	.03	.23	.08	.84	.92	.42	17	--	--
04...	.02	.13	.11	.89	1.0	.39	27	--	--
13...	.07	.66	.55	1.5	2.0	1.4	14	--	.20
JAN 23...	.04	.12	.22	1.2	1.4	.30	13	--	--
30...	.04	.21	.30	1.1	1.4	.35	33	--	--
FEB 05...	.04	.31	.19	1.3	1.5	.33	18	--	--
06...	.04	.26	.12	.88	1.0	.25	12	--	--
07...	.06	.20	.07	.93	1.0	.18	24	--	--
09...	.06	.14	.08	.88	.96	.22	9.4	--	--
12...	.06	.13	.11	.35	.46	.23	11	--	--
16...	.02	.08	.11	.89	1.0	.18	11	--	--
21...	.04	.29	.30	1.2	1.5	.27	14	--	--
MAR 12...	.51	--	.83	.67	--	1.5	12	10	--
APR 11...	.40	1.5	.36	1.4	1.8	1.1	18	--	--
23...	.08	.24	.18	2.6	2.8	.21	--	--	--
26...	.04	.14	.13	1.1	1.2	.31	15	--	--
MAY 03...	.18	.45	.28	1.5	1.8	.45	18	--	--
21...	.41	1.1	.41	.89	1.3	1.4	9.7	--	.20
JUN 27...	.32	.91	.51	1.1	1.6	.44	12	2	.00
SEP 12...	.68	1.4	2.3	.60	2.9	3.4	11	--	--
17...	.25	.81	.36	1.0	1.4	1.0	20	--	--
20...	.02	.06	.05	.79	.84	.24	9.7	--	--
24...	.02	.14	.07	.22	.29	.24	8.1	--	--
26...	.00	.01	.01	.94	.95	.19	8.6	--	--

SAN JACINTO RIVER BASIN

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08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 12...	1250	2	100	0	0	0	10
APR 23...	1355	2	100	1	0	3	600
JUN 27...	0955	3	100	0	10	1	140
SEP 20...	1045	2	50	<1	0	0	250
24...	1300	2	50	3	0	0	110

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 12...	0	0	.0	1	0	20
APR 23...	0	0	.0	0	0	10
JUN 27...	0	0	.0	0	0	20
SEP 20...	2	2	.0	0	0	9
24...	1	<1	.0	0	0	7

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 28...	1435	.0	.00	.0	.00	.00	.00	.05
FEB 05...	1435	.0	.00	.0	.00	.00	.00	.02
MAR 12...	1250	.0	.00	.0	.00	.00	.00	.11
JUN 27...	0955	.0	.00	.0	.00	.00	.00	.91

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)	METHYL PARA- THION, TOTAL (UG/L)
NOV 28...	.00	.00	.00	.00	.00	.00	.00	.00	.05
FEB 05...	.00	.00	.00	.00	.00	.00	.00	.00	.03
MAR 12...	.00	.00	.00	.00	.00	.01	.00	.00	.00
JUN 27...	.00	.00	.00	.00	.00	.00	.02	.56	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 28...	.00	.00	.00	0	.00	.06	.01	.01
FEB 05...	.00	.00	.00	0	.00	.02	.00	.00
MAR 12...	.00	.00	.00	0	.00	.03	.00	.00
JUN 27...	.00	.00	.00	0	.00	.22	.02	.00

SAN JACINTO RIVER BASIN

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 (30 m) downstream from Rummel Creek, 3.5 mi (5.6 km) downstream from station 08073500, and 3.7 mi (6.0 km) upstream from station 08073700.

DRAINAGE AREA.--307 mi² (795 km²), 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 (0.204 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Floodflow regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) 10.1 and 10.3 mi (16.3 and 16.6 km) upstream, respectively. Low flow is sustained by sewage effluent from Houston suburbs. The Corps of Engineers has a gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years, 322 ft³/s (9.119 m³/s), 233,300 acre-ft/yr (288 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s (107 m³/s) Mar. 20, 1972, gage height, 62.15 ft (18.943 m); minimum daily, 25 ft³/s (0.71 m³/s) Nov. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,710 ft³/s (105 m³/s) Sept. 19, gage height, 61.28 ft (18.678 m); minimum daily, 41 ft³/s (1.16 m³/s) Oct. 31, Nov. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	41	839	874	593	65	124	585	168	52	217	262
2	71	42	580	837	246	64	143	397	522	50	214	163
3	86	44	741	1030	359	87	794	376	393	48	200	115
4	120	42	829	979	522	73	705	1230	472	48	171	99
5	105	42	669	969	982	61	877	988	450	75	137	159
6	76	301	284	1360	1380	57	807	924	410	60	129	154
7	66	181	393	1380	1130	55	726	839	379	350	157	250
8	63	104	582	1060	1040	54	662	764	213	300	130	296
9	61	72	644	990	978	54	478	782	123	400	209	266
10	57	59	475	929	1010	58	222	848	100	800	235	173
11	59	56	205	981	978	58	72	612	85	1000	187	121
12	56	57	114	972	956	55	68	67	70	900	145	103
13	54	54	66	1060	934	51	57	52	65	500	117	88
14	54	51	88	998	911	50	51	205	60	250	100	79
15	52	53	97	936	872	50	47	557	55	150	109	72
16	49	48	76	969	824	59	45	108	65	120	204	67
17	49	56	67	979	858	56	43	49	55	100	131	138
18	51	52	59	952	828	52	154	48	75	110	107	770
19	49	187	56	894	762	205	748	48	60	142	111	2410
20	50	190	170	1180	691	608	1010	47	50	237	158	2250
21	50	199	161	1040	512	899	367	47	48	161	123	630
22	48	122	56	1020	154	1000	299	287	48	150	101	473
23	47	83	51	1010	216	908	494	510	48	172	98	589
24	46	68	47	941	163	805	904	530	50	150	101	745
25	46	55	45	905	118	709	808	252	55	281	88	838
26	46	702	45	909	97	591	746	86	60	313	83	1570
27	46	592	46	864	79	203	706	89	100	377	100	1670
28	45	560	44	840	75	77	670	79	70	393	234	1640
29	44	975	198	806	---	67	809	150	60	400	254	1620
30	43	860	232	825	---	59	668	200	55	341	130	1600
31	41	---	347	717	---	104	---	151	---	270	107	---
TOTAL	1813	5948	8306	30206	18268	7294	14304	11907	4464	8700	4587	19410
MEAN	58.5	198	268	974	652	235	477	384	149	281	148	647
MAX	120	975	839	1380	1380	1000	1010	1230	522	1000	254	2410
MIN	41	41	44	717	75	50	43	47	48	48	83	67
AC-FT	3600	11800	16470	59910	36230	14470	28370	23620	8850	17260	9100	38500

CAL YR 1978 TOTAL 88089 MEAN 241 MAX 2520 MIN 34 AC-FT 174700
WTR YR 1979 TOTAL 135207 MEAN 370 MAX 2410 MIN 41 AC-FT 268200

NOTE.--No gage-height record June 10 to July 17.

SAN JACINTO RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical and biochemical analyses: December 1978 to September 1979.

PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: June to September 1979.

WATER TEMPERATURES: June to September 1979.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 922 micromhos June 25; minimum daily, 93 micromhos Sept. 20

WATER TEMPERATURES: Maximum daily, 30.5°C July 1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DEC												
13...	1055	72	595	7.1	14.5	180	50	8.9	90	7.2	780	60
JAN												
23...	1110	1030	150	7.2	12.0	360	110	9.4	90	5.4	9700	920
MAR												
12...	1135	59	774	7.3	20.0	40	25	6.9	78	15	2800	40
MAY												
11...	1125	774	178	7.1	24.5	--	110	6.9	84	4.9	500	230
JUN												
14...	0935	60	770	7.6	25.0	--	17	6.0	74	4.4	--	2
JUL												
05...	1130	75	740	7.2	27.5	--	6.0	4.6	59	1.4	--	6000
AUG												
28...	1350	142	490	7.0	27.0	40	290	5.8	73	6.8	--	150

DATE	STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
DEC												
13...	4	100	0	32	6.0	75	3.2	6.9	200	0	30	59
JAN												
23...	430	42	0	13	2.4	12	.8	3.7	58	0	12	12
MAR												
12...	6	130	0	40	8.0	95	3.6	7.0	250	0	33	74
MAY												
11...	78	51	0	16	2.6	15	.9	3.4	69	0	10	12
JUN												
14...	10	140	0	41	8.9	89	3.3	7.6	250	0	29	80
JUL												
05...	2500	--	--	--	--	--	--	5.8	270	0	33	77
AUG												
28...	130	110	0	34	5.0	50	2.1	5.5	190	0	22	46

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (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)
DEC												
13...	.4	22	--	330	69	24	.38	.09	.47	4.3	2.3	6.6
JAN												
23...	.1	7.7	--	92	182	28	.09	.06	.15	.63	1.1	1.7
MAR												
12...	.6	33	--	414	47	37	.40	.54	.94	7.2	1.0	8.2
MAY												
11...	.2	4.4	139	98	--	--	.10	.23	.33	.61	1.3	1.9
JUN												
14...	.4	21	424	400	30	20	.75	.55	1.3	5.2	3.2	8.4
JUL												
05...	.4	12	393	--	15	12	.52	.58	1.1	6.6	.00	5.4
AUG												
28...	.4	16	265	273	568	60	.64	.56	1.2	2.6	1.5	4.1

SAN JACINTO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 13...	--	1.20	--	15	--	--	--	.80	--	--	--
JAN 23...	--	.330	--	16	--	--	--	.10	--	--	--
MAR 12...	--	4.40	--	8.4	--	--	8	.10	--	--	--
MAY 11...	1.3	.410	.360	--	10	1.7	--	--	81	169	75
JUN 14...	--	6.50	--	14	--	--	--	--	28	4.5	82
JUL 05...	6.1	1.20	.720	7.5	--	--	--	--	20	4.0	90
AUG 28...	.80	.910	.920	--	6.3	3.2	--	--	--	--	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 12...	1135	--	2	--	--	100	--	--	0	--
MAY 11...	1125	3	2	100	0	100	2	1	1	10
AUG 28...	1350	5	4	0	0	0	0	0	0	20

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
MAR 12...	--	0	--	--	--	--	--	0	--	--
MAY 11...	10	0	1	1	0	18	11	7	3800	3700
AUG 28...	20	0	4	4	0	7	5	2	6200	6100

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
MAR 12...	10	--	--	0	--	--	60	--	--	.0
MAY 11...	80	22	22	0	80	70	10	1.0	1.0	.0
AUG 28...	60	30	30	0	160	150	10	.0	.0	.0

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 12...	--	--	1	--	--	0	--	--	20
MAY 11...	0	0	0	0	0	0	40	30	10
AUG 28...	1	1	0	0	0	0	30	20	8

SAN JACINTO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	
MAR 12...	1135	.0	.00	.0	.00	.00	.00	.66	
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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 12...	.01	.00	.00	.00	.00	.00	.03	.11	.00
DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	
MAR 12...	.00	.00	.00	0	.00	.06	.00	.00	
DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)				
JUL 05...	21	2.68	3.62	.000	.000				

SAN JACINTO RIVER BASIN

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

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	MAY 11, 79 1125	JUN 14, 79 0935	JUL 5, 79 1130	AUG 28, 79 1335
TOTAL CELLS/ML	4900	3100	19000	4100
DIVERSITY: DIVISION	1.5	0.8	0.2	0.5
..CLASS	1.5	0.8	0.2	0.5
...ORDER	1.7	1.5	0.3	0.6
....FAMILY	2.4	1.6	0.6	0.6
.....GENUS	0.0	1.9	0.6	0.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	170	4	--	-	--	-	--	-
...HYDRODICTYACEAE								
...PEDIASTRUM	150	3	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	370	8	*	0	--	-	--	-
...DICTYOSPHAERIUM	1800#	37	--	-	--	-	--	-
...KIRCHNERIELLA	58	1	*	0	--	-	--	-
...OOCYSTIS	*	0	--	-	--	-	--	-
...SELENASTRUM	--	-	26	1	--	-	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	--	-	52	2	--	-	--	-
...SCENEDESMUS	270	6	150	5	230	1	--	-
...TETRASTRUM	--	-	52	2	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE	38	1	--	-	--	-	--	-
...MESOSTIGMA	*	0	--	-	--	-	--	-
...ZYGNEMALES								
...DESMIDIACEAE								
...CLOSTERIUM	*	0	--	-	--	-	--	-
...STAUSTRUM	38	1	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...CYCLOTELLA	650	13	100	3	*	0	130	3
...MELOSIRA	96	2	--	-	--	-	--	-
...PENNIALES								
...NAVICULACEAE								
...NAVICULA	--	-	--	-	*	0	--	-
...NITZSCHIAEAE								
...NITZSCHIA	120	2	52	2	260	1	390	9
..XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
...OPHIOCYTIUM	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	440	9	520#	17	100	1	--	-
...ANACYSTIS	480	10	150	5	*	0	--	-
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	150	1	--	-
...OSCILLATORIAEAE								
...OSCILLATORIA	--	-	1900#	63	18000#	92	3600#	88
...RIVULARIAEAE								
...RAPHIIDIOPSIS	--	-	--	-	630	3	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	38	1	--	-	--	-	--	-
...PHACUS	--	-	--	-	*	0	--	-
...TRACHELOMONAS	96	2	--	-	--	-	--	-

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

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

SAN JACINTO RIVER BASIN

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

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	1813	**	**	**	**	**	**	**	**
NOV. 1978.....	5948	**	**	**	**	**	**	**	**
DEC. 1978.....	8306	**	**	**	**	**	**	**	**
JAN. 1979.....	30206	**	**	**	**	**	**	**	**
FEB. 1979.....	18268	**	**	**	**	**	**	**	**
MAR. 1979.....	7294	**	**	**	**	**	**	**	**
APR. 1979.....	14304	**	**	**	**	**	**	**	**
MAY 1979.....	11907	**	**	**	**	**	**	**	**
JUNE 1979.....	4464	472	260	3130	47	570	21	259	94
JULY 1979.....	8700	347	190	4520	33	785	18	412	76
AUG. 1979.....	4587	456	250	3100	46	565	21	259	92
SEPT 1979.....	19410	171	98	5120	14	712	12	619	50
TOTAL	135207	**	**	**	**	**	**	**	**
WTD.AVG.	370	**	**	**	**	**	**	**	**

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									412	791	374	425
2									261	768	387	485
3									779	799	431	611
4									274	762	470	613
5									267	548	503	597
6									257	642	474	462
7									290	450	424	346
8									407	481	443	335
9									517	205	350	370
10									587	193	327	401
11									583	190	345	462
12									658	220	454	511
13									692	247	459	543
14									722	273	501	587
15									778	478	527	600
16									833	481	450	616
17									840	521	497	580
18									826	534	525	410
19									813	500	516	109
20									897	400	495	93
21									844	510	478	156
22									880	522	547	151
23									909	501	588	152
24									893	490	591	107
25									922	420	600	106
26									889	412	618	109
27									373	402	590	108
28									639	401	500	106
29									704	398	351	110
30									712	369	448	115
31									---	381	524	---
MEAN									649	461	477	346

SAN JACINTO RIVER BASIN

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									26.5	30.5	28.0	27.0
2									27.5	30.0	29.0	27.5
3									27.0	24.5	27.0	26.0
4									26.0	27.5	30.0	25.0
5									25.0	27.5	29.5	26.5
6									26.0	27.0	26.5	26.0
7									28.0	26.5	27.0	25.0
8									29.0	27.5	27.0	25.0
9									29.0	26.0	26.0	26.0
10									28.0	27.0	27.0	24.5
11									26.5	27.5	28.0	25.5
12									24.5	28.0	27.5	25.5
13									24.5	27.5	27.0	25.0
14									25.0	27.0	27.5	26.0
15									25.5	28.0	28.0	24.5
16									22.5	27.5	27.0	25.0
17									26.0	29.0	26.5	---
18									26.5	27.5	26.5	24.0
19									27.0	---	26.0	23.0
20									28.0	26.0	26.0	22.5
21									27.5	27.0	27.0	24.5
22									27.0	29.5	28.5	23.5
23									27.5	27.5	26.5	24.0
24									29.5	27.5	27.0	25.0
25									27.0	27.0	25.0	25.0
26									28.0	26.5	26.0	24.5
27									25.0	26.0	27.5	25.0
28									26.5	29.0	26.0	24.5
29									28.0	28.0	26.0	23.5
30									28.5	28.0	27.0	22.5
31									---	20.5	28.5	---
MEAN									27.0	27.5	27.0	25.0

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LOCATION.--Lat 29°44'48", long 95°31'24", Harris County, Hydrologic Unit 12040104, on downstream side of bridge on Piney Point Road, village of Piney Point, 3.7 mi (6.0 km) downstream from Rummel Creek, 7.2 mi (11.6 km) downstream from gage near Addicks (station 08073500), and 12.5 mi (20.1 km) upstream from gage at Houston (station 08074000).

PERIOD OF RECORD.--October 1963 to September 1976, October 1976 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 1.35 ft (0.412 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Station is operated for the purpose of gate regulations at Barker and Addicks Reservoirs (stations 08072500 and 08073000), located 14.0 and 13.8 mi (22.5 and 22.2 km) upstream, respectively. Low flow is partly sustained by sewage effluent from Houston suburbs. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years (water years 1963-76), 265 ft³/s (7.505 m³/s), 192,000 acre-ft/yr (237 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,470 ft³/s (127 m³/s) June 13, 1973, gage height, 54.98 ft (16.758 m); maximum gage height, 55.15 ft (16.810 m) Sept. 19, 1979; minimum daily discharge, 6.0 ft³/s (0.17 m³/s) Dec. 6, 7, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 55.15 ft (16.810 m) Sept. 19; minimum, 32.29 ft (9.842 m) Oct. 31, Nov. 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.93	32.68	40.12	41.99	39.11	33.65	34.20	39.06	35.09	---	35.57	40.23
2	33.61	32.74	---	40.63	37.32	33.64	---	38.51	46.23	---	35.22	37.05
3	35.13	32.81	---	41.16	37.74	34.12	43.20	37.31	37.66	---	35.12	34.50
4	34.56	32.80	40.12	41.10	40.77	34.04	41.00	44.76	39.45	---	34.98	34.00
5	34.26	33.74	39.72	42.55	42.57	33.61	40.18	42.22	38.46	---	34.77	---
6	33.88	39.48	36.90	46.38	43.78	33.49	39.96	40.90	37.25	---	34.53	---
7	33.50	35.56	37.66	45.86	42.67	33.35	39.48	40.57	37.18	---	34.97	---
8	33.42	34.68	38.76	41.78	41.42	33.32	39.14	40.08	36.42	---	34.30	---
9	33.36	33.92	38.85	41.05	41.02	33.29	38.64	40.37	34.68	---	35.53	---
10	33.27	33.46	38.77	40.63	---	33.50	36.62	40.41	34.08	39.42	35.63	---
11	33.26	33.36	36.27	41.10	---	33.50	33.97	40.17	33.74	39.47	35.19	34.38
12	33.24	33.35	34.95	41.28	40.50	33.42	33.77	35.52	33.58	39.30	34.70	33.94
13	33.10	33.34	33.84	41.37	40.45	33.19	33.50	33.47	33.40	38.84	34.30	33.77
14	33.17	33.18	35.55	41.24	40.30	33.33	33.30	38.22	33.27	37.25	34.03	33.59
15	33.08	33.15	35.45	40.90	40.10	33.22	33.17	38.75	33.26	35.84	---	33.54
16	32.97	33.77	34.03	40.86	39.85	33.69	33.12	37.62	33.28	34.39	38.22	33.32
17	32.95	33.86	33.90	40.82	---	33.42	33.10	33.38	33.31	34.15	---	37.30
18	33.02	33.18	33.73	40.77	---	33.33	38.08	33.31	33.52	34.20	34.38	45.95
19	33.01	38.82	33.62	40.65	---	40.30	47.78	33.27	33.38	36.60	34.68	55.15
20	32.97	35.76	36.43	43.93	39.20	39.90	47.78	33.22	33.40	39.60	34.69	55.15
21	32.98	35.62	36.38	41.52	38.80	42.60	39.03	33.20	33.30	37.60	34.53	45.13
22	32.94	34.80	33.70	41.02	35.40	43.01	36.78	38.04	33.26	34.75	34.08	38.45
23	32.94	---	33.60	41.19	38.60	41.36	40.38	38.32	33.31	34.90	33.80	39.40
24	32.86	33.55	33.53	40.74	---	---	40.76	38.32	33.45	34.85	33.87	39.61
25	32.80	---	33.45	40.47	---	---	40.49	37.52	---	39.07	33.75	41.60
26	32.94	44.50	33.50	40.57	34.00	---	39.99	---	---	37.35	33.57	45.05
27	32.88	41.40	33.48	40.27	33.85	---	39.71	---	---	37.85	35.18	45.10
28	32.81	39.80	33.46	40.05	33.84	---	39.52	---	---	37.60	38.10	45.10
29	32.79	41.62	38.73	39.87	---	---	41.86	37.63	---	37.08	37.65	44.95
30	32.76	40.80	35.80	40.46	---	33.23	40.37	36.18	---	36.90	34.90	44.80
31	32.69	---	37.63	39.54	---	---	---	35.43	---	36.07	34.38	---
MAX	35.13	---	---	46.38	---	---	---	---	---	---	---	---
MIN	32.69	---	---	39.54	---	---	---	---	---	---	---	---

SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°45'36", long 95°24'30", Harris County, Hydrologic Unit 12040104, at bridge on Shepherd Drive in Houston and 0.8 mi (1.3 km) upstream from Waugh Drive.

DRAINAGE AREA.--358 mi² (927 km²), 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. Datum of gage is 1.36 ft (0.414 m) 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 (1.3 km) downstream at 4.08-foot (1.244 m) lower datum. Jan. 17, 1962, to Sept. 30, 1973, auxiliary water-stage recorder 0.8 mi (1.3 km) downstream. Water-stage recorder at Main Street (station 08074600) used as auxiliary gage after Sept. 30, 1973.

REMARKS.--Water-discharge records fair. Although floodflows are regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) located 26.3 and 26.8 mi (42.3 and 42.6 km) 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 which produce peak discharges above 1,500 ft³/s (42.5 m³/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. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years (water years 1936-44) unregulated, 272 ft³/s (7.703 m³/s), 197,100 acre-ft/yr (243 hm³/yr); 26 years (water years 1944-57, 1962-75) regulated, 274 ft³/s (7.760 m³/s), 198,500 acre-ft/yr (245 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Aug. 30, 1945, gage height, 28.82 ft (8.784 m), at site 0.8 mi (1.3 km) downstream at present datum; minimum daily, 1.3 ft³/s (0.037 m³/s) May 24, 1939, Nov. 5, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--All flood data at site 0.8 mi (1.3 km) downstream at present datum. Maximum gage height since at least 1835, 49.0 ft (14.94 m) Dec. 9, 1935, discharge 40,000 ft³/s (1,130 m³/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (13.26 m), discharge 19,000 ft³/s (538 m³/s), at bridge on Capitol Avenue affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,210 ft³/s (261 m³/s) Sept. 19, gage height, 27.59 ft (8.409 m); minimum discharge not determined (affected by tides).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	1250	---	---	---	---	---	---		1120
2		---	---	829	---	---	---	---	1870	---		883
3		---	---	---	---	---	1660	---	771	---		---
4		---	---	---	577	---	1210	1780	---	---		---
5		---	---	1160	1450	---	843	1340	---	---		---
6		---	---	2120	1940	---	---	998	---	---		---
7		---	---	2200	1410	---	---	---	---	---		752
8		---	---	1200	1100	---	---	---	---	---		600
9		---	---	1100	949	---	---	---	---	---		---
10		---	---	1000	---	---	---	---	---	---		---
11		---	---	---	---	---	---	---	---	---		---
12		---	---	---	---	---	---	---	---	---		---
13		---	---	---	---	---	---	---	---	---		---
14		---	---	---	---	---	---	---	---	---		---
15		---	---	---	---	---	---	---	---	---		---
16		---	---	---	---	---	---	---	---	---		---
17		---	---	---	---	---	---	---	---	---		---
18		---	---	---	---	---	302	---	---	---		1300
19		---	---	---	---	400	1730	---	---	---		4200
20		---	---	---	---	870	3910	---	---	---		6750
21		---	---	---	---	1320	718	---	---	---		1940
22		---	---	---	---	1610	---	---	---	---		---
23		---	---	---	---	1040	---	---	---	---		---
24		---	---	---	---	850	---	---	---	---		---
25		---	---	---	---	---	---	---	---	576		759
26		1500	---	---	---	---	---	---	---	500		1360
27		1800	---	---	---	---	---	---	---	---		2000
28		509	---	---	---	---	---	---	---	---		1990
29		---	---	---	---	---	1050	---	---	---		1920
30		---	---	---	---	---	923	---	---	---		1860
31		---	285	---	---	---	---	---	---	---		---
TOTAL		---	---	---	---	---	---	---	---	---		---
MEAN		---	---	---	---	---	---	---	---	---		---
MAX		---	---	---	---	---	---	---	---	---		---
MIN		---	---	---	---	---	---	---	---	---		---
AC-FT		---	---	---	---	---	---	---	---	---		---
CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		
WTR YR 1979	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		

NOTE.--No gage-height record Sept. 18, 19.

08074000 BUFFALO 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 1978 TO SEPTEMBER 1979

		STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
DATE	TIME			(UNITS)						
DEC 13...	1145	84	428	7.0	11.0	200	60	9.5	89	11
JAN 23...	1340	1080	174	7.4	12.5	400	120	9.5	92	9.6
MAR 12...	1015	62	777	7.5	16.5	40	10	5.6	59	14
MAY 22...	1310	629	600	7.2	24.0	30	150	3.7	45	31
JUL 16...	1325	118	532	7.3	29.0	30	46	3.2	42	17
SEP 20...	1210	6710	103	6.8	22.5	60	65	7.1	84	2.9
	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DATE	100 ML)	100 ML)	100 ML)							
DEC 13...	420000	120000	12000	91	0	28	5.2	43	2.0	6.8
JAN 23...	70000	11000	5100	51	0	16	2.6	14	.9	3.7
MAR 12...	540000	160000	7700	170	0	54	9.0	92	3.1	6.1
MAY 22...	1500000	220000	17000	120	0	38	6.2	64	2.5	4.8
JUL 16...	68000	54000	1000	140	0	47	5.9	53	1.9	4.1
SEP 20...	440000	100000	49000	37	1	12	1.6	4.8	.3	2.2
	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
DATE										
DEC 13...	130	0	20	38	.3	17	222	82	23	.56
JAN 23...	67	0	12	14	.2	8.0	104	248	32	.15
MAR 12...	260	0	37	78	.5	26	431	21	2	1.2
MAY 22...	180	0	23	66	.3	11	302	396	66	.43
JUL 16...	190	0	22	58	.3	18	302	90	17	.80
SEP 20...	44	0	5.7	3.7	.1	6.0	58	112	5	.13
	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)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	
DATE										
DEC 13...	.09	.65	2.1	1.4	3.5	1.80	12	--	.20	
JAN 23...	.08	.23	.51	1.2	1.7	.520	14	--	--	
MAR 12...	.68	1.9	3.9	1.5	5.4	2.80	8.2	7	.20	
MAY 22...	.45	.88	1.2	1.5	2.7	1.40	8.2	--	.30	
JUL 16...	.70	1.5	1.1	1.1	2.2	.720	9.5	--	.10	
SEP 20...	.06	.19	.10	.71	.81	.320	9.6	--	--	

SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 12...	1015	3	100	0	0	2	0
SEP 20...	1210	2	50	<1	0	0	230

DATE	LEAD, DIS- SOLVED (UG/L AS FB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 12...	0	0	6.0	1	0	20
SEP 20...	1	2	.0	0	0	10

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 12...	1015	.0	--	.00	.1	.00	.00	.00	.00
SEP 19...	1145	.2	.00	.00	.0	.00	.00	.00	--
20...	1210	.4	.00	.00	.0	.00	.00	.00	--

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)
MAR 12...	.01	.00	.00	.00	.00	.00	.01	.00	--
SEP 19...	.00	.00	.00	--	.00	.00	.00	--	.00
20...	.00	.00	.00	--	.00	.00	.00	--	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 12...	.00	.00	.00	.00	0	.00	.21	.01	.00
SEP 19...	--	--	.00	--	0	--	.00	.00	.00
20...	--	--	.00	--	0	--	.00	.00	.00

SAN JACINTO RIVER BASIN

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08074150 COLE CREEK AT DEIHL ROAD, HOUSTON, TX

LOCATION.--Lat 29°51'04", long 95°29'16", Harris County, Hydrologic Unit 12040104, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--7.33 mi² (18.98 km²). Prior to Oct. 1, 1976, 8.05 mi² (20.85 km²).

PERIOD OF RECORD.--April 1964 to current year. Gage at temporary location 1.0 mi (1.6 km) downstream at Antoine Drive May 18, 1965, to Sept. 1, 1966, due to bridge construction and channel rectification.

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records fair. No diversion above station. Low flow is partly sustained by sewage effluent from Houston suburbs. Recording rain gage at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 7.70 ft³/s (0.218 m³/s), 5,580 acre-ft/yr (6.88 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft³/s (57.2 m³/s) Mar. 20, 1972, elevation, 78.60 ft (23.957 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)
Apr. 19	2030	491 13.9	75.45 22.997
Sept. 19	2030	*815 23.1	77.78 23.707

Minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Oct. 9, 10, 19-21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.06	1.1	46	2.3	1.7	1.3	2.5	4.6	.25	.58	17
2	.07	.06	.68	6.4	4.9	1.6	15	2.0	13	.21	.53	4.1
3	.07	.06	9.0	2.1	17	3.5	45	1.5	2.6	.42	.55	.83
4	.07	.10	5.3	1.3	18	1.7	27	160	2.0	2.5	.60	.56
5	.09	1.5	1.8	12	89	1.6	14	31	2.6	2.2	.51	2.1
6	.10	27	3.7	105	117	1.5	3.0	6.9	3.5	.77	.89	31
7	.09	1.5	3.7	55	31	1.2	1.9	3.0	.98	80	.91	13
8	.07	.38	2.9	8.3	11	1.2	1.7	1.9	.83	50	.52	2.5
9	.04	.23	1.3	3.7	5.4	1.1	1.6	1.4	.65	3.2	.46	.99
10	.04	.17	.90	3.3	3.6	1.2	1.4	1.3	.60	1.2	.49	.56
11	.05	.55	.76	1.4	3.0	1.2	1.2	2.3	.57	.99	.50	.61
12	.05	.97	.69	5.6	4.6	1.4	1.1	2.1	.59	1.2	.48	.55
13	.07	.33	.61	3.3	4.9	1.4	1.0	1.3	.57	1.5	1.5	.52
14	.05	.26	1.3	2.1	2.3	1.5	.88	1.1	.58	1.6	1.1	.47
15	.05	.22	1.7	1.5	2.0	1.3	.83	1.1	.57	.83	10	.45
16	.09	.52	1.0	1.6	1.8	1.8	.79	1.2	.54	.64	2.4	.42
17	.09	.89	.73	1.6	8.9	1.5	.74	1.2	.50	1.2	.97	9.2
18	.05	.44	.61	1.6	14	1.5	47	1.1	.66	.81	.63	65
19	.04	23	.63	4.9	5.4	17	123	1.2	.50	8.7	31	388
20	.04	7.9	.65	34	3.7	26	134	1.2	.47	16	3.8	323
21	.04	1.2	.56	6.4	3.1	67	17	1.2	.46	1.1	.97	54
22	.05	.53	.53	3.4	2.8	90	6.1	13	.43	.55	3.8	9.0
23	.06	.36	.53	3.0	24	26	3.6	2.5	.33	.47	.87	2.8
24	.06	.28	.53	1.9	13	7.3	2.2	1.2	.33	.49	.61	1.4
25	.06	.42	.53	1.8	3.9	3.5	1.6	1.1	.31	32	.56	.99
26	.06	96	.53	4.5	2.3	2.3	1.3	.90	4.1	7.4	1.1	.97
27	.06	42	.53	2.8	1.9	1.8	1.1	1.2	.42	14	13	1.0
28	.05	3.1	.68	1.9	1.7	1.5	.93	.93	.32	9.5	1.1	1.5
29	.06	13	14	2.3	---	1.5	20	26	.31	1.2	1.3	1.1
30	.06	3.4	4.5	6.9	---	1.9	5.2	3.6	.27	.89	.60	1.4
31	.06	---	5.1	3.7	---	1.8	---	2.1	---	.84	.53	---
TOTAL	1.91	226.43	67.08	339.3	402.5	275.5	481.47	279.03	44.19	242.66	82.86	935.02
MEAN	.062	7.55	2.16	10.9	14.4	8.89	16.0	9.00	1.47	7.83	2.67	31.2
MAX	.10	96	14	105	117	90	134	160	13	80	31	388
MIN	.04	.06	.53	1.3	1.7	1.1	.74	.90	.27	.21	.46	.42
AC-FT	3.8	449	133	673	798	546	955	553	88	481	164	1850
(††)	.11	6.34	2.72	5.39	4.17	3.22	5.44	4.09	1.56	7.08	3.53	10.71

CAL YR 1978 TOTAL 2807.44 MEAN 7.69 MAX 354 MIN .04 AC-FT 5570 †† 42.45
WTR YR 1979 TOTAL 3377.95 MEAN 9.25 MAX 388 MIN .04 AC-FT 6700 †† 54.36

†† Weighted mean rainfall, in inches, based on four rain gages.

SAN JACINTO RIVER BASIN

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX

LOCATION.--29°49'40", long 95°28'09", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at Costa Rica Street in northwest Houston and 1.0 mi (1.6 km) upstream from Whiteoak Bayou.

DRAINAGE AREA.--11.4 mi² (29.5 km²). Prior to Oct. 1, 1973, 11.6 mi² (30.0 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Low-water concrete control since Dec. 9, 1970. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Low flow is partially sustained by sewage effluent. No known diversion above station. Recording rain gage at station.

AVERAGE DISCHARGE.--15 years, 13.8 ft³/s (0.391 m³/s), 10,000 acre-ft/yr (12.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft³/s (164 m³/s) Mar. 20, 1972, elevation, 69.20 ft (21.092 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Nov. 26	1300	1,810	51.3	62.04	18.910	aJuly 5	1330	62	1.76	54.17	16.511
aJan. 23	0630	26	0.74	53.72	16.374	aAug. 15	1530	984	27.9	59.61	18.169
Feb. 23	1815	2,090	59.2	62.74	19.123	Aug. 19	1500	1,880	53.2	62.22	18.965
aApr. 19	1900	*3,090	87.5	64.92	19.788	Sept. 19	1100	2,780	78.7	64.29	19.596

a Water-quality samples were obtained on this date.

Minimum daily discharge, 1.3 ft³/s (0.037 m³/s) Oct. 8, Aug. 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	1.8	3.0	105	5.6	4.8	3.7	11	24	5.2	2.6	19
2	3.7	3.3	2.4	6.3	23	5.2	41	6.5	51	5.6	2.4	4.0
3	3.2	4.9	30	4.9	43	12	103	4.9	113	5.1	12	3.2
4	2.3	3.4	17	3.8	42	9.4	21	224	64	15	2.5	2.8
5	1.6	13	4.5	59	136	9.9	7.4	23	11	13	1.7	20
6	1.6	110	11	271	146	4.6	6.4	11	21	3.2	4.1	79
7	1.4	7.0	6.9	54	33	3.8	5.5	6.6	4.2	176	2.5	56
8	1.3	5.1	11	18	16	6.5	4.9	5.0	3.4	53	1.6	5.8
9	1.8	3.7	3.1	8.4	11	3.8	4.7	4.6	3.2	9.3	1.7	2.4
10	2.9	2.7	2.5	14	8.5	4.1	6.2	4.3	3.2	5.2	2.1	2.9
11	3.2	8.9	2.3	34	6.8	3.8	4.9	12	3.4	4.2	2.1	2.7
12	1.8	2.3	2.2	9.4	6.7	3.7	4.7	5.7	3.9	2.8	2.0	1.5
13	2.2	1.9	1.8	6.8	6.7	4.3	4.3	3.7	2.9	8.6	23	1.6
14	2.3	2.8	9.3	5.9	6.5	3.6	3.6	3.5	2.9	2.7	11	1.7
15	1.7	2.3	8.3	5.3	8.7	3.6	4.0	3.7	2.3	2.4	127	1.9
16	1.5	4.4	3.7	6.4	5.8	6.6	16	3.7	14	3.5	10	1.4
17	1.6	5.5	2.9	5.1	32	4.3	20	3.8	9.5	16	2.8	46
18	3.6	3.3	2.8	4.5	19	5.7	196	3.9	2.6	4.5	2.5	196
19	4.0	81	2.8	22	7.8	64	423	3.9	2.3	27	184	1200
20	2.5	7.7	3.2	97	5.9	22	131	4.2	2.6	57	17	283
21	2.5	3.6	3.0	6.3	5.6	108	26	4.2	2.1	5.8	4.0	40
22	2.5	2.8	3.0	3.7	5.7	107	13	44	2.1	2.5	13	18
23	3.2	2.3	3.0	9.1	160	23	9.7	5.5	2.5	3.3	3.2	9.4
24	2.2	1.6	2.3	3.1	65	9.1	7.6	4.2	2.0	3.2	2.3	5.6
25	1.9	3.6	2.6	4.0	12	5.6	6.8	2.9	19	100	1.6	3.9
26	3.1	253	2.7	16	8.9	6.2	6.1	2.6	20	14	1.3	3.0
27	2.9	39	2.3	4.3	8.3	5.2	5.2	3.4	2.7	32	18	2.9
28	2.1	5.4	2.0	3.4	7.2	4.5	4.8	4.4	2.7	11	26	2.4
29	2.2	41	56	4.8	---	4.8	71	62	3.0	4.4	9.0	2.5
30	1.6	5.2	8.0	28	---	5.2	8.7	18	5.5	3.0	3.5	2.4
31	2.6	---	20	5.7	---	4.4	---	15	---	3.4	5.3	---
TOTAL	74.7	632.5	235.6	829.2	842.7	468.7	1170.2	515.2	406.0	601.9	501.8	2021.0
MEAN	2.41	21.1	7.60	26.7	30.1	15.1	39.0	16.6	13.5	19.4	16.2	67.4
MAX	4.0	253	56	271	160	108	423	224	113	176	184	1200
MIN	1.3	1.6	1.8	3.1	5.6	3.6	3.6	2.6	2.0	2.4	1.3	1.4
AC-FT	148	1250	467	1640	1670	930	2320	1020	805	1190	995	4010
(ft)	.04	6.64	2.85	5.83	4.17	3.09	6.37	3.80	2.66	7.06	5.23	10.64

CAL YR 1978	TOTAL	5508.70	MEAN 15.1	MAX 501	MIN .92	AC-FT 10930	†† 44.25
WTR YR 1979	TOTAL	8299.50	MEAN 22.7	MAX 1200	MIN 1.3	AC-FT 16460	†† 58.38

†† Weighted mean rainfall, in inches, based on six rain gages.

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical, biochemical, and pesticide analyses: October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 18...	1330	3.7	769	7.6	24.5	20	10	15.9	194	5.8
DEC 26...	1050	2.6	863	8.2	16.0	20	5.0	13.5	141	16
JAN 23...	0910	14	550	7.7	14.0	70	40	9.1	91	10
FEB 28...	1025	5.9	780	7.6	17.0	40	10	16.5	176	6.3
MAR 13...	0900	4.2	940	7.8	17.0	20	6.0	12.1	129	4.5
APR 18...	1025	17	683	7.5	22.5	8	13	6.2	73	9.9
20...	0825	123	186	7.2	21.0	130	190	7.1	82	32
MAY 21...	1310	4.4	791	8.9	29.0	5	1.0	20.0	263	5.0
JUN 25...	1155	2.6	861	8.3	33.0	5	1.0	19.5	271	3.7
JUL 05...	1340	52	183	7.3	28.5	25	22	7.2	94	1.2
AUG 15...	1615	875	131	7.5	25.0	100	310	7.3	90	41
16...	1105	6.8	329	7.3	28.5	60	52	13.5	175	6.7

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L 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)
OCT 18...	100000	6700	190	--	--	--	--	--	--	--
DEC 26...	220000	10000	2000	--	--	--	--	--	--	--
JAN 23...	140000	13000	5300	170	0	53	8.6	46	1.5	2.7
FEB 28...	310000	48000	4900	240	0	74	13	77	2.2	2.3
MAR 13...	130000	11000	550	300	0	92	17	83	2.1	2.4
APR 18...	420000	31000	6400	--	--	--	--	--	--	--
20...	580000	38000	10000	68	0	22	3.1	9.2	.5	2.4
MAY 21...	29000	800	200	--	--	--	--	--	--	--
JUN 25...	7000	620	250	220	0	59	17	88	2.6	2.0
JUL 05...	760000	74000	7700	56	4	18	2.7	--	--	2.1
AUG 15...	220000	160000	4700	--	--	--	--	--	--	--
16...	1300000	140000	6900	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 18...	--	--	--	--	--	--	--	17	9	.00
DEC 26...	--	--	--	--	--	--	--	13	11	.00
JAN 23...	240	0	19	48	.2	13	309	80	16	.26
FEB 28...	340	0	17	77	.5	17	445	14	11	.07
MAR 13...	400	0	24	82	.4	12	511	11	11	.01
APR 18...	--	--	--	--	--	--	--	17	15	.03
20...	84	0	9.8	6.3	.2	4.5	99	113	23	.11
MAY 21...	--	--	--	--	--	--	--	0	0	.04
JUN 25...	300	0	22	110	.5	22	469	0	0	.03
JUL 05...	64	0	12	11	.2	1.9	80	184	51	.21
AUG 15...	--	--	--	--	--	--	--	29	102	.56
16...	--	--	--	--	--	--	--	58	15	.14

SAN JACINTO RIVER BASIN

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 18...	.01	.01	.07	.53	.60	.13	5.9	--	.20
DEC 26...	.01	.01	.01	.46	.47	.16	3.0	--	.20
JAN 23...	.14	.40	.03	.62	.65	.22	11	--	.30
FEB 28...	.02	.09	.06	.62	.68	.09	--	--	--
MAR 13...	.02	.03	.07	.45	.52	.09	7.8	4	.10
APR 18...	.02	.05	.02	.31	.33	.16	4.6	--	.10
MAY 20...	.02	.13	.15	1.3	1.4	.47	30	--	.10
MAY 21...	.02	.06	.03	.13	.16	.13	11	1	.20
JUN 25...	.04	.07	.04	.52	.56	.43	4.9	8	.10
JUL 05...	.14	.35	.17	.93	1.1	.34	19	15	--
AUG 15...	.08	.64	.12	2.3	2.4	.31	31	--	.00
AUG 16...	.10	.24	.20	1.1	1.3	.47	15	--	.10

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 13...	0900	3	600	0	0	0	10
MAY 21...	1310	8	500	0	0	0	10
JUN 25...	1155	6	600	<1	0	0	10
JUL 05...	1340	13	100	0	10	4	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 13...	0	70	.0	0	0	20
MAY 21...	5	0	.1	0	0	10
JUN 25...	0	<1	.0	0	0	<3
JUL 05...	8	20	.0	0	0	9

SAN JACINTO RIVER BASIN

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08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 13...	0900	.0	--	.00	.0	.00	.00	.00	.10
MAY 21...	1310	.3	.00	.00	.0	.00	.00	.00	.06
JUN 25...	1155	.0	--	.00	.0	.00	.00	.00	.05

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 13...	.00	.00	.00	0	.00	.02	.01	.00
MAY 21...	.00	.00	.00	0	.00	.02	.00	.00
JUN 25...	.00	.00	.00	0	.00	.02	.00	.00

SAN JACINTO RIVER BASIN

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 (171 m) downstream from Texas and New Orleans Railroad Co. bridge, 2.4 mi (3.9 km) upstream from Little Whiteoak Bayou, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--86.3 mi² (223.5 km²). Prior to Oct. 1, 1976, 84.7 mi² (219.4 km²).

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 (2.240 m) 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 (146 m) upstream at same datum.

REMARKS.--Water-discharge records fair. Low flow is partly sustained by industrial waste. No diversion above station

AVERAGE DISCHARGE.--43 years, 78.8 ft³/s (2.232 m³/s), 57,090 acre-ft/yr (70.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/s) Mar. 20, 1972, gage height, 43.50 ft (13.259 m); maximum gage height, 43.60 ft (13.289 m) 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 (15.70 m) Dec. 9, 1935, prior to channel rectification, present site and datum, discharge 14,750 ft³/s (418 m³/s), furnished by the engineer for Harris County. The flood of May 31, 1929, reached a stage of 47.0 ± 0.5 ft (14.33 ± 0.15 m), prior to channel rectification, present site and datum, discharge 9,360 ft³/s (265 m³/s), computed on basis of current-meter measurement at stage 1.0 ft (0.30 m) below crest, furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 26	1500	5,400 153	28.82 8.784	aJune 26	1500	1,130 32.0	20.81 6.343
aJan. 6	1830	4,030 114	26.64 8.120	Sept. 1	1830	5,410 153	28.84 8.790
aMar. 22	1130	1,680 47.6	22.13 6.745	Sept. 20	0030	*11,800 334	37.18 11.332
Apr. 19	2200	11,100 314	36.39 11.092				

a Water-quality samples were obtained on this date.

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	15	44	775	51	36	49	80	78	22	20	977
2	21	18	32	196	89	36	212	62	431	23	25	237
3	22	21	246	76	309	88	1030	49	270	27	61	36
4	22	18	176	45	313	53	344	1170	296	64	56	28
5	19	19	54	273	1020	51	155	365	97	86	24	67
6	19	475	64	1540	1190	39	77	154	92	46	20	189
7	16	79	110	718	428	37	64	89	45	684	60	343
8	15	30	134	222	198	38	57	64	32	595	26	88
9	16	22	69	114	134	42	49	53	31	140	22	26
10	15	20	33	104	102	42	46	54	25	42	20	36
11	16	104	28	273	84	41	43	90	23	31	20	19
12	18	33	26	122	54	41	44	66	25	31	19	17
13	20	21	24	63	49	38	41	39	24	106	117	16
14	21	21	67	41	40	34	33	36	24	45	49	17
15	19	19	68	34	42	32	32	35	26	31	280	13
16	18	24	30	35	36	40	43	34	37	25	90	13
17	17	52	25	29	186	31	57	35	39	124	30	201
18	16	26	24	30	236	29	758	35	22	25	28	796
19	16	341	26	154	101	262	2550	36	24	76	1000	4880
20	15	218	24	612	62	277	1970	46	22	277	200	4420
21	15	60	23	141	53	646	381	36	22	69	50	706
22	14	42	21	51	50	791	193	393	22	24	100	276
23	15	36	22	85	425	334	137	115	23	21	35	164
24	14	22	19	33	381	129	91	40	23	22	25	103
25	14	31	18	32	114	69	71	29	54	577	20	69
26	15	1510	19	144	55	54	62	28	205	174	18	50
27	15	667	19	50	44	46	38	27	39	195	70	46
28	16	145	18	32	40	43	35	29	20	164	178	43
29	17	380	250	38	---	40	384	393	19	43	80	34
30	17	123	141	183	---	47	130	228	21	24	40	32
31	17	---	156	132	---	63	---	135	---	22	25	---
TOTAL	530	4592	2010	6377	5886	3549	9176	4045	2111	3835	2808	13942
MEAN	17.1	153	64.8	206	210	114	306	130	70.4	124	90.6	465
MAX	22	1510	250	1540	1190	791	2550	1170	431	684	1000	4880
MIN	14	15	18	29	36	29	32	27	19	21	18	13
AC-FT	1050	9110	3990	12650	11670	7040	18200	8020	4190	7610	5570	27650
(ft)	.22	7.01	2.82	5.93	3.94	3.00	6.60	4.31	2.13	6.47	4.03	10.46
CAL YR 1978	TOTAL	34813	MEAN	95.4	MAX	2920	MIN	14	AC-FT	69050	ft	42.86
WTR YR 1979	TOTAL	58861	MEAN	161	MAX	4880	MIN	13	AC-FT	116800	ft	56.92

ft Weighted-mean rainfall, in inches, based on thirteen rain gages.

SAN JACINTO RIVER BASIN

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08074500 WHITEOAK 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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	
OCT											
23...	0920	12	917	7.1	22.5	40	5.0	6.4	75	8.4	
DEC											
26...	0915	19	967	7.4	16.0	40	10	7.6	79	24	
JAN											
05...	0840	121	475	7.6	14.0	50	100	9.1	91	17	
05...	0920		490	6.5	14.0	60	100	8.9	89	17	
06...	1055	643	241	7.8	10.0	200	120	9.7	89	12	
07...	1100	67	172	7.8	8.0	240	95	10.3	90	5.0	
08...	1430	210	316	7.2	9.5	200	55	11.8	106	8.1	
FEB											
28...	0925	36	954	7.4	16.5	40	10	7.4	78	15	
MAR											
22...	1010	1270	233	7.7	19.0	80	300	7.8	87	14	
22...	1510	1280	260	7.4	20.5	100	320	7.7	88	14	
MAY											
21...	1115	34	1050	8.0	26.0	10	4.9	12.7	148	40	
JUN											
27...	1155	32	719	7.5	30.0	--	84	7.3	97	17	
DATE		COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT											
23...	1600000	500000	9000	--	--	--	--	--	--	--	--
DEC											
26...	310000	18000	5200	--	--	--	--	--	--	--	--
JAN											
05...	160000	28000	52000	110	0	34	5.1	45	1.9	4.7	--
05...	230000	25000	24000	--	--	--	--	--	--	--	--
06...	400000	44000	52000	66	0	21	3.3	16	.9	4.9	--
07...	20000	2000	2800	--	--	--	--	--	--	--	--
08...	6700	750	20	--	--	--	--	--	--	--	--
FEB											
28...	1500000	190000	13000	--	--	--	--	--	--	--	--
MAR											
22...	780000	160000	55000	130	28	47	2.3	8.2	.3	2.8	--
22...	700000	130000	44000	--	--	--	--	--	--	--	--
MAY											
21...	1600000	120000	7300	--	--	--	--	--	--	--	--
JUN											
27...	1000000	310000	10000	--	--	--	--	--	--	--	--

SAN JACINTO RIVER BASIN

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 23...	--	--	--	--	--	--	--	12	5	1.5
DEC 26...	--	--	--	--	--	--	--	15	8	1.3
JAN 05...	150	0	20	47	.4	11	241	408	86	.62
05...	--	--	--	--	--	--	--	418	82	.62
06...	83	0	9.9	21	.2	8.6	126	316	60	.54
07...	--	--	--	--	--	--	--	194	28	.30
08...	--	--	--	--	--	--	--	118	26	.35
FEB 28...	--	--	--	--	--	--	--	14	14	.23
MAR 22...	120	0	16	6.9	.2	.2	143	1740	980	.37
22...	--	--	--	--	--	--	--	1330	124	.37
MAY 21...	--	--	--	--	--	--	--	15	15	.58
JUN 27...	--	--	--	--	--	--	--	144	40	.81

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE SUB- STANCE (MG/L)
OCT 23...	.43	1.9	5.1	1.5	6.6	5.7	6.8	--	1.2
DEC 26...	1.0	2.3	5.0	3.2	8.2	4.8	12	--	1.3
JAN 05...	.31	.93	1.7	2.3	4.0	1.9	33	16	--
05...	.34	.96	1.9	1.8	3.7	2.0	27	--	.20
06...	.12	.66	.45	1.3	1.7	.82	16	1	.00
07...	.08	.38	.30	.90	1.2	.54	13	--	.00
08...	.16	.51	1.0	1.0	2.0	.82	16	--	--
FEB 28...	.51	.74	2.2	2.6	4.8	.68	11	--	.70
MAR 22...	.14	.51	.57	.30	.87	.68	64	2	.00
22...	.12	.49	.75	.55	1.3	.65	30	--	.00
MAY 21...	.62	1.2	4.1	3.3	7.4	3.4	20	--	.30
JUN 27...	.69	1.5	4.3	1.2	5.5	1.3	12	3	.20

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 05...	0840	5	90	<1	0	8	10
06...	1055	6	80	<1	0	4	60
MAR 22...	1010	5	100	1	0	2	10
JUN 27...	1155	20	200	<1	0	1	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 05...	0	4	.0	0	1	60
06...	0	<1	.0	0	0	10
MAR 22...	0	0	.0	0	0	20
JUN 27...	0	<1	.1	0	0	6

SAN JACINTO RIVER BASIN

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08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JAN								
05...	0840	.2	.00	.3	.00	.00	.03	.45
06...	1055	.0	.00	.0	.00	.00	.00	.08
MAR								
22...	1010	.0	.00	1.3	.00	.04	.14	.32
JUN								
27...	1155	.0	.00	.1	.00	.00	.00	.61

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)	METHYL PARA- THION, TOTAL (UG/L)
JAN									
05...	.01	.00	.00	.00	.00	.00	.00	.02	.00
06...	.00	.00	.00	.00	.00	.00	.02	.01	.00
MAR									
22...	.13	.00	.00	.00	.07	.04	.00	.04	.00
JUN									
27...	.00	.00	.00	.00	.00	.00	.05	.24	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN								
05...	.00	.00	.01	0	.00	.00	.00	.00
06...	.00	.00	.00	0	.00	.06	.03	.00
MAR								
22...	.00	.00	.00	0	.00	.22	.01	.00
JUN								
27...	.00	.00	.00	0	.00	.03	.01	.00

SAN JACINTO RIVER BASIN

08074550 LITTLE WHITEOAK BAYOU AT HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°47'33", long 95°22'06", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at Trimble Street, Houston.

DRAINAGE AREA.--18.0 mi² (46.6 km²). Area at site used prior to June 22, 1979, 20.9 mi² (54.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to September 1979. May 1971 to June 22, 1979, operated as low-flow partial-record station at site 6,200 ft (1,890 m) downstream.

GAGE.--Flood-hydrograph and rainfall recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment. Prior to June 1979 occasional discharge measurements to arbitrary datum at site 6,200 ft (1,890 m) downstream at North Main Street bridge.

REMARKS.--Additional storm rainfall-runoff data for the period after June 22, 1979, can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1979".

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s (135 m³/s) Sept. 19, 1979, elevation, 37.76 ft (11.509 m).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 7	1530	1,220 34.6	29.32 8.937	Sept. 1	unknown	b3,000 85.0	unknown --
aJuly 25	1600	1,230 34.8	29.33 8.940	aSept. 6	2330	303 8.58	24.36 7.425
aAug. 15	1500	832 23.6	27.54 8.394	aSept. 19	2400	*4,750 135	37.76 11.509
Aug. 19	1530	2,670 75.6	34.33 10.464				

a Water-quality samples were made on this date.
b About.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 25...	1115	4.5	746	7.3	24.0	40	5.0	4.5	55	14
DEC 27...	0915	4.5	808	7.6	15.0	40	20	4.9	50	5.6
MAR 13...	1030	7.6	962	7.8	18.5	30	5.0	5.1	56	9.6
21...	1350	315	293	7.6	19.0	120	120	8.0	89	10
22...	0915	26	538	7.3	19.5	110	45	5.0	56	12
JUL 17...	1115	3.5	663	7.5	30.0	40	.60	4.3	57	13
25...	1715	944	181	7.4	26.0	70	290	5.7	71	13
AUG 15...	1550	588	178	7.0	26.0	120	--	7.3	91	35
15...	1745	194	230	7.1	26.5	60	130	6.4	81	44
16...	1320	9.2	347	6.9	28.0	50	3.2	2.3	29	30
SEP 07...	1625	147	292	6.9	27.0	40	11	5.0	63	23
08...	1930	11	433	6.9	28.0	40	4.5	2.5	32	14
19...	0905	355	268	7.0	23.5	55	53	6.4	77	6.3

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, KF AGAR UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	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)
OCT 25...	1100000	260000	1300	--	--	--	--	--	--	--
DEC 27...	460000	160000	18000	180	0	55	11	96	3.1	4.1
MAR 13...	420000	58000	1000	230	0	69	15	110	3.1	3.7
21...	1100000	180000	86000	110	0	39	3.6	14	.6	3.7
22...	3000000	280000	26000	--	--	--	--	--	--	--
JUL 17...	300000	240000	1000	--	--	--	--	--	--	--
25...	840000	160000	9700	72	5	25	2.4	7.4	.4	2.1
AUG 15...	1200000	120000	12000	--	--	--	--	--	--	--
15...	740000	290000	15000	--	--	--	--	--	--	--
16...	1200000	360000	2000	--	--	--	--	--	--	--
SEP 07...	1000000	350000	49000	--	--	--	--	--	--	--
08...	1000000	340000	4200	--	--	--	--	--	--	--
19...	860000	150000	30000	--	--	--	--	--	--	--

SAN JACINTO RIVER BASIN

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08074550 LITTLE WHITEOAK BAYOU AT HOUSTON TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT 25...	--	--	--	--	--	--	--	12	6	.12
DEC 27...	320	0	25	76	.5	16	441	27	8	.10
MAR 13...	390	0	37	88	.7	14	530	10	0	.11
21...	140	0	24	13	.4	.4	167	296	20	.72
22...	--	--	--	--	--	--	--	87	8	.42
JUL 17...	--	--	--	--	--	--	--	0	16	.00
25...	82	0	12	4.7	.1	3.9	98	121	88	.28
AUG 15...	--	--	--	--	--	--	--	--	--	.74
15...	--	--	--	--	--	--	--	53	38	.39
16...	--	--	--	--	--	--	--	20	7	.41
SEP 07...	--	--	--	--	--	--	--	57	12	.33
08...	--	--	--	--	--	--	--	40	0	.14
19...	--	--	--	--	--	--	--	266	30	.20

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 25...	.19	.31	1.6	1.4	3.0	1.5	5.6	--	.40
DEC 27...	.10	.20	2.4	1.3	3.7	1.0	6.6	--	.30
MAR 13...	.11	.22	2.0	1.0	3.0	1.1	7.3	11	.20
21...	.14	.86	.64	.86	1.5	.69	25	23	.10
22...	.30	.72	1.7	1.2	2.9	1.0	15	--	.10
JUL 17...	.06	.03	2.0	1.1	3.1	.44	8.9	--	.20
25...	.08	.36	.35	1.8	2.1	.68	22	10	.20
AUG 15...	.10	.84	.30	2.1	2.4	.41	27	12	.20
15...	.08	.47	.17	1.5	1.7	.65	23	--	.10
16...	.25	.66	.53	1.1	1.6	.45	.2	--	.20
SEP 07...	.10	.43	.87	.43	1.3	.59	14	--	--
08...	.16	.30	1.3	.60	1.9	.80	17	--	--
19...	.08	.28	.36	1.1	1.5	.46	16	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 13...	1030	3	200	0	0	0	20
21...	1350	6	100	1	0	8	40
JUL 25...	1715	9	0	0	10	4	20
AUG 15...	1525	2	0	1	0	6	60

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 13...	0	300	.0	1	0	30
21...	0	0	.0	0	0	20
JUL 25...	0	20	2.8	0	0	4
AUG 15...	9	50	.0	0	0	10

SAN JACINTO RIVER BASIN

08074550 LITTLE WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 13...	1030	.0	--	.00	.0	.00	.00	.00	.24
MAR 21...	1350	.1	--	.00	.2	.00	.00	.01	.54
JUL 25...	1715	.2	.00	.00	.4	.00	.00	.15	.36
AUG 15...	1550	1.1	.00	.00	.2	.00	.00	.05	.06

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 13...	.00	.00	.00	.00	.00	.00	.00	.09	.00
MAR 21...	.01	.00	.00	.00	.01	.01	.02	1.4	.00
JUL 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 15...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 13...	.00	.00	.00	0	.00	.03	.00	.01
MAR 21...	.00	.00	.00	0	.00	.12	.03	.01
JUL 25...	.00	.00	.00	0	.00	.05	.04	.01
AUG 15...	.00	.00	.00	0	.00	.00	.00	.00

SAN JACINTO RIVER BASIN

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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 White-oak Bayou at up stream side of Main Street viaduct in Houston and 3.2 mi (5.1 km) downstream from station 08074000.

DRAINAGE AREA.--469 mi² (1,215 km²).

PERIOD OF RECORD.--January 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1.47 ft (0.448 m) below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers), 1973 adjustment; unadjusted for land-surface subsidence.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.6 ft (7.19 m) June 13, 1973; minimum, -3.5 ft (-1.07 m) Jan. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1835, 38.5 ft (11.73 m) Dec. 9, 1935, present site and datum, unadjusted for land-surface subsidence.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.5 ft (7.16 m) Sept. 19; minimum, -0.5 ft (0.15 m) Dec. 9, Jan. 2.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
1	3.9	2.7	3.6	2.2	4.0	2.4	4.3	1.3	3.4	1.5	3.5	1.9	-	-	5.9	3.1	4.1	2.1	3.2	2.1	3.4	2.2	16.3	3.6
2	4.0	2.7	3.5	1.6	4.5	2.8	1.3	-5	4.0	2.8	4.5	2.4	-	-	4.8	3.2	6.7	3.0	3.5	2.2	3.5	2.0	7.7	2.8
3	3.7	2.5	3.3	1.7	4.3	2.5	3.1	.7	4.1	2.3	4.0	1.8	-	-	4.7	3.1	4.2	2.7	3.5	2.2	3.8	2.1	4.5	2.8
4	3.9	2.4	3.2	1.7	2.8	1.3	4.3	3.1	4.5	1.5	2.6	.3	-	-	7.4	4.0	4.3	2.6	3.2	1.9	3.7	1.8	4.3	2.7
5	3.9	2.4	3.6	2.6	3.2	2.1	4.1	3.0	6.2	4.7	3.6	1.0	-	-	4.0	3.0	3.7	2.7	3.4	1.8	3.6	1.9	4.0	2.3
6	3.7	1.7	4.8	1.8	3.9	2.8	9.5	2.9	6.9	4.9	3.6	1.6	-	-	4.6	3.0	4.5	2.6	3.2	1.5	3.4	1.6	3.6	2.3
7	3.9	2.3	2.5	.9	4.3	2.5	7.2	2.5	4.9	2.2	3.4	.9	-	-	4.2	3.4	4.3	3.3	5.6	1.5	4.3	1.4	5.9	2.3
8	4.3	2.6	2.8	1.7	3.2	.8	2.5	1.2	3.4	2.0	3.4	1.1	-	-	4.5	3.5	4.6	3.0	4.0	2.4	4.1	1.7	4.0	2.7
9	3.9	2.3	3.3	2.0	.8	-5	3.4	2.0	2.7	1.1	4.9	2.5	-	-	4.8	3.6	4.4	2.6	3.8	1.9	4.1	2.2	4.0	2.7
10	3.7	1.8	3.7	2.4	2.7	.2	4.4	2.8	3.6	2.4	3.1	1.1	-	-	5.1	3.9	3.8	2.2	4.3	1.8	3.6	2.2	4.1	2.5
11	3.9	2.0	3.7	2.6	3.1	1.4	4.8	3.0	3.6	2.3	3.1	1.4	-	-	4.7	3.2	3.5	1.7	4.3	2.3	3.6	1.9	4.5	3.2
12	3.9	2.5	4.0	2.2	2.8	1.1	4.3	2.6	3.4	2.2	3.2	1.5	-	-	3.6	2.0	4.2	1.9	4.0	2.4	3.3	1.9	4.7	3.1
13	4.0	2.6	4.1	2.7	3.0	1.3	4.1	1.8	3.2	2.0	3.4	2.3	-	-	3.7	2.0	4.0	2.4	5.8	2.3	3.3	2.2	4.4	2.9
14	3.6	1.7	4.1	2.7	3.0	1.2	1.9	.4	3.5	2.5	3.4	2.0	-	-	3.8	1.9	3.8	2.1	4.6	2.6	3.4	1.9	5.0	3.1
15	4.1	2.7	3.9	2.1	3.3	1.7	3.4	1.9	3.4	2.3	-	-	-	-	3.8	2.2	4.3	2.3	4.0	2.6	5.7	2.1	4.5	2.9
16	3.7	2.1	3.8	2.1	3.2	1.4	3.5	2.3	3.2	1.4	-	-	-	-	3.8	2.0	4.1	2.4	3.3	2.0	4.2	2.1	4.2	2.9
17	3.8	2.3	3.5	1.3	3.2	1.2	3.4	2.1	3.4	1.8	-	-	5.1	3.2	3.6	1.8	4.2	2.9	3.4	1.6	3.8	2.1	4.8	2.8
18	3.7	1.9	3.3	1.9	3.3	2.1	3.1	2.1	3.4	2.1	-	-	8.3	3.2	3.8	1.9	4.3	2.9	3.5	1.8	3.7	2.2	6.5	3.6
19	3.4	1.7	3.9	3.0	3.4	1.7	3.7	2.6	3.6	2.1	-	-	22.4	3.4	4.1	2.3	4.2	3.1	3.7	1.8	7.7	1.9	23.5	5.4
20	3.3	1.9	4.4	2.5	3.2	2.0	6.2	1.9	4.3	2.7	-	-	22.2	5.2	3.8	2.5	3.9	2.6	3.8	2.1	3.7	2.3	23.5	7.7
21	3.4	1.9	3.8	2.3	3.2	.9	1.9	.0	4.1	2.6	-	-	5.2	3.4	4.2	2.8	3.7	2.1	3.5	2.2	3.7	2.0	7.7	3.5
22	3.4	2.4	3.7	2.7	3.1	1.8	3.7	.9	3.8	2.2	-	-	4.2	3.0	4.8	2.8	3.6	1.8	4.2	1.8	5.2	2.0	4.5	3.2
23	3.7	2.0	3.9	2.4	3.3	2.2	4.0	.9	5.2	2.2	-	-	4.1	2.9	3.6	2.0	3.9	1.8	5.5	2.5	3.6	2.0	4.7	3.6
24	3.2	2.3	3.4	2.4	3.7	1.0	1.8	-1	4.9	1.9	-	-	4.4	3.2	3.2	1.4	3.9	1.7	4.8	3.4	4.8	2.0	4.7	3.3
25	3.8	2.5	3.3	2.3	2.9	1.2	3.9	1.7	2.3	.8	-	-	4.5	3.1	3.5	1.6	3.3	1.5	8.8	2.2	3.8	2.3	4.2	2.9
26	3.7	1.9	11.5	2.9	3.4	1.9	4.4	2.6	2.8	.3	-	-	4.4	2.9	3.9	2.0	4.1	1.5	7.0	4.3	3.7	2.6	4.4	3.6
27	3.0	1.9	7.9	2.3	3.8	1.8	3.3	.7	3.9	2.3	-	-	4.4	2.3	3.8	2.3	3.3	1.6	5.5	4.0	4.4	3.0	4.9	3.7
28	3.2	2.3	3.5	1.6	4.3	2.2	2.4	.6	4.3	2.1	-	-	4.3	2.7	3.7	1.9	3.4	1.8	4.7	3.6	3.9	3.2	4.8	3.4
29	3.7	-	4.2	3.0	4.7	2.8	3.6	2.3	-	-	-	-	6.2	2.7	5.5	1.9	3.6	2.1	4.2	3.1	4.4	2.8	4.7	3.1
30	-	-	4.0	2.2	4.1	2.1	4.2	2.1	---	---	-	-	4.7	3.1	5.4	2.2	3.2	1.8	3.9	2.9	4.4	3.2	4.3	2.9
31	3.7	-	---	---	3.8	1.9	2.4	.6	---	---	-	-	---	---	4.3	2.5	---	---	3.8	2.6	5.1	3.5	---	---

NOTE.--No gage-height record Mar. 15 to Apr. 16.

SAN JACINTO RIVER BASIN

08074700 BUFFALO BAYOU AT 69TH STREET, HOUSTON, TX

LOCATION.--Lat 29°45'15", long 95°17'51", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on 69th Street in Houston, 1.1 mi (1.8 km) upstream from Turning Basin, 2.8 mi (4.5 km) upstream from Brays Bayou, and 4.8 mi (7.7 km) downstream from Whiteoak Bayou.

DRAINAGE AREA.--476 mi² (1,233 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1.73 ft (0.527 m) below National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers), 1973 adjustment; unadjusted for land-surface subsidence.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.1 ft (4.60 m) Sept. 11, 12, 1961, result of Hurricane Carla; minimum, -3.5 ft (-1.07 m) Jan. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.2 ft (2.50 m) Sept. 19; minimum, -1.0 ft (-0.30 m) Jan. 2.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
1	4.3	3.2	4.2	2.7	4.3	2.5	3.4	0.2	1.4	3.5	3.7	2.0	4.7	3.0	5.8	3.2	4.2	2.4	3.5	2.3	-	-	7.4	3.9
2	4.3	3.1	4.2	2.1	4.7	3.0	1.0	4.0	4.0	3.0	4.2	2.4	4.5	3.0	5.0	3.3	4.2	3.1	3.8	2.5	-	-	5.4	-
3	4.2	2.9	3.7	2.1	4.5	2.2	3.3	1.0	3.9	2.4	4.0	2.1	5.0	2.9	4.7	3.3	4.1	2.8	3.8	2.5	-	-	4.6	-
4	4.3	2.8	3.7	2.1	3.0	1.0	4.4	3.3	-	1.5	2.5	.6	3.6	2.0	4.3	2.4	4.1	2.7	3.7	1.9	-	-	4.5	3.1
5	4.3	2.7	4.5	3.0	3.8	2.3	4.3	2.6	-	-	3.4	1.4	4.1	2.3	3.7	4.6	4.0	2.6	3.5	1.8	-	-	4.3	2.8
6	4.0	2.0	4.6	2.1	4.5	3.3	3.9	1.9	-	-	3.4	1.7	4.3	2.7	4.6	2.8	4.7	2.9	-	-	-	-	4.3	2.8
7	4.2	2.7	2.9	1.2	4.6	2.7	3.4	1.6	-	1.2	3.1	1.4	4.7	3.4	4.3	3.3	4.6	-	-	-	-	-	4.1	-
8	4.6	3.0	3.2	2.1	3.4	.4	2.5	.6	3.1	1.7	3.2	1.1	4.2	3.1	4.6	3.6	4.9	3.1	-	-	-	-	4.2	2.8
9	4.3	2.7	3.8	2.6	.8	-.5	3.5	1.9	2.6	.8	3.8	2.6	4.5	2.5	4.8	3.7	4.7	2.8	-	-	-	-	4.2	-
10	4.1	2.2	4.1	3.0	3.2	.8	4.3	2.7	3.7	2.3	3.2	1.2	4.9	3.3	5.2	-	4.3	2.5	-	-	-	-	4.4	2.8
11	4.3	2.9	4.1	3.0	3.4	1.7	4.8	2.8	3.4	2.1	3.0	1.6	5.9	4.0	-	-	3.9	2.0	4.5	-	-	-	-	3.4
12	4.3	2.9	4.4	2.6	-	1.1	4.4	2.7	3.2	2.0	3.4	1.9	4.7	3.4	-	-	4.5	2.0	4.2	2.5	-	-	5.0	3.4
13	4.4	3.0	4.6	3.2	3.4	-	4.2	1.5	3.2	1.8	3.4	2.4	4.2	2.8	-	-	4.3	2.6	5.0	2.5	-	-	4.6	3.1
14	3.9	2.1	4.5	3.1	3.3	1.5	1.9	.0	3.5	2.4	3.2	1.9	3.9	2.2	-	-	4.1	2.3	4.8	2.8	-	2.2	5.1	3.4
15	4.5	3.1	4.3	2.5	3.6	2.0	3.5	1.8	3.5	2.2	4.3	2.2	4.1	2.4	4.0	2.8	4.6	2.6	4.3	2.8	3.7	2.0	4.6	3.2
16	4.0	2.5	4.3	2.6	3.6	1.8	3.7	2.3	3.2	1.2	4.4	3.3	4.6	2.6	4.0	2.4	4.4	2.7	3.6	2.2	3.6	-	4.4	3.2
17	4.2	2.7	3.7	1.7	3.4	1.6	3.6	2.1	3.1	1.8	4.7	2.9	5.1	3.2	3.7	2.1	4.5	3.1	4.3	1.9	3.9	-	4.6	-
18	4.2	2.3	4.0	2.3	3.7	2.4	3.3	2.1	3.0	1.7	5.1	3.5	5.6	3.3	4.0	2.1	4.5	3.3	3.6	2.0	4.1	-	5.4	-
19	3.8	2.1	4.3	2.8	3.8	2.1	3.6	2.6	3.7	1.8	6.4	3.2	7.0	3.2	4.2	2.5	4.4	3.2	3.9	2.1	4.2	-	8.2	4.2
20	3.7	2.3	4.8	3.0	3.6	2.3	4.1	.8	4.2	2.6	5.2	3.5	6.8	4.6	4.0	2.7	4.2	2.5	3.8	2.1	3.9	-	8.2	4.6
21	3.8	2.3	4.2	2.8	3.4	1.1	1.1	-.9	4.1	2.5	4.6	2.7	4.6	3.2	4.3	3.0	4.0	2.1	3.7	-	3.9	2.1	4.6	3.2
22	3.8	2.8	4.2	3.2	3.5	2.3	3.7	.4	4.0	2.4	4.5	3.0	4.1	3.0	4.5	2.6	3.9	2.1	4.2	2.1	4.0	2.0	4.5	3.1
23	4.1	2.5	4.4	2.9	3.8	2.5	4.0	.4	4.2	2.5	3.7	1.1	4.2	2.9	3.7	1.9	4.0	2.1	5.7	-	3.7	2.1	4.7	3.6
24	3.6	2.8	4.0	2.9	4.0	1.4	1.6	-.7	4.5	2.1	2.2	.4	4.3	3.2	3.2	1.5	4.1	2.2	-	-	4.7	2.2	4.6	3.3
25	4.2	3.0	3.9	2.9	3.2	1.5	3.9	1.5	2.2	-.3	2.8	.9	4.5	3.0	3.6	1.6	3.5	2.0	-	-	-	-	4.2	2.9
26	4.2	2.4	5.1	3.5	3.8	2.3	4.3	2.4	2.5	.3	3.8	2.3	4.5	2.8	4.0	2.2	3.9	1.9	-	-	-	2.8	4.4	3.3
27	3.4	2.4	4.0	2.0	4.1	2.2	3.2	.6	3.6	2.2	3.9	2.6	4.4	2.3	4.0	2.3	3.6	-	-	-	4.0	3.0	4.7	3.1
28	3.7	2.6	3.8	1.8	4.6	2.7	2.4	.4	3.7	2.3	4.2	2.7	4.3	2.7	4.0	2.0	3.6	2.1	-	-	4.1	3.2	4.5	2.8
29	4.1	2.7	4.2	2.4	4.9	2.9	3.9	2.3	-	-	4.7	3.0	5.8	2.7	4.7	2.1	3.8	2.3	-	-	4.4	3.5	4.3	2.4
30	3.9	2.4	4.0	2.2	4.3	2.4	4.0	1.9	---	---	4.9	3.3	4.7	3.0	5.2	2.3	3.5	2.1	-	-	4.6	3.5	3.9	2.2
31	4.1	2.6	---	---	4.2	2.1	2.3	.5	---	---	4.6	3.2	---	---	4.5	2.7	---	---	-	-	5.2	3.8	---	---

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX

LOCATION.--Lat 29°39'23", long 95°33'43", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on Roark Road in southwest Houston.

DRAINAGE AREA.--11.5 mi² (29.8 km²). Oct. 1, 1976, to Dec. 31, 1977, 12.0 mi² (31.1 km²); August 1964 to Sept. 30, 1976, 11.6 mi² (30.0 km²). Drainage area changes were the result of ditch relocations or extensions.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: Drainage area. WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Recording rain gage at station.

AVERAGE DISCHARGE.--15 years, 12.0 ft³/s (0.340 m³/s), 8,690 acre-ft/yr (10.7 hm³/yr).EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) July 19, 1979, elevation, 74.54 ft (22.720 m); no flow for many days.EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s), revised, and maximum (*):

Date	Time	Discharge		Elevation		Date	Time	Discharge		Elevation	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Nov. 26	1430	894	25.3	70.36	21.446	May 7	0900	470	13.3	68.39	20.845
aJan. 6	1730	881	24.9	70.31	21.430	June 2	0900	624	17.7	69.50	21.184
Jan. 20	0500	419	11.9	67.70	20.635	June 26	1500	406	11.5	67.82	20.672
aFeb. 6	0400	361	10.2	67.24	20.495	July 26	0230	726	20.6	70.04	21.348
aApr. 3	1530	743	21.0	69.70	21.245	Sept. 7	1730	825	23.4	70.60	21.519
Apr. 19	2300	1,070	30.3	70.98	21.635	Sept. 19	2100	*1,640	46.4	74.54	22.720

a Water-quality samples were obtained on this date.

Minimum daily discharge, 2.3 ft³/s (0.065 m³/s) July 4.DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.2	13	131	8.4	3.1	3.9	15	5.4	4.0	6.2	48
2	4.7	2.8	9.7	29	13	7.1	6.9	12	196	4.2	5.6	12
3	5.6	3.4	27	11	33	6.5	251	9.7	9.4	3.8	5.6	5.3
4	4.2	3.2	21	5.7	48	3.5	131	238	7.9	2.3	5.5	5.2
5	16	3.2	9.0	40	203	5.6	41	69	6.9	23	9.3	5.4
6	5.3	64	6.9	378	262	3.4	13	28	5.7	8.0	19	5.3
7	3.3	12	6.5	233	108	5.7	8.9	14	5.2	5.6	8.6	214
8	3.1	6.0	8.8	94	43	5.7	7.0	9.0	5.0	21	5.6	68
9	3.8	4.5	5.5	30	16	4.2	6.4	7.6	4.6	8.5	5.2	12
10	4.0	4.0	5.2	16	11	3.9	5.9	7.0	4.5	4.8	5.5	9.5
11	3.8	7.0	5.2	40	9.0	3.9	5.6	12	4.5	4.2	7.8	7.5
12	3.7	4.5	3.7	17	8.2	4.1	4.3	8.6	4.3	11	7.8	6.5
13	3.8	4.1	4.2	10	7.7	3.7	4.4	5.7	4.1	11	8.0	5.7
14	3.8	3.9	11	7.4	6.6	3.5	4.3	6.0	4.2	5.6	5.4	4.9
15	3.9	4.1	11	6.0	6.3	3.6	4.4	6.9	4.2	4.8	4.8	4.5
16	4.3	4.1	5.4	5.2	5.9	3.7	4.5	6.1	4.2	4.4	77	4.6
17	4.1	4.7	5.0	4.8	9.7	4.5	4.9	6.0	4.4	4.4	28	37
18	3.8	3.7	4.1	5.0	9.5	5.2	31	6.6	5.2	3.9	8.6	374
19	3.9	45	3.9	21	6.9	82	158	6.0	4.6	53	6.4	1100
20	3.7	16	3.5	205	6.3	41	497	5.0	4.4	84	6.3	900
21	3.5	5.0	4.0	74	6.1	92	215	5.8	4.6	33	5.4	379
22	3.8	4.1	3.2	25	6.1	102	68	21	4.3	21	6.3	129
23	4.3	3.7	2.7	14	13	46	22	7.1	4.2	9.8	5.1	44
24	3.7	3.3	2.7	8.7	14	15	12	5.9	4.3	9.3	4.8	14
25	3.4	3.1	2.7	7.2	7.2	7.9	8.9	5.5	4.6	141	5.2	9.9
26	3.2	300	2.6	16	5.5	6.2	7.3	5.3	108	318	5.4	8.4
27	3.1	104	3.1	9.8	4.7	5.2	6.4	5.1	14	59	5.6	7.8
28	3.1	17	9.3	7.6	3.4	4.8	6.0	5.5	4.7	35	6.7	7.3
29	3.2	72	34	7.0	---	4.8	41	33	4.5	20	6.1	7.1
30	3.3	23	36	41	---	4.1	14	8.8	4.2	9.7	4.2	6.9
31	3.2	---	16	12	---	5.2	---	8.3	---	6.8	4.6	---
TOTAL	131.1	738.6	285.9	1511.4	881.5	497.1	1594.0	589.5	452.1	934.1	295.6	3442.8
MEAN	4.23	24.6	9.22	48.8	31.5	16.0	53.1	19.0	15.1	30.1	9.54	115
MAX	16	300	36	378	262	102	497	238	196	318	77	1100
MIN	3.1	2.8	2.6	4.8	3.4	3.1	3.9	5.0	4.1	2.3	4.2	4.5
AC-FT	260	1470	567	3000	1750	986	3160	1170	897	1850	586	6830
(††)	.44	7.57	2.59	6.99	3.61	3.56	8.11	4.63	3.07	7.08	3.95	13.20

CAL YR 1978 TOTAL 4591.3 MEAN 12.6 MAX 300 MIN 1.8 AC-FT 9110 †† 67.35
WTR YR 1979 TOTAL 11353.7 MEAN 31.1 MAX 1100 MIN 2.3 - AC-FT 22520 †† 64.80

†† Weighted-mean rainfall, in inches, based on four rain gages.

SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Sediment analyses: October 1970 to September 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (FLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)
OCT 23...	1110	4.9	971	7.4	23.5	40	10	5.1	61	8.4
DEC 26...	0955	2.6	886	7.2	14.5	30	10	6.8	69	11
JAN 06...	1610	762	188	8.2	8.5	240	250	10.0	88	6.0
07...	0925	231	139	7.4	6.5	240	100	9.8	82	4.4
08...	1125	95	159	7.6	5.5	240	75	10.9	89	4.9
FEB 06...	1015	245	178	7.6	8.0	160	100	10.4	90	13
28...	1145	3.7	845	7.2	19.5	40	10	8.2	92	12
MAR 19...	1205	4.4	774	7.4	22.5	20	30	8.8	104	4.5
APR 03...	1000	221	239	6.6	15.5	40	690	8.6	89	5.8
03...	1235	226	243	7.7	16.0	45	440	8.3	86	11
03...	1420	611	190	7.1	15.5	50	570	9.1	94	8.1
JUN 25...	1105	4.7	840	7.4	28.5	5	3.6	6.1	79	7.0
DATE	COLIFORM, TOTAL, IMMEDIATE, PER 100 ML	COLIFORM, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	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)
OCT 23...	6700	150	130	--	--	--	--	--	--	--
DEC 26...	3000	20	20	--	--	--	--	--	--	--
JAN 06...	69000	29000	23000	61	0	19	3.3	9.3	.5	3.7
07...	5000	720	3500	--	--	--	--	--	--	--
08...	28000	980	920	--	--	--	--	--	--	--
FEB 06...	400000	36000	12000	66	2	20	3.8	9.3	.5	2.7
28...	1000	40	140	--	--	--	--	--	--	--
MAR 19...	1000	42	30	210	0	63	13	75	2.2	8.2
APR 03...	140000	14000	10000	79	13	26	3.5	15	.7	3.8
03...	190000	16000	12000	--	--	--	--	--	--	--
03...	220000	15000	13000	72	9	24	2.8	7.9	.4	3.2
JUN 25...	6700	210	130	--	--	--	--	--	--	--
DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLATILE, SUS-PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT 23...	--	--	--	--	--	--	--	19	8	3.0
DEC 26...	--	--	--	--	--	--	--	14	5	.93
JAN 06...	78	0	7.4	9.1	.2	6.4	97	744	76	.60
07...	--	--	--	--	--	--	--	264	36	.60
08...	--	--	--	--	--	--	--	146	26	--
FEB 06...	77	0	8.6	7.7	.2	8.7	99	352	88	.35
28...	--	--	--	--	--	--	--	15	12	6.8
MAR 19...	280	0	36	82	.4	41	457	57	16	3.4
APR 03...	81	0	16	12	.2	6.4	123	1180	55	1.1
03...	--	--	--	--	--	--	--	706	124	1.4
03...	76	0	12	6.6	.2	1.2	96	1090	124	.84
JUN 25...	--	--	--	--	--	--	--	35	27	5.0

SAN JACINTO RIVER BASIN

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08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 23...	.66	3.7	4.0	1.7	5.7	11	13	--	.60
DEC 26...	.47	1.4	5.2	2.7	7.9	6.3	8.5	--	1.1
JAN 06...	.08	.68	.26	1.3	1.6	.66	19	3	.00
07...	.06	.66	.14	.79	.93	.34	13	--	.00
08...	--	--	--	--	--	--	--	--	--
FEB 06...	.10	.45	.40	3.4	3.8	1.5	16	--	.00
28...	.85	7.6	1.1	6.5	7.6	3.1	--	--	.30
MAR 19...	.38	3.8	.54	.86	1.4	6.0	6.1	1	.10
APR 03...	.14	1.2	.62	1.7	2.3	1.3	22	1	.00
03...	.18	1.6	1.1	1.5	2.6	1.7	15	--	.00
03...	.10	.94	.59	1.7	2.3	.74	19	4	.00
JUN 25...	.74	5.7	2.2	1.4	3.6	3.1	6.2	--	.20

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 06...	1610	2	40	<1	10	2	40
MAR 19...	1205	4	100	0	0	0	0
APR 03...	1000	3	0	1	0	1	20
03...	1420	3	100	1	0	2	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 06...	0	<1	.0	0	0	3
MAR 19...	0	0	.0	2	0	20
APR 03...	0	10	.0	0	0	10
03...	0	0	.0	1	0	10

SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 19...	1205	.0	.00	.0	.00	.00	.00	.12
APR 03...	1000	--	--	--	--	--	--	2.7
03...	1420	.0	.00	.2	.00	.00	.00	1.5
JUN 25...	1105	.0	.00	.1	.00	.00	.00	.51

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 19...	.00	.00	.00	.00	.00	.00	.02	.01	.00
APR 03...	--	--	--	.00	--	--	--	.00	.00
03...	.01	.00	.00	.00	.00	.01	.00	.01	.00
JUN 25...	.01	.00	.00	.00	.00	.01	.03	.06	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 19...	.00	.00	.00	0	.00	.00	.00	.00
APR 03...	.00	--	.00	--	.00	.53	.03	.00
03...	.00	.00	.00	0	.00	.38	.03	.01
JUN 25...	.00	.00	.00	0	.00	.00	.00	.00

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 pile bend of Main Street Bridge in southwest Houston, 1.6 mi (2.6 km) upstream from Harris Gully, and 11.6 mi (18.7 km) upstream from Buffalo Bayou.

DRAINAGE AREA.--94.9 mi² (245.8 km²). Prior to October 1976, 88.4 mi² (229.0 km²). Changes due to drainage ditch relocation..

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 (2.182 m) 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 (1.3 km) downstream at same datum.

REMARKS.--Water-discharge records good. No diversion above station. Low flow is mostly sewage effluent from Houston suburbs.

AVERAGE DISCHARGE.--43 years, 115 ft³/s (3.257 m³/s), 83,320 acre-ft/yr (103 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s (821 m³/s) June 15, 1976, gage height, 52.13 ft (15.889 m); minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 11, 12, 1937, Mar. 14, Apr. 1, 1958. Maximum discharge, that of June 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1911, 56.0 ft (17.07 m) in June 1919 before channel rectification, former site, from information by engineer for city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
aNov. 6	0645	1,640	46.4	29.95	9.129	Apr. 19	2230	*25,500	722	50.36	15.350
Nov. 26	1515	9,720	275	39.31	11.982	aMay 22	0730	1,050	29.7	28.92	8.815
aJan. 6	1730	8,480	240	38.15	11.628	June 2	0945	15,400	436	43.94	13.393
aFeb. 6	0345	3,370	95.4	32.50	9.906	Sept. 1	1830	11,300	320	40.68	12.399
Mar. 9	1930	8,800	249	38.46	11.723	aSept. 7	1800	3,100	87.8	32.12	9.790
Apr. 3	1600	7,860	223	37.55	11.445	Sept. 19	2315	19,000	538	46.44	14.155

a Water-quality samples were obtained on this date.

Minimum daily discharge, 65 ft³/s (1.84 m³/s) May 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	76	123	1240	122	95	95	211	99	77	89	2060
2	77	75	100	275	149	107	219	167	3820	79	88	446
3	90	78	423	149	484	143	2380	106	414	82	85	122
4	82	77	327	119	598	95	789	2220	318	208	83	105
5	132	76	142	659	1890	97	262	492	184	243	226	366
6	92	727	121	3580	2090	90	152	212	150	149	145	216
7	74	155	131	1280	588	92	127	144	100	101	136	794
8	73	91	229	377	273	89	110	111	88	383	112	535
9	72	86	112	203	169	89	104	99	82	137	92	167
10	73	85	95	190	132	89	105	92	78	93	87	122
11	73	171	95	481	114	86	103	152	79	82	175	107
12	72	104	92	204	107	88	94	134	74	150	160	99
13	72	86	87	146	104	84	90	82	74	223	118	102
14	70	81	176	116	98	82	85	82	73	122	85	103
15	72	80	225	107	96	82	87	76	72	89	89	94
16	72	77	108	108	93	86	95	77	73	102	1100	90
17	73	102	91	105	166	85	98	76	72	148	453	372
18	72	80	87	101	185	88	397	75	94	89	140	2180
19	74	485	84	198	119	1470	5020	73	80	244	288	9620
20	74	233	83	1640	107	762	5480	65	78	605	117	5580
21	74	97	82	329	106	1320	1100	85	74	438	102	945
22	74	88	81	179	101	1560	358	369	73	245	107	393
23	77	92	76	252	145	469	188	109	72	133	98	224
24	79	78	74	136	213	191	134	81	74	98	87	159
25	78	73	71	111	114	125	111	78	82	1130	84	130
26	80	3030	75	305	97	117	103	71	1040	1550	85	116
27	82	845	77	152	92	103	93	70	314	485	107	108
28	77	200	84	113	91	98	84	72	114	362	100	111
29	77	737	406	108	---	97	614	546	91	167	115	119
30	77	226	225	527	---	91	199	359	80	117	89	127
31	82	---	166	182	---	131	---	296	---	101	119	---
TOTAL	2422	8491	4348	13672	8643	8201	18876	6882	8116	8232	4961	25712
MEAN	78.1	283	140	441	309	265	629	222	271	266	160	857
MAX	132	3030	423	3580	2090	1560	5480	2220	3820	1550	1100	9620
MIN	70	73	71	101	91	82	84	65	72	77	83	90
AC-FT	4800	16840	8620	27120	17140	16270	37440	13650	16100	16330	9840	51000
(††)	.50	7.39	2.65	6.49	3.35	3.68	8.25	4.10	4.50	6.35	3.31	12.49

CAL YR 1978 TOTAL 59214 MEAN 162 MAX 3030 MIN 68 AC-FT 117500 †† 39.54
WTR YR 1979 TOTAL 118556 MEAN 325 MAX 9620 MIN 65 AC-FT 235200 †† 63.24

†† Weighted-mean rainfall, in inches, based on twelve rain gages.

SAN JACINTO RIVER BASIN

08075000 BRAYS 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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
23...	1215	79	771	7.8	27.0	40	5.0	11.6	147	10
NOV										
06...	1115	830	298	7.1	20.5	60	100	6.9	78	18
JAN										
06...	1430	7910	196	8.0	9.5	120	140	9.9	89	9.6
07...	1015	1160	213	7.8	8.0	180	140	10.0	87	5.6
08...	1220	361	339	7.2	9.0	180	65	13.2	118	5.2
FEB										
06...	1500	2170	214	7.9	8.5	120	120	5.3	47	5.6
MAR										
19...	1100	92	795	7.4	22.5	25	40	9.7	114	20
MAY										
22...	1150	512	449	7.6	24.0	35	290	5.8	71	11
JUN										
25...	1000	66	887	7.9	29.5	5	15	10.4	137	21
SEP										
07...	1815	3020	204	7.0	25.0	45	110	8.6	106	14
09...	1640	150	588	7.6	29.5	30	42	10.8	142	7.8
25...	1055	122	702	7.0	25.0	25	21	8.6	102	11

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0-7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
23...	13000	180	190	--	--	--	--	--	--	--
NOV										
06...	100000	12000	5800	83	13	27	3.7	24	1.1	5.4
JAN										
06...	160000	40000	30000	66	0	22	2.6	7.4	.4	3.1
07...	25000	4100	2700	--	--	--	--	--	--	--
08...	920	140	70	--	--	--	--	--	--	--
FEB										
06...	190000	20000	6000	74	0	23	3.9	13	.7	2.5
MAR										
19...	480000	61000	4700	160	0	48	9.2	98	3.4	6.7
MAY										
22...	340000	69000	6700	110	0	34	5.3	46	1.9	4.8
JUN										
25...	25000	2400	170	--	--	--	--	--	--	--
SEP										
07...	400000	150000	8600	78	9	27	2.5	5.8	.3	2.9
09...	35000	32000	110	--	--	--	--	--	--	--
25...	240000	26000	880	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT										
23...	--	--	--	--	--	--	--	150	2	2.2
NOV										
06...	85	0	24	24	.2	7.7	158	264	76	1.0
JAN										
06...	86	0	6.4	7.2	.1	5.8	97	916	120	.38
07...	--	--	--	--	--	--	--	380	48	.48
08...	--	--	--	--	--	--	--	134	36	3.0
FEB										
06...	91	0	14	8.7	.2	8.4	119	276	36	.35
MAR										
19...	280	0	41	79	.4	30	450	131	34	.76
MAY										
22...	170	0	27	29	.3	3.5	234	472	114	.32
JUN										
25...	--	--	--	--	--	--	--	41	32	1.1
SEP										
07...	84	0	15	8.0	.1	5.2	108	80	26	.60
09...	--	--	--	--	--	--	--	73	2	1.5
25...	--	--	--	--	--	--	--	35	13	1.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV									
06...	.00	.00	.00	.03	0	.00	2.9	.10	.00
MAR									
19...	.00	.00	.00	.00	0	.00	.03	.00	.00
JUN									
25...	.00	.00	.00	.00	0	.00	.03	.00	.00
SEP									
07...	.00	.00	.00	.00	0	.00	.37	.05	.00

SAN JACINTO RIVER BASIN

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08075100 BRAYS BAYOU AT SCOTT STREET, HOUSTON, TX
(Low-flow partial-record station)

LOCATION.--Lat 29°42'35", long 95°21'23", Harris County, Hydrologic Unit 12040104, at bridge on Scott Street in Houston.

DRAINAGE AREA.--106 mi² (275 km²).

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: May 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
06...	0915	1400	273	7.1	20.5	60	100	7.1	81	23
27...	1110	800	335	6.9	19.0	90	180	8.1	90	16
FEB										
05...	1100	2750	260	7.4	10.0	120	110	10.5	96	10
06...	1350	2500	235	7.4	8.5	120	50	10.2	90	9.9
MAR										
20...	1215	960	404	7.3	21.0	100	150	7.9	91	7.2

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM 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)
NOV										
06...	2000000	220000	35000	73	7	24	3.1	22	1.1	5.3
27...	990000	440000	140000	82	0	25	4.7	27	1.3	4.3
FEB										
05...	460000	120000	26000	90	0	28	4.9	18	.8	3.0
06...	420000	130000	41000	83	0	27	3.8	16	.8	2.5
MAR										
20...	1000000	460000	51000	110	1	33	6.2	34	1.4	4.4

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	80	0	20	22	.2	6.7	143	182	48	.81
27...	110	0	22	26	.4	10	174	356	44	.96
FEB										
05...	110	0	14	20	.3	9.8	152	256	80	.49
06...	110	0	8.3	18	.3	8.6	139	210	36	.36
MAR										
20...	130	0	30	31	.3	14	217	624	112	.78

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV									
06...	.08	.89	1.3	1.2	2.5	1.8	15	7	.30
27...	.14	1.1	1.0	1.7	2.7	.94	21	6	.60
FEB									
05...	.14	.63	.45	1.5	1.9	.63	16	7	.00
06...	.12	.48	.50	1.3	1.8	.53	16	--	--
MAR									
20...	.42	1.2	1.8	.70	2.5	1.0	20	--	.00

SAN JACINTO RIVER BASIN

08075100 BRAYS BAYOU AT SCOTT STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)											ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	
DATE	TIME	PCB, TOTAL (UG/L)																				
NOV 06...	0915	.0	.00											.00	.0	.00	.00	.00	.60	.01	.00	.00
27...	1110	.0	--											.02	.0	.00	.00	.00	.24	.02	.00	.00
FEB 05...	1100	.0	--											.00	.1	.00	.00	.00	.12	.02	.00	.00
DATE		HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	-METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)									
NOV 06...	.00	.00	.04	1.2	.00	.00	.00	.02	0	.00	2.9	.06	.00									
27...	.00	.01	.02	.02	.00	.00	.00	.01	0	.00	.14	.05	.00									
FEB 05...	.00	.01	.01	.00	.00	.00	.00	.00	0	.00	.01	.01	.00									

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 (20.4 km) upstream from gage Sims Bayou at Houston, and 19.7 mi (31.7 km) upstream from mouth.

DRAINAGE AREA.--20.2 mi² (52.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1964 to current year (discharge measurements and supplemental peak discharges only Dec. 6, 1978, to Aug. 31, 1979).

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

REMARKS.--Water-discharge records fair. No elevation records were collected during most of the year due to channel rectification and bridge construction. 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 610 acre-ft (752,000 m³) of ground water was used for cooling purposes then released to the bayou about 300 ft (90 m) upstream from gage. Recording rain gage located at station.

AVERAGE DISCHARGE.--14 years (water years 1965-78), 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft³/s (127 m³/s) June 15, 1976, elevation, 57.12 ft (17.410 m); minimum daily, 1.5 ft³/s (0.042 m³/s) July 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft³/s (18.4 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)
at Nov. 6	0745	167	4.73	Apr. 20	--	b2,000	56.6
Nov. 26	1830	1,930	54.7	June 2	--	b1,000	28.3
Jan. 6	--	b2,000	56.6	a July 26	b0600	b2,500	70.8
Feb. 6	--	b800	22.7	Sept. 19	b2400	*3,400	96.3
Mar. 19	--	b2,500	70.8				52.73 16.072

a Water-quality samples were obtained on this date.

b Estimated.

Minimum discharge not determined.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	28		---					---		60
2	13	13	23		---					---		30
3	26	11	34		---					---		20
4	19	13	53		---					---		15
5	13	14	30		---					---		25
6	13	100			---					---		50
7	13	21			---					---		200
8	13	14			---					---		50
9	14	12			---					---		25
10	12	13			---					---		16
11	11	18			---					---		15
12	10	19	15		---					---		14
13	11	15			---					---		12
14	11	15			17					---		11
15	11	17			---					---		10
16	10	16			---					11		10
17	10	14			---					---		35
18	9.9	14			---					---		300
19	9.7	59			---					---		1730
20	9.8	44			---					---		1650
21	13	16			---					---		199
22	13	15			---					---		53
23	12	19			---					---		30
24	12	13			---					---		20
25	11	13			---					---		18
26	11	593			---					949		17
27	12	261			---					---		16
28	12	48			---					---		15
29	12	179			---					---		15
30	11	47			---					---		15
31	12	---			---					---		---
TOTAL	382.4	1659	---		---					---		4676
MEAN	12.3	55.3	---		---					---		156
MAX	26	593	---		---					---		1730
MIN	9.7	11	---		---					---		10
AC-FT	758	3290	---		---					---		9270
(††)	.50	7.99	2.10	5.64	3.24	6.10	7.50	4.32	4.09	7.94	2.55	12.06

CAL YR 1978 TOTAL - MEAN - MAX - MIN - AC-FT - †† 38.48
WTR YR 1979 TOTAL - MEAN - MAX - MIN - AC-FT - †† 64.03

†† Weighted-mean rainfall, in inches, based on two rain gages.

NOTE.--No elevation record Dec. 6 to Sept. 18.

SAN JACINTO RIVER BASIN

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	
DATE	TIME			(UNITS)							
NOV											
06...	1200	134	423	7.7	20.5	80	320	6.8	77	20	
06...	1915	57	467	7.0	21.0	40	100	5.7	66	42	
JUL											
16...	0925	11	845	7.7	28.5	5	48	7.7	100	2.5	
26...	1035	1150	160	5.9	24.0	100	170	5.9	72	5.5	
		COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOI FECAL KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DATE											
NOV											
06...	340000	14000	5500	96	0	30	5.0	47	2.1	6.8	
06...	300000	4000	3000	--	--	--	--	--	--	--	
JUL											
16...	1000	200	1	150	0	44	9.1	120	4.3	5.8	
26...	140000	17000	7800	47	0	15	2.2	12	.8	2.3	
		BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLTA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
DATE											
NOV											
06...	120	0	26	45	.3	8.7	228	756	148	1.5	
06...	--	--	--	--	--	--	--	286	126	2.2	
JUL											
16...	280	0	35	100	.5	22	474	76	20	.11	
26...	62	0	4.9	14	.2	6.1	87	320	16	.24	
		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)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	
DATE											
NOV											
06...	.06	1.6	.44	3.2	3.6	2.4	18	5	.00		
06...	.02	2.2	.31	9.0	9.3	3.7	45	--	.00		
JUL											
16...	.19	.30	.99	1.2	2.2	1.6	8.1	--	.10		
26...	.06	.30	.15	.95	1.1	.43	11	6	.00		

SAN JACINTO RIVER BASIN

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08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		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)
DATE	TIME					
NOV 06...	1200	32	200	1	10	5
JUL 26...	1035	3	40	<1	20	8

		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)
DATE	TIME							
NOV 06...	40	18	10	.0	1	0	10	
JUL 26...	80	2	4	.0	0	0	8	

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 06...	1200	.0	.00	.00	.0	.00	.00	.00	.73
JUL 26...	1035	.2	.00	.00	.0	.00	.00	.00	.20

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)	METHYL PARA- THION, TOTAL (UG/L)
NOV 06...	.01	.00	.00	.00	.00	.01	.01	.34	.00
JUL 26...	.00	.00	.00	.00	.00	.00	.00	.01	.11

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	.00	.00	.00	0	.00	83	.13	.00
JUL 26...	.00	.00	.05	0	.00	.00	.00	.00

SAN JACINTO RIVER BASIN

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 (11.3 km) upstream from mouth.

DRAINAGE AREA.--63.0 mi² (163.2 km²). Prior to Oct. 1, 1976, 64.0 mi² (165.8 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1922: 1960. WDR TX-76-2: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 3.09 ft (0.942 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair except those above 75 ft³/s (2.12 m³/s) during April, May, and June, which are poor. Low flow is largely sustained by sewage effluent from Houston suburbs and industrial wastes.

AVERAGE DISCHARGE.--27 years, 78.6 ft³/s (2.226 m³/s), 56,950 acre-ft/yr (70.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) June 9, 1975, and June 16, 1976; maximum gage height, 33.17 ft (10.110 m) June 9, 1975; minimum daily, 0.9 ft³/s (0.025 m³/s) Aug. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62.3 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
aNov. 6	1100	372	10.5	12.48	3.804	aMay 22	0815	170	4.81	10.70	3.261
aNov. 26	2200	3,390	96.0	22.98	7.004	June 2	1500	3,380	95.7	24.07	7.336
Jan. 6	b2200	4,290	121	24.74	7.541	July 26	b0700	9,080	257	32.94	10.040
aFeb. 6	0700	2,000	56.6	19.70	6.005	aSept. 18	1330	850	24.1	16.00	4.877
Mar. 19	2245	6,100	173	27.85	8.489	Sept. 20	0145	*10,900	309	32.99	10.055
Apr. 20	0215	5,970	169	28.03	8.544						

a Water-quality samples were obtained on this date.

b Estimated.

Minimum discharge, 32 ft³/s (0.91 m³/s) Sept. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	42	75	434	77	47	70	83	111	36	47	158
2	41	41	59	207	72	50	121	105	1890	36	44	156
3	64	41	68	77	135	58	640	69	757	37	46	53
4	73	37	194	67	198	49	492	928	336	37	41	46
5	42	39	91	350	1230	46	131	350	313	45	39	66
6	42	281	56	1600	1570	45	77	120	172	49	55	178
7	40	89	63	1450	501	46	65	75	91	39	65	748
8	40	49	56	242	175	45	61	59	63	43	42	144
9	39	45	60	115	104	44	58	54	53	47	53	64
10	38	45	50	95	78	45	55	51	48	56	50	49
11	37	115	48	304	69	47	56	64	47	61	45	48
12	38	118	46	158	67	46	52	74	45	64	40	42
13	40	51	47	98	64	43	49	54	45	112	38	40
14	45	49	59	73	58	42	48	49	44	88	38	37
15	40	47	83	66	57	41	51	49	43	45	50	32
16	39	52	55	67	57	42	50	49	41	62	102	33
17	38	44	49	65	58	41	52	47	41	169	100	68
18	39	45	48	66	66	49	129	47	40	92	48	519
19	39	135	47	81	54	1230	640	46	42	41	56	3300
20	40	152	46	377	53	2110	3450	43	42	205	61	6400
21	40	64	43	150	55	1020	1130	45	41	103	54	765
22	42	44	41	84	59	1260	231	107	40	158	45	193
23	42	46	42	177	61	543	113	53	40	108	40	91
24	39	47	44	90	56	146	77	44	42	51	35	61
25	38	45	44	68	52	85	63	41	47	1200	33	50
26	37	1020	42	182	51	69	55	41	100	6200	38	46
27	37	1180	41	148	50	61	52	43	87	1090	39	44
28	38	145	40	86	52	57	48	42	43	472	42	42
29	47	485	56	72	---	55	200	186	36	120	60	45
30	44	167	63	162	---	54	148	133	36	68	40	45
31	40	---	50	129	---	100	---	243	---	54	37	---
TOTAL	1298	4760	1806	7340	5179	7416	8464	3394	4776	10988	1523	13563
MEAN	41.9	159	58.3	237	185	246	282	109	159	354	49.1	452
MAX	73	1180	194	1600	1570	2110	3450	928	1890	6200	102	6400
MIN	37	37	40	65	50	41	48	41	36	36	33	32
AC-FT	2570	9440	3580	14560	10270	15110	16790	6730	9470	21790	3020	26900
(††)	.53	7.64	1.81	5.99	3.25	5.95	7.03	4.24	4.71	10.73	2.13	10.89

CAL YR 1978 TOTAL 30218 MEAN 82.8 MAX 1200 MIN 28 AC-FT 59940 †† 35.28
WTR YR 1979 TOTAL 70707 MEAN 194 MAX 6400 MIN 32 AC-FT 140200 †† 64.90

†† Weighted-mean rainfall, in inches, based on six rain gages.

SAN JACINTO RIVER BASIN

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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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
06...	1520	334	1050	7.4	21.0	80	150	3.5	40	31
07...	1020	77	750	7.1	18.0	80	120	4.2	46	14
27...	0945	1140	363	7.1	19.0	180	200	6.2	69	6.1
DEC										
12...	1040	46	935	7.2	11.5	30	20	6.7	63	16
FEB										
06...	1350	1590	235	8.0	8.0	140	120	10.0	87	4.1
MAR										
14...	0950	42	1450	7.6	20.0	30	20	3.1	35	9.0
MAY										
22...	0955	154	611	2.1	23.0	35	200	2.1	25	25
SEP										
12...	0920	43	1260	7.4	26.0	100	7.2	3.0	38	18
18...	1450	833	285	7.1	24.0	45	85	8.5	104	11
25...	0955	50	899	7.2	23.5	25	9.2	3.0	35	10

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV										
06...	2400000	180000	15000	120	17	36	6.3	150	6.1	6.4
07...	2000000	34000	2500	--	--	--	--	--	--	--
27...	440000	120000	35000	79	7	25	4.0	38	1.9	3.8
DEC										
12...	290000	11000	1000	130	0	38	8.8	120	4.6	5.9
FEB										
06...	400000	29000	25000	64	0	22	2.3	18	1.0	2.6
MAR										
14...	710000	35000	850	180	0	53	12	240	7.7	5.5
MAY										
22...	1900000	250000	13000	--	--	--	--	--	--	--
SEP										
12...	440000	2100	130	--	--	--	--	--	--	--
18...	220000	160000	100000	70	0	23	3.1	27	1.4	3.5
25...	44000	6700	520	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	120	0	28	240	.3	7.9	534	416	196	.97
07...	--	--	--	--	--	--	--	408	40	1.1
27...	88	0	26	46	.2	6.9	193	480	60	.66
DEC										
12...	180	0	51	150	.3	14	477	43	15	1.8
FEB										
06...	88	0	10	17	.2	8.4	124	476	72	.30
MAR										
14...	240	0	330	110	.4	23	892	25	6	1.3
MAY										
22...	--	--	--	--	--	--	--	288	74	.09
SEP										
12...	--	--	--	--	--	--	--	25	2	.49
18...	93	0	21	27	.1	6.4	157	212	4	.27
25...	--	--	--	--	--	--	--	43	17	1.3

SAN JACINTO RIVER BASIN

08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV									
06...	.13	1.1	.94	1.8	2.7	1.9	16	6	.10
07...	.13	1.2	1.4	1.7	3.1	1.8	14	--	.40
27...	.05	.71	.21	1.5	1.7	.59	14	4	.10
DEC									
12...	.20	2.0	1.4	1.2	2.6	2.0	6.5	--	.30
FEB									
06...	.08	.38	.18	1.2	1.4	.43	15	--	--
MAR									
14...	.38	1.7	2.6	1.1	3.7	3.0	6.4	2	.20
MAY									
22...	.18	.27	1.1	2.4	3.5	2.1	18	--	.90
SEP									
12...	.30	.79	.27	1.3	1.6	1.3	16	--	--
18...	.12	.39	.40	1.0	1.4	.80	15	--	--
25...	.37	1.7	2.2	.70	2.9	1.1	10	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV						
06...	1520	35	0	0	0	11
27...	0945	7	60	<1	0	9
MAR						
14...	0950	3	100	0	0	0
SEP						
18...	1450	6	50	<1	10	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV							
06...	30	16	10	.0	1	0	30
27...	30	17	<1	.0	0	0	<3
MAR							
14...	20	0	10	.0	0	0	20
SEP							
18...	30	0	1	.4	0	0	20

SAN JACINTO RIVER BASIN

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08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV									
06...	1520	.0	.00	.00	.2	.00	.00	.00	.29
27...	0945	.0	--	.01	.2	.00	.00	.00	.26
MAR									
14...	0950	.0	--	.00	.1	.00	.00	.00	.00
SEP									
18...	1450	.0	.00	.00	.3	.00	.00	.02	--
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)
NOV									
06...	.01	.00	.00	.00	.00	.00	.06	.15	--
27...	.01	.00	.00	.00	.00	.01	.00	.01	--
MAR									
14...	.01	.00	.00	.00	.00	.00	.01	.00	--
SEP									
18...	.02	.00	.00	--	.01	.00	.00	--	.00
DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV									
06...	.00	.00	.00	.00	0	.00	11	.08	.07
27...	.00	.00	.00	.00	0	.00	.62	.02	.00
MAR									
14...	.00	.00	.00	.00	0	.00	.05	.00	.00
SEP									
18...	--	--	.00	--	0	--	.00	.00	.00

SAN JACINTO RIVER BASIN

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°40'35", long 95°14'37", Harris County, Hydrologic Unit 12040104, at gaging station at Forest Oaks Street Bridge in southeast Houston, 0.8 mi (1.3 km) upstream from auxiliary gage at mouth of Berry-Creek, and 1.7 mi (2.7 km) upstream from Sims Bayou.

DRAINAGE AREA.--10.7 mi² (27.7 km²). Prior to Oct. 1, 1973, 11.1 mi² (28.7 km²). Oct. 1, 1976, to Dec. 31, 1977, 10.1 mi² (26.2 km²). Drainage ditch relocations resulted in drainage area changes.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year. April 1964 to September 1966 operated as a daily discharge station.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 2.72 ft (0.829 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment. Auxiliary water-stage recorder 0.8 mi (1.3 km) downstream at same datum. June 25, 1964, to Jan. 11, 1965, auxiliary nonrecording gage 0.8 mi (1.3 km) downstream at same datum.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1979."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,120 ft³/s (145 m³/s) July 26, 1979; maximum gage height, 23.85 ft (7.269 m) Sept. 20, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
aNov. 6	0600	c150 4.25	b6.25 1.905	aJuly 17	1800	486 13.8	8.22 2.505
aNov. 26	0815	490 13.9	b12.13 3.697	July 25	1600	1,700 48.1	b14.65 4.465
aFeb. 6	0400	473 13.4	b10.33 3.149	aJuly 26	0515	*5,120 145	b22.83 6.959
Mar. 19	2000	1,820 51.5	b17.87 5.447	Sept. 1	1830	1,960 55.5	15.49 4.721
aMar. 21	0815	734 20.8	b9.70 2.957	Sept. 18	1415	1,010 28.6	b11.57 3.527
Mar. 22	1200	c1,100 31.2	b10.95 3.338	Sept. 20	0130	4,820 137	b23.85 7.269

a Water-quality samples were made on this date.

b Not at same time as peak discharge.

c About.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Water temperatures: April 1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	
NOV											
06...	1415	73	374	7.3	22.0	60	40	5.1	60	13	
27...	0820	75	406	7.9	19.5	200	100	5.7	64	8.1	
FEB											
06...	1005	295	215	7.2	8.0	140	45	10.0	87	5.9	
MAR											
21...	1025	520	229	7.5	18.0	110	100	6.1	66	12	
JUL											
17...	1640	416	254	7.3	26.0	160	150	5.0	62	12	
26...	1255	2640	92	7.3	24.0	50	34	5.9	72	4.2	
		COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	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)
NOV											
06...	1200000	140000	25000	--	--	--	--	--	--	--	
27...	1200000	200000	40000	100	0	32	5.6	40	1.7	4.6	
FEB											
06...	260000	120000	31000	71	3	22	3.9	14	.7	2.6	
MAR											
21...	520000	140000	52000	79	6	25	3.9	13	.6	3.1	
JUL											
17...	520000	280000	18000	67	0	21	3.5	21	1.1	2.8	
26...	180000	100000	10000	33	0	11	1.3	3.3	.3	1.4	

SAN JACINTO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
NOV 06...	--	--	--	--	--	--	--	63	19	.29
27...	140	0	26	31	.3	11	220	156	20	1.4
FEB 06...	83	0	7.7	19	.2	8.1	118	95	24	.53
MAR 21...	88	0	13	15	.3	.4	115	228	20	.57
JUL 17...	84	0	17	20	.3	4.7	132	976	86	.78
26...	44	0	3.4	3.0	.1	3.7	49	86	11	.10

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 06...	.03	.32	.29	1.7	2.0	1.2	14	--	.60
27...	.13	1.5	.42	1.5	1.9	.69	19	--	.20
FEB 06...	.10	.63	.29	1.6	1.9	.65	--	--	--
MAR 21...	.21	.78	.35	.75	1.1	.52	22	2	.10
JUL 17...	.16	.94	.43	1.8	2.2	.67	36	11	.10
26...	.02	.12	.04	.82	.86	.22	6.0	5	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
MAR 21...	1025	5	0	1	0	6
JUL 17...	1640	6	0	0	10	5
26...	1255	2	30	<1	10	4

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 21...	100	0	0	.0	0	0	20
JUL 17...	80	0	20	.0	0	0	20
26...	40	4	1	.0	0	0	10

SAN JACINTO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR									
21...	1025	.0	--	.00	.2	.01	.00	.01	.40
JUL									
17...	1640	3.1	.00	.00	.8	.00	.00	.00	.34
26...	1255	.1	.00	.00	.1	.00	.00	.00	.20

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR									
21...	.02	.00	.00	.00	.02	.04	.00	.03	.00
JUL									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
26...	.00	.00	.00	.00	.00	.00	.00	.10	.03

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
21...	.00	.00	.00	0	.00	.24	.07	.01
JUL								
17...	.00	.00	.00	0	.00	.79	.00	.00
26...	.00	.00	.04	0	.00	.03	.00	.01

SAN JACINTO RIVER BASIN

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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 (3.9 km) upstream from mouth.

DRAINAGE AREA (revised).--7.32 mi² (18.96 km²). Prior to Jan. 1, 1978, 8.21 mi² (21.26 km²). Jan. 1 to Sept. 30, 1978, 7.61 mi² (19.71 km²). Drainage area revisions due to drainage ditch changes.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.54 ft (0.774 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence (levels by Corps of Engineers).

REMARKS.--Water-discharge records fair. Low flow is sustained by sewage effluent.

AVERAGE DISCHARGE.--8 years, 18.4 ft³/s (0.521 m³/s), 13,330 acre-ft/yr (16.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,940 ft³/s (112 m³/s) July 26, 1979, gage height, 16.93 ft (5.160 m); no flow Aug. 5, 6, 18, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
aJan. 26	1100	111	3.14	9.24	2.816	aJuly 17	1645	324	9.18	10.24	3.121
aMar. 19	1945	2,450	69.4	14.76	4.499	aJuly 26	0400	*3,940	112	16.93	5.160
aMay 22	0545	145	4.11	9.44	2.877	Sept. 1	1815	2,700	76.5	15.18	4.627
June 3	1815	1,760	49.8	13.61	4.148	Sept. 20	0145	3,600	102	16.51	5.032

a Water-quality samples were obtained on this date.

Minimum discharge, 0.20 ft³/s (0.006 m³/s) Oct. 23, June 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	.30	1.5	186	3.0	2.7	3.3	10	34	.51	1.7	456
2	1.2	.33	.81	22	3.6	3.1	21	5.6	199	.44	1.9	86
3	.90	.29	1.8	4.0	23	6.9	41	1.2	234	.31	1.4	5.8
4	.56	.22	18	3.3	74	3.7	9.1	143	127	.35	3.1	3.3
5	.66	.24	5.5	79	223	3.8	4.6	8.7	34	28	3.3	53
6	1.5	70	1.4	286	234	3.5	2.2	3.6	32	34	3.9	59
7	.78	3.7	1.3	53	25	4.0	2.6	2.4	2.8	2.4	5.7	66
8	.38	1.6	1.8	11	8.0	3.7	1.6	1.5	1.0	11	4.0	7.9
9	.56	.76	1.0	6.6	4.0	4.7	1.5	1.0	.97	3.3	17	1.6
10	.90	.83	.88	17	2.8	4.8	1.3	1.0	1.4	5.9	1.8	1.4
11	.90	.61	.90	42	2.7	4.1	2.2	16	1.1	.91	.84	1.8
12	1.0	.41	.88	7.7	3.1	3.8	1.5	7.6	.56	1.7	7.7	1.5
13	.90	1.4	1.2	6.7	2.9	3.7	1.8	1.7	.48	106	27	1.3
14	1.5	1.9	11	6.1	2.2	4.2	1.7	1.9	.38	20	3.2	1.2
15	.30	.34	11	5.5	2.0	4.1	1.9	1.5	.83	2.1	4.2	1.5
16	.38	3.5	2.4	3.6	2.3	3.9	2.0	1.7	.74	1.5	3.0	1.7
17	.30	.62	1.5	3.3	7.4	4.0	8.1	2.4	.64	57	2.9	39
18	.33	.31	1.7	3.4	8.4	3.8	87	2.1	4.8	25	1.1	318
19	.34	25	1.3	38	4.1	434	188	2.7	1.2	6.4	2.9	1320
20	.44	9.3	1.2	101	2.4	106	272	3.6	.25	10	49	919
21	.83	2.9	1.4	9.5	2.2	233	30	3.0	.27	7.4	1.8	14
22	.31	.96	1.0	3.7	2.7	238	6.2	20	.21	33	11	3.4
23	.20	1.2	.90	39	5.7	23	1.8	4.8	.28	6.8	1.5	3.0
24	.25	.59	1.4	5.9	4.8	6.9	2.4	2.1	25	23	.76	3.2
25	.42	.42	1.4	3.7	5.1	5.1	2.1	1.1	22	695	.63	1.9
26	.31	264	2.4	34	2.9	4.5	.90	1.6	54	1520	43	2.3
27	1.6	30	2.2	6.3	2.2	3.4	.66	1.4	9.1	88	2.6	1.8
28	.34	2.8	1.8	5.5	2.8	3.2	.66	1.4	2.1	10	4.1	1.9
29	.36	56	11	3.4	---	2.3	76	60	.46	2.6	9.1	1.4
30	.28	3.7	5.8	21	---	2.2	4.0	50	.20	3.2	13	.41
31	.37	---	6.2	7.4	---	7.0	---	11	---	2.1	12	---
TOTAL	19.88	484.23	102.57	1024.6	666.3	1141.1	779.12	375.6	790.77	2707.92	245.13	3378.31
MEAN	.64	16.1	3.31	33.1	23.8	36.8	26.0	12.1	26.4	87.4	7.91	113
MAX	1.6	264	18	286	234	434	272	143	234	1520	49	1320
MIN	.20	.22	.81	3.3	2.0	2.2	.66	1.0	.20	.31	.63	.41
AC-FT	39	960	203	2030	1320	2260	1550	745	1570	5370	486	6700
(††)	.00	6.42	1.37	6.15	3.34	6.10	5.57	3.60	4.39	15.93	2.83	16.12
CAL YR 1978	TOTAL	3078.04	MEAN	8.43	MAX	264	MIN	.15	AC-FT	6110	††	36.56
WTR YR 1979	TOTAL	11715.53	MEAN	32.1	MAX	1520	MIN	.20	AC-FT	23240	††	71.82

†† Weighted-mean rainfall, in inches, based on two rain gages.

SAN JACINTO RIVER BASIN

08075730 VINCE BAYOU AT PASADENA, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 24...	1215	.22	763	10.3	24.0	60	10	20.0	244	11
DEC 12...	0955	.78	799	7.2	7.0	30	8.0	16.8	142	4.0
JAN 26...	1110	105	246	7.4	13.0	200	100	8.7	101	29
JAN 27...	1235	5.2	440	4.8	15.5	180	30	15.0	155	4.4
MAR 14...	0855	4.0	692	7.1	19.0	25	5.0	9.9	110	9.6
MAR 19...	1940	2360	136	7.8	18.5	65	100	10.2	112	13
MAR 19...	2050	2000	141	7.8	18.5	110	150	9.8	108	8.1
MAR 20...	1020	55	239	7.4	19.0	220	150	6.6	73	12
MAY 22...	1055	24	427	7.5	24.0	50	68	6.8	83	17
JUN 05...	1100	40	318	7.2	28.0	200	58	8.1	104	4.8
JUL 17...	1520	40	263	7.6	29.0	30	13	7.1	93	12
JUL 25...	1450	1400	115	6.8	25.5	80	200	7.4	92	5.7
DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UN-MF (COLS./ 100 ML)	STREP- TOCOCCHI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 24...	1000	2	14	--	--	--	--	--	--	--
DEC 12...	98000	6200	410	160	0	43	12	95	3.3	3.6
JAN 26...	160000	14000	8700	84	11	27	4.1	14	.7	2.9
JAN 27...	11000	3800	270	--	--	--	--	--	--	--
MAR 14...	280000	32000	5300	120	0	31	9.3	89	3.6	3.2
MAR 19...	180000	36000	7400	--	--	--	--	--	--	--
MAR 19...	520000	48000	7100	--	--	--	--	--	--	--
MAR 20...	1300000	54000	6800	76	9	24	4.0	13	.6	3.0
MAY 22...	260000	62000	8900	--	--	--	--	--	--	--
JUN 05...	200000	35000	5400	--	--	--	--	--	--	--
JUL 17...	420000	120000	2700	--	--	--	--	--	--	--
JUL 25...	200000	140000	10000	47	4	16	1.7	4.2	.3	2.6
DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 24...	--	--	--	--	--	--	--	24	15	.01
DEC 12...	210	0	49	110	.4	7.8	424	18	9	.11
JAN 26...	89	0	18	14	.2	7.5	132	236	54	.79
JAN 27...	--	--	--	--	--	--	--	45	8	.52
MAR 14...	200	0	47	77	.6	2.4	358	10	2	.00
MAR 19...	--	--	--	--	--	--	--	484	108	.75
MAR 19...	--	--	--	--	--	--	--	552	72	.82
MAR 20...	82	0	19	13	.3	.5	117	308	12	.59
MAY 22...	--	--	--	--	--	--	--	131	37	.40
JUN 05...	--	--	--	--	--	--	--	103	41	.06
JUL 17...	--	--	--	--	--	--	--	31	31	.56
JUL 25...	52	0	5.6	2.6	.2	5.0	<64	440	28	.23

SAN JACINTO RIVER BASIN

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08075730 VINCE BAYOU AT PASADENA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 24...	.02	.03	.08	2.1	2.2	1.4	18	--	1.7
DEC 12...	.04	.15	.51	.79	1.3	.49	6.7	--	.30
JAN 26...	.14	.93	.26	1.5	1.8	.38	27	8	.10
27...	.12	.64	.15	.95	1.1	.34	12	--	.10
MAR 14...	.02	.02	.25	.61	.86	.29	7.7	8	.10
19...	.06	.81	.51	.99	1.5	.45	14	4	.10
19...	.08	.90	.62	.88	1.5	.52	17	--	.10
20...	.18	.77	.47	.93	1.4	.43	15	--	.10
MAY 22...	.14	.54	.18	1.3	1.5	.39	22	--	.60
JUN 05...	.06	.12	.26	.05	.31	.36	23	--	.10
JUL 17...	.12	.68	.08	.74	.82	.39	19	--	.40
25...	.04	.27	.10	.75	.85	.41	14	5	.10

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
JAN 26...	1110	2	100	0	0	5
MAR 14...	0855	1	100	0	0	1
JUL 25...	1450	1	30	<1	0	1

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 26...	110	2	0	.0	0	0	30
MAR 14...	0	0	0	.0	0	0	10
JUL 25...	40	5	4	.6	0	0	8

-SAN JACINTO RIVER BASIN
08075730 VINCE BAYOU AT PASADENA, TX--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JAN 26...	1110	.1	--	.00	.3	.00	.00	.01	.19
MAR 14...	0855	.0	--	.00	.0	.00	.00	.00	.00
MAR 19...	1940	.0	--	.00	.6	.00	.01	.03	.90
JUL 25...	1450	.2	.00	.00	.1	.00	.00	.00	.53

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)	METHYL PARA- THION, TOTAL (UG/L)
JAN 26...	.02	.00	.00	.00	.03	.01	.00	.04	.00
MAR 14...	.00	.00	.00	.00	.00	.00	.05	.00	.00
MAR 19...	.04	.00	.00	.00	.03	.03	.15	.04	.00
JUL 25...	.00	.00	.00	.00	.00	.00	.00	.02	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN 26...	.00	.00	.00	0	.00	.05	.01	.00
MAR 14...	.00	.00	.00	0	.00	.80	.01	.01
MAR 19...	.00	.00	.00	0	.00	.46	.03	.01
JUL 25...	.00	.00	.01	0	.00	.02	.02	.00

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LOCATION.--Lat 29°48'22", long 95°19'50", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on Falls Street in northeast Houston.

WATER-DISCHARGE RECORDS

GAGE.--Flood-hydrograph and rainfall recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 778 ft³/s (22.0 m³/s) June 13, 1973, elevation, 46.70 ft (14.234 m); maximum elevation, 47.35 ft (14.432 m) Sept. 1, 1979.

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Nov. 26	1815	345	9.77	42.72	13.021	aJuly 25	1530	72	2.04	40.13	12.232
Jan. 26	unknown	20	.57	unknown	--	Sept. 1	1830	*640	18.1	47.35	14.432
Apr. 19	2215	545	15.4	46.56	14.191	aSept. 20	0045	603	17.1	47.01	14.329

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year. Water temperatures: April 1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

SAN JACINTO RIVER BASIN

08075760 HUNTING BAYOU AT FALLS STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT 25...	--	--	--	--	--	--	--	36	24	.00
JAN 22...	--	--	--	--	--	--	--	17	8	.38
26...	190	0	45	47	.4	11	308	228	84	.73
26...	--	--	--	--	--	--	--	104	20	.91
27...	--	--	--	--	--	--	--	30	13	.38
APR 09...	210	0	59	130	.5	.1	467	12	16	.29
JUL 25...	56	0	33	54	.2	4.6	188	62	12	.92
26...	--	--	--	--	--	--	--	54	5	.88
SEP 17...	200	0	23	48	.4	10	286	964	44	.21
18...	--	--	--	--	--	--	--	58	6	.60
19...	--	--	--	--	--	--	--	38	11	.51
25...	--	--	--	--	--	--	--	13	14	.00

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 25...	.01	--	11	.00	11	4.20	27	--	4.0
JAN 22...	.08	.46	1.7	.40	2.1	.440	7.0	--	.30
26...	.21	.94	2.9	1.9	4.8	1.20	26	19	.20
26...	.19	1.1	3.7	2.0	5.7	1.30	21	--	.30
27...	.14	.52	7.0	2.0	9.0	1.30	14	--	1.1
APR 09...	.16	.45	2.5	.70	3.2	.960	10	18	.20
JUL 25...	.28	1.2	5.6	.00	5.4	1.60	15	160	.30
26...	.12	1.0	1.2	.00	.49	1.60	22	--	.40
SEP 17...	.08	.29	.46	1.2	1.7	.660	60	--	--
18...	.18	.78	2.5	3.5	6.0	1.50	28	--	--
19...	.12	.63	1.3	1.5	2.8	1.200	21	--	--
25...	.08	.05	2.1	.40	2.5	1.90	5.3	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 26...	0920	4	100	1	0	6	0
APR 09...	1155	2	200	1	0	2	0
JUL 25...	1825	4	0	1	10	20	170
SEP 17...	1540	3	80	3	0	0	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 26...	1	0	.0	0	0	70
APR 09...	0	10	.0	1	0	20
JUL 25...	15	120	.3	0	0	90
SEP 17...	2	<1	.0	0	0	20

SAN JACINTO RIVER BASIN
08075760 HUNTING BAYOU AT FALLS STREET, HOUSTON, TX--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JAN 26...	0920	.2	--	.00	.1	.00	.00	.03	.15
APR 09...	1155	.0	--	.00	.0	.00	.00	.00	.14
JUL 25...	1825	.2	.00	.00	.2	.00	.00	.07	.31

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)	METHYL PARA- THION, TOTAL (UG/L)
JAN 26...	.00	.00	.00	.00	.00	.00	.00	.49	.00
APR 09...	.00	.00	.00	.00	.00	.00	.00	.01	.00
JUL 25...	.00	.00	.00	.00	.00	.00	.00	9.4	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN 26...	.00	.00	.00	0	.00	.27	.03	.00
APR 09...	.00	.00	.00	0	.00	.00	.00	.00
JUL 25...	.00	.00	1.1	0	.00	.33	.03	.00

SAN JACINTO RIVER BASIN

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 (14.2 km) upstream from mouth.

DRAINAGE AREA (revised).--15.8 mi² (40.9 km²). Prior to Oct. 1, 1973, 16.8 mi² (43.5 km²). Oct. 1, 1973, to Sept. 30, 1978, 14.7 mi² (38.1 km²). Changes due to storm sewer relocations.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder. 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 (549 m) upstream at same datum.

REMARKS.--Water-discharge records. Low flow is largely maintained by sewage and industrial effluent. Recording rain gage at station.

AVERAGE DISCHARGE.--15 years, 22.9 ft³/s (0.649 m³/s), 16,590 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft³/s (95.7 m³/s) June 13, 1973, elevation, 38.11 ft (11.616 m); maximum gage height, 39.28 ft (11.973 m) June 15, 1976; minimum daily, 0.88 ft³/s (0.025 m³/s) Aug. 24, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Elevation (ft) (m)
Nov. 26	2030	1,000 28.3	32.80 9.997	Sept. 1	2100	2,240 63.4	38.62 11.771
aJan. 26	1300	81 2.29	23.25 7.087	aSept. 18	0200	333 9.43	27.09 8.257
Apr. 19	2330	2,300 65.1	38.55 11.750	Sept. 20	0200	*2,470 70.0	39.11 11.921
aAug. 22	1500	360 10.2	27.40 8.352				

a Water-quality samples were obtained on this date.

Minimum daily discharge, 2.7 ft³/s (0.076 m³/s) May 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.2	14	154	14	8.4	4.5	19	8.5	4.1	5.4	670
2	3.9	4.4	11	37	17	10	11	18	90	4.0	4.6	1150
3	3.8	4.4	20	18	53	16	224	15	25	4.2	4.4	108
4	3.8	4.7	29	12	60	9.3	152	251	98	5.4	4.4	46
5	3.8	5.0	15	34	270	8.4	29	62	60	5.1	5.2	35
6	3.7	96	10	301	319	8.9	18	21	27	18	6.2	71
7	3.7	8.5	9.8	181	89	8.2	13	15	14	9.1	8.4	197
8	3.7	5.5	16	31	32	11	11	14	9.7	16	64	46
9	3.6	4.3	10	19	21	8.7	10	11	7.8	6.4	30	15
10	3.6	4.3	8.7	19	17	8.0	9.5	8.9	7.2	5.0	6.2	12
11	3.6	9.4	8.4	53	15	8.0	9.5	12	6.6	5.0	5.0	7.7
12	3.5	8.8	8.4	23	14	8.9	8.8	12	6.3	5.0	4.4	5.8
13	3.5	5.5	8.2	18	14	9.6	9.9	6.5	6.0	115	6.6	5.6
14	3.5	5.3	11	13	13	7.4	9.2	5.8	6.2	38	4.8	4.8
15	3.4	4.5	16	13	11	6.6	8.3	5.4	6.1	8.8	40	4.2
16	3.4	5.2	9.6	14	10	6.3	6.9	5.1	8.3	6.2	33	4.6
17	3.3	7.3	7.6	13	22	6.2	7.3	4.8	6.3	6.1	12	74
18	3.4	4.8	7.0	13	29	5.5	112	4.6	9.9	6.0	9.1	258
19	3.9	42	6.6	24	15	51	432	4.7	8.1	7.2	156	982
20	3.9	27	6.6	135	19	83	1010	4.5	5.4	6.7	210	1770
21	3.8	8.2	6.1	28	19	236	119	4.2	5.4	5.4	37	233
22	3.6	6.8	6.7	20	14	268	36	31	5.5	5.7	165	37
23	3.6	7.2	6.4	27	19	90	21	6.6	5.5	6.9	49	18
24	3.4	5.7	6.3	15	17	13	16	5.1	5.8	11	9.7	15
25	4.0	5.5	6.1	13	12	8.4	13	4.4	50	166	8.4	13
26	4.2	344	6.4	51	10	7.0	11	4.3	25	336	6.7	7.7
27	4.3	264	6.3	25	10	6.0	9.3	3.1	6.0	55	40	7.1
28	4.2	24	6.9	16	8.9	5.5	8.8	2.7	3.6	29	12	7.3
29	4.2	100	52	16	---	5.0	124	53	4.4	11	19	6.5
30	4.1	25	24	36	---	4.8	36	33	4.2	9.6	8.2	6.1
31	4.1	---	17	19	---	4.6	---	48	---	6.6	25	---
TOTAL	116.4	1051.5	377.1	1391	1163.9	937.7	2490.0	695.7	531.8	923.5	999.7	5817.4
MEAN	3.75	35.1	12.2	44.9	41.6	30.2	83.0	22.4	17.7	29.8	32.2	194
MAX	4.3	344	52	301	319	268	1010	251	98	336	210	1770
MIN	3.3	4.2	6.1	12	8.9	4.6	4.5	2.7	3.6	4.0	4.4	4.2
AC-FT	231	2090	748	2760	2310	1860	4940	1380	1050	1830	1980	11540
(††)	.00	7.70	2.27	5.36	3.44	4.15	10.39	3.94	2.85	6.07	6.61	17.26
CAL YR 1978 TOTAL	8169.2			MEAN 22.4	MAX 718	MIN 3.3	AC-FT 16200	†† 46.89				
WTR YR 1979 TOTAL	16495.7			MEAN 45.2	MAX 1770	MIN 2.7	AC-FT 32720	†† 70.04				

†† Weighted-mean rainfall, in inches, based on three rain gages.

SAN JACINTO RIVER BASIN

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08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 24...	0945	3.4	1060	7.2	21.0	70	20	2.1	24	9.6
DEC 26...	1320	6.2	805	7.4	16.5	20	70	7.1	75	19
JAN 26...	1005	66	632	7.1	13.0	80	10	5.6	55	35
26...	1430	78	553	7.2	13.5	90	85	5.2	51	35
27...	1140	24	693	7.3	11.5	100	30	6.3	59	9.6
MAR 13...	1205	9.6	927	7.5	20.0	25	10	10.1	115	9.0
JUN 27...	1320	5.4	719	7.6	29.5	30	6.3	9.4	124	9.3
AUG 22...	1020	42	376	6.9	24.0	30	110	7.3	89	19
22...	1240	337	212	7.0	24.0	40	200	6.8	83	12
23...	1110	59	334	7.0	25.5	50	24	5.2	65	5.5
SEP 17...	1600	92	391	7.1	23.5	45	50	7.8	94	19
18...	0840	296	270	6.9	23.0	80	30	4.1	49	12

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 24...	30000	900	250	--	--	--	--	--	--	--
DEC 26...	13000	60	18	--	--	--	--	--	--	--
JAN 26...	190000	17000	25000	170	0	52	9.9	60	2.0	4.3
26...	500000	17000	11000	--	--	--	--	--	--	--
27...	11000	900	780	--	--	--	--	--	--	--
MAR 13...	170000	210	230	210	0	61	13	110	3.3	4.8
JUN 27...	30000	2300	270	160	0	50	9.3	82	2.8	4.6
AUG 22...	270000	31000	7700	--	--	--	--	--	--	--
22...	190000	41000	9100	63	0	20	3.2	14	.8	3.8
23...	71000	11000	2000	--	--	--	--	--	--	--
SEP 17...	52000	13000	39000	--	--	--	--	--	--	--
18...	500000	220000	70000	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEC. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 24...	--	--	--	--	--	--	--	36	10	.27
DEC 26...	--	--	--	--	--	--	--	240	72	.07
JAN 26...	230	0	53	52	.5	12	357	172	40	.51
26...	--	--	--	--	--	--	--	152	38	.64
27...	--	--	--	--	--	--	--	39	10	.73
MAR 13...	330	0	46	94	.6	10	502	28	8	.12
JUN 27...	260	0	50	61	.5	11	397	21	9	.00
AUG 22...	--	--	--	--	--	--	--	86	55	.24
22...	77	0	22	9.8	.2	5.5	116	506	56	.29
23...	--	--	--	--	--	--	--	65	14	.00
SEP 17...	--	--	--	--	--	--	--	434	46	.12
18...	--	--	--	--	--	--	--	84	17	1.8

SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 24...	.38	.65	7.8	.90	8.7	2.6	23	--	.90
DEC 26...	.93	1.0	4.5	2.0	6.5	1.4	110	--	.10
JAN 26...	.40	.91	1.8	1.4	3.2	1.3	24	26	.30
26...	.35	.99	1.8	1.4	3.2	1.3	24	--	.00
27...	.47	1.2	1.5	1.1	2.6	.71	17	--	.60
MAR 13...	.16	.28	3.0	1.3	4.3	1.7	13	9	.20
JUN 27...	.14	.11	2.1	2.3	4.4	.68	11	13	.40
AUG 22...	.18	.42	1.4	1.6	3.0	1.3	35	7	.20
22...	.12	.41	.63	1.5	2.1	.84	34	--	.10
23...	.02	.01	.01	2.8	2.8	1.6	18	--	.20
SEP 17...	.19	.31	.76	1.4	2.2	.91	31	--	--
18...	.18	2.0	2.3	1.0	3.3	.44	18	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 26...	1005	5	100	0	0	5	10
MAR 13...	1205	3	100	0	0	0	10
JUN 27...	1320	11	80	2	0	1	20

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 26...	1	0	.0	0	0	40
MAR 13...	0	170	.0	0	0	20
JUN 27...	0	2	.0	0	0	10

SAN JACINTO RIVER BASIN

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08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JAN 26...	1005	.1	--	.00	.0	.00	.00	.02	.28
MAR 13...	1205	.0	--	.00	.0	.00	.00	.00	.03
JUN 27...	1320	.0	--	.00	.0	.00	.00	.00	.36
AUG 22...	1020	.6	.00	.00	.0	.00	.00	.00	.30

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)	METHYL PARA- THION, TOTAL (UG/L)
JAN 26...	.00	.00	.00	.00	.00	.00	.03	.13	.00
MAR 13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN 27...	.00	.00	.00	.00	.00	.00	.00	1.1	.00
AUG 22...	.00	.00	.00	.00	.00	.00	.00	1.0	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN 26...	.00	.00	.00	0	.00	.10	.02	.00
MAR 13...	.00	.00	.00	0	.00	.00	.01	.00
JUN 27...	.00	.00	.00	0	.00	.10	.00	.03
AUG 22...	.00	.00	.00	0	.00	.08	.00	.00

SAN JACINTO RIVER BASIN

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 bridge, 9.0 mi (14.5 km) upstream from station 08076000, and 21 mi (34 km) upstream from Halls Bayou.

DRAINAGE AREA.--36.1 mi² (93.5 km²). Prior to October 1973, 34.8 mi² (90.1 km²).

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

REVISED RECORDS.--WDR TX-76-1: Drainage area.

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

REMARKS.--Records fair. Records furnished by Houston Lighting and Power Co. show that about 1,950 acre-ft (2.40 hm³) of ground water used for cooling purposes was released to bayou about 8 mi (13 km) upstream from gage during the current year. No known diversion above station. Recording rain gage at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 30.6 ft³/s (0.867 m³/s), 22,170 acre-ft/yr (27.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft³/s (83.5 m³/s) Sept. 20, 1979, elevation, 90.46 ft (27.572 m); maximum elevation, 91.09 ft (27.764 m) Feb. 21, 1969; minimum daily discharge, 0.16 ft³/s (0.004 m³/s) Oct. 21, 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 26	1800	1,700	48.1	Apr. 18	1930	2,140	60.6
Jan. 6	2130	1,100	31.2	Sept. 20	0200	*2,950	83.5
							88.50 26.975
							90.46 27.572

Minimum discharge, 5.6 ft³/s (0.16 m³/s) Nov. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	6.7	17	228	23	15	16	26	34	15	12	15
2	6.4	6.7	13	62	17	15	101	24	96	14	14	17
3	7.2	6.9	36	24	95	30	279	20	37	14	11	13
4	7.2	8.3	39	16	104	16	191	389	26	44	11	12
5	7.1	8.3	20	65	433	14	59	172	26	25	12	14
6	7.8	86	26	582	564	15	26	65	17	17	13	26
7	6.4	21	35	437	212	13	14	35	17	198	61	63
8	6.5	9.2	33	97	82	13	11	22	12	230	21	16
9	7.2	7.2	19	42	40	13	11	17	11	38	13	11
10	6.9	6.5	12	28	28	15	11	17	11	26	11	12
11	6.6	7.6	11	81	20	16	10	22	11	20	14	11
12	6.6	15	9.8	41	18	16	8.8	25	10	27	13	10
13	8.2	7.5	9.7	25	17	15	10	16	9.8	62	12	10
14	7.5	6.6	13	16	15	12	8.9	14	9.6	98	12	9.8
15	7.2	6.0	11	13	16	11	6.9	13	11	33	32	9.4
16	7.3	5.6	9.8	14	14	13	6.6	13	10	15	29	9.8
17	6.9	8.1	8.7	13	48	12	6.4	12	12	11	24	28
18	7.0	7.1	8.7	14	108	11	608	12	13	12	15	147
19	6.6	107	8.7	37	38	26	858	12	12	11	27	1090
20	6.9	86	9.7	143	28	80	1050	12	12	71	40	1870
21	7.2	14	8.7	51	26	140	495	11	10	258	14	456
22	7.2	8.7	9.8	26	23	298	151	150	9.4	43	33	103
23	7.2	7.0	9.7	18	86	157	74	36	11	20	17	47
24	7.9	7.4	10	12	119	47	46	14	12	16	12	29
25	8.3	6.9	9.4	11	43	24	32	11	14	151	11	18
26	7.5	592	9.4	26	23	16	26	12	13	150	13	15
27	6.8	385	9.2	18	18	11	20	13	13	124	11	14
28	6.1	54	8.8	12	17	9.7	18	14	12	150	11	13
29	6.3	85	51	14	---	10	70	97	13	36	11	12
30	6.7	37	36	157	---	10	50	80	15	20	11	13
31	6.6	---	42	66	---	29	---	58	---	14	13	---
TOTAL	217.7	1620.3	554.1	2389	2275	1122.7	4274.6	1434	519.8	1963	554	4114.0
MEAN	7.02	54.0	17.9	77.1	81.3	36.2	142	46.3	17.3	63.3	17.9	137
MAX	8.3	592	51	582	564	298	1050	389	96	258	61	1870
MIN	6.1	5.6	8.7	11	14	9.7	6.4	11	9.4	11	11	9.4
AC-FT	432	3210	1100	4740	4510	2230	8480	2840	1030	3890	1100	8160
(††)	.13	7.58	2.49	5.65	3.84	3.26	7.94	4.74	1.52	8.56	2.98	9.02
CAL YR 1978	TOTAL	10480.2	MEAN	28.7	MAX	1210	MIN	5.6	AC-FT	20790	††	41.30
WTR YR 1979	TOTAL	21038.2	MEAN	57.6	MAX	1870	MIN	5.6	AC-FT	41730	††	57.71

†† Weighted-mean rainfall, in inches, based on five rain gages.

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, 10.5 mi (16.9 km) northeast of Houston, 12.0 mi (19.3 km) upstream from Halls Bayou, and 23.4 mi (37.7 km) upstream from mouth.

DRAINAGE AREA.--69.6 mi² (180.3 km²). Prior to Oct. 1, 1973, 72.7 mi² (188.3 km²).

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 (0.201 m) below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Channel rectified during the water years 1974-75. No known diversion above station. Low flow is sustained by Houston Light and Power Co. effluent, which is obtained from ground-water sources. Recording rain gage at station.

AVERAGE DISCHARGE.--27 years, 55.6 ft³/s (1.575 m³/s), 40,280 acre-ft/yr (49.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,730 ft³/s (219 m³/s) Apr. 18, 1976, gage height, 61.92 ft (18.873 m); maximum gage height, 65.75 ft (20.041 m) Sept. 12, 1961 (prior to channel rectification); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
aNov. 26	2130	2,180 61.7	56.86 17.331	Apr. 20	2000	3,140 88.9	59.36 18.093
Jan. 6	2230	2,130 60.3	56.67 17.273	aJuly 25	2330	1,680 47.6	56.57 17.243
Feb. 23	2230	2,360 66.8	57.42 17.502	Sept. 20	0330	*5,760 163	64.78 19.745
aApr. 18	2230	3,040 86.1	59.14 18.026				

a Water-quality samples were obtained on this date.

Minimum daily discharge, 10 ft³/s (0.28 m³/s) Nov. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	32	477	54	31	30	38	62	23	20	268
2	11	11	21	163	49	31	113	34	361	23	20	149
3	13	12	118	50	250	62	582	29	104	24	24	27
4	13	12	128	36	225	35	353	787	55	79	20	22
5	13	13	48	91	903	24	115	412	53	54	18	17
6	14	155	23	1090	1170	23	53	142	36	32	18	49
7	13	54	73	1040	472	21	32	64	34	120	61	188
8	16	21	69	219	190	21	24	39	25	393	28	55
9	13	13	39	94	98	20	22	28	20	67	20	19
10	13	11	17	56	61	21	21	25	19	35	17	16
11	12	12	14	189	46	22	19	30	19	27	16	17
12	13	19	14	101	39	21	18	46	21	29	20	15
13	13	13	14	56	36	20	17	26	18	166	14	15
14	15	12	13	37	32	20	16	23	17	170	17	15
15	13	11	20	30	32	17	14	21	18	71	91	15
16	13	10	15	29	29	21	13	21	18	27	57	15
17	13	17	13	26	83	21	15	20	19	22	37	55
18	12	14	13	26	218	17	808	20	27	23	21	279
19	12	107	13	106	85	39	1640	19	26	20	137	1700
20	12	244	14	382	57	150	2210	19	21	29	164	4280
21	13	34	12	119	54	340	1250	19	20	330	71	1100
22	13	17	13	53	49	568	378	330	18	75	206	264
23	13	15	14	38	424	360	175	92	18	31	71	112
24	14	13	14	26	867	103	89	26	20	25	21	61
25	14	13	13	22	148	47	50	19	21	451	17	42
26	15	710	13	61	66	32	36	19	43	700	17	32
27	14	812	13	43	47	28	27	20	26	138	19	28
28	12	126	13	26	37	24	23	21	21	292	17	26
29	12	192	72	25	---	22	168	182	21	72	16	24
30	12	101	123	188	---	21	122	241	22	38	16	21
31	13	---	64	161	---	37	---	175	---	24	17	---
TOTAL	405	2806	1075	5060	5821	2219	8433	2987	1203	3610	1308	8926
MEAN	13.1	93.5	34.7	163	208	71.6	281	96.4	40.1	116	42.2	298
MAX	16	812	128	1090	1170	568	2210	787	361	700	206	4280
MIN	11	10	12	22	29	17	13	19	17	20	14	15
AC-FT	803	5570	2130	10040	11550	4400	16730	5920	2390	7160	2590	17700
(††)	.11	6.98	2.50	5.62	4.32	3.00	7.92	4.43	1.65	8.27	3.14	9.44
CAL YR 1978	TOTAL	24068	MEAN	65.9	MAX	2470	MIN	10	AC-FT	47740	††	41.08
WTR YR 1979	TOTAL	43853	MEAN	120	MAX	4280	MIN	10	AC-FT	86980	††	57.38

†† Weighted-mean rainfall, in inches, based on seven rain gages.

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	
DATE	TIME										
OCT 18...	1100	13	990	7.2	17.5	40	20	8.8	95	18	
NOV 27...	1935	298	221	7.5	17.0	200	250	7.7	82	5.5	
DEC 12...	0815	15	815	6.9	6.5	40	40	9.8	82	11	
JAN 22...	1240	48	510	7.7	11.5	200	50	9.2	87	18	
MAR 14...	1420	18	1000	8.4	24.0	20	20	15.5	189	5.4	
APR 18...	0845	39	616	7.4	21.0	25	310	5.7	66	24	
18...	1410	128	372	7.2	21.5	25	250	13.0	151	26	
18...	2200	3010	172	7.0	20.0	75	810	8.6	98	14	
19...	1505	1060	186	7.1	20.5	100	580	7.2	82	5.0	
JUL 25...	1330	74	626	7.2	26.0	30	160	5.9	74	17	
26...	1045	639	144	7.6	24.5	280	180	6.5	79	12	
31...	1050	23	712	7.4	28.5	70	96	5.2	68	16	
DATE		COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 18...	16000	2900	40	--	--	--	--	--	--	--	--
NOV 27...	150000	30000	5500	76	6	26	2.8	12	.6	3.5	
DEC 12...	14000	2300	620	200	12	66	8.6	77	2.4	7.2	
JAN 22...	61000	8300	980	--	--	--	--	--	--	--	--
MAR 14...	13000	2000	68	260	14	86	11	110	3.0	5.9	
APR 18...	480000	30000	4700	--	--	--	--	--	--	--	--
18...	840000	38000	7800	110	0	37	3.4	29	1.2	3.2	
18...	580000	36000	21000	69	0	24	2.3	7.8	.4	1.8	
19...	120000	34000	4400	--	--	--	--	--	--	--	--
JUL 25...	460000	100000	7400	160	32	55	6.3	63	2.1	4.3	
26...	120000	100000	12000	--	--	--	--	--	--	--	--
31...	26000	3000	2000	190	29	64	8.1	74	2.3	4.5	
DATE		BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLATILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 18...	--	--	--	--	--	--	--	--	42	14	2.5
NOV 27...	86	0	10	14	.1	8.7	120	532	36	.35	
DEC 12...	230	0	52	85	.3	34	443	71	20	2.1	
JAN 22...	--	--	--	--	--	--	--	--	105	19	1.1
MAR 14...	300	0	110	95	.4	33	600	32	9	1.1	
APR 18...	--	--	--	--	--	--	--	--	752	94	.20
18...	140	0	19	23	.3	.3	184	568	68	.53	
18...	86	0	7.7	6.1	.3	2.3	95	762	68	.25	
19...	--	--	--	--	--	--	--	--	266	34	.10
JUL 25...	160	0	90	53	.3	23	374	237	72	.35	
26...	--	--	--	--	--	--	--	--	276	56	.24
31...	200	0	71	67	.3	27	415	157	27	.26	

SAN JACINTO RIVER BASIN

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08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 18...	.42	2.9	1.6	1.3	2.9	6.1	12	--	.30
NOV 27...	.04	.39	.24	1.2	1.4	.59	15	--	.10
DEC 12...	.30	2.4	2.7	1.4	4.1	2.8	8.0	--	--
JAN 22...	.55	1.6	3.0	1.5	4.5	2.9	15	--	.20
MAR 14...	.51	1.6	1.7	.80	2.5	2.1	4.8	2	.10
APR 18...	.34	.54	1.4	2.1	3.5	1.6	17	--	.20
18...	.31	.84	1.1	.90	2.0	.58	17	0	.10
18...	.10	.35	.39	.81	1.2	.25	25	--	.00
19...	.08	.18	.22	.88	1.1	.18	16	--	.00
JUL 25...	.41	.76	.82	1.2	2.0	1.8	13	4	.20
26...	.12	.36	.15	.38	.53	.49	14	--	.00
31...	.34	.60	.36	.00	.24	2.0	12	1	.10

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
MAR 14...	1420		5	300	0	0
APR 18...	1410		4	100	1	0
JUL 25...	1330		7	300	0	1
31...	1050		8	300	1	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 14...	0	0	0	.0	2	0	10
APR 18...	10	0	0	.0	0	0	10
JUL 25...	0	0	40	.0	1	2	8
31...	20	0	30	.0	1	0	10

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 14...	1420	.0	--	.00	.0	.00	.00	.00	.00
APR 18...	1410	.0	--	.00	.1	.00	.00	.00	.40
JUL 25...	1330	.2	.00	.00	.1	.00	.00	.00	.88
31...	1050	.0	.00	.00	.0	.00	.00	.00	.29

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 14...	.00	.00	.00	.00	.00	.00	.01	.00	.00
APR 18...	.00	.00	.00	.00	.00	.00	.00	.11	.00
JUL 25...	.00	.00	.00	.00	.00	.00	.00	.01	.00
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 14...	.00	.00	.00	0	.00	.08	.00	.00
APR 18...	.00	.00	.00	0	.00	.28	.04	.00
JUL 25...	.00	.00	.01	0	.00	3.0	.03	.00
31...	.00	.00	.00	0	.00	.00	.00	.00

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 (17.7 km) upstream from mouth.

DRAINAGE AREA.--27.6 mi² (71.5 km²). Oct. 1, 1973, to Sept. 30, 1977, 28.3 mi² (73.3 km²). Prior to Oct. 1, 1973, 24.7 mi² (64.0 km²). Changes were result of drainage ditch extensions or relocations.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft (0.201 m) below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. No known diversion above station. Low flow is sustained by sewage effluent from Houston suburbs.

AVERAGE DISCHARGE.--27 years, 27.3 ft³/s (0.773 m³/s), 19,780 acre-ft/yr (24.4 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft³/s (107 m³/s) Mar. 21, 1972, gage height, 60.70 ft (18.501 m); maximum gage height, 60.75 ft (18.517 m) June 13, 1973; no flow at times prior to 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Jan. 6	2000	1,290	36.5	55.60	16.947	aJuly 8	0100	150	4.25	48.18	14.685
aApr. 18	2100	1,410	39.9	56.52	17.227	Sept. 1	2030	1,450	41.1	57.48	17.520
aApr. 20	0100	1,740	49.3	57.55	17.541	Sept. 20	0400	*3,100	87.8	61.42	18.721

a Water-quality samples were obtained on this date.

Minimum daily discharge, 5.6 ft³/s (0.16 m³/s) Nov. 10, 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	8.3	12	231	21	24	18	21	23	7.7	8.5	390
2	7.5	8.3	9.8	41	22	23	49	21	92	7.5	8.5	253
3	7.6	7.8	53	19	124	35	379	19	39	8.4	18	24
4	7.2	7.9	53	15	94	24	135	376	27	8.9	14	14
5	7.7	8.8	20	39	406	21	40	66	26	14	9.1	12
6	7.8	66	12	492	534	20	26	42	20	11	8.9	95
7	7.3	19	16	365	136	19	22	27	18	27	40	257
8	7.6	7.1	27	58	61	18	22	22	15	74	15	39
9	8.1	5.9	16	31	38	18	20	19	13	16	10	17
10	7.5	5.6	11	26	30	17	19	17	13	11	8.6	13
11	7.7	6.6	10	91	28	18	18	18	12	8.8	10	11
12	7.6	6.6	9.0	39	27	18	17	25	11	9.0	14	10
13	7.6	6.8	9.3	27	26	17	16	16	11	29	13	9.6
14	7.5	6.5	9.4	21	24	16	15	14	11	27	19	11
15	7.7	6.3	12	19	22	16	14	14	11	19	27	8.5
16	8.0	6.7	10	18	19	18	14	13	11	11	29	8.9
17	7.5	7.4	9.5	18	53	18	15	12	11	9.2	13	51
18	6.4	6.3	9.1	18	89	17	368	12	15	9.0	9.2	198
19	7.0	52	9.0	49	36	38	580	12	14	8.3	85	1120
20	6.9	56	9.4	239	29	89	912	12	13	9.9	51	2480
21	6.3	9.6	8.3	48	28	179	238	12	11	21	21	274
22	7.9	6.5	8.1	27	27	318	76	78	10	10	91	76
23	8.6	6.6	8.8	26	180	104	46	27	11	8.3	39	41
24	7.9	5.8	9.2	20	425	40	30	16	10	9.2	14	28
25	9.5	5.6	9.4	18	64	28	24	13	10	145	10	21
26	8.5	334	9.1	47	37	24	20	13	10	175	31	18
27	8.1	203	9.2	32	30	21	19	11	10	27	40	17
28	8.2	20	8.1	22	27	20	16	11	11	47	13	16
29	8.4	79	38	22	---	20	78	60	8.6	19	12	15
30	8.2	26	38	55	---	19	42	61	8.6	12	10	15
31	8.8	---	25	34	---	18	---	61	---	9.6	12	---
TOTAL	240.0	1002.0	497.7	2207	2637	1275	3288	1141	506.2	808.8	703.8	5543.0
MEAN	7.74	33.4	16.1	71.2	94.2	41.1	110	36.8	16.9	26.1	22.7	185
MAX	9.5	334	53	492	534	318	912	376	92	175	91	2480
MIN	6.3	5.6	8.1	15	19	16	14	11	8.6	7.5	8.5	8.5
AC-FT	476	1990	987	4380	5230	2530	6520	2260	1000	1600	1400	10990
(††)	.09	6.59	2.61	6.74	4.89	2.64	7.09	4.00	1.24	5.76	3.33	10.73
CAL YR 1978	TOTAL	10988.8	MEAN	30.1	MAX	1180	MIN	5.3	AC-FT	21800	††	41.00
WTR YR 1979	TOTAL	19849.5	MEAN	54.4	MAX	2480	MIN	5.6	AC-FT	39370	††	55.71

†† Weighted-mean rainfall, in inches, based on five rain gages.

SAN JACINTO RIVER BASIN

08076500 HALLS 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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 18...	1145	5.9	829	7.0	18.0	50	8.0	4.5	49	23
DEC 12...	0855	9.3	813	7.3	8.5	60	9.0	6.4	57	16
JAN 22...	1155	24	655	7.6	12.0	140	20	6.9	66	17
FEB 28...	1405	26	855	7.6	19.5	70	10	4.5	51	12
MAR 14...	1345	15	985	7.8	23.0	30	2.0	9.9	118	7.2
APR 18...	0900	35	807	7.4	22.0	30	75	3.2	38	19
18...	1405	56	737	7.2	22.0	25	71	4.9	58	31
18...	2045	1400	197	6.9	21.0	50	300	7.7	89	12
19...	1345	173	264	7.2	21.0	130	120	6.1	70	12
JUL 07...	1715	8.9	834	7.2	30.0	30	1.1	1.3	17	14
07...	2015	55	865	7.4	29.0	30	52	.6	8	22
08...	1310	44	471	7.0	28.0	50	14	1.8	23	16
DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0-7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 18...	190000	13000	250	--	--	--	--	--	--	--
DEC 12...	210	160	24	180	0	56	9.9	84	2.7	8.7
JAN 22...	42000	2500	1600	--	--	--	--	--	--	--
FEB 28...	35000	3400	550	230	0	72	13	81	2.3	6.9
MAR 14...	400000	20000	310	250	0	77	14	100	2.8	7.0
APR 18...	620000	25000	5800	--	--	--	--	--	--	--
18...	680000	72000	7400	190	0	60	9.7	72	2.3	5.1
18...	180000	110000	15000	--	--	--	--	--	--	--
19...	250000	35000	4900	--	--	--	--	--	--	--
JUL 07...	400000	210000	2500	--	--	--	--	--	--	--
07...	1000000	240000	7700	180	0	57	8.4	92	3.0	8.0
08...	1200000	120000	15000	--	--	--	--	--	--	--
DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEC. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
OCT 18...	--	--	--	--	--	--	--	16	15	.03
DEC 12...	290	0	31	81	.3	26	440	20	15	1.4
JAN 22...	--	--	--	--	--	--	--	39	6	.42
FEB 28...	330	0	30	79	.5	19	464	31	18	.44
MAR 14...	370	0	33	99	.4	31	544	11	5	.30
APR 18...	--	--	--	--	--	--	--	132	30	.20
18...	260	0	31	73	.4	1.8	381	120	27	.17
18...	--	--	--	--	--	--	--	714	116	.43
19...	--	--	--	--	--	--	--	298	62	.17
JUL 07...	--	--	--	--	--	--	--	8	0	.00
07...	300	0	27	110	.2	9.9	<460	310	48	.00
08...	--	--	--	--	--	--	--	52	20	.25

08076500 HALLS BAYOU AT HOUSTON TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 18...	.03	.06	10	.00	.61	9.80	6.3	--	.70
DEC 12...	.39	1.8	5.8	2.3	8.1	5.10	15	--	2.6
JAN 22...	.21	.63	1.3	1.4	2.7	1.70	15	--	.40
FEB 28...	.48	.92	3.0	2.9	5.9	2.00	16	--	.60
MAR 14...	.59	.89	5.1	1.8	6.9	5.10	8.4	3	.20
APR 18...	.32	.52	5.2	2.0	7.2	9.60	14	--	.20
18...	.23	.40	4.4	1.6	6.0	3.40	17	16	.20
18...	.10	.53	.64	1.7	2.3	.510	21	--	.10
19...	.08	.25	.45	1.4	1.8	.700	18	--	.10
JUL 07...	.14	.07	7.9	.00	5.7	3.30	9.8	--	--
07...	.18	.11	9.1	.00	5.4	3.50	13	7	.40
08...	.26	.51	1.9	1.2	3.1	.920	11	5	.30

DATE	TIME	ARSENIC		BARIUM, DIS- SOLVED		CADMIUM DIS- SOLVED		CHRO- MIUM, DIS- SOLVED		COPPER, DIS- SOLVED		IRON, DIS- SOLVED	
		(UG/L AS AS)	(UG/L AS BA)	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CU)	(UG/L AS FE)						
MAR 14...	1345		4	200	0	10	0	20					
APR 18...	1405		8	100	0	0	0	0					
JUL 07...	2015		8	30	<1	0	1	<10					
08...	1310		26	200	0	0	2	100					

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 14...	0	10	.0	1	0	20
APR 18...	0	10	.0	0	0	20
JUL 07...	2	<1	.0	1	0	<3
08...	1	200	.0	0	0	5

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 14...	1345	.0	--	.00	.2	.00	.00	.00	.34
APR 18...	1405	.0	--	.00	.4	.00	.00	.00	.62
JUL 07...	2015	.0	.00	.00	.1	.00	.00	.00	.75
08...	1310	.0	.00	.00	.0	.00	.00	.00	1.0

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)	METHYL PARA- THION, TOTAL (UG/L)
MAR 14...	.01	.00	.00	.00	.00	.00	.03	.04	.00
APR 18...	.03	.00	.00	.00	.01	.00	.04	.12	.00
JUL 07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
08...	.01	.00	.00	.00	.00	.00	.00	.06	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
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SAN JACINTO RIVER BASIN

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 (91 m) downstream from mouth of Halls Bayou.

DRAINAGE AREA.--182 mi² (471 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1962 to December 1964, May to September 1971 (discharge measurements only), October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.13 ft (0.649 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records fair except those below 1,000 ft³/s (28.3 m³/s), which are poor. Discharge is computed for all storms which produce peak discharges over 1,000 ft³/s (28.3 m³/s). Tidal influences on the stage-discharge relationship affect discharge below about 500 ft³/s (14.2 m³/s). Discharge below 1,000 ft³/s (28.3 m³/s) is estimated following designated storm periods only.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s (473 m³/s) June 13, 1973, gage height, 34.27 ft (10.445 m); minimum not determined (affected by tides).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft³/s (119 m³/s), revised and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
aNov. 20	0500	850	24.1	7.15	2.179	Apr. 20	0600	11,800	334	28.73	8.757
aNov. 27	0300	3,550	101	17.24	5.255	July 26	0700	5,060	143	22.03	6.715
Jan. 7	0600	4,210	119	18.80	5.730	Sept. 2	0200	4,680	133	21.25	6.477
aFeb. 6	1500	3,510	99.4	16.75	5.105	Sept. 20	b1000	*14,700	416	33.61	10.244
Feb. 24	0700	4,390	124	19.18	5.846						

a Water-quality samples were obtained on this date.

b Estimated.

Minimum discharge not determined (affected by tides).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---		1110	---	---	---	---	60	---	---	1230
2		---		480	---	---	80	---	1020	---	---	2750
3		---		140	680	---	1630	---	500	---	---	410
4		---		---	690	---	1620	1540	100	---	---	100
5		---		60	2330	---	380	1210	---	---	---	---
6		---		1840	3200	---	120	350	---	---	---	240
7		---		3050	1640	---	---	110	---	---	---	1010
8		---		570	540	---	---	---	---	---	---	240
9		---		150	150	---	---	---	---	---	---	60
10		---		---	---	---	---	---	---	---	---	---
11		---		---	---	---	---	---	---	---	---	---
12		---		---	---	---	---	---	---	---	---	---
13		---		---	---	---	---	---	---	680	---	---
14		---		---	---	---	---	---	---	700	---	---
15		---		---	---	---	---	---	---	100	---	---
16		---		---	---	---	---	---	---	---	---	---
17		---		---	---	---	---	---	---	---	---	300
18		---		---	---	---	1040	---	---	---	---	1000
19		---		50	---	---	5480	---	---	---	290	5000
20		---		1120	---	---	9340	---	---	---	430	13900
21		---		400	---	1040	3960	---	---	---	100	7130
22		---		100	---	1900	930	---	---	---	380	1240
23		---		---	170	1440	340	---	---	---	500	450
24		---		---	3010	310	110	---	---	---	120	150
25		---		---	540	100	---	---	---	1110	---	---
26		1060		---	130	---	---	---	---	4050	---	---
27		2190		---	---	---	---	---	---	1180	---	---
28		350		---	---	---	---	---	---	830	---	---
29		---		---	---	---	---	---	---	310	---	---
30		---		---	---	---	---	---	---	100	---	---
31		---		---	---	---	---	---	---	---	---	---
TOTAL		---		---	---	---	---	---	---	---	---	---
MEAN		---		---	---	---	---	---	---	---	---	---
MAX		---		---	---	---	---	---	---	---	---	---
MIN		---		---	---	---	---	---	---	---	---	---
AC-FT		---		---	---	---	---	---	---	---	---	---

NOTE.--No gage-height record Sept. 7-20.

SAN JACINTO RIVER BASIN

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08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
NOV										
20...	1015	700	299	7.6	14.5	260	380	7.2	73	14
20...	1430	500	286	7.7	15.0	220	350	7.0	71	23
27...	1410	1840	191	7.7	18.5	180	250	6.6	73	8.7
FEB										
05...	1400	2680	254	7.5	9.0	--	110	9.3	83	5.5
06...	1130	3400	202	7.3	7.5	200	120	10.2	88	4.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV										
20...	480000	44000	48000	84	3	29	2.8	22	1.0	3.5
20...	440000	40000	35000	--	--	--	--	--	--	--
27...	690000	160000	44000	72	12	25	2.4	11	.6	2.8
FEB										
05...	170000	34000	28000	91	1	30	3.9	16	.7	2.5
06...	110000	25000	19000	72	4	24	3.0	12	.6	2.1

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 DIS- CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- PENDE (MG/L)	SOLIDS, VOLATILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
NOV										
20...	99	0	14	27	.2	7.0	154	1000	116	.72
20...	--	--	--	--	--	--	--	904	160	.71
27...	74	0	13	16	.1	5.6	112	680	92	.46
FEB										
05...	110	0	12	21	.2	9.2	149	--	--	.31
06...	83	0	10	19	.2	7.8	119	312	16	.21

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)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV									
20...	.05	.77	.75	1.5	2.2	1.3	17	4	.00
20...	.07	.78	.73	1.8	2.5	1.2	--	--	.00
27...	.04	.50	.24	1.1	1.3	.57	18	2	.10
FEB									
05...	.08	.39	.30	1.3	1.6	.58	22	1	.00
06...	.06	.27	.17	1.0	1.2	.49	17	--	.00

SAN JACINTO RIVER BASIN

08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		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)
DATE	TIME					
NOV						
20...	1015	8	100	2	0	2
27...	1410	5	80	2	0	4
FEB						
05...	1400	3	100	0	0	4

		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)
DATE	TIME							
NOV								
20...	10	21	<1	.0	0	0	3	
27...	30	20	1	.0	0	0	4	
FEB								
05...	110	0	0	.0	0	0	30	

		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)
DATE	TIME								
MAR									
14...	1420	.0	--	.00	.0	.00	.00	.00	.00
APR									
18...	1410	.0	--	.00	.1	.00	.00	.00	.40
JUL									
25...	1330	.2	.00	.00	.1	.00	.00	.00	.88
31...	1050	.0	.00	.00	.0	.00	.00	.00	.29

		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)	METHYL PARA- THION, TOTAL (UG/L)
DATE	TIME									
MAR										
14...	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
APR										
18...	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00
JUL										
25...	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

		METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DATE	TIME								
MAR									
14...	.00	.00	.00	.00	0	.00	.08	.00	.00
APR									
18...	.00	.00	.00	.00	0	.00	.28	.04	.00
JUL									
25...	.00	.00	.00	.01	0	.00	3.0	.03	.00
31...	.00	.00	.00	.00	0	.00	.00	.00	.00

08077000 CLEAR CREEK NEAR PEARLAND, TX

LOCATION.--Lat 29°35'50", long 95°17'11", Harris-Brazoria County line, Hydrologic Unit 12040204, at downstream side of pier of bridge on State Highway 35, 0.7 mi (1.1 km) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi (1.9 km) upstream from Hickory Slough, 2.3 mi (3.7 km) north of Pearland, and about 30 mi (48 km) upstream from head of Clear Lake.

DRAINAGE AREA.--38.8 mi² (100.5 km²).

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 (8.102 m) 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 (1.768 m) higher.

REMARKS.--Records good. Large area of riceland above station is irrigated with water from the Brazos River. Low flow from April to October is largely drainage from irrigated lands. Many diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years (water years 1948-59, 1964-79), 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) Mar. 18, 1957; maximum gage height, 18.57 ft (5.660 m) 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 above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 7	0400	639	18.1	10.12	3.085	May 4	2000	658	18.6	10.29	3.136
Feb. 6	1500	965	27.3	12.74	3.883	June 2	2000	995	28.2	12.96	3.950
Mar. 20	0400	1,100	31.2	13.72	4.182	July 26	1700	*1,950	55.2	18.57	5.660
Mar. 22	2000	916	25.9	12.37	3.770	Sept. 20	0900	1,780	50.4	17.80	5.425
Apr. 21	0200	850	24.1	11.86	3.615						

Minimum daily discharge, 0.41 ft³/s (0.012 m³/s) Oct. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.56	18	36	8.4	3.1	6.2	43	23	13	65	30
2	1.1	.48	11	34	6.9	2.8	8.6	53	653	11	35	30
3	1.0	.44	7.3	15	12	3.1	41	45	626	9.5	21	13
4	1.1	.48	10	9.2	28	2.8	195	364	244	8.3	15	9.9
5	1.1	.50	20	27	467	2.4	70	409	282	11	15	11
6	.95	7.9	13	271	878	2.2	29	134	184	14	15	9.0
7	.90	2.8	9.0	535	513	2.1	15	55	85	14	20	159
8	.90	1.7	8.0	197	174	2.0	9.9	30	31	14	19	132
9	.90	.84	6.1	59	76	2.0	7.5	20	15	36	22	45
10	.90	.68	4.5	34	42	1.8	5.9	20	14	28	22	20
11	.80	2.5	3.4	91	27	2.0	4.8	13	13	22	21	12
12	.80	2.6	2.8	94	19	2.3	4.4	14	9.3	74	26	8.2
13	.80	2.3	2.4	50	15	2.0	3.9	11	9.3	77	23	7.1
14	.69	1.3	2.3	27	12	1.9	3.0	6.4	7.2	82	18	6.3
15	.67	.98	3.6	15	10	1.7	2.7	5.1	5.6	40	20	5.9
16	.67	.83	3.5	11	8.3	1.7	2.7	4.9	5.7	27	18	5.3
17	.67	.67	3.0	11	7.2	1.7	3.0	5.2	8.9	38	21	5.2
18	.59	.65	2.6	10	8.2	1.7	16	4.9	13	70	28	34
19	.58	3.3	2.2	13	7.4	150	58	5.7	17	35	20	816
20	.57	4.7	2.0	163	6.7	881	731	4.5	16	61	20	1760
21	.51	3.5	1.8	77	6.3	589	755	7.2	15	108	39	1630
22	.46	2.3	1.6	27	6.3	682	380	10	15	30	24	1200
23	.47	1.7	1.5	25	6.4	536	131	13	12	24	34	586
24	.47	1.4	1.5	30	6.6	149	65	11	12	27	21	212
25	.44	1.2	1.4	17	5.6	56	33	5.5	11	274	10	91
26	.48	28	1.4	21	4.5	30	16	6.5	38	1870	10	46
27	.41	79	1.3	34	3.9	18	10	7.0	47	1910	9.5	28
28	.48	30	1.2	21	3.6	12	7.8	6.1	25	1800	11	18
29	.48	36	1.5	13	---	8.0	35	15	16	1470	23	13
30	.48	35	2.2	12	---	6.0	90	30	12	481	19	12
31	.56	---	2.1	11	---	6.9	---	45	---	164	20	---
TOTAL	22.13	254.31	152.2	1990.2	2369.3	3163.2	2740.4	1404.0	2465.0	8842.8	684.5	6954.9
MEAN	.71	8.48	4.91	64.2	84.6	102	91.3	45.3	82.2	285	22.1	232
MAX	1.2	79	20	535	878	881	755	409	653	1910	65	1760
MIN	.41	.44	1.2	9.2	3.6	1.7	2.7	4.5	5.6	8.3	9.5	5.2
AC-FT	44	504	302	3950	4700	6270	5440	2780	4890	17540	1360	13800
CAL YR 1978	TOTAL	7331.94	MEAN	20.1	MAX	690	MIN	.41	AC-FT	14540		
WTR YR 1979	TOTAL	31042.94	MEAN	85.0	MAX	1910	MIN	.41	AC-FT	61570		

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 (7.2 km) 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 0.49 ft (0.149 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers), 1973 adjustment. Prior records unadjusted for land-surface subsidence.

REMARKS.--The purpose of this station is to record gage heights of high tides in Galveston Bay and the corresponding gage heights of the water surface in Moses Lake. Moses Lake is connected to Galveston Bay by gated opening through levee. No gage heights are shown for Moses Lake until they reach 3.0 ft (0.91 m) on either side.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (Moses Lake), 4.4 ft (1.34 m) Sept. 20, 1979; minimum, -2.6 ft (-0.79 m) Mar. 12, 13, 1968. Maximum gage height (Galveston Bay), 4.7 ft (1.43 m) Feb. 14, 1969; minimum not recorded but probably occurred Mar. 12 or 13, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum gage height (Moses Lake), 4.4 ft (1.34 m) Sept. 20; minimum, -2.3 ft (-0.70 m) Jan. 21. Maximum gage height (Galveston Bay), 4.0 ft (1.22 m) Sept. 19, 20; minimum, -2.4 ft (-0.73 m) Jan. 2, 21.

MAXIMUM DAILY GAGE HEIGHT, IN FEET, GALVESTON BAY AND MOSES LAKE
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake	Galv. Bay	Moses Lake
1	2.1	-	-	-	2.3	-	1.8	-	1.4	-	1.3	-	2.5	-	2.9	-	1.9	-	1.3	-	1.8	-	3.2	2.0
2	2.1	-	-	-	2.6	-	1.4	-	1.9	-	1.9	-	2.6	-	2.8	-	2.0	-	1.4	-	1.9	-	2.9	-
3	2.0	-	-	-	2.6	-	1.3	-	1.8	-	1.9	-	2.5	-	2.7	-	1.9	-	1.5	-	2.0	-	2.7	-
4	2.0	-	-	-	1.4	-	2.1	-	1.6	-	1.0	-	1.7	-	2.5	-	1.7	-	1.7	-	1.9	-	2.6	-
5	-	-	-	-	1.7	-	2.1	-	2.7	-	1.5	-	2.0	-	1.7	-	1.8	-	1.6	-	2.0	-	2.2	-
6	-	-	-	-	2.4	-	1.4	-	2.8	-	1.5	-	2.1	-	2.1	-	2.2	-	1.6	-	1.8	-	1.9	-
7	2.3	-	1.4	-	2.5	-	1.3	-	1.5	-	1.3	-	2.2	-	2.0	-	2.2	-	1.7	-	1.9	-	2.1	-
8	2.5	-	1.4	-	1.7	-	1.7	-	1.3	-	1.2	-	2.2	-	2.3	-	2.3	-	1.8	-	2.2	-	2.2	-
9	2.4	-	1.6	-	1.1	-	1.7	-	1.3	-	1.6	-	1.8	-	2.6	-	2.4	-	1.9	-	2.1	-	2.2	-
10	-	-	1.9	-	1.3	-	2.7	-	1.5	-	1.5	-	2.4	-	3.0	2.4	2.2	-	2.3	-	-	-	2.4	-
11	2.2	-	2.0	-	1.3	-	2.7	-	1.5	-	.9	-	3.5	3.0	2.7	-	2.2	-	2.5	-	-	-	2.8	-
12	-	-	2.2	-	1.2	-	2.5	-	1.3	-	1.1	-	2.6	-	2.0	-	2.7	-	1.8	-	-	-	3.4	1.5
13	2.1	-	2.4	-	1.3	-	2.3	-	1.1	-	1.3	-	2.1	-	1.7	-	2.3	-	2.1	-	-	-	2.9	-
14	-	-	2.3	-	1.4	-	.3	-	1.3	-	1.2	-	1.9	-	2.1	-	2.2	-	2.2	-	-	-	3.4	3.1
15	-	-	2.3	-	1.6	-	1.6	-	1.3	-	2.0	-	1.9	-	1.8	-	2.4	-	2.0	-	-	-	3.0	2.5
16	-	-	2.3	-	1.7	-	1.7	-	1.1	-	2.3	-	2.4	-	1.8	-	2.1	-	1.7	-	-	-	2.7	-
17	-	-	1.8	-	1.3	-	1.5	-	1.5	-	2.4	-	2.7	-	1.8	-	2.1	-	1.5	-	-	-	2.9	-
18	-	-	1.9	-	1.7	-	1.3	-	1.2	-	2.6	-	2.6	-	1.8	-	2.2	-	1.9	-	-	-	3.3	2.4
19	-	-	2.3	-	1.8	-	1.7	-	1.7	-	3.4	2.9	2.5	-	1.7	-	2.2	-	2.0	-	-	-	4.0	4.3
20	-	-	2.7	-	1.6	-	1.8	-	2.3	-	2.5	-	2.9	-	1.8	-	2.1	-	1.9	-	2.0	-	4.0	4.4
21	-	-	2.2	-	1.6	-	-1.1	-	2.1	-	2.3	-	2.2	-	1.8	-	2.0	-	1.8	-	1.9	-	2.2	3.1
22	-	-	2.2	-	1.6	-	1.7	-	2.2	-	2.3	-	2.0	-	2.1	-	1.9	-	2.1	-	2.0	-	2.4	-
23	-	-	2.3	-	2.0	-	1.7	-	2.2	-	1.8	-	1.9	-	1.7	-	1.9	-	3.8	1.7	1.5	-	2.7	-
24	-	-	1.8	-	2.1	-	.0	-	2.3	-	.2	-	2.1	-	1.3	-	1.8	-	3.5	1.7	1.8	-	2.7	-
25	-	-	1.8	-	1.6	-	2.1	-	.6	-	.7	-	2.3	-	1.8	-	1.6	-	3.0	2.7	-	-	2.4	-
26	-	-	2.6	-	1.7	-	2.1	-	.5	-	1.2	-	2.3	-	2.1	-	1.8	-	3.9	3.9	-	-	2.6	-
27	-	-	2.3	-	2.2	-	1.2	-	1.2	-	1.5	-	2.4	-	1.9	-	1.7	-	3.5	3.1	-	-	2.9	-
28	-	-	2.0	-	2.7	-	.6	-	1.6	-	1.8	-	2.2	-	1.9	-	1.7	-	2.8	-	-	-	2.6	-
29	-	-	2.2	-	2.8	-	1.8	-	-	-	2.1	-	2.9	-	2.0	-	1.8	-	2.3	-	-	-	1.7	-
30	-	-	2.1	-	2.5	-	2.1	-	---	---	2.4	-	2.7	-	2.3	-	1.4	-	2.0	-	-	-	1.9	-
31	-	-	---	---	2.2	-	.7	-	---	---	2.3	-	---	---	2.3	-	---	---	2.0	-	3.3	1.9	---	---

HIGHLAND BAYOU BASIN

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08077700 HIGHLAND BAYOU AT HITCHCOCK, TX

LOCATION.--Lat 29°21'12", long 95°01'49", Galveston County, Hydrologic Unit 12040204, at downstream side of bridge on Farm Road 2004, 0.6 mi (1.0 km) west of Hitchcock, and 7 mi (11 km) from mouth and Jones Bay.

DRAINAGE AREA.--15.6 mi² (40.4 km²).

PERIOD OF RECORD.--August 1963 to current year (elevations only prior to 1973, beginning 1973 gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 0.80 ft (0.244 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 14.33 ft (4.368 m) Sept. 20, 1979; minimum unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1930, 14.6 ft (4.45 m) July 25, 1959, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 14.33 ft (4.368 m) Sept. 20; minimum, -0.97 ft (-0.296 m) Jan. 24.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
1	2.52	2.01	2.56	1.58	2.57	1.37	2.08	0.11	1.78	0.20	1.77	0.90	2.75	1.66	3.44	2.23	2.85	1.43	1.70	1.21	2.20	1.45	7.62	2.99
2	2.48	1.98	2.37	1.05	2.96	1.94	.11	-.44	2.38	1.65	2.43	1.38	2.57	1.88	3.18	2.36	2.30	1.60	1.88	1.25	2.24	1.33	8.15	7.20
3	2.44	1.82	2.07	1.02	2.94	1.65	1.51	-.30	2.34	1.23	2.16	1.40	2.72	1.80	3.13	2.20	2.25	1.56	1.97	1.24	2.33	1.27	7.20	4.80
4	2.58	1.80	2.10	1.03	2.00	.50	2.53	1.51	2.42	.57	1.45	.26	2.17	1.18	2.84	1.97	2.17	1.57	1.98	1.11	2.28	1.23	5.25	3.55
5	2.66	1.60	2.27	1.38	1.77	1.07	2.56	1.66	4.10	2.42	1.83	.54	2.34	1.01	2.18	1.44	2.26	1.56	2.00	1.07	2.37	2.24	3.55	2.38
6	2.42	1.42	2.64	1.41	2.52	1.72	1.90	1.05	5.40	4.10	1.83	.84	2.40	1.49	2.52	1.64	2.78	1.63	1.92	.87	2.20	1.15	2.58	1.93
7	2.67	1.83	1.75	.35	2.82	1.78	1.92	.89	4.25	1.44	1.63	.25	2.65	2.08	2.49	2.10	2.13	1.78	2.12	.92	2.28	1.08	2.57	1.66
8	2.77	1.98	1.79	1.02	2.17	.44	1.06	.15	1.51	.88	1.46	.04	2.67	1.86	2.74	2.24	2.17	1.70	2.23	1.13	2.58	1.17	2.57	1.86
9	2.76	1.60	1.97	1.49	.46	-.30	1.88	.62	1.33	.12	1.88	1.21	2.29	1.59	3.04	2.25	2.24	1.63	2.56	1.14	2.57	1.58	2.60	1.99
10	2.42	1.29	2.22	1.80	1.38	-.30	2.90	1.35	1.82	.94	1.77	.59	2.87	2.17	3.30	2.33	2.02	1.57	2.64	1.28	2.19	1.55	2.67	1.88
11	2.45	1.43	2.28	1.78	1.67	.68	2.98	2.21	1.82	.96	1.31	.58	3.87	2.84	3.03	2.23	2.11	1.07	3.04	1.56	2.16	1.43	3.23	2.64
12	2.52	1.83	2.48	1.54	1.40	.38	2.92	1.73	1.69	.86	1.41	.74	2.99	2.14	2.53	1.72	3.07	1.50	2.54	1.68	2.07	1.33	3.69	2.78
13	2.64	1.85	2.79	2.04	1.66	.72	2.60	.72	1.47	.72	1.70	1.14	2.53	1.58	2.32	1.25	2.68	1.83	2.73	1.43	1.92	1.33	3.43	2.23
14	2.36	1.45	2.58	1.86	1.72	.58	.72	-.26	1.73	1.10	1.61	.93	2.36	1.33	2.47	1.25	2.67	1.48	2.84	1.96	1.97	1.15	3.75	2.60
15	2.73	1.94	2.48	1.42	1.97	1.09	1.90	.45	1.72	1.06	2.40	.85	2.40	1.43	2.25	1.34	2.83	1.74	2.48	1.75	2.06	1.20	3.45	2.56
16	2.45	1.47	2.59	1.60	2.00	.84	2.07	1.21	1.38	.42	2.80	2.16	2.79	1.57	2.24	1.09	2.61	1.79	2.07	1.27	2.07	1.27	3.18	2.39
17	2.50	1.68	1.96	.78	1.73	.72	1.87	.94	1.76	.82	2.88	1.94	3.07	1.89	2.17	1.19	2.54	1.96	2.15	1.13	2.41	1.33	3.34	2.35
18	2.50	1.40	2.10	1.27	2.05	1.30	1.65	.78	1.67	.99	3.01	2.27	2.83	1.85	2.18	1.13	2.65	2.02	2.27	1.13	2.35	1.38	4.93	2.47
19	2.22	1.17	2.47	1.70	2.07	.93	2.14	1.54	2.03	.93	3.25	1.98	3.93	1.66	2.26	1.49	2.73	1.92	2.42	1.28	2.32	1.39	14.00	4.78
20	2.17	1.18	3.04	1.90	1.87	1.15	2.16	.02	2.67	1.52	3.15	2.18	4.96	3.57	2.23	1.57	2.52	1.52	2.63	1.33	2.33	1.38	14.33	-
21	2.15	1.20	2.48	1.63	1.78	.34	.02	-.82	2.52	1.45	4.57	2.05	3.57	2.13	2.34	1.75	2.35	1.36	2.73	2.45	2.30	1.42	-	-
22	2.22	1.62	2.38	1.88	1.83	1.05	1.72	-.83	2.57	1.46	3.41	2.24	2.37	1.76	2.53	1.75	2.28	1.23	2.67	2.00	2.30	1.32	-	-
23	2.40	1.38	2.50	1.62	2.19	1.38	1.90	-.33	2.54	1.59	2.75	.54	2.29	1.62	2.12	.88	2.33	1.23	4.10	1.84	2.02	1.27	-	-
24	2.08	1.42	2.10	1.44	2.33	.44	.07	-.97	2.75	1.32	.60	-.12	2.48	1.86	1.75	.65	2.27	1.25	3.80	2.90	2.58	1.33	-	-
25	2.42	1.73	2.05	1.55	1.67	.23	2.18	-.04	1.32	-.74	.95	.00	2.62	1.86	2.17	.81	2.12	1.07	7.70	2.34	2.45	1.69	-	-
26	2.41	1.30	2.93	1.89	2.02	1.20	2.49	1.37	.81	-.49	1.65	.85	2.61	1.37	2.41	1.24	2.72	.95	10.90	7.70	2.26	1.74	-	-
27	1.80	1.30	2.74	1.37	2.49	1.30	1.62	-.10	1.57	.82	1.91	1.20	2.80	1.25	2.26	1.37	2.10	1.17	10.70	7.35	2.47	1.85	-	-
28	1.98	1.50	2.17	1.08	3.07	1.84	.77	-.34	2.00	1.24	2.25	1.20	2.63	1.79	2.25	1.07	2.09	1.15	7.35	3.45	2.54	2.09	-	1.83
29	2.27	1.67	2.45	1.42	3.11	2.06	2.11	.67	-	-	2.14	1.75	3.12	1.60	2.63	1.09	2.20	1.25	3.45	2.26	3.01	1.93	2.74	1.52
30	2.13	1.33	2.42	1.22	2.68	1.48	2.45	1.06	-----	-----	2.80	1.96	3.18	2.13	2.93	1.44	1.82	1.10	2.53	2.05	3.06	2.33	2.37	1.27
31	2.42	1.42	-----	-----	2.57	1.32	1.06	-.35	-----	-----	2.57	1.80	-----	-----	2.69	1.84	-----	-----	2.47	1.72	3.69	2.71	-----	-----

CHOCOLATE BAYOU BASIN

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°22'09", long 95°19'14", Brazoria County, Hydrologic Unit 12040204, on right bank 800 ft (240 m) downstream from bridge on Farm Road 1462, 5.9 mi (9.5 km) southwest of Alvin, and 6.9 mi (11.1 km) upstream from State Highway 35.

DRAINAGE AREA.--87.7 mi² (227.1 km²). During extreme flooding, overflow from about 11 mi² (28 km²) of the Mustang Bayou drainage basin enters the Chocolate Bayou basin upstream from gage.

WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder. Datum of gage is 10.31 ft (3.142 m) 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 (270 to 427 m) upstream and at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records good except those for September, which are poor. Large area of riceland above station is irrigated with water from Brazos River. Low flow from April to October is largely drainage from irrigated lands. Diversions for irrigation above station.

AVERAGE DISCHARGE.--30 years (water years 1948-57, 1960-79), 112 ft³/s (3.172 m³/s), 81,140 acre-ft/yr (100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) July 26, 1979, gage height, 23.88 ft (7.279 m); no flow at times.
Maximum stage is that of July 26, 1979. Flood of Oct. 8, 1949, reached a stage of 21.80 ft (6.645 m), present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1939, reached a stage of 22.9 ft (6.98 m), former site and present datum, adjusted from floodmark 1,700 ft (518 m) to right and 550 ft (168 m) 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 above base of 1,200 ft³/s (34.0 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 7	1200	1,440 40.8	14.36 4.377	June 4	2000	1,750 49.6	16.10 4.907
Feb. 7	0800	2,410 68.3	18.48 5.633	July 26	a1100	*21,500 609	23.88 7.279
Apr. 21	0400	1,470 41.6	14.58 4.444	Sept. 2	--	1,800 51.0	-- --
May 5	0600	1,340 37.9	13.76 4.194	Sept. 20	a0800	5,850 166	21.53 6.562

a Estimated.

Minimum daily discharge, 0.23 ft³/s (0.007 m³/s) Oct. 22, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.36	122	254	34	10	13	194	169	123	870	200
2	1.3	.43	72	237	25	9.3	83	391	704	108	180	800
3	5.8	.39	50	91	91	10	172	249	1360	99	120	1500
4	21	.33	50	43	144	9.9	148	721	1680	104	90	800
5	36	.34	65	199	1040	8.6	70	1250	1580	124	68	400
6	21	4.5	47	1120	1850	8.2	31	479	1170	175	63	500
7	12	17	39	1410	2290	7.9	19	132	618	269	73	400
8	5.5	7.2	33	892	1200	7.3	15	67	193	259	70	200
9	4.6	1.8	26	252	242	7.0	13	47	93	354	72	100
10	11	1.1	19	132	111	6.5	15	34	66	253	88	50
11	3.8	.67	15	496	72	6.7	18	147	60	366	100	30
12	.95	107	12	567	53	6.3	12	304	46	400	114	25
13	.61	68	11	260	41	4.9	16	106	40	588	106	22
14	.43	27	11	120	33	4.9	21	76	39	869	90	20
15	.61	14	13	64	29	4.3	21	56	47	437	82	18
16	.61	8.1	16	46	24	3.7	20	47	74	235	75	16
17	.56	3.2	16	41	20	4.7	14	39	78	158	72	15
18	.56	1.3	14	41	21	6.0	22	29	84	139	69	100
19	.43	7.4	13	46	20	6.9	80	28	115	137	68	1900
20	.29	644	12	543	19	338	1130	34	106	123	71	5400
21	.26	368	11	512	18	655	1400	42	97	139	81	4200
22	.23	110	8.8	134	18	1060	714	80	86	212	75	3200
23	.26	56	7.4	78	19	1060	210	119	84	170	74	2500
24	.23	33	6.7	51	19	345	107	83	84	198	71	1850
25	.29	22	5.8	31	16	100	77	68	110	1050	64	700
26	.36	194	5.2	41	13	48	57	43	377	15700	58	150
27	.46	761	5.1	53	12	29	48	35	466	11700	66	68
28	.43	368	4.3	35	11	21	55	36	259	6940	76	44
29	.40	214	3.7	24	---	17	152	52	183	4420	72	39
30	.37	231	5.0	31	---	15	313	121	142	3190	65	36
31	.36	---	6.2	60	---	14	---	198	---	2380	60	---
TOTAL	132.00	3271.12	725.2	7904	7485	3835.1	5066	5307	10210	51419	3303	25283
MEAN	4.26	109	23.4	255	267	124	169	171	340	1659	107	843
MAX	36	761	122	1410	2290	1060	1400	1250	1680	15700	870	5400
MIN	.23	.33	3.7	24	11	3.7	12	28	39	99	58	15
AC-FT	262	6490	1440	15680	14850	7610	10050	10530	20250	102000	6550	50150
CAL YR 1978	TOTAL	31791.47	MEAN	87.1	MAX	1190	MIN	.23	AC-FT	63060		
WTR YR 1979	TOTAL	123940.42	MEAN	340	MAX	15700	MIN	.23	AC-FT	245800		

CHOCOLATE BAYOU BASIN

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08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1971 to current year.

SPECIFIC CONDUCTANCE: February to September 1978, December 1978 to July 1979.

WATER TEMPERATURES: February to September 1978, December 1978 to July 1979.

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, 1,360 micromhos Mar. 20, 1978, Mar. 19, 1979; minimum daily, 100 micromhos July 26, 1979.

WATER TEMPERATURES (December 1978 to July 1979): Minimum daily, 4.0°C Jan. 2, Feb. 11, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,360 micromhos Mar. 19; minimum daily, 100 micromhos July 26.

WATER TEMPERATURES: Minimum daily, 4.0°C Jan. 2, Feb. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0-7 UM-MF (COLS./ 100 ML)
OCT 24...	1120	.29	1100	7.8	20.5	70	10	7.1	81	1.2	13000	24
NOV 15...	1035	14	520	7.3	23.5	140	40	6.7	81	2.5	29000	650
DEC 20...	1015	12	980	7.9	17.0	40	20	9.2	98	1.3	5000	110
JAN 30...	1110	24	760	7.5	8.5	70	40	10.3	91	1.6	1500	1400
FEB 14...	1030	33	620	8.0	17.5	160	40	9.5	102	1.7	2600	310
MAR 26...	1200	47	490	7.4	18.0	180	100	8.7	95	2.8	2500	1700
APR 30...	1210	323	380	7.1	20.0	50	340	7.7	88	4.2	36000	9000
MAY 09...	1150	49	550	7.8	25.5	50	170	7.2	90	2.6	7000	170
JUN 06...	1210	1140	265	7.3	25.5	200	110	4.6	58	3.5	8000	520
JUL 10...	1355	242	590	7.5	28.0	25	7.6	6.9	88	3.2	2500	310
AUG 08...	1645	70	480	7.7	29.5	30	44	7.6	100	2.3	650	500
SEP 12...	1530	24	700	7.5	28.0	--	--	7.0	90	2.5	--	96

DATE	STREP- TOCOCCEI FECAL, KF ACAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 24...	40	250	74	69	20	120	3.3	5.3	220	0	56	210
NOV 15...	460	150	50	43	10	39	1.4	8.2	120	0	54	64
DEC 20...	130	300	42	84	21	90	2.3	4.7	310	0	56	140
JAN 30...	580	240	46	71	16	74	2.1	2.7	240	0	40	110
FEB 14...	900	180	17	51	13	59	1.9	3.0	200	0	28	77
MAR 26...	12	140	13	38	10	43	1.6	2.7	150	0	32	49
APR 30...	5300	110	20	33	7.4	32	1.3	2.8	110	0	34	40
MAY 09...	500	160	10	45	11	49	1.7	2.7	180	0	31	58
JUN 06...	1700	71	1	20	5.2	21	1.1	2.4	86	0	21	18
JUL 10...	550	170	43	50	12	49	1.6	2.5	160	0	41	71
AUG 08...	230	150	14	45	10	39	1.4	2.7	170	0	26	50
SEP 12...	54	170	15	47	13	67	2.2	5.5	190	0	40	96

CHOCOLATE BAYOU BASIN

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 24...	.4	25	667	614	14	1	.03	.01	.04	.04	.94	.98
NOV 15...	.3	18	305	296	62	6	--	--	--	--	--	--
DEC 20...	.3	14	572	563	33	14	.01	.00	.01	.01	.42	.43
JAN 30...	.3	13	435	445	57	14	.03	.02	.05	.05	1.2	1.2
FEB 14...	.3	11	368	341	80	8	.03	.02	.05	.07	.92	.99
MAR 26...	.3	15	275	264	156	92	.00	.02	.01	.01	1.2	1.2
APR 30...	.3	12	216	216	604	124	1.0	.08	1.1	.07	1.4	1.5
MAY 09...	.4	9.5	322	295	106	30	.21	.06	.27	.05	1.2	1.2
JUN 06...	.3	15	166	145	142	34	.04	.08	.12	.10	1.5	1.6
JUL 10...	.3	17	345	322	98	28	.15	.21	.36	.26	.70	.96
AUG 08...	.3	13	265	270	70	13	.06	.02	.08	.07	.65	.72
SEP 12...	.3	16	395	378	--	--	.02	.02	.04	.07	.85	.92

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	.92	.080	.060	11	--	--	1	.20	--	--	--
NOV 15...	1.2	--	.090	15	--	--	--	.10	--	--	--
DEC 20...	.30	.050	.030	--	7.3	.5	--	.20	--	--	--
JAN 30...	1.2	.090	.060	11	--	--	--	.00	--	--	--
FEB 14...	1.4	.050	.080	9.8	--	--	0	.00	--	--	--
MAR 26...	1.0	.100	.010	--	18	--	0	--	85	11	98
APR 30...	.72	.130	.050	15	--	--	2	.00	196	171	99
MAY 09...	1.2	.060	.030	16	--	--	--	.10	160	21	99
JUN 06...	--	.100	--	17	--	--	--	.00	184	566	93
JUL 10...	.99	.090	.050	7.7	--	--	2	.10	107	70	97
AUG 08...	.46	.060	.020	--	13	--	0	.00	67	13	99
SEP 12...	.81	.070	.040	11	--	--	--	--	56	3.6	100

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 20...	1015	2	1	200	0	200	0	0	<1	10
MAR 26...	1200	2	1	200	100	100	0	0	<1	10
AUG 08...	1645	2	2	0	0	100	1	0	<1	10

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
DEC 20...	0	10	2	0	<3	5	4	1	550	540
MAR 26...	0	10	1	0	<3	10	4	6	3000	2900
AUG 08...	0	10	2	0	<3	6	5	1	1800	1800

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CHOCOLATE BAYOU BASIN

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 15, 78 1035	MAR 26, 79 1200	MAY 9, 79 1150	JUN 6, 79 1210
TOTAL CELLS/ML	1300	1300	8500	1100
DIVERSITY: DIVISION	1.8	1.1	1.2	1.2
..CLASS	1.8	1.1	1.2	1.2
..ORDER	1.9	2.0	1.6	1.4
...FAMILY	2.6	2.6	1.7	1.6
....GENUS	2.9	2.7	0.0	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACTACEAE								
...SCHROEDERIA	--	-	--	-	75	1	--	-
...MICRACETINACEAE								
...MICRACETINIUM	--	-	--	-	--	-	51	5
...OOCYSTACEAE								
...ANKISTRODESMUS	67	5	--	-	530	6	--	-
...CLOSTERIOPSIS	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	51	5
...KIRCHNERIELLA	--	-	50	4	50	1	--	-
...OOCYSTIS	--	-	--	-	50	1	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	--	-	--	-	75	1	--	-
...SCENEDESMUS	270#	20	--	-	--	-	--	-
...TETRASTRUM	--	-	--	-	100	1	--	-
...CLADOPHORALES								
...CLADOPHORACEAE								
...RHIZOCLONIUM	--	-	150	12	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE	--	-	--	-	100	1	--	-
...CARTERIA	22	2	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	50	4	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	--	-	250#	20	330	4	51	5
...MELOSIRA	--	-	--	-	50	1	--	-
...PENNIALES								
...CYMBELLACEAE								
...CYMBELLA	--	-	50	4	--	-	--	-
...RHOPALODIA	22	2	--	-	--	-	--	-
...NAVICULACEAE								
...DIPLONEIS	67	5	--	-	--	-	--	-
...GYROSIGMA	22	2	--	-	--	-	--	-
...NAVICULA	180	14	150	12	50	1	13	1
...NITZSCHIA	240#	19	450#	36	650	8	180#	16
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	--	-	--	-	1000	12	--	-
...ANACYSTIS	--	-	--	-	5000#	59	13	1
...HORMOCOONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIA	--	-	--	-	--	-	--	-
...OSCILLATORIA	330#	25	--	-	250	3	770#	68
...RIVULARIA								
...RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	67	5	50	4	--	-	--	-
...LEPOTINCLIS	--	-	--	-	--	-	--	-
...TRACHELOMONAS	22	2	50	4	180	2	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
...GYMNODINIUM	--	-	--	-	--	-	--	-
...PERIDINIALES								
...GLENODINIACEAE								
...GLENODINIUM	--	-	--	-	*	0	--	-

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

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

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 10,79 1355	AUG 8,79 1645	SEP 12,79 1530
TOTAL CELLS/ML	890	2000	2900
DIVERSITY: DIVISION	1.5	1.0	1.4
..CLASS	1.5	1.0	1.4
..ORDER	1.8	1.0	2.1
...FAMILY	1.8	1.0	2.5
....GENUS	2.0	1.1	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	--	-	--	-
...MICRACTINIACEAE						
...MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
...ANKISTRODESMUS	--	-	--	-	110	4
...CLOSTERIOPSIS	--	-	--	-	*	0
...DICTYOSPHAERIUM	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-
...SCENEDESMACEAE						
...CRUCIGENIA	52	6	--	-	57	2
...SCENEDESMUS	100	12	--	-	210	7
...TETRASTRUM	--	-	--	-	--	-
...CLADOPHORALES						
...CLADOPHORACEAE						
...RHIZOCLONIUM	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE	--	-	--	-	--	-
...CARTERIA	--	-	52	3	72	2
...CHLAMYDOMONAS	52	6	150	8	29	1
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCEAE						
...CYCLOTELLA	26	3	--	-	*	0
...MELOSIRA	--	-	--	-	--	-
...PENNALES						
...CYMBELLACEAE						
...CYMBELLA	--	-	--	-	--	-
...RHOPALODIA	--	-	--	-	--	-
...NAVICULACEAE						
...DIPLONEIS	--	-	--	-	--	-
...GYROSIGMA	--	-	--	-	--	-
...NAVICULA	13	1	--	-	--	-
...NITZSCHIAEAE						
...NITZSCHIA	120	13	--	-	290	10
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	52	3	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	--	-	--	-	1300#	43
...ANACYSTIS	--	-	--	-	170	6
...HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	520#	58	--	-	--	-
...OSCILLATORIACEAE	--	-	--	-	300	10
...OSCILLATORIA	--	-	1500#	79	--	-
...RIVULARIACEAE						
...RAPHIIDIOPSIS	--	-	--	-	270	9
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...EUGLENA	--	-	--	-	57	2
...LEPOCINCLIS	--	-	--	-	29	1
...TRACHELOMONAS	13	1	150	8	29	1
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
...GYMNODINIACEAE						
...GYMNODINIUM	--	-	--	-	*	0
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	--	-	--	-	--	-

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

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

CHOCOLATE BAYOU BASIN

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	131	**	**	**	**	**	**	**	**
NOV. 1978.....	3271.12	**	**	**	**	**	**	**	**
DEC. 1978.....	725.2	643	360	697	86	170	42	83	180
JAN. 1979.....	7904	291	160	3420	36	765	19	408	84
FEB. 1979.....	7485	224	120	2510	28	570	15	296	64
MAR. 1979.....	3835.1	334	190	1920	43	444	22	225	96
APR. 1979.....	5066	353	190	2670	44	600	23	316	100
MAY 1979.....	5307	425	240	3390	54	770	28	401	120
JUNE 1979.....	10210	347	190	5240	42	1170	23	630	100
JULY 1979.....	51419	208	110	15900	25	3540	14	1920	60
AUG. 1979.....	3303	**	**	**	**	**	**	**	**
SEPT 1979.....	25283	**	**	**	**	**	**	**	**
TOTAL	123940.37	**	**	**	**	**	**	**	**
WTD.AVG.	340	**	**	**	**	**	**	**	**

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			392	270	646	1130	970	520	597	706		
2			453	295	706	1190	850	344	277	755		
3			511	436	680	1170	398	392	243	810		
4			557	524	506	1250	446	286	207	800		
5			531	430	235	1280	490	211	243	740		
6			536	258	158	1290	598	270	269	700		
7			584	214	135	1200	707	388	337	620		
8			627	238	177	1250	809	498	431	600		
9			667	300	273	1280	907	557	506	550		
10			690	362	348	1260	995	618	559	590		
11			737	236	422	1300	1020	550	578	560		
12			786	243	488	1270	890	353	592	550		
13			850	297	557	1270	995	564	631	505		
14			889	360	631	1300	961	646	641	420		
15			960	429	694	1320	741	718	645	501		
16			970	498	741	1340	740	1060	678	560		
17			980	554	810	1290	736	1050	662	604		
18			965	601	850	1320	830	1020	660	645		
19			990	647	888	1360	789	1030	658	675		
20			1000	273	930	528	259	995	637	700		
21			1050	293	948	279	231	1020	649	688		
22			1040	359	971	246	284	865	669	630		
23			1070	450	990	233	370	833	687	690		
24			1100	517	1020	321	435	861	717	669		
25			1120	582	1050	399	505	884	650	380		
26			1140	616	1070	489	547	865	467	100		
27			1140	655	1090	614	583	861	459	120		
28			1200	672	1110	674	571	861	560	180		
29			1180	706	---	751	510	826	610	230		
30			1190	754	---	817	404	634	645	260		
31			1170	630	---	903	---	548	---	300		
MEAN			873	442	683	978	652	682	539	543		

CHOCOLATE BAYOU BASIN

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08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			10.5	---	7.0	16.0	23.0	---	27.5	30.0		
2			20.0	4.0	9.0	18.0	23.0	22.0	28.0	---		
3			21.0	5.0	14.0	17.0	18.0	24.5	26.5	---		
4			14.0	9.0	12.0	19.0	17.0	21.0	26.5	---		
5			11.5	---	10.0	18.0	---	19.0	27.0	---		
6			10.5	11.0	---	16.0	21.0	---	---	---		
7			21.0	8.0	---	17.0	21.0	22.5	28.0	---		
8			10.5	6.0	9.0	19.0	20.0	26.0	29.5	---		
9			9.0	5.0	10.0	19.0	20.0	26.0	29.5	27.5		
10			7.0	9.0	19.0	18.0	21.0	26.0	29.5	---		
11			8.0	7.0	4.0	17.0	22.0	26.0	26.0	---		
12			7.0	8.0	17.0	18.0	23.0	19.0	26.5	---		
13			10.0	11.0	16.0	16.0	26.0	24.0	17.0	27.5		
14			10.0	9.0	18.0	18.5	24.0	23.0	28.0	---		
15			12.0	5.0	19.0	17.0	26.5	23.5	28.0	29.5		
16			13.0	9.0	17.0	17.0	---	25.5	27.0	---		
17			14.0	19.0	11.0	19.0	23.0	25.5	27.0	29.5		
18			10.5	16.0	8.0	20.0	22.0	27.0	---	---		
19			10.5	19.0	7.0	20.0	22.0	28.0	28.5	---		
20			19.0	18.0	8.0	19.0	21.0	25.0	29.5	---		
21			16.0	14.0	11.0	---	23.0	25.0	29.0	28.0		
22			18.0	11.0	15.0	18.0	21.0	24.0	29.5	---		
23			---	14.0	19.0	19.0	21.0	25.0	29.5	---		
24			6.0	9.0	19.0	17.0	21.0	25.0	29.0	28.0		
25			14.0	9.0	16.0	16.0	25.0	25.0	29.0	26.5		
26			15.0	14.0	15.0	18.0	---	24.5	27.0	---		
27			14.0	13.0	14.0	22.0	23.0	25.0	27.5	---		
28			14.0	10.0	16.0	21.5	23.0	27.0	28.0	---		
29			16.0	9.0	---	21.0	---	27.0	28.5	---		
30			10.0	11.0	---	21.0	22.5	28.0	29.0	---		
31			---	9.0	---	22.0	---	27.0	---	---		
MEAN			13.0	10.5	13.0	18.5	22.0	24.5	27.5	28.5		

08079000 OYSTER CREEK NEAR ANGLETON, TX

LOCATION.--Lat 29°09'30", long 95°28'32", Brazoria County, Hydrologic Unit 12040205, near center of low-water channel at downstream side of bridge on State Highway 35, 2.7 mi (4.3 km) west of Angleton, 4.1 mi (6.6 km) upstream from Missouri Pacific Railroad Co. bridge, 4.5 mi (7.2 km) downstream from Styles Bayou, and about 45 mi (72 km) upstream from Gulf of Mexico.

DRAINAGE AREA.--171 mi² (443 km²).

PERIOD OF RECORD.--October 1944 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1392: 1947. WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.31 ft (0.399 m) below National Geodetic Vertical Datum of 1929. Prior to Apr. 30, 1958, at site 500 ft (150 m) downstream at same datum.

REMARKS.--Records good. Diversions above station for irrigation. A large part of flow is water released from Harris Reservoir, capacity 12,000 acre-ft (14.8 hm³) for industrial use below station. Harris Reservoir is supplied with water diverted from Brazos River during periods of floodflow. Several observations of water temperature were made during the year.

COOPERATION.--Records of water released from Harris Reservoir into Oyster Creek above station furnished by Dow Chemical Co.

AVERAGE DISCHARGE.--35 years, 184 ft³/s (5.211 m³/s), 133,300 acre-ft/yr (164 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) May 10, 1957, gage height, 31.45 ft (9.586 m), present site, overflow from Brazos River; minimum daily, 0.3 ft³/s (0.008 m³/s) at times in 1955-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 32.2 ft (9.81 m) in December 1913; flood of Dec. 5, 1940, reached a stage of 30.9 ft (9.42 m), from information by State Department of Highways and Public Transportation. At extreme high stages, the Brazos River overflows into Oyster Creek above this station.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 7	1000	1,370 38.8	21.37 6.514	July 28	0800	4,210 119	29.17 8.891
Mar. 23	0800	926 26.2	18.39 5.605	Sept. 21	0900	*4,580 130	29.48 8.986
May 5	1400	995 28.2	18.90 5.761				

Minimum daily discharge, 69 ft³/s (1.95 m³/s) Mar. 31, Apr. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	145	282	192	183	124	69	424	147	114	2300	158
2	150	144	251	210	178	120	84	776	240	110	1700	179
3	152	146	231	167	179	118	89	808	654	110	1200	183
4	155	146	220	153	187	98	96	768	626	108	900	158
5	159	147	217	174	473	109	105	977	513	115	700	145
6	161	165	209	473	1040	99	89	882	450	142	500	153
7	163	162	203	662	1350	96	83	677	422	147	400	188
8	163	152	201	584	1220	95	82	487	361	144	350	218
9	162	146	200	471	986	94	85	348	274	144	300	230
10	159	148	195	382	729	93	106	267	222	144	250	232
11	153	149	172	432	545	93	115	235	191	158	230	216
12	144	207	162	547	427	94	117	496	163	216	220	194
13	120	223	160	493	355	93	115	458	130	196	220	156
14	116	163	159	417	314	93	111	294	109	229	220	147
15	116	142	161	353	286	93	111	170	98	243	220	143
16	115	137	160	310	259	93	114	156	91	207	215	142
17	115	146	158	279	240	93	168	142	84	169	215	139
18	115	147	158	220	227	94	196	133	81	157	200	360
19	116	147	157	199	216	94	164	133	110	156	185	2220
20	119	168	156	286	206	98	442	128	102	175	178	4530
21	117	184	154	348	199	376	671	129	95	202	212	4560
22	116	198	152	290	193	771	619	137	100	202	217	4500
23	120	203	150	250	180	911	494	219	94	236	212	3930
24	145	193	138	221	173	759	377	162	112	191	210	3280
25	151	198	142	213	166	539	290	122	113	531	191	2640
26	153	209	142	207	157	364	236	109	114	3030	153	2020
27	154	533	142	204	148	263	203	114	119	4120	156	1560
28	153	597	141	197	130	215	186	131	118	4180	157	1080
29	153	434	143	189	---	158	209	130	119	4010	155	765
30	151	332	145	186	---	81	375	137	117	3700	159	532
31	142	---	161	186	---	69	---	167	---	3000	169	---
TOTAL	4359	6211	5422	9495	10946	6490	6201	10316	6169	26586	12694	34958
MEAN	141	207	175	306	391	209	207	333	206	858	409	1165
MAX	163	597	282	662	1350	911	671	977	654	4180	2300	4560
MIN	115	137	138	153	130	69	69	109	81	108	153	139
AC-FT	8650	12320	10750	18830	21710	12870	12300	20460	12240	52730	25180	69340
(t)	8370	9390	9650	8440	6700	4310	4860	4640	2630	6770	5390	4350
CAL YR 1978	TOTAL	60636	MEAN 166	MAX	597	MIN 79	AC-FT	120300	†	90590		
WTR YR 1979	TOTAL	139847	MEAN 383	MAX	4560	MIN 69	AC-FT	277400	†	75500		

† Discharge, in acre-feet, released from Harris Reservoir into Oyster Creek above gage (included in total flow past gage).

COASTAL BASIN

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08079100 EAST LEVEE DITCH NEAR FREEPORT, TX

LOCATION.--Lat 28°57'38", long 95°18'34", Brazoria County, Hydrologic Unit 12040205, on County Road 690, in room at left end of East Union Bayou drainage structure of East Levee, one orifice located upstream and one downstream from levee, 0.9 mi (1.4 km) upstream from Intracoastal Waterway, and 2.4 mi (3.9 km) east of Freeport.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Duplex water-stage recorder and crest-stage gages. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--The purpose of this station is to record elevations of high tide at downstream side of levee and the corresponding elevations of the water surface at upstream side. No elevations are shown for the upstream side until they reach 3.0 ft (0.91 m) on either side. The levee is an earthen structure about 43 mi (69 km) long with a maximum height of 22 ft (6.7 m) NGVD. Gravity drainage structures with flapper gates and pumps to remove floodwaters from the downstream side are located at various points along the levee.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (upstream side), 6.3 ft (1.92 m) Sept. 20, 1979; minimum not determined. Maximum elevation (downstream side), 5.5 ft (1.68 m) Sept. 10, 1978; minimum, -2.2 ft (-0.67 m) Feb. 3, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (upstream side), 6.3 ft (1.92 m) Sept. 20; minimum, -1.0 ft (-0.30 m) Jan. 24. Maximum elevation (downstream side), 3.5 ft (1.07 m) July 23, 24, 26, Sept. 1; estimated minimum, -1.0 ft (-0.30 m) Jan. 24.

MAXIMUM DAILY ELEVATION, IN FEET, UPSTREAM AND DOWNSTREAM SIDES OF LEVEE
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down
1	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	2.0	-	1.5	-	1.8	2.2	3.5	-
2	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	-	-	2.0	-	1.4	-	1.7	-	2.9	-
3	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	-	-	1.9	-	1.5	-	1.8	-	2.9	-
4	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	1.8	-	1.6	-	1.8	-	2.9	-
5	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	1.7	-	1.8	-	2.0	-	2.6	-
6	-	-	-	-	-	-	-	-	3.0	-	-	-	2.0	-	-	-	2.1	-	1.9	-	2.0	-	2.2	-
7	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	-	-	2.1	-	1.8	-	2.1	-	2.5	-
8	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2.3	-	2.0	-	2.4	-	2.5	-
9	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2.6	-	2.1	-	2.2	-	2.5	-
10	-	-	-	-	-	-	-	-	-	-	-	-	2.5	1.9	3.0	-	2.5	-	2.4	-	2.0	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	1.6	3.0	-	2.8	-	2.7	-	2.9	-	1.8	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-	-	3.1	-	2.2	-	1.6	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	-	2.4	-	2.4	-	1.5	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	2.6	-	2.5	-	1.7	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	2.3	-	2.7	-	1.7	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	2.2	-	2.5	-	1.8	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	1.2	3.0	-	-	2.1	-	2.2	-	1.7	-	2.2	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	2.1	-	2.0	-	4.4	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.1	-	2.3	-	6.1	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	2.1	-	2.1	-	6.3	-
21	-	-	-	-	-	-	-	-	-	-	3.0	-	-	-	-	-	1.8	-	2.1	-	2.1	-	6.0	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	2.2	-	2.2	-	5.0	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	2.2	-	2.8	3.5	3.8	-
24	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	1.8	-	2.2	-	1.9	3.5	3.4	-
25	-	-	-	-	-	-	-	-	-	-	.9	-	-	-	-	-	2.0	-	2.0	-	4.4	2.8	3.0	-
26	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	2.5	-	2.0	-	5.6	3.2	3.0	-
27	-	-	-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	2.3	-	2.1	-	5.5	3.5	3.0	2.8
28	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	-	-	2.0	-	2.0	-	4.9	3.2	2.4	-
29	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	2.2	-	2.0	-	3.8	2.7	2.6	-
30	-	-	-	-	-	-	-	-	-	-	2.5	-	3.3	-	-	-	2.4	-	1.8	-	3.0	2.3	2.3	-
31	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	2.6	-	-	-	2.2	3.3	-	-

08079120 OLD BRAZOS RIVER NEAR FREEPORT, TX

LOCATION.--Lat 28°57'03", long 95°20'19", Brazoria County, Hydrologic Unit 12040205, in room at left gate abutment of Freeport levee guillotine gate structure, one orifice located upstream and one downstream side of gate, and 6,000 ft (1,829 m) downstream from river diversion channel near Freeport.

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

GAGE.--Duplex water-stage recorder and crest-stage gages. Datum of gage is 0.11 ft (0.034 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--The purpose of this station is to record gage heights of high tides at the downstream side of the levee and the corresponding elevation of the water surface at the upstream side. No gage heights are shown for the upstream side until they reach 3.0 ft (0.91 m) on either side. The levee is an earthen structure with a maximum height of 22 ft (8 m) NGVD. Gravity drainage structures, guillotine gate, and pumps to remove floodwaters from the downstream side are located along the levee.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (upstream side), 3.7 ft (1.13 m) Sept. 19, 20, 1979; minimum not determined. Maximum gage height (downstream side), 3.7 ft (1.13 m) Sept. 19, 20, 1979; minimum not determined.

EXTREMES FOR PERIOD AUGUST TO SEPTEMBER 1978.--Maximum gage height (upstream side), 2.8 ft (0.85 m) Sept. 11; minimum not determined. Maximum gage height (downstream side), 2.8 ft (0.85 m) Sept. 11; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum gage height (upstream side), 3.7 ft (1.13 m) Sept. 19, 20; minimum not determined. Maximum gage height (downstream side), 3.7 ft (1.13 m) Sept. 19, 20; minimum not determined.

MAXIMUM GAGE HEIGHT, IN FEET, UPSTREAM AND DOWNSTREAM SIDES OF LEVEE
AUGUST TO SEPTEMBER 1978

DAY	AUG.		SEP.		DAY	AUG.		SEP.		DAY	AUG.		SEP.		DAY	AUG.		SEP.	
	up	down	up	down		up	down	up	down		up	down	up	down		up	down	up	down
1			-	2.0	9		-	2.5		17		-	1.8		25	-	1.8	-	2.0
2			-	1.6	10		-	2.6		18		-	2.0		26	-	2.0	-	2.2
3			-	1.5	11		-	2.8		19		-	1.8		27	-	2.2	-	2.1
4			-	1.7	12		-	2.7		20		-	2.2		28	-	2.6	-	2.1
5			-	1.8	13		-	2.2		21		-	2.4		29	-	2.1	-	2.3
6			-	2.2	14		-	2.2		22		-	2.6		30	-	2.1	-	2.0
7			-	2.1	15		-	1.6		23		-	2.3		31	-	1.9		
8			-	2.3	16		-	1.6		24	-	1.9	-	2.2					

MAXIMUM GAGE HEIGHT, IN FEET, UPSTREAM AND DOWNSTREAM SIDES OF LEVEE
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP	
	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down
1	-	2.0	-	2.1	-	2.6	-	1.4	-	1.3	-	1.0	-	2.1	-	2.8	-	1.7	-	1.2	-	1.4	3.1	3.1
2	-	2.2	-	1.9	-	2.6	-	.3	-	1.6	-	-	-	2.2	-	2.5	-	1.8	-	1.1	-	1.4	-	2.8
3	-	2.0	-	1.9	-	2.0	-	1.5	-	1.1	-	-	-	2.3	-	2.3	-	1.7	-	1.1	-	1.6	-	2.8
4	-	2.3	-	1.9	-	1.8	-	2.0	-	1.5	-	-	-	-	-	2.4	-	1.4	-	1.3	-	1.7	-	2.6
5	-	2.0	-	2.5	-	1.8	-	1.5	-	2.6	-	-	-	1.9	-	1.7	-	1.4	-	1.5	-	2.0	-	2.4
6	-	2.3	-	2.6	-	2.3	-	1.3	-	2.5	-	-	-	1.6	-	2.1	-	1.8	-	1.5	-	2.1	-	1.9
7	-	2.3	-	1.5	-	1.8	-	1.1	-	1.0	-	-	-	2.1	-	1.8	-	1.8	-	1.6	-	1.8	-	2.3
8	-	2.4	-	1.6	-	1.3	-	.7	-	1.3	-	-	-	2.0	-	2.1	-	2.1	-	1.8	-	2.3	-	2.2
9	-	2.3	-	1.8	-	.1	-	1.8	-	.8	-	1.5	-	1.8	-	2.3	-	2.3	-	1.9	-	2.1	-	2.2
10	-	2.2	-	1.7	-	1.2	-	2.6	-	1.5	-	.9	-	2.0	-	2.7	-	2.3	-	2.5	-	1.8	-	2.7
11	-	2.1	-	1.7	-	1.2	-	2.7	-	1.2	-	1.1	-	2.8	-	2.5	-	2.4	-	2.7	-	1.7	3.2	3.2
12	-	2.2	-	2.2	-	1.2	-	2.4	-	.9	-	1.1	-	2.3	-	2.8	-	2.9	-	2.0	-	1.4	3.3	3.3
13	-	2.3	-	2.1	-	1.6	-	1.8	-	1.1	-	1.1	-	2.1	-	2.2	-	2.5	-	2.1	-	1.3	3.0	3.0
14	-	2.2	-	2.1	-	1.7	-	.5	-	1.1	-	1.1	-	1.8	-	2.2	-	2.3	-	2.3	-	1.5	3.2	3.2
15	-	2.3	-	2.2	-	1.6	-	1.6	-	1.0	-	1.7	-	1.9	-	2.0	-	2.5	-	1.8	-	1.7	3.1	3.1
16	-	2.0	-	2.1	-	1.6	-	1.4	-	.7	-	2.1	-	2.1	-	2.0	-	2.2	-	1.4	-	1.7	3.0	3.0
17	-	2.2	-	1.9	-	1.5	-	1.1	-	1.2	-	2.0	-	2.8	-	1.9	-	1.9	-	1.5	-	2.0	3.1	3.1
18	-	2.0	-	2.0	-	1.8	-	1.2	-	.8	-	2.4	-	2.2	-	1.9	-	1.7	-	1.9	-	2.0	3.2	3.2
19	-	2.0	-	2.5	-	1.5	-	1.4	-	1.4	-	2.4	-	2.2	-	1.7	-	1.8	-	2.1	-	2.0	3.7	3.7
20	-	1.8	-	2.4	-	1.5	-	1.2	-	2.2	-	-	-	2.6	-	1.5	-	1.8	-	1.9	-	2.0	3.7	3.7
21	-	1.7	-	2.1	-	.8	-	-	-	1.7	-	-	-	2.5	-	1.5	-	2.0	-	2.0	-	2.0	-	2.1
22	-	1.9	-	2.1	-	1.5	-	1.3	-	2.2	-	-	-	1.9	-	1.8	-	2.0	-	2.0	-	1.6	-	2.3
23	-	1.9	-	1.8	-	1.8	-	1.1	-	2.1	-	.9	-	1.7	-	1.9	-	2.0	-	3.3	3.2	1.6	-	2.6
24	-	1.9	-	1.5	-	1.5	-	2.2	-	2.0	-	.7	-	2.1	-	1.5	-	2.0	-	3.3	3.2	1.9	-	2.3
25	-	2.0	-	1.6	-	1.3	-	2.3	-	2.3	-	2.2	-	2.2	-	1.7	-	1.9	-	2.5	-	1.9	-	2.5
26	-	1.8	-	2.0	-	1.4	-	1.9	-	.8	-	1.2	-	2.2	-	2.2	-	1.8	-	2.6	-	1.7	-	2.8
27	-	1.4	-	2.1	-	2.2	-	1.0	-	1.1	-	1.4	-	2.2	-	2.1	-	1.9	-	2.8	-	2.1	-	2.6
28	-	1.5	-	2.1	-	2.8	-	1.0	-	1.5	-	1.7	-	2.2	-	1.8	-	1.6	-	2.5	-	2.1	-	2.5
29	-	1.9	-	2.4	-	2.4	-	2.0	-	-	-	2.1	-	2.7	-	1.9	-	1.8	-	2.1	-	2.2	-	2.3
30	-	1.8	-	2.2	-	2.2	-	1.7	-	---	---	2.3	3.1	3.1	-	2.2	-	1.4	-	1.7	-	2.7	-	2.0
31	-	2.2	---	---	-	2.1	-	.3	---	---	-	2.1	---	---	-	2.4	---	---	-	1.5	3.0	3.0	---	---

COASTAL BASIN

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08079150 SOUTH LEVEE DITCH NEAR FREEPORT, TX

LOCATION.--Lat 28°55'28", long 95°21'23", Brazoria County, Hydrologic Unit 12040205, on southern arm of levee, in room at right end of South Levee drainage structure, one orifice located upstream and one downstream from levee, 0.6 mi (1.0 km) upstream from Intracoastal Waterway, 0.7 mi (1.1 km) west of State Highway 1495, and 1.7 mi (2.7 km) southwest of Freeport.

PERIOD OF RECORD.--May 1970 to current year.

GAGE.--Duplex water-stage recorder and crest-stage gages. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--The purpose of this station is to record elevations of high tides at downstream side of levee and the corresponding elevation of the water surface at upstream side. No elevations are shown for the upstream side until they reach 3.0 ft (0.91 m) on either side. The levee is an earthen structure with a maximum elevation of 22 ft (6.7 m) NGVD. Gravity drainage structures, with flapper gates and pumps to remove floodwaters from the downstream side, are located along the levee.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (upstream side), 5.0 ft (1.52 m) Sept. 20, 1979; minimum not determined. Maximum elevation (downstream side), 5.8 ft (1.77 m) Sept. 10, 1971; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (upstream side), 5.0 ft (1.52 m) Sept. 20; minimum not determined. Maximum elevation (downstream side), 3.9 ft (1.19 m) Sept. 19, 20; minimum not determined.

MAXIMUM DAILY ELEVATION, IN FEET, UPSTREAM AND DOWNSTREAM SIDES OF LEVEE
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		
	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	up	down	
1	-	-	-	2.3	-	2.6	-	2.0	-	1.7	-	1.6	-	-	-	2.9	-	2.0	-	1.5	3.0	1.9	2.2	3.4	
2	-	-	-	2.2	-	2.7	-	.7	-	1.9	-	1.9	-	-	-	2.7	-	2.0	-	1.5	-	1.9	-	2.9	
3	-	-	-	2.1	-	2.6	-	1.8	-	1.5	-	2.1	-	-	-	2.6	-	1.9	-	1.5	-	2.0	-	2.7	
4	-	-	-	2.1	-	2.0	-	2.2	-	1.8	-	1.3	-	-	-	2.3	-	1.8	-	1.5	-	2.1	-	2.7	
5	-	2.3	-	2.6	-	2.1	-	2.1	-	2.8	-	1.8	-	-	-	2.0	-	1.8	-	1.8	-	2.2	-	2.5	
6	-	2.5	-	2.7	-	2.4	-	1.6	-	2.7	-	1.7	-	-	-	2.2	-	2.1	-	2.0	-	2.1	-	2.0	
7	-	2.5	-	1.8	-	2.4	-	1.3	-	1.7	-	1.1	-	-	-	2.1	-	2.1	-	1.9	-	2.1	-	2.3	
8	-	2.5	-	1.9	-	2.0	-	1.1	-	1.7	-	1.3	-	-	-	2.3	-	2.3	-	2.1	-	2.3	-	2.3	
9	-	2.5	-	2.0	-	.8	-	1.8	-	1.2	-	1.8	-	-	-	2.6	-	2.5	-	2.1	-	2.2	-	2.4	
10	-	2.3	-	2.1	-	1.5	-	2.8	-	1.8	-	1.2	-	-	-	2.9	-	2.4	-	2.4	-	2.0	-	2.8	
11	-	2.3	-	2.0	-	1.5	-	2.9	-	1.6	-	1.3	-	2.8	-	2.8	-	2.6	-	2.8	-	1.8	2.4	3.5	
12	-	2.4	-	2.4	-	1.5	-	2.6	-	1.4	-	1.4	-	2.7	-	2.5	-	3.2	-	2.0	-	1.6	2.4	3.5	
13	-	2.4	-	2.3	-	1.8	-	2.2	-	1.3	-	1.4	-	2.3	-	2.2	-	2.6	-	2.3	-	1.7	2.3	3.3	
14	-	2.3	-	2.3	-	1.9	-	.9	-	1.4	-	1.3	-	2.1	-	2.2	-	2.5	-	2.4	-	1.7	2.3	3.5	
15	-	2.5	-	2.4	-	1.9	-	1.9	-	1.3	-	2.0	-	2.2	-	2.2	-	2.7	-	2.1	-	1.8	2.3	3.5	
16	-	2.2	-	2.3	-	1.8	-	1.8	-	1.1	-	2.3	-	2.4	-	2.2	-	2.4	-	1.8	-	2.0	2.2	3.3	
17	-	2.4	-	2.2	-	1.9	-	1.5	-	1.6	-	2.2	-	2.6	-	2.1	-	2.2	-	1.7	-	2.2	2.4	3.4	
18	-	2.2	-	2.3	-	2.0	-	1.5	-	1.2	-	2.4	-	2.3	-	2.1	-	2.1	-	2.0	-	2.2	3.7	3.6	
19	-	2.1	-	2.8	-	1.9	-	1.7	-	1.6	-	2.6	-	2.3	-	2.0	-	2.1	-	2.2	-	2.2	4.9	3.9	
20	-	2.1	-	2.9	-	1.8	-	1.4	-	2.4	-	2.3	-	2.3	-	1.8	-	2.1	-	2.1	-	2.2	5.0	3.9	
21	-	2.2	-	2.4	-	1.4	-	.6	-	2.0	-	2.3	-	2.2	-	1.8	-	2.1	-	2.1	-	2.2	4.8	2.4	
22	-	2.2	-	2.3	-	1.8	-	1.6	-	2.3	-	2.4	-	2.1	-	2.1	-	2.2	-	2.2	-	1.8	4.4	2.6	
23	-	2.3	-	2.3	-	2.1	-	1.4	-	2.3	-	-	-	2.1	-	2.1	-	2.2	1.8	3.6	-	1.8	4.1	2.9	
24	-	2.1	-	2.0	-	2.0	-	.4	-	2.1	-	-	-	2.2	-	1.8	-	2.2	1.8	3.6	-	2.0	3.8	2.6	
25	-	2.3	-	1.9	-	1.7	-	2.2	-	.9	-	-	-	2.4	-	2.0	-	2.1	3.7	3.0	-	2.1	3.5	2.7	
26	-	2.2	-	2.3	-	1.8	-	2.1	-	1.2	-	-	-	2.4	-	2.4	-	2.0	4.4	2.8	-	1.9	3.4	3.0	
27	-	1.7	-	2.1	-	2.4	-	1.3	-	1.4	-	-	-	2.4	-	2.2	-	2.0	4.4	3.1	-	2.2	3.4	3.0	
28	-	1.9	-	2.2	1.0	3.1	-	1.3	-	1.8	-	-	-	2.4	-	2.0	-	2.0	4.1	2.7	-	2.3	3.3	2.9	
29	-	2.2	-	2.5	-	2.8	-	2.1	-	-	-	-	-	2.6	-	2.1	-	2.1	3.8	2.3	-	2.3	3.0	2.6	
30	-	2.1	-	2.4	-	2.3	-	2.1	---	---	-	-	-	2.9	-	2.2	-	1.8	3.5	2.1	-	2.7	-	2.3	
31	-	2.3	---	---	-	2.2	-	.8	---	---	-	-	---	---	-	2.4	---	---	3.2	2.2	2.2	2.2	3.2	---	---

BRAZOS RIVER BASIN

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 (76 m) downstream from Panhandle and Santa Fe Railroad, and at mile 143.4 (230.7 km) measured from confluence with Salt Fork Brazos River at mile 923.2 (1,485.4 km) on the Brazos River.

DRAINAGE AREA.--1,466 mi² (3,797 km²), of which 1,222 mi² (3,165 km²) 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. Datum of gage is 2,222.47 ft (677.409 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. No known diversion above station.

AVERAGE DISCHARGE.--17 years (water years 1963-79), 28.6 ft³/s (0.810 m³/s), 1.59 in/yr (40 mm/yr), 20,720 acre-ft/yr (25.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s (1,400 m³/s) May 6, 1969, gage height, 19.8 ft (6.04 m), from floodmarks; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, 25.8 ft (7.89 m) in 1914 and 22.2 ft (6.77 m) in September 1955, from information by local resident. Flood in July 1961 reached a stage of 18.2 ft (5.55 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 1	1800	*20,900 592	a13.30 4.054	July 19	0900	12,400 351	10.80 3.292
June 9	1100	7,820 221	a9.40 2.865	Aug. 21	0100	3,510 99.4	7.80 2.377

a From floodmark.

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	.30	.44	.05	.30	.14	.10	409	4570	.03	134	.00		
2	.00	.30	.37	.00	.30	.14	.10	3.2	420	.03	46	.00		
3	.00	.30	.37	.00	.30	.14	.07	.30	78	.03	7.8	.00		
4	.00	.25	.37	.30	.30	.14	.05	.10	36	.03	8.8	.00		
5	.00	.15	.37	.37	.30	.14	.05	.10	441	.03	2.0	.00		
6	.00	2.7	.37	.20	.30	.14	.05	.03	0	.03	.53	.00		
7	.00	.74	.37	.10	.37	.14	.05	.01	6.6	.02	.14	.00		
8	.00	.74	.37	.00	.37	.14	.03	.01	31	.02	.10	.00		
9	.00	.74	.37	.30	.37	.14	.02	.01	2110	.01	.07	.00		
10	.00	.63	.37	.74	.30	.14	.01	.03	291	.01	248	.00		
11	.00	.63	.30	.74	.24	.14	.00	.01	22	.01	302	.00		
12	.00	.53	.30	.74	.24	.14	.00	.00	12	.01	21	.00		
13	.00	.44	.30	.74	.24	.14	.00	.00	4.8	.01	8.3	.00		
14	.00	.37	.30	.63	.24	.14	.00	.00	3.2	.01	5.5	.00		
15	.00	.30	.30	.53	.18	.18	.00	.00	.99	.00	3.2	.00		
16	.00	1.7	.30	.53	.18	.24	.00	.00	.63	.00	2.7	.00		
17	.00	.44	.30	.53	.18	.37	6.2	.00	.53	296	2.4	.00		
18	.00	.37	.30	.53	.18	1.4	.54	.00	.37	1590	2.2	.00		
19	.00	.37	.30	.86	.14	1.0	.02	.00	.30	5490	2.0	.00		
20	.00	.37	.30	.74	.14	.37	.01	.00	.30	224	204	.00		
21	.00	.86	.30	.63	.14	6.6	.00	16	.14	68	714	.00		
22	.00	1.6	.30	.53	.14	14	.00	.10	.10	24	61	.00		
23	.79	.44	.30	.44	.14	.63	.00	.01	.10	7.8	37	.00		
24	.37	.37	.30	.44	.14	.44	.00	.00	.10	3.5	8.3	.00		
25	5.1	1.1	.30	.37	.14	.37	.00	.00	.10	2.7	5.5	.00		
26	.99	.17	.30	.37	.14	.24	.00	.00	.07	1.6	1.8	.00		
27	.63	4.4	.24	.30	.14	.18	.00	.00	.07	1.3	.99	.00		
28	.44	.53	.24	.30	.14	.18	.00	.00	.05	.74	.30	.00		
29	.37	.44	.24	.30	---	.14	.00	.00	.03	.18	.10	.00		
30	.37	.44	.24	.30	---	.10	.00	.00	.03	.10	.03	.00		
31	.30	---	.10	.30	---	.10	---	2.7	---	12	.01	---		
TOTAL	124.20	79.15	9.63	12.91	6.29	28.50	7.30	443.51	8080.71	7722.20	1829.77	.00		
MEAN	4.01	2.64	.31	.42	.22	.92	.24	14.3	269	249	59.0	.000		
MAX	79	25	.44	.86	.37	14	6.2	409	4570	5490	714	.00		
MIN	.00	.30	.10	.00	.14	.10	.00	.00	.03	.00	.01	.00		
CFSM	.003	.002	.000	.000	.000	.001	.000	.01	.18	.17	.04	.000		
IN.	.00	.00	.00	.00	.00	.00	.00	.01	.21	.20	.05	.00		
AC-FT	246	157	19	26	12	57	14	880	16030	15320	3630	.00		
CAL YR 1978	TOTAL	7426.38	MEAN	20.3	MAX	2740	MIN	.00	CFSM	.01	IN	.19	AC-FT	14730
WTR YR 1979	TOTAL	18344.17	MEAN	50.3	MAX	5490	MIN	.00	CFSM	.03	IN	.47	AC-FT	36390

BRAZOS RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1975 to current year. Sediment records: October 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURES: October 1975 to September 1976.

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, 20,600 micromhos Oct. 22, 1975; minimum daily, 420 micromhos July 19, 1979.

WATER TEMPERATURES: Minimum daily, 4.0°C Jan. 7-9, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 19,600 micromhos May 11; minimum daily, 420 micromhos July 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT											
23...	0810	19	8040	18.0	530	420	140	44	1600	30	9.4
NOV											
05...	0730	25	1280	14.0	85	0	23	6.6	250	12	5.2
16...	1045	1.3	--	7.0	--	--	--	--	--	--	--
DEC											
16...	1005	.44	15000	4.0	1100	950	270	110	3200	41	11
FEB											
21...	1045	.15	17000	8.0	1300	1100	310	130	3500	42	10
MAR											
18...	0915	7.2	2290	13.0	190	0	59	11	390	12	4.5
MAY											
01...	0710	840	1210	15.0	68	0	19	5.0	230	12	4.0
JUN											
11...	1330	18	--	29.0	--	--	--	--	--	--	--
26...	1420	.07	13600	35.0	1100	890	240	110	2800	38	13
JUL											
19...	1245	6000	415	21.0	43	0	13	2.5	77	5.1	2.6
19...	1745	1900	--	21.0	--	--	--	--	--	--	--
20...	0840	187	--	21.0	--	--	--	--	--	--	--
AUG											
19...	1300	5600	--	21.0	--	--	--	--	--	--	--
19...	1525	2800	--	21.0	--	--	--	--	--	--	--

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN
OCT										
23...	130	0	340	2500	.4	5.6	4700	--	--	--
NOV										
05...	190	0	120	230	1.2	11	741	--	--	--
16...	--	--	--	--	--	--	--	205	.72	--
DEC										
16...	220	0	530	5200	1.0	9.5	9440	--	--	--
FEB										
21...	220	0	630	5900	1.1	8.0	10600	--	--	--
MAR										
18...	240	0	180	510	.4	14	1290	--	--	--
MAY										
01...	260	0	96	190	1.1	13	686	--	--	--
JUN										
11...	--	--	--	--	--	--	--	359	17	--
26...	200	0	530	4400	1.2	12	8200	--	--	--
JUL										
19...	150	0	34	33	.8	11	248	--	--	--
19...	--	--	--	--	--	--	--	13900	71300	62
20...	--	--	--	--	--	--	--	3560	1800	84
AUG										
19...	--	--	--	--	--	--	--	22100	334000	48
19...	--	--	--	--	--	--	--	20500	155000	54

BRAZOS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
NOV 16...	1045	1.3	7.0	205	.72	--	--	--
JUN 11...	1330	18	29.0	359	17	--	--	--
JUL 19...	1745	1900	21.0	13900	71300	--	--	--
20...	0840	187	21.0	3560	1800	--	--	--
AUG 19...	1300	5600	21.0	22100	334000	18	25	30
19...	1525	2800	21.0	20500	155000	27	32	38

DATE	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	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
NOV 16...	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--
JUL 19...	--	--	62	77	96	100	--
20...	--	--	84	94	100	--	--
AUG 19...	35	40	48	61	88	99	100
19...	42	48	54	72	95	99	100

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	124.2	1280	730	247	250	82	110	36	85
NOV. 1978.....	79.15	3880	2270	485	1090	233	190	41	260
DEC. 1978.....	9.63	15300	9170	238	5040	131	550	14	****
JAN. 1979.....	12.91	14600	8770	306	4810	167	530	18	****
FEB. 1979.....	6.29	16200	9720	165	5360	91	580	10	****
MAR. 1979.....	28.5	6020	3570	275	1850	142	260	20	400
APR. 1979.....	7.3	3500	2040	40	950	19	180	3.6	230
MAY 1979.....	443.51	899	520	620	140	172	97	116	60
JUNE 1979.....	8080.66	663	380	8260	110	2320	89	1950	44
JULY 1979.....	7722.18	560	320	6690	96	2010	85	1780	37
AUG. 1979.....	1829.77	2500	1470	7280	680	3370	150	727	170
SEPT 1979.....	0	*****	*****	0	*****	0	*****	0	****
TOTAL	18344.09	**	**	24600	**	8740	**	4720	**
WTD.AVG.	50	859	500	**	180	**	95	**	57

BRAZOS RIVER BASIN

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	---	13000	14900	14900	17300	16800	17200	850	650	14000	15000
2	---	13000	14400	---	17000	17000	17100	1360	564	14100	12200
3	---	13200	15300	---	16600	16600	17300	5530	1450	14400	10000
4	---	3500	15100	15300	16300	16700	17200	9710	2620	14800	2500
5	---	1260	16000	15000	16200	16400	17400	12200	820	15000	4050
6	---	4500	14500	15300	16000	16600	17600	14900	1000	14900	7250
7	---	10700	15200	15700	15800	16500	17500	15800	2670	15000	11800
8	---	12500	16200	---	15400	16800	18000	17100	2200	15100	14100
9	---	13200	17100	15800	15700	16900	18200	17900	542	15300	14300
10	---	13200	15700	14000	16200	17300	18600	13900	600	15200	1500
11	---	14100	15200	14100	16000	17600	---	19600	1510	15100	665
12	---	13300	15200	14300	15800	18000	---	---	2440	15500	1560
13	---	13900	14700	14200	15900	18400	---	---	3270	15900	3230
14	---	13700	14600	14500	15800	18900	---	---	4190	16200	5080
15	---	13200	15100	14100	15700	19000	---	---	6890	---	6980
16	---	9120	15100	13900	16000	19300	---	---	8080	---	9210
17	---	12600	15200	13500	15900	15000	2000	---	9060	2000	11100
18	---	13900	15100	12700	15700	3500	6500	---	10200	610	9980
19	---	14100	14800	11500	16100	10100	13800	---	10500	420	12500
20	---	14400	15500	13900	16200	15900	16600	---	10700	631	2000
21	---	14600	15700	15500	17000	8500	---	1190	12200	1250	767
22	---	2790	15600	15400	16200	1040	---	1060	13100	1650	1200
23	1000	12600	15100	15700	16300	8140	---	3730	13100	2200	1160
24	950	14600	15700	15900	16200	13000	---	---	13000	2560	1810
25	2450	10500	15000	16300	16500	15700	---	---	13200	2810	1990
26	6760	850	15500	16200	16500	16500	---	---	13100	3100	2680
27	11500	1900	14900	16400	16500	16400	---	---	13400	3600	3710
28	12000	8440	15300	16500	16800	16200	---	---	13700	4180	6130
29	12400	1330	14800	15100	---	18800	---	---	13900	6100	9000
30	12600	14500	15100	16800	---	17800	---	---	13800	9200	10500
31	12900	---	14600	17500	---	17200	---	3500	---	11500	11800
MEAN	8060	10400	15200	15000	16200	15200	15400	9220	7080	9050	6640

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

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

BRAZOS RIVER BASIN

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 (0.5 km) downstream from Hitson Creek, 10 mi (16 km) south of Aspermont, and at mile 34.5 (55.5 km) measured from confluence with Salt Fork Brazos River which is at mile 923.2 (1,485.4 km) on the Brazos River.

DRAINAGE AREA.--8,796 mi² (22,782 km²), of which 6,932 mi² (17,954 km²) 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). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,624.79 ft (495.236 m) National Geodetic Vertical Datum of 1929. Dec. 3, 1923, to Sept. 30, 1934, nonrecording gage at site 90 ft (27 m) downstream at datum 2.0 ft (0.61 m) higher, and June 8, 1939, to Aug. 12, 1972, water-stage recorder at present site and datum 2.0 ft (0.61 m) higher.

REMARKS.--Water-discharge records fair. Small diversions above station for oilfield operation.

AVERAGE DISCHARGE.--50 years (water years 1925-34, 1940-79), 163 ft³/s (4.616 m³/s), 1.19 in/yr (30 mm/yr), 118,100 acre-ft/yr (146 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 91,400 ft³/s (2,590 m³/s) Sept. 26, 1955, gage height, 29.5 ft (8.99 m), present datum; no flow at times most years.
Maximum stage since at least 1899, that of Sept. 26, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,310 ft³/s (264 m³/s) July 20, gage height, 10.83 ft (3.301 m), no other peak above base of 8,800 ft³/s (249 m³/s); minimum, 0.05 ft³/s (0.001 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	21	36	8.0	10	8.5	47	294	16	13	42	25
2	105	20	30	7.0	10	10	42	88	2700	10	42	20
3	70	19	34	5.0	10	20	40	723	1240	8.4	46	33
4	55	17	39	7.0	9.3	13	39	338	597	8.4	114	59
5	48	17	28	10	8.0	9.9	36	104	1370	13	107	27
6	39	17	20	8.0	8.0	9.2	33	122	1480	682	79	14
7	35	16	19	6.0	12	8.8	29	41	658	114	62	11
8	29	23	16	4.0	16	8.0	24	27	368	58	53	8.8
9	23	42	14	7.0	15	7.6	23	19	275	46	40	6.9
10	19	33	18	10	13	6.8	21	15	1390	203	31	5.6
11	15	27	27	9.0	13	6.2	19	12	1490	29	25	5.0
12	13	28	15	10	12	5.9	18	11	866	16	21	4.7
13	14	28	13	12	12	5.3	16	9.2	590	12	65	3.8
14	11	28	13	10	11	5.0	14	7.6	405	11	104	3.6
15	10	28	13	10	11	5.0	13	5.9	275	10	71	2.6
16	9.9	31	13	12	10	5.0	12	5.0	183	8.4	44	2.6
17	8.4	28	12	18	9.5	5.0	12	4.7	130	7.3	33	2.1
18	7.9	24	12	22	9.0	5.0	12	4.1	94	86	24	1.7
19	7.3	25	13	23	8.5	327	73	3.8	71	1770	20	1.3
20	7.3	24	12	23	8.4	290	65	2.9	55	5300	18	1.1
21	7.3	24	12	25	7.6	62	39	90	45	1350	36	1.1
22	7.3	26	12	25	7.6	477	25	224	37	527	27	.83
23	24	26	11	23	7.6	373	19	51	29	352	315	.56
24	44	23	10	23	9.2	220	17	25	25	296	100	.35
25	29	23	11	20	10	161	15	16	61	228	90	.28
26	39	59	9.7	17	16	156	12	10	105	165	85	.20
27	78	40	9.3	15	15	143	11	8.8	27	114	76	.17
28	57	27	9.1	13	9.0	104	12	19	20	92	57	.11
29	41	30	9.2	10	---	81	19	21	18	64	38	.09
30	31	48	9.3	9.0	---	64	17	19	16	48	33	.05
31	26	---	9.0	9.0	---	52	---	16	---	42	34	---
TOTAL	1060.4	822	508.6	410.0	297.7	2654.2	774	2337.0	14696	11683.5	1932	242.54
MEAN	34.2	27.4	16.4	13.2	10.6	85.6	25.8	75.4	490	377	62.3	8.08
MAX	150	59	39	25	16	477	73	723	2700	5300	315	59
MIN	7.3	16	9.0	4.0	7.6	5.0	11	2.9	16	7.3	18	.05
CFSM	.004	.003	.002	.002	.001	.01	.003	.009	.06	.04	.007	.001
IN.	.00	.00	.00	.00	.00	.01	.00	.01	.06	.05	.01	.00
AC-FT	2100	1630	1010	813	590	5260	1540	4640	29150	23170	3830	481
CAL YR 1978	TOTAL	20967.20	MEAN	57.4	MAX	2860	MIN	.00	CFSM	.007	IN	.09
WTR YR 1979	TOTAL	37417.94	MEAN	103	MAX	5300	MIN	.05	CFSM	.01	IN	.16
									AC-FT	41590		
									AC-FT	74220		

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1948 to November 1951, October 1956 to September 1977. Chemical and biochemical analyses: October 1977 to September 1978. Sediment records: November 1949 to November 1951.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1948 to November 1951, October 1956 to current year.

WATER TEMPERATURES: November 1949 to November 1951, October 1956 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, 12,800 micromhos May 30, 1953; minimum daily, 735 micromhos Oct. 24, 1957.

WATER TEMPERATURES (1945-51, 1956-67, 1969-79): Maximum daily, 30.1°C July 18, 1966; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 8,490 micromhos Mar 14; minimum daily, 945 micromhos June 12.

WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 14; minimum daily, 0.0°C on several days during December, January, February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
01...	1400	22	4500	8.0	19.0	95	9.5	107	1.3	210	340
21...	1400	21	5200	8.1	8.0	80	10.8	96	1.8	2400	280
DEC											
13...	0930	14	7400	8.1	2.0	70	11.5	88	.4	64	40
JAN											
17...	1430	18	6600	8.0	10.0	65	10.8	101	.9	100	130
FEB											
14...	0830	11	6850	8.0	6.0	7.0	10.6	90	.8	44	36
MAR											
14...	0815	5.0	8790	7.9	9.0	3.0	10.5	101	1.1	10	52
APR											
11...	0840	20	7600	8.1	11.0	25	10.3	99	2.0	42	28
MAY											
09...	0810	20	4530	8.0	20.0	350	7.7	89	1.4	680	390
JUN											
06...	1515	1500	1730	7.7	26.0	11000	6.8	85	6.8	21000	33000
JUL											
11...	1215	38	2900	7.0	31.0	230	7.0	96	1.8	1100	680
AUG											
08...	1330	54	3662	8.0	29.0	60	7.6	100	1.8	100	4800
SEP											
05...	1225	31	5350	7.9	28.5	120	7.6	96	2.2	940	410

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)
NOV											
01...	860	740	250	56	630	9.4	8.5	140	0	740	920
21...	1100	1000	300	94	730	9.4	13	160	0	1000	1000
DEC											
13...	1500	1400	450	100	1100	12	13	190	0	1300	1600
JAN											
17...	1300	1100	370	82	890	11	9.9	170	0	1100	1400
FEB											
14...	1500	1300	400	110	1000	11	15	150	0	1200	1700
MAR											
14...	1800	1700	500	140	1300	13	18	130	0	1700	2000
APR											
11...	1600	1500	430	130	1100	12	18	150	0	1500	1600
MAY											
09...	850	740	250	55	600	9.0	11	130	0	780	840
JUN											
06...	450	320	140	25	220	4.5	8.5	160	0	410	260
JUL											
11...	960	900	320	40	270	3.8	11	78	0	860	440
AUG											
08...	730	630	220	44	470	7.9	10	118	0	720	650
SEP											
05...	1000	940	300	70	850	11	15	120	0	1000	1200

BRAZOS RIVER BASIN

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (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 01...	.8	11	2900	2690	--	.01	.01	.02	.02	.58
21...	1.4	13	3440	3230	--	.07	.01	.08	.02	.48
DEC 13...	1.0	12	4990	4670	--	.11	.01	.12	.04	.36
JAN 17...	.8	9.0	4160	3950	--	.05	.00	.05	.00	5.5
FEB 14...	1.4	7.9	4590	4510	--	.03	.02	.05	.03	.27
MAR 14...	1.2	5.2	6010	5730	--	.01	.00	.01	.03	.27
APR 11...	1.4	10	5100	4860	--	.00	.02	.01	.11	.53
MAY 09...	1.1	7.7	2670	2610	--	.10	.02	.12	.08	.86
JUN 06...	1.4	8.0	1150	1150	12500	1.2	.60	1.8	1.6	2.9
JUL 11...	.4	7.6	2170	1990	--	.14	.02	.16	.05	.68
AUG 08...	1.1	11	2260	2180	--	.03	.02	.05	.02	.68
SEP 05...	1.3	12	3550	3510	--	.00	.06	.05	.23	.50

DATE	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 01...	.60	.45	.130	.120	--	2.8	2.0	143	8.5	96
21...	.50	.66	.100	.040	4.8	--	--	106	6.0	99
DEC 13...	.40	.43	.050	.050	3.1	--	--	139	5.3	100
JAN 17...	5.5	.48	.070	.050	--	--	--	150	7.3	99
FEB 14...	.30	.32	.030	.060	--	3.4	.6	23	.68	98
MAR 14...	.30	.26	.000	.010	3.9	--	--	14	.19	95
APR 11...	.64	.41	.030	.020	4.4	--	--	44	2.4	97
MAY 09...	.94	.97	.370	.010	6.1	--	--	475	26	100
JUN 06...	4.5	.75	1.90	.020	--	4.8	1.6	15100	61200	96
JUL 11...	.73	.95	.060	.130	5.0	--	--	149	15	99
AUG 08...	.70	.38	.050	.050	--	5.4	1.2	120	17	92
SEP 05...	.73	.18	.160	.020	9.6	--	--	180	15	98

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
JAN 17...	35	.160	.240	.000	.000
SEP 05...	28	.080	.160	.000	.000

BRAZOS RIVER BASIN

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08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 01...	1400	4	3	0	0	0	0	0	0	0
FEB 14...	0830	2	2	0	0	0	0	0	0	20
JUN 06...	1515	45	3	2800	2600	200	3	2	1	200
AUG 08...	1330	4	4	200	100	100	0	0	0	0

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
NOV 01...	0	0	2	2	0	5	4	1	2400	2400
FEB 14...	0	20	2	2	0	7	5	2	30	10
JUN 06...	190	10	150	150	2	190	190	1	13000	13000
AUG 08...	0	10	1	1	0	5	3	2	1900	1900

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 01...	10	2	2	0	80	50	30	.2	.1	.1
FEB 14...	20	12	12	0	100	20	80	.4	.3	.1
JUN 06...	30	220	220	2	8600	8600	40	.3	.3	.0
AUG 08...	30	4	4	0	70	50	20	.5	.3	.2

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 01...	1	0	1	0	0	0	20	10	10
FEB 14...	1	0	1	1	0	1	40	20	20
JUN 06...	3	2	1	0	0	0	570	540	30
AUG 08...	1	0	1	0	0	0	10	0	30

BRAZOS RIVER BASIN

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 21, 78 1400	MAR 14, 79 0815	MAY 9, 79 0810	JUN 6, 79 1515
TOTAL CELLS/ML	270000	2100	21000	37000
DIVERSITY: DIVISION	0.3	1.3	0.5	0.9
..CLASS	0.3	1.3	0.5	0.9
...ORDER	0.9	1.4	0.5	0.9
...FAMILY	0.9	1.6	1.6	0.9
...GENUS	2.2	3.0	2.7	0.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE								
...CHLOROCOCCUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
...PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINACEAE								
...GOLINKINIA	--	-	28	1	--	-	--	-
...MICRACTINIUM	*	0	--	-	1600	8	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	2100	1	250	12	530	3	--	-
...CHLORELLA	--	-	--	-	--	-	--	-
...CHODATELLA	*	0	--	-	--	-	--	-
...DICTYOSPHAERIUM	3400	1	350#	16	2900	14	--	-
...FRANCEIA	--	-	55	3	--	-	--	-
...KIRCHNERIELLA	*	0	--	-	*	0	--	-
...OOCYSTIS	1500	1	360#	17	1600	8	--	-
...SELENASTRUM	--	-	69	3	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-
...TREUBARIA	*	0	83	4	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	790	4	--	-
...CRUCIGENIA	--	-	--	-	1100	5	--	-
...SCENEDESMUS	3400	1	--	-	8300#	40	10000#	29
...TETRASTRUM	*	0	--	-	1800	9	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	14	1	--	-	--	-
...CHLAMYDOMONAS	--	-	14	1	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CHAETOCERACEAE								
...CHAETOCEROS	*	0	--	-	--	-	--	-
...COSCINODISCAEAE								
...CYCLOTETRA	*	0	--	-	1800	9	--	-
...PENNALES								
...FRAGILARIACEAE								
...FRAGILARIA	*	0	--	-	--	-	--	-
...NAVICULACEAE								
...CALONEIS	--	-	28	1	--	-	--	-
...NAVICULA	*	0	--	-	*	0	--	-
...PINNULARIA	--	-	650#	31	--	-	--	-
...NITZSCHIAEAE								
...HANTZSCHIA	--	-	14	1	--	-	--	-
...NITZSCHIA	--	-	28	1	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	14	1	--	-	--	-

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

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

BRAZOS RIVER BASIN

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08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979--Continued

DATE TIME	NOV 21,78 1400	MAR 14,79 0815	MAY 9,79 0810	JUN 6,79 1515				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	70000#	26	--	-	--	-	--	-
....ANACYSTIS	130000#	49	--	-	--	-	--	-
....GOMPHOSPHAERIA	20000	7	--	-	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	--	-	--	-
...OSCILLATORIAEAE								
....LYNGBYA	12000	5	140	7	--	-	--	-
....OSCILLATORIA	18000	7	--	-	--	-	26000#	71
....SCHIZOTHRIX	--	-	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	14	1	--	-	--	-

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

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

BRAZOS RIVER BASIN

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 11, 79 1215	AUG 8, 79 1330	SEP 5, 79 1225
TOTAL CELLS/ML	28000	59000	1400000
DIVERSITY: DIVISION	0.2	0.9	0.2
..CLASS	0.2	0.9	0.2
..ORDER	1.1	1.6	0.4
...FAMILY	1.3	2.5	1.0
....GENUS	1.5	2.7	1.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	* 0	--	--	-
...CHLOROCOCCACEAE						
...CHLOROCOCCUM	--	-	--	-	* 0	
...COELASTRACEAE						
...COELASTRUM	--	-	1900	3	--	-
...HYDRODICTYACEAE						
...PEDIASTRUM	--	-	1000	2	--	-
...MICRACTINIACEAE						
...GOLENKINTIA	--	-	--	-	--	-
...MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
...ANKISTRODESMUS	--	-	--	-	--	-
...CHLORELLA	--	-	--	-	* 0	
...CHODATELLA	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	6000	10	--	-
...FRANCEIA	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-
...OOCYSTIS	--	-	2100	4	12000	1
...SELENASTRUM	--	-	--	-	--	-
...TETRAEDRON	--	-	* 0		--	-
...TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	400	1	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	500	2	4600	8	* 0	
...TETRASTRUM	--	-	510	1	12000	1
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	* 0		--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...CHAETOCERACEAE						
...CHAETOCEROS	--	-	--	-	--	-
...COSCINODISCACEAE						
...CYCLOTILLA	--	-	* 0		--	-
...PENNALES						
...FRAGILARIACEAE						
...FRAGILARIA	--	-	--	-	--	-
...NAVICULACEAE						
...CALONEIS	--	-	--	-	--	-
...NAVICULA	--	-	--	-	--	-
...PINNULARIA	--	-	--	-	--	-
...NITZSCHACEAE						
...HANTZSCHIA	--	-	--	-	--	-
...NITZSCHIA	--	-	* 0		* 0	
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	* 0		--	-

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

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

BRAZOS RIVER BASIN

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08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979--Continued

DATE TIME	JUL 11, 79 1215		AUG 8, 79 1330		SEP 5, 79 1225	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	8400#	30	--	-	--	-
....ANACYSTIS	--	-	16000#	27	44000	3
....GOMPHOSPHAERIA	--	-	--	-	--	-
..HORMOGONALES						
..NOSTOCACEAE						
....ANABAENA	--	-	--	-	200000	14
....ANABAENOPSIS	1300	4	--	-	43000	3
....APHANIZOMENON	--	-	10000#	18	--	-
..OSCILLATORIACEAE						
....LYNCBYA	--	-	--	-	--	-
....OSCILLATORIA	600	2	15000#	26	--	-
....SCHIZOTHRIX	17000#	60	--	-	1100000#	76
....SPIRULINA	--	-	--	-	24000	2
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-

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

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

BRAZOS RIVER BASIN

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	1060.4	3370	2280	6530	660	1890	680	1930	860
NOV. 1978.....	822	4710	3180	7070	980	2180	940	2090	1200
DEC. 1978.....	508.6	6050	4090	5620	1330	1820	1210	1670	1540
JAN. 1979.....	410	6150	4160	4600	1350	1500	1230	1370	1560
FEB. 1979.....	297.7	6740	4560	3670	1500	1210	1350	1090	1710
MAR. 1979.....	2654.2	2590	1750	12600	460	3300	520	3730	660
APR. 1979.....	774	5470	3700	7740	1190	2480	1100	2300	1390
MAY 1979.....	2336	2640	1790	11300	470	2950	530	3340	670
JUNE 1979.....	14696	1600	1080	43000	270	10600	320	12700	410
JULY 1979.....	11683.49	1500	1010	31900	250	8000	300	9420	380
AUG. 1979.....	1932	2830	1910	9990	510	2670	570	2960	720
SEPT 1979.....	242.54	4590	3100	2030	950	622	920	603	1170
TOTAL	37417.92	**	**	146000	**	39200	**	43200	**
WTD.AVG.	103	2140	1400	**	390	**	430	**	540

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	4170	2920	7900	6800	7190	4020	2040	4580	6840	4470	3890
2	1670	4760	3060	7910	5940	7240	4380	2690	2000	7020	4760	4380
3	2110	5350	3680	8000	6030	5500	4700	2500	1210	7100	4950	4000
4	2700	5750	4060	7900	6030	4170	5120	1810	1170	7150	3000	2620
5	3280	6010	4590	7700	6400	6680	5480	2470	1560	6800	2380	5500
6	3730	6190	5190	7600	6040	6900	5860	2530	1950	2000	2340	4780
7	4110	6400	5650	7550	5840	7470	6170	2850	1410	1800	3180	5430
8	4440	6560	6390	7500	6040	7670	6410	3340	1560	3000	3510	5840
9	4780	4500	7210	7490	6150	8000	6720	4050	1600	3500	3630	6270
10	5150	3350	7110	7570	5970	8000	6880	4690	1300	2220	4020	6680
11	5320	3700	7030	7670	5890	8160	7300	5530	1090	3000	2220	6860
12	5610	3830	6930	7940	6150	8160	7790	6000	945	3870	5040	6990
13	5940	4260	7170	7300	6440	8250	8120	6500	1070	4940	3000	7100
14	6160	4610	7520	8420	6650	8490	8200	7120	1540	5630	2780	7280
15	6370	4910	7920	8190	6690	8250	8300	7570	1830	6780	2110	7420
16	6520	4880	8040	7700	7460	8160	8470	7870	2110	7080	2270	7340
17	6520	5310	8200	6190	7460	8120	8470	8060	2410	7200	2800	7350
18	6640	5420	7950	6030	7260	8220	8040	8190	2790	4660	3460	7410
19	6780	5420	7760	5000	7130	1680	5000	8350	3090	1800	4250	7550
20	6800	5630	7910	4050	7210	1710	2240	8440	3430	1160	4910	7600
21	6890	4870	7210	4640	7550	3550	2520	3000	3760	1060	4500	7640
22	6890	5100	7260	4570	7740	2500	3530	1960	4090	980	3600	7700
23	4890	5280	7360	4910	8200	2220	4560	3540	4440	1080	2200	7530
24	2780	5340	7440	5380	7390	2860	5720	5230	4770	1270	2000	8120
25	5530	5520	7440	5340	7630	2860	6770	5380	3000	1650	1980	7900
26	6970	4000	7570	5480	7740	2860	7460	4220	1950	2150	1960	7800
27	3560	2960	7810	5750	7410	2860	7690	4780	4420	2530	1950	7600
28	2820	4010	7810	6220	7010	2490	8030	5380	5230	3090	2380	7740
29	2290	4580	7810	6470	---	3020	7970	4500	5750	3400	2820	7980
30	2780	4110	7850	6380	---	3400	6920	4350	6210	3810	3220	8090
31	3470	---	7860	6910	---	3740	---	4220	---	4150	3500	---
MEAN	4670	4890	6760	6700	6790	5440	6290	4810	2740	3830	3280	6680

BRAZOS RIVER BASIN

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08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	16.0	7.0	---	.0	6.0	13.0	15.0	18.0	23.0	24.0	24.0
2	19.0	15.0	10.0	---	4.0	11.0	10.0	20.0	17.0	22.0	22.0	30.0
3	18.0	16.0	3.0	---	4.0	7.0	11.0	19.0	18.0	---	24.0	24.0
4	16.0	16.0	2.0	---	3.0	5.0	9.0	11.0	21.0	---	24.0	22.0
5	20.0	15.0	4.0	---	.0	5.0	10.0	11.0	21.0	---	24.0	23.0
6	16.0	12.0	3.0	---	1.0	5.0	13.0	15.0	24.0	---	25.0	23.0
7	17.0	7.0	2.0	---	3.0	8.0	15.0	17.0	24.0	---	24.0	23.0
8	16.0	8.0	.0	---	4.0	8.0	16.0	20.0	25.0	---	24.0	22.0
9	17.0	10.0	.0	4.0	1.0	8.0	13.0	22.0	---	---	23.0	22.0
10	17.0	13.0	1.0	2.0	3.0	8.0	15.0	18.0	19.0	22.0	23.0	18.0
11	18.0	10.0	1.0	2.0	5.0	9.0	11.0	14.0	20.0	25.0	22.0	18.0
12	17.0	9.0	2.0	2.0	6.0	9.0	9.0	---	20.0	25.0	20.0	19.0
13	14.0	11.0	3.0	.0	7.0	10.0	10.0	---	22.0	23.0	23.0	18.0
14	11.0	14.0	3.0	.0	8.0	10.0	12.0	16.0	23.0	25.0	31.0	16.0
15	12.0	6.0	3.0	.0	12.0	9.0	15.0	16.0	22.0	25.0	24.0	13.0
16	14.0	6.0	4.0	2.0	1.0	9.0	18.0	17.0	21.0	25.0	23.0	15.0
17	14.0	5.0	2.0	4.0	1.0	12.0	19.0	17.0	22.0	25.0	22.0	15.0
18	13.0	6.0	5.0	7.0	1.0	14.0	18.0	18.0	22.0	25.0	23.0	19.0
19	14.0	10.0	9.0	---	4.0	9.0	19.0	20.0	23.0	23.0	23.0	17.0
20	14.0	10.0	10.0	5.0	6.0	7.0	20.0	21.0	24.0	22.0	22.0	19.0
21	13.0	7.0	3.0	2.0	6.0	13.0	17.0	18.0	25.0	24.0	22.0	17.0
22	17.0	9.0	3.0	5.0	9.0	13.0	16.0	15.0	25.0	25.0	25.0	19.0
23	12.0	12.0	5.0	4.0	10.0	9.0	17.0	17.0	24.0	25.0	24.0	18.0
24	11.0	12.0	3.0	1.0	7.0	10.0	17.0	19.0	23.0	26.0	---	19.0
25	13.0	16.0	3.0	4.0	4.0	9.0	21.0	17.0	23.0	27.0	---	20.0
26	12.0	15.0	2.0	4.0	5.0	12.0	14.0	16.0	23.0	26.0	---	20.0
27	12.0	8.0	5.0	1.0	6.0	11.0	17.0	19.0	24.0	25.0	26.0	20.0
28	13.0	5.0	8.0	1.0	6.0	11.0	13.0	20.0	24.0	26.0	24.0	20.0
29	13.0	7.0	9.0	2.0	---	16.0	14.0	20.0	25.0	26.0	23.0	19.0
30	14.0	8.0	---	.0	---	15.0	16.0	22.0	25.0	25.0	24.0	18.0
31	14.0	---	---	1.0	---	12.0	---	19.0	---	24.0	25.0	---
MEAN	15.0	10.5	4.0	2.5	4.5	9.5	14.5	17.5	22.5	24.5	23.5	19.5

BRAZOS RIVER BASIN

08080950 DUCK CREEK NEAR GIRARD, TX

LOCATION.--Lat 33°21'22", long 100°42'17", Kent County, Hydrologic Unit 12050007, near right bank on downstream side of bridge on Farm Road 643, 2.5 mi (4.0 km) west of Girard, and 10.7 mi (17.2 km) upstream from mouth.

DRAINAGE AREA.--431 mi² (1,116 km²), of which 152 mi² (394 km²) probably is noncontributing.

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

REVISED RECORDS.--WRD TX-72-1: 1971. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,006.08 ft (611.453 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several small diversions upstream from gage. Flow is affected at times by discharge from flood-detention pools of 12 floodwater-retarding structures with combined detention capacity of 24,710 acre-ft (30.5 hm³). These structures control runoff from 108 mi² (280 km²). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years, 5.94 ft³/s (0.168 m³/s), 4,300 acre-ft/yr (5.30 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) June 4, 1974, gage height, 15.22 ft (4.639 m); no flow July 19 to Aug. 6, Aug. 18-21, 1966, Aug. 19, 1969, July 20, 1971, and Aug. 17-22, 1974.

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 (6.04 m) in September 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 485 ft³/s (13.7 m³/s) Aug. 20, gage height, 11.48 ft (3.499 m); minimum, 0.06 ft³/s (0.002 m³/s) July 13, 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.74	.87	1.1	1.6	1.9	1.7	1.7	.74	.13	12	.72
2	.89	.78	.89	1.0	1.8	1.9	1.7	2.1	1.1	.13	51	.35
3	.71	.89	.77	.80	1.8	2.0	1.7	3.7	1.1	.10	6.4	.25
4	.63	1.1	.75	1.0	1.8	2.0	1.7	1.8	1.0	.10	2.3	.19
5	.63	1.3	.84	1.2	1.8	2.0	1.7	1.6	1.4	.10	1.0	.21
6	.80	1.2	.80	1.1	1.9	2.0	1.6	1.5	1.2	.13	.49	.21
7	.80	1.1	.80	1.0	1.9	2.0	1.6	1.4	.81	.13	.29	.20
8	.80	1.2	.78	1.0	1.8	2.1	1.6	1.2	.65	.10	.26	.16
9	.80	1.3	.75	1.3	1.7	2.1	1.6	1.1	3.8	.10	.19	.16
10	.99	1.3	.84	1.6	1.8	2.1	1.7	1.0	2.1	.10	.19	.14
11	1.1	1.2	.89	1.5	1.9	2.1	1.6	.92	6.4	.10	.15	.13
12	1.1	1.3	.95	1.5	1.9	2.1	1.6	.95	3.2	.10	.13	.13
13	.79	1.5	.96	1.6	1.8	2.1	1.6	.97	1.8	.08	.13	.13
14	.74	1.7	.94	1.2	1.9	2.1	1.7	.73	1.4	.06	.13	.13
15	.78	1.7	1.1	1.0	1.8	2.1	1.6	.55	1.1	.08	.10	.15
16	.81	1.9	1.1	1.5	1.7	2.1	1.6	.56	.91	.10	.10	.16
17	.71	1.8	.99	1.6	1.8	2.2	1.9	.53	.64	.10	.10	.16
18	.76	1.7	1.1	1.7	1.9	3.1	1.8	.52	.49	.15	.13	.16
19	.72	1.7	1.2	1.8	1.9	1.9	1.7	.47	.40	.18	.13	.15
20	.59	1.8	1.2	1.6	1.9	1.7	1.6	.44	.30	.29	52	.15
21	.60	1.9	.99	1.5	1.9	1.8	1.6	.51	.24	.30	42	.15
22	.71	1.9	1.1	1.5	1.9	1.9	1.6	.75	.19	.32	1.8	.15
23	1.6	1.9	1.2	1.6	1.9	1.8	1.6	.79	.18	.35	1.1	.13
24	1.8	1.9	1.2	1.5	1.9	1.7	1.6	.67	.15	.26	.52	.13
25	1.4	1.9	1.2	1.6	1.9	1.8	1.6	.58	.13	.22	.53	.13
26	1.1	1.3	1.2	1.8	1.9	1.8	1.5	.58	.15	.19	.50	.10
27	.99	4.9	1.2	1.7	1.9	1.8	1.5	.55	.23	.15	.44	.10
28	1.0	2.0	1.3	1.6	1.9	1.8	1.5	.48	.21	.15	.36	.10
29	1.1	1.2	1.3	1.7	---	1.8	1.6	.47	.15	.15	.35	.10
30	1.1	.88	1.3	1.7	---	1.7	1.6	.45	.15	.15	.36	.10
31	.84	---	1.3	1.6	---	1.7	---	.43	---	.50	.36	---
TOTAL	28.39	58.69	31.81	43.90	51.6	61.2	49.0	30.00	32.32	5.10	175.54	5.23
MEAN	.92	1.96	1.03	1.42	1.84	1.97	1.63	.97	1.08	.16	5.66	.17
MAX	1.8	1.3	1.3	1.8	1.9	3.1	1.9	3.7	6.4	.50	52	.72
MIN	.59	.74	.75	.80	1.6	1.7	1.5	.43	.13	.06	.10	.10
AC-FT	56	116	63	87	102	121	97	60	64	10	348	10
CAL YR 1978	TOTAL	1688.76	MEAN	4.63	MAX	363	MIN	.04	AC-FT	3350		
WTR YR 1979	TOTAL	572.78	MEAN	1.57	MAX	52	MIN	.06	AC-FT	1140		

BRAZOS RIVER BASIN

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08081000 SALT FORK BRAZOS RIVER NEAR PEACOCK, TX

LOCATION.--Lat 33°12'43", long 100°25'53", Stonewall County, Hydrologic Unit 12050007, on right bank at downstream side of bridge on U.S. Highway 380, 2.9 mi (4.7 km) northwest of Peacock, 6.2 mi (10.0 km) upstream from Croton Creek, 13.0 mi (20.9 km) northwest of Aspermont, and at mile 54.3 (87.4 km) measured from confluence with Double Mountain Fork Brazos River which is at mile 923.2 (1,485.4 km) on the Brazos River.

DRAINAGE AREA.--4,619 mi² (11,963 km²), of which 2,634 mi² (6,822 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1949 to September 1951, September 1964 to current year.

REVISED RECORD.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,724.32 ft (525.573 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1964, nonrecording gage at site 2.9 mi (4.7 km) upstream at datum 19.39 ft (5.910 m) higher.

REMARKS.--Water-discharge records fair. Some regulation by White River Reservoir (station 08080910), capacity 44,900 acre-ft (55.4 hm³) 79 mi (127 km) upstream. Several small diversions above station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950.

AVERAGE DISCHARGE.--16 years (water years 1951, 1965-79), 36.3 ft³/s (1.028 m³/s), 26,300 acre-ft/yr (32.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s (538 m³/s) Aug. 13, 1972, gage height, 13.75 ft (4.191 m); no flow at times most years.
Maximum stage since at least 1939, that of Aug. 13, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) June 5, gage height, 8.32 ft (2.536 m), no peak above base of 5,000 ft³/s (142 m³/s); no flow at times.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	3.5	5.4	.50	3.9	3.2	3.7	14	7.8	.34	119	.07
2	13	3.7	4.8	.00	4.4	3.6	3.1	9.7	15	.23	29	.04
3	8.9	3.7	3.5	.00	4.4	3.1	3.3	7.2	9.9	.19	12	.03
4	7.3	3.7	3.7	2.0	4.6	2.6	3.0	5.4	21	.18	7.3	.03
5	6.4	3.6	3.7	4.0	4.9	2.7	3.2	5.0	458	.32	4.1	.01
6	5.8	3.5	3.2	2.0	5.9	2.7	3.1	4.7	386	.20	2.7	.01
7	5.0	3.3	3.2	1.0	5.3	2.9	3.2	3.6	90	.19	1.9	.00
8	4.1	3.1	3.3	.50	4.5	3.2	3.1	2.9	42	.10	1.1	.00
9	4.1	3.1	3.0	10	3.5	3.2	3.5	2.7	37	.41	.68	.00
10	4.1	3.1	3.0	5.8	3.4	3.3	4.0	2.3	343	.13	.57	.00
11	4.2	2.3	3.4	6.1	3.8	3.3	3.1	1.6	151	.06	1.2	.00
12	3.7	2.5	3.7	6.0	3.6	3.4	2.5	1.8	71	.04	2.0	.00
13	2.8	3.2	3.4	6.0	3.7	3.2	2.4	1.7	37	.03	1.2	.00
14	2.3	3.7	3.3	4.0	4.2	2.6	2.7	1.5	23	.03	.44	.00
15	2.3	4.4	3.7	2.0	3.3	3.9	2.6	1.5	14	.02	.17	.00
16	2.3	4.8	3.2	5.7	3.4	4.9	2.5	1.3	10	.01	.08	.00
17	2.1	4.9	3.1	5.6	3.5	6.4	3.0	1.3	8.6	1.2	.04	.00
18	2.1	4.6	3.7	6.1	2.8	6.4	22	1.4	7.2	4.2	.02	.00
19	2.0	4.0	4.2	6.5	3.5	7.6	11	1.4	5.8	1.2	.01	.00
20	1.9	4.0	3.9	6.0	3.7	7.4	8.0	1.5	5.3	.39	.86	.00
21	1.8	4.2	3.0	5.5	3.5	7.9	5.8	4.0	4.3	.19	1.1	.00
22	2.0	4.9	3.1	5.4	3.8	13	4.6	4.3	3.3	.11	4.7	.00
23	10	5.3	3.0	4.1	3.2	9.4	4.1	3.0	2.4	.06	6.7	.00
24	15	4.9	2.8	3.6	4.7	6.1	3.7	1.7	1.8	.04	3.0	.00
25	9.4	5.3	3.0	4.1	4.3	5.6	3.0	1.2	1.7	.80	1.4	.00
26	6.5	6.2	2.8	5.2	3.6	4.9	2.3	.98	2.6	.94	.67	.00
27	5.2	4.9	3.0	5.2	3.5	4.1	2.1	1.7	1.8	.40	.50	.00
28	4.6	6.6	3.4	4.4	3.5	4.7	2.3	2.3	1.0	.18	.33	.00
29	4.2	7.6	3.6	4.2	---	5.0	4.6	1.2	.73	.09	.15	.00
30	3.8	6.2	2.8	4.0	---	3.8	5.3	.79	.54	.07	.09	.00
31	3.5	---	1.5	4.0	---	3.6	---	.74	---	.17	.16	---
TOTAL	169.4	128.8	104.4	129.50	110.4	147.7	130.8	94.41	1762.77	12.52	203.17	.19
MEAN	5.46	4.29	3.37	4.18	3.94	4.76	4.36	3.05	58.8	.40	6.55	.006
MAX	19	7.6	5.4	10	5.9	13	22	14	458	4.2	119	.07
MIN	1.8	2.3	1.5	.00	2.8	2.6	2.1	.74	.54	.01	.01	.00
AC-FT	336	255	207	257	219	293	259	187	3500	25	403	.4

CAL YR 1978 TOTAL 5722.31 MEAN 15.7 MAX 1500 MIN .00 AC-FT 11350
WTR YR 1979 TOTAL 2994.06 MEAN 8.20 MAX 458 MIN .00 AC-FT 5940

BRAZOS RIVER BASIN

08081000 SALT FORK BRAZOS RIVER NEAR PEACOCK, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1949 to September 1951, October 1964 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1949 to September 1951, October 1964 to current year.

WATER TEMPERATURES: December 1949 to September 1951, October 1964 to current year.

INSTRUMENTATION.--Specific conductance is recorded continuously at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 61,100 micromhos July 31, 1966; minimum daily, 900 micromhos Aug. 31, 1966.

WATER TEMPERATURES (1949-50, 1964-69, 1971-79): Maximum daily, 39.0°C June 25, 1968, July 30, 1978; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 50,000 micromhos May 22; minimum daily, 3,250 micromhos June 11.

WATER TEMPERATURES: Maximum daily, 32.0°C June 17, July 9; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 03...	1445	9.2	20000	22.0	1500	1400	390	130	4400
NOV 07...	1115	3.2	42400	13.0	3000	2800	760	260	9300
DEC 05...	1215	4.0	35800	11.0	2800	2600	690	250	7500
FEB 28...	1000	3.0	31600	8.0	2500	2400	610	240	6700
MAR 02...	1050	3.2	37600	11.5	3000	2900	790	260	8000
MAY 22...	1215	5.2	45600	20.0	3300	3200	880	270	10000
SEP 03...	0908	.06	34000	24.0	3200	3100	780	300	7400

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 03...	49	21	160	0	1300	6900	.6	11	13200
NOV 07...	74	27	180	0	2400	15000	.6	13	27900
DEC 05...	62	21	160	0	2200	12000	.5	8.6	22700
FEB 28...	58	19	120	0	2100	10000	.5	14	19700
MAR 02...	63	23	130	0	2700	13000	.6	1.6	24800
MAY 22...	76	32	160	0	3000	16000	.6	9.2	30300
SEP 03...	57	33	160	0	2600	12000	.4	8.0	23200

BRAZOS RIVER BASIN

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08081000 SALT FORK BRAZOS RIVER NEAR PEACOCK, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	169.4	26900	17400	7950	9040	4140	1810	827	****
NOV. 1978.....	128.8	37600	24300	8460	12700	4400	2530	879	****
DEC. 1978.....	104.4	33000	21600	6090	11100	3140	2220	627	****
JAN. 1979.....	129.5	35500	23200	8110	12000	4190	2390	836	****
FEB. 1979.....	110.4	35100	22900	6830	11800	3520	2360	704	****
MAR. 1979.....	147.7	33800	21900	8750	11400	4530	2270	906	****
APR. 1979.....	130.8	30700	19800	7000	10300	3650	2070	730	****
MAY 1979.....	94.41	34400	22300	5680	11600	2950	2310	589	****
JUNE 1979.....	1762.77	7350	4650	22100	2470	11800	500	2360	650
JULY 1979.....	12.52	29400	18900	639	9890	334	1980	67	****
AUG. 1979.....	203.17	6420	4060	2230	2160	1190	430	237	570
SEPT 1979.....	0.19	31900	21000	11	10800	5.4	2150	1.1	****
TOTAL	2994.06	**	**	83800	**	43800	**	8760	**
WTD.AVG.	8.2	16100	10000	**	5400	**	1100	**	*****

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12000	42900	23400	33000	35400	35000	40000	19000	34500	44300	4010	30000
2	15400	42700	25500	---	35300	37900	40300	27600	17500	43500	4900	31300
3	20000	43000	28400	---	35300	37200	40400	37400	20000	44400	5610	33500
4	22100	42600	35200	29900	34600	37500	39600	33800	13800	44200	9500	34300
5	24300	42700	36300	29000	33600	36500	39900	35500	5140	43000	12400	33300
6	26700	42700	33700	33500	35200	36800	40100	36600	5990	41900	17500	35000
7	28800	42400	32800	35000	35200	36900	40200	37700	6190	42300	20100	---
8	30700	41400	41900	36100	36400	36900	42000	39700	10000	43700	24900	---
9	32800	41500	37500	32500	37300	37500	42200	40900	16200	43000	31600	---
10	33400	42600	32800	35000	39000	38400	40000	40800	5150	37900	31400	---
11	35000	42500	37500	37200	36900	38000	42400	35200	3250	43700	20500	---
12	34700	42300	30400	38900	39200	38100	42300	40800	4250	45000	18700	---
13	36200	42400	32300	40600	35600	38400	42000	40900	7120	43600	17000	---
14	36500	40900	33500	40400	35900	37700	41500	41200	13200	38500	25800	---
15	36000	41900	34700	37700	38800	38100	41800	40900	20600	45600	31100	---
16	35300	41200	35400	38000	33800	36800	42600	36600	27700	46100	32600	---
17	35600	40700	36200	35200	33500	38400	42000	36900	36300	36000	31800	---
18	36100	40000	33400	32600	33900	36100	18100	37500	39100	20000	30600	---
19	35700	39600	32000	32700	33200	36800	12000	37000	42100	15700	32500	---
20	31900	39000	36400	31700	33400	37100	16100	36300	43400	18000	33600	---
21	33600	38800	36700	35000	34300	35200	20500	33700	45800	19300	24000	---
22	35700	38500	36300	36700	34200	20000	24200	50000	46100	37200	14900	---
23	22200	38900	36500	38700	34400	17800	33700	44000	46600	35600	6230	---
24	20400	39200	33700	39100	34700	25100	35800	44300	47000	36000	6990	---
25	29500	39400	34800	38000	34500	34400	37900	42800	46700	36700	10000	---
26	38800	35100	34000	36600	34700	35600	34000	39000	47500	37500	12100	---
27	40900	39000	33400	33800	33000	37100	37500	39300	48800	33800	23600	---
28	35500	25500	31300	35400	31500	36900	40700	30500	38300	33400	25800	---
29	36800	19200	28000	35500	---	36600	36500	33000	46300	37700	26000	---
30	39900	21000	28800	36100	---	38100	35800	35000	45000	45000	27200	---
31	43000	---	30200	36400	---	39000	---	34500	---	33700	28500	---
MEAN	31500	39000	33300	35500	35100	35500	36100	37400	27700	37600	20700	32900

BRAZOS RIVER BASIN

08081000 SALT FORK BRAZOS RIVER NEAR PEACOCK, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.0	8.0	---	.0	20.0	13.0	16.0	19.0	21.0	24.0	24.0
2	---	15.0	10.0	---	5.0	11.0	8.0	19.0	19.0	21.0	24.0	24.0
3	---	15.0	8.0	---	.0	7.0	11.0	15.0	20.0	22.0	25.0	24.0
4	---	16.0	1.0	---	6.0	9.0	9.0	8.0	20.0	22.0	24.0	23.0
5	---	16.0	3.0	---	4.0	8.0	10.0	9.0	20.0	22.0	24.0	23.0
6	---	9.0	2.0	---	2.0	6.0	13.0	19.0	22.0	24.0	26.0	21.0
7	---	12.0	1.0	---	3.0	23.0	14.0	15.0	29.0	24.0	24.0	---
8	---	9.0	.0	.0	3.0	18.0	12.0	19.0	22.0	23.0	24.0	---
9	16.0	17.0	---	.0	.0	13.0	12.0	21.0	26.0	32.0	26.0	---
10	29.0	21.0	7.0	---	3.0	8.0	14.0	16.0	24.0	21.0	24.0	---
11	16.0	8.0	.0	---	11.0	20.0	10.0	10.0	19.0	22.0	21.0	---
12	16.0	9.0	8.0	---	10.0	12.0	10.0	9.0	21.0	23.0	21.0	---
13	12.0	15.0	3.0	.0	10.0	10.0	9.0	14.0	22.0	23.0	23.0	---
14	9.0	8.0	1.0	.0	10.0	10.0	10.0	14.0	23.0	23.0	23.0	---
15	25.0	8.0	2.0	.0	10.0	10.0	10.0	14.0	19.0	29.0	23.0	---
16	12.0	7.0	1.0	2.0	.0	9.0	15.0	16.0	19.0	24.0	23.0	---
17	12.0	4.0	8.0	3.0	---	10.0	18.0	16.0	32.0	24.0	22.0	---
18	12.0	4.0	16.0	9.0	3.0	21.0	17.0	16.0	21.0	23.0	22.0	---
19	12.0	14.0	8.0	9.0	9.0	10.0	21.0	19.0	26.0	22.0	23.0	---
20	12.0	11.0	8.0	5.0	16.0	9.0	19.0	19.0	23.0	23.0	23.0	---
21	12.0	12.0	3.0	10.0	13.0	15.0	16.0	19.0	30.0	23.0	21.0	---
22	20.0	13.0	2.0	3.0	13.0	13.0	16.0	22.0	23.0	23.0	22.0	---
23	10.0	13.0	2.0	.0	10.0	8.0	16.0	17.0	23.0	25.0	22.0	---
24	11.0	13.0	4.0	.0	2.0	12.0	17.0	17.0	23.0	25.0	22.0	---
25	11.0	14.0	4.0	3.0	6.0	22.0	18.0	16.0	---	25.0	22.0	---
26	11.0	18.0	5.0	3.0	7.0	10.0	15.0	15.0	22.0	24.0	22.0	---
27	9.0	6.0	8.0	11.0	8.0	8.0	15.0	15.0	23.0	24.0	24.0	---
28	9.0	2.0	9.0	10.0	8.0	14.0	14.0	19.0	23.0	26.0	22.0	---
29	9.0	5.0	9.0	8.0	---	16.0	18.0	19.0	28.0	26.0	22.0	---
30	10.0	6.0	.0	.0	---	13.0	19.0	21.0	21.0	26.0	22.0	---
31	15.0	---	---	.0	---	12.0	---	19.0	---	---	24.0	---
MEAN	13.5	11.0	5.0	3.5	6.5	12.5	14.0	16.0	23.0	24.0	23.0	23.0

BRAZOS RIVER BASIN

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08081100 CROTON CREEK BELOW SHORT CROTON CREEK NEAR JAYTON, TX
(Low-flow partial-record station)

LOCATION.--Lat 33°18'23", long 100°31'55", Kent County, Hydrologic Unit 12050007, at county road crossing and 4.7 mi (7.6 km) northeast of Jayton.

PERIOD OF RECORD.--Periodic discharge measurements: August 1959 to current year. Periodic water-quality data: October 1960 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 11...	0730	.22	27250	17.0	3600	--	1100	210	3100	7800
JAN 09...	0814	.57	46470	.0	4400	--	1200	330	3700	15000
FEB 20...	--	1.0	40500	8.0	4100	--	1100	340	3900	14000
APR 04...	0710	.19	45340	7.0	5800	--	1700	370	4500	18000
AUG 07...	0750	7.3	10200	24.0	2400	2400	830	78	3000	2300
SEP 18...	0800	.09	41800	--	4600	--	1300	330	4300	15000

BRAZOS RIVER BASIN

08081200 CROTON CREEK NEAR JAYTON, TX

LOCATION.--Lat 33°17'18", long 100°25'52", Stonewall County, Hydrologic Unit 12050007, on left bank 220 ft (67 m) downstream from county road, 0.9 mi (1.4 km) upstream from mouth, and 8.5 mi (13.7 km) northeast of Jayton.

DRAINAGE AREA.--290 mi² (751 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2122: Drainage area. WDR TX-76-2: Drainage area.

GAGE.-- Water-stage recorder and crest-stage gage. Datum of gage is 1,694.45 ft (516.468 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 11, 1976, at site 680 ft (207 m) upstream at same datum.

REMARKS.--Water-discharge records fair. No diversion above station.

AVERAGE DISCHARGE.--20 years, 14.3 ft³/s (0.405 m³/s), 0.67 in/yr (17 mm/yr), 10,360 acre-ft/yr (12.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Oct. 18, 1960, gage height, 12.40 ft (3.780 m), from rating curve extended above 3,100 ft³/s (87.8 m³/s); maximum gage height, 12.52 ft (3.816 m) May 20, 1977, from floodmark; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1935, 13.5 ft (4.11 m) in 1941 or 1942, present datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft³/s (43.6 m³/s) May 1, gage height, 7.87 ft (2.399 m), no peak above base of 1,600 ft³/s (45.3 m³/s); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.02	4.1	.00	.73	.07	.11	268	10	.23	243	.07
2	1.3	.01	3.1	.00	.68	.17	.09	56	10	.09	221	.05
3	1.0	.01	2.3	.00	.68	.23	.07	12	.56	.03	74	.07
4	.79	.00	1.9	.08	.68	.06	.10	6.2	52	.01	30	.03
5	.57	.00	1.5	.10	.68	.03	.07	3.5	123	.03	14	.00
6	.48	.00	1.3	.00	.80	.02	.06	2.4	25	.07	8.3	.00
7	.40	.00	1.1	.00	1.1	.01	.05	1.6	42	15	4.9	.00
8	.34	.00	.62	.00	1.0	.01	.04	1.2	6.3	4.5	3.1	.00
9	.28	.00	.58	.05	.59	.01	.05	.50	126	1.6	2.1	.00
10	.21	.00	.54	.10	.63	.04	.08	.43	101	3.1	41	.00
11	.16	.00	.51	.10	.50	.01	.03	.38	40	.59	18	.00
12	.16	.00	.52	1.0	.45	.00	.22	.24	16	.24	7.3	.00
13	.10	.00	.49	2.0	.39	.01	.11	.20	7.8	.10	3.2	.00
14	.05	.00	.43	.00	.31	.00	.04	.13	3.9	.03	1.8	.00
15	.02	.00	.43	.00	.22	.05	.03	.09	2.0	.01	1.2	.00
16	.01	.00	.43	1.1	.11	.59	.02	.07	1.0	.00	.99	.00
17	.00	.51	.37	1.0	.10	1.1	.79	.08	.68	.00	.68	.00
18	.00	.51	.37	1.6	.11	2.4	.24	.07	.39	7.7	.46	.00
19	.00	.71	.35	2.7	.14	5.8	1.8	.06	.26	112	.31	.00
20	.00	1.1	.27	1.8	.12	4.9	1.8	.04	.24	70	9.4	.00
21	.00	1.1	.15	2.6	.07	3.2	.78	.10	.15	22	51	.00
22	.00	1.2	.14	2.6	.08	62	.43	2.7	.09	11	3.6	.00
23	2.2	1.3	.10	1.6	.07	6.8	.30	5.2	.05	5.0	13	.00
24	2.2	1.0	.09	1.3	.23	2.5	.24	2.1	.05	2.6	40	.00
25	.59	.96	.07	1.2	.21	1.3	.10	1.0	.04	3.4	4.0	.00
26	.36	25	.07	1.1	.32	.76	.10	.51	.57	1.7	1.4	.00
27	.24	55	.07	1.7	.27	.47	.05	.21	9.7	2.2	.78	.00
28	.19	16	.05	1.5	.13	.42	.03	1.1	2.0	2.5	.59	.00
29	.16	8.5	.05	1.1	---	.35	.59	.52	.70	1.2	.30	.00
30	.12	5.5	.05	.96	---	.18	.10	.14	.39	.79	.24	.00
31	.05	---	.00	.70	---	.15	---	.03	---	127	.19	---
TOTAL	13.78	118.43	22.05	27.99	11.40	93.64	110.49	366.80	581.87	394.72	799.84	.22
MEAN	.44	3.95	.71	.90	.41	3.02	3.68	11.8	19.4	12.7	25.8	.007
MAX	2.2	55	4.1	2.7	1.1	62	79	268	126	127	243	.07
MIN	.00	.00	.00	.00	.07	.00	.02	.03	.04	.00	.19	.00
CFSM	.002	.01	.002	.003	.001	.01	.01	.04	.07	.04	.09	.000
IN.	.00	.02	.00	.00	.00	.01	.01	.05	.07	.05	.10	.00
AC-FT	27	235	44	56	23	186	219	728	1150	783	1590	.4
CAL YR 1978	TOTAL	1579.65	MEAN 4.33	MAX 283	MIN .00	CFSM .02	IN .20	AC-FT 3130				
WTR YR 1979	TOTAL	2541.23	MEAN 6.96	MAX 268	MIN .00	CFSM .02	IN .33	AC-FT 5040				

BRAZOS RIVER BASIN

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08081200 CROTON CREEK NEAR JAYTON, TX--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to current year.

WATER TEMPERATURES: October 1961 to September 1973.

INSTRUMENTATION.--Specific conductance is recorded continuously at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (1961-64, 1972-79): Maximum daily, 54,100 micromhos Feb. 11, 1978; minimum daily, 1,570 micromhos Aug. 3, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 50,600 micromhos Mar. 19; minimum daily, 1,830 micromhos May 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 03...	1200	1.8	21800	21.0	2600	2500	780	160	4400
NOV 27...	1030	56	5600	--	1700	1600	570	58	740
DEC 05...	0855	1.6	22400	10.0	3100	3000	960	180	4500
FEB 01...	0910	.68	41000	.0	4300	4200	1200	310	8600
APR 24...	1012	.26	31900	22.0	4500	4400	1200	360	6900
JUN 12...	1350	14	6950	30.5	2000	1900	700	59	930
JUL 23...	1035	5.3	10900	--	2400	2300	820	87	1800
AUG 15...	1030	1.3	15900	27.0	2700	2600	880	110	2800

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 03...	38	24	91	0	1600	7700	.2	6.8	14700
NOV 27...	7.9	7.1	80	0	1600	1100	.2	8.2	4120
DEC 05...	35	5.0	120	0	2700	7400	.2	5.8	15800
FEB 01...	57	26	150	0	3600	13000	.2	17	26800
APR 24...	45	46	110	0	3300	9500	.2	4.8	21400
JUN 12...	8.6	10	82	0	1900	1400	.3	9.4	5050
JUL 23...	16	15	78	0	2300	2700	.3	8.8	7770
AUG 15...	24	18	88	0	2700	4300	.2	8.3	10900

08081200 CROTON CREEK NEAR JAYTON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	13.78	21600	14600	544	6660	248	2590	96	****
NOV. 1978.....	118.43	10600	7170	2290	2800	896	1950	624	****
DEC. 1978.....	22.05	18900	12800	762	5710	340	2430	145	****
JAN. 1979.....	27.99	39400	26700	2020	13000	983	3590	272	****
FEB. 1979.....	11.4	40500	27400	844	13400	414	3660	113	****
MAR. 1979.....	93.64	27900	18900	4780	8970	2270	2960	748	****
APR. 1979.....	110.49	13400	9110	2720	3820	1140	2110	630	****
MAY 1979.....	366.8	5310	3600	3560	1320	1310	1110	1100	1740
JUNE 1979.....	581.87	6330	4290	6740	1440	2250	1530	2410	1820
JULY 1979.....	394.72	6060	4110	4390	1260	1350	1640	1750	1800
AUG. 1979.....	799.84	4290	2900	6270	830	1800	1250	2690	1650
SEPT 1979.....	0.22	23100	15600	9.2	7190	4.2	2670	1.6	****
TOTAL	2541.22	**	**	34900	**	13000	**	10600	**
WTD.AVG.	7	7510	5100	**	1900	**	1500	**	1900

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20000	20500	14500	---	41000	40500	41200	1830	37000	32700	2240	22200
2	20500	21200	16600	---	39000	40400	42500	5600	37400	33400	2500	23800
3	21700	22800	18900	---	38400	40000	42000	14200	40300	34600	3250	22900
4	22900	---	20900	28900	38300	42300	44100	21500	8460	36100	4980	24500
5	23700	---	22400	25000	41300	44700	42000	29700	2700	35400	5660	---
6	24200	---	24200	---	45600	45600	41000	38300	8000	34500	9400	---
7	22900	---	24600	---	46300	46300	40900	39000	5500	10300	12200	---
8	20000	---	20900	---	45200	47100	40300	39800	7990	15300	15000	---
9	16600	---	20900	30300	42600	49900	40900	40700	3170	15400	17700	---
10	16400	---	20200	32500	39500	48500	40000	41200	3660	13500	5090	---
11	16500	---	19400	34200	32800	49000	42300	41600	5500	22500	7500	---
12	17100	---	18700	36000	32600	---	44200	43000	8030	27600	10700	---
13	18900	---	18000	39500	32700	50300	44100	44300	10400	26000	12400	---
14	20800	---	18100	---	32300	---	40700	44800	12400	24500	15100	---
15	22700	---	18300	---	34000	47600	40400	45200	15100	23700	16700	---
16	23200	---	18400	39300	39300	45400	40000	45500	18200	---	18200	---
17	---	24500	18600	39500	41000	46800	13400	45000	19900	---	19100	---
18	---	26900	18400	34800	39000	49100	9470	45600	22700	12100	20000	---
19	---	26700	18500	35200	37800	50600	16600	46100	24600	5630	21700	---
20	---	33400	18800	36300	36600	43200	19700	46300	25400	3140	19100	---
21	---	34500	19400	37800	37600	37800	25300	44200	26600	5760	8470	---
22	---	34400	19600	39900	37500	22600	28400	33800	28100	8380	14100	---
23	21700	34600	19100	40700	39800	24100	29800	29600	30300	11000	10200	---
24	22200	34000	19800	41200	45000	27400	31900	30000	31400	14200	5170	---
25	24600	33600	19400	40900	43400	31500	33300	33300	33700	13600	9500	---
26	26400	17500	19900	48400	43000	36800	34700	35500	31500	17500	10400	---
27	26900	5480	19800	41900	42400	38600	37100	36400	22900	20000	11300	---
28	19100	5770	18900	42800	41600	38800	39500	34500	23400	22100	14000	---
29	18600	9500	19700	42800	---	39400	38000	35900	29700	22900	16600	---
30	19100	12000	21700	43100	---	40600	39800	37100	32500	25900	18700	---
31	19900	---	---	42500	---	40800	---	39400	---	4590	19000	---
MEAN	21100	23400	19600	38000	39500	41600	35500	35800	20200	19800	12100	23400

BRAZOS RIVER BASIN

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08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX
(National stream-quality accounting network)

LOCATION.--Lat 33°20'02", long 100°14'16", revised, Stonewall County, Hydrologic Unit 12050007, on left bank at downstream side of bridge on U.S. Highway 83, 5.5 mi (8.8 km) downstream from Salt Croton Creek, 13.2 mi (21.2 km) north of Aspermont, and at mile 27.3 (43.9 km) measured from confluence with Double Mountain Fork Brazos River which is at mile 923.2 (1,485.4 km) on the Brazos River.

DRAINAGE AREA.--5,130 mi² (13,287 km²), of which 2,634 mi² (6,822 km²) 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. Datum of gage is 1,588.70 ft (484.236 m) National Geodetic Vertical Datum of 1929. Dec. 5, 1923, to Aug. 29, 1925, nonrecording gage at site 6.7 mi (10.8 km) 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 (0.2 km) upstream at same datum.

REMARKS.--Water-discharge records fair. No large diversion above station. Some regulation by White River Reservoir (station 08080910), capacity 44,900 acre-ft (55.4 hm³), 106 mi (171 km) upstream. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950.

AVERAGE DISCHARGE.--40 years (water years 1940-79), 113 ft³/s (3,200 m³/s), 81,870 acre-ft/yr (101 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,200 ft³/s (1,480 m³/s) Sept. 25, 1955, gage height, 14.92 ft (4.548 m), from rating curve extended above 29,000 ft³/s (821 m³/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 (4.39 m), and flood in November 1934 reached a stage of 13.7 ft (4.18 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,210 ft³/s (148 m³/s) Aug. 20, gage height, 6.48 ft (1.975 m), no peak above base of 12,000 ft³/s (340 m³/s); minimum daily, 0.13 ft³/s (0.004 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	2.9	21	3.6	7.3	3.3	5.9	466	94	1.8	507	30
2	37	2.8	15	3.5	6.7	4.3	5.9	338	121	1.4	751	4.3
3	25	2.6	9.5	3.0	6.5	5.0	6.0	123	44	1.1	305	3.8
4	18	2.6	8.1	3.5	5.9	4.3	5.7	56	43	.93	151	2.7
5	14	2.6	7.0	5.0	5.9	4.2	5.1	34	761	.96	97	2.0
6	10	2.6	6.5	3.5	7.9	3.8	4.9	21	755	1.3	60	2.0
7	7.1	2.4	6.5	2.5	11	3.6	4.9	13	332	1.6	34	1.5
8	4.6	2.3	6.4	2.0	9.1	3.5	4.9	9.1	176	1.3	19	1.2
9	4.0	2.3	5.4	7.3	5.4	3.2	5.3	7.0	151	6.7	13	1.0
10	4.0	2.2	3.6	12	5.9	4.3	5.4	6.8	667	.97	22	.89
11	3.9	2.0	2.9	14	5.4	4.0	4.2	6.1	625	9.2	50	.67
12	3.4	2.0	2.9	15	5.4	4.4	4.3	5.8	288	2.3	32	.48
13	2.9	2.0	2.9	13	5.4	4.3	4.4	4.8	175	.92	14	.45
14	2.6	2.9	3.2	10	5.2	4.0	4.4	4.3	109	.73	8.5	.21
15	2.6	4.9	3.5	7.7	4.1	7.5	4.3	3.5	69	.52	4.0	.32
16	2.6	4.9	3.6	15	3.6	13	4.0	3.2	43	.47	3.2	.33
17	2.6	6.2	3.6	13	3.7	13	5.3	2.9	25	.50	4.1	.35
18	2.6	3.7	3.6	13	4.2	15	157	2.6	17	1.8	4.7	.31
19	2.6	3.6	3.6	17	4.4	20	76	2.4	12	16	2.4	.27
20	2.6	3.6	3.6	16	4.1	25	43	2.2	9.2	114	626	.32
21	2.6	3.6	4.0	14	3.4	23	23	5.0	7.9	31	965	.31
22	2.6	3.7	4.0	13	3.9	82	11	11	6.0	6.4	218	.25
23	17	4.6	3.6	9.0	4.0	52	6.2	5.4	4.6	2.1	72	.25
24	48	5.4	3.6	7.2	6.3	27	5.9	5.1	4.4	.99	131	.25
25	38	4.9	3.6	8.7	5.2	16	5.0	3.9	70	45	121	.21
26	20	28	3.6	9.3	4.4	10	4.4	3.5	22	17	44	.18
27	9.7	68	3.6	10	3.7	7.1	4.7	2.7	5.1	1.4	33	.18
28	5.1	66	3.6	9.3	3.2	7.1	4.9	20	6.4	.83	20	.18
29	3.6	39	3.6	9.6	---	7.1	4.9	29	4.7	.52	11	.15
30	3.2	28	3.6	9.3	---	6.5	5.8	7.5	2.6	.30	7.3	.13
31	3.1	---	5.9	7.5	---	5.9	---	4.1	---	6.6	196	---
TOTAL	362.0	312.3	165.1	286.5	151.2	393.4	436.7	1208.9	4649.9	372.67	4526.2	55.19
MEAN	11.7	10.4	5.33	9.24	5.40	12.7	14.6	39.0	155	12.0	146	1.84
MAX	57	68	21	17	11	82	157	466	761	114	965	30
MIN	2.6	2.0	2.9	2.0	3.2	3.2	4.0	2.2	2.6	.30	2.4	.13
AC-FT	718	619	327	568	300	780	866	2400	9220	739	8980	109

CAL YR 1978 TOTAL 10535.64 MEAN 28.9 MAX 1220 MIN .13 AC-FT 20900
WTR YR 1979 TOTAL 12920.06 MEAN 35.4 MAX 963 MIN .13 AC-FT 25630

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1948 to September 1951, October 1956 to September 1974. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1948 to September 1951, October 1956 to current year.

WATER TEMPERATURES: October 1948 to September 1951, October 1956 to current year.

INSTRUMENTATION.--Specific conductance is recorded continuously at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 173,000 micromhos Apr. 12, 1974; minimum daily, 1,690 micromhos July 8, 1960.

WATER TEMPERATURES: Maximum daily, 38.0°C Aug. 2, 1973; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 127,000 micromhos Mar. 16; minimum daily, 3,970 micromhos Aug. 2.

WATER TEMPERATURES: Maximum daily, 35.0°C July 11; minimum daily, 0.0°C on several days during December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
01...	0900	2.9	55500	7.9	15.0	15	7.5	97	.7	27	45
21...	0915	3.6	66000	8.0	7.5	1.0	7.8	92	.6	25	38
DEC											
12...	1615	2.9	64000	7.8	10.0	4.0	8.0	99	.7	16	24
JAN											
17...	1000	13	51000	7.8	3.0	6.0	9.7	94	.6	14	92
FEB											
13...	1600	5.4	63000	8.2	17.5	.00	9.8	140	1.4	K9	K3
MAR											
13...	1630	4.4	84640	8.2	24.5	3.0	7.7	151	1.8	<1	20
APR											
10...	1700	5.4	63420	8.1	24.0	4.0	8.0	125	1.2	3	64
MAY											
08...	1510	9.2	36000	8.2	31.5	3.2	7.1	111	.8	96	32
JUN											
06...	0915	1300	6440	7.6	22.0	5600	5.6	66	9.9	27000	48000
JUL											
11...	0900	10	45000	7.3	24.5	60	6.1	90	2.6	1800	620
AUG											
08...	0855	27	15380	7.8	24.0	36	7.8	99	1.0	210	7700
SEP											
05...	0900	1.8	42000	7.7	24.0	2.6	9.1	111	1.0	29	170

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
01...	3600	3600	950	310	13000	94	45	120	0	3300	20000
21...	3300	3200	780	330	16000	121	50	150	0	2600	25000
DEC											
12...	5600	5400	1900	200	14000	82	55	180	0	2900	23000
JAN											
17...	3300	3200	880	270	12000	91	43	180	0	2700	18000
FEB											
13...	3800	3700	930	350	15000	106	54	130	0	2600	25000
MAR											
13...	4700	4600	1200	410	21000	134	90	100	0	3000	35000
APR											
10...	4000	3900	1400	130	14000	96	40	140	0	3000	22000
MAY											
08...	3400	3300	950	250	7700	57	25	110	0	2700	11000
JUN											
06...	820	770	270	36	1100	17	8.4	70	0	740	1600
JUL											
11...	2200	2100	640	140	9700	91	32	70	0	2000	15000
AUG											
08...	2100	2000	660	99	2800	27	15	108	0	1600	4600
SEP											
05...	3400	3400	1000	230	9500	70	48	98	0	3000	15000

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, 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 01...	.1	6.7	38400	37700	--	.11	.01	.12	.04	.26
21...	.2	9.4	--	44800	--	.36	.01	.37	.32	.31
DEC 12...	.6	11	41900	42200	--	.50	.01	.51	.29	.40
JAN 17...	.3	.3	35100	34000	--	.38	.02	.40	.08	.42
FEB 13...	.5	4.9	43700	44000	--	.21	.04	.25	.26	.14
MAR 13...	.3	2.6	61500	60800	--	.19	.02	.21	.24	.23
APR 10...	.4	2.1	43700	40600	--	.01	.02	.03	.29	.32
MAY 08...	.4	4.8	25200	22700	--	.01	.00	.01	.08	.43
JUN 06...	.4	5.9	3910	3800	9820	.72	.20	.92	1.5	3.8
JUL 11...	.3	5.8	30700	27600	--	.19	.06	.25	.20	.44
AUG 08...	.4	10	10100	9780	--	.00	.02	.01	.09	.40
SEP 05...	.3	5.6	28200	28800	--	.03	.00	.03	.17	.00

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 01...	.30	.40	.020	.040	--	2.7	.5	31	.24	86
21...	.63	.56	.010	.050	--	--	--	13	.13	98
DEC 12...	.69	.64	.030	.030	2.2	--	--	22	.17	93
JAN 17...	.50	.43	.010	.010	2.7	--	--	11	.39	56
FEB 13...	.40	.44	.020	.070	--	3.4	.8	82	1.2	10
MAR 13...	.47	.42	.010	.010	5.3	--	--	46	.55	99
APR 10...	.61	.48	.010	.020	--	--	--	225	3.3	96
MAY 08...	.51	.50	.020	.010	4.0	--	--	120	3.0	93
JUN 06...	5.3	.87	1.00	.040	--	3.3	5.6	6010	21100	87
JUL 11...	.64	.66	.050	.020	4.7	--	--	124	3.3	98
AUG 08...	.49	.53	.040	.040	--	4.3	.6	66	4.8	81
SEP 05...	.10	.09	.020	.010	3.2	--	--	11	.05	93

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 01...	0900	3	2	0	0	0	0	0	0	40
FEB 13...	1600	1	2	0	0	0	0	0	0	40
JUN 06...	0915	43	1	2000	2000	0	2	1	1	240
AUG 08...	0855	4	4	0	0	100	1	1	0	10

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
NOV 01...	10	30	0	0	0	3	3	0	490	460
FEB 13...	0	40	0	0	0	6	5	1	330	150
JUN 06...	230	10	150	150	2	150	150	0	14000	14000
AUG 08...	0	10	0	0	0	4	2	2	1200	1200

BRAZOS RIVER BASIN

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 01...	30	0	0	0	210	0	210	.0	.0	.0
FEB 13...	180	16	16	0	150	10	140	.4	.2	.2
JUN 06...	30	200	200	2	8600	8600	10	.2	.2	.0
AUG 08...	50	4	4	0	90	40	50	.4	.2	.2

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 01...	9	0	10	0	0	0	80	10	70
FEB 13...	8	0	8	0	0	0	90	0	100
JUN 06...	2	1	1	0	0	0	560	550	10
AUG 08...	2	0	2	0	0	0	30	0	60

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
MAY 08...	28	32.5	34.2	8.92	.000	191

BRAZOS RIVER BASIN

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08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAR 13...	1630	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR 10...	1700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 08...	1510	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 21...	0805	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAR 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 08...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 21...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
MAR 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 08...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 21...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TOTAL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAR 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 08...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 21...	ND	--	ND	--	ND	--	ND	--	ND	--

BRAZOS RIVER BASIN

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 21, 78 0915	MAR 13, 79 1630	MAY 8, 79 1510	JUN 6, 79 0915
TOTAL CELLS/ML	160	25000	4200	0
DIVERSITY: DIVISION	0.0	0.4	0.2	0.0
..CLASS	0.0	0.4	0.2	0.0
...ORDER	0.4	0.4	1.0	0.0
...FAMILY	1.1	0.5	1.8	0.0
...GENUS	1.1	0.6	1.8	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...SCENEDESMUS	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	83	2	--	-
...CHLAMYDOMONAS	--	-	* 0		83	2	--	-
...CHLOROCONIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CHAETOCERACEAE								
...CHAETOCEROS	--	-	--	-	990# 23		--	-
...COSCINODISACEAE								
...CYCLOTELLA	14	9	--	-	41	1	--	-
...PENNALES								
...CYMBELLACEAE								
...AMPHORA	--	-	* 0		--	-	--	-
...CYMBELLA	--	-	* 0		--	-	--	-
...DIATOMACEAE								
...OPEPHORA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
...ENTOMONEIS	29# 18		360	1	--	-	--	-
...NAVICULA	--	-	--	-	1700# 40		--	-
...PINNULARIA	--	-	610	2	--	-	--	-
...PLAGIOTROPIS	--	-	--	-	--	-	--	-
...NITZSCHACEAE								
...NITZSCHIA	120# 73		760	3	1400# 32		--	-
..XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
...OPHIOCYTIUM	--	-	--	-	--	-	--	-
CYRPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	* 0		--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	--	-	--	-	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIA								
...OSCILLATORIA	--	-	23000# 92		--	-	--	-

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

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

BRAZOS RIVER BASIN

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08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 11, 79 0900	AUG 8, 79 0855	SEP 5, 79 0900
TOTAL CELLS/ML	1400	26000	3500
DIVERSITY: DIVISION	0.6	0.3	0.1
..CLASS	0.6	0.4	0.1
...ORDER	0.7	0.5	0.7
...FAMILY	2.0	1.0	0.8
....GENUS	2.0	1.0	0.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	36	3	--	-	--	-
...OOCYSTACEAE						
...ANKISTRODESMUS	36	3	*	0	--	-
...DICTYOSPHAERIUM	--	-	360	1	--	-
...SCENEDESMACEAE						
...SCENEDESMUS	--	-	180	1	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	35	1
...CHLOROGONIUM	--	-	*	0	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...CHAETOCERACEAE						
...CHAETOCEROS	--	-	--	-	3000#	85
...COSCINODISACEAE						
...CYCLOTELLA	24	2	450	2	--	-
...PENNIALES						
...CYMBELLACEAE						
...AMPHORA	--	-	--	-	--	-
...CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
...OPEPHORA	700#	50	--	-	--	-
...NAVICULACEAE						
...ENTOMONEIS	--	-	--	-	--	-
...NAVICULA	230#	17	--	-	70	2
...PINNULARIA	--	-	--	-	--	-
...PLAGIOTROPIS	--	-	--	-	310	9
...NITZSCHACEAE						
...NITZSCHIA	290#	21	--	-	100	3
...XANTHOPHYCEAE						
...HETEROCOCCALES						
...CHLOROTHECIACEAE						
...OPHIOCYTIUM	--	-	180	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROCOCCALES						
...CHROCOCCACEAE						
...ANACYSTIS	--	-	540	2	--	-
...HORMOGONIALES						
...NOSTOCACEAE						
...ANABAENA	73	5	2200	8	--	-
...OSCILLATORIAACEAE						
...OSCILLATORIA	--	-	22000#	84	--	-

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

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

BRAZOS RIVER BASIN

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNE (CA, M (MG/L)
OCT. 1978.....	361	32400	22300	21800	11500	11200	1990	1940	****
NOV. 1978.....	312.3	36100	24900	21000	13600	11400	1990	1680	****
DEC. 1978.....	165.1	54600	37600	16800	20600	9180	2640	1180	****
JAN. 1979.....	286.5	64800	44700	34500	24500	19000	3000	2320	****
FEB. 1979.....	151.2	66200	45600	18600	25100	10200	2940	1200	****
MAR. 1979.....	393.4	59500	41000	43500	22800	24300	2750	2920	****
APR. 1979.....	436.7	45200	31100	36700	16300	19200	2460	2900	****
MAY 1979.....	1208.9	23800	16400	53400	8840	28800	1570	5120	****
JUNE 1979.....	4649.89	11200	7710	96800	3940	49400	1110	14000	****
JULY 1979.....	372.67	25000	17200	17300	9090	9140	1630	1640	****
AUG. 1979.....	4526.2	12700	8770	107000	4480	54800	1180	14400	****
SEPT 1979.....	55.19	34600	23900	3550	12400	1850	2050	306	****
TOTAL	12920.03	**	**	471000	**	248000	**	49600	**
WTD.AVG.	35	19600	14000	**	7100	**	1400	**	*****

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13000	55400	25600	123000	61000	70700	47700	18200	19100	61600	17400	22800
2	16500	58900	27700	117000	55000	32200	51000	11200	22700	71200	3970	32000
3	20000	63100	33100	104000	57900	92000	55600	13900	35900	79300	4380	37400
4	25000	64500	39400	87400	60900	90000	53200	15300	45200	74100	5620	45800
5	27300	65700	40500	79400	60000	74300	59900	24000	9380	80200	7670	42800
6	35400	72300	46400	89300	63500	68000	53900	27400	6800	56700	10100	45500
7	36700	83100	50200	87400	76700	66000	68200	34500	7670	50100	13400	48200
8	41400	79200	49500	72100	57600	64200	65000	38600	8610	76600	17500	51000
9	44100	76900	60400	64500	70200	68400	58900	40000	19400	58500	19700	54000
10	44400	73000	64800	54600	61900	61800	62200	41500	14000	27300	21500	56400
11	48400	78200	70500	68800	56600	88600	80600	43200	5960	51500	13400	58700
12	52500	79500	55600	71300	58000	106000	99000	58900	5080	68100	16200	59100
13	56100	80700	68600	67500	60500	84600	85400	56700	6810	73800	17500	63400
14	57400	89100	67400	64800	62800	73000	74500	58600	9580	78100	23700	68100
15	59000	90700	67000	52500	69000	62500	71100	59200	14000	81500	32400	73600
16	60100	99000	69800	45300	64200	127000	82900	67300	18300	83500	38100	71400
17	59400	119000	68600	51000	65900	90800	81600	69700	22700	80200	48100	78500
18	61600	74600	69800	52900	65200	81900	38500	73700	26400	64400	65000	71600
19	64300	66500	71000	75600	69500	58100	35200	75000	29100	73300	43500	73600
20	66400	62400	75500	49800	72700	62500	36200	76200	33000	11400	15300	71000
21	69200	66100	80600	63700	77000	56500	38900	55200	35400	12700	16900	75000
22	66400	68800	79000	65000	73800	74300	46000	87100	38100	18500	15900	75200
23	54600	70000	77400	51400	75800	25300	58000	114000	40600	24700	21000	73200
24	34000	71300	75800	62500	68400	28400	51000	91800	43000	26000	11800	75500
25	35700	66000	77500	54100	81100	37800	55000	72700	25900	11000	9670	75300
26	39600	49600	79100	53700	74300	35100	59200	72100	27700	23400	14300	80500
27	43400	20000	75800	69500	61400	38200	60300	76200	77700	55300	19300	78000
28	44900	12800	77900	84300	71100	39800	57800	108000	69700	69000	21200	78300
29	48400	15400	78500	62500	---	43900	60500	93100	44300	73300	28400	78600
30	60100	24000	80400	60600	---	50700	64800	84200	50800	82900	32200	78400
31	55300	---	79100	74600	---	52800	---	80200	---	67000	12800	---
MEAN	46500	66500	64000	70300	66500	64700	60400	59300	27100	56900	20600	63100

BRAZOS RIVER BASIN

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08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	20.0	14.0	.0	7.0	19.0	20.0	19.0	18.0	30.0	22.0	31.0
2	25.0	20.0	12.0	.0	9.0	13.0	15.0	25.0	17.0	31.0	28.0	31.0
3	21.0	19.0	6.0	.0	5.0	10.0	17.0	13.0	27.0	32.0	26.0	29.0
4	26.0	19.0	7.0	6.0	5.0	15.0	21.0	10.0	25.0	22.0	30.0	30.0
5	16.0	16.0	4.0	.0	3.0	16.0	11.0	24.0	25.0	26.0	31.0	33.0
6	22.0	11.0	5.0	.0	2.0	19.0	21.0	20.0	23.0	30.0	30.0	---
7	25.0	17.0	4.0	.0	7.0	18.0	25.0	25.0	22.0	34.0	29.0	28.0
8	22.0	18.0	1.0	3.0	8.0	19.0	22.0	27.0	29.0	32.0	32.0	30.0
9	25.0	18.0	2.0	3.0	10.0	11.0	15.0	20.0	25.0	27.0	---	26.0
10	26.0	17.0	5.0	1.0	12.0	16.0	19.0	16.0	23.0	21.0	30.0	28.0
11	28.0	11.0	3.0	4.0	15.0	16.0	10.0	19.0	25.0	35.0	28.0	28.0
12	26.0	---	.0	8.0	6.0	9.0	16.0	24.0	28.0	27.0	28.0	24.0
13	19.0	19.0	6.0	.0	15.0	19.0	24.0	20.0	30.0	---	31.0	26.0
14	22.0	10.0	7.0	.0	19.0	14.0	24.0	25.0	28.0	---	28.0	21.0
15	25.0	6.0	8.0	4.0	11.0	9.0	24.0	16.0	26.0	31.0	25.0	21.0
16	23.0	9.0	7.0	9.0	3.0	9.0	26.0	18.0	---	34.0	30.0	24.0
17	24.0	14.0	6.0	11.0	---	15.0	18.0	23.0	28.0	30.0	29.0	21.0
18	25.0	11.0	14.0	11.0	12.0	16.0	22.0	28.0	31.0	22.0	30.0	25.0
19	23.0	11.0	15.0	12.0	10.0	16.0	21.0	26.0	29.0	20.0	25.0	25.0
20	23.0	10.0	10.0	7.0	14.0	12.0	22.0	28.0	34.0	30.0	19.0	25.0
21	24.0	7.0	9.0	5.0	12.0	19.0	21.0	23.0	30.0	---	20.0	27.0
22	21.0	11.0	---	5.0	15.0	14.0	23.0	21.0	30.0	---	22.0	27.0
23	12.0	---	---	6.0	16.0	15.0	20.0	29.0	32.0	34.0	27.0	21.0
24	14.0	17.0	7.0	7.0	8.0	10.0	25.0	26.0	32.0	---	29.0	28.0
25	21.0	19.0	10.0	7.0	15.0	22.0	24.0	20.0	25.0	---	29.0	29.0
26	19.0	15.0	7.0	5.0	13.0	16.0	25.0	16.0	30.0	---	26.0	28.0
27	21.0	10.0	8.0	1.0	12.0	13.0	20.0	28.0	34.0	29.0	29.0	26.0
28	21.0	11.0	11.0	5.0	14.0	19.0	19.0	24.0	30.0	26.0	22.0	25.0
29	21.0	9.0	10.0	4.0	---	20.0	---	31.0	34.0	32.0	29.0	---
30	21.0	12.0	1.0	5.0	---	11.0	20.0	25.0	32.0	33.0	26.0	28.0
31	21.0	---	.0	4.0	---	11.0	---	24.0	---	31.0	30.0	---
MEAN	22.0	14.0	7.0	4.5	10.5	15.0	20.5	22.5	27.5	29.0	27.5	26.5

BRAZOS RIVER BASIN

08082100 STINKING CREEK NEAR ASPERMONT, TX

LOCATION.--Lat 33°14'00", long 100°12'47", Stonewall County, Hydrologic Unit 12050007, at downstream side of bridge on Farm Road 1263, 4.9 mi (7.9 km) upstream from Salt Fork Brazos River, and 6.8 mi (10.9 km) north of Aspermont.

DRAINAGE AREA.--88.8 mi² (230.0 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,601.5 ft (488.14 m) National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bridge plans).

REMARKS.--Water-discharge records good. No known diversion above station. Recording rain gage at station prior to May 1, 1978.

AVERAGE DISCHARGE.--14 years, 3.36 ft³/s (0.095 m³/s), 0.51 in/yr (13 mm/yr), 2,430 acre-ft/yr (3.00 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) Aug. 13, 1972, gage height, 9.85 ft (3.00 m); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1925, 31 ft (9.4 m) in September 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 4	1800	565 16.0	7.08 2.158
Aug. 1	2100	*926 26.2	8.23 2.509

Minimum discharge, 0.02 ft³/s (0.001 m³/s) Jan. 3, Sept. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.29	.06	.14	.10	.29	.21	.29	.49	4.5	.67	126	.25		
2	.21	.06	.14	.08	.29	2.0	.20	.34	8.2	.67	127	.21		
3	.15	.06	.16	.02	.31	5.8	.20	.69	3.1	.67	13	2.6		
4	.12	.06	.15	.05	.31	3.4	.25	.89	.73	.67	3.1	12		
5	.15	.07	.16	.10	.33	1.4	.21	.16	231	.73	.73	3.2		
6	.15	.08	.15	.05	.46	.61	.21	5.3	53	.73	.29	.52		
7	.15	.08	.15	.05	.42	.31	.23	2.9	11	.73	.16	.42		
8	.15	.07	.17	.05	.30	.19	.18	1.9	5.7	.73	.12	.35		
9	.15	.06	.18	.08	.25	.12	.25	1.4	4.3	.73	.12	.25		
10	.15	.06	.21	.10	.25	.14	.33	1.1	3.5	8.9	19	.18		
11	.14	.06	.29	.08	.26	.12	.29	.87	2.7	6.7	7.4	.18		
12	.12	.08	.29	.08	.28	.10	.21	.62	2.0	.96	9.3	.12		
13	.09	.09	.29	.15	.28	.12	.24	.46	1.6	.25	2.7	.12		
14	.08	.11	.25	.08	.28	.11	.25	.30	1.3	.12	.97	.12		
15	.09	.13	.20	.10	.26	.17	.22	.18	1.0	.10	.38	.12		
16	.11	.15	.21	.20	.25	.27	.18	.13	.82	.08	.21	.15		
17	.12	.13	.21	.58	.22	.29	.23	.12	.64	.08	.15	.18		
18	.12	.09	.20	1.1	.26	.38	.52	.10	.52	.12	.12	.17		
19	.11	.09	.17	1.1	.27	4.8	.95	.09	.43	.47	3.9	.15		
20	.10	.12	.19	.89	.28	6.2	.45	.08	.38	.21	19	.15		
21	.11	.12	.17	.63	.27	3.2	.27	.15	.36	.15	19	.15		
22	.12	.14	.18	.47	.30	.31	.22	.25	.29	.12	5.2	.15		
23	2.7	.14	.19	.33	.26	16	.19	.45	.29	.12	5.4	.11		
24	5.1	.12	.18	.29	.57	3.7	.19	.59	.27	.08	3.3	.10		
25	2.0	.12	.21	.31	.43	1.8	.18	.25	.35	.08	1.2	.08		
26	.56	.52	.25	.38	.28	1.1	.16	.17	.67	.08	.34	.08		
27	.17	.28	.25	.38	.21	.72	.15	.14	.73	.10	.14	.07		
28	.09	.13	.24	.31	.20	.53	.15	.21	.73	.12	.29	.06		
29	.08	.10	.23	.29	---	.49	.13	2.1	.67	.15	.25	.05		
30	.07	.12	.29	.35	---	.42	.13	.88	.67	.15	.66	.07		
31	.06	---	.20	.30	---	.43	---	.23	---	.15	.28	---		
TOTAL	13.81	3.50	6.30	9.08	8.37	90.13	7.66	277.97	413.72	25.62	369.71	22.36		
MEAN	.45	.12	.20	.29	.30	2.91	.26	8.97	13.8	.83	11.9	.75		
MAX	5.1	.52	.29	1.1	.57	35	.95	.89	.27	8.9	127	12		
MIN	.06	.06	.14	.02	.20	.10	.13	.08	.21	.08	.12	.05		
CFSM	.005	.001	.002	.003	.003	.03	.003	.10	.16	.009	.13	.008		
IN.	.01	.00	.00	.00	.00	.04	.00	.12	.17	.01	.15	.01		
AC-FT	27	6.9	12	18	17	179	15	551	821	51	733	44		
CAL YR 1978	TOTAL	546.23	MEAN	1.50	MAX	82	MIN	.00	CFSM	.02	IN	.23	AC-FT	1080
WTR YR 1979	TOTAL	1248.23	MEAN	3.42	MAX	231	MIN	.02	CFSM	.04	IN	.52	AC-FT	2480

BRAZOS RIVER BASIN

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08082100 STINKING CREEK NEAR ASPERMONT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1965 to current year. Periodic sediment records: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 10...	1615	.15	8160	23.0	2300	2200	520	250	970
NOV 28...	1010	.67	7950	7.0	2600	2500	580	290	990
JAN 15...	1300	.73	8580	2.0	2500	2300	550	280	980
FEB 20...	1420	.29	9000	8.0	3100	2900	700	320	1100
APR 03...	1550	.18	7290	16.0	2300	2200	560	230	810
MAY 14...	1545	.25	5870	27.0	1900	1900	500	170	670
JUN 25...	1635	.33	7340	27.0	2500	2400	610	240	830
AUG 06...	1620	.29	3220	33.0	1000	930	270	85	310
SEP 17...	1510	.18	6830	24.0	2500	2400	600	250	710

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)
OCT 10...	8.8	16	132	0	1900	1700	.3	2.0	5420
NOV 28...	8.4	3.8	180	0	2100	1800	.3	.2	5850
JAN 15...	8.5	15	250	0	2500	1400	.3	4.3	5850
FEB 20...	8.6	18	190	0	2400	2000	.4	.3	6630
APR 03...	7.3	14	120	0	1800	1400	.2	.2	4870
MAY 14...	6.6	13	99	0	1700	1200	.3	1.9	4300
JUN 25...	7.2	15	140	0	2000	1500	.3	1.9	5270
AUG 06...	4.2	10	110	0	870	570	.3	6.6	2180
SEP 17...	6.1	15	160	0	2100	1300	.4	4.7	5060

BRAZOS RIVER BASIN

08082180 NORTH CROTON CREEK NEAR KNOX CITY, TX

LOCATION.--Lat 33°22'59", long 100°04'51", Stonewall County, Hydrologic Unit 12060101, on left bank 600 ft (180 m) downstream from Wedington Creek, 9.5 mi (15.3 km) upstream from mouth, and 15.4 mi (24.8 km) southwest of Knox City.

DRAINAGE AREA.--251 mi² (650 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-75-1: 1966-67, 1969-74.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.44 ft (445.752 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No diversion or regulation above station. Recording rain gage at station prior to May 1, 1978.

AVERAGE DISCHARGE.--14 years, 14.2 ft³/s (0.402 m³/s), 0.77 in/yr (20 mm/yr), 10,290 acre-ft/yr (12.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,100 ft³/s (909 m³/s) Aug. 30, 1966, gage height, 32.36 ft (9.863 m); from rating curve extended above 240 ft³/s (6.80 m³/s) on basis of step-backwater analysis and slope-area measurements of 2,660, 6,530, and 32,100 ft³/s (75.3, 185, and 909 m³/s); no flow at times. Maximum stage since at least 1921, that of Aug. 30, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of about 32 ft (9.8 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 264 ft³/s (7.48 m³/s) Aug. 1, gage height, 9.71 ft (2.960 m), no peak above base of 500 ft³/s (14.2 m³/s); no flow for several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	.35	1.2	.30	.64	.31	.40	.75	.43	.36	41	4.5
2	.43	.31	.95	.10	.62	2.4	.39	2.8	2.5	.26	23	1.8
3	.38	.31	.89	.10	.55	.83	.45	3.5	7.3	.21	.36	1.2
4	.35	.34	.89	.40	.55	.47	.53	.96	1.9	.13	.58	.92
5	.27	.36	.86	.40	.55	.40	.51	.64	2.1	.09	.45	.73
6	.27	.36	.84	.30	.59	.35	.44	.51	.95	.08	.26	.56
7	.30	.36	.89	.10	.65	.31	.39	.62	.68	.09	.23	.47
8	.25	.36	.88	.10	.55	.31	.38	.46	.42	.08	.21	.41
9	.26	.38	.82	.30	.53	.27	.43	.36	1.2	8.2	.25	.37
10	.38	.36	.74	.40	.47	.30	.55	.26	1.2	30	1.5	.33
11	.31	.36	.70	.30	.42	.31	.53	.24	2.4	9.8	1.2	.24
12	.31	.36	.70	.30	.42	.30	.49	.22	1.1	1.6	9.7	.22
13	.31	.36	.70	.50	.36	.30	.50	.14	.50	.59	2.5	.20
14	.27	.48	.70	.30	.35	.27	.37	.11	.29	.31	.81	.18
15	.24	.55	.57	.95	.31	.40	.28	.07	.21	.19	.40	.17
16	.24	1.1	.68	.98	.31	.61	.28	.06	.18	.16	.26	.17
17	.24	.72	.36	1.0	.31	.79	.31	.07	.12	.16	.18	.15
18	.24	.55	.27	.94	.31	.91	56	.06	.07	.10	.13	.15
19	.24	.48	1.2	1.1	.31	3.7	12	.05	.06	.08	.23	.14
20	.24	.47	.60	1.3	.29	1.4	6.3	.05	.04	.10	3.4	.14
21	.23	.51	.57	1.1	.26	.94	2.7	16	.02	.09	87	.14
22	.21	.55	.55	.99	.30	2.6	1.6	2.1	.00	.08	8.5	.13
23	1.6	.57	.53	.80	.31	1.3	1.1	.39	.00	1.2	3.6	.12
24	1.3	.55	.52	.79	.39	2.3	.83	.14	.00	.21	1.5	.11
25	.74	.55	.55	.84	.44	1.3	.66	.11	87	.13	.91	.10
26	.59	3.4	.55	.89	.43	.80	.53	.09	17	.08	5.5	.09
27	.45	9.5	.55	.96	.35	.62	.48	.07	3.8	.04	77	.09
28	.35	3.3	.55	.84	.31	.62	.49	.06	1.6	.01	7.1	.07
29	.34	1.9	.55	.70	---	.59	.44	.06	.88	.00	4.0	.03
30	.35	1.6	.58	.70	---	.47	.39	.05	.52	.00	2.0	.01
31	.34	---	.50	.68	---	.42	---	.05	---	.00	27	---
TOTAL	12.64	31.35	21.44	19.46	11.88	26.90	90.75	31.05	134.47	54.43	310.76	13.94
MEAN	.41	1.05	.69	.63	.42	.87	3.03	1.00	4.48	1.76	10.0	.46
MAX	1.6	9.5	1.2	1.3	.65	3.7	56	16	87	30	87	4.5
MIN	.21	.31	.27	.10	.26	.27	.28	.05	.00	.00	.13	.01
CFSM	.002	.004	.003	.003	.002	.003	.01	.004	.02	.007	.04	.002
IN	.00	.00	.00	.00	.00	.00	.01	.00	.02	.01	.05	.00
AC-FT	25	62	43	39	24	53	180	62	267	108	616	28

CAL YR 1978 TOTAL 688.33 MEAN 1.89 MAX 118 MIN .00 CFSM .008 IN .10 AC-FT 1370
WTR YR 1979 TOTAL 759.07 MEAN 2.08 MAX 87 MIN .00 CFSM .008 IN .11 AC-FT 1510

BRAZOS RIVER BASIN

08082180 NORTH CROTON CREEK NEAR KNOX CITY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	12.64	19200	13100	448	5910	201	2520	86	****
NOV. 1978.....	31.35	15100	10400	877	4470	378	2180	184	****
DEC. 1978.....	21.44	19700	13500	780	6150	356	2500	145	****
JAN. 1979.....	19.46	33900	23200	1220	11400	599	2920	153	****
FEB. 1979.....	11.88	36100	24700	791	12200	392	2960	95	****
MAR. 1979.....	26.9	29700	20300	1480	9850	715	2770	201	****
APR. 1979.....	90.75	8290	5670	1390	2050	501	1660	407	2170
MAY 1979.....	31.05	33500	22900	1930	11200	943	2910	244	****
JUNE 1979.....	134.47	7770	5310	1930	1870	680	1600	582	2130
JULY 1979.....	54.43	17700	12100	1770	5240	770	2480	365	****
AUG. 1979.....	310.76	5490	3750	3150	1040	873	1460	1230	1920
SEPT 1979.....	13.94	14000	9600	361	4080	154	2100	79	****
TOTAL	759.07	**	**	16100	**	6560	**	3770	**
WTD.AVG.	2.1	11500	7900	**	3200	**	1800	**	*****

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13200	25200	12500	23500	40900	34000	24700	21500	29100	16500	5000	5790
2	14500	26900	14000	22800	39800	25000	25000	25400	28000	19300	4650	10700
3	15800	25700	14100	23000	38700	23800	25100	20000	25300	22500	6500	12500
4	16700	27700	11000	22100	38600	28500	25200	19500	20000	24700	7330	14400
5	17900	26000	10600	22300	37000	33200	25000	24700	15700	26300	15000	16600
6	18500	25200	13500	24500	36000	33500	24900	29100	16000	27200	20000	18300
7	19200	25900	15000	26200	35200	33600	26300	36100	16300	26800	23500	19500
8	19500	25800	16300	27000	34700	33500	25800	37900	20000	27400	26600	20900
9	20000	25300	23600	29800	35400	33400	26100	40000	21200	19100	32200	21000
10	21500	24800	24100	31500	35700	34000	24900	40600	23500	18900	20000	21500
11	21400	23900	24100	31300	35400	33400	24800	41100	26400	15000	17100	22700
12	21300	24600	24500	32700	36100	34000	28200	40200	26100	7620	8200	23200
13	21700	23800	24000	33500	35500	33500	27600	38200	18200	8770	8050	24300
14	21800	23400	23100	34000	35100	35100	27200	38000	17900	10000	9650	24400
15	21900	23800	23500	34800	36300	31700	27000	39000	18900	11500	11200	24300
16	21900	19900	23700	33500	35500	31600	27400	38600	19200	12500	12800	24800
17	22000	18500	22200	31300	36600	31500	27200	38300	20500	13400	14700	25200
18	21800	17600	21200	32000	36000	31400	4750	38000	20700	14000	14800	25600
19	21900	17300	19800	32900	35700	12700	7050	39700	22300	14400	14300	25700
20	21800	16900	24400	33600	35200	17500	10000	38000	23100	14600	10000	26000
21	21700	23300	22200	33400	35700	28200	11900	39800	24300	15200	5570	25700
22	21800	23400	22900	34600	35200	25000	13500	31400	---	16600	8530	26300
23	15500	23400	20400	35900	35500	46700	16300	17700	---	17500	14500	26100
24	16000	27200	24700	38000	34000	43900	18300	22600	---	18000	11000	26800
25	18500	26600	25100	37600	32700	46700	20300	29600	3500	18400	10900	27200
26	21000	11800	21100	38000	33600	45200	21000	22800	6790	19600	9500	28600
27	23000	9620	20800	37000	33200	45000	21500	33000	10000	19800	3060	28400
28	23700	9530	20700	38000	33800	32000	21900	32300	12300	20700	4500	28300
29	24000	11300	26000	38300	---	24400	22600	31800	13900	---	5160	29200
30	24300	13200	25200	38500	---	24700	23100	32200	15200	---	10200	30400
31	25700	---	24000	39600	---	24300	---	31600	---	---	5650	---
MEAN	20300	21600	20600	32000	35800	32000	21800	32500	19100	17700	11900	22800

BRAZOS RIVER BASIN

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08082180 NORTH CROTON CREEK NEAR KNOX CITY, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	13.0	11.0	---	.0	7.0	18.0	20.0	18.0	25.0	---	25.0
2	24.0	14.0	12.0	.0	4.0	6.0	18.0	27.0	21.0	---	30.0	31.0
3	18.0	20.0	5.0	---	5.0	5.0	17.0	20.0	18.0	---	---	27.0
4	18.0	13.0	5.0	---	2.0	---	17.0	16.0	27.0	---	30.0	30.0
5	18.0	13.0	9.0	---	---	5.0	18.0	25.0	26.0	---	31.0	24.0
6	18.0	12.0	3.0	---	.0	8.0	22.0	27.0	30.0	---	30.0	30.0
7	18.0	9.0	4.0	---	5.0	10.0	24.0	26.0	30.0	---	31.0	30.0
8	18.0	7.0	2.0	---	3.0	18.0	16.0	27.0	30.0	---	31.0	29.0
9	19.0	12.0	1.0	---	1.0	12.0	16.0	25.0	25.0	21.0	28.0	29.5
10	24.0	12.0	.0	---	.0	10.0	16.0	26.0	---	21.0	---	25.0
11	24.0	10.0	2.0	---	6.0	10.0	17.0	18.0	27.0	---	28.0	27.0
12	25.0	12.0	8.0	---	5.0	10.0	20.0	23.0	30.0	31.0	30.0	27.0
13	16.0	12.0	6.0	---	14.0	15.0	22.0	18.0	30.0	31.0	30.0	27.0
14	11.0	8.0	5.0	---	15.0	15.0	22.0	18.0	30.0	31.0	30.0	27.0
15	20.0	6.0	5.0	---	15.0	12.0	22.0	18.0	30.0	31.0	30.0	27.0
16	---	6.0	3.0	3.0	.0	10.0	20.0	16.0	24.0	---	30.0	---
17	20.0	9.0	8.0	8.0	.0	11.0	20.0	27.0	23.0	29.0	30.0	23.0
18	20.0	12.0	12.0	6.0	6.0	21.0	18.0	27.0	23.0	29.0	30.0	24.0
19	20.0	9.0	10.0	6.0	1.0	12.0	23.0	---	29.0	29.0	---	22.0
20	20.0	9.0	10.0	4.0	7.0	12.0	20.0	26.0	30.0	28.0	---	24.0
21	20.0	9.0	7.0	5.0	6.0	18.0	23.0	26.0	---	30.0	---	20.0
22	20.0	9.0	8.0	5.0	10.0	16.0	24.0	25.0	---	28.0	30.0	20.0
23	---	16.0	8.0	3.0	9.0	12.0	25.0	26.0	---	30.0	28.0	20.0
24	13.0	15.0	7.0	1.0	---	15.0	25.0	24.0	---	31.0	28.0	22.0
25	12.0	15.0	8.0	3.0	10.0	12.0	25.0	25.0	---	---	28.0	25.0
26	18.0	15.0	7.0	3.0	5.0	20.0	20.0	25.0	29.0	30.0	26.0	23.0
27	18.0	---	7.0	.0	12.0	14.0	18.0	27.0	---	30.0	23.0	22.0
28	18.0	10.0	11.0	.0	11.0	14.0	16.0	25.0	31.0	---	24.0	18.0
29	13.0	11.0	12.0	---	---	14.0	18.0	28.0	31.0	---	24.0	---
30	28.0	11.0	---	.0	---	22.0	17.0	25.0	31.0	---	29.0	---
31	13.0	---	---	---	---	20.0	---	28.0	---	---	25.0	---
MEAN	19.0	11.5	7.0	3.0	6.0	13.0	20.0	24.0	27.0	28.5	28.5	25.0

BRAZOS RIVER BASIN

08082500 BRAZOS RIVER AT SEYMOUR, TX
(National stream-quality accounting network)

LOCATION.--Lat 33°34'51", long 99°16'02", Baylor County, Hydrologic Unit 12060101, on left bank at upstream side of bridge on U.S. Highways 277 and 283, 0.8 mi (1.3 km) upstream from Wichita Valley Railway bridge, 1.0 mi (1.6 km) southwest of courthouse in Seymour, and at mile 847.4 (1,363.5 km).

DRAINAGE AREA.--15,538 mi² (40,243 km²), approximately, of which 9,566 mi² (24,776 km²) 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 (377.638 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 6, 1972, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records fair. Small diversions above station for irrigation and oilfield operation. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950. National Weather Service gage-height telemeter located at station.

AVERAGE DISCHARGE.--55 years (water years 1925-79), 379 ft³/s (10.73 m³/s), 274,600 acre-ft/yr (339 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,400 ft³/s (2,700 m³/s) Oct. 16, 1926, gage height, 17.16 ft (5.230 m), from floodmarks, present datum, from rating curve extended above 48,000 ft³/s (1,360 m³/s) on basis of slope-area measurement of 95,400 ft³/s (2,700 m³/s); maximum gage height, 23.00 ft (7.010 m), present datum, Sept. 28, 1955, discharge 71,200 ft³/s (2,020 m³/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.--Maximum discharge, 6,980 ft³/s (198 m³/s) July 21, gage height, 7.30 ft (2.225 m), no peak above base of 11,000 ft³/s (312 m³/s); minimum, 0.99 ft³/s (0.028 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	74	79	14	46	36	131	35	51	62	97	90
2	356	70	74	12	45	34	105	236	55	43	113	79
3	268	62	64	16	44	38	98	479	675	29	1030	91
4	215	55	68	20	41	71	94	623	1230	21	691	116
5	183	51	66	25	44	99	88	543	1030	21	532	104
6	152	47	68	20	49	61	81	695	2120	364	287	62
7	136	44	55	16	47	47	77	333	1480	62	238	53
8	122	45	54	12	46	46	65	204	1630	22	190	56
9	108	43	50	20	46	37	63	149	793	97	140	43
10	96	41	50	30	47	33	69	118	497	128	175	35
11	87	35	52	25	47	32	86	97	329	89	121	28
12	82	34	55	30	41	29	55	87	1590	73	184	24
13	73	37	49	40	41	27	53	75	1200	87	190	21
14	66	46	43	30	41	24	47	70	772	72	114	16
15	64	62	43	40	38	30	44	59	589	46	80	15
16	57	86	41	55	37	41	41	55	391	29	59	12
17	54	73	34	85	38	42	54	48	291	24	77	12
18	51	63	36	69	37	43	64	41	227	36	86	10
19	48	60	35	97	36	52	46	57	170	17	59	9.8
20	46	57	34	75	35	76	43	74	130	12	75	9.3
21	43	54	34	72	33	249	75	646	106	3570	316	7.8
22	41	52	28	62	33	541	83	1040	110	1480	731	8.2
23	50	52	27	54	29	451	96	231	85	1040	463	7.4
24	77	54	20	50	37	399	87	136	63	645	225	5.3
25	71	52	22	49	37	474	64	217	98	436	1360	4.4
26	80	62	22	50	38	348	57	125	152	307	792	3.6
27	69	70	27	49	43	256	49	87	263	240	320	2.8
28	80	86	29	47	40	209	43	78	159	198	311	2.1
29	71	77	22	47	---	200	37	77	128	173	252	1.5
30	70	72	22	44	---	186	34	73	100	134	149	1.1
31	82	---	15	37	---	154	---	52	---	112	119	---
TOTAL	3490	1716	1318	1292	1136	4365	2029	6840	16520	9669	9576	930.3
MEAN	113	57.2	42.5	41.7	40.6	141	67.6	221	551	312	309	31.0
MAX	492	86	79	97	49	541	131	1040	2120	3570	1360	116
MIN	41	34	15	12	29	24	34	35	51	12	59	1.1
AC-FT	6920	3400	2610	2560	2250	8660	4020	13570	32770	19180	18990	1850
CAL YR 1978	TOTAL	67368.69	MEAN 185	MAX 19200	MIN .00	AC-FT 133600						
WTR YR 1979	TOTAL	58881.30	MEAN 161	MAX 3570	MIN 1.1	AC-FT 116800						

BRAZOS RIVER BASIN

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08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1959 to current year.

WATER TEMPERATURES: 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 micromhos May 24, 1971; minimum daily, 559 micromhos May 22, 1979.

WATER TEMPERATURES: Maximum daily, 37.0°C Aug. 6, 1959, Sept. 3, 1963; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 24,500 micromhos Apr. 24; minimum daily, 559 micromhos May 22.

WATER TEMPERATURES: Maximum daily, 36.0°C July 8; minimum daily, 0.0°C on many days during December, January, and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 03...	1025	249	4270	22.0	510	400	150	33	740
NOV 15...	1430	63	9530	6.5	1300	1200	370	99	1700
DEC 27...	1025	28	15100	3.5	1900	1700	480	160	2900
FEB 06...	1600	48	18200	5.0	1900	1700	490	160	3700
MAR 20...	1330	80	--	15.0	--	--	--	--	--
31...	1125	150	7270	15.0	920	770	250	72	1200
MAY 01...	0855	35	--	17.5	--	--	--	--	--
22...	0940	1320	674	17.5	140	29	45	7.6	98
JUN 06...	1545	2600	3620	24.5	490	370	150	29	570
12...	1430	1750	--	--	--	--	--	--	--
JUL 23...	1705	910	1820	30.0	320	210	100	18	260
SEP 04...	0925	101	7050	25.0	1200	1200	380	71	1100

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 03...	14	10	140	0	440	1100	.9	9.6	2550
NOV 15...	20	12	150	0	1200	2500	.4	7.8	5960
DEC 27...	29	15	180	0	1600	4600	.7	12	9860
FEB 06...	37	17	170	0	1400	6100	.7	5.2	12000
MAR 20...	--	--	--	--	--	--	--	--	--
31...	17	12	180	0	800	1800	1.1	9.6	4230
MAY 01...	--	--	--	--	--	--	--	--	--
22...	3.6	6.7	140	0	59	120	.4	9.2	415
JUN 06...	11	7.7	150	0	420	840	.6	12	2100
12...	--	--	--	--	--	--	--	--	--
JUL 23...	6.3	6.1	140	0	350	290	.9	11	1110
SEP 04...	14	15	110	0	1200	1600	.9	10	4430

BRAZOS RIVER BASIN

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	3490	7310	4720	44400	2070	19500	820	7740	980
NOV. 1978.....	1716	10500	6750	31300	2930	13600	1190	5540	****
DEC. 1978.....	1318	13200	8530	30400	3740	13300	1490	5310	****
JAN. 1979.....	1292	15300	9890	34500	4420	15400	1680	5860	****
FEB. 1979.....	1136	15900	10300	31400	4600	14100	1740	5330	****
MAR. 1979.....	4365	7790	5030	59200	2190	25800	890	10500	1040
APR. 1979.....	2029	12700	8220	45100	3680	20200	1390	7600	****
MAY 1979.....	6840	5150	3320	61300	1440	26600	590	10800	690
JUNE 1979.....	16520	4380	2820	126000	1230	54700	500	22300	590
JULY 1979.....	9669	3040	1960	51100	850	22200	350	9050	410
AUG. 1979.....	9576	5400	3480	90100	1520	39400	610	15700	720
SEPT 1979.....	930.3	7790	5020	12600	2180	5490	890	2230	1040
TOTAL	58881.29	**	**	617000	**	270000	**	108000	**
WTD.AVG.	161	6020	3900	**	1700	**	680	**	810

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4780	14600	11100	15800	15500	14700	7500	15300	7390	6520	8470	5090
2	4020	11900	13400	14800	15200	16000	8180	4830	7390	6600	5330	5710
3	4300	10500	20000	15700	15500	15300	8480	9850	5000	7780	1870	6500
4	4720	10000	14600	14200	15800	15900	8730	8600	4370	8500	9380	7020
5	5080	10300	12700	13700	16400	7430	9450	9140	3570	9700	6780	11300
6	5910	10400	11100	13700	18000	8190	10200	4740	4790	1030	4710	5890
7	6280	10700	11100	13700	16400	10400	10600	4420	5430	2180	4230	9020
8	7130	11200	11400	12000	15300	9810	11000	5100	4900	3590	5050	7300
9	7500	11300	12600	11100	15500	13000	11800	5170	4300	7230	5170	8100
10	8140	11500	11800	14300	15500	13900	11600	5860	3930	3480	3600	8870
11	8380	11800	11800	15300	16000	14100	8840	5270	4000	2140	4060	8850
12	8930	11900	12000	14700	16200	15300	11800	8120	4100	2660	4400	8760
13	9440	12000	12200	9250	16400	16200	12300	8900	4220	3810	5710	8510
14	9710	12200	12900	16000	16600	17000	12800	9530	3260	6960	6770	8680
15	10000	9460	12600	17600	17500	14300	13200	10300	2420	9660	7470	9090
16	10300	9210	12600	16900	17900	14100	13600	10900	2730	13200	9200	9250
17	10500	6950	12800	17500	19000	13500	14100	11600	3240	11600	10600	9300
18	10600	6690	13600	13700	18200	13900	12100	11900	3930	12500	10000	9500
19	10900	9050	13600	17600	16500	10600	11300	12300	4630	8890	8010	9710
20	10900	9720	13600	17600	16000	12300	13600	5620	5250	7460	6640	9730
21	11000	9590	13900	14200	15800	6820	14500	1470	5840	3420	1220	9760
22	11000	10200	14100	16300	15000	5940	17600	559	5020	2060	5420	9500
23	9310	11000	14300	16300	16100	5430	20400	1150	5700	2050	7830	9630
24	8200	12700	14600	14300	13800	5990	24500	1780	5900	1600	18300	9480
25	6260	12500	14700	14800	13500	4750	17300	5000	4960	1600	5000	9600
26	9010	13200	14800	14300	13700	9670	15500	3810	6000	1740	3530	9850
27	9390	8190	15200	16000	13800	7760	15800	3640	2750	1960	4160	10100
28	10300	9670	14900	14800	14000	7500	15500	4340	3930	2170	4720	10200
29	12200	10100	14600	14300	---	7270	15500	5130	4700	2420	4300	10300
30	12300	9860	14600	15000	---	7120	15700	4650	9540	6150	3890	10300
31	23000	---	15100	15900	---	6600	---	6160	---	13500	4110	---
MEAN	9020	10600	13500	14900	15900	11000	13100	6620	4770	5620	6130	8830

BRAZOS RIVER BASIN

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08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.5	18.5	7.0	.0	.0	7.0	18.0	25.0	22.0	32.0	28.0	24.0
2	20.0	15.0	10.5	.0	3.0	10.5	14.5	21.0	18.5	---	29.5	27.0
3	22.5	19.0	3.5	1.0	3.0	7.0	11.5	18.5	19.0	30.5	26.5	---
4	25.0	18.0	7.0	.5	3.0	5.5	9.0	13.0	22.0	---	25.0	24.0
5	18.0	17.5	8.0	.0	.0	4.5	13.0	14.0	25.0	24.0	26.0	24.0
6	19.0	12.0	8.5	.0	2.0	6.5	---	18.0	23.0	24.5	26.5	30.0
7	17.5	11.0	3.5	.0	8.5	12.5	---	26.5	25.0	25.5	29.5	31.0
8	21.5	19.0	2.0	.5	9.5	18.5	17.5	24.0	---	36.0	27.0	23.0
9	17.5	10.0	.0	1.0	.5	9.0	20.0	22.0	25.5	30.0	27.5	---
10	18.0	13.5	1.5	.0	.5	10.0	14.5	20.0	21.5	22.0	25.5	30.5
11	18.5	9.0	5.5	.0	14.0	11.0	14.5	14.5	20.5	30.5	22.5	29.0
12	20.0	9.5	7.0	1.5	13.0	18.5	14.5	26.0	---	26.0	28.0	20.5
13	18.5	13.0	4.0	.0	---	22.0	16.0	29.0	23.0	32.5	30.0	23.0
14	12.0	13.5	8.0	.0	8.0	13.0	14.5	29.0	28.5	30.0	23.5	17.5
15	23.0	6.0	7.5	.5	10.5	10.0	---	28.5	29.5	31.0	23.0	16.0
16	14.5	5.0	7.0	.5	.0	8.0	18.0	22.0	26.0	34.0	30.5	19.5
17	14.5	12.0	7.0	3.0	.0	10.5	20.5	24.5	28.5	29.0	25.0	27.0
18	14.5	6.5	12.5	7.0	1.0	17.0	21.0	28.0	30.0	23.0	24.0	---
19	14.5	12.0	14.0	6.0	2.5	10.5	20.5	21.0	29.0	22.0	26.5	18.0
20	16.0	10.0	12.5	4.0	4.0	15.0	28.0	26.5	33.0	30.0	22.5	20.0
21	13.5	7.0	10.0	1.0	6.5	18.0	19.5	19.5	32.5	25.0	22.0	17.5
22	22.0	8.0	9.5	3.5	10.0	16.0	17.5	19.5	32.5	29.5	24.0	28.0
23	13.0	---	4.0	4.0	14.0	9.0	20.0	18.5	25.5	25.0	24.0	31.0
24	14.0	12.5	5.0	.5	5.0	10.5	22.0	20.0	---	30.0	29.5	19.0
25	15.5	16.0	---	3.0	1.5	12.5	25.0	20.0	22.5	28.0	21.0	23.0
26	12.0	15.0	3.0	4.0	4.5	12.0	27.0	20.5	31.5	26.0	25.0	21.5
27	21.0	7.5	3.5	.5	11.0	13.0	17.5	24.0	24.0	27.0	24.0	28.5
28	14.5	11.5	7.0	4.0	6.0	---	13.0	27.5	30.0	32.5	23.5	21.0
29	22.5	6.5	10.0	.0	---	20.5	16.0	25.5	26.0	32.5	24.5	21.0
30	14.0	8.0	.5	---	---	18.5	18.0	26.0	26.0	32.0	26.5	29.5
31	15.0	---	.0	1.0	---	15.0	---	21.0	---	25.0	27.0	---
MEAN	17.5	12.0	6.5	1.5	5.0	12.5	18.0	22.5	26.0	28.5	25.5	24.0

BRAZOS RIVER BASIN

08082700 MILLERS CREEK NEAR MUNDAY, TX

LOCATION.--Lat 33°19'45", long 99°27'53", Throckmorton County, Hydrologic Unit 12060101, near right bank on downstream side of bridge on Farm Road 1720, 12.7 mi (20.4 km) southeast of Munday, and 24.6 mi (39.6 km) upstream from mouth.

DRAINAGE AREA.--104 mi² (269 km²).

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. Altitude of gage is 1,350 ft (411 m), from topographic map.

REMARKS.--Records poor. No diversions above station.

AVERAGE DISCHARGE.--16 years (water years 1964-79), 6.00 ft³/s (0.170 m³/s), 0.78 in/yr (20 mm/yr), 4,350 acre-ft/yr (5.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s (980 m³/s) Aug. 24, 1978, gage height, 17.53 ft (5.343 m); no flow most of time.

Maximum stage since 1930, 18.0 ft (5.49 m) 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 (5.49 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 21	2400	247	7.00	6.29	1.917
June 26	0400	*440	12.5	9.50	2.896
July 6	0600	374	10.6	8.49	2.588

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.09	.00	.00	.00	.00	.00	1.9	1.4	.00	.00
2	.00	.00	.05	.00	.00	.00	.00	.00	1.2	.84	.00	.00
3	.00	.00	.02	.00	.00	.00	.00	.00	.72	.60	.00	.00
4	.00	.00	.01	.00	.00	.00	.00	.00	.37	.34	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	2.1	43	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	3.1	263	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	8.2	16	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	4.0	3.6	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	2.2	1.6	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.89	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.53	.56	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.16	.34	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.05	.20	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.01	.11	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
19	.00	.00	.00	.00	.00	3.4	.00	.00	.00	.01	.00	.00
20	.00	.00	.00	.00	.00	2.5	.00	.65	.00	.01	.00	.00
21	.00	.00	.00	.00	.00	4.2	.00	151	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	39	.00	135	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	13	.00	22	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	3.2	.00	7.7	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	2.5	.00	4.2	156	.00	.00	.00
26	.00	.55	.00	.00	.00	1.0	.00	2.4	268	.00	.00	.00
27	.00	2.0	.00	.00	.00	.50	.00	1.5	18	.00	.00	.00
28	.00	2.2	.00	.00	.00	.24	.00	.84	6.4	.00	.00	.00
29	.00	.64	.00	.00	.00	.09	.00	.46	3.3	.00	.00	.00
30	.00	.18	.00	.00	.00	.01	.00	3.0	2.1	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	3.3	.00	.00	.00	.00
TOTAL	.00	5.57	.17	.00	.00	69.64	.00	332.05	479.54	332.60	.00	.00
MEAN	.000	.19	.005	.000	.000	2.25	.000	10.7	16.0	10.7	.000	.000
MAX	.00	2.2	.09	.00	.00	39	.00	151	268	263	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.000	.002	.000	.000	.000	.02	.000	.10	.15	.10	.000	.000
IN.	.00	.00	.00	.00	.00	.02	.00	.12	.17	.12	.00	.00
AC-FT	.00	11	.3	.00	.00	138	.00	659	951	660	.00	.00
CAL YR 1978	TOTAL	12525.14	MEAN	34.3	MAX	8730	MIN	.00	CFSM	.33	IN	4.48
WTR YR 1979	TOTAL	1219.57	MEAN	3.34	MAX	268	MIN	.00	CFSM	.03	IN	.44
									AC-FT	24840		
										2420		

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 (1.8 km) upstream from dam, 7.1 mi (11.4 km) southeast of Bomarton, and 13.2 mi (21.2 km) upstream from mouth.

DRAINAGE AREA.--240 mi² (622 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--The reservoir is formed by an earthfill dam 9,250 ft (2,820 m) long. The dam was completed in 1974 and storage began in July 1974. Dead storage, 1,240 acre-ft (1.53 hm³) below elevation, 1,303.4 ft (397.28 m). The reservoir is used for municipal, mining, and industrial water supply. The uncontrolled emergency spillway is an open cut 3,000 ft (910 m) wide located on left bank about 800 ft (240 m) upstream from level. The service spillway is an uncontrolled morning-glory-type drop inlet, 16.5 ft (5.0 m) square, that discharges through a 5.0-foot-square (1.5 m) 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.....	1,331.2	25,180
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 furnished by Freese, Nichols, and Endress Consulting Engineers. Record of diversions furnished by North Central Texas Municipal Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 34,380 acre-ft (42.5 hm³) Aug. 6, 1978, elevation, 1,335.30 ft (406.999 m); 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, 26,570 acre-ft (32.8 hm³) July 7, elevation, 1,331.89 ft (405.960 m); minimum, 21,850 acre-ft (26.9 hm³) May 18, elevation, 1,329.37 ft (405.192 m).

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

1,329.0	21,230	1,331.0	24,800
1,330.0	22,950	1,332.0	26,800

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24520	23800	23590	22830	22200	22740	22810	22370	24170	25720	24570	23860
2	24520	23820	23460	22810	22600	22760	22760	22390	24170	25580	24630	23820
3	24490	23800	23400	22830	22880	22720	22710	22360	24170	25480	24570	23800
4	24460	23770	23440	22830	22880	22690	22720	22320	24190	25380	24530	23680
5	24380	23730	23390	22830	22860	22710	22740	22360	24380	25520	24500	23660
6	24360	23620	23310	22830	22860	22720	22740	22370	24400	26460	24480	23600
7	24330	23660	23200	22830	22860	22670	22720	22360	24460	26400	24400	23550
8	24290	23660	23190	22830	22830	22740	22670	22320	24380	26200	24340	23500
9	24290	23660	23190	22810	22780	22600	22620	22300	24330	26020	24310	23440
10	24290	23570	23200	22810	22830	22620	22690	22160	24290	25880	24230	23400
11	24290	23510	23170	22850	22860	22620	22600	22060	24270	25740	24150	23370
12	24270	23570	23190	22930	22830	22640	22510	22090	24210	25640	24150	23330
13	24080	23590	23190	22830	22830	22600	22510	22090	24210	25540	24100	23280
14	24060	23440	23170	22790	22880	22530	22530	22060	24170	25460	24040	23190
15	24080	23530	23100	22850	22810	22510	22500	22190	24100	25360	23990	23150
16	24040	23600	23100	22900	22640	22550	22480	21950	24020	25320	23950	23150
17	24000	23640	23100	22880	22650	22650	22570	21900	23970	25240	23890	23110
18	23970	23680	23170	22930	22710	22670	22600	22080	23950	25180	23880	23080
19	23930	23640	23200	22950	22710	22760	22580	22060	23890	25140	23770	22970
20	23950	23570	23110	22970	22760	22860	22530	22440	23890	25120	24000	22970
21	23910	23550	23080	22950	22760	23040	22510	23400	23860	25120	24000	22970
22	23860	23620	23060	23040	22790	23310	22500	24190	23820	25090	23970	22950
23	23860	23640	23060	22530	22760	23260	22480	24340	23750	25070	23910	22920
24	23910	23660	23020	22650	22710	23200	22510	24360	23710	24990	23880	22900
25	23930	23690	23000	22650	22740	23150	22390	24330	25440	24930	24080	22880
26	23880	23640	22970	22510	22760	23100	22340	24340	26460	24860	23970	22810
27	23880	23590	22970	22370	22780	23060	22250	24310	26400	24860	24020	22790
28	23880	23600	23000	22370	22740	23040	22270	24290	26220	24820	24020	22740
29	23880	23550	22900	22440	---	22990	22270	24250	26060	24760	23950	22740
30	23860	23530	22830	22110	---	22900	22310	24230	25920	24650	23930	22720
31	23820	---	22860	22250	---	22900	---	24210	---	24610	23890	---
MAX	24520	23820	23590	23040	22880	23310	22810	24360	26460	26460	24630	23860
MIN	23820	23440	22830	22110	22200	22510	22250	21900	23710	24610	23770	22720
(†)	1330.48	1330.32	1329.95	1329.60	1329.88	1329.97	1329.64	1330.69	1331.57	1330.90	1330.52	1329.87
(‡)	-700	-290	-670	-610	-490	-160	-590	-1900	+1710	-1310	-720	-1170
(††)	112	97.3	93.5	93.5	79.9	84.9	90.9	107	121	124	109	117

CAL YR 1978 MAX 33760 MIN 1100 ‡ +20930 †† 303
WTR YR 1979 MAX 26460 MIN 21900 ‡ -1800 †† 1203

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for North Central Texas Municipal Water Authority.

BRAZOS RIVER BASIN

08082800 MILLERS CREEK RESERVOIR NEAR BOMARTON, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
FEB 06...	1700	269	4.0	110	0	35	6.4	7.2	.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)
FEB 06...	4.8	140	0	13	5.8	.2	7.2	149

BRAZOS RIVER BASIN

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08082950 ELM CREEK NEAR PROFFITT, TX
(Reconnaissance partial-record station)

LOCATION.--Lat 33°11'00", long 98°53'40", Young County, Hydrologic Unit 12060101, at bridge on U.S. Highway 380 in Proffitt community, 1,000 ft (305 m) west of Farm Road 578 south, 5.5 mi (8.9 km) upstream from mouth, and about 9 mi (14 km) west of Newcastle.

DRAINAGE AREA.--275 mi² (712 km²).

PERIOD OF RECORD.--Occasional discharge measurements: October 1968 to current year. Occasional water-quality data: December 1968 to September 1975, October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 03...	0850	.15	1240	21.5	300	150	77	27	130
FEB 07...	1445	.55	1130	4.5	260	160	59	28	120
JUN 12...	0845	12	647	21.5	180	67	48	15	51
JUL 23...	0845	.02	1590	24.5	390	260	92	40	150
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 03...	3.2	8.2	190	0	36	270	.2	7.7	650
FEB 07...	3.2	5.2	130	0	71	240	.2	4.8	592
JUN 12...	1.6	6.6	140	0	29	110	.2	12	341
JUL 23...	3.3	9.1	170	0	90	360	.3	3.7	829

BRAZOS RIVER BASIN

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 (4.8 km) north of Roby, 3.2 mi (5.1 km) upstream from Cottonwood Creek, and 255.7 mi (411.4 km) upstream from mouth.

DRAINAGE AREA.--228 mi² (591 km²).

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 (574.575 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--17 years (water years 1963-79), 8.12 ft³/s (0.230 m³/s), 0.48 in/yr (12 mm/yr), 5,880 acre-ft/yr (7.25 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s (200 m³/s) Oct. 18, 1965, gage height, 21.48 ft (6.547 m); maximum gage height, 21.52 ft (6.559 m) Sept. 19, 1969; no flow at times in 1963-67.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since the 1890's, about 22 ft (6.7 m) in May and June 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 22	1800	336	9.52	9.30	2.835
May 28	2200	*671	19.0	11.39	3.472

Minimum discharge, 0.10 ft³/s (0.003 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	.70	.81	1.1	1.5	1.5	1.5	1.4	4.2	.58	.27	.18
2	.54	.71	.82	1.2	1.7	1.6	1.4	9.2	34	.55	.25	.17
3	.54	.72	.82	1.2	1.7	1.6	1.4	3.2	5.6	.54	.24	.40
4	.54	.71	.85	1.2	1.7	1.5	1.4	72	3.0	.54	.26	.41
5	.53	.75	.89	1.2	1.7	1.5	1.4	4.9	2.8	.54	.23	.22
6	.54	.74	.89	1.2	1.9	1.6	1.4	1.8	3.0	.54	.21	.19
7	.54	.70	.91	1.2	1.9	1.6	1.4	1.3	2.8	.55	.20	.17
8	.54	.73	.93	1.2	1.8	1.6	1.4	1.1	1.9	.54	.19	.16
9	.56	1.3	.94	1.3	1.7	1.6	1.3	1.1	1.7	.54	.18	.17
10	.59	.63	.97	1.3	1.8	1.6	1.4	1.0	1.6	.56	.19	.16
11	.58	.59	.97	1.3	1.8	1.6	1.3	.95	1.4	.60	.21	.12
12	.57	.61	1.0	1.4	1.8	1.7	1.3	.94	1.4	.58	.20	.13
13	.55	.65	1.1	1.4	1.8	1.7	1.3	.90	1.3	.62	.19	.13
14	.55	.68	1.0	1.2	1.8	1.7	1.3	.87	1.2	.56	.19	.12
15	.55	.68	1.1	1.3	1.6	1.7	1.3	.80	1.1	.45	.18	.12
16	.57	.76	1.1	1.3	1.5	1.8	1.3	.66	1.1	.44	.17	.14
17	.60	.70	1.1	1.4	1.5	1.8	1.3	.56	1.1	.42	.18	.14
18	.59	.69	1.2	1.4	1.5	1.8	1.3	.54	1.0	.51	.18	.13
19	.58	.71	1.2	1.6	1.5	12	1.3	.50	.96	.66	.17	.14
20	.60	.74	1.0	1.5	1.5	56	1.3	.50	.94	120	.17	.15
21	.60	.74	1.0	1.3	1.5	6.7	1.3	.71	.89	5.2	.19	.15
22	.62	.76	1.1	1.3	1.6	127	1.3	128	.86	1.2	.18	.15
23	.93	.76	1.0	1.4	1.5	30	1.2	24	.84	.62	.18	.15
24	.86	.75	1.1	1.4	1.6	4.0	1.2	3.9	.81	.42	.18	.15
25	.75	.79	1.1	1.5	1.5	2.2	1.2	2.3	.89	.30	.18	.14
26	.67	.84	1.1	1.5	1.5	1.8	1.1	1.9	.84	.26	.18	.14
27	.67	.75	1.1	1.5	1.5	1.6	1.1	1.7	.76	.24	.18	.13
28	.67	.75	1.2	1.5	1.5	1.5	1.1	173	.71	.23	.17	.12
29	.67	.77	1.2	1.5	---	1.5	1.1	184	.68	.22	.17	.12
30	.68	.81	1.3	1.6	---	1.5	1.1	12	.63	.29	.16	.11
31	.69	---	1.2	1.5	---	1.4	---	4.7	---	.26	.18	---
TOTAL	19.01	22.22	32.00	41.9	45.9	276.7	38.7	640.43	80.01	139.56	6.01	4.91
MEAN	.61	.74	1.03	1.35	1.64	8.93	1.29	20.7	2.67	4.50	.19	.16
MAX	.93	1.3	1.3	1.6	1.9	127	1.5	184	34	120	.27	.41
MIN	.53	.59	.81	1.1	1.5	1.4	1.1	.50	.63	.22	.16	.11
CFSM	.003	.003	.005	.006	.007	.04	.006	.09	.01	.02	.001	.001
IN.	.00	.00	.01	.01	.01	.05	.01	.10	.01	.02	.00	.00
AC-FT	38	44	63	83	91	549	77	1270	159	277	12	9.7
CAL YR 1978	TOTAL	677.82	MEAN 1.86	MAX 88	MIN .03	CFSM .008	IN .11	AC-FT 1340				
WTR YR 1979	TOTAL	1347.35	MEAN 3.69	MAX 184	MIN .11	CFSM .02	IN .22	AC-FT 2670				

BRAZOS RIVER BASIN

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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 (27 m) upstream from upstream bridge on U.S. Highways 83 and 277, 0.8 mi (1.3 km) south of Hawley, 7.4 mi (11.9 km) upstream from Mulberry Creek, and 188.6 mi (303.5 km) upstream from mouth.

DRAINAGE AREA.--1,416 mi² (3,667 km²).

WATER-DISCHARGE RECORDS

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 (491.475 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1973, at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records fair. Lake Sweetwater, capacity 11,900 acre-ft (14.7 hm³), is located on a tributary upstream from gage.

AVERAGE DISCHARGE.--12 years, 44.8 ft³/s (1.269 m³/s), 32,460 acre-ft/yr (40.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,170 ft³/s (175 m³/s) Sept. 11, 1969, gage height, 19.31 ft (5.886 m), 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 (7.62 m), present datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 24	0230	*957 27.1	11.87 3.618
Aug. 2	0700	846 24.0	11.44 3.487

Minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Aug. 18, 19, Sept. 3, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	5.0	5.8	5.3	9.5	8.7	18	84	66	20	10	2.3
2	8.1	5.1	5.8	5.3	10	8.8	18	221	35	13	375	2.3
3	7.1	5.2	5.6	5.3	11	9.3	17	158	39	11	24	2.2
4	6.5	4.9	5.7	5.3	10	8.7	17	249	55	8.6	8.8	2.3
5	6.2	4.8	5.6	5.3	9.7	8.5	17	115	34	7.8	5.8	8.6
6	6.0	4.7	5.6	5.3	15	8.0	17	124	112	11	4.0	4.6
7	5.7	4.7	5.6	5.3	15	8.0	17	47	70	10	3.2	3.3
8	5.3	4.7	5.6	5.3	15	7.8	17	21	26	7.9	3.0	2.8
9	5.3	4.9	5.5	5.3	13	7.2	17	19	19	8.6	2.9	3.3
10	5.3	5.3	5.6	5.3	12	7.2	17	18	18	10	2.8	3.2
11	5.3	5.3	5.7	5.3	12	7.2	18	17	17	9.3	2.8	2.4
12	5.3	5.3	5.8	5.3	11	6.9	17	17	17	9.9	2.8	2.6
13	4.9	5.3	5.8	5.3	11	6.7	16	17	14	10	2.8	2.5
14	4.6	5.3	5.8	5.3	10	6.7	16	16	12	9.9	2.8	2.6
15	4.4	5.3	5.8	5.3	10	7.1	16	16	11	10	2.8	3.2
16	4.4	5.4	5.9	5.3	9.2	8.0	17	16	9.9	10	2.7	3.2
17	4.4	5.4	5.9	5.3	9.0	8.5	17	15	9.3	11	2.4	3.0
18	4.4	5.4	5.9	5.3	8.8	9.2	32	14	8.5	29	2.2	2.8
19	4.5	5.4	5.9	5.3	9.0	12	23	14	8.1	26	2.2	2.9
20	4.5	5.4	5.9	5.3	9.3	18	17	13	7.8	323	2.6	2.9
21	4.5	5.4	5.8	5.3	9.0	17	17	16	7.5	83	3.4	3.1
22	4.7	5.6	5.8	7.6	8.8	202	17	234	6.9	119	4.4	3.0
23	11	5.6	5.8	12	8.7	704	17	122	6.6	59	3.7	2.7
24	12	5.6	5.6	11	9.0	405	17	124	6.4	27	3.3	2.2
25	17	5.6	5.4	10	9.0	151	17	58	38	16	2.9	2.7
26	11	5.6	5.3	10	8.7	81	16	28	110	11	2.8	2.7
27	7.5	5.6	5.3	10	8.7	52	16	18	121	8.4	2.7	2.7
28	6.3	5.7	5.3	10	8.7	32	16	11	99	7.0	2.7	2.9
29	5.6	5.8	5.3	10	---	22	17	22	98	5.9	2.6	2.8
30	5.4	5.8	5.3	9.9	---	20	17	156	38	5.1	2.4	3.1
31	5.0	---	5.3	9.6	---	19	---	138	---	6.4	2.3	---
TOTAL	202.2	159.1	175.0	211.4	290.1	1877.5	528	2138	1120.0	903.8	498.8	90.9
MEAN	6.52	5.30	5.65	6.82	10.4	60.6	17.6	69.0	37.3	29.2	16.1	3.03
MAX	17	5.8	5.9	12	15	704	32	249	121	323	375	8.6
MIN	4.4	4.7	5.3	5.3	8.7	6.7	16	11	6.4	5.1	2.2	2.2
AC-FT	401	316	347	419	575	3720	1050	4240	2220	1790	989	180
CAL YR 1978	TOTAL	7128.91	MEAN	19.5	MAX	2010	MIN	.00	AC-FT	14140		
WTR YR 1979	TOTAL	8194.80	MEAN	22.5	MAX	704	MIN	2.2	AC-FT	16250		

BRAZOS RIVER BASIN

08083240 CLEAR FORK BRAZOS RIVER AT HAWLEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1967 to September 1979 (discontinued).

WATER TEMPERATURES: October 1967 to September 1979 (discontinued).

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 (1967-70, 1972-79): Maximum daily, 11,500 micromhos Oct. 5, 1969; minimum daily, 163 micromhos Sept. 11, 1969.

WATER TEMPERATURES (1967-69, 1972-79): Maximum daily, 30.5°C July 12-15, 1978; minimum daily, 0.0°C Dec. 16, 1967, Jan. 3, 4, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,150 micromhos July 23; minimum daily, 528 micromhos July 21.

WATER TEMPERATURES: Maximum daily, 30.0°C July 8, 28; minimum daily, 1.0°C Dec. 10, Jan 2, 3, 5, 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT										
02...	1726	7.7	2400	--	24.0	820	640	200	79	230
NOV										
06...	1655	4.7	3610	--	15.5	1300	1000	300	130	370
DEC										
19...	1635	5.9	3860	--	11.0	1400	1200	330	150	380
JAN										
31...	1825	9.3	3260	--	5.0	1200	1000	280	130	350
FEB										
07...	1740	6.0	--	--	6.0	--	--	--	--	--
MAR										
12...	1635	6.8	--	--	--	--	--	--	--	--
31...	1300	19	2110	--	17.5	790	600	200	70	200
APR										
30...	1900	17	3850	--	19.0	1400	1200	330	140	400
MAY										
01...	1700	84	--	--	19.0	--	--	--	--	--
31...	2000	97	939	--	21.0	300	190	83	23	81
JUN										
12...	1140	17	--	--	24.0	--	--	--	--	--
JUL										
25...	0930	16	--	--	27.0	--	--	--	--	--
31...	1800	6.0	2490	--	25.0	790	570	200	70	260
SEP										
05...	1020	11	3420	7.9	28.0	1300	1100	300	130	330

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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...	3.5	9.8	230	0	560	370	.3	13	1580
NOV									
06...	4.5	6.8	310	0	1000	530	.3	9.4	2500
DEC									
19...	4.4	5.7	280	0	1200	530	.5	12	2750
JAN									
31...	4.3	6.2	260	0	1100	470	.5	10	2470
FEB									
07...	--	--	--	--	--	--	--	--	--
MAR									
12...	--	--	--	--	--	--	--	--	--
31...	3.1	7.2	230	0	600	270	.5	11	1470
APR									
30...	4.7	7.8	240	0	1300	590	.5	5.6	2890
MAY									
01...	--	--	--	--	--	--	--	--	--
31...	2.0	9.1	140	0	250	76	.4	9.1	532
JUN									
12...	--	--	--	--	--	--	--	--	--
JUL									
25...	--	--	--	--	--	--	--	--	--
31...	4.0	9.2	260	0	690	330	.6	10	1700
SEP									
05...	4.0	8.4	250	0	1100	470	.3	10	2470

BRAZOS RIVER BASIN

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08083240 CLEAR FORK BRAZOS RIVER AT HAWLEY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	202.2	3370	2420	1320	480	261	1030	560	1120
NOV. 1978.....	159.1	3710	2660	1140	540	230	1130	486	1370
DEC. 1978.....	174	3650	2620	1240	520	248	1110	525	1360
JAN. 1979.....	211.4	3570	2560	1460	520	297	1090	620	1340
FEB. 1979.....	290.1	4050	2900	2270	600	468	1230	966	1440
MAR. 1979.....	1877.5	1670	1200	6060	240	1200	510	2570	550
APR. 1979.....	528	3320	2380	3390	470	671	1010	1440	1100
MAY 1979.....	2138	1670	1200	6920	230	1350	510	2940	560
JUNE 1979.....	1119	1960	1400	4240	270	827	600	1810	650
JULY 1979.....	903.8	1920	1380	3360	280	679	580	1430	640
AUG. 1979.....	498.8	2080	1490	2010	290	392	640	856	690
SEPT 1979.....	90.9	3410	2450	601	480	117	1040	256	1130
TOTAL	8194.78	**	**	34000	**	6740	**	14500	**
WTD. AVG.	22	2140	1500	**	300	**	650	**	710

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2380	4190	2680	3970	3360	4290	3260	1560	1190	2050	2620	3400
2	2380	3820	3080	3970	3540	4290	2600	1610	1270	1760	2000	3400
3	2500	3800	3260	4020	3450	4290	3260	987	1830	1760	1180	3450
4	2700	3830	3110	4040	3630	4370	2600	643	1830	1880	1490	3450
5	2940	3920	3710	3950	3630	4370	3260	892	2120	2040	1060	3000
6	3190	3650	3290	4110	3620	4280	3260	2000	932	2080	1260	3100
7	3260	3830	3290	4110	3710	4370	3260	3920	1400	2100	1260	3200
8	4250	3830	3830	4150	4170	4370	3560	3890	1420	2110	1430	3300
9	3380	3650	3470	4110	3850	4370	3580	3490	1500	2350	1590	3200
10	3350	3920	3540	4110	3930	4370	3560	3500	1500	2470	1750	3200
11	3460	3630	3730	4130	3850	4340	3780	3310	1950	2560	2080	3600
12	3520	3820	3730	4160	4170	4360	3800	3310	2380	2530	2850	3700
13	3500	3800	3820	4190	4290	4400	3680	3140	2520	2740	2870	3600
14	3540	3370	3810	4240	4290	4400	3840	3130	2660	2740	3130	3700
15	3640	3370	3550	4240	4270	4320	3650	3150	2830	2840	3280	3300
16	3660	3370	3680	4270	4270	4290	3730	3230	2890	2830	3430	3300
17	3640	3370	3830	4240	4270	4320	3810	3260	2970	3140	3650	3400
18	3650	3780	3260	4270	4310	4220	2400	3470	3140	3150	3650	3500
19	3640	3800	3870	4020	4310	4200	2870	3470	3280	3410	3760	3500
20	3680	3800	3800	4000	4330	4240	2390	3470	3370	536	3500	3500
21	3640	3500	3830	1310	4380	3750	2380	3000	3490	528	3560	3400
22	3430	3750	3830	2180	4380	2190	2870	1000	3480	2500	3560	3500
23	3100	3720	3910	2670	4380	700	3750	800	3570	6150	2900	3700
24	3430	3730	3880	2180	4350	1840	3750	2060	3640	4430	3680	3800
25	3310	3680	3880	2670	4380	975	2920	3500	1730	2490	2970	3600
26	3720	3680	3870	2670	4350	2500	3680	2000	2200	2480	3080	3600
27	3490	3400	3950	3080	4350	1560	3710	1960	1330	2320	3100	3600
28	3810	4390	3950	3930	4370	2000	3750	2000	1900	2320	3080	3500
29	3810	4390	3950	4220	---	2150	3710	2070	2950	2480	3400	3600
30	4290	2640	3970	4110	---	2500	3930	2520	4680	2480	3400	3700
31	4270	---	3920	3390	---	2800	---	925	---	2490	3400	---
MEAN	3440	3710	3650	3700	4080	3530	3350	2490	2400	2510	2710	3460

BRAZOS RIVER BASIN

08083240 CLEAR FORK BRAZOS RIVER AT HAWLEY, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	16.0	8.5	2.5	6.0	12.0	16.0	21.0	18.5	26.5	25.0	
2	23.0	18.0	8.5	1.0	8.0	11.0	16.0	20.0	17.0	28.0	27.5	
3	---	18.0	7.0	1.0	7.0	10.5	17.5	15.0	20.0	27.5	26.0	
4	---	18.0	7.0	2.5	5.5	13.5	17.5	13.0	22.5	26.0	27.5	
5	22.0	13.5	6.0	1.0	5.0	14.0	17.5	15.0	22.0	28.0	27.5	
6	20.0	13.0	7.0	5.0	4.5	14.0	18.0	16.5	22.5	---	27.0	
7	20.5	13.5	6.0	1.0	5.5	14.0	19.0	16.0	27.0	---	27.0	
8	21.0	16.0	4.0	1.5	7.0	14.0	19.0	22.0	26.5	30.0	27.0	
9	21.0	16.0	4.0	2.0	5.0	14.5	19.0	21.0	22.5	29.5	27.5	
10	22.0	16.5	1.0	4.0	8.0	14.5	20.0	20.5	21.5	29.0	26.5	
11	23.0	13.0	4.0	3.5	10.0	15.0	18.5	15.0	---	28.5	25.0	
12	22.5	13.0	6.0	4.5	10.0	15.5	19.0	13.5	23.0	27.0	25.5	
13	19.0	13.0	6.0	5.0	11.5	15.0	19.0	15.0	25.0	27.0	26.0	
14	19.0	12.0	6.0	5.0	13.5	15.5	19.0	20.0	25.0	26.0	27.5	
15	---	11.0	7.5	5.5	13.0	11.0	20.0	20.5	27.0	26.5	26.0	
16	---	10.5	7.5	6.5	6.0	12.0	19.0	19.0	23.0	27.0	27.5	
17	---	10.0	7.0	8.0	4.0	13.5	19.0	21.0	23.5	26.0	26.0	
18	---	10.5	8.0	10.0	5.0	13.5	23.0	21.0	27.0	25.5	26.0	
19	---	11.0	10.0	---	6.0	14.5	19.0	20.0	27.0	24.0	27.5	
20	---	11.0	15.5	5.5	10.5	14.0	20.0	22.5	27.5	24.0	21.0	
21	---	12.0	9.5	6.0	12.0	17.0	19.0	20.5	27.5	27.0	28.0	
22	---	12.5	9.5	8.0	13.0	16.0	20.0	17.0	28.5	25.0	27.0	
23	---	12.5	9.0	8.0	11.5	9.5	19.0	16.5	27.0	27.0	27.0	
24	---	15.0	8.5	8.5	10.0	13.5	19.5	19.0	28.5	24.0	27.5	
25	16.5	12.5	8.5	8.0	10.5	14.5	19.0	17.5	24.0	28.0	25.0	
26	15.5	12.0	9.0	6.0	10.0	14.5	19.0	20.5	25.0	28.0	27.0	
27	15.5	12.0	11.0	6.0	11.0	14.0	19.0	20.0	24.5	27.0	27.0	
28	15.5	12.0	8.0	6.0	12.5	14.0	18.5	20.0	24.0	30.0	27.0	
29	16.0	12.0	7.0	6.0	---	16.0	19.0	23.0	26.0	28.0	27.5	
30	17.0	12.0	7.0	8.0	---	17.0	19.0	21.5	26.5	27.0	28.0	
31	16.5	---	4.0	5.0	---	17.5	---	21.0	---	25.0	28.0	
MEAN	19.0	13.5	7.5	5.0	8.5	14.0	19.0	19.0	24.5	27.0	26.5	

BRAZOS RIVER BASIN

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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 (5.3 km) south of Hawley, and 5.8 mi (9.3 km) upstream from mouth.

DRAINAGE AREA.--205 mi² (531 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD TX-74-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,615.98 ft (492.551 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No known diversion above station.

AVERAGE DISCHARGE.--11 years (water years 1969-79), 9.51 ft³/s (0.269 m³/s), 0.63 in/yr (16 mm/yr), 6,890 acre-ft/yr (8.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s (70.8 m³/s), July 21, 1975, gage height, 15.53 ft (4.734 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1932, about 16.0 ft (4.88 m) in 1957, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 2	0030	319 9.03	6.80 2.073
June 26	1430	*501 14.2	8.71 2.655

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.00	.08	.00	.02	.00	.33	116	1.8	.01	.00	.00
2	.19	.00	.03	.00	.01	.00	.23	108	2.0	.00	.00	.00
3	.07	.00	.01	.00	.00	.00	.14	24	3.6	.00	.00	.00
4	.01	.00	.00	.00	.00	.00	.15	20	3.6	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.12	18	3.9	.00	.00	.00
6	.00	.00	.00	.00	.23	.00	.10	10	2.4	.00	.00	.00
7	.00	.00	.00	.00	3.0	.00	.09	6.3	1.5	.00	.00	.00
8	.00	.00	.00	.00	2.7	.00	.15	4.8	.59	.01	.00	.00
9	.00	.00	.00	.00	2.3	.00	.11	3.0	7.4	.00	.00	.00
10	.00	.00	.00	.00	1.1	.00	.17	3.1	103	.00	.00	.00
11	.00	.00	.00	.00	.61	.00	4.5	3.5	18	.00	.00	.00
12	.00	.00	.00	.00	.40	.00	4.6	3.5	2.8	.00	.00	.00
13	.00	.00	.00	.00	.23	.00	1.2	3.2	1.1	.00	.00	.00
14	.00	.00	.00	.00	.12	.00	.28	2.2	.57	.00	.00	.00
15	.00	.00	.00	.00	.06	.00	.02	1.5	.33	.00	.00	.00
16	.00	.00	.00	.00	.02	.00	.02	.84	.12	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.06	.67	.03	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	5.9	.36	.01	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	4.3	.15	.00	20	.00	.00
20	.00	.00	.00	.62	.00	3.9	1.2	.05	.00	13	.00	.00
21	.00	.00	.00	2.1	.00	11	.47	.11	.00	4.2	.00	.00
22	.00	.00	.00	1.3	.00	128	.21	8.8	.00	.24	.00	.00
23	.05	.00	.00	.71	.00	40	.10	16	.00	.01	.66	.00
24	.94	.00	.00	.19	.00	4.5	.06	5.7	.00	.00	.00	.00
25	3.4	.00	.00	.11	.00	1.5	.03	4.0	43	.00	.00	.00
26	1.4	.28	.00	.17	.00	.83	.01	3.1	293	.00	.00	.00
27	.51	1.9	.00	.09	.00	.54	.00	2.9	36	.00	.00	.00
28	.13	1.4	.00	.35	.00	.40	.00	4.5	4.5	.00	.00	.00
29	.04	.48	.00	.38	---	.39	.11	6.7	.85	.00	.00	.00
30	.02	.18	.00	.21	---	.46	.01	3.9	.10	.00	.00	.00
31	.00	---	.00	.06	---	.41	---	2.8	---	.35	.00	---
TOTAL	7.13	4.24	.12	6.29	10.80	191.93	24.67	387.68	530.20	37.82	.66	.00
MEAN	.23	.14	.004	.20	.39	6.19	.82	12.5	17.7	1.22	.021	.000
MAX	3.4	1.9	.08	2.1	3.0	128	5.9	116	293	20	.66	.000
MIN	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.000
CFSM	.001	.001	.000	.001	.002	.03	.004	.06	.09	.006	.000	.000
IN.	.00	.00	.00	.00	.00	.03	.00	.07	.10	.01	.00	.00
AC-FT	14	8.4	.2	12	21	381	49	769	1050	75	1.3	.00
CAL YR 1978	TOTAL	3130.19	MEAN 8.58	MAX 1330	MIN .00	CFSM .04	IN .57	AC-FT 6210				
WTR YR 1979	TOTAL	1201.54	MEAN 3.29	MAX 293	MIN .00	CFSM .02	IN .22	AC-FT 2380				

BRAZOS RIVER BASIN

08083245 MULBERRY CREEK NEAR HAWLEY, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 02...	1625	.18	3110	28.0	880	760	170	110	310
FEB 07...	1615	2.8	7420	6.0	2500	2300	390	360	820
MAR 20...	1410	8.2	8940	13.5	2900	2800	400	470	1100
MAR 22...	1350	187	2950	16.0	880	730	170	110	300
MAY 01...	1515	100	1210	20.0	360	270	73	44	100
JUN 12...	0920	2.9	960	21.0	270	170	55	33	91

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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...	4.6	11	149	0	550	640	.2	7.2	1870
FEB 07...	7.2	9.1	250	0	1900	1500	.3	1.4	5100
MAR 20...	8.8	11	210	0	2400	1800	.4	1.2	6290
MAR 22...	4.4	8.8	180	0	560	580	.3	10	1830
MAY 01...	2.3	5.9	120	0	230	200	.2	6.2	718
JUN 12...	2.4	6.8	120	0	180	150	.2	7.1	582

BRAZOS RIVER BASIN

227

08083300 ELM CREEK NEAR ABILENE, TX

LOCATION.--Lat 32°21'08", long 99°48'27", Taylor County, Hydrologic Unit 12060102, on right bank at upstream side of bridge on Farm Road 707, 2.8 mi (4.5 km) southeast of Caps, 7.5 mi (12.1 km) southwest of Abilene, and 35.1 mi (56.5 km) upstream from mouth.

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--September 1963 to September 1979 (discontinued).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,804.15 ft (549.90 m) National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bridge plans).

REMARKS.--Records good. Since 1921, flow largely regulated by Lake Abilene, capacity 7,900 acre-ft (9.74 hm³), 12 mi (19 km) upstream. Rain gage at station prior to May 31, 1978. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 9.79 ft³/s (0.277 m³/s), 7,090 acre-ft/yr (8.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s (129 m³/s) Sept. 18, 1974, gage height, 18.68 ft (5.694 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) Mar. 30, gage height, 13.12 ft (3.999 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.82	81	.19	.33	9.8	.00
2	.00	.00	.00	.00	.00	.00	.40	1.7	.07	.05	.49	.00
3	.00	.00	.00	.00	.00	.00	.29	.60	.04	.00	.02	.00
4	.00	.00	.00	.00	.00	.00	.22	.46	.02	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.16	.36	.01	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.16	.19	.09	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.15	.17	.01	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.16	.20	.28	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.17	.20	.13	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.21	.17	.03	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.39	.14	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.39	.09	.05	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.30	.08	.08	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.29	.06	.10	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.27	.05	.06	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.25	.05	.02	.00	.00	.00
17	.00	.04	.00	.00	.00	.00	71	.03	.02	.00	.00	.00
18	.00	.01	.00	.00	.00	.00	2.9	.02	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.135	.35	.03	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	4.8	.20	.02	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	12	.12	.02	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	186	.10	.08	.00	.00	.00	.00
23	1.7	.00	.00	.00	.00	3.0	.08	.03	.00	.00	3.7	.00
24	.02	.00	.00	.00	.00	.83	.08	.02	.00	.00	.09	.00
25	.00	.00	.00	.00	.00	.54	.08	.02	11	.00	.00	.00
26	.00	.00	.00	.00	.00	.41	.08	.07	53	.00	.00	.00
27	.00	.00	.00	.00	.00	.20	.08	.03	1.9	.00	.00	.00
28	.00	.00	.00	.00	.00	.25	.08	.02	.95	.00	.00	.00
29	.00	.00	.00	.00	.00	47	.08	.02	.43	.00	.00	.00
30	.00	.00	.00	.00	.00	598	.08	.01	.46	.00	.01	.00
31	.00	.00	.00	.00	.00	3.2	.01	.01	.00	.00	.00	.00
TOTAL	1.72	.05	.00	.00	.00	991.23	79.94	85.95	109.54	.38	14.11	.00
MEAN	.055	.002	.000	.000	.000	32.0	2.66	2.77	3.65	.012	.46	.000
MAX	1.7	.04	.00	.00	.00	598	71	81	53	.33	9.8	.00
MIN	.00	.00	.00	.00	.00	.00	.08	.01	.00	.00	.00	.00
AC-FT	3.4	.10	.00	.00	.00	1970	159	170	217	.8	28	.00
CAL YR 1978	TOTAL	1481.72	MEAN	4.06	MAX	1050	MIN	.00	AC-FT	2940		
WTR YR 1979	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		

BRAZOS RIVER BASIN

08083400 LITTLE ELM CREEK NEAR ABILENE, TX

LOCATION---Lat 32°23'29", long 99°51'08", Taylor County, Hydrologic Unit 12060102, on right bank at downstream side of bridge on Farm Road 707, 1.2 mi (1.9 km) north of Caps, 4.6 mi (7.4 km) southwest of intersection of U.S. Highways 277 and 83 in Abilene, and 10.3 mi (16.6 km) upstream from mouth.

DRAINAGE AREA---39.1 mi² (101.3 km²).

PERIOD OF RECORD---September 1963 to September 1979 (discontinued).

GAGE---Water-stage recorder. Datum of gage is 1,786.12 ft (544.409 m) National Geodetic Vertical Datum of 1929.

REMARKS---Records fair. No known diversion above station. Rain gage at station prior to May 31, 1978.

AVERAGE DISCHARGE---16 years, 2.09 ft³/s (0.0592 m³/s), 0.73 in/yr (16 mm/yr), 1,510 acre-ft/yr (1.86 hm³/yr).

EXTREMES FOR PERIOD OF RECORD---Maximum discharge, 2,180 ft³/s (61.7 m³/s) Sept. 18, 1974, gage height, 11.52 ft (3.511 m); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD---Maximum stage since 1903, about 15 ft (4.6 m) in 1913, from information by local residents.

EXTREMES FOR CURRENT YEAR---Maximum discharge, 162 ft³/s (4.59 m³/s) Mar. 30, gage height, 3.62 ft (1.103 m), no other peak above base of 100 ft³/s (2.83 m³/s); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.70	25	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.15	9.0	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.03	1.4	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.01	.26	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	5.3	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	1.3	.95	.00	.00	28	.00	.00
20	.00	.00	.00	.00	.00	.04	.07	.00	.00	7.8	.00	.00
21	.00	.00	.00	.00	.00	.17	.00	.00	.00	.14	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
23	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.01	.00	.00	6.3	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	3.7	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.44	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00
29	.00	.00	.00	.00	---	.33	.00	.00	.07	.00	.00	.00
30	.00	.00	.00	.00	---	74	.00	.00	.01	.00	.00	.00
31	.00	---	.00	.00	---	3.3	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	93.03	18.22	35.72	10.78	35.95	.00	.00
MEAN	.000	.000	.000	.000	.000	3.00	.61	1.15	.36	1.16	.000	.000
MAX	.00	.00	.00	.00	.00	74	11	25	6.3	28	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.000	.000	.000	.000	.000	.08	.02	.03	.009	.03	.000	.000
IN.	.00	.00	.00	.00	.00	.09	.02	.03	.01	.03	.00	.00
AC-FT	.00	.00	.00	.00	.00	185	36	71	21	71	.00	.00
CAL YR 1978	TOTAL	804.96	MEAN	2.21	MAX	698	MIN	.00	CFSM	.06	IN	.77
WTR YR 1979	TOTAL	193.70	MEAN	.53	MAX	74	MIN	.00	CFSM	.01	IN	.18
									AC-FT	1600		
									AC-FT	384		

BRAZOS RIVER BASIN

229

08083420 CAT CLAW CREEK AT ABILENE, TX

LOCATION.--Lat 32°28'31", long 99°44'56", Taylor County, Hydrologic Unit 12060102, in Sears Park 320 ft (98 m) downstream from bridge on Ambler Street in Abilene and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--13.0 mi² (33.7 km²).

PERIOD OF RECORD.--October 1970 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,682.32 ft (512.77 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 2.50 ft³/s (0.0708 m³/s), 2.61 in/yr (66 mm/yr), 1,810 acre-ft/yr (2.23 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft³/s (37.1 m³/s) Aug. 3, 1978, gage height, 6.60 ft (2.012 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 15	1500	363 10.3	a4.40 1.341	Mar. 29	2130	492 13.9	4.82 1.469
Mar. 19	1330	805 22.8	a5.62 1.713	May 1	0600	513 14.5	a4.88 1.487
Mar. 22	0430	*1,130 32.0	a6.28 1.914				

a From floodmark.

Minimum discharge, no flow most of time.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.36	4.8	71	5.7	.00	.25	.00
2	.00	.00	.00	.00	.00	.00	.57	4.1	1.2	.00	.00	.00
3	.00	.00	.00	.00	4.6	.00	.32	2.4	.07	.00	.00	.00
4	.00	.00	.00	.00	59	.00	.05	.90	15	.00	.00	.00
5	.00	1.4	.00	.00	14	.00	.00	.28	.67	.00	.00	.00
6	.00	1.2	.00	.00	4.2	.00	.00	.07	.03	.00	.00	.00
7	.00	.73	.00	.00	.84	.00	.00	.00	.00	.00	.00	.00
8	.00	.11	.00	.00	.22	.00	.00	.00	3.1	.00	.00	.00
9	.00	.00	.00	.00	.01	.00	.05	.00	5.9	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.37	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	10	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	42	.00	.00	.00	7.1	.00	.00	.00	.00	.00	.00
16	.00	11	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
17	.00	.67	.00	.00	.00	.20	20	.00	.00	.00	.00	.00
18	.00	.02	.00	.00	.00	.10	1.0	.00	.00	.00	.00	.00
19	.00	.22	.00	.00	.00	.89	.12	.03	.00	4.6	.00	.00
20	.00	.20	.00	.00	.00	21	.44	.34	.00	.74	1.1	.00
21	.00	.07	.00	.00	.00	26	.11	5.1	.00	.00	11	.00
22	6.8	.01	.00	.00	.02	151	.01	.19	.00	.00	.10	.00
23	30	.00	.00	.00	.01	8.7	.00	.00	.00	.00	15	.00
24	.37	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.14	.00
25	.41	.00	.00	.00	.00	.38	.00	.00	12	.00	.00	.00
26	.00	.00	.00	.00	.00	.06	.00	.00	9.9	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.35	.65	.00	.00	.00
28	.00	.00	.00	.00	1.4	.00	.00	.66	.01	.00	.00	.00
29	.00	.00	.00	.00	---	46	5.3	.14	.00	.00	.00	.00
30	.00	.00	.00	.00	---	80	.48	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	7.7	---	8.2	---	10	.00	---
TOTAL	37.58	57.63	.00	.00	84.30	440.20	43.77	93.76	54.23	15.34	27.59	.00
MEAN	1.21	1.92	.000	.000	3.01	14.2	1.46	3.02	1.81	.49	.89	.000
MAX	30	42	.00	.00	59	151	20	71	15	10	15	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.09	.15	.000	.000	.23	1.09	.11	.23	.14	.04	.07	.000
IN.	.11	.16	.00	.00	.24	1.26	.13	.27	.16	.04	.08	.00
AC-FT	75	114	.00	.00	167	873	87	186	108	30	55	.00

CAL YR 1978 TOTAL 970.37 MEAN 2.66 MAX 431 MIN .00 CFSM .21 IN 2.78 AC-FT 1920
WTR YR 1979 TOTAL 854.40 MEAN 2.34 MAX 151 MIN .00 CFSM .18 IN 2.44 AC-FT 1690

BRAZOS RIVER BASIN

08083470 CEDAR CREEK AT ABILENE, TX

LOCATION.--Lat 32°26'56", long 99°43'13". Taylor County, Hydrologic Unit 12060102, on right bank at upstream side of North Second Street Bridge and State Highway 355 at Abilene, 0.2 mi (0.3 km) downstream from Lytle Creek, 4.1 mi (6.6 km) downstream from Buttonwillow Creek, 5.9 mi (9.5 km) upstream from Rainy Creek, 7.2 mi (11.6 km) downstream from Kirby Lake, and 9.8 mi (15.8 km) upstream from mouth.

DRAINAGE AREA.--119 mi² (308 km²).

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,677.67 ft (511.354 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow is partly regulated by Lytle Lake, capacity 1,200 acre-ft (1.48 hm³), and by Lake Kirby, capacity 7,620 acre-ft (9.40 hm³). Records furnished by the city of Abilene show that 295 acre-ft (364,000 m³) was diverted from Lake Kirby during the current year. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 6.20 ft³/s (0.176 m³/s), 4,490 acre-ft/yr (5.54 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,670 ft³/s (132 m³/s) Sept. 18, 1974, gage height, 12.54 ft (3.822 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 734 ft³/s (20.8 m³/s) Mar. 19, gage height, 6.30 ft (1.920 m); no flow at times.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.25	.29	.35	.44	.19	21	132	1.7	.00	.09	.00
2	.39	.28	.33	.29	.40	1.8	5.9	44	2.8	.00	.02	.00
3	.34	.36	.29	.72	.38	1.4	6.0	20	.88	.00	.00	.00
4	.34	.35	1.1	.58	1.5	.22	4.9	25	.32	.00	.00	.00
5	.35	2.1	1.5	.39	3.6	.17	4.9	11	23	.00	.00	.00
6	.37	.53	1.5	.19	4.1	.20	4.3	6.6	2.0	2.9	.00	.00
7	.47	.76	1.5	.33	1.3	.21	3.5	5.2	1.6	3.6	.00	.00
8	.61	.21	1.5	.33	.27	.22	2.4	4.6	.86	.65	.00	.00
9	.75	.21	1.8	.41	.20	.17	2.4	4.4	7.4	.00	.00	.00
10	.91	.21	1.9	1.8	.43	.18	6.5	3.0	22	.71	.00	.00
11	1.1	.21	2.2	1.4	.42	.25	5.3	1.5	.27	.75	.00	.00
12	.96	.26	2.5	.52	.18	.39	1.8	1.4	.26	.74	.00	.00
13	.67	.36	1.4	.18	.15	.41	1.6	1.1	.12	.84	.00	.00
14	.61	.39	1.2	.17	.14	.37	1.8	1.2	.09	1.0	.00	.00
15	.66	25	.80	.20	.14	2.3	2.1	1.3	.03	1.1	.00	.00
16	.86	5.0	.87	.17	.12	1.1	2.2	.98	.02	1.3	.00	.00
17	.56	1.0	.75	.19	.19	.47	50	1.1	.18	1.6	.00	.00
18	.56	.36	.25	16	.21	.61	63	1.2	.14	2.8	.00	.00
19	.52	.41	.29	2.0	.21	186	12	1.1	.17	8.8	.00	.00
20	.56	.33	.23	.70	.21	87	5.3	1.1	.04	4.6	.00	.00
21	.80	.51	.20	.35	.21	70	4.0	1.5	.00	.86	20	.00
22	4.5	.43	.21	.29	.21	197	3.9	.87	.01	.00	.06	.00
23	20	.30	.23	.24	.21	31	3.2	.45	.00	.00	8.2	.00
24	1.3	.50	.22	.21	.80	7.2	4.2	.31	.00	.00	.06	.00
25	.87	.38	.26	.29	.16	4.6	4.0	.21	9.6	.00	.01	.00
26	.48	.58	.26	.36	.13	3.8	2.2	.16	20	.00	.01	.00
27	.28	.33	.28	.14	.14	2.7	2.3	.17	7.1	.00	.01	.00
28	.19	.29	.35	.22	.15	4.4	2.7	1.5	4.5	.00	.00	.00
29	.66	.28	.37	.21	---	34	2.9	.55	3.3	.00	.00	.00
30	.29	.30	.28	.20	---	398	2.3	.55	.90	.00	.00	.00
31	.18	---	.35	.32	---	94	---	.38	---	7.9	.00	---
TOTAL	41.51	42.48	25.21	29.75	16.60	1130.36	238.6	274.43	109.29	40.15	28.46	.00
MEAN	1.34	1.42	.81	.96	.59	36.5	7.95	8.85	3.64	1.30	.92	.000
MAX	20	25	2.5	16	4.1	398	63	132	23	8.8	20	.00
MIN	.18	.21	.20	.14	.12	.17	1.6	.16	.00	.00	.00	.00
AC-FT	82	84	50	59	33	2240	473	544	217	80	56	.00
CAL YR 1978	TOTAL	2373.58	MEAN 6.50	MAX 931	MIN .00	AC-FT 4710						
WTR YR 1979	TOTAL	1976.84	MEAN 5.42	MAX 398	MIN .00	AC-FT 3920						

08083500 FORT PHANTOM HILL RESERVOIR NEAR NUGENT, TX

LOCATION.--Lat 32°36'58", long 99°40'05", Jones County, Hydrologic Unit 12060102, at outlet gate tower near right bank, 120 ft (37 m) upstream from dam on Elm Creek, 4.3 mi (6.9 km) upstream from mouth, and 5.4 mi (8.7 km) south of Nugent.

DRAINAGE AREA.--470 mi² (1,217 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1940 to current year. Prior to October 1965, monthend contents only.

REVISED RECORDS.--WSP 1562: 1953-57 (figures of monthend contents). WDR TX-76-2: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 1,580.78 ft (481.822 m) National Geodetic Vertical Datum of 1929.

REMARKS.--The reservoir is formed by a rock-faced earthfill dam 3,740 ft (1,140 m) long. The dam was completed and storage began in October 1938. The uncontrolled service spillway is a cut channel through natural ground with a concrete ogee weir located 0.7 mi (1.1 km) from right end of dam. The service outlet works consist of a concrete tower with a 4.0 by 7.0 ft (1.2 by 2.1 m) conduit. The service tower contains five gated openings at various elevations. The dam and reservoir are owned by the city of Abilene and were built to impound water for municipal use. Since July 1974, the West Texas Utility Co. has operated a steam generating powerplant on the reservoir. During the year, the city of Abilene diverted 1,450 acre-ft (1.79 hm³) from Clear Fork Brazos River into Fort Phantom Hill Reservoir and an undetermined amount of floodflow was diverted by gravity ditch from Deadman Creek into the reservoir. The capacity table was based on a survey of Oct. 2, 1953. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam.....	69.2	-
Crest of spillway.....	55.1	74,310
Highest gated outlet (invert).....	28.0	10,330
Lowest gated outlet (invert).....	1.6	-

COOPERATION.--Records of gage heights and diversions were furnished by the city of Abilene. The capacity table is furnished by Soil Conservation Service.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents observed, 89,910 acre-ft (111 hm³) May 25, 1957, gage height, 58.7 ft (17.89 m); minimum observed, 19,040 acre-ft (23.5 hm³) Apr. 23-25, 1953, gage height, 34.5 ft (10.52 m).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents observed, 55,820 acre-ft (68.8 hm³) May 3-6, gage height, 50.1 ft (15.27 m); minimum, 39,360 acre-ft (48.5 hm³) Sept 30, gage height, 44.5 ft (13.56 m).

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

44.5	39,360	48.5	50,680
46.5	44,740	50.5	57,180

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47940	46750	46160	44740	43610	42520	53530	53530	53210	52880	47940	43890
2	47940	46750	46160	44460	43610	42520	53860	55480	53210	52880	47940	43610
3	47940	46750	46160	44460	43330	42250	53860	55820	53210	52560	47940	43610
4	47640	46750	45870	44460	43330	42250	53530	55820	53210	52560	47640	43330
5	47640	46750	45870	44180	43330	42250	53530	55820	54180	52230	47640	43330
6	47640	46750	45870	44180	43330	42250	53530	55820	54180	51920	47340	43060
7	47640	46750	45590	44180	43610	42250	53530	55480	53860	51610	47340	43060
8	47340	46450	45590	44180	43610	42250	53530	55480	53860	51610	47050	42790
9	47340	46450	45590	44180	43610	42250	53210	55480	53860	51300	46750	42520
10	47340	46450	45310	43890	43610	41980	53210	55480	54180	51300	46750	42520
11	47340	46450	45310	43890	43610	41980	53530	55160	54180	50990	46450	42250
12	47340	46450	45310	43890	43610	41720	53210	55160	54180	50990	46450	41980
13	47340	46160	45310	43890	43330	41720	53210	55160	54180	50680	46160	41980
14	47050	46160	45310	43610	43330	41720	52880	54830	53860	50680	46160	41720
15	47050	46160	45310	43610	43330	41450	52880	54830	53860	50370	45870	41450
16	47050	46160	45310	43610	43330	41720	52880	54830	53530	50060	45590	41450
17	46750	46450	45030	43610	43330	41720	52880	54510	53210	50060	45310	41180
18	46750	46450	45030	43610	43060	41720	53210	54510	53210	49750	45030	40910
19	46750	46450	45030	43890	43060	41720	53530	54180	52880	49750	45030	40910
20	46750	46450	45030	43890	43060	42790	53530	54180	52880	49440	44740	40640
21	46750	46450	45030	44180	43060	43610	53530	54180	52560	49440	44740	40640
22	46750	46160	45030	44180	42790	44740	53210	54180	52560	49440	44740	40640
23	46750	46160	45030	44180	42790	47340	53210	54180	52230	49130	44740	40380
24	47050	46160	44740	43890	42790	47940	53210	53860	52230	49130	44740	40380
25	47050	46160	44740	43890	42790	48830	53210	53860	51920	48830	44740	40130
26	47050	46160	44740	43890	42520	48830	52880	53860	52880	48830	44740	40130
27	47050	46160	44740	43890	42520	48830	52880	53530	53210	48530	44460	39870
28	47050	46160	44740	43890	42520	48830	52560	53530	53210	48530	44460	39620
29	47050	46160	44740	43890	---	48830	52560	53530	53210	48230	44180	39620
30	47050	46160	44740	43610	---	50060	52560	53530	52880	48230	44180	39360
31	46750	---	44740	43610	---	53210	---	53210	---	47940	44180	---
MAX	47940	46750	46160	44740	43610	53210	53860	55820	54180	52880	47940	43890
MIN	46750	46160	44740	43610	42520	41450	52560	53210	51920	47940	44180	39360
(†)	47.2	47.0	46.5	46.1	45.7	49.3	49.1	49.3	49.2	47.6	46.3	44.5
(‡)	-1190	-590	-1420	-1130	-1090	+10690	-650	+650	-330	-4940	-3760	-4820
(††)	329	667	718	1190	1080	1250	1340	1680	2050	2960	2690	2720

CAL YR 1978 MAX 50370 MIN 26590 ‡ +1130 †† 18040
WTR YR 1979 MAX 55820 MIN 39360 ‡ -8580 †† 18670

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use.

BRAZOS RIVER BASIN

08083500 FORT PHANTOM HILL RESERVOIR NEAR NUGENT, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO_3)	HARDNESS, NONCARBONATE (MG/L AS CaCO_3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO
OCT 05...	1400	677	23.0	200	68	47	20	60	1.8
JUL 25...	1220	696	30.0	190	46	43	19	64	2.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO_3)	CARBONATE (MG/L AS CO_3)	SULFATE DIS-SOLVED (MG/L AS SO_4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO_2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
OCT 05...	8.4	160	0	76	93	.3	2.0	386
JUL 25...	8.1	170	0	76	90	.3	3.0	387

BRAZOS RIVER BASIN

233

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 (10 m) downstream from bridge on Farm Road 600 at Nugent, 2 mi (3 km) downstream from Elm Creek, 4 mi (6 km) upstream from Deadman Creek, and 167.8 mi (270.0 km) upstream from mouth.

DRAINAGE AREA.--2,199 mi² (5,695 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1924 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,531.91 ft (466.926 m) National Geodetic Vertical Datum of 1929 (levels by Brazos River Authority). Prior to Dec. 12, 1933, nonrecording gage at site 575 ft (175 m) downstream at same datum.

REMARKS.--Water-discharge records good. Flow affected by four reservoirs with a capacity of 103,600 acre-ft (128 hm³). Numerous diversions above station for municipal supply and oilfield operation materially affect low flow. See table below for records of diversions from river above station into Fort Phantom Hill Reservoir.

AVERAGE DISCHARGE.--14 years (water years 1925-38) prior to completion of Fort Phantom Hill Reservoir, 186 ft³/s (5,268 m³/s), 134,800 acre-ft/yr (166 hm³/yr); 41 years (water years 1939-79) partially regulated, 81.6 ft³/s (2,311 m³/s), 59,120 acre-ft/yr (72.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 47,000 ft³/s (1,330 m³/s) Sept. 8, 1932, gage height, 27.05 ft (8.245 m), site then in use, from rating curve extended above 25,000 ft³/s (708 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 30 ft (9.1 m) in 1876; floods in 1900 and May 1923 reached stages of 24 and 24.5 ft (7.3 and 7.47 m), respectively, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 975 ft³/s (27.6 m³/s) May 1, gage height, 5.60 ft (1.707 m); minimum, 0.03 ft³/s (0.001 m³/s) Aug. 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	8.2	12	9.0	9.9	11	28	388	83	40	9.2	1.4
2	11	6.6	11	8.6	9.6	11	25	448	46	20	297	1.3
3	9.4	7.4	9.9	9.0	9.6	12	23	222	34	13	87	1.3
4	8.9	8.7	9.2	9.6	10	12	21	278	31	12	17	1.3
5	8.1	9.4	8.8	9.6	12	11	20	184	77	12	9.2	.99
6	7.3	10	9.0	9.6	13	11	19	115	241	12	5.3	.99
7	7.1	9.3	9.0	9.6	17	11	20	79	64	12	3.9	1.5
8	7.8	9.0	8.5	9.3	18	11	21	40	37	12	3.6	1.8
9	8.5	9.0	8.4	9.9	16	10	21	28	31	12	1.6	1.6
10	8.8	8.8	8.4	10	14	10	22	22	88	12	1.0	1.1
11	9.4	9.6	8.8	11	13	10	28	18	71	12	1.8	.87
12	9.5	9.4	9.0	11	12	10	26	16	26	12	.79	.73
13	9.4	9.0	8.4	11	12	10	23	15	18	12	.27	.73
14	9.0	9.5	8.7	11	12	10	19	14	14	12	.06	.58
15	9.0	10	8.8	10	11	11	18	13	11	12	.04	.50
16	9.4	19	9.0	10	11	13	18	13	9.7	12	.05	.50
17	9.5	21	9.0	10	10	13	19	13	8.4	12	.34	.50
18	9.3	10	9.0	12	10	13	22	12	7.8	15	1.3	.50
19	9.4	10	9.0	17	10	15	52	13	7.4	30	1.5	.67
20	7.8	11	9.1	103	11	20	30	13	6.3	80	4.3	.73
21	7.8	11	9.0	66	11	59	19	16	5.7	250	3.9	.73
22	9.1	9.9	9.5	23	11	216	16	104	5.5	150	2.6	.73
23	27	9.8	8.9	14	11	555	16	254	5.5	60	2.3	.73
24	23	9.6	9.0	12	11	91	16	87	4.6	30	2.6	.73
25	18	11	8.9	12	11	228	16	122	23	13	2.6	.93
26	22	23	8.6	12	11	131	15	41	372	11	2.2	.99
27	15	34	7.9	12	11	78	14	28	250	8.3	2.1	.99
28	12	40	8.2	11	11	59	12	22	150	5.8	2.1	1.1
29	10	24	8.4	11	---	47	19	21	110	5.8	2.0	1.5
30	9.3	15	8.4	10	---	38	14	33	80	4.9	1.8	1.9
31	8.7	---	9.5	10	---	31	---	241	---	5.0	1.7	---
TOTAL	345.5	392.2	279.3	493.2	329.1	1768	632	2913	1917.9	909.8	471.15	29.92
MEAN	11.1	13.1	9.01	15.9	11.8	57.0	21.1	94.0	63.9	29.3	15.2	1.00
MAX	27	40	12	103	18	555	52	448	372	250	297	1.9
MIN	7.1	6.6	7.9	8.6	9.6	10	12	12	4.6	4.9	.04	.50
AC-FT	685	778	554	978	653	3510	1250	5780	3800	1800	935	59
(†)	0	0	0	0	0	1450	0	0	0	0	0	0
CAL YR 1978	TOTAL	9130.62	MEAN	25.0	MAX	2370	MIN	.00	AC-FT	18110	†	4180
WTR YR 1979	TOTAL	10481.07	MEAN	28.7	MAX	555	MIN	.04	AC-FT	20790	†	1450

† Diversions, in acre-feet, into Fort Phantom Hill Reservoir from river above station.

BRAZOS RIVER BASIN

08084000 CLEAR FORK BRAZOS RIVER AT NUGENT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: August 1948 to September 1953. Chemical and biochemical analyses: February 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L CaCO3)
NOV 02...	1030	3.5	3000	7.8	18.0	9.7	107	2.4	1000	780
DEC 14...	1200	9.5	3000	7.6	4.0	10.8	86	1.0	1000	810
FEB 14...	1600	12	3980	7.9	13.0	11.3	112	1.8	1200	1000
APR 11...	1600	37	2908	8.1	18.5	8.2	91	3.1	990	760
MAY 02...	0900	529	--	--	20.0	--	--	--	--	--
JUN 07...	1100	61	148	6.8	24.5	6.6	80	2.5	170	110
AUG 09...	1220	1.8	878	7.3	27.0	6.2	78	2.8	300	170

DATE	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)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)
NOV 02...	220	110	290	4.0	6.9	270	0	730	490	.4
DEC 14...	230	110	310	4.2	7.6	270	0	730	480	.4
FEB 14...	280	130	400	5.0	7.1	280	0	970	650	.4
APR 11...	230	100	270	3.7	7.4	270	0	790	420	.5
MAY 02...	--	--	--	--	--	--	--	--	--	--
JUN 07...	62	3.4	58	1.9	6.5	70	0	140	83	.2
AUG 09...	77	26	70	1.8	7.4	160	0	150	120	.3

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2)	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)
NOV 02...	12	1990	.60	.02	.62	.04	.72	.76	.05
DEC 14...	9.3	2010	.69	.01	.70	.01	.52	.53	.03
FEB 14...	5.3	2580	.94	.02	.96	.01	.93	.94	.05
APR 11...	7.1	1960	.75	.08	.83	.15	.52	.67	.08
MAY 02...	--	--	--	--	--	--	--	--	--
JUN 07...	6.0	394	.36	.04	.40	.08	1.1	1.2	.26
AUG 09...	12	463	.04	.06	.10	.03	.79	.82	.07

BRAZOS RIVER BASIN

235

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 (5.1 km) east of Nugent, and 4.4 mi (7.1 km) upstream from Clear Fork Brazos River.

DRAINAGE AREA.--168 mi² (435 km²).

PERIOD OF RECORD.--Periodic discharge measurements and water-quality data: October 1967 to current year.

REMARKS.--During the current water year, the city of Abilene discharged 8,530 acre-ft (10.5 hm³) of sewage effluent into creek 12 mi (19 km) upstream from station.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
NOV 02...	0930	12	1650	7.3	18.0	5.7	63	26	230	66
DEC 14...	0945	22	1700	7.6	5.0	10.1	82	19	250	89
FEB 14...	1400	4.3	1750	7.9	14.0	11.5	116	23	270	57
APR 11...	1430	12	1698	8.1	20.0	10.9	124	43	310	77
JUN 07...	0910	12	320	7.7	24.0	6.4	78	21	290	120
AUG 09...	1030	18	2164	7.6	27.5	6.9	88	14	350	130

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 02...	51	25	210	6.0	18	200	0	150	290	.6
DEC 14...	52	30	230	6.3	20	200	0	200	290	.7
FEB 14...	54	33	230	6.1	17	260	0	220	270	.7
APR 11...	65	35	240	6.0	15	280	0	220	270	.7
JUN 07...	66	30	220	5.6	12	210	0	190	290	.7
AUG 09...	74	40	250	5.8	16	268	0	250	320	.8

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, 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 02...	12	855	3.1	.55	3.6	5.9	1.7	7.6	9.3
DEC 14...	9.0	930	5.0	.10	5.1	8.0	3.0	11	8.8
FEB 14...	9.0	962	.34	.27	.61	9.4	6.6	16	12
APR 11...	9.0	993	1.2	.76	2.0	9.2	2.8	12	10
JUN 07...	7.8	920	.45	.65	1.1	1.5	3.5	5.0	4.4
AUG 09...	11	1090	1.1	1.0	2.1	.93	2.9	3.8	5.3

08084500 LAKE STAMFORD NEAR HASKELL, TX

LOCATION.--Lat 33°04'44", long 99°34'52", Haskell County, Hydrologic Unit 12060103, on left bank at intake structure of West Texas Utilities Co. steam powerplant at Lake Stamford on Paint Creek, 1.0 mi (1.6 km) upstream from dam, 1.7 mi (2.7 km) upstream from California Creek, 10 mi (16 km) southeast of Haskell, and 21.8 mi (35.1 km) upstream from mouth.

DRAINAGE AREA.--368 mi² (953 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1953 to current year.

REVISED RECORDS.--WDR TX-77-2: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is 2.77 ft (0.84 m) National Geodetic Vertical Datum of 1929 (levels by Freese, Nichols, and Endress, Consulting Engineers).

REMARKS.--The lake is formed by a rolled earthfill dam 3,600 ft (1,097 m) long. The dam was completed in March 1953, and deliberate impoundment began in June 1953. The emergency spillway is an uncontrolled natural channel located near right end of dam. The service spillway is an uncontrolled channel excavated through natural ground, 169 ft (52 m) wide, located 900 ft (270 m) to left of left end of dam. The service outlet is a controlled 24-inch-diameter (610 mm) concrete pipe that is used for low-flow releases. During the current year, the cities of Stamford and Hamlin diverted 2,450 acre-ft (3.02 hm³) for municipal use. The capacity table is based on sedimentation survey of 1966. Gage-height record was furnished by West Texas Utilities Co. from their powerplant 1.0 mi (1.6 km) upstream from dam. 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.....	1,434.0	-
Crest of spillway.....	1,423.0	110,400
Crest of spillway.....	1,414.0	53,070
Lowest gated outlet (invert).....	1,380.0	358

COOPERATION.--The capacity table was furnished by the Soil Conservation Service. The diversions were furnished by the city of Stamford.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 103,700 acre-ft (128 hm³) Aug. 5, 1978, gage height, 1,422.2 ft (433.49 m); minimum since first appreciable storage in June 1954, 14,060 acre-ft (17.3 hm³) Jan. 29-31, 1957, gage height, 1,400.2 ft (426.78 m).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 64,690 acre-ft (79.8 hm³) June 7, 8, gage height, 1,416.3 ft (431.688 m); minimum, 49,410 acre-ft (60.9 hm³) Sept. 26-30, gage height, 1,413.2 ft (430.743 m).

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

1,413.0	48,530	1,415.0	57,920
1,414.0	53,070	1,416.0	63,080
		1,417.0	68,560

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56920	54020	53070	52130	52600	52130	53540	52130	52600	57920	53540	52600
2	56430	54020	53070	52130	52130	52130	53070	52600	54020	57420	53540	52130
3	56430	54020	53070	52130	52130	51670	53070	53070	53070	57420	53070	52130
4	55940	53540	53070	52130	52130	51670	53070	54020	52600	56920	53070	52130
5	55940	53540	53070	52130	52130	51670	53070	53540	61500	56430	53540	52130
6	55940	53540	53070	52130	52130	51670	53070	53540	63610	56430	53540	52130
7	55940	53540	53070	52130	53070	52130	53070	53540	64690	55940	53540	51670
8	55940	53540	53070	52130	53070	51670	53070	53540	64690	55940	53540	51670
9	55460	53540	53070	52130	53540	51670	53070	54020	63610	55940	53540	51210
10	55460	53540	53070	52130	53540	51670	53070	53540	63610	55940	53540	51210
11	55460	53540	53070	52130	53540	51210	53070	53540	61500	55940	53540	51210
12	55460	53540	53070	52130	53540	51210	52600	54020	60980	55460	53540	51210
13	54970	53540	52600	52130	53540	51210	52600	53540	59950	55460	53540	50760
14	54970	53540	52600	52130	52130	51210	52130	53540	59440	54970	53540	50760
15	54970	53070	52600	52130	52130	51210	52130	53540	59440	54970	53540	50310
16	54970	53070	52600	52130	52130	51210	52130	53070	58420	54970	52600	50310
17	54970	53540	52600	52130	52130	51210	52130	53070	57920	54970	52600	50310
18	54970	53540	52600	52130	52130	51210	53070	53540	57920	54970	52130	50310
19	54490	53540	52600	52130	52130	51210	53070	52600	57920	54970	52130	50310
20	54490	53070	52600	52130	52130	51210	52600	52600	56920	54970	52130	50310
21	54490	53070	52600	52130	52130	52130	52600	53070	57420	54490	52130	50310
22	54490	53540	52130	52600	52130	53070	52130	53070	56920	54490	52600	49860
23	54490	53540	52130	52600	52130	53070	52130	52600	56920	54490	52600	49860
24	54490	53540	52130	52600	52130	53070	52130	54020	56920	54020	52600	49860
25	54490	53540	52130	52600	52130	53070	52130	54020	56920	54020	53070	49860
26	54490	53540	52130	52600	52130	53540	51670	54020	57420	54020	53070	49410
27	54490	53540	52130	52600	52130	53540	51670	53070	58930	54020	52600	49410
28	54020	53540	52600	52600	52130	53540	51670	53070	58930	54020	52600	49410
29	54020	53070	52130	52130	---	53540	51210	53070	58420	54020	52600	49410
30	54020	53540	52130	52600	---	53540	51210	53070	57920	54020	52600	49410
31	54020	---	52130	52600	---	53540	---	52600	---	53540	52600	---
MAX	56920	54020	53070	52600	53540	53540	53540	54020	64690	57920	53540	52600
MIN	54020	53070	52130	52130	52130	51210	51210	52130	52600	53540	52130	49410
(†)	1414.2	1414.1	1413.8	1413.9	1413.8	1414.1	1413.6	1413.9	1415.0	1414.1	1413.9	1413.2
(‡)	-2900	-480	-1410	+470	-470	+1410	-2330	+1390	+5320	-4380	-940	-3190
(††)	152	138	134	150	117	133	152	156	189	217	212	224

CAL YR 1978 MAX 102100 MIN 16610 ‡ +27900 †† 2198
WTR YR 1979 MAX 64690 MIN 49410 ‡ -7510 †† 1974

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use.

BRAZOS RIVER BASIN

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08084500 LAKE STAMFORD NEAR HASKELL, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JUL 23...	1305	607	29.5	200	57	49	18	46	1.4
DATE	POTAS- SIUM, DIS- SOLVED (MG/LO AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS DIS- SOLVED (MG/L)	
JUL 23...	7.8	170	0	70	61	.2	5.2	341	

BRAZOS RIVER BASIN

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 (14 km) east of Stamford, and 19.4 mi (31.2 km) upstream from Paint Creek.

DRAINAGE AREA.--478 mi² (1,238 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WSP 2122: 1965. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,470 ft (448 m), from topographic map.

REMARKS.--Water-discharge records good. Three small diversions above station.

AVERAGE DISCHARGE.--17 years, 27.8 ft³/s (0.787 m³/s), 0.79 in/yr (20 mm/yr), 20,140 acre-ft/yr (24.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Aug. 4, 1978, gage height, 31.00 ft (9.449 m), from floodmark, from rating curve extended above 21.0 ft (6.40 m) 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 (9.02 m), 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 (8.56 m); from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Mar. 22	1600	466	13.2	12.60	3.840
May 2	0200	*2,640	74.8	22.15	6.751
June 6	0615	426	12.1	12.22	3.725

Minimum discharge, 0.13 ft³/s (0.004 m³/s) Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2.0	2.4	2.4	2.7	2.9	5.6	1230	3.9	2.5	16	1.2
2	9.9	2.0	2.0	2.4	2.7	2.9	4.9	1820	4.1	2.0	9.4	1.0
3	7.2	2.4	1.9	2.2	2.7	3.3	4.7	177	4.6	2.0	124	.84
4	6.3	2.7	1.7	2.7	3.1	2.7	4.6	51	4.8	1.9	19	.50
5	5.7	3.1	1.7	2.7	3.5	2.7	4.4	26	155	20	6.1	.44
6	4.7	3.1	1.6	2.9	4.0	2.7	4.2	17	328	83	3.6	.48
7	4.2	3.3	1.7	3.1	4.2	2.7	4.0	12	189	12	3.4	1.1
8	3.7	3.3	1.6	3.1	4.9	2.7	4.0	8.5	47	11	2.4	1.1
9	3.5	3.5	1.6	2.7	6.6	2.7	4.1	7.4	24	13	2.9	.89
10	3.3	3.3	1.7	2.5	6.0	2.7	4.3	5.8	14	8.4	1.6	.81
11	3.1	3.3	1.7	2.4	5.2	2.5	4.2	5.1	10	7.0	1.8	.59
12	3.1	3.3	1.7	2.4	4.4	2.4	3.8	4.6	8.4	6.5	1.3	.44
13	2.7	3.3	1.7	2.7	4.2	2.4	3.6	4.3	7.1	6.5	1.3	.30
14	2.5	3.1	1.9	2.5	3.7	2.4	3.4	4.1	6.2	6.8	1.0	.20
15	2.5	4.0	1.7	2.9	3.5	2.4	3.4	3.8	5.8	8.0	1.0	.19
16	2.5	4.0	1.9	2.5	3.8	2.4	3.4	3.7	5.3	8.7	.94	.17
17	2.4	4.2	2.0	2.2	3.1	2.4	3.7	3.3	4.6	9.5	.94	.19
18	2.4	4.0	2.0	2.9	2.9	2.7	4.0	3.0	4.7	11	.94	.19
19	2.4	3.7	2.2	2.5	2.7	2.9	4.8	2.9	4.9	11	.84	.20
20	2.2	3.7	2.3	18	2.7	3.7	15	3.0	4.4	13	1.7	.16
21	2.0	3.5	1.9	30	2.5	6.9	9.7	4.3	4.5	8.9	4.0	.18
22	2.2	3.5	2.2	13	2.5	293	7.1	4.6	3.3	29	1.9	.21
23	4.2	3.5	2.9	5.2	2.7	153	5.4	6.1	2.7	42	5.4	.26
24	4.4	3.7	1.7	4.9	2.9	43	4.0	6.6	2.7	27	2.7	.21
25	3.3	3.7	2.0	4.2	3.1	19	3.5	7.9	6.7	18	9.6	.18
26	3.1	20	2.5	3.5	3.1	12	3.0	6.2	77	13	2.2	.19
27	2.9	11	2.5	3.5	2.9	10	2.7	5.6	19	11	1.7	.19
28	2.9	6.3	2.0	2.7	2.9	8.4	2.5	50	6.3	9.0	1.6	.15
29	2.7	4.7	1.7	2.5	---	7.3	2.9	19	3.9	7.7	1.6	.16
30	2.5	3.1	2.7	2.5	---	6.5	3.0	9.8	2.9	7.9	1.6	.18
31	2.2	---	2.5	2.5	---	6.0	---	5.8	---	13	1.4	---
TOTAL	118.7	128.3	61.6	142.2	98.7	619.3	137.9	3518.4	964.8	430.3	233.86	12.90
MEAN	3.83	4.28	1.99	4.59	3.53	20.0	4.60	113	32.2	13.9	7.54	.43
MAX	12	20	2.9	30	6.6	293	15	1820	328	83	124	1.2
MIN	2.0	2.0	1.6	2.2	2.5	2.4	2.5	2.9	2.7	1.9	.84	.15
CFSM	.008	.009	.004	.01	.007	.04	.01	.24	.07	.03	.02	.001
IN.	.01	.01	.00	.01	.01	.05	.01	.27	.08	.03	.02	.00
AC-FT	235	254	122	282	196	1230	274	6980	1910	853	464	26
CAL YR 1978	TOTAL	26515.34	MEAN	72.6	MAX	20400	MIN	.06	CFSM	.15	IN	2.06
WTR YR 1979	TOTAL	6466.96	MEAN	17.7	MAX	1820	MIN	.15	CFSM	.04	IN	.50
									AC-FT	52590		
										12830		

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

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

WATER TEMPERATURES: October 1962 to September 1979 (discontinued).

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, 46,400 micromhos Sept. 16, 1970; minimum measured daily, 218 micromhos Sept. 20, 1974; minimum estimated daily, 180 micromhos Aug. 4, 1978.

WATER TEMPERATURES: Maximum daily, 37.0°C July 4, 6, 16, 1965, July 5, 1968; minimum daily, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 20,000 micromhos July 23; minimum daily, 386 micromhos May 2.

WATER TEMPERATURES: Maximum daily, 30.0°C July 12; minimum daily, 2.0°C Dec. 10, Jan 31, Feb 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 03...	1215	7.0	4730	21.5	1600	1400	230	240	560
NOV 15...	1100	3.8	--	--	--	--	--	--	--
30...	0800	3.0	5300	8.0	1900	1600	280	280	600
DEC 20...	1450	2.3	8160	13.0	2900	2600	420	460	1100
JAN 31...	0900	2.5	5910	2.0	2100	1900	320	320	700
FEB 07...	0925	4.1	--	3.0	--	--	--	--	--
28...	1030	2.9	7330	10.0	2600	2400	360	410	850
MAR 21...	0940	6.0	--	16.0	--	--	--	--	--
31...	0900	6.0	4270	16.0	1300	1200	210	200	530
MAY 03...	1020	178	830	19.5	250	140	64	22	69
JUN 12...	1250	8.1	--	23.5	--	--	--	--	--
30...	0800	2.7	2230	26.0	560	400	97	76	220
JUL 23...	1205	42	23200	28.0	7400	7300	1800	700	3500
SEP 04...	1240	.56	--	25.5	--	--	--	--	--

[illegible]

BRAZOS RIVER BASIN

08084800 CALIFORNIA CREEK NEAR STAMFORD, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	118.7	6390	4680	1500	1170	376	1950	623	2150
NOV. 1978.....	128.3	6940	5120	1770	1280	443	2130	739	2330
DEC. 1978.....	61.6	7150	5280	878	1320	219	2200	367	2400
JAN. 1979.....	142.2	4930	3550	1360	890	340	1450	558	1660
FEB. 1979.....	98.7	6550	4810	1280	1200	320	2000	533	2200
MAR. 1979.....	619.3	2130	1430	2390	350	591	530	892	720
APR. 1979.....	137.9	6850	5040	1880	1260	469	2100	783	2300
MAY 1979.....	3518.4	741	480	4510	110	1090	160	1500	250
JUNE 1979.....	964.8	1520	990	2580	240	635	350	919	510
JULY 1979.....	430.3	7850	5870	6830	1470	1700	2470	2870	2640
AUG. 1979.....	233.86	4840	3520	2220	880	553	1430	901	1630
SEPT 1979.....	12.9	10800	8110	282	2030	71	3430	119	****
TOTAL	6466.95	**	**	27500	**	6810	**	10800	**
WTD. AVG.	18	2230	1600	**	390	**	620	**	750

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3710	8190	3810	7600	6120	7290	4620	534	2750	2750	16200	11900
2	4250	8260	4310	8180	6030	7370	4930	386	3890	3110	16500	11800
3	4730	8170	4760	8160	6050	7370	5310	863	4940	3470	1200	11700
4	5110	7950	5200	6300	6190	7410	5670	1580	5260	3870	2230	11700
5	5370	7820	6120	7000	6250	7360	5800	2490	2380	4200	3070	11400
6	5860	7880	6440	7400	6360	7240	5890	3120	896	490	3690	11200
7	6260	8070	6610	7800	6560	7370	6200	3860	641	775	4410	11300
8	6480	8100	6740	8180	6500	7500	6200	4420	1090	1310	5230	11700
9	6930	8170	7210	7990	6500	7520	6630	4960	1700	2660	5910	11400
10	7180	8170	7300	7960	6370	7560	6760	5310	2330	3780	6420	11200
11	7340	8270	7220	7940	5990	7580	6910	5650	2930	2280	6850	10900
12	7530	8270	7440	7740	5780	7640	7030	5970	3400	2750	7400	10500
13	7640	8270	7440	7240	5810	7690	7150	6190	3820	2910	8020	10400
14	7730	8270	7700	7390	6190	7750	7100	6190	4340	3240	8200	10100
15	7760	8210	7570	7260	6100	7690	7300	6550	4690	3520	8430	9800
16	7790	8110	7750	7170	6600	7690	7490	6680	4870	3880	8690	9550
17	7910	8050	8000	7120	6690	7750	7630	6800	5260	4180	8910	9200
18	8010	7980	8020	6900	6800	7750	7630	6950	5560	4410	9100	9000
19	8040	7830	6900	6740	6930	7580	7630	7080	5850	4650	9180	8790
20	8010	7890	8120	4390	7010	7690	7580	7220	6060	4850	9330	8670
21	8080	7850	7890	2890	7170	7780	8480	7050	6100	5250	9350	8560
22	8100	7750	6920	2650	7250	917	7740	6550	6210	5580	10100	8500
23	7980	7750	8020	2840	7390	1670	7690	6590	6370	20000	10800	8560
24	7760	7740	8040	3190	7340	1500	7690	6850	6540	17300	11300	8680
25	7110	7740	8090	3660	7360	4160	6960	6690	6540	16800	9960	8680
26	7300	5840	7960	4050	7360	4360	6340	7190	648	16500	9800	8580
27	7480	4790	7970	4450	7260	3350	6190	6100	684	16400	9620	8490
28	7590	3510	7960	4650	7250	3260	6340	3000	1240	16000	9500	8410
29	7480	3350	7970	5120	---	3680	6340	1410	1820	15800	9870	8320
30	7950	5270	7980	5450	---	3950	6270	3140	2240	15600	10700	8200
31	8050	---	7370	5850	---	4230	---	2870	---	15100	11200	---
MEAN	7050	7450	7120	6170	6610	6120	6720	4850	3700	7210	8420	9910

BRAZOS RIVER BASIN

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08084800 CALIFORNIA CREEK NEAR STAMFORD, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	18.0	11.0	---	6.0	10.0	12.0	14.0	21.0	25.0	24.0	28.0
2	23.0	21.0	12.0	3.0	5.0	13.0	13.0	18.0	19.0	26.0	25.0	25.0
3	---	19.0	8.0	5.0	6.0	9.0	14.0	20.0	20.0	26.0	23.0	28.0
4	19.0	19.0	6.0	4.0	5.0	8.0	12.0	15.0	21.0	26.0	25.0	27.0
5	21.0	16.0	8.0	---	---	6.0	13.0	14.0	23.0	27.0	26.0	29.0
6	18.0	15.0	6.0	---	4.0	10.0	16.0	16.0	24.0	24.0	28.0	27.0
7	24.0	9.0	5.0	---	3.0	12.0	18.0	20.0	25.0	25.0	29.0	25.0
8	18.0	11.0	4.0	6.0	4.0	13.0	18.0	22.0	27.0	29.0	26.0	23.0
9	23.0	9.0	3.0	4.0	4.0	11.0	16.0	23.0	24.0	27.0	28.0	23.0
10	20.0	15.0	2.0	---	6.0	12.0	17.0	21.0	19.0	28.0	27.0	26.0
11	21.0	11.0	5.0	3.0	6.0	11.0	16.0	17.0	20.0	25.0	25.0	25.0
12	22.0	12.0	4.0	7.0	10.0	10.0	15.0	14.0	---	30.0	25.0	27.0
13	19.0	15.0	5.0	3.0	8.0	13.0	16.0	18.0	19.0	26.0	24.0	22.0
14	14.0	17.0	5.0	3.0	11.0	13.0	15.0	20.0	29.0	28.0	---	23.0
15	15.0	15.0	7.0	4.0	13.0	11.0	19.0	18.0	28.0	26.0	25.0	18.0
16	22.0	7.0	---	3.0	4.0	9.0	22.0	21.0	24.0	25.0	28.0	17.0
17	21.0	---	4.0	6.0	2.0	12.0	21.0	---	24.0	26.0	---	20.0
18	23.0	10.0	8.0	9.0	3.0	15.0	---	20.0	22.0	25.0	---	18.0
19	16.0	9.0	14.0	8.0	5.0	14.0	20.0	19.0	26.0	26.0	---	19.0
20	18.0	12.0	13.0	5.0	6.0	13.0	22.0	25.0	25.0	24.0	---	23.0
21	20.0	9.0	8.0	6.0	10.0	15.0	20.0	21.0	---	28.0	---	22.0
22	18.0	10.0	7.0	5.0	10.0	14.0	17.0	20.0	28.0	26.0	---	24.0
23	14.0	12.0	8.0	4.0	12.0	11.0	19.0	19.0	22.0	28.0	---	24.0
24	13.0	13.0	5.0	3.0	9.0	13.0	20.0	22.0	27.0	29.0	---	23.0
25	15.0	16.0	6.0	5.0	5.0	12.0	22.0	19.0	26.0	27.0	24.0	24.0
26	---	16.0	5.0	5.0	7.0	15.0	19.0	19.0	23.0	26.0	---	23.0
27	14.0	12.0	6.0	5.0	9.0	13.0	17.0	21.0	25.0	26.0	26.0	24.0
28	15.0	10.0	9.0	3.0	10.0	16.0	16.0	23.0	25.0	28.0	27.0	25.0
29	14.0	9.0	11.0	4.0	---	19.0	15.0	22.0	27.0	27.0	22.0	22.0
30	17.0	8.0	6.0	5.0	---	18.0	16.0	24.0	26.0	25.0	23.0	22.0
31	14.0	---	4.0	2.0	---	16.0	---	22.0	---	27.0	26.0	---
MEAN	18.5	13.0	7.0	4.5	7.0	12.5	17.0	19.5	24.0	26.5	25.5	23.5

BRAZOS RIVER BASIN

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 (0.6 km) northeast of Fort Griffin, 1.0 mi (1.6 km) upstream from bridge on U.S. Highway 283, 1.7 mi (2.7 km) upstream from Mill Creek, and 74.6 mi (120.0 km) upstream from mouth.

DRAINAGE AREA.--3,988 mi² (10,329 km²).

WATER-DISCHARGE RECORDS

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 (357.863 m) National Geodetic Vertical Datum of 1929. Prior to June 23, 1932, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Diversions above station for irrigation, municipal supply, and oilfield operations materially affect low flow. Gage-height telemeter at station.

AVERAGE DISCHARGE.--55 years (water years 1925-79), 224 ft³/s (6.344 m³/s), 162,300 acre-ft/yr (200 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149,000 ft³/s (4,220 m³/s) Aug. 4, 1978, gage height, 38.88 ft (11.851 m), from floodmark; 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 (11.58 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,730 ft³/s (162 m³/s) May 2, gage height, 17.53 ft (5.343 m), no other peak above base of 3,900 ft³/s (110 m³/s); minimum, 0.54 ft³/s (0.015 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	37	72	42	42	30	154	64	68	188	14	15
2	140	36	62	39	41	32	137	3760	172	167	13	11
3	124	35	53	39	39	34	107	2370	123	130	12	9.4
4	115	33	48	39	38	32	90	717	89	105	76	8.6
5	103	32	43	38	37	33	85	476	726	87	179	7.5
6	92	32	38	38	35	34	76	366	946	75	93	6.1
7	80	32	37	38	35	32	73	222	1330	174	57	5.3
8	73	31	36	37	36	32	74	183	1200	123	39	4.4
9	67	31	34	37	41	35	70	144	944	95	28	3.9
10	63	31	32	34	37	34	74	106	733	65	21	3.2
11	59	31	30	34	38	35	86	88	653	49	16	3.0
12	53	31	31	34	38	39	79	71	608	46	13	3.6
13	57	31	31	33	38	39	83	61	463	40	10	4.0
14	50	31	31	34	39	43	84	58	359	34	9.9	3.8
15	42	31	34	34	38	46	72	56	287	27	9.3	3.8
16	39	32	36	33	34	46	71	52	218	23	9.2	3.5
17	37	36	35	33	34	48	110	48	154	22	9.0	3.2
18	37	36	43	52	32	45	127	44	136	20	8.0	2.8
19	37	36	40	100	30	72	80	45	124	18	8.0	2.4
20	37	47	37	75	29	52	75	42	109	18	8.7	2.2
21	37	48	36	56	30	35	75	140	95	20	16	1.9
22	37	45	37	38	31	146	95	96	81	18	9.8	1.5
23	42	44	38	133	32	500	73	69	71	97	12	1.5
24	42	43	38	131	32	760	60	122	67	74	11	1.3
25	41	43	37	115	30	461	56	186	57	57	17	1.2
26	50	61	37	98	30	200	52	117	63	69	12	.95
27	55	60	37	81	29	256	45	133	155	49	13	.88
28	64	53	37	68	29	195	42	97	588	35	14	.74
29	54	78	37	56	---	151	39	80	334	27	15	.67
30	46	69	37	45	---	134	39	86	239	21	19	.58
31	44	---	40	43	---	116	---	83	---	18	20	---
TOTAL	1946	1216	1214	1707	974	3747	2383	10188	11192	1991	791.9	117.92
MEAN	62.8	40.5	39.2	55.1	34.8	121	79.4	329	373	64.2	25.5	3.93
MAX	140	78	72	133	42	760	154	3760	1330	188	179	15
MIN	37	31	30	33	29	30	39	42	57	18	8.0	.58
AC-FT	3860	2410	2410	3390	1930	7430	4730	20210	22200	3950	1570	234
CAL YR 1978	TOTAL	201850.74	MEAN	553	MAX	72800	MIN	.00	AC-FT	400400		
WTR YR 1979	TOTAL	37467.82	MEAN	103	MAX	3760	MIN	.58	AC-FT	74320		

BRAZOS RIVER BASIN

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08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1949 to September 1951, November 1967 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1949 to September 1951, November 1967 to September 1979 (discontinued).

WATER TEMPERATURES: November 1949 to September 1951, November 1967 to September 1979 (discontinued).

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 (1949-51, 1967-77): Maximum daily, 6,680 micromhos May 11, 1972; minimum daily, 204 micromhos 1950.

WATER TEMPERATURES (1949-51, 1967-77): Maximum daily, 34.0°C June 14, 1969, June 28, 1972; minimum daily, 0.0°C on during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT									
03...	1020	131	1450	23.5	360	200	80	39	140
16...	1030	40	--	--	--	--	--	--	--
NOV									
15...	0915	31	2420	13.5	670	470	170	60	240
DEC									
20...	1300	37	2860	10.0	760	560	180	75	320
FEB									
07...	1300	36	3410	5.0	990	800	200	120	380
MAR									
21...	1400	35	--	17.0	--	--	--	--	--
31...	0800	120	2060	18.0	620	490	140	65	220
MAY									
02...	1455	5590	--	19.0	--	--	--	--	--
03...	1310	2200	556	19.0	240	54	79	11	32
JUN									
12...	1030	602	1270	23.5	350	200	88	32	130
JUL									
23...	1018	141	--	28.0	--	--	--	--	--
31...	0940	18	1640	28.5	480	310	120	43	150
SEP									
04...	1540	8.6	2450	30.5	650	440	150	66	270

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT									
03...	3.2	9.5	190	0	170	240	.3	11	783
16...	--	--	--	--	--	--	--	--	--
NOV									
15...	4.0	8.1	250	0	310	490	.3	11	1410
DEC									
20...	5.1	11	240	0	460	600	.4	5.3	1770
FEB									
07...	5.2	11	240	0	720	660	.6	4.1	2210
MAR									
21...	--	--	--	--	--	--	--	--	--
31...	3.9	7.3	160	0	440	340	.4	6.8	1300
MAY									
02...	--	--	--	--	--	--	--	--	--
03...	.9	7.2	230	0	54	51	.2	11	359
JUN									
12...	3.0	8.9	190	0	250	160	.3	4.9	768
JUL									
23...	--	--	--	--	--	--	--	--	--
31...	3.0	9.1	200	0	280	260	.4	13	974
SEP									
04...	4.6	12	250	0	370	440	.5	11	1440

BRAZOS RIVER BASIN

08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG)
OCT. 1978.....	1946	**	**	**	**	**	**	**	**
NOV. 1978.....	1216	**	**	**	**	**	**	**	**
DEC. 1978.....	1214	**	**	**	**	**	**	**	**
JAN. 1979.....	1707	**	**	**	**	**	**	**	**
FEB. 1979.....	974	**	**	**	**	**	**	**	**
MAR. 1979.....	3747	3060	1980	20100	520	5290	710	7160	870
APR. 1979.....	2383	2010	1300	8380	340	2220	470	2990	570
MAY 1979.....	10188	949	610	16900	160	4450	220	6030	270
JUNE 1979.....	11192	1100	710	21500	190	5720	250	7700	310
JULY 1979.....	1991	1460	940	5070	250	1340	340	1810	410
AUG. 1979.....	791.9	1640	1060	2270	280	599	380	810	470
SEPT 1979.....	117.92	2490	1610	512	420	135	580	184	710
TOTAL	37467.81	**	**	**	**	**	**	**	**
WTD. AVG.	103	**	**	**	**	**	**	**	**

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	3730	2280	1590	2370	1570	1660	2360
2	---	---	---	---	---	3770	2180	1000	2320	1550	1660	2360
3	1450	---	---	---	---	3750	2080	471	2020	1460	1670	2370
4	---	---	---	---	---	3730	2060	590	2150	1380	1680	2400
5	---	---	---	---	---	3710	2530	719	2200	1300	1350	2410
6	---	---	---	---	---	3730	2530	888	1750	1270	1360	2420
7	---	---	---	---	3410	3790	2690	1440	640	1220	1480	2460
8	---	---	---	---	---	3840	2510	1530	824	1140	1470	2460
9	---	---	---	---	---	3910	2390	1430	794	1050	1470	2470
10	---	---	---	---	---	3970	2100	1580	778	954	1490	2490
11	---	---	---	---	---	3970	1800	1360	845	1040	1500	2500
12	---	---	---	---	---	3930	1670	1230	1270	1140	1570	2510
13	---	---	---	---	---	3860	1810	1150	1040	1310	1610	2570
14	---	---	---	---	---	3770	2170	1140	868	1430	1650	2570
15	---	2420	---	---	---	3660	2260	1220	804	1800	1720	2570
16	2010	---	---	---	---	3620	2220	1290	787	2130	1730	2630
17	---	---	---	---	---	3510	2120	1370	818	2200	1760	2680
18	---	---	---	---	---	3380	1550	1450	830	2260	1780	2690
19	---	---	---	---	---	3270	1620	1470	870	2320	1740	2700
20	---	---	2860	---	---	2860	1580	1650	907	2100	1860	2720
21	---	---	---	---	---	2910	1650	1660	949	2070	1960	2720
22	---	---	---	---	---	3060	1700	1320	974	1950	1980	2710
23	---	---	---	---	---	2920	1750	1590	1000	1750	2000	2740
24	---	---	---	---	---	4070	1730	1750	1030	1730	2050	2750
25	---	---	---	---	---	2520	1750	1510	1050	1710	2100	2740
26	---	---	---	---	---	2600	1810	1370	1090	1580	2200	2750
27	---	---	---	---	---	2450	1810	1230	1110	1560	2300	2760
28	---	---	---	---	3750	1970	1870	1270	1100	1570	2420	2770
29	---	---	---	---	---	2010	1840	1580	1210	1590	2440	2770
30	---	---	---	---	---	1940	1840	1780	1360	1600	2490	2770
31	---	---	---	---	---	2040	---	2260	---	1640	2490	---
MEAN	1730	2420	2860	---	3580	3300	2000	1350	1190	1590	1830	2590

BRAZOS RIVER BASIN

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08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	13.0	18.0	21.0	24.5	28.5	29.0	30.0
2					---	12.0	16.0	21.0	24.0	30.0	30.0	29.0
3					---	9.5	16.0	18.0	23.0	29.5	28.0	27.5
4					---	9.5	16.0	17.0	25.0	30.0	28.0	31.0
5					---	9.5	16.0	19.0	26.0	28.5	30.0	30.0
6					---	13.5	17.0	20.0	23.0	31.0	29.0	31.0
7					---	14.0	19.0	22.0	24.0	31.0	30.0	30.0
8					---	14.5	19.5	23.5	27.0	29.5	30.0	29.0
9					---	14.5	18.5	23.0	26.0	32.0	30.0	29.0
10					---	11.0	19.0	24.0	23.5	31.0	28.5	29.0
11					---	16.0	18.0	21.0	25.0	33.5	26.0	28.0
12					---	14.0	17.0	19.0	24.0	31.0	29.5	25.5
13					---	18.5	17.0	22.0	24.5	32.0	28.0	27.0
14					---	16.0	19.0	20.5	24.5	29.0	29.0	24.0
15					---	14.0	22.0	22.5	27.0	31.0	29.0	21.0
16					---	13.0	21.0	23.5	25.0	31.0	29.5	24.0
17					---	13.0	22.0	22.5	27.0	31.0	29.0	21.0
18					---	14.0	21.0	24.0	26.0	30.0	26.0	27.5
19					---	14.0	21.0	24.0	29.0	29.0	26.5	25.0
20					---	13.0	23.0	24.5	28.0	28.5	28.0	25.0
21					---	15.0	22.5	25.0	29.0	27.5	28.5	27.5
22					---	17.0	21.0	22.0	29.0	31.5	26.0	25.0
23					---	15.0	22.0	22.5	29.0	31.0	---	28.5
24					---	15.0	23.0	24.0	29.0	30.5	---	27.0
25					---	16.0	23.5	23.0	29.0	29.5	---	25.0
26					---	15.0	23.5	21.0	29.0	31.0	---	25.0
27					---	16.0	23.0	24.0	29.0	31.0	---	26.0
28					12.0	16.0	20.0	24.0	27.0	29.0	29.0	27.0
29					---	18.0	21.0	25.5	---	30.5	29.0	26.0
30					---	20.0	19.0	25.0	30.0	32.5	29.0	21.0
31					---	18.0	---	25.0	---	28.5	27.0	---
MEAN					12.0	14.5	20.0	22.5	26.5	30.5	28.5	26.5

BRAZOS RIVER BASIN

08086150 NORTH FORK HUBBARD CREEK NEAR ALBANY, TX

LOCATION.--Lat 32°42'27", long 99°16'29", Shackelford County, Hydrologic Unit 12060105, on downstream side of bridge on U.S. Highway 6, 1.7 mi (2.7 km) southeast of Albany, and 2.0 mi (3.2 km) upstream from Salt Prong Hubbard Creek.

DRAINAGE AREA.--39.3 mi² (101.8 km²).

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 (408.597 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No diversion above station.

AVERAGE DISCHARGE.--16 years (water years 1964-79), 7.54 ft³/s (0.214 m³/s), 2.61 in/yr (66 mm/yr), 5,460 acre-ft/yr (6.73 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) Aug. 4, 1978, gage height, 23.3 ft (7.10 m), from floodmarks, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of 4,570 ft³/s (129 m³/s) and contracted-opening measurement of 9,520 ft³/s (270 m³/s), and computation of flow-through-culvert, contracted-opening, and flow-over-road determinations of 103,000 ft³/s (2,920 m³/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 (6.4 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 22	0730	287 8.13	4.16 1.268
May 1	0900	159 4.50	3.65 1.113
May 21	1900	*2,370 67.1	8.41 2.563

Minimum discharge, 0.24 ft³/s (0.007 m³/s) Sept. 28, 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.34	.61	.56	.66	.81	5.6	68	4.6	1.1	3.2	1.0
2	.60	.34	.61	.56	.63	.67	4.9	20	4.4	.98	2.0	.97
3	.51	.34	.56	.56	.61	.67	4.3	7.4	4.3	.89	2.4	.89
4	.51	.30	.56	.61	.63	.61	4.1	4.6	4.3	.81	1.9	.89
5	.51	.38	.61	.56	.80	.49	4.1	3.7	6.5	.74	1.4	.89
6	.51	.42	.56	.56	1.3	.42	3.8	3.9	9.8	.67	1.2	.89
7	.51	.42	.56	.56	1.7	.38	3.1	3.1	7.2	.67	1.1	.83
8	.51	.46	.56	.61	1.1	.43	2.7	3.0	4.6	.67	1.1	.81
9	.51	.46	.56	.61	.87	.37	2.9	3.1	4.2	.61	1.0	.81
10	.51	.46	.56	.81	.75	.35	3.1	2.9	5.7	.55	1.1	.71
11	.51	.42	.56	1.5	.61	.36	4.9	2.5	4.3	.56	1.2	.68
12	.51	.42	.55	1.3	.51	.44	2.7	2.4	3.9	.56	1.2	.61
13	.51	.51	.56	.67	.46	.71	2.5	2.9	3.6	.51	1.1	.58
14	.34	.46	.53	.74	.56	1.1	2.5	2.9	3.2	.50	1.0	.56
15	.35	.66	.57	.74	.56	1.9	2.5	2.6	3.0	.46	.96	.56
16	.35	1.5	.58	.60	.56	2.3	2.5	2.5	2.7	.45	.89	.51
17	.35	.89	.58	.56	.56	1.2	16	2.6	2.6	1.6	.81	.49
18	.38	.67	.62	6.0	.62	1.2	7.7	2.3	2.5	2.1	.81	.48
19	.30	.67	.63	3.4	.51	7.0	4.9	2.9	2.4	.93	.80	.51
20	.30	.67	.59	1.8	.46	1.7	4.1	2.9	2.2	.74	.91	.46
21	.27	.61	.56	1.2	.42	2.3	2.7	300	1.9	.74	7.6	.46
22	.38	.56	.60	.96	.46	120	2.5	49	1.7	.67	2.0	.46
23	1.7	.61	.60	.74	.79	27	2.3	8.4	1.6	.60	2.1	.42
24	.97	.61	.57	.67	1.4	13	2.3	8.3	1.4	.54	1.9	.40
25	.56	.67	.62	.85	1.6	9.8	2.3	8.3	1.5	.48	6.4	.38
26	.46	2.4	.58	1.5	1.6	7.8	2.0	7.3	2.7	.35	3.0	.34
27	.42	1.2	.56	.89	1.7	6.1	2.0	3.8	1.5	.34	1.7	.29
28	.38	.81	.65	.74	1.1	5.9	2.2	6.6	1.4	.34	1.2	.27
29	.38	.67	.63	.74	---	5.7	3.1	6.0	1.3	.34	1.1	.31
30	.34	.61	.56	.67	---	5.9	2.3	5.0	1.2	.32	1.1	.30
31	.34	---	.56	.67	---	5.9	---	4.3	---	11	1.1	---
TOTAL	15.53	19.54	18.01	32.94	23.53	232.51	112.6	553.2	102.2	31.82	55.28	17.76
MEAN	.50	.65	.58	1.06	.84	7.50	3.75	17.8	3.41	1.03	1.78	.59
MAX	1.7	2.4	.65	6.0	1.7	120	16	300	9.8	11	7.6	1.0
MIN	.27	.30	.53	.56	.42	.35	2.0	2.3	1.2	.32	.80	.27
CFSM	.01	.02	.02	.03	.02	.19	.10	.45	.09	.03	.05	.02
IN.	.01	.02	.02	.03	.02	.22	.11	.52	.10	.03	.05	.02
AC-FT	31	39	36	65	47	461	223	1100	203	63	110	35
CAL YR 1978	TOTAL	20152.96	MEAN	55.2	MAX	13100	MIN	.00	CFSM	1.41	IN	19.08
WTR YR 1979	TOTAL	1214.92	MEAN	3.33	MAX	300	MIN	.27	CFSM	.09	IN	1.15
										AC-FT	39970	
										AC-FT	2410	

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

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.--

WATER TEMPERATURES (1962-69, 1974-76): Maximum daily, 33.0°C July 11, 1964; minimum daily, 0.0°C Jan. 12, 1963, Jan. 29, 1966.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 5.560 micromhos Mar. 14; minimum measured daily, 692 micromhos May 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 04...	1340	.52	5130	26.0	1300	1100	340	110	580
NOV 30...	1400	.56	4570	15.0	1200	1000	320	93	530
DEC 07...	1400	.54	--	8.0	--	--	--	--	--
JAN 04...	1300	.58	5430	6.0	1300	1200	350	110	650
31...	0815	.66	--	3.0	--	--	--	--	--
FEB 18...	1600	.56	4880	11.0	1100	1000	290	100	610
28...	1525	1.0	--	15.0	--	--	--	--	--
MAR 26...	1400	7.7	3840	19.0	820	690	220	65	470
APR 25...	1327	2.3	--	27.0	--	--	--	--	--
MAY 23...	0950	7.8	2100	19.0	430	340	120	31	240
JUN 30...	1300	1.1	5100	29.0	1200	1000	300	98	620
JUL 17...	1630	1.3	--	26.5	--	--	--	--	--
31...	1730	11	5110	29.0	1100	990	300	97	610
AUG 31...	1330	1.1	4550	29.0	1000	870	250	93	570
SEP 10...	1310	.68	--	28.0	--	--	--	--	--

[illegible]

BRAZOS RIVER BASIN

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

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1977.....	2.62	5390	2930	20	1580	11	180	1.3	1210
NOV. 1977.....	2.97	5320	2890	23	1560	12	180	1.4	1200
DEC. 1977.....	5.24	5290	2870	41	1550	22	180	2.5	1190
JAN. 1978.....	6.01	4820	2610	42	1410	23	160	2.5	1080
FEB. 1978.....	6.59	5150	2800	50	1510	27	170	2.8	1160
MAR. 1978.....	3.84	5110	2770	28	1500	16	170	1.7	1150
APR. 1978.....	3.04	5500	2990	24	1620	14	180	1.5	1240
MAY 1978.....	2.37	5480	2980	19	1610	10	180	1.2	1240
JUNE 1978.....	1.75	5180	2810	13	1520	7.1	170	0.9	1160
JULY 1978.....	0	*****	*****	0	*****	0	*****	0	****
AUG. 1978.....	20037.4	172	90	4880	29	1580	5	250	48
SEPT 1978.....	38.84	4650	2520	264	1350	142	150	16	1030
TOTAL	20110.67	**	**	5400	**	1860	**	282	**
WTD. AVG.	55	189	99	**	34	**	5.6	**	52

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	15.53	5000	2720	114	1490	63	150	6	1150
NOV. 1978.....	19.54	4590	2490	132	1370	72	140	7.4	1060
DEC. 1978.....	18	4730	2570	125	1410	69	140	6.6	1090
JAN. 1979.....	32.94	4540	2470	219	1350	120	140	12	1040
FEB. 1979.....	23.53	5040	2740	174	1500	95	150	9.4	1160
MAR. 1979.....	232.51	3280	1780	1120	970	611	97	61	750
APR. 1979.....	112.6	4340	2360	716	1290	393	130	39	1000
MAY 1979.....	553.2	1900	1030	1540	570	847	56	85	440
JUNE 1979.....	102.2	4740	2580	711	1410	390	140	39	1090
JULY 1979.....	31.82	5130	2780	239	1530	131	150	13	1180
AUG. 1979.....	55.28	4710	2560	382	1400	210	140	21	1080
SEPT 1979.....	17.76	4530	2460	118	1350	65	130	6.4	1040
TOTAL	1214.92	**	**	5590	**	3070	**	306	**
WTD. AVG.	3.3	3140	1700	**	930	**	93	**	720

BRAZOS RIVER BASIN

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5000	4720	4450	5150	4650	5430	4550	3400	4250	5050	4530	4500
2	5050	4700	4400	5400	4510	5450	4640	3490	4480	5070	4430	4430
3	5080	4330	4420	5340	4650	5470	4700	3610	4500	5040	4420	4440
4	5100	4460	4430	5430	4850	5450	4740	3790	4520	5000	4510	4410
5	5120	4670	4440	5390	4890	5420	4800	4700	4600	4980	4600	4380
6	5130	4690	4360	5400	4910	5400	4900	4330	4440	4940	4570	4370
7	5150	4700	4540	5410	4870	5430	5010	4120	4600	4910	4590	4300
8	5170	4870	4560	5250	4910	5500	5110	4460	4800	4850	4420	4340
9	5180	4690	4440	5110	4940	5480	5050	4590	4880	4860	4470	4500
10	5150	4500	4500	5220	4900	5470	5120	4620	4810	4830	4500	4520
11	5140	4050	4580	4890	4920	5500	5170	4680	4770	4800	4540	4510
12	5160	3760	4620	4750	4910	5530	4950	4750	4740	4780	4570	4520
13	5150	4850	4600	5000	4870	5550	4900	4820	4700	4750	4690	4530
14	5260	4980	4680	5280	4950	5560	4820	4880	4670	4720	4680	4500
15	5230	5050	4730	5310	4930	5200	4760	5000	4790	5080	4720	4480
16	5200	5130	4770	5000	4910	5300	4800	5080	4900	5360	4760	4540
17	5180	4900	4800	4960	4980	5400	3180	5140	4950	5270	4810	4620
18	5210	4800	4850	4000	4960	5380	2750	5190	4990	5460	4800	4730
19	5280	4750	4890	3820	4990	3230	4330	5150	5000	5410	4820	4650
20	5310	4700	4950	4050	4980	3290	4200	5170	5090	5420	4950	4720
21	5340	4650	4980	4340	5000	3300	4170	692	5080	5440	5090	4770
22	5000	4610	5020	4500	5050	2700	4220	1800	5100	5480	5150	4590
23	4910	4700	5000	4680	5250	3240	4280	2350	5100	5390	4960	4710
24	4550	4720	4950	4660	5390	3450	4330	2640	5180	5330	4970	4820
25	4600	4630	4980	4600	5350	3640	4500	2820	5250	5290	4600	4770
26	4770	3960	4900	4000	5320	3880	4740	3350	5180	5390	4590	4850
27	4730	4440	4950	4250	5290	4000	4720	3870	5190	5310	4640	4920
28	4740	4520	4980	4600	5410	4110	4500	3670	5150	5330	4720	4990
29	4750	4580	4930	4650	---	4320	4370	3820	5120	5390	4640	4620
30	4760	4500	4990	4690	---	4510	4700	3910	5070	5260	4610	4320
31	4770	---	4930	4660	---	4430	---	4030	---	5060	4590	---
MEAN	5040	4620	4730	4830	4980	4710	4570	4000	4860	5140	4680	4580

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21.0	---	---	10.0	15.0	---	23.0	---	---	26.0	---
2	26.0	22.0	10.0	3.0	11.0	---	---	23.0	24.0	---	28.0	30.0
3	26.0	20.0	---	6.0	---	12.0	16.0	19.0	25.0	---	29.0	30.0
4	25.0	20.0	---	---	5.0	---	18.0	18.0	25.0	---	---	---
5	24.0	19.0	12.0	5.0	3.0	15.0	20.0	20.0	27.0	---	30.0	25.0
6	22.0	---	10.0	---	4.0	16.0	21.0	25.0	27.0	---	31.0	29.0
7	23.0	16.0	8.0	3.0	9.0	16.0	---	23.0	---	---	28.0	29.0
8	21.0	18.0	7.0	---	8.0	16.0	22.0	26.0	27.0	---	29.0	29.0
9	23.0	19.0	9.0	7.0	---	---	27.0	25.0	---	---	---	28.0
10	23.0	---	---	6.0	---	15.0	---	---	24.0	---	29.0	26.0
11	---	---	10.0	5.0	---	17.0	18.0	---	27.0	---	---	---
12	---	18.0	10.0	---	11.0	---	---	---	---	---	28.0	29.0
13	27.0	19.0	11.0	5.0	12.0	---	16.0	22.0	---	---	28.0	28.0
14	23.0	14.0	10.0	8.0	15.0	16.0	18.0	23.0	29.0	29.0	30.0	---
15	---	---	12.0	7.0	---	12.0	---	25.0	---	28.0	29.0	24.0
16	---	12.0	---	---	14.0	---	---	23.0	28.0	29.0	---	22.0
17	23.0	14.0	---	10.0	7.0	15.0	19.0	---	---	28.0	30.0	---
18	22.0	15.0	---	11.0	11.0	---	22.0	27.0	28.0	28.0	---	26.0
19	24.0	---	17.0	11.0	10.0	19.0	24.0	25.0	29.0	26.0	27.0	23.0
20	21.0	19.0	15.0	---	11.0	16.0	23.0	---	31.0	---	---	---
21	21.0	---	11.0	10.0	---	19.0	21.0	21.0	---	30.0	28.0	26.0
22	17.0	15.0	---	---	11.0	15.0	---	27.0	29.0	29.0	30.0	27.0
23	17.0	---	---	7.0	14.0	15.0	---	---	30.0	---	30.0	---
24	18.0	18.0	---	9.0	12.0	---	25.0	24.0	---	---	29.0	25.0
25	---	16.0	11.0	---	---	18.0	25.0	20.0	26.0	30.0	30.0	24.0
26	19.0	14.0	9.0	7.0	---	18.0	24.0	---	28.0	29.0	27.0	27.0
27	16.0	16.0	12.0	---	14.0	---	22.0	24.0	30.0	30.0	28.0	---
28	---	14.0	10.0	6.0	14.0	18.0	---	25.0	31.0	31.0	29.0	22.0
29	---	13.0	14.0	---	---	21.0	23.0	26.0	28.0	29.0	30.0	26.0
30	24.0	15.0	---	4.0	---	21.0	22.0	26.0	29.0	30.0	---	23.0
31	21.0	---	8.0	6.0	---	20.0	---	27.0	---	29.0	29.0	---
MEAN	22.0	17.0	11.0	7.0	10.5	16.5	21.5	23.5	27.5	29.0	29.0	26.5

08086212 HUBBARD CREEK BELOW ALBANY, TX

LOCATION.--Lat 32°43'58", long 99°08'25", Shackelford County, Hydrologic Unit 12060105, on left bank 0.5 mi (0.8 km) downstream from Salt Prong Hubbard Creek, 2.8 mi (4.5 km) upstream from Newcomb Creek, 4.5 mi (7.2 km) upstream from U.S. Highway 180, 9.1 mi (14.6 km) east of Albany, 22.6 mi (36.4 km) upstream from Hubbard Creek Reservoir, and 35.2 mi (56.6 km) upstream from mouth. Water-quality sampling site on left bank 0.5 mi (0.8 km) downstream.

DRAINAGE AREA.--613 mi² (1,588 km²).

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 (361.185 m) National Geodetic Vertical Datum of 1929. Prior to June 12, 1968, water-stage recorder at site 2.1 mi (3.4 km) downstream at datum 7.63 ft (2.326 m) lower.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--13 years, 75.6 ft³/s (2.141 m³/s), 1.67 in/yr (43 mm/yr), 54,770 acre-ft/yr (67.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330,000 ft³/s (9,350 m³/s) Aug. 4, 1978, gage height, 41.41 ft (12.622 m), from floodmark, from rating curve extended above 110 ft³/s (3.12 m³/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 (9,350 m³/s) at site 4.5 mi (7.2 km) downstream; no flow for many days.

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

Date	Time	Discharge ft ³ /s (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge ft ³ /s (m ³ /s)	Gage height (ft) (m)
Mar. 19	2130	3,190 90.3	11.79 3.594	May 1	1900	*16,200 459	24.50 7.468
Mar. 30	0630	10,300 292	20.10 6.126	May 21	2300	3,050 86.4	11.54 3.517

Minimum discharge, 0.14 ft³/s (0.004 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.8	3.3	2.3	3.0	3.7	361	7160	14	9.4	2.0	5.1
2	2.9	2.7	2.8	2.5	2.9	4.0	120	2860	16	7.7	3.7	4.6
3	2.9	2.6	2.5	2.3	2.6	4.1	76	377	14	6.3	4.1	4.4
4	2.9	2.6	2.0	2.5	2.6	3.9	71	314	12	5.7	3.5	4.4
5	2.8	2.6	1.8	2.6	3.2	4.7	64	143	13	5.5	3.2	3.9
6	2.8	3.6	1.7	2.6	4.2	4.5	54	101	16	5.5	3.0	3.4
7	2.8	3.3	1.8	2.6	4.4	3.5	46	76	12	5.6	2.6	3.3
8	2.6	2.9	1.8	2.6	4.6	3.1	40	58	12	5.6	2.1	3.3
9	2.2	2.6	1.7	2.5	4.5	2.5	39	46	9.9	5.1	2.0	3.1
10	2.3	2.5	1.8	3.2	3.7	2.4	55	39	366	4.7	2.0	2.2
11	2.3	2.4	1.6	4.1	3.5	2.2	55	33	117	4.6	2.8	1.9
12	2.4	2.2	1.6	4.7	3.4	2.0	44	30	51	4.4	26	1.6
13	2.3	2.4	1.6	5.3	2.9	1.8	35	28	36	4.0	16	1.4
14	1.8	2.6	1.5	5.0	2.6	1.7	30	27	24	3.9	9.4	1.4
15	1.8	3.7	1.5	4.0	2.6	1.8	27	24	18	3.7	6.8	1.3
16	1.8	16	1.6	3.5	2.2	2.5	24	21	17	3.4	5.2	1.3
17	1.8	13	1.8	3.0	1.9	4.0	103	20	13	3.6	4.3	1.2
18	1.8	7.9	1.8	6.4	1.9	5.1	126	19	12	5.0	3.6	1.1
19	1.8	5.3	1.8	14	2.0	635	37	18	11	16	3.1	1.0
20	1.8	4.4	2.1	72	2.1	917	24	16	9.9	43	3.1	1.0
21	1.7	4.3	1.9	54	2.2	177	26	376	9.3	21	5.5	.91
22	1.9	4.2	1.5	22	2.4	545	37	574	8.7	24	6.6	.90
23	5.4	3.8	1.4	11	2.4	273	26	49	7.8	14	8.0	.72
24	7.7	3.2	1.4	6.2	2.2	114	21	29	7.5	9.5	13	.72
25	6.2	3.1	1.4	5.1	2.2	73	19	20	63	6.8	23	.72
26	4.3	13	1.4	5.9	2.2	62	18	16	300	5.4	15	.61
27	3.4	15	1.4	4.0	2.3	48	17	16	84	4.5	11	.61
28	3.1	7.8	1.4	4.2	2.5	35	15	15	35	3.9	8.3	.41
29	2.8	5.4	1.6	3.4	---	315	17	15	18	3.0	7.7	.41
30	2.8	4.2	1.9	3.3	---	3850	33	12	12	2.5	7.1	.24
31	2.8	---	2.0	3.2	---	282	---	12	---	1.9	5.9	---
TOTAL	88.8	152.1	55.4	270.0	79.2	7383.5	1660	12544	1339.1	249.2	219.6	57.15
MEAN	2.86	5.07	1.79	8.71	2.83	238	55.3	405	44.6	8.04	7.08	1.91
MAX	7.7	16	3.3	72	4.6	3850	361	7160	366	43	26	5.1
MIN	1.7	2.2	1.4	2.3	1.9	1.7	15	12	7.5	1.9	2.0	.24
CFSM	.005	.008	.003	.01	.005	.39	.09	.66	.07	.01	.01	.003
IN.	.01	.01	.00	.02	.00	.45	.10	.76	.08	.02	.01	.00
AC-FT	176	302	110	536	157	14650	3290	24880	2660	494	436	113
CAL YR 1978	TOTAL	105520.39	MEAN	289	MAX	94700	MIN	.00	CFSM	.47	IN	6.40
WTR YR 1979	TOTAL	24098.05	MEAN	66.0	MAX	7160	MIN	.24	CFSM	.11	IN	1.46
									AC-FT	209300	AC-FT	47800

WATER-QUALITY RECORDS

WATER TEMPERATURES: October 1966 to current year.

WATER TEMPERATURES: Minimum daily, 2.0°C Dec. 9, Jan. 5.

[illegible]

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	88.8	4500	2390	574	1250	299	130	31	900
NOV. 1978.....	152.1	3900	2090	858	1060	435	110	46	860
DEC. 1978.....	55.4	3960	2130	319	1080	162	110	17	880
JAN. 1979.....	269	4010	2170	1580	1120	814	120	84	820
FEB. 1979.....	79.2	4520	2430	519	1260	270	130	28	910
MAR. 1979.....	7383.5	568	310	6210	160	3120	17	329	130
APR. 1979.....	1660	1330	730	3260	360	1630	39	173	290
MAY 1979.....	12544	415	230	7620	110	3840	12	417	92
JUNE 1979.....	1339.1	1400	760	2760	380	1380	41	147	310
JULY 1979.....	249.2	2150	1170	789	590	395	62	42	470
AUG. 1979.....	219.6	2660	1460	863	730	431	77	46	590
SEPT 1979.....	57.15	2950	1610	249	810	124	85	13	650
TOTAL	24098.03	**	**	25600	**	12900	**	1370	**
WTD.AVG.	66	723	400	**	200	**	21	**	160

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4370	4440	3480	4200	4830	4760	652	262	1930	1320	2900	2560
2	4300	4450	3510	4300	4900	4780	799	440	1900	1410	3020	2600
3	4320	4470	3650	4500	4940	4790	900	671	1920	1500	3110	2690
4	4350	4450	3520	4670	4960	4780	1010	733	1930	1640	3180	2730
5	4400	4460	3850	4500	4850	4790	1120	950	2000	1770	3230	2750
6	4460	4400	3850	4490	4770	4770	1330	1140	2040	1820	3290	2790
7	4420	4410	3810	4350	4790	4790	1290	1100	2080	1960	3340	2830
8	4380	4410	3980	4300	4600	4860	1380	1260	2110	2080	3400	2860
9	4480	4420	3730	4380	4580	4950	1460	1350	2130	2190	3460	2910
10	4450	4430	3550	4600	4620	4910	1660	1570	1510	2270	3510	2980
11	4530	4480	3750	4560	3970	4920	1600	1550	1060	2310	3490	3060
12	4480	4470	4090	4580	3630	4950	1580	1570	1750	2450	3120	3150
13	4490	4460	4000	4600	4000	4930	2090	1750	1880	2540	2620	3230
14	4550	4430	4940	4530	4330	4950	2130	1960	2000	2630	2500	3260
15	4600	4240	4500	4560	4540	4920	2150	1920	2050	2700	2470	3240
16	4640	3950	4110	4530	4650	4980	1970	1890	2090	2820	2660	3300
17	4530	3810	4360	4600	4020	4990	1750	1900	2110	2850	2690	3330
18	4700	4070	4370	4350	4100	5000	1640	2110	2110	3210	2670	3380
19	4720	4150	4330	4020	4180	438	1710	2250	2120	3040	2700	3360
20	4730	4120	4250	3000	4250	496	1680	2330	2150	1970	2710	3400
21	4620	4280	3850	3520	4360	1500	1620	314	2260	1980	2660	3420
22	4730	4260	4140	4170	4420	726	1670	384	2460	1950	2890	3470
23	4550	4250	4200	5520	4490	950	1710	1030	2470	2020	2920	3540
24	4490	3960	3800	5530	4540	1130	1950	1120	2470	2160	2690	3600
25	4450	3990	3500	5420	4610	1450	2010	1500	1880	2300	2130	3580
26	4550	3410	3460	5400	4700	1650	1980	1940	873	2440	2090	3590
27	4590	3180	3910	5420	4780	1740	2160	1950	647	2560	2250	3620
28	4570	3310	4000	5350	4840	1700	2200	1960	850	2610	2330	3640
29	4550	3130	4420	5300	---	811	2190	1930	1100	2660	2460	3630
30	4510	3120	4570	5200	---	344	1950	1940	1330	2700	2550	3700
31	4560	---	4250	5180	---	717	---	1920	---	2790	2610	---
MEAN	4520	4110	3990	4630	4510	3270	1640	1440	1840	2280	2830	3210

BRAZOS RIVER BASIN

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08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	19.0	16.0	5.0	5.0	12.0	17.0	18.0	25.0	30.0	30.0	29.0
2	25.0	19.0	14.0	4.0	7.0	15.0	17.0	16.0	26.0	---	30.0	28.0
3	24.0	20.0	10.0	4.0	6.0	13.0	17.0	20.0	27.0	---	29.0	29.0
4	22.0	19.0	9.0	4.0	6.0	11.0	14.0	16.0	25.0	---	29.0	28.0
5	23.0	20.0	11.0	2.0	5.0	13.0	15.0	16.0	24.0	---	29.0	28.0
6	22.0	15.0	6.0	3.0	5.0	13.0	18.0	18.0	26.0	---	30.0	29.0
7	20.0	15.0	6.0	3.0	7.0	12.0	18.0	20.0	28.0	---	30.0	28.0
8	22.0	16.0	4.0	3.0	5.0	17.0	18.0	20.0	28.0	---	30.0	28.0
9	23.0	17.0	2.0	3.0	6.0	17.0	19.0	21.0	27.0	---	30.0	27.0
10	21.0	18.0	4.0	4.0	6.0	16.0	17.0	21.0	23.0	---	30.0	26.0
11	25.0	16.0	4.0	3.0	9.0	16.0	19.0	20.0	23.0	---	29.0	27.0
12	27.0	18.0	10.0	---	8.0	16.0	20.0	18.0	24.0	---	26.0	27.0
13	23.0	18.0	8.0	3.0	9.0	18.0	18.0	23.0	26.0	---	26.0	27.0
14	21.0	17.0	7.0	4.0	13.0	15.0	19.0	23.0	26.0	---	28.0	---
15	22.0	14.0	8.0	3.0	12.0	12.0	18.0	24.0	26.0	---	27.0	---
16	21.0	10.0	7.0	6.0	6.0	12.0	22.0	24.0	27.0	31.0	29.0	---
17	22.0	11.0	12.0	12.0	4.0	12.0	21.0	22.0	27.0	28.0	29.0	---
18	23.0	13.0	14.0	13.0	6.0	15.0	20.0	25.0	26.0	29.0	29.0	---
19	20.0	12.0	14.0	10.0	8.0	14.0	24.0	25.0	26.0	26.0	30.0	---
20	20.0	11.0	14.0	9.0	9.0	14.0	23.0	26.0	25.0	26.0	26.0	---
21	20.0	10.0	11.0	8.0	12.0	13.0	21.0	24.0	28.0	29.0	25.0	---
22	23.0	10.0	9.0	8.0	11.0	16.0	20.0	16.0	28.0	29.0	27.0	---
23	17.0	11.0	8.0	5.0	11.0	15.0	21.0	22.0	28.0	29.0	26.0	---
24	17.0	13.0	8.0	6.0	9.0	13.0	24.0	20.0	28.0	31.0	31.0	---
25	22.0	15.0	8.0	7.0	9.0	17.0	25.0	20.0	28.0	30.0	29.0	---
26	21.0	15.0	9.0	6.0	11.0	19.0	23.0	21.0	27.0	29.0	29.0	---
27	20.0	13.0	8.0	5.0	13.0	18.0	16.0	21.0	28.0	29.0	30.0	---
28	20.0	10.0	11.0	5.0	14.0	18.0	17.0	22.0	28.0	30.0	28.0	---
29	20.0	11.0	12.0	4.0	---	19.0	17.0	23.0	29.0	30.0	29.0	---
30	18.0	12.0	9.0	5.0	---	16.0	19.0	23.0	30.0	29.0	29.0	---
31	20.0	---	---	4.0	---	18.0	---	24.0	---	30.0	28.0	---
MEAN	21.5	14.5	9.0	5.5	8.5	15.0	19.0	21.0	26.5	29.0	28.5	28.0

BRAZOS RIVER BASIN

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 (180 m) downstream from Battle Creek, 1.6 mi (2.6 km) upstream from bridge on Farm Road 576, 9.8 mi (15.8 km) south-west of Breckenridge, and about 14.6 mi (23.5 km) upstream from Hubbard Creek Dam.

DRAINAGE AREA.--280 mi² (725 km²).

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. Datum of gage is 1,185.83 ft (361.441 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at site 1.6 mi (2.6 km) downstream at datum 7.41 ft (2.259 m) lower.

REMARKS.--Water-discharge records good. Flow is affected by Lake Cisco, capacity 25,600 acre-ft (31.6 hm³).

AVERAGE DISCHARGE.--17 years (water years 1963-79), 27.3 ft³/s (0.773 m³/s), 1.32 in/yr (34 mm/yr), 19,780 acre-ft/yr (24.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s (231 m³/s) May 13, 1965, gage height, 23.30 ft (7.102 m); 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 (7.50 m).

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

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Mar. 30	0530	2,890	81.8	15.44	4.706
May 1	1430	*3,850	109	18.66	5.688

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.02	.03	.07	.05	47	2020	.40	.01	.00	.00
2	.01	.01	.02	.03	.04	.10	20	1000	.40	.00	.00	.00
3	.01	.01	.02	.06	.02	.12	10	101	.40	.00	.00	.00
4	.01	.01	.02	.09	.02	.05	6.5	37	.38	.00	.00	.00
5	.10	.01	.02	.09	.02	.03	3.6	23	.34	.00	.00	.00
6	.05	.07	.02	.09	.02	.03	1.7	17	.32	.00	.00	.00
7	.02	.08	.02	.09	.02	.03	1.2	9.8	.28	.00	.00	.00
8	.01	.03	.02	.08	.02	.03	.74	6.0	.25	.00	.00	.00
9	.01	.01	.02	.07	.02	.03	.45	3.9	.25	.00	.00	.00
10	.01	.01	.00	.07	.02	.03	.40	2.8	302	.00	.00	.00
11	.01	.01	.00	.07	.02	.03	.40	1.7	65	.00	.00	.00
12	.02	.01	.00	.07	.08	.03	.25	1.4	16	.00	.00	.00
13	.01	.01	.00	.07	.09	.03	.15	.97	5.4	.00	.00	.00
14	.00	.01	.00	.07	.05	.03	.13	.78	1.8	.00	.00	.00
15	.00	.97	.00	.07	.03	.03	.09	.61	.73	.00	.00	.00
16	.00	1.7	.00	.07	.02	.03	.09	.49	.37	.00	.00	.00
17	.00	1.5	.00	.07	.02	.03	4.1	.39	.22	.00	.00	.00
18	.00	.24	.00	.06	.02	.03	36	.33	.13	.00	.00	.00
19	.00	.08	.00	199	.02	210	13	.28	.09	.00	.00	.00
20	.00	.04	.00	92	.02	434	2.8	.25	.07	.00	.00	.00
21	.00	.01	.00	28	.03	59	52	9.9	.05	.00	6.3	.00
22	.00	.01	.00	8.3	.03	382	14	377	.04	.00	90	.00
23	.08	.00	.00	1.8	.03	153	5.0	30	.04	.00	2.9	.00
24	.07	.00	.00	.72	.03	33	2.4	9.8	.04	.00	.03	.00
25	.03	.01	.00	.31	.03	11	1.4	4.4	.04	.00	46	.00
26	.01	.08	.00	.21	.03	5.4	.82	2.1	17	.00	18	.00
27	.01	.04	.00	.11	.03	3.3	.61	1.5	4.7	.00	.39	.00
28	.01	.02	.00	.06	.04	1.5	.52	1.0	.31	.00	.00	.00
29	.01	.02	.00	.08	---	17	1.0	.81	.02	.00	.00	.00
30	.01	.02	.00	.09	---	1640	4.7	.60	.07	.00	.00	.00
31	.01	---	.02	.08	---	179	---	.47	---	.00	.00	---
TOTAL	.52	5.03	.20	332.01	.89	3128.94	231.05	3665.28	417.14	.01	163.62	.00
MEAN	.017	.17	.006	10.7	.032	101	7.70	118	13.9	.000	5.28	.000
MAX	.10	1.7	.02	199	.09	1640	52	2020	302	.01	90	.00
MIN	.00	.00	.00	.03	.02	.03	.09	.25	.02	.00	.00	.00
CFSM	.000	.001	.000	.04	.000	.36	.03	.42	.05	.000	.02	.000
IN.	.00	.00	.00	.04	.00	.42	.03	.49	.06	.00	.02	.00
AC-FT	1.0	10.0	.4	659	1.8	6210	458	7270	827	.02	325	.00
CAL YR 1978	TOTAL	7690.08	MEAN	21.1	MAX	3290	MIN	.00	CFSM	.08	IN	1.02
WTR YR 1979	TOTAL	7944.69	MEAN	21.8	MAX	2020	MIN	.00	CFSM	.08	IN	1.06
									AC-FT	15250		
									AC-FT	15760		

BRAZOS RIVER BASIN

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08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1962 to current year. Sediment records: October 1967 to September 1975.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1962 to current year.

WATER TEMPERATURES: February 1962 to current year.

INSTRUMENTATION.--Specific conductance is recorded continuously at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,700 micromhos Apr. 5, 10, 1976; minimum daily, 59 micromhos Nov. 21, 1963.

WATER TEMPERATURES (1976-77): Maximum daily, 31.0°C June 26, 1977; minimum daily, 0.0°C Jan. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 18,100 micromhos Mar. 11, 14; minimum measured daily, 261 micromhos Mar. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 08...	1600	.03	16900	14.5	3300	3200	980	200	2700
DEC 06...	1630	.02	10500	7.0	1800	1700	550	110	1600
JAN 03...	1330	.03	--	4.5	--	--	--	--	--
29...	1030	.09	2070	--	390	280	120	22	260
31...	1510	.07	--	3.5	--	--	--	--	--
FEB 11...	1030	.02	9620	--	1700	1600	490	110	1400
MAR 01...	0910	.04	--	9.5	--	--	--	--	--
26...	1735	4.8	659	20.0	160	78	53	6.8	63
APR 02...	1310	17	500	16.5	140	46	45	5.8	41
26...	1042	.76	--	21.0	--	--	--	--	--
MAY 23...	1505	23	397	22.0	110	30	35	4.5	31
JUN 20...	1615	.07	2880	34.0	530	410	170	25	370

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 08...	21	9.1	96	0	600	6200	.1	9.4	10700
DEC 06...	16	8.3	120	0	390	3500	.2	1.3	6220
JAN 03...	--	--	--	--	--	--	--	--	--
29...	5.7	5.2	130	0	95	510	.2	7.1	1080
31...	--	--	--	--	--	--	--	--	--
FEB 11...	15	6.0	130	0	400	3100	.2	4.7	5580
MAR 01...	--	--	--	--	--	--	--	--	--
26...	2.2	4.9	100	0	30	130	.2	9.0	346
APR 02...	1.5	4.5	110	0	27	76	.2	9.6	263
26...	--	--	--	--	--	--	--	--	--
MAY 23...	1.3	5.2	92	0	22	64	.2	6.1	213
JUN 20...	7.0	6.6	140	0	140	760	.2	4.8	1550

BRAZOS RIVER BASIN

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	0.52	13800	8530	12	4750	6.2	550	0.7	****
NOV. 1978.....	5.03	5280	3270	44	1620	22	210	2.8	990
DEC. 1978.....	0.2	10900	6730	3.6	3670	2.1	430	0.2	****
JAN. 1979.....	332	553	340	306	120	106	22	20	100
FEB. 1979.....	0.89	8310	5150	12	2710	6.6	330	0.8	1560
MAR. 1979.....	3128.94	311	190	1610	64	538	12	103	58
APR. 1979.....	231.05	1290	800	499	290	178	52	32	240
MAY 1979.....	3665.28	451	280	2790	94	935	18	176	85
JUNE 1979.....	417.14	735	460	515	160	183	29	33	140
JULY 1979.....	0.01	1430	890	0.02	290	0	57	0	270
AUG. 1979.....	163.62	406	250	110	83	37	17	7.4	76
SEPT 1979.....	0	*****	*****	0	*****	0	*****	0	****
TOTAL	7944.69	**	**	5900	**	2010	**	376	**
WTD.AVG.	22	444	270	**	94	**	18	**	83

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15000	14000	9350	16600	2810	15800	447	333	4270	1430	---	---
2	14800	14100	9600	17300	3090	14900	558	355	4750	---	---	---
3	15000	14300	9740	17700	3620	14100	670	358	5220	---	---	---
4	14900	14400	9920	14500	5940	15300	690	464	5190	---	---	---
5	13400	14300	10000	13000	6330	13900	1090	595	7440	---	---	---
6	14600	14200	10500	12200	6530	14400	1190	803	7830	---	---	---
7	14900	16600	10800	10800	8080	15800	1550	940	8330	---	---	---
8	15000	16900	11200	9400	9210	16100	1990	1140	9850	---	---	---
9	14800	16500	11400	8700	9550	16900	2750	1280	10100	---	---	---
10	14900	16000	---	8350	9720	16500	3300	1420	547	---	---	---
11	14700	15800	---	7920	9810	18100	3640	1520	581	---	---	---
12	14400	15500	---	10600	8140	17800	4230	1820	629	---	---	---
13	14800	15600	---	15300	3620	17300	5370	2260	710	---	---	---
14	---	15700	---	14700	4070	18100	5820	3250	775	---	---	---
15	---	12500	---	14500	5840	17900	6560	4520	950	---	---	---
16	---	1500	---	14800	7500	16800	6970	4690	1150	---	---	---
17	---	2980	---	14900	8970	13700	6750	4620	1600	---	---	---
18	---	4000	---	14900	10000	14400	1740	6320	1820	---	---	---
19	---	5220	---	502	11000	540	1190	7440	2630	---	---	---
20	---	5990	---	389	11500	334	1100	7390	3090	---	---	---
21	---	6150	---	700	11900	487	838	7250	3100	---	1250	---
22	---	6300	---	966	12300	264	2090	1030	3710	---	313	---
23	12800	---	---	1030	12800	314	2280	402	4110	---	321	---
24	13100	---	---	1070	13100	341	2490	692	4510	---	393	---
25	13300	6200	---	1200	13500	485	2560	862	5300	---	423	---
26	13200	5500	---	1550	13800	616	3380	956	3530	---	541	---
27	13500	5870	---	1970	14400	873	3670	1950	1070	---	584	---
28	13600	5400	---	2190	15300	1190	4020	2290	1140	---	---	---
29	14000	6850	---	2070	---	955	4650	2530	1190	---	---	---
30	13800	9020	---	2040	---	261	4790	3110	1250	---	---	---
31	13900	---	16200	2610	---	309	---	4170	---	---	---	---
MEAN	14200	10600	10900	8210	9020	9510	2950	2480	3550	1430	546	---

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08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

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

[illegible]

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 (2.3 km) upstream from U.S. Highway 183, 6.5 mi (10.5 km) northwest of Breckenridge, and 12.6 mi (20.3 km) upstream from mouth.

DRAINAGE AREA.--1,085 mi² (2,810 km²).

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 (1,720 m) long. There are two additional levees, the north and south, making an overall length of 3.5 mi (5.6 km). Storage began September 1962 and the dam was completed in December 1962. The emergency spillway is a 2,000-foot-wide (610 m) 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 (850 m³/s), with a 17.5-foot (5.3 m) head through a 22.0-foot-diameter (6.7 m) concrete conduit. The dam is the property of the West Central Texas Municipal Water District. The District has a permit to divert 56,000 acre-ft (69.0 hm³) annually for municipal, mining, and industrial uses. Diversions during the current year are as follows: 2,860 acre-ft (3.53 hm³) for municipal use, 3,600 acre-ft (4.44 hm³) for oilfield operation, and 1,790 acre-ft (2.21 hm³) for irrigation and domestic uses. 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 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, 401,500 acre-ft (495 hm³) Aug. 5, 1978, elevation, 1,188.06 ft (362.121 m); minimum since normal operating level was reached in May 1969, 171,200 acre-ft (211 hm³) Oct. 18-20, 1972, elevation, 1,171.3 ft (357.01 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 329,200 acre-ft (406 hm³) May 2, elevation, 1,183.74 ft (360.804 m); minimum, 277,200 acre-ft (342 hm³) Jan. 7, elevation, 1,180.21 ft (359.728 m).

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

1,180.0	274,200	1,182.0	302,800
1,181.0	288,300	1,184.0	333,300

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292600	285000	283500	278200	279400	279100	304700	320900	306800	307000	297700	292900
2	292200	284900	283200	278200	279400	279300	304900	328300	307100	306400	297400	292300
3	291600	284700	282800	278000	279400	279100	304900	323500	307000	305900	297000	292000
4	291400	284600	282500	277700	279100	279100	304900	319600	308500	305500	296700	291900
5	290900	284500	282200	277700	279800	279100	305000	315700	309100	304700	296400	291600
6	290900	284200	281800	277500	279800	279100	305000	312400	309800	304700	296100	291300
7	290400	284200	281200	277300	280100	279000	305000	308500	309400	304600	295600	290900
8	289800	284000	281000	277300	280000	278900	304900	305200	308900	304100	295200	290600
9	289700	283900	280800	277300	279800	278700	304900	303200	308600	303800	295100	290100
10	289400	283500	280800	277700	280000	278700	305500	302500	309700	303500	295100	289700
11	289300	283200	280700	278200	280000	278700	305000	302300	309800	303100	295100	289400
12	289100	283100	280700	278300	279800	278400	304600	302300	309800	302800	295100	289100
13	288000	282800	280500	278200	279800	278200	304600	302500	310100	302200	294600	288400
14	288000	282500	280400	278000	279600	278000	304600	302200	310000	302000	294500	287500
15	287700	283600	280300	278000	279100	278400	304600	301900	309500	301400	294100	287400
16	287400	283800	280000	277900	279100	279000	304300	301600	308800	301200	293800	287000
17	287300	284000	280000	277700	279100	279100	305300	301600	308600	301000	293600	286700
18	286800	283900	279800	279000	279300	279300	305800	301400	308300	300900	293600	286400
19	286700	283600	279800	279600	279300	281900	305800	301600	307900	300700	293500	286100
20	286400	283300	279800	279600	279300	285000	305800	301200	307600	300700	293800	286000
21	286100	283300	279800	279800	279300	285700	305800	304600	307300	300900	294300	286000
22	286100	283600	279700	279800	279300	287500	305800	307100	307100	300400	294300	285900
23	286000	283800	279600	279700	279100	288700	305600	307300	306800	300400	294200	285600
24	286000	283900	279300	279700	279100	288800	305300	307100	306200	300000	294200	285200
25	285900	283900	279100	280100	279100	289000	304900	307300	307100	299700	294200	285000
26	285700	283900	279000	280100	279100	289000	304700	307300	308000	299300	294200	284700
27	285700	283800	278900	280000	279100	289000	304000	307400	307900	299300	294200	284600
28	285400	283800	278600	279800	279100	289000	303800	307300	307700	299000	293900	284200
29	285400	283600	278300	279800	---	291600	304100	307100	307600	298700	293600	283800
30	285200	283600	278200	279600	---	302500	304000	307000	307300	298100	293200	283300
31	285200	---	278200	279600	---	304100	---	306800	---	297800	293000	---
MAX	292600	285000	283500	280100	280100	304100	305800	328300	310100	307000	297700	292900
MIN	285200	282500	278200	277300	279100	278000	303800	301200	306200	297800	293000	283300
(†)	1180.78	1180.61	1180.28	1180.38	1180.35	1182.09	1182.08	1182.27	1182.30	1181.66	1181.33	1180.65
(+)	-7400	-1600	-5400	+1400	-500	+25000	-100	+2800	+500	-9500	-4800	-9700
CAL YR 1978	MAX	399000	MIN	185900	+	+70,700						
WTR YR 1979	MAX	328300	MIN	277300	+	-9300						

† Elevation, in feet, at end of month.

+ Change in contents, in acre-feet.

BRAZOS RIVER BASIN

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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 CREEK RESERVOIR SITE P1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN										
16...	0925	1.0	925	8.2	4.5	1.10	13.2	106	220	130
16...	0927	10	925	8.2	4.5	--	13.2	106	--	--
16...	0929	20	925	8.2	4.5	--	13.2	106	--	--
16...	0931	30	925	8.2	4.0	--	13.1	103	--	--
16...	0933	40	925	8.2	3.5	--	13.1	102	--	--
16...	0935	50	925	8.2	3.0	--	13.1	101	--	--
16...	0937	60	925	8.2	3.0	--	13.0	100	--	--
16...	0939	67	925	8.1	3.0	--	13.0	100	220	120
MAY										
15...	1215	1.0	905	8.2	21.5	.90	8.6	100	220	130
15...	1217	10	905	8.2	21.5	--	8.6	100	--	--
15...	1219	20	905	8.2	21.5	--	8.4	98	--	--
15...	1221	30	905	8.1	20.5	--	8.1	92	--	--
15...	1223	40	905	8.0	19.5	--	7.7	86	--	--
15...	1225	50	915	8.0	19.0	--	7.5	83	--	--
15...	1227	60	915	7.8	19.0	--	6.2	69	--	--
15...	1229	65	943	7.4	17.5	--	1.8	19	230	120
JUL										
31...	0945	1.0	928	8.3	28.0	1.90	7.0	92	240	130
31...	0947	10	928	8.3	28.1	--	7.0	92	--	--
31...	0949	20	928	8.3	28.0	--	7.0	92	--	--
31...	0951	30	928	8.3	27.5	--	6.7	88	--	--
31...	0954	40	928	7.9	27.0	--	4.9	64	--	--
31...	0958	50	928	7.3	24.0	--	.1	1	--	--
31...	1002	60	928	7.3	22.0	--	.1	1	--	--
31...	1005	73	928	7.3	21.5	--	.1	1	230	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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN										
16...	65	15	83	2.4	7.7	120	0	34	210	.3
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	64	15	82	2.4	7.7	120	0	36	200	--
MAY										
15...	65	15	86	2.5	7.3	120	0	37	190	.3
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	67	15	89	2.6	7.6	130	0	37	200	--
JUL										
31...	69	16	83	2.3	7.3	130	0	38	190	.3
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	69	15	83	2.4	6.7	150	0	32	190	--

BRAZOS RIVER BASIN

HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324932098575101 HUBBARD CREEK RESERVOIR SITE P1--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN									
16...	5.8	480	.16	.02	--	.020	--	0	<1
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.17	.02	--	.020	--	0	30
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	6.8	471	.16	.02	--	.070	--	300	40
MAY									
15...	4.5	465	.19	.02	.03	.010	.03	10	0
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.17	.04	.03	.010	.03	10	20
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.25	.06	.09	.030	.09	20	40
15...	5.1	485	.27	.06	.09	.030	.09	10	280
JUL									
31...	5.5	473	.01	.00	--	.010	.03	0	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	.06	.00	--	.010	.03	0	50
31...	--	--	.00	.09	--	.010	.03	60	1100
31...	--	--	--	--	--	--	--	--	--
31...	8.3	481	.00	.33	--	.050	.15	1500	1800

324712098575101 HUBBARD CREEK RESERVOIR SITE P4

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1025	1.0	925	8.2	5.0	13.0	105
16...	1027	10	925	8.2	5.0	13.0	105
16...	1029	20	925	8.2	5.0	13.0	105
16...	1031	31	925	8.2	5.0	13.0	105
MAY							
15...	1320	1.0	926	8.1	20.5	8.2	93
15...	1322	10	926	8.1	20.0	8.2	93
15...	1324	23	926	7.9	20.0	7.5	85
JUL							
31...	0915	1.0	928	8.1	27.5	6.6	87
31...	0917	10	928	8.0	27.5	6.6	87
31...	0919	20	928	8.0	27.5	6.6	87
31...	0921	32	928	8.0	27.5	6.5	86

324843098582901 HUBBARD CREEK RESERVOIR SITE P6

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1045	1.0	925	8.3	3.5	12.9	100
16...	1047	10	925	8.3	3.5	12.9	100
16...	1049	20	925	8.3	3.5	12.9	100
16...	1051	30	925	8.3	3.5	12.9	100
16...	1053	40	925	8.2	3.5	12.9	100
16...	1055	50	925	8.2	3.5	12.9	100
16...	1057	60	925	8.2	3.5	12.9	100
16...	1059	66	925	8.2	3.5	12.9	100
MAY							
15...	1145	1.0	906	8.1	20.5	8.3	94
15...	1147	10	906	8.1	20.5	8.3	94
15...	1149	20	906	8.1	20.0	8.3	94
15...	1151	30	906	8.1	20.0	8.3	94
15...	1153	40	906	7.9	19.0	7.6	84
15...	1155	50	906	7.9	19.0	7.3	81
15...	1157	63	906	7.8	18.5	7.1	78
JUL							
31...	1040	1.0	923	8.3	28.0	6.9	91
31...	1042	10	923	8.2	28.0	6.7	88
31...	1044	20	923	8.2	28.0	6.7	88
31...	1046	30	923	8.2	27.0	6.6	86
31...	1048	40	923	8.0	27.0	5.6	72
31...	1050	50	923	7.3	24.5	.1	2
31...	1052	60	923	7.3	22.0	.2	2
31...	1054	67	923	7.3	22.0	.2	2

BRAZOS RIVER BASIN

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HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324649099000501 HUBBARD CREEK RESERVOIR SITE P9

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN										
16...	1400	1.0	925	8.3	3.5	1.00	13.0	101	220	120
16...	1402	10	925	8.3	3.5	--	13.0	101	--	--
16...	1404	20	925	8.3	3.0	--	13.0	100	--	--
16...	1406	30	925	8.3	3.0	--	13.0	100	--	--
16...	1408	40	925	8.3	3.0	--	13.0	100	--	--
16...	1410	50	925	8.3	3.0	--	13.0	100	220	120
MAY										
15...	1100	1.0	891	8.1	19.5	.70	8.4	94	220	120
15...	1102	10	891	8.1	19.5	--	8.4	94	--	--
15...	1104	20	906	8.1	19.0	--	8.3	92	--	--
15...	1106	30	906	8.0	19.0	--	7.8	87	--	--
15...	1108	40	906	7.9	18.5	--	6.7	84	--	--
15...	1110	50	906	7.9	18.5	--	7.2	79	220	120
JUL										
31...	1115	1.0	923	8.0	27.5	--	6.2	82	230	120
31...	1117	10	923	8.0	27.2	--	6.1	79	--	--
31...	1119	20	923	8.0	27.2	--	5.8	75	--	--
31...	1123	30	923	7.8	27.0	--	4.4	57	--	--
31...	1125	40	923	7.4	26.1	--	.9	12	--	--
31...	1129	48	923	7.3	26.0	--	.6	8	240	130

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN									
16...	64	15	82	2.4	7.8	120	0	34	200
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	64	15	83	2.4	7.8	120	0	36	200
MAY									
15...	64	14	83	2.5	7.4	120	0	35	190
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	65	15	86	2.5	7.4	130	0	36	190
JUL									
31...	66	15	86	2.5	7.2	130	0	36	190
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	71	16	84	2.3	7.1	140	0	35	190

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN									
16...	5.7	468	.16	.02	--	.010	--	0	<1
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.16	.02	--	.020	--	10	10
16...	--	--	--	--	--	--	--	--	--
16...	5.7	471	.16	.02	--	.020	--	0	1
MAY									
15...	4.4	457	.20	.03	.06	.020	.06	10	0
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.22	.05	.06	.020	.06	10	0
15...	--	--	--	--	--	--	--	--	--
15...	4.6	468	.15	.05	.09	.030	.09	10	10
JUL									
31...	5.6	470	.02	.00	--	.010	.03	0	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	.06	.01	--	.010	.03	0	70
31...	--	--	--	--	--	--	--	--	--
31...	6.2	479	.05	.00	--	.010	.03	0	580

BRAZOS RIVER BASIN

HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324606099000201 HUBBARD CREEK RESERVOIR SITE P10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1425	1.0	925	8.3	3.5	13.2	102
16...	1427	10	925	8.3	3.5	13.2	102
16...	1429	20	925	8.3	3.0	13.3	102
16...	1431	30	925	8.3	3.0	13.3	102
16...	1433	39	925	8.3	3.0	13.3	102
MAY							
15...	1035	1.0	878	8.1	19.5	8.5	96
15...	1037	10	890	8.1	19.5	8.5	96
15...	1039	20	900	8.0	19.0	8.0	89
15...	1041	30	900	7.9	18.5	7.2	79
15...	1043	42	900	7.7	18.0	6.2	67
JUL							
31...	1143	1.0	939	7.9	27.0	5.6	73
31...	1145	10	939	7.9	27.0	5.6	73
31...	1147	20	939	7.7	27.0	4.2	55
31...	1149	30	939	7.6	26.5	3.3	42
31...	1151	44	939	7.4	26.0	.1	1

324514099010201 HUBBARD CREEK RESERVOIR SITE P11

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1450	1.0	925	8.3	3.0	13.3	102
16...	1452	10	925	8.3	3.0	13.3	102
16...	1454	22	925	8.2	3.0	13.3	102
MAY							
15...	1700	1.0	858	8.0	20.0	8.3	94
15...	1702	10	858	8.0	20.0	8.2	93
15...	1704	20	858	7.9	19.5	7.8	87
15...	1706	30	858	7.8	19.5	7.4	82
JUL							
31...	1207	1.0	939	7.9	27.0	5.8	75
31...	1209	10	939	7.9	27.0	5.6	73
31...	1211	20	939	7.8	27.0	5.2	68
31...	1213	30	939	7.4	27.0	1.6	21

324301099001701 HUBBARD CREEK RESERVOIR SITE P12

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
JAN										
16...	1510	1.0	918	8.2	3.5	1.00	13.3	103	220	100
16...	1512	10	923	8.2	3.5	--	13.3	103	--	--
16...	1514	19	923	8.2	4.0	--	13.3	105	220	120
MAY										
15...	1730	1.0	472	7.8	22.0	.20	8.0	94	140	46
15...	1732	5.0	472	7.8	22.0	--	8.0	94	--	--
15...	1734	10	660	7.8	20.5	--	7.3	83	--	--
15...	1736	15	780	7.8	19.5	--	7.3	81	--	--
15...	1738	20	835	7.8	19.5	--	7.2	80	210	110
JUL										
31...	1235	1.0	922	8.0	28.0	.30	6.1	80	240	130
31...	1237	11	925	8.0	28.0	--	5.8	76	230	130

BRAZOS RIVER BASIN

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HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324301099001701 HUBBARD CREEK RESERVOIR SITE P12--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN									
16...	63	15	80	2.4	7.9	140	0	35	200
16...	--	--	--	--	--	--	--	--	--
16...	64	15	81	2.4	7.9	130	0	34	200
MAY									
15...	44	6.5	36	1.3	5.5	110	0	22	72
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	63	13	76	2.3	7.0	120	0	35	170
JUL									
31...	70	15	84	2.4	7.4	130	0	36	190
31...	65	17	84	2.4	7.4	130	0	36	200

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN									
16...	5.2	475	.07	.02	--	.020	--	30	30
16...	--	--	--	--	--	--	--	--	--
16...	5.2	471	.08	.02	--	.020	--	<0	20
MAY									
15...	5.1	245	.33	.10	.15	.050	.15	0	10
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	4.5	428	.21	.07	.09	.030	.09	0	30
JUL									
31...	6.1	473	.01	.00	--	.030	.09	0	0
31...	6.0	479	.01	.00	--	.030	.09	0	10

324949098594301 HUBBARD CREEK RESERVOIR SITE P13

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1110	1.0	925	8.3	4.0	12.9	100
16...	1112	10	925	8.3	4.0	12.9	100
16...	1114	20	925	8.3	4.0	12.9	100
16...	1116	30	925	8.3	3.5	12.9	100
16...	1118	40	925	8.3	3.5	12.9	100
16...	1120	50	925	8.3	3.5	12.9	100
16...	1122	62	925	8.3	3.5	12.9	100
MAY							
15...	1345	1.0	898	8.2	21.5	8.6	100
15...	1347	10	898	8.1	21.0	8.5	99
15...	1349	20	898	8.1	21.0	8.2	95
15...	1351	30	898	8.0	20.0	8.0	91
15...	1353	40	898	8.0	20.0	7.7	88
15...	1355	50	908	7.8	19.0	6.6	73
15...	1357	60	928	7.4	18.5	3.6	40
15...	1359	63	938	7.3	18.0	2.4	26
JUL							
31...	1333	1.0	928	8.3	28.5	7.3	97
31...	1335	10	928	8.3	28.5	7.2	96
31...	1337	20	928	8.2	28.0	6.8	89
31...	1339	30	928	8.1	27.0	6.1	79
31...	1341	40	928	7.9	27.5	5.0	66
31...	1343	48	928	7.3	26.0	.2	3
31...	1345	60	928	7.3	23.0	.2	2

BRAZOS RIVER BASIN

HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324802099021601 HUBBARD CREEK RESERVOIR SITE P15

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1145	1.0	930	8.3	3.0	13.0	100
16...	1147	10	930	8.3	3.0	13.0	100
16...	1149	20	930	8.3	3.0	13.0	100
16...	1151	30	930	8.3	3.0	13.0	100
16...	1153	42	930	8.3	3.0	13.0	100
MAY							
15...	1415	1.0	860	8.1	20.5	8.4	95
15...	1417	10	880	8.0	20.0	8.2	93
15...	1419	20	880	8.0	20.0	8.0	91
15...	1421	34	880	7.6	19.0	6.2	69
JUL							
31...	1406	1.0	928	8.1	28.0	6.5	86
31...	1408	10	928	8.0	27.5	6.1	80
31...	1410	20	928	7.9	27.0	5.8	75
31...	1412	30	928	7.7	27.0	3.9	51
31...	1414	42	928	7.3	27.0	.5	6

324653099032401 HUBBARD CREEK RESERVOIR SITE P16

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)
JAN										
16...	1205	1.0	960	8.3	3.0	1.00	13.0	100	220	120
16...	1207	10	960	8.3	3.0	--	13.0	100	--	--
16...	1209	20	960	8.3	3.0	--	13.0	100	--	--
16...	1211	29	960	8.3	3.0	--	13.0	100	220	120
MAY										
15...	1445	1.0	847	8.0	20.0	--	8.0	91	210	100
15...	1447	10	847	8.0	20.0	--	7.8	89	--	--
15...	1449	20	847	7.8	19.0	--	6.8	76	--	--
15...	1451	27	836	7.6	18.5	--	5.6	62	210	100
JUL										
31...	1430	1.0	929	8.1	28.0	1.10	6.8	89	240	140
31...	1432	10	929	7.9	27.5	--	5.9	78	--	--
31...	1434	20	929	7.9	27.5	--	5.6	74	--	--
31...	1436	30	929	7.8	27.5	--	5.4	71	230	130

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN									
16...	63	15	88	2.6	8.2	120	0	37	220
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	63	15	87	2.6	8.2	120	0	37	210
MAY									
15...	63	13	78	2.3	6.7	130	0	36	170
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	63	13	76	2.3	6.9	130	0	35	170
JUL									
31...	71	16	86	2.4	7.3	130	0	38	200
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	65	17	88	2.5	7.4	130	0	39	200

BRAZOS RIVER BASIN

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HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324653099032401 HUBBARD CREEK RESERVOIR SITE P16--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN									
16...	5.5	496	.15	.00	--	.020	--	<0	4
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	5.5	485	.15	.00	--	.020	--	<0	4
MAY									
15...	4.8	436	.16	.05	.06	.020	.06	50	10
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	5.1	433	.20	.16	.09	.030	.09	20	20
JUL									
31...	5.8	488	.03	.01	--	.020	.06	10	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	5.8	422	.02	.00	--	.040	.12	0	40

324608099042101 HUBBARD CREEK RESERVOIR SITE P17

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JAN							
16...	1310	1.0	1140	8.3	5.0	13.1	106
16...	1312	10	1180	8.3	5.0	12.8	103
16...	1314	20	2150	8.0	5.0	12.0	98
16...	1316	26	2280	8.0	5.0	11.9	98
MAY							
15...	1500	1.0	933	7.9	22.5	7.6	90
15...	1502	5.0	860	7.6	21.0	6.1	71
15...	1504	10	820	7.5	18.5	5.3	58
15...	1506	20	800	7.3	18.0	3.9	42
15...	1508	25	800	7.3	18.0	3.3	36

324541099053601 HUBBARD CREEK RESERVOIR SITE P18

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN										
16...	1245	1.0	1220	8.3	5.0	1.00	13.1	106	270	170
16...	1247	10	1220	8.3	5.0	--	13.0	105	--	--
16...	1249	20	2580	8.0	5.0	--	12.0	98	600	470
MAY										
15...	1545	1.0	1440	8.1	23.5	.50	9.3	113	380	210
15...	1547	5.0	1320	7.9	21.0	--	7.2	84	--	--
15...	1549	10	900	7.2	18.5	--	2.4	26	--	--
15...	1551	15	1440	7.4	19.5	--	3.4	38	--	--
15...	1553	21	1490	7.4	19.5	--	2.8	31	400	220
JUL										
31...	1515	1.0	937	8.1	28.0	--	6.9	91	240	130
31...	1517	10	940	7.9	27.5	--	5.9	78	--	--
31...	1519	15	940	7.7	27.0	--	4.9	64	230	130

BRAZOS RIVER BASIN

HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324541099053601 HUBBARD CREEK RESERVOIR SITE P18--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
JAN									
16...	77	20	120	3.2	8.1	130	0	46	290
16...	--	--	--	--	--	--	--	--	--
16...	160	49	280	5.0	7.5	160	0	99	680
MAY									
15...	110	26	130	2.9	5.1	210	0	78	300
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	120	25	130	2.8	4.6	220	0	80	320
JUL									
31...	69	16	86	2.4	7.3	130	0	43	210
31...	--	--	--	--	--	--	--	--	--
31...	69	15	85	2.4	7.3	130	0	36	200

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN									
16...	4.3	630	.09	.00	--	.020	--	<0	10
16...	--	--	--	--	--	--	--	--	--
16...	4.1	1360	.47	.06	--	.030	--	0	40
MAY									
15...	7.9	761	.40	.02	.09	.030	.09	30	20
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	8.6	797	.61	.18	.12	.040	.12	10	50
JUL									
31...	6.2	502	.04	.01	--	.020	.06	10	10
31...	--	--	--	--	--	--	--	--	--
31...	.9	477	.05	.02	--	.050	.15	0	80

324932098575101 HUBBARD CREEK RESERVOIR SITE P1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	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)
JAN							
16...	0925	1.0	--	--	--	--	--
16...	0931	30	--	--	--	--	--
16...	0939	67	--	--	--	--	--
MAY							
15...	1215	1.0	0	200	1	10	0
15...	1221	30	--	--	--	--	--
15...	1227	60	--	--	--	--	--
15...	1229	65	0	200	1	0	0
JUL							
31...	0945	1.0	1	200	0	0	0
31...	0954	40	--	--	--	--	--
31...	0958	50	--	--	--	--	--
31...	1005	73	5	200	0	0	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN							
16...	0	--	<1	--	--	--	--
16...	0	--	30	--	--	--	--
16...	300	--	40	--	--	--	--
MAY							
15...	10	0	0	.1	0	0	10
15...	10	--	20	--	--	--	--
15...	20	--	40	--	--	--	--
15...	10	0	280	.0	0	0	20
JUL							
31...	0	0	10	.0	0	0	<3
31...	0	--	50	--	--	--	--
31...	60	--	1100	--	--	--	--
31...	1500	0	1800	.2	0	0	<3

BRAZOS RIVER BASIN

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HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324932098575101 HUBBARD CREEK RESERVOIR SITE P1

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	JAN 16, 79 0926	MAY 15, 79 1216	JUL 31, 79 0946
TOTAL CELLS/ML	670	2100	7500
DIVERSITY: DIVISION	0.7	0.9	0.8
..CLASS	0.7	0.9	0.8
..ORDER	0.8	1.6	1.4
...FAMILY	0.8	1.8	1.7
....GENUS	0.8	1.8	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
...COELASTRUM	--	-	260	12	150	2
...OOCYSTACEAE						
...ANKISTRODESMUS	--	-	52	2	*	0
...DICTYOSPHAERIUM	--	-	--	-	52	1
...OOCYSTIS	--	-	--	-	*	0
...TETRAEDRON	--	-	--	-	*	0
...SCENEDESMACEAE						
...CRUCIGENIA	15	2	--	-	100	1
...SCENEDESMUS	--	-	26	1	410	5
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	5	1	--	-	52	1
...ZYCNEMATALES						
...DESMIDIACEAE						
...COSMARIUM	--	-	--	-	*	0
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCAEAE						
...CYCLOTELLA	--	-	--	-	39	1
...MELOSIRA	50	8	26	1	--	-
...PENNALES						
...ACHNANTHACEAE						
...ACHNANTHES	--	-	--	-	*	0
...FRAGILARIACEAE						
...FRAGILARIA	5	1	--	-	--	-
...NAVICULACEAE						
...NAVICULA	--	-	--	-	*	0
...NITZSCHIAEAE						
...NITZSCHIA	15	2	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	--	-	52	2	140	2
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	140	2
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	--	-	--	-	410	5
...ANACYSTIS	--	-	520#	25	620	8
...HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	580#	86	--	-	--	-
...OSCILLATORIACEAE						
...OSCILLATORIA	--	-	1200#	56	5200#	69
...RIVULARIACEAE						
...RAPHDIOPSIS	--	-	--	-	90	1

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

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

BRAZOS RIVER BASIN

HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

324541099053601 HUBBARD CREEK RESERVOIR SITE P18

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	JAN 16,79 1246	MAY 15,79 1544	JUL 31,79 1516
TOTAL CELLS/ML	60	6100	16000
DIVERSITY: DIVISION	0.9	1.9	0.5
..CLASS	0.9	1.9	0.5
..ORDER	2.0	2.2	1.0
...FAMILY	2.1	2.5	1.1
....GENUS	2.1	3.3	1.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	5	8	290	5	*	0
....DICTYOSPHAERIUM	--	--	470	8	--	--
....KIRCHNERIELLA	--	--	--	--	*	0
...OOCYSTIS	--	--	120	2	*	0
....SELENASTRUM	--	--	--	--	*	0
....TETRAEDRON	--	--	*	0	*	0
...SCENEDESMACEAE						
....ACTINASTRUM	--	--	120	2	--	--
....CRUCIGENIA	--	--	--	--	150	1
...SCENEDESMUS	--	--	350	6	260	2
....TETRASTRUM	--	--	120	2	--	--
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIS	--	--	--	--	*	0
...PALMELLACEAE						
....SPHAEROCYSTIS	--	--	240	4	--	--
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	10#	17	88	1	100	1
..ZYGNEMATALES						
...DESMIDIACEAE						
....CLOSTERIUM	5	8	--	--	--	--
CHRYSTOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCEAE						
....CYCLOTELLA	30#	50	*	0	*	0
..PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	5	8	--	--	--	--
...NITZSCHACEAE						
....NITZSCHIA	5	8	*	0	90	1
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	--	120	2	*	0
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	--	1800#	30	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	--	940#	16	750	5
....ANACYSTIS	--	--	820	14	640	4
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENOPSIS	--	--	--	--	350	2
...OSCILLATORIACEAE						
....OSCILLATORIA	--	--	--	--	13000#	82
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	--	120	2	150	1
....TRACHELOMONAS	--	--	320	5	130	1
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	--	*	0	--	--

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

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

BRAZOS RIVER BASIN

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08086500 HUBBARD CREEK NEAR BRECKENRIDGE, TX

LOCATION.--Lat 32°50'13", long 98°56'52", Stephens County, Hydrologic Unit 12060105, on downstream side of pier of bridge on U.S. Highway 183, 1.4 mi (2.3 km) downstream from Hubbard Creek Reservoir, 6.8 mi (10.9 km) northwest of Breckenridge, 8.2 mi (13.2 km) upstream from Gonzales Creek, and 11.2 mi (18.0 km) upstream from Clear Fork Brazos River.

DRAINAGE AREA.--1,089 mi² (2,821 km²), of which 1,085 mi² (2,810 km²) is above Hubbard Creek Dam.

PERIOD OF RECORD.--April 1955 to current year.

Water-quality records: Chemical analyses: April 1955 to September 1975. Water temperatures: April 1955 to September 1975.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.10 ft (332.872 m) National Geodetic Vertical Datum of 1929. Prior to July 16, 1959, at site 300 ft (91 m) upstream at same datum.

REMARKS.--Records good. Flow is regulated by Hubbard Creek Reservoir (station 08086400). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years (water years 1956-62) prior to completion of Hubbard Creek Dam, 170 ft³/s (4,814 m³/s), 123,200 acre-ft/yr (152 hm³/yr); 17 years (water years 1963-79) regulated, 35.3 ft³/s (1,000 m³/s), 25,570 acre-ft/yr (31.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,500 ft³/s (977 m³/s) May 26, 1957, gage height, 34.00 ft (10.363 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1925, 34.2 ft (10.42 m) July 20, 1953, from information by local resident and State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,700 ft³/s (76.5 m³/s) May 3, gage height, 18.29 ft (5.575 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.14	.26	.49	.21	.16	2.9	13	.24	.19	.22	.00
2	.22	.13	.25	.37	.22	.20	1.1	625	.22	.08	.28	.00
3	.22	.12	.18	.37	.26	.31	.60	2640	.16	.04	.08	.00
4	.25	.14	.13	.30	.26	.24	.47	2460	.28	.02	.03	.00
5	.25	.15	.12	.26	.38	.26	.38	2280	5.5	.02	.01	.00
6	.23	.20	.12	.19	.43	1.1	.27	2140	1.4	.02	.00	.00
7	.18	.16	.14	.19	.39	1.3	.27	2000	.61	.04	.00	.00
8	.13	.17	.14	.18	.35	.74	.27	1870	.36	.04	.00	.00
9	.12	.23	.12	.19	.27	.68	.26	1140	.25	.03	.00	.00
10	.25	.15	.14	.31	.26	.50	.31	3.3	.17	.03	.05	.00
11	.32	.11	.18	.40	.28	.29	.34	1.6	.13	.02	.19	.00
12	.27	.13	.16	.31	.28	.33	.32	1.1	.10	.01	.08	.00
13	.21	.13	.18	.28	.28	.74	1.0	.77	.11	.00	.03	.00
14	.17	.15	.16	.15	.28	.94	.37	4.6	.11	.00	.02	.00
15	.19	.49	.18	.12	.26	.60	.23	.80	.08	.00	.01	.00
16	.19	1.2	.20	.13	.21	.60	.17	.37	.07	.00	.01	.00
17	.18	.49	.16	.14	.16	.60	.38	.36	.08	.00	.00	.00
18	.19	.21	.17	.56	.16	.60	.54	4.7	.10	.02	.00	.00
19	.19	.14	.23	.93	.15	.60	.28	.56	.10	.02	.00	.00
20	.16	.13	.30	.60	.14	.60	.19	.35	.09	.02	.12	.00
21	.13	.18	.35	.32	.14	.55	.16	.81	.09	.03	15	.00
22	.16	.17	.44	.20	.16	.55	.14	1.2	.07	.03	.58	.00
23	.40	.14	.61	.17	.16	.55	.13	.69	.07	.01	11	.00
24	.26	.14	.66	.17	.20	.55	.12	.35	.06	.01	1.1	.00
25	.18	.15	.72	.32	.19	.55	.12	.25	.07	.01	.32	.00
26	.17	4.0	.76	.48	.17	.50	.10	.21	.13	.00	.17	.00
27	.22	.93	.65	.37	.17	.49	.11	.19	.13	.00	.10	.00
28	.19	.44	.53	.27	.19	.32	.12	.22	.09	.00	.06	.00
29	.15	.30	.45	.27	---	.73	.12	.20	.07	.00	.03	.00
30	.12	.30	.38	.28	---	4.4	.11	.18	.27	.00	.01	.00
31	.13	---	.51	.24	---	1.2	---	.16	---	.00	.01	---
TOTAL	6.27	11.52	9.58	9.56	6.61	21.78	11.88	15190.97	11.21	.69	29.51	.00
MEAN	.20	.38	.31	.31	.24	.70	.40	490	.37	.022	.95	.000
MAX	.40	4.0	.76	.93	.43	4.4	2.9	2640	5.5	.19	15	.00
MIN	.12	.11	.12	.12	.14	.16	.10	.16	.06	.00	.00	.00
AC-FT	12	23	19	19	13	43	24	30130	22	1.4	59	.00

CAL YR 1978 TOTAL 71046.49 MEAN 195 MAX 13800 MIN .00 AC-FT 140900
WTR YR 1979 TOTAL 15309.58 MEAN 41.9 MAX 2640 MIN .00 AC-FT 30370

08087300 CLEAR FORK BRAZOS RIVER AT ELIASVILLE, TX

LOCATION.--Lat 32°57'36", long 98°45'59", Young County, Hydrologic Unit 12060104, on right bank 5 ft (2 m) upstream from old mill dam 180 ft (55 m) upstream from bridge on Farm Road 1974, 400 ft (122 m) northwest of U.S. Post Office at Eliasville, and 13.2 mi (21.2 km) upstream from mouth.

DRAINAGE AREA.--5,697 mi² (14,755 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1915 to April 1920, December 1923 to August 1925, July 1928 to September 1951, October 1961 to current year. Monthly discharge only for some periods published in WSP 1312 as "near Crystal Falls".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,027.77 ft (313.264 m) National Geodetic Vertical Datum of 1929. See WSP 1922 for history of changes prior to Dec. 18, 1961.

REMARKS.--Water-discharge records good. Many small diversions above station for municipal supply and oilfield operations.

AVERAGE DISCHARGE.--27 years (water years 1917-19, 1929-51, 1962) prior to completion of Hubbard Creek Dam, 430 ft³/s (12.18 m³/s), 311,500 acre-ft/yr (384 hm³/yr); 17 years (water years 1963-79) regulated, 253 ft³/s (7.165 m³/s), 183,300 acre-ft/yr (226 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft³/s (1,930 m³/s) Aug. 5, 1978, gage height, 37.04 ft (11.290 m), present site and datum, from rating curve extended above 40,000 ft³/s (1,130 m³/s); no flow at times.

Maximum stage since 1877, that of Aug. 5, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1, 1957, reached a stage of 35 ft (10.7 m), present site and datum; flood in September 1900 reached about same stage, from information by State Department of Highways and Public Transportation and local residents. Other floods are reported to have occurred in 1876, Apr. 27, 1890, 1932, 1941, and 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 3	2100	*7,730 219	15.72 4.791
June 5	0430	6,580 186	14.39 4.386

Minimum discharge, 0.45 ft³/s (0.013 m³/s) Sept. 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	62	80	45	44	38	124	146	99	243	30	18
2	189	57	73	47	41	39	142	459	81	194	28	24
3	158	53	72	48	40	44	148	6200	153	170	19	18
4	137	51	66	48	40	50	106	5380	158	136	14	12
5	123	49	58	47	39	45	86	3830	3490	109	10	9.8
6	106	50	52	53	44	43	75	3490	1330	97	155	7.9
7	98	51	48	52	43	41	72	3200	1270	89	104	6.2
8	87	50	41	50	44	42	65	2910	1580	163	70	5.1
9	79	43	40	49	46	39	64	2620	1400	135	48	4.4
10	77	39	40	52	46	38	65	378	1020	108	32	3.3
11	74	38	40	57	49	40	63	138	762	82	29	2.6
12	69	38	38	60	46	37	64	112	699	64	22	2.2
13	62	40	35	52	45	35	70	93	615	53	15	1.9
14	62	40	35	50	46	35	64	79	487	51	11	1.4
15	64	71	36	49	44	42	70	73	375	43	8.9	1.3
16	60	97	36	53	42	48	62	71	298	38	7.6	1.1
17	56	63	39	55	43	48	71	66	220	36	6.4	.93
18	52	53	41	68	41	48	163	60	166	40	5.8	.74
19	50	49	43	107	41	63	201	56	142	41	9.7	.83
20	49	53	48	126	40	153	97	55	127	29	61	.93
21	45	52	45	72	40	91	82	68	112	25	184	.76
22	47	66	42	58	40	188	103	326	96	23	59	.58
23	79	64	40	50	40	282	79	295	83	24	199	.54
24	74	58	43	81	40	547	80	114	74	41	100	.52
25	67	55	43	129	43	788	66	118	73	94	43	.62
26	58	124	40	97	43	435	59	234	72	63	26	.95
27	54	78	40	78	41	211	53	151	72	68	40	1.0
28	69	82	39	62	43	247	47	161	212	67	25	1.1
29	73	68	39	57	---	197	44	133	557	47	17	1.0
30	69	65	41	51	---	319	43	101	333	34	16	.97
31	66	---	46	45	---	177	---	90	---	32	19	---
TOTAL	2555	1759	1419	1948	1194	4450	2528	31207	16156	2439	1414.4	130.67
MEAN	82.4	58.6	45.8	62.8	42.6	144	84.3	1007	539	78.7	45.6	4.36
MAX	202	124	80	129	49	788	201	6200	3490	243	199	24
MIN	45	38	35	45	39	35	43	55	72	23	5.8	.52
AC-FT	5070	3490	2810	3860	2370	8830	5010	61900	32050	4840	2810	259
CAL YR 1978	TOTAL	249260.76	MEAN	683	MAX	55200	MIN	.03	AC-FT	494400		
WTR YR 1979	TOTAL	67200.07	MEAN	184	MAX	6200	MIN	.52	AC-FT	133300		

08087300 CLEAR FORK BRAZOS RIVER AT ELIASVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1961 to current year.
Pesticide analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to current year.
WATER TEMPERATURES: October 1961 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 7,400 micromhos Jan. 9, 1971; minimum daily, 227 micromhos Aug. 5, 1978.

WATER TEMPERATURES: Maximum daily, 38.0°C Aug. 6 1964; minimum daily, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,830 micromhos Mar 21; minimum daily, 473 micromhos June 6.

WATER TEMPERATURES: Maximum daily, 30.5°C July 5; minimum daily, 1.0°C Jan. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 18...	0733	52	2140	19.0	520	340	130	48	220
NOV 06...	1220	51	2650	17.5	730	530	190	62	280
DEC 20...	1005	48	2990	9.5	840	610	220	70	320
JAN 30...	1330	50	--	4.5	--	--	--	--	--
FEB 12...	1245	46	3220	7.0	890	700	210	88	350
MAR 12...	1205	36	3830	15.0	1000	820	220	110	490
APR 23...	1230	79	--	22.5	--	--	--	--	--
MAY 03...	0920	6230	1430	21.0	430	260	120	31	140
JUN 04...	1215	149	1900	25.5	520	380	130	48	200
JUL 16...	1230	37	--	31.5	--	--	--	--	--
AUG 20...	1345	60	--	29.0	--	--	--	--	--
SEP 28...	0825	27	2010	28.5	400	280	99	37	250
SEP 30...	0912	1.0	2340	23.5	490	360	120	45	280

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 18...	4.2	9.9	220	0	180	480	.3	7.9	1180
NOV 06...	4.5	8.6	240	0	310	610	.3	8.4	1590
DEC 20...	4.8	8.3	280	0	340	680	.3	10	1790
JAN 30...	--	--	--	--	--	--	--	--	--
FEB 12...	5.1	9.6	230	0	460	660	.5	5.6	1900
MAR 12...	6.7	11	220	0	780	820	.5	.5	2540
APR 23...	--	--	--	--	--	--	--	--	--
MAY 03...	2.9	9.0	210	0	190	260	.3	19	873
JUN 04...	3.8	7.1	170	0	260	360	.3	6.2	1100
JUL 16...	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--
SEP 28...	5.4	9.7	140	0	130	500	.3	5.8	1100
SEP 30...	5.5	9.7	150	0	150	590	.3	7.2	1280

BRAZOS RIVER BASIN

08087300 CLEAR FORK BRAZOS RIVER AT ELIASVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
FEB 12...	1245	.0	0	.00	.0	.0	0	.00	.0	.00
AUG 20...	1345	.0	1	.00	.0	.0	0	.00	.1	.00

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
FEB 12...	1.2	.00	.0	.03	.00	.0	.00	.00	.0
AUG 20...	2.2	.00	1.4	.00	.00	.1	.00	.00	.0

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
FEB 12...	.00	.00	.0	.00	.0	.00	.0	.00	.00
AUG 20...	.00	.00	.0	.00	.0	.00	.0	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
FEB 12...	.00	.00	.00	0	0	.00	.00	.00	.00
AUG 20...	.00	.00	.00	0	0	.00	.00	.00	.00

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	2555	2270	1430	9890	450	3070	430	2990	610
NOV. 1978.....	1759	2840	1800	8530	560	2660	540	2580	760
DEC. 1978.....	1419	2970	1880	7190	580	2230	570	2170	790
JAN. 1979.....	1948	3280	2070	10900	650	3400	620	3290	880
FEB. 1979.....	1194	3420	2160	6970	670	2170	650	2100	910
MAR. 1979.....	4450	3480	2200	26400	680	8230	660	7980	930
APR. 1979.....	2528	2510	1590	10900	490	3370	480	3280	670
MAY 1979.....	31207	1020	650	54400	200	17100	200	16400	270
JUNE 1979.....	16156	1030	650	28200	200	8830	200	8530	270
JULY 1979.....	2439	1550	980	6440	300	2010	300	1950	410
AUG. 1979.....	1414.4	1940	1230	4690	380	1460	370	1420	520
SEPT 1979.....	130.67	1890	1190	422	370	131	360	127	510
TOTAL	67200	**	**	175000	**	54700	**	52800	**
WTD. AVG.	184	1530	970	**	300	**	290	**	410

BRAZOS RIVER BASIN

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08087300 CLEAR FORK BRAZOS RIVER AT ELIASVILLE, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2310	2490	2920	3180	3250	3810	2670	2810	1620	1150	1710	1830
2	2950	2510	2830	3200	3240	3850	2490	2220	1510	1210	1690	1800
3	2100	2540	2750	3150	3220	3830	2400	1200	1700	1190	1690	1790
4	2050	2600	2880	3100	3220	3900	2510	844	1200	1130	1680	1920
5	1920	2620	2890	3090	3190	3980	2560	844	569	1410	1700	1860
6	1870	2640	2880	3130	3240	3950	2590	867	473	1570	1760	1870
7	1790	2780	2960	3030	3270	3920	2570	874	1510	1520	2090	1880
8	1920	2810	2950	3020	3250	3920	2490	895	2520	1480	1680	1910
9	2240	2810	2940	3000	3220	3880	2460	910	747	1420	1600	1930
10	2410	2780	2950	3010	3250	3890	2370	921	800	1510	1650	1960
11	2360	2850	2940	3050	3220	3940	2370	996	830	1660	1750	1980
12	2280	2880	2910	3090	3210	3830	2440	1050	830	1740	1860	2010
13	2190	2840	2920	3080	3280	3850	2400	1080	839	1800	1970	2030
14	2320	2810	2980	3360	3270	3880	2430	1080	858	1840	2060	2040
15	2230	2860	3040	3270	3310	3900	2370	1090	900	1870	2140	2070
16	2200	2880	2920	3230	3430	3060	2340	1160	1240	1890	2180	2090
17	2160	2780	2920	3330	3680	3730	2400	1250	1260	1920	2160	2120
18	2140	3020	2960	3360	3620	3850	2350	1360	1210	1900	2240	2160
19	2110	3000	2980	3280	3570	3920	2700	1520	1160	1930	2280	2190
20	2130	2980	2990	3380	3570	3760	2460	1630	1110	1990	2360	2200
21	2170	2940	3000	3810	3590	4830	2440	1690	1090	2020	2080	2210
22	2230	2970	3010	3800	3510	4020	2620	1790	1080	2040	2520	2240
23	2310	2920	2970	3650	3540	3680	2780	1610	1070	1940	2120	2250
24	2420	2880	2970	3480	3590	3540	2840	2360	1060	1890	1620	2260
25	2370	2840	3110	3180	3680	3160	2640	1980	1080	1940	1630	2290
26	2410	2930	3090	3370	3700	2390	2570	1860	1100	2030	1810	2310
27	2490	2670	3080	3430	3810	3030	2370	1460	1140	2020	2110	2330
28	2480	3110	3090	3290	3860	4000	2330	1540	1140	1860	2030	2340
29	2530	3150	3140	3210	---	4040	2420	1640	1070	1780	2000	2350
30	2500	3010	3170	3200	---	3720	2600	1770	1060	1760	1960	2360
31	2470	---	3190	3170	---	2700	---	1840	---	1750	1880	---
MEAN	2260	2830	2980	3260	3420	3730	2500	1420	1130	1710	1940	2080

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	17.0	11.5	4.0	2.0	9.0	18.0	20.0	24.0	29.0	28.5	29.0
2	23.5	18.0	13.0	2.0	4.5	11.5	17.0	20.0	23.5	28.5	28.5	29.0
3	23.5	18.5	11.0	3.0	5.5	11.0	16.5	21.0	---	28.5	28.5	29.0
4	23.0	18.5	9.5	3.0	4.5	10.0	15.5	17.0	23.0	28.5	28.5	28.5
5	23.0	18.5	10.0	3.0	4.5	9.0	16.0	17.0	22.0	29.0	29.0	29.0
6	22.0	18.0	9.0	1.5	4.5	10.0	17.0	18.5	22.0	29.5	28.5	28.5
7	21.5	16.0	8.5	1.5	4.5	11.5	18.0	19.5	25.0	29.0	28.5	28.5
8	21.5	14.5	6.5	1.0	4.5	11.0	19.0	20.0	26.0	29.5	28.5	28.5
9	21.0	15.0	5.5	2.0	3.5	12.0	18.0	20.5	25.5	29.5	28.5	28.0
10	21.0	15.5	5.5	3.0	4.5	12.0	18.5	21.0	24.5	29.0	29.0	25.5
11	20.5	14.5	5.0	3.0	5.5	11.5	18.5	19.5	23.5	29.5	28.5	25.5
12	20.5	14.5	4.5	3.0	7.0	13.0	17.0	17.0	23.5	29.5	26.5	25.5
13	21.0	15.5	5.0	3.5	7.0	14.0	18.0	18.5	24.0	29.5	26.5	25.5
14	20.0	15.5	5.5	2.0	8.0	14.0	18.0	20.0	24.5	30.0	28.0	25.0
15	19.5	14.0	5.5	2.0	10.0	14.0	19.5	20.5	25.0	30.5	28.5	24.0
16	19.5	13.0	6.0	3.5	8.0	11.5	20.0	21.5	26.0	29.5	28.5	23.5
17	19.0	10.0	5.5	4.5	6.0	13.0	21.0	21.5	26.5	30.0	28.5	22.0
18	19.0	11.0	6.5	6.0	5.5	14.5	20.0	21.5	25.0	29.5	28.5	21.5
19	18.5	11.5	8.0	7.0	5.5	15.0	20.5	23.0	25.5	28.5	28.5	21.5
20	18.5	12.0	10.0	8.0	6.0	14.0	20.5	24.5	26.5	27.0	26.5	22.0
21	18.5	11.5	5.5	6.5	7.0	14.5	21.0	24.0	27.0	28.5	25.5	21.5
22	20.0	11.5	8.5	6.0	8.5	15.5	20.5	23.5	28.5	28.5	26.0	23.0
23	18.5	12.0	8.5	6.0	10.0	15.0	20.5	21.5	29.0	28.0	26.5	22.0
24	17.0	13.0	8.0	5.5	10.0	14.5	20.5	21.5	29.0	29.0	26.5	23.0
25	18.0	12.0	7.0	5.5	8.5	15.0	22.0	22.0	29.0	29.0	27.0	23.0
26	19.5	14.5	7.0	5.5	5.0	15.0	21.0	---	28.5	29.0	27.0	23.0
27	16.0	13.5	7.0	5.5	8.5	15.5	21.0	28.5	28.5	29.5	27.0	23.0
28	16.0	11.5	8.0	5.0	9.0	15.5	20.0	29.0	28.5	28.5	28.0	23.0
29	17.0	13.0	8.5	5.0	---	17.0	19.5	24.0	28.5	29.5	28.5	23.0
30	---	11.5	7.0	4.5	---	18.0	19.5	24.0	29.0	29.5	28.5	23.5
31	17.0	---	5.0	3.5	---	17.0	---	24.0	---	29.0	29.0	---
MEAN	20.0	14.0	7.5	4.0	6.5	13.5	19.0	21.5	26.0	29.0	28.0	25.0

BRAZOS RIVER BASIN

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 (69 m) downstream from bridge on State Highway 67, 1.8 mi (2.9 km) downstream from Clear Fork Brazos River, 2.0 mi (3.2 km) northeast of South Bend, and at mile 758.2 (1,219.9 km).

DRAINAGE AREA.--22,673 mi² (58,723 km²), of which 9,566 mi² (24,776 km²) 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 (305.708 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 23, 1939, nonrecording gage at site 255 ft (69 m) upstream. Feb. 23, 1939, to Mar. 9, 1961, water-stage recorder at site 225 ft (69 m) upstream.

REMARKS.--Water-discharge records good. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08080950. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years, 830 ft³/s (23.51 m³/s), 601,300 acre-ft/yr (741 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,400 ft³/s (2,480 m³/s) May 4, 1941, gage height, 27.35 ft (8.336 m); maximum gage height, 41.50 ft (12.649 m) Aug. 6, 1978, from floodmark; no flow at times. Maximum stage since 1976, that of Aug. 6, 1978.

EXTREME OUTSIDE PERIOD OF RECORD.--Flood in 1886 reached a stage of 36.2 ft (11.03 m), from information by State Department of Highways and Public Transportation and Corps of Engineers. Flood of Sept. 24, 1900, reached a stage of 29.5 ft (8.99 m), and flood of June 16, 1930, reached a stage of 35.5 ft (10.82 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,720 ft³/s (190 m³/s) May 4, gage height, 14.16 ft (4.316 m), no peak above base of 11,000 ft³/s (312 m³/s); minimum daily, 8.4 ft³/s (0.24 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	588	147	169	74	132	87	297	174	212	557	200	147
2	795	141	162	78	127	88	259	465	191	438	179	109
3	614	137	149	84	123	96	286	3690	182	360	156	93
4	452	139	158	95	121	96	233	5580	252	274	136	79
5	395	141	149	92	117	94	198	3740	4070	225	746	68
6	360	152	130	79	122	90	177	3190	3790	190	685	65
7	328	149	123	80	121	97	163	2900	3310	174	631	75
8	272	143	117	84	113	126	146	2700	3020	357	386	59
9	222	135	113	89	118	105	140	2300	2480	357	279	46
10	195	118	109	101	119	96	145	1090	2110	257	240	38
11	177	108	101	111	120	92	143	362	1590	205	193	33
12	163	107	98	117	116	89	143	268	1340	246	184	29
13	152	113	91	111	114	82	149	217	1310	216	151	24
14	139	110	97	98	113	77	147	179	1700	179	149	20
15	137	130	95	92	98	79	132	155	1360	160	166	18
16	135	201	91	120	92	85	130	140	1170	163	145	16
17	127	161	91	119	95	91	146	127	1040	165	108	15
18	118	155	92	123	92	96	208	114	835	154	92	13
19	113	160	93	255	90	129	336	105	627	130	85	12
20	109	148	92	305	89	193	214	106	473	106	161	12
21	104	133	94	196	86	162	167	112	404	108	252	12
22	103	133	93	181	90	376	176	324	344	976	222	11
23	152	142	91	142	88	843	151	1500	286	1710	288	11
24	145	137	88	147	87	1100	156	1070	243	1180	1180	10
25	139	134	91	206	89	1220	148	458	228	1050	591	9.8
26	131	189	85	205	89	1010	139	407	208	759	603	9.5
27	133	197	86	179	91	736	135	367	200	541	1410	9.2
28	135	175	87	163	88	594	126	315	325	421	831	8.9
29	154	168	85	150	---	491	114	318	1340	328	360	8.7
30	165	162	83	141	---	506	107	216	763	262	262	8.4
31	152	---	90	133	---	418	---	200	---	225	250	---
TOTAL	7104	4365	3293	4150	2940	9444	5211	32889	35403	12473	11321	1069.5
MEAN	229	146	106	134	105	305	174	1061	1180	402	365	35.7
MAX	795	201	169	305	132	1220	336	5580	4070	1710	1410	147
MIN	103	107	83	74	86	77	107	105	182	106	85	8.4
AC-FT	14090	8660	6530	8230	5830	18730	10340	65240	70220	24740	22460	2120
CAL YR 1978	TOTAL	342398.4	MEAN	938	MAX	74700	MIN	1.2	AC-FT	679100		
WTR YR 1979	TOTAL	129662.5	MEAN	355	MAX	5580	MIN	8.4	AC-FT	257200		

BRAZOS RIVER BASIN

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WATER-QUALITY RECORDS

PERIOD OF RECORD---Chemical analyses: January 1942 to March 1948, October 1968 to September 1969. Pesticide analyses: March 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
16...	1420	135	6400	7.4	20.0	60	8.7	104	2.2	44	K10
NOV											
06...	1400	150	8420	7.7	14.0	45	8.9	95	2.6	340	230
06...	1440	154	--	--	14.5	--	--	--	--	--	--
DEC											
04...	1445	158	8360	7.9	9.0	5.0	9.8	94	1.6	170	38
20...	0920	92	--	--	13.0	--	--	--	--	--	--
JAN											
08...	1600	84	5400	8.1	1.5	5.0	12.3	95	1.8	<1	K17
30...	1200	139	--	--	3.5	--	--	--	--	--	--
FEB											
12...	1400	116	8320	8.6	8.5	6.0	15.0	139	5.7	K16	96
MAR											
05...	1355	94	8350	8.5	13.0	15	11.6	121	4.5	K9	K6
12...	1120	89	--	--	13.0	--	--	--	--	--	--
APR											
09...	1500	140	6290	8.9	21.5	20	16.3	196	9.0	K11	K17
23...	1100	144	--	--	21.0	--	--	--	--	--	--
MAY											
03...	1200	4210	--	--	21.5	--	--	--	--	--	--
07...	1500	2900	2200	8.0	21.5	280	7.9	95	2.4	12000	71000
22...	1330	207	--	--	21.5	--	--	--	--	--	--
JUN											
04...	1130	261	--	--	24.5	--	--	--	--	--	--
11...	1340	1600	2400	7.9	24.5	2100	7.1	88	3.2	1800	1800
JUL											
09...	1530	350	2200	8.1	33.5	5000	6.6	94	3.9	1500	2400
16...	1050	173	--	--	--	--	--	--	--	--	--
AUG											
20...	1510	160	5100	7.9	29.5	100	8.1	111	3.4	2500	11000
28...	1100	877	--	--	27.5	--	--	--	--	--	--
SEP											
10...	1400	38	7600	8.1	28.0	44	7.5	101	2.5	55	63

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
16...	980	820	270	74	980	14	11	200	0	660
NOV										
06...	1200	1100	340	94	1500	19	11	190	0	870
06...	--	--	--	--	--	--	--	--	--	--
DEC										
04...	1200	1000	320	100	1400	18	12	220	0	850
20...	--	--	--	--	--	--	--	--	--	--
JAN										
08...	1100	990	280	85	780	10	12	72	0	540
30...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	1300	1200	350	110	1500	18	13	190	5	1500
MAR										
05...	1300	1200	350	110	1400	17	12	160	8	980
12...	--	--	--	--	--	--	--	--	--	--
APR										
09...	1000	910	270	90	1000	13	12	120	23	820
23...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
07...	330	230	98	20	310	7.5	8.0	120	0	160
22...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	--	--	--	--	--	--	--	--	--	--
11...	470	370	140	30	340	6.8	9.2	130	0	390
JUL										
09...	410	330	110	32	340	7.3	9.0	94	0	300
16...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	900	810	270	56	800	12	11	120	0	730
28...	--	--	--	--	--	--	--	--	--	--
SEP										
10...	1100	990	330	67	1300	17	14	140	0	960

BRAZOS RIVER BASIN

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	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)
OCT 16...	1600	.5	9.7	3890	3700	.00	.01	.01	.03	.74
NOV 06...	2400	.4	7.1	5200	5320	.01	.00	.01	.01	.86
DEC 04...	2100	.4	6.8	5170	4900	.09	.02	.11	.04	.51
JAN 08...	1300	.3	7.6	3180	3040	.10	.02	.12	.21	.47
FEB 12...	2000	.5	1.1	5540	5570	.00	.00	.00	.04	.96
MAR 05...	2400	.5	.9	5390	5340	.04	.00	.04	.04	.66
APR 09...	1500	.9	4.8	4050	3780	.15	.23	.38	.04	1.3
MAY 03...	530	.3	8.7	1260	1190	.21	.02	.23	.04	1.5
JUN 04...	470	.4	6.6	1510	1450	.33	.10	.43	.06	3.3
JUL 09...	510	.6	8.0	1390	1310	.13	.02	.15	.03	1.7
AUG 20...	1300	.5	8.0	3210	3230	.00	.04	.01	.08	.92
SEP 10...	2100	.8	9.8	4370	4850	.02	.02	.04	.10	.48

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 16...	.77	.49	.080	.000	6.8	--	--	114	42	100
NOV 06...	.87	.64	.080	.010	6.6	--	--	86	35	99
DEC 04...	55	.59	.180	.050	4.7	--	--	24	10	90
JAN 08...	68	.46	.150	.090	--	5.7	.8	35	7.9	25
FEB 12...	1.0	.46	.340	.220	5.3	--	--	22	6.9	68
MAR 05...	.70	.61	.150	.190	--	6.0	1.9	21	5.3	99
APR 09...	1.3	.91	.650	.150	11	--	--	31	12	83
MAY 03...	1.5	.51	.400	.050	12	--	--	934	7310	90
JUN 04...	3.4	.47	2.60	.120	28	--	--	3470	15000	98
JUL 09...	1.7	.37	.770	.070	--	4.6	--	5360	5070	100
AUG 20...	1.0	.25	.260	.020	9.6	--	--	423	183	99
SEP 10...	.58	.48	.080	.090	--	3.4	2.0	103	11	100

BRAZOS RIVER BASIN

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
JAN 08...	1600	3	--	2	0	0	100	1	1	0
MAR 05...	1355	2	--	2	0	0	0	0	0	0
JUL 09...	1530	16	--	5	900	800	100	0	0	0
SEP 10...	1400	5	1	4	300	0	300	0	0	0

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
JAN 08...	10	10	0	2	0	2	5	3	2	300
MAR 05...	20	10	10	3	3	0	8	8	0	430
JUL 09...	80	80	0	40	40	0	46	43	3	41000
SEP 10...	10	0	20	0	0	0	5	4	1	1600

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
JAN 08...	270	30	13	12	1	240	70	170	.1	.1
MAR 05...	390	40	7	7	0	280	140	140	.1	.0
JUL 09...	41000	10	70	70	0	1300	1300	0	.3	.1
SEP 10...	--	10	7	7	0	100	60	40	.1	.0

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 08...	.0	1	0	1	0	0	1	30	10	20
MAR 05...	.1	1	0	2	0	0	0	10	0	20
JUL 09...	.2	1	0	1	0	0	0	200	170	30
SEP 10...	.2	1	0	1	0	0	0	30	10	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)
NOV 06...	1400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 08...	1600	.0	0	.00	.0	.0	0	.00	.2	.00	.8	.00
FEB 12...	1400	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 07...	1500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUL 09...	1530	.0	0	.00	.0	.0	0	.00	.0	.01	.0	.00
AUG 20...	1510	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
JAN 08...	.0	--	--	.01	.0	.00	.00	.0	.00	--	.00	.0
FEB 12...	--	ND	--	ND	--	--	ND	--	ND	--	ND	--
MAY 07...	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND
JUL 09...	.0	.00	--	.00	.0	.00	.00	.0	.00	--	.00	.0
AUG 20...	--	ND	--	ND	--	--	ND	--	ND	--	ND	--

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)
NOV 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 08...	.00	.0	.00	.0	.00	--	--	--	.00	--	.00	--
FEB 12...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUL 09...	.00	.0	.00	.0	.00	--	--	--	.00	--	.00	--
AUG 20...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 06...	--	--	ND	ND	ND	ND	ND	ND	--	--	--
JAN 08...	.00	.0	.01	--	0	0	.00	--	.00	.00	.00
FEB 12...	--	--	ND	--	ND	--	ND	--	--	--	--
MAY 07...	--	--	ND	ND	ND	ND	ND	ND	--	--	--
JUL 09...	.00	--	.00	--	0	0	.00	--	.01	.07	.00
AUG 20...	--	--	ND	--	ND	--	ND	--	--	--	--

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
NOV 06...		.21	6.06	6.77	.450
DEC 04...	28	33.2	36.8	12.5	.000

BRAZOS RIVER BASIN

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PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 6,78 1400	MAR 5,79 1355	MAY 7,79 1500	JUN 11,79 1340	AUG 20,79 1510	SEP 10,79 1400
TOTAL CELLS/ML	45000	43000	4000	1700	74000	510000
DIVERSITY: DIVISION	1.4	1.2	0.8	0.0	0.7	0.2
..CLASS	1.4	1.2	0.8	0.0	0.7	0.2
..ORDER	1.7	1.2	0.8	0.0	1.5	0.2
...FAMILY	1.8	1.7	1.0	0.0	2.2	0.7
....GENUS	2.6	1.9	1.0	0.0	2.7	0.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...COELASTRACEAE												
...COELASTRUM	--	-	--	-	--	-	--	-	*	0	--	-
...MICRACTINIACEAE									*	0	--	-
...GOLENKINIA	--	-	--	-	--	-	--	-	*	0	--	-
...MICRACTINIUM	*	0	620	1	--	-	--	-	--	-	--	-
...OOCYSTACEAE												
...ANKISTRODESUS	7800#	17	1400	3	56	1	--	-	770	1	3900	1
...CHLORELLA	--	-	--	-	--	-	--	-	--	-	*	0
...CHODATELLA	1000	2	--	-	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	1900	4	620	1	--	-	--	-	1500	2	9300	2
...FRANCEIA	690	2	--	-	--	-	--	-	*	0	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-	770	1	--	-
...OOCYSTIS	1200	3	--	-	28	1	--	-	940	1	*	0
...QUADRIGULA	--	-	--	-	--	-	--	-	*	0	--	-
...SELENASTRUM	--	-	940	2	--	-	--	-	--	-	--	-
...TETRAEDRON	*	0	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
...CRUCIGENIA	--	-	620	1	--	-	--	-	--	-	--	-
...SCENEDESMUS	690	2	27000#	62	170	4	--	-	5900	8	*	0
...TETRASTRUM	--	-	--	-	--	-	--	-	690	1	--	-
...TETRASPORALES												
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-	*	0	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE									*	0	--	-
...CHLAMYDOMONAS	--	-	*	0	--	-	--	-	*	0	--	-
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...CHAETOCERACEAE												
...CHAETOCEROS	*	0	--	-	--	-	--	-	--	-	--	-
...COSCINODISCACEAE												
...CYCLOTELLA	5700	13	4100	9	28	1	--	-	*	0	--	-
...PENNALES												
...CYMBELLACEAE												
...AMPHORA	--	-	--	-	56	1	--	-	--	-	--	-
...NAVICULACEAE												
...NAVICULA	--	-	--	-	56	1	--	-	*	0	--	-
...NITZSCHACEAE												
...NITZSCHIA	--	-	*	0	220	6	1700#	100	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOMONADACEAE												
...CRYPTOMONAS	--	-	470	1	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
...AGMENELLUM	2800	6	--	-	--	-	--	-	--	-	--	-
...ANACYSTIS	20000#	44	7000#	16	--	-	--	-	16000#	22	--	-
...HORMOGONALES												
...NOSTOCACEAE												
...ANABAENA	--	-	--	-	--	-	--	-	3100	4	46000	9
...ANABAENOPSIS	--	-	--	-	--	-	--	-	7200	10	6400	1
...CYLINDROSPERMUM	--	-	--	-	--	-	--	-	4600	6	--	-
...OSCILLATORIA												
...OSCILLATORIA	2800	6	--	-	3400#	85	--	-	30000#	40	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-	--	-	430000#	86
...SPIRULINA	--	-	--	-	--	-	--	-	--	-	4900	1
EUGLENOPHYTA (EUGLENIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENA									*	0	--	-
...EUGLENA	*	0	*	0	--	-	--	-	*	0	--	-
...TRACHELOMONAS												

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

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

BRAZOS RIVER BASIN

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	7104	4940	3090	59300	1380	26500	550	10500	730
NOV. 1978.....	4365	6790	4240	50000	1900	22400	750	8820	1010
DEC. 1978.....	3293	8150	5090	45300	2280	20300	900	8000	1210
JAN. 1979.....	4150	7890	4930	55300	2210	24700	870	9760	1170
FEB. 1979.....	2940	9220	5770	45800	2580	20500	1020	8080	1370
MAR. 1979.....	9444	5730	3590	91500	1600	40900	630	16100	850
APR. 1979.....	5211	6190	3870	54500	1730	24400	680	9600	920
MAY 1979.....	32889	2060	1290	115000	580	51300	230	20200	310
JUNE 1979.....	35403	2550	1600	152000	720	68400	280	26900	380
JULY 1979.....	12473	2500	1560	52700	700	23600	280	9330	370
AUG. 1979.....	11321	4190	2620	80200	1170	35900	460	14100	620
SEPT 1979.....	1069.5	6050	3780	10900	1690	4890	670	1930	900
TOTAL	129662.43	**	**	812000	**	364000	**	143000	**
WTD.AVG.	355	3710	2300	**	1000	**	410	**	550

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2930	6370	7450	7400	8970	9450	5820	5500	3320	1720	2520	6570
2	4720	6520	8200	7200	8970	9370	5720	4160	3400	2440	2740	4560
3	5990	6810	7090	7140	9500	9200	5100	2840	3150	3190	3000	6250
4	4680	7460	7980	7680	9400	9000	5290	1080	2880	4030	3960	4180
5	3790	7750	7120	7500	9300	8490	5230	1500	2500	4370	2670	4340
6	3660	8460	7500	7600	9000	8600	5580	1880	1040	4270	7180	5080
7	3700	11000	8750	6500	8890	9720	5820	2470	2030	3870	8400	5900
8	3230	8710	9810	5740	8700	10600	6180	1880	2880	3780	5950	6790
9	3700	7520	9010	6890	8570	11400	6200	1470	2850	2150	5160	7200
10	4350	7280	13500	7000	8700	11600	6200	2320	2100	1620	4310	7610
11	4640	7200	11200	7180	8890	9810	6310	3200	2420	1970	4330	8900
12	4880	6950	8610	7480	9090	8060	7040	3450	2160	1940	5020	8140
13	5550	6920	8430	7300	9770	8220	6820	3800	2490	4500	5200	6800
14	5820	7060	7950	7250	9860	7850	5740	4070	3550	3700	4800	5480
15	5900	5800	7950	6610	9700	8060	3760	4260	3250	3090	4450	6950
16	6040	5510	7950	8220	9500	7600	6690	4480	3360	2840	4640	4500
17	6150	5880	7810	7960	9300	7430	5860	4820	2640	2970	5250	3870
18	6250	6990	7580	7330	9170	7200	5050	4990	2340	3430	5620	4370
19	6380	7880	7450	7050	8800	6620	5400	5340	2420	4270	5630	3880
20	6410	7450	7320	5990	8640	5990	5690	5300	2670	4980	5640	4780
21	6520	6770	7320	7560	9170	7300	6610	5470	2970	5420	4010	7850
22	6520	6950	7500	8780	9370	7600	5740	2500	3290	2500	6030	7800
23	5770	5920	7450	10300	9810	5710	6010	1930	3580	2060	5500	7770
24	5610	5340	7660	10400	9450	4920	5840	1230	3860	1890	3240	7880
25	5640	5770	7720	8420	9590	3080	7090	1100	4350	2410	5480	7950
26	6290	5230	7890	8080	9450	3750	8080	1720	4410	1940	4500	8100
27	6730	6190	7720	8220	9500	5500	9100	1810	4370	1820	2380	8150
28	6520	4720	7500	9270	9590	4070	9530	2140	5260	1890	1370	8210
29	6410	5640	7780	9710	---	6120	8240	4750	3340	2040	2910	8250
30	6350	7250	7800	9310	---	6410	10900	4380	2030	2240	3500	8300
31	6370	---	7500	9100	---	5970	---	4000	---	2400	4760	---
MEAN	5400	6840	8150	7810	9240	7570	6420	3220	3030	2960	4520	6550

BRAZOS RIVER BASIN

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08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.0	24.0	18.0	---	7.0	18.0	24.0	---	24.0	32.0	28.0	32.0
2	28.0	24.0	21.0	---	11.0	14.0	17.0	25.0	25.0	30.0	31.0	32.0
3	25.0	24.0	10.0	5.0	8.0	10.0	17.0	18.0	28.0	31.0	30.0	29.0
4	26.0	24.0	11.0	5.0	---	14.0	20.0	17.0	30.0	33.0	33.0	31.0
5	23.0	19.0	16.0	---	---	17.0	24.0	22.0	27.0	32.0	31.0	33.0
6	23.0	15.0	9.0	---	---	20.0	24.0	25.0	29.0	32.0	32.0	32.0
7	23.0	17.0	6.0	---	9.0	19.0	21.0	26.0	31.0	34.0	32.0	31.0
8	23.0	18.0	5.0	5.0	---	21.0	25.0	27.0	30.0	27.0	31.0	32.0
9	25.0	19.0	5.0	6.0	9.0	16.0	---	27.0	28.0	33.0	31.0	---
10	25.0	23.0	6.0	---	13.0	16.0	22.0	22.0	25.0	33.0	28.0	30.0
11	28.0	16.0	8.0	4.0	19.0	20.0	21.0	17.0	28.0	33.0	29.0	31.0
12	28.0	19.0	11.0	9.0	10.0	20.0	24.0	22.0	30.0	33.0	30.0	30.0
13	22.0	21.0	10.0	---	15.0	22.0	24.0	---	30.0	33.0	31.0	---
14	24.0	15.0	10.0	3.0	21.0	17.0	25.0	28.0	32.0	34.0	31.0	25.0
15	---	10.0	---	6.0	---	14.0	20.0	28.0	31.0	30.0	32.0	26.0
16	24.0	10.0	10.0	11.0	---	---	26.0	27.0	29.0	34.0	32.0	---
17	24.0	16.0	9.0	13.0	---	16.0	21.0	28.0	28.0	29.0	31.0	26.0
18	24.0	17.0	16.0	16.0	11.0	20.0	23.0	29.0	30.0	29.0	33.0	25.0
19	25.0	14.0	19.0	13.0	---	15.0	---	31.0	31.0	27.0	---	25.0
20	25.0	14.0	16.0	10.0	16.0	17.0	25.0	29.0	32.0	29.0	31.0	26.0
21	25.0	11.0	13.0	10.0	13.0	21.0	22.0	26.0	32.0	33.0	28.0	28.0
22	23.0	13.0	13.0	12.0	19.0	21.0	24.0	---	32.0	---	33.0	---
23	16.0	19.0	13.0	7.0	17.0	16.0	25.0	27.0	32.0	31.0	31.0	31.0
24	20.0	19.0	15.0	8.0	9.0	17.0	27.0	26.0	32.0	31.0	31.0	30.0
25	23.0	23.0	18.0	7.0	11.0	19.0	28.0	23.0	29.0	33.0	31.0	---
26	20.0	20.0	11.0	8.0	13.0	20.0	24.0	26.0	31.0	30.0	31.0	29.0
27	22.0	12.0	10.0	8.0	14.0	18.0	19.0	30.0	32.0	33.0	31.0	30.0
28	22.0	12.0	13.0	8.0	17.0	21.0	22.0	29.0	33.0	34.0	31.0	29.0
29	24.0	15.0	11.0	5.0	---	23.0	23.0	29.0	33.0	33.0	32.0	31.0
30	23.0	16.0	---	5.0	---	24.0	20.0	26.0	33.0	32.0	31.0	---
31	23.0	---	---	4.0	---	22.0	---	29.0	---	32.0	32.0	---
MEAN	24.0	17.5	12.0	8.0	13.0	18.5	23.0	25.5	30.0	31.5	31.0	29.5

BRAZOS RIVER BASIN

08088300 BRIAR CREEK NEAR GRAHAM, TX

LOCATION.--Lat 33°12'43", long 98°37'06". Young County, Hydrologic Unit 12060201, near right bank on downstream side of bridge on Farm Road 1769, 3.7 mi (6.0 km) upstream from mouth, and 7.0 mi (11.3 km) northwest of Graham.

DRAINAGE AREA.--24.2 mi² (62.7 km²).

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. Altitude of gage is 1,090 ft (332 m), from topographic map.

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

AVERAGE DISCHARGE.--21 years (water years 1959-79), 3.57 ft³/s (0.101 m³/s), 2.00 in/yr (57 mm/yr), 2,590 acre-ft/yr (3.19 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft³/s (77.3 m³/s) Sept. 19, 1976, gage height, 12.31 ft (3.752 m); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 15.2 ft (4.63 m) in September 1955. Flood in May 1957 reached a stage of 15.0 ft (4.57 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 19	1400	*263 7.45	5.04 1.536
June 6	2200	209 5.92	4.36 1.329

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00		
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
6	.00	.00	.00	.00	.00	.00	.00	.00	33	.00	.00	.00		
7	.00	.00	.00	.00	.00	.00	.00	.00	48	.00	.00	.00		
8	.00	.00	.00	.00	.00	.00	.00	.00	5.3	.00	.00	.00		
9	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00		
10	.00	.00	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00		
11	.00	.00	.00	.00	.00	.00	.22	.00	.10	.00	.00	.00		
12	.00	.00	.00	.00	.00	.00	.05	.00	.05	.00	.00	.00		
13	.00	.00	.00	.00	.00	.00	.03	.00	.03	.00	.00	.00		
14	.00	.00	.00	.00	.00	.00	.02	.00	.01	.00	.00	.00		
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
17	.00	.00	.00	.00	.00	.00	2.2	.00	.00	4.2	.00	.00		
18	.00	.00	.00	.70	.00	.00	2.2	.00	.00	4.1	.00	.00		
19	.00	.00	.00	2.0	.00	53	1.0	.00	.00	2.3	.00	.00		
20	.00	.00	.00	.25	.00	17	.28	.00	.00	.87	7.6	.00		
21	.00	.00	.00	.00	.00	2.6	.06	.00	.00	.22	2.0	.00		
22	.00	.00	.00	.00	.00	75	.03	1.4	.00	.39	.13	.00		
23	.00	.00	.00	.00	.00	11	.01	.51	.00	.11	4.8	.00		
24	.00	.00	.00	.00	.00	1.5	.00	.03	.00	.04	.68	.00		
25	.00	.00	.00	.00	.00	.37	.00	.01	.00	.02	.05	.00		
26	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.02	.00		
27	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00		
28	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00		
29	.00	.00	.00	.00	---	.02	.00	.00	.00	.00	.00	.00		
30	.00	.00	.00	.00	---	.02	.00	.00	.00	.00	.00	.00		
31	.00	---	.00	.00	---	.01	---	.00	---	.00	.00	---		
TOTAL	.00	.00	.00	2.95	.00	160.68	6.11	1.95	87.75	12.25	15.28	.00		
MEAN	.000	.000	.000	.095	.000	5.18	.20	.063	2.93	.40	.49	.000		
MAX	.00	.00	.00	2.0	.00	75	2.2	1.4	48	4.2	7.6	.00		
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
CFSM	.000	.000	.000	.004	.000	.21	.008	.003	.12	.02	.02	.000		
IN.	.00	.00	.00	.00	.00	.25	.01	.00	.13	.02	.02	.00		
AC-FT	.00	.00	.00	5.9	.00	319	12	3.9	174	24	30	.00		
CAL YR 1978	TOTAL	87.34	MEAN	.24	MAX	37	MIN	.00	CFSM	.01	IN	.13	AC-FT	173
WTR YR 1979	TOTAL	286.97	MEAN	.79	MAX	75	MIN	.00	CFSM	.03	IN	.44	AC-FT	569

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 (3.5 km) northwest of Graham, 5 mi (8 km) downstream from Briar Creek, and 9.5 mi (15.3 km) upstream from mouth.

DRAINAGE AREA.--221 mi² (572 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1958 to September 1963 (unpublished record), October 1963 to current year. Prior to October 1965, monthend contents only.

Water-quality records: Chemical analyses: October 1969 to September 1976.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.30 ft (0.396 m) Salt Creek datum. Prior to October 1963, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 5,000 ft (1,500 m) long. Lake Graham was connected with Lake Eddleman in 1959 by a cut channel at a gage height of 1,050.0 ft (320.04 m). Deliberate impoundment began Apr. 28, 1958, and the dam was completed in July 1958. The uncontrolled emergency spillway is a 1,050-foot-wide (320 m) cut at the right end of dam. The spillway is designed to discharge 136,500 ft³/s (3,870 m³/s) at a gage height of 1,087.5 ft (331.47 m). 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 furnished by Freese, Nichols, and Endress, Consulting Engineers. Record of diversions furnished by the city of Graham and the Texas Electric Service Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 61,120 acre-ft (75.4 hm³) Apr. 30, 1970, gage height, 1,077.77 ft (328.504 m); minimum, 28,760 acre-ft (35.5 hm³) Sept. 30, 1979, gage height, 1,064.09 ft (324.335 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 33,180 acre-ft (40.9 hm³) June 8, gage height, 1,066.26 ft (324.996 m); minimum, 28,760 acre-ft (35.5 hm³) Sept. 30, gage height, 1,064.09 ft (324.335 m).

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

1,064.0	28,580	1,066.0	32,630
1,065.0	30,580	1,067.0	34,760

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32780	31970	31870	30920	30820	30340	32700	32700	32490	31930	30840	30440
2	32740	31950	31850	30880	30780	30340	32570	32670	32470	31810	30840	30420
3	32650	31910	31810	30880	30760	30460	32530	32570	32470	31640	30740	30340
4	32590	31870	31810	30880	30740	30460	32490	32630	32450	31520	30640	30300
5	32970	31850	31740	30880	30740	30420	32470	32590	32760	31460	30600	30220
6	32900	31850	31700	30880	30740	30380	32430	32570	32900	31480	30520	30180
7	32840	31870	31700	30820	30740	30340	32390	32490	33140	31660	30440	30120
8	32760	31830	31680	30720	30740	30300	32300	32510	33160	31620	30360	30080
9	32720	31790	31580	30620	30740	30240	32300	32490	33030	31460	30320	29970
10	32700	31740	31460	30600	30740	30200	32320	32430	33050	31580	30120	29890
11	32650	31700	31390	30640	30740	30180	32320	32360	33050	31500	30010	29830
12	32610	31660	31370	30680	30700	30160	32320	32390	33030	31410	29950	29750
13	32510	31640	31350	30720	30680	30120	32280	32340	32990	31330	29850	29630
14	32490	31620	31370	30680	30680	30070	32200	32280	32900	31230	29790	29490
15	32450	31600	31350	30660	30660	30070	32180	32240	32860	31190	29730	29510
16	32410	32010	31250	30660	30640	30070	32140	32200	32780	31170	29650	29430
17	32340	31910	31230	30620	30600	30120	32590	32140	32670	31390	29570	29370
18	32320	31910	31210	30620	30560	30120	32900	32100	32610	31540	29490	29350
19	32280	31910	31210	30620	30560	31370	32990	32030	32570	31460	29770	29270
20	32220	31890	31190	30720	30500	31540	32990	31930	32530	31500	29990	29270
21	32080	31870	31150	30840	30480	31560	33030	32100	32470	31480	29950	29210
22	32120	31870	31120	30880	30440	31580	33030	32340	32410	31330	29930	29050
23	32260	31890	31100	30840	30440	31580	33100	32550	32360	31270	30400	29070
24	32300	31890	31080	30820	30460	32590	33070	32550	32320	31210	30560	29070
25	32280	31910	31080	30920	30460	32670	32930	32530	32300	31290	30540	29070
26	32200	31950	31020	30940	30420	32630	32800	32530	32220	31170	30740	29070
27	32120	31950	30960	30900	30420	32610	32700	32490	32200	31100	30680	28990
28	32080	31910	30940	30880	30380	32570	32650	32490	32140	30960	30620	28920
29	32050	31890	30940	30840	---	32550	32630	32450	32080	30940	30580	28840
30	32010	31870	30940	30860	---	32650	32550	32430	32010	30840	30520	28760
31	31990	---	30920	30840	---	32740	---	32390	---	30880	30500	---
MAX	32970	32010	31870	30940	30820	32740	33100	32700	33160	31930	30840	30440
MIN	31990	31600	30920	30600	30380	30070	32140	31930	32010	30840	29490	28760
(†)	1065.69	1065.63	1065.17	1065.13	1064.90	1066.05	1065.96	1065.88	1065.70	1065.15	1064.96	1064.09
(‡)	-770	-120	-950	-80	-460	+2360	-190	-160	-380	-1130	-380	-1740
(††)	348	311	391	466	376	261	257	190	258	485	411	448
CAL YR 1978	MAX	43120	MIN	30920	±	-11070	††	5171				
WTR YR 1979	MAX	33160	MIN	28760	±	-4000	††	4426				

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by city of Graham and for use by Texas Electric Service Company powerplant.

BRAZOS RIVER BASIN

08088400 LAKE GRAHAM NEAR GRAHAM, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	CALCIUM HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
JUL 16...	0925	<866	26.0	200	87	61	12	83
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	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)
JUL 16...	2.5	9.4	140	32	180	.0	6.2	453

BRAZOS RIVER BASIN

285

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 (5.1 km) south of Ivan, 8.2 mi (13.2 km) northwest of Caddo, and 11.6 mi (18.7 km) northeast of Breckenridge.

DRAINAGE AREA.--97.0 mi² (251.2 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,090 ft (33 m), from topographic map.

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

AVERAGE DISCHARGE.--14 years (water years 1966-79), 10.7 ft³/s (0.303 m³/s), 1.50 in/yr (38 mm/yr), 7,750 acre-ft/yr (9.56 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft³/s (272 m³/s) July 8, 1968, gage height, 22.39 ft (6.824 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurement of 7,980 ft³/s (226 m³/s); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 96 ft³/s (2.72 m³/s) Mar. 30, gage height, 5.32 ft (1.622 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.03	.15	.01	.00	.02	13	21	.01	.00	.00	.00
2	.02	.03	.11	.01	.01	.02	1.9	19	.01	.00	.00	.00
3	.04	.04	.09	.01	.02	.02	.21	4.3	.01	.00	.00	.00
4	.03	.04	.08	.02	.02	.01	.05	1.2	.01	.00	.00	.00
5	.05	.05	.08	.02	.03	.01	.01	.43	.03	.00	.00	.00
6	.04	.03	.08	.02	.04	.01	.01	.26	.02	.00	.00	.00
7	.04	.02	.08	.02	.03	.01	.01	.09	.01	.00	.00	.00
8	.04	.01	.08	.02	.03	.01	.01	.04	.01	.00	.00	.00
9	.03	.01	.05	.02	.02	.01	.01	.03	.01	.00	.00	.00
10	.03	.01	.04	.04	.02	.01	.03	.03	.01	.00	.00	.00
11	.04	.02	.03	.03	.02	.01	.05	.04	.00	.00	.00	.00
12	.03	.02	.03	.03	.02	.01	.04	.05	.00	.00	.00	.00
13	.02	.02	.02	.03	.03	.01	.05	.05	.00	.00	.00	.00
14	.02	.03	.02	.02	.03	.01	.06	.05	.00	.00	.00	.00
15	.02	.04	.01	.02	.03	.02	.07	.04	.00	.00	.00	.00
16	.03	.05	.01	.03	.02	.03	.06	.04	.00	.00	.00	.00
17	.02	.04	.01	.03	.02	.02	.72	.04	.00	.00	.00	.00
18	.03	.04	.01	.04	.02	.02	2.2	.04	.00	.00	.00	.00
19	.03	.04	.00	.05	.02	.10	.22	.04	.00	.00	.00	.00
20	.03	.06	.00	.03	.02	.03	.03	.04	.00	.00	.00	.00
21	.03	.07	.00	.02	.02	.02	.03	.04	.00	.00	6.2	.00
22	.04	.08	.00	.02	.02	2.3	.03	.04	.00	.00	7.8	.00
23	.08	.08	.00	.02	.02	.84	.02	.04	.00	.00	9.4	.00
24	.05	.08	.00	.02	.02	.05	.01	.03	.00	.00	.95	.00
25	.05	.11	.00	.00	.02	.01	.01	.03	.00	.00	.05	.00
26	.05	.13	.00	.00	.02	.00	.01	.02	4.4	.00	.00	.00
27	.05	.13	.01	.00	.02	.00	.02	.02	.93	.00	.00	.00
28	.03	.13	.00	.00	.02	.00	.03	.02	.07	.00	.00	.00
29	.03	.15	.00	.00	---	.55	.04	.02	.00	.00	.00	.00
30	.04	.15	.01	.00	---	35	.05	.01	.00	.00	.00	.00
31	.03	---	.02	.00	---	6.5	---	.01	---	.00	.00	---
TOTAL	1.09	1.74	1.02	.58	.61	45.66	18.99	47.09	5.53	.00	24.40	.00
MEAN	.035	.058	.033	.019	.022	1.47	.63	1.52	.18	.000	.79	.000
MAX	.08	.15	.15	.05	.04	35	13	21	4.4	.00	9.4	.00
MIN	.02	.01	.00	.00	.00	.00	.01	.01	.00	.00	.00	.00
CFSM	.000	.001	.000	.000	.000	.02	.006	.02	.002	.000	.008	.000
IN.	.00	.00	.00	.00	.00	.02	.01	.02	.00	.00	.01	.00
AC-FT	2.2	3.5	2.0	1.2	1.2	91	38	93	11	.00	48	.00
CAL YR 1978	TOTAL	956.72	MEAN	2.62	MAX	589	MIN	.00	CFSM	.03	IN	.37
WTR YR 1979	TOTAL	146.71	MEAN	.40	MAX	35	MIN	.00	CFSM	.004	IN	.06
									AC-FT	1900		
									AC-FT	291		

BRAZOS RIVER BASIN

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 Brazos River, 2.6 mi (4.2 km) upstream from Loving Creek, 11.3 mi (18.2 km) southwest of Grafard, and at mile 687.5 (1,106.2 km).

DRAINAGE AREA.--23,596 mi² (61,114 km²), approximately, of which 9,566 mi² (24,776 km²) 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 (0.030 m) 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 (835 m) 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 (22.45 by 4 m) each and are designed to discharge about 100,000 ft³/s (2,830 m³/s) at a gage height of 1,000.0 ft (304.80 m). The outlet works consist of one controlled 54-inch-diameter (1,372 mm) 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 ft (305 m) gage height. Eleven major reservoirs, with a combined capacity of 607,800 acre-ft (749 hm³), largely regulate the inflow. The capacity curve is based on recomputation of survey made in 1974. For state-maintained regulation by Soil Conservation Service floodwater-retarding structures, see Duck Creek near Girard (station 08080950). 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 furnished by the Brazos River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 743,700 acre-ft (917 hm³) Oct. 5, 1941, gage height, 1,001.0 ft (305.10 m); minimum observed, 273,000 acre-ft (337 hm³) Feb. 19 to Mar. 17, 1953, gage height, 967.0 ft (294.74 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 561,100 acre-ft (692 hm³) May 10, gage height, 999.48 ft (304.642 m); minimum, 521,800 acre-ft (643 hm³) Jan. 15, gage height, 997.13 ft (303.925 m).

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

997.0	519,800	999.0	552,800
998.0	536,000	1,000.0	570,200

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	546900	540200	535900	528600	527800	526400	542000	533900	532100	538700	549400	551100
2	544200	540400	536200	525200	528000	527000	540500	533100	530900	538900	549800	549600
3	543000	540400	534500	525600	528000	526500	539900	533100	530600	539000	549400	548100
4	541700	540400	534500	525700	528100	526200	538400	538900	531300	539000	549400	546600
5	543400	540900	535000	525700	528600	526400	537700	546100	533100	539000	549800	545200
6	543400	541000	534500	525700	529500	526700	535700	551300	538400	539400	550800	544000
7	543900	540500	534200	525400	529100	526700	534400	554700	543900	539000	551500	542700
8	544000	540500	531800	525200	529000	526900	534500	557700	549400	538900	551700	541400
9	544200	540500	531100	525700	529000	527200	534400	559700	553200	539400	551800	540500
10	544200	541000	531300	526700	529500	526700	535200	560600	554600	539200	552200	539200
11	543400	540400	531300	527000	530000	527000	535200	557800	555300	538900	552700	538400
12	541500	540500	530800	527500	530000	527000	535700	555800	555100	538900	551800	538200
13	540900	540900	531600	525600	530300	527500	535400	553900	554600	538900	550600	538000
14	540700	540500	531400	523300	530300	527300	535900	551500	554600	538500	549800	537000
15	541000	540500	531900	522800	529800	527700	535900	549400	554600	538500	548800	536400
16	540900	536200	531800	523600	528000	528500	536000	547200	553500	538900	547800	536000
17	540700	535900	531800	523900	528000	529000	538500	545200	552000	541700	547400	535900
18	541000	536200	532100	524300	528000	529600	538900	543400	550500	544400	547200	535500
19	540900	536200	532400	525400	526400	531400	539400	541700	548900	544700	547200	535400
20	540700	536400	530400	525700	526200	532700	538500	540200	546900	544700	548800	534500
21	540500	536400	530400	525700	526000	533200	537000	539900	544900	544700	550000	534100
22	540700	536400	530400	525900	525900	535400	535700	541400	542500	544700	550100	532600
23	540700	536500	530800	525700	525700	534700	535500	540500	540400	548300	550800	531300
24	541400	537000	530000	526700	526000	534200	534900	540000	538900	550300	551100	530300
25	541500	537200	530400	526900	525700	534500	534400	539200	538000	551300	552000	529500
26	540500	537700	530000	527200	525900	535000	533200	538200	538200	551300	552700	528100
27	540500	534900	530000	527200	526400	535500	533200	537500	538400	551500	553700	527000
28	540900	534900	530100	527200	526200	536000	533100	536200	537900	551000	554900	525900
29	540900	535200	530300	527700	---	537900	533200	535900	537700	550300	554400	524800
30	540900	535400	530300	527800	---	540200	533400	534900	538700	549600	553700	523600
31	540200	---	530300	527300	---	541000	---	533400	---	549400	552700	---
MAX	546900	541000	536200	528600	530300	541000	542000	560600	555300	551500	554900	551100
MIN	540200	534900	530000	522800	525700	526200	533100	533100	530600	538500	547200	523600
(†)	998.25	997.96	997.65	997.47	997.40	998.30	997.84	997.84	998.16	998.80	998.99	997.24
(+)	-8900	-4800	-5100	-3000	-1100	+14800	-7600	0	+5300	+10700	+3300	-29100
CAL YR 1978	MAX	560400	MIN	457300	+	+63100						
WTR YR 1979	MAX	560600	MIN	522800	+	-25500						

† Gage height, in feet, at end of month.

+ Change in contents, in acre-feet.

BRAZOS RIVER BASIN

287

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1962 to current year.

325208098254201 POSSUM KINGDOM LAKE SITE AR

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1350	1.0	1880	8.2	7.0	11.5	100
13...	1352	10	1880	8.2	7.0	11.3	98
13...	1354	40	1880	8.2	6.5	11.1	96
13...	1356	30	1880	8.2	6.5	11.2	97
13...	1400	50	1880	8.1	6.5	11.0	95
13...	1402	60	1880	8.1	6.5	11.0	95
13...	1404	69	1880	8.1	6.5	11.1	96
AUG							
01...	1400	1.0	2060	8.4	28.5	7.3	96
01...	1402	10	2060	8.4	28.5	7.3	96
01...	1404	20	2060	8.4	28.0	7.2	95
01...	1406	30	2060	7.5	26.0	1.2	15
01...	1408	40	2060	7.4	23.5	.2	2
01...	1410	50	2100	7.4	21.0	.2	2
01...	1412	60	2100	7.4	18.5	.2	2
01...	1414	70	2150	7.4	17.0	.1	1
01...	1416	80	2470	7.4	16.0	.1	1
01...	1418	90	2470	7.4	15.0	.2	2
01...	1420	102	2470	7.3	15.0	.2	2

325218098254101 POSSUM KINGDOM LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (°EG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
13...	1310	1.0	1880	8.2	6.5	2.80	11.3	97	320	220
13...	1312	10	1880	8.2	6.5	--	11.1	96	--	--
13...	1314	20	1880	8.1	6.5	--	11.0	95	--	--
13...	1316	30	1880	8.1	6.5	--	10.9	94	--	--
13...	1318	40	1880	8.1	6.5	--	10.9	94	--	--
13...	1320	50	1880	8.1	6.0	--	10.8	92	--	--
13...	1322	60	1880	8.1	6.0	--	10.8	92	--	--
13...	1324	70	1880	8.1	6.0	--	10.8	92	--	--
13...	1326	80	1880	8.1	6.0	--	10.8	92	--	--
13...	1328	90	1880	8.1	6.0	--	10.6	90	--	--
13...	1330	104	1940	8.1	6.0	--	10.5	89	330	220
MAY										
16...	1240	1.0	1820	8.5	21.5	--	8.9	103	320	210
16...	1242	10	1820	8.5	21.0	--	9.0	103	--	--
16...	1244	20	1820	8.5	20.5	--	9.2	105	--	--
16...	1246	30	1820	8.4	19.0	--	8.5	93	--	--
16...	1248	40	1820	8.1	17.5	--	6.8	72	--	--
16...	1250	50	1870	7.7	14.0	--	5.9	58	--	--
16...	1252	60	1880	7.6	13.0	--	5.9	57	--	--
16...	1254	70	1940	7.6	11.0	--	5.7	53	--	--
16...	1256	80	2170	7.5	10.5	--	4.3	39	--	--
16...	1258	90	2690	7.4	10.5	--	1.7	16	--	--
16...	1300	100	2940	7.4	10.5	--	.2	2	460	330
AUG										
01...	1310	1.0	2060	8.5	29.0	2.50	7.3	97	340	240
01...	1312	10	2060	8.5	29.0	--	7.3	97	--	--
01...	1314	20	2060	8.4	28.5	--	7.2	95	--	--
01...	1316	30	2060	7.5	26.0	--	.5	6	--	--
01...	1318	40	2060	7.5	23.5	--	.1	1	--	--
01...	1320	50	2100	7.5	21.0	--	.1	1	--	--
01...	1322	60	2100	7.4	19.0	--	.2	2	--	--
01...	1324	70	2150	7.4	18.0	--	.2	2	--	--
01...	1326	80	2470	7.4	16.5	--	.1	1	--	--
01...	1328	90	2470	7.4	15.0	--	.1	1	--	--
01...	1330	103	2470	7.4	14.5	--	.2	2	390	270

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325218098254101 POSSUM KINGDOM LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB										
13...	90	23	260	6.3	8.3	120	0	180	440	.3
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	93	23	270	6.5	8.4	130	0	210	450	--
MAY										
16...	90	23	250	6.1	6.6	120	4	190	400	.3
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	120	38	520	11	7.3	160	0	360	780	--
AUG										
01...	95	25	280	6.6	6.9	120	0	200	470	.3
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	110	29	320	7.0	7.0	150	0	220	540	--

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
13...	6.2	1070	.08	.02	--	.030	--	10	0
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.08	.02	--	.040	--	0	10
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	6.2	1120	.07	.03	--	.040	--	0	0
MAY									
16...	4.8	1030	.05	.03	.03	.010	.03	10	0
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.05	.02	.03	.010	.03	10	0
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.19	.03	.03	.010	.03	--	--
16...	6.6	1910	.05	.29	.40	.130	.40	20	920
AUG									
01...	4.4	1140	.00	.01	--	.010	.03	0	10
01...	--	--	--	--	--	--	--	--	--
01...	--	--	.00	.00	--	.010	.03	0	10
01...	--	--	.00	.00	--	.020	.06	0	30
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	5.6	1310	.06	.01	--	.010	.03	0	760

BRAZOS RIVER BASIN

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POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325250098275301 POSSUM KINGDOM LAKE SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1250	1.0	1820	8.4	6.5	12.1	104
13...	1252	10	1820	8.3	6.5	11.9	103
13...	1254	20	1820	8.2	6.0	11.4	97
13...	1256	30	1820	8.2	6.0	11.3	96
13...	1258	40	1820	8.2	6.0	11.2	95
13...	1300	50	1820	8.2	6.0	11.1	94
13...	1302	60	1820	8.2	6.0	11.1	94
13...	1304	69	1820	8.2	6.0	11.1	94
MAY							
16...	1205	1.0	1840	8.5	21.5	9.1	106
16...	1207	10	1840	8.5	21.0	9.2	106
16...	1209	20	1840	8.5	20.0	9.2	103
16...	1211	30	1850	8.3	18.5	7.6	83
16...	1213	40	2050	7.7	16.5	5.4	56
16...	1215	50	2130	7.6	15.0	4.6	46
16...	1217	55	2130	7.5	14.0	4.6	46
AUG							
01...	1245	1.0	2060	8.4	29.0	7.3	97
01...	1247	10	2060	8.4	29.0	7.3	97
01...	1249	20	2060	8.3	28.0	6.6	87
01...	1251	30	2060	7.9	27.0	4.6	60
01...	1253	39	2060	7.4	25.5	.2	2

325256098275301 POSSUM KINGDOM LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1225	1.0	1820	8.4	6.5	12.2	105
13...	1227	10	1820	8.3	6.5	11.9	103
13...	1229	20	1820	8.2	6.5	11.7	101
13...	1231	30	1820	8.2	6.0	11.2	95
13...	1233	40	1820	8.2	6.0	11.1	94
13...	1235	50	1820	8.2	6.0	11.0	93
13...	1237	60	1820	8.2	6.0	10.9	92
13...	1239	70	1820	8.2	6.0	10.8	92
13...	1241	80	1820	8.1	6.0	10.1	86
13...	1243	94	3040	7.8	5.5	7.0	59
MAY							
16...	1145	1.0	1840	8.5	21.5	8.9	103
16...	1147	10	1840	8.5	21.5	9.0	105
16...	1149	20	1840	8.5	20.5	9.2	105
16...	1151	30	1840	8.4	18.5	8.0	87
16...	1153	40	2000	7.7	16.5	5.2	54
16...	1155	50	2040	7.6	14.5	4.9	49
16...	1157	60	2070	7.6	13.5	4.9	48
16...	1159	70	2160	7.5	12.5	4.5	43
16...	1201	80	2330	7.5	12.0	3.5	33
16...	1203	90	2720	7.3	11.5	1.0	9
16...	1205	94	2950	7.3	11.5	.2	2
AUG							
01...	1220	1.0	2060	8.4	29.0	7.3	97
01...	1222	10	2060	8.4	29.0	7.3	97
01...	1224	20	2060	8.4	28.0	7.0	92
01...	1226	30	2060	7.9	27.0	4.2	55
01...	1228	40	2060	7.4	23.5	.1	1
01...	1230	50	2100	7.4	21.5	.1	1
01...	1232	60	2100	7.4	19.5	.1	1
01...	1234	70	2150	7.4	19.0	.1	1
01...	1236	80	2300	7.4	16.5	.1	1
01...	1238	90	2470	7.4	16.0	.1	1
01...	1240	96	2470	7.3	16.5	.1	1

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325129098311801 POSSUM KINGDOM LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1125	1.0	1690	8.2	5.5	11.9	99
13...	1127	10	1690	8.2	5.5	11.8	98
13...	1129	20	1690	8.2	5.0	11.6	96
13...	1131	30	1690	8.2	5.0	11.5	95
13...	1133	40	1690	8.2	5.0	11.3	93
13...	1135	50	1720	8.2	5.0	11.3	93
13...	1137	60	1720	8.1	5.0	10.5	87
13...	1139	70	2470	7.8	4.5	9.4	77
13...	1141	80	3040	7.8	4.5	8.4	69
MAY							
16...	1345	1.0	1930	8.5	21.0	9.5	109
16...	1347	10	2000	8.4	20.5	9.0	102
16...	1349	20	2000	8.4	20.0	8.7	98
16...	1351	30	2190	8.1	19.5	7.3	81
16...	1353	40	2440	7.8	18.5	5.5	60
16...	1355	50	2500	7.5	16.0	4.0	41
16...	1357	60	2500	7.4	15.0	2.6	26
16...	1359	70	2720	7.4	14.5	1.5	15
16...	1401	80	3410	7.3	14.5	.2	2
AUG							
01...	1102	1.0	2140	8.3	29.0	7.0	93
01...	1104	10	2140	8.3	28.5	7.0	92
01...	1106	20	2140	8.2	28.0	6.1	80
01...	1108	30	2250	7.5	27.0	1.6	21
01...	1110	40	2400	7.3	24.5	.1	1
01...	1112	50	2400	7.4	23.0	.1	1
01...	1114	60	2450	7.4	20.0	.1	1
01...	1116	70	2510	7.3	18.0	.1	1
01...	1118	81	2580	7.2	17.5	.2	2

325327098314001 POSSUM KINGDOM LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
13...	0955	1.0	1690	8.2	5.0	2.20	11.9	98	290	180
13...	0957	10	1690	8.2	5.0	--	11.9	98	--	--
13...	0959	20	1690	8.2	4.5	--	11.9	98	--	--
13...	1001	30	1730	8.1	4.5	--	11.8	97	--	--
13...	1003	40	1770	8.1	4.0	--	11.7	95	--	--
13...	1005	50	1810	8.1	4.0	--	11.7	95	--	--
13...	1007	60	2080	8.0	4.0	--	11.6	94	--	--
13...	1009	71	3040	7.7	4.0	--	10.8	88	460	350
MAY										
16...	0945	1.0	1980	8.4	21.5	2.70	8.9	103	330	220
16...	0947	10	1980	8.4	21.0	--	8.9	102	--	--
16...	0949	20	2100	8.3	20.5	--	8.4	95	--	--
16...	0951	30	2400	8.1	20.0	--	7.3	82	--	--
16...	0953	40	2470	8.0	19.5	--	6.7	74	--	--
16...	0955	50	3010	7.5	17.5	--	3.4	36	--	--
16...	0957	60	3040	7.4	15.5	--	2.2	22	--	--
16...	0959	65	3120	7.4	15.5	--	1.7	17	--	--
16...	1001	71	3650	7.3	15.5	--	.2	2	630	490
AUG										
01...	0915	1.0	2200	8.3	29.0	1.10	7.1	95	360	270
01...	0917	10	2200	8.3	29.0	--	7.1	95	--	--
01...	0919	20	2200	8.3	28.5	--	6.9	91	--	--
01...	0921	30	2400	7.4	27.5	--	1.8	24	--	--
01...	0923	40	2400	7.3	24.0	--	.1	1	--	--
01...	0925	50	2450	7.3	21.5	--	.1	1	--	--
01...	0927	60	2510	7.3	19.5	--	.1	1	--	--
01...	0929	71	2510	7.2	18.5	--	.2	2	430	290

BRAZOS RIVER BASIN

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POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325327098314001 POSSUM KINGDOM RESERVOIR SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
13...	83	20	230	5.9	7.9	130	0	170	360
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	130	34	450	9.1	9.1	140	0	280	740
MAY									
16...	94	23	280	6.7	6.4	120	4	210	450
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	160	55	560	9.7	8.4	170	0	460	880
AUG									
01...	98	27	310	7.2	7.1	110	0	220	490
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	120	31	350	7.4	7.0	170	0	230	580

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
13...	6.1	941	.05	.01	--	.040	--	0	0
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.04	.02	--	.030	--	10	10
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	5.0	1720	.02	.03	--	.040	--	0	20
MAY									
16...	4.1	1130	.05	.04	.03	.010	.03	10	0
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.07	.03	.06	.020	.06	0	10
16...	--	--	--	--	--	--	--	--	--
16...	--	--	.23	.05	.06	.020	.06	10	190
16...	--	--	--	--	--	--	--	--	--
16...	7.3	2220	.06	.26	.15	.050	.15	70	1300
AUG									
01...	4.6	1210	.00	.01	--	.010	.03	0	20
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	--	--	.01	.01	--	.020	.06	0	50
01...	--	--	.00	.01	--	.020	.06	10	350
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
01...	7.2	1410	.00	.57	--	.180	.55	200	670

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325347098265701 POSSUM KINGDOM LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1450	1.0	1670	8.2	6.0	12.0	103
13...	1452	10	1670	8.2	5.5	12.1	103
13...	1454	20	1680	8.2	5.5	12.0	102
13...	1456	30	1860	8.2	5.0	11.8	99
13...	1458	40	1860	8.2	5.0	11.7	98
13...	1500	50	2180	8.1	5.0	11.0	92
13...	1502	57	3380	7.9	5.5	9.5	81
MAY							
16...	1510	1.0	2200	8.4	21.5	9.7	113
16...	1512	10	2240	8.4	21.0	9.1	105
16...	1514	20	2390	8.1	20.5	7.0	80
16...	1516	30	2470	7.9	20.0	6.0	67
16...	1518	40	2550	7.9	20.0	5.6	63
16...	1520	53	3450	7.4	18.5	1.8	20
AUG							
02...	0828	1.0	2320	8.2	28.0	6.2	82
02...	0830	10	2320	8.2	28.0	6.3	83
02...	0832	20	2320	8.2	28.0	6.2	82
02...	0834	30	2470	7.4	27.5	2.1	28
02...	0836	40	2540	7.2	26.0	.1	1
02...	0838	50	2540	7.2	21.0	.1	1
02...	0840	57	2540	7.1	20.0	.1	1

325557098264401 POSSUM KINGDOM LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1515	1.0	1830	8.2	5.5	12.2	103
13...	1517	10	1830	8.2	5.0	12.1	102
13...	1519	20	1860	8.2	5.0	11.9	101
13...	1521	30	1900	8.1	5.0	11.5	97
13...	1523	39	2180	8.0	5.5	11.1	94
MAY							
16...	1530	1.0	2330	8.4	21.5	9.0	105
16...	1532	10	2330	8.4	21.5	9.0	105
16...	1534	20	2340	8.4	21.5	8.9	103
16...	1536	30	2350	8.0	20.5	7.1	81
16...	1538	40	2480	7.7	20.0	4.3	48
16...	1540	44	2720	7.6	20.0	3.7	42
AUG							
02...	0902	1.0	2380	8.3	28.0	6.5	86
02...	0904	10	2380	8.3	28.0	6.5	86
02...	0906	20	2380	8.3	28.0	6.5	86
02...	0908	30	2440	7.8	27.5	4.0	53
02...	0910	44	2510	7.1	24.0	.2	2

325715098250501 POSSUM KINGDOM LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
13...	1545	1.0	1890	8.3	6.0	1.60	12.2	105	320	220
13...	1547	10	1890	8.3	5.5	--	12.3	104	--	--
13...	1549	20	1970	8.3	5.0	--	12.1	102	--	--
13...	1551	30	2170	8.2	5.0	--	11.9	100	--	--
13...	1553	38	5830	8.1	5.5	--	10.7	92	750	610
MAY										
16...	1600	1.0	2280	8.6	22.5	.90	11.3	133	370	270
16...	1602	10	2280	8.5	22.0	--	10.8	126	--	--
16...	1604	20	2280	8.0	21.0	--	7.4	85	--	--
16...	1606	30	2290	7.4	20.0	--	3.6	40	--	--
16...	1608	34	2300	7.4	20.0	--	3.5	39	400	280
AUG										
02...	0925	1.0	2540	8.2	28.5	--	6.1	80	400	310
02...	0927	10	2540	8.2	28.5	--	6.0	79	--	--
02...	0929	20	2540	8.2	28.5	--	5.8	76	--	--
02...	0931	30	2550	8.1	28.5	--	5.8	76	400	310

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325715098250501 POSSUM KINGDOM LAKE SITE GC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
13...	91	23	270	6.5	8.2	130	0	180	430
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	200	60	880	14	11	170	0	500	1500
MAY									
16...	100	30	330	7.4	7.3	110	8	240	520
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	110	30	330	7.2	7.8	140	0	240	510
AUG									
02...	110	31	360	7.8	7.7	110	0	270	580
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	110	31	360	7.8	7.8	110	0	270	580

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
13...	5.8	1070	.01	.01	--	.030	--	0	0
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	2.0	3240	.01	.03	--	.080	--	10	50
MAY									
16...	3.5	1290	.05	.05	.15	.050	.15	10	0
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	5.2	1300	.15	.11	.12	.040	.12	10	180
AUG									
02...	5.9	1420	.00	.01	--	.040	.12	0	10
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	5.9	1420	.00	.01	--	.050	.15	0	20

325047098291201 POSSUM KINGDOM LAKE SITE P3

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1200	1.0	1790	8.2	6.0	11.4	97
13...	1202	10	1790	8.2	6.0	11.4	97
13...	1204	20	1790	8.2	5.5	11.5	96
13...	1206	30	1790	8.2	5.5	11.4	95
13...	1208	40	1790	8.2	5.5	11.1	93
13...	1210	50	1810	8.1	5.5	11.0	92
13...	1212	60	1820	8.1	5.5	11.3	94
MAY							
16...	1105	1.0	1870	8.5	20.5	9.1	103
16...	1107	10	1870	8.5	20.0	9.1	102
16...	1109	20	1870	8.5	19.5	9.1	101
16...	1111	30	1880	8.4	19.0	8.3	91
16...	1113	40	2030	7.6	16.0	4.6	47
16...	1115	50	2030	7.5	14.5	3.4	34
16...	1117	58	2030	7.4	13.0	2.3	22
AUG							
01...	1140	1.0	2100	8.4	29.0	7.2	96
01...	1142	10	2100	8.4	29.0	7.2	96
01...	1144	20	2100	8.3	28.5	7.0	92
01...	1146	30	2100	7.5	27.0	1.2	16
01...	1148	40	2100	7.4	24.5	.1	1
01...	1150	50	2150	7.4	23.0	.1	1
01...	1152	60	2150	7.4	19.0	.1	1
01...	1154	70	2300	7.4	18.0	.1	1
01...	1156	80	2450	7.3	17.0	.1	1
01...	1158	86	2600	7.3	17.5	.2	2

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325125098323701 POSSUM KINGDOM LAKE SITE P5

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1100	1.0	1670	8.2	5.5	11.7	98
13...	1102	10	1670	8.2	5.0	11.6	96
13...	1104	20	1670	8.2	5.0	11.5	95
13...	1106	30	1670	8.1	5.0	11.3	93
13...	1108	38	1670	8.1	5.0	11.5	95
MAY							
16...	1040	1.0	1950	8.2	20.0	8.6	97
16...	1042	10	1960	8.2	20.0	8.3	93
16...	1044	20	1960	8.1	20.0	7.9	89
16...	1046	33	1980	7.7	19.0	5.2	57
AUG							
01...	1034	1.0	2170	8.1	29.0	6.5	87
01...	1036	10	2170	8.0	28.5	6.2	82
01...	1038	20	2170	7.9	28.5	5.6	74
01...	1040	27	2190	7.6	28.0	3.4	45

325301098342901 POSSUM KINGDOM LAKE SITE P7

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1030	1.0	1630	8.2	5.0	11.9	98
13...	1032	10	1630	8.2	5.0	11.8	98
13...	1034	20	1630	8.1	4.5	11.6	95
13...	1036	30	1630	8.1	4.5	11.5	94
13...	1038	40	1660	8.1	4.5	11.4	93
13...	1040	50	1690	8.1	5.0	10.9	90
13...	1042	60	1940	7.9	5.0	9.1	75
13...	1044	69	2710	7.6	5.0	5.8	48
MAY							
16...	1415	1.0	1890	8.4	22.0	9.2	107
16...	1417	10	1890	8.4	22.0	9.2	107
16...	1419	20	1900	8.3	21.0	8.9	102
16...	1421	30	1900	8.2	20.0	7.9	89
16...	1423	40	2110	7.6	17.5	4.0	43
16...	1425	50	2110	7.4	15.5	2.5	26
16...	1427	65	2130	7.3	13.0	.3	3
AUG							
01...	1000	1.0	2080	8.3	29.0	6.9	92
01...	1002	10	2080	8.3	29.0	6.9	92
01...	1004	20	2080	7.8	28.0	4.5	59
01...	1006	30	2100	7.2	25.0	.1	1
01...	1008	40	2140	7.2	25.0	.1	1
01...	1010	48	2140	7.2	24.5	.1	1

325915098243001 POSSUM KINGDOM LAKE SITE P9

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
13...	1606	1.0	2080	8.3	5.0	12.4	104
13...	1608	10	2150	8.3	5.0	12.2	103
13...	1610	20	2210	8.4	5.0	11.9	100
13...	1612	30	5640	8.1	5.5	10.3	89
13...	1614	33	6310	8.2	5.5	11.2	97
MAY							
16...	1632	1.0	2230	8.6	22.5	12.1	142
16...	1634	10	2230	8.6	22.5	12.1	142
16...	1636	20	2240	8.5	22.5	11.9	140
16...	1637	25	2230	8.5	22.5	11.7	138
16...	1638	32	2420	7.4	21.0	2.5	29
AUG							
02...	0945	1.0	2600	8.0	28.5	5.3	70
02...	0947	10	2600	8.0	28.5	5.2	68
02...	0949	20	2630	8.0	28.5	4.7	62
02...	0951	32	2660	8.1	28.5	5.2	68

BRAZOS RIVER BASIN

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POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325725098280301 POSSUM KINGDOM LAKE SITE P10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
FEB										
13...	1630	1.0	2150	8.4	5.5	1.30	12.6	107	360	250
13...	1632	10	2150	8.4	5.5	--	12.5	106	--	--
13...	1634	18	2210	8.3	5.5	--	12.5	106	360	250
MAY										
16...	1700	1.0	2220	8.7	23.5	.80	14.2	171	350	260
16...	1703	5.0	2220	8.6	23.0	--	14.2	169	--	--
16...	1705	10	2200	8.5	22.5	--	13.0	153	--	--
16...	1707	16	2150	7.4	20.5	--	4.0	45	380	260
AUG										
02...	1010	1.0	2360	8.2	28.5	--	6.1	80	400	300
02...	1012	9.0	2380	8.2	28.0	--	6.3	83	400	300

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
13...	100	26	310	7.1	8.3	130	0	210	510
13...	--	--	--	--	--	--	--	--	--
13...	100	27	320	7.3	8.4	140	0	220	530
MAY									
16...	98	25	320	7.5	7.8	96	8	220	540
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	110	25	300	6.7	7.6	140	0	220	510
AUG									
02...	120	25	350	7.6	7.2	120	0	380	470
02...	120	25	340	7.4	7.5	120	0	380	470

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
13...	5.6	1230	.01	.01	--	.040	--	0	10
13...	--	--	--	--	--	--	--	--	--
13...	5.6	1280	.01	.01	--	.030	--	0	10
MAY									
16...	4.3	1270	.05	.02	.12	.040	.12	10	0
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	5.5	1250	.09	.05	.21	.070	.21	10	140
AUG									
02...	8.8	1420	.05	.01	--	.050	.15	10	10
02...	11	1410	.04	.00	--	.040	.12	10	10

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325218098254101 POSSUM KINGDOM LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	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)
FEB							
13...	1310	1.0	2	0	0	10	2
13...	1320	50	--	--	--	--	--
13...	1330	104	2	0	0	10	2
MAY							
16...	1240	1.0	1	200	1	10	0
16...	1246	30	--	--	--	--	--
16...	1300	100	1	200	1	0	0
AUG							
01...	1310	1.0	1	200	0	10	0
01...	1314	20	--	--	--	--	--
01...	1316	30	--	--	--	--	--
01...	1330	103	2	200	0	10	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
FEB							
13...	10	0	0	.0	1	0	20
13...	0	--	10	--	--	--	--
13...	0	0	0	.0	0	0	10
MAY							
16...	10	0	0	.0	0	0	10
16...	10	--	0	--	--	--	--
16...	20	0	920	.0	0	0	10
AUG							
01...	0	0	10	.0	0	0	10
01...	0	--	10	--	--	--	--
01...	0	--	30	--	--	--	--
01...	0	0	760	.2	0	0	10

BRAZOS RIVER BASIN

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POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325218098254101 POSSUM KINGDOM LAKE SITE AC

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 13, 79 1311	MAY 16, 79 1240	AUG 1, 79 1311			
TOTAL CELLS/ML	3200	730	330000			
DIVERSITY: DIVISION	1.7	1.5	0.1			
..CLASS	1.7	1.5	0.1			
..ORDER	2.0	1.5	0.2			
...FAMILY	2.2	1.9	0.2			
....GENUS	2.3	2.4	0.2			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	24	1	26	4	*	0
...OOCYSTIS	190	6	230#	32	*	0
...SELENASTRUM	--	-	--	-	*	0
...TETRAEDRON	--	-	51	7	*	0
...SCENEDESMACEAE						
...CRUCIGENIA	270	8	--	-	--	-
...SCENEDESMUS	97	3	51	7	*	0
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	240	8	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCAEAE						
...CYCLOTELLA	24	1	--	-	--	-
...PENNALES						
...FRAGILARIACEAE						
...SYNEDRA	48	2	--	-	--	-
..CHRYSOPHYCEAE						
...CHRYSOMONADALES						
...MALLOMONADACEAE						
...MALLOMONAS	48	2	--	-	--	-
...OCHROMONADACEAE						
...OCHROMONAS	48	2	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	24	1	90	12	--	-
...CRYPTOMONADACEAE						
...CRYPTOMONAS	1900#	58	39	5	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	*	0
...ANACYSTIS	170	5	240#	33	2000	1
...HORMOGONALES						
...OSCILLATORIACEAE						
...OSCILLATORIA	--	-	--	-	330000#	98
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...TRACHELOMONAS	140	5	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	24	1	--	-	*	0

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

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

BRAZOS RIVER BASIN

POSSUM KINGDOM LAKE NEAR GRAFORD, TX--Continued

325725098280301 POSSUM KINGDOM LAKE SITE P10

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 13, 79 1631	MAY 16, 79 1701	AUG 2, 79 1010
TOTAL CELLS/ML	4800	23000	670000
DIVERSITY: DIVISION	1.6	1.5	0.1
...CLASS	1.6	1.5	0.1
...ORDER	1.7	2.0	0.4
...FAMILY	1.8	2.5	0.7
...GENUS	2.7	3.2	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
...ANKISTRODESMUS	79	2	140	1	*	0
...DICTYOSPHAERIUM	--	--	1400	6	--	--
...OOCYSTIS	--	--	280	1	--	--
...SELENASTRUM	--	--	140	1	*	0
...TETRAEDRON	26	1	*	0	--	--
...WESTELLA	--	--	570	2	--	--
...SCENEDESMACEAE						
...ACTINASTRUM	--	--	570	2	--	--
...CRUCIGENIA	730#	15	--	--	--	--
...SCENEDESMUS	100	2	3300	14	*	0
...TETRASTRUM	100	2	2300	10	--	--
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	--	570	2	--	--
...CHLAMYDOMONAS	130	3	1600	7	*	0
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	100	2	210	1	*	0
...MELOSIRA	79	2	--	--	--	--
...STEPHANODISCUS	--	--	850	4	--	--
..PENNALES						
...NITZSCHIAEAE						
...NITZSCHIA	--	--	--	--	*	0
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	--	--	210	1	--	--
...CRYPTOMONADACEAE						
...CRYPTOMONAS	52	1	640	3	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	--	--	--	--	43000	6
...ANACYSTIS	1400#	28	1300	5	5000	1
...COCCOCHLORIS	1600#	33	--	--	--	--
..HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	--	--	570	2	--	--
...ANABAENOPSIS	--	--	--	--	25000	4
...OSCILLATORIAEAE						
...OSCILLATORIA	--	--	8500#	37	590000#	88
...SPIRULINA	--	--	--	--	*	0
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
...EUGLENA	52	1	140	1	*	0
...TRACHELONAS	130	3	--	--	--	--
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	240	5	--	--	*	0

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

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

BRAZOS RIVER BASIN

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08088600 BRAZOS RIVER AT POSSUM KINGDOM DAM NEAR GRAFORD, TX

LOCATION.--Lat 32°52'00", long 98°26'00", Palo Pinto County, Hydrologic Unit 12060201, immediately below Possum Kingdom Dam, 2.6 mi (4.2 km) upstream from Loving Creek, 11.3 mi (18.2 km) southwest of Grafard, and 20 mi (32 km) upstream from gaging station near Palo Pinto.

DRAINAGE AREA.--23,596 mi² (61,114 km²), of which 9,566 mi² (24,776 km²) probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: January 1942 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1942 to current year.

WATER TEMPERATURES: October 1949 to September 1955, October 1965 to current year.

REMARKS.--Discharges are computed on the basis of releases from Possum Kingdom Reservoir. 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 micromhos Feb. 20, 1961; minimum daily, 494 micromhos May 4, 1957.

WATER TEMPERATURES (1949-55, 1965-75): Maximum daily, 26.5°C on several days during September 1971; minimum daily, 7.0°C on several days in February 1951.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,650 micromhos Oct. 5, 6; minimum daily, 1,800 micromhos May 6-8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 24...	1600	20	3170	--	19.5	490	390	130	40	450
JAN 30...	1600	20	1860	--	9.0	320	220	90	22	260
FEB 21...	1615	20	2000	8.0	8.5	350	250	100	24	270
MAR 29...	1600	20	2520	7.8	10.5	430	310	120	31	360
APR 14...	1000	20	2680	--	10.5	440	320	120	33	390
MAY 31...	1600	1000	1840	--	18.0	--	--	92	--	260
JUN 29...	1500	636	1900	--	23.5	330	230	92	24	270
JUL 10...	1600	220	1970	--	23.5	340	240	99	23	280
SEP 28...	1400	590	2220	--	23.5	370	280	100	29	300

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 24...	8.9	10	120	0	340	770	.3	6.9	1810
JAN 30...	6.4	6.8	120	0	190	420	.5	8.8	1060
FEB 21...	6.3	6.0	120	0	210	450	.3	5.7	1130
MAR 29...	7.6	7.8	140	0	230	590	.3	5.7	1410
APR 14...	8.1	7.3	140	0	290	600	.3	5.5	1520
MAY 31...	--	6.6	120	0	180	410	.3	3.8	--
JUN 29...	6.5	7.1	120	0	170	430	.3	4.7	1060
JUL 10...	6.6	6.2	130	0	180	450	.3	4.7	1110
SEP 28...	6.8	8.2	110	0	240	500	.5	5.4	1240

BRAZOS RIVER BASIN

08088600 BRAZOS RIVER AT POSSUM KINGDOM DAM NEAR GRAFORD, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1977.....	4329	3530	2080	24300	840	9790	430	5050	600
NOV. 1977.....	2513	3600	2130	14400	860	5860	440	3000	620
DEC. 1977.....	3498	3740	2200	20800	900	8480	460	4330	640
JAN. 1978.....	3648	3750	2210	21700	900	8880	460	4560	640
FEB. 1978.....	2153	3820	2250	13100	920	5350	470	2730	650
MAR. 1978.....	1136	3830	2260	6930	930	2850	470	1440	650
APR. 1978.....	600	3870	2280	3700	940	1520	480	778	660
MAY 1978.....	3332	3920	2310	20800	950	8550	490	4410	670
JUNE 1978.....	2022	3840	2260	12400	930	5080	480	2620	660
JULY 1978.....	2064	3920	2310	12900	950	5310	490	2710	670
AUG. 1978.....	265050	3590	2120	1520000	860	615000	440	314000	610
SEPT 1978.....	16672	3400	2000	90100	800	36100	410	18600	580
TOTAL	307017	**	**	1760000	**	713000	**	364000	**
WTD. AVG.	841	3590	2100	**	860	**	440	**	610

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	10701	3300	1930	55700	790	22700	390	11200	550
NOV. 1978.....	6499	2820	1630	28500	650	11500	320	5600	480
DEC. 1978.....	3284	2800	1620	14300	650	5790	320	2810	470
JAN. 1979.....	5269	2030	1160	16400	460	6580	200	2820	340
FEB. 1979.....	3643	1980	1130	11100	450	4480	190	1840	330
MAR. 1979.....	5176	2480	1420	19800	570	7950	260	3690	420
APR. 1979.....	10643	2340	1340	38400	540	15400	240	7030	400
MAY 1979.....	35575	1820	1040	99800	420	40300	170	16000	310
JUNE 1979.....	29592	1900	1080	86100	440	35000	180	14300	320
JULY 1979.....	3774	1990	1130	11600	460	4660	190	1940	340
AUG. 1979.....	7115	2110	1200	23100	480	9270	210	4030	360
SEPT 1979.....	12787	2200	1250	43300	510	17500	230	7790	370
TOTAL	134058	**	**	448000	**	181000	**	79000	**
WTD. AVG.	367	2160	1200	**	500	**	220	**	370

BRAZOS RIVER BASIN

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08088600 BRAZOS RIVER AT POSSUM KINGDOM DAM NEAR GRAFORD, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3600	3280	3200	2350	1880	2050	2480	1810	1840	1960	2050	2160
2	3600	3280	3170	2110	1880	2110	2460	1810	1870	1980	2060	2160
3	2730	3280	3170	2120	1880	2110	2500	1810	1900	1980	2070	2160
4	3610	3280	3140	3220	1880	2110	2520	1810	1850	1970	2070	2160
5	3650	3280	3100	3010	1880	2110	2520	1810	1850	1960	2080	2160
6	3650	3280	3070	2890	1880	2500	2520	1800	1900	1960	2080	2160
7	3300	3300	3060	2800	1870	2520	2530	1800	1900	1960	2060	2160
8	3100	2180	3000	2710	1870	2520	2530	1800	1900	1960	2060	2160
9	3000	3160	3010	2120	1870	2520	2540	1810	1900	1970	2060	2160
10	3050	2160	2970	2120	1870	2500	2540	1810	1900	1970	2070	2160
11	2720	2440	2900	1900	1880	2500	2560	1820	1900	1970	2070	2160
12	3000	2800	2710	1900	1880	2480	2600	1820	1900	1970	2090	2160
13	2970	3120	2500	1890	1880	2480	2680	1820	1900	1960	2090	2170
14	3150	2180	2490	1890	1880	2540	2680	1820	1900	1960	2100	2190
15	3300	2450	2380	1880	1880	2500	2680	1810	1900	1960	2100	2190
16	3550	2850	2340	3220	2000	2500	2680	1810	1900	1960	2100	2200
17	3130	3160	2370	1880	2000	2510	2680	1820	1900	1970	2110	2200
18	3070	3150	2360	1880	2000	2510	2320	1820	1900	2000	2110	2240
19	3050	3120	2370	1880	2000	2520	2320	1830	1900	2000	2110	2280
20	3170	3100	2300	1880	2000	2520	2320	1830	1900	2000	2110	2300
21	3170	3220	2320	1880	2000	2520	2300	1840	1900	2000	2110	2340
22	3170	2160	2330	1880	2160	2520	2280	1840	1900	2000	2110	2310
23	3170	2330	2330	1880	2160	2520	2000	1840	1900	2000	2110	2260
24	3170	2560	2310	1880	2150	2520	1830	1840	1900	2000	2110	2220
25	2610	2870	2320	1880	2120	2520	1820	1840	1900	2000	2110	2220
26	2690	3090	2320	1880	2100	2520	1820	1840	1900	2000	2110	2220
27	2800	3130	2340	1880	2070	2520	1830	1840	1900	2000	2110	2220
28	2970	2170	2330	1880	2050	2520	1830	1840	1900	2000	2110	2220
29	3080	3200	2330	1880	---	2520	1830	1840	1900	2000	2120	2220
30	3170	3210	2340	1880	---	2500	1830	1840	1940	2000	2140	2220
31	3120	---	2340	1880	---	2500	---	1840	---	2000	2140	---
MEAN	3150	2890	2620	2140	1960	2440	2330	1820	1900	1980	2090	2200

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	8.5	10.5	---	15.5	19.0	---	25.0	---
2	23.0	---	---	13.0	8.5	10.5	---	15.0	---	23.5	25.0	---
3	23.0	---	---	13.0	---	---	11.5	16.0	21.5	---	24.5	---
4	23.5	---	---	13.0	---	---	11.0	16.0	20.0	---	---	---
5	23.5	---	---	---	8.0	10.5	---	---	19.0	24.0	24.5	---
6	23.5	---	---	---	8.0	10.0	---	---	21.5	---	23.5	---
7	---	---	---	---	7.0	10.0	---	16.0	21.5	---	24.0	---
8	---	---	---	13.0	7.0	10.5	---	16.0	21.0	---	23.5	---
9	20.0	---	---	13.0	---	---	11.0	16.0	---	23.5	24.0	---
10	20.5	---	---	11.0	---	---	11.0	16.0	---	23.5	---	23.5
11	23.5	---	---	11.0	---	---	10.0	16.5	---	23.5	---	---
12	23.0	---	---	---	8.0	10.0	10.0	---	21.5	24.0	---	24.5
13	19.5	---	---	---	8.0	10.0	10.5	---	21.5	---	---	---
14	---	---	---	---	8.5	10.5	10.5	16.0	21.5	---	---	---
15	---	---	---	11.0	8.5	11.0	11.0	17.0	21.5	---	---	---
16	20.0	---	---	11.0	8.0	---	11.0	18.0	---	24.0	---	---
17	20.0	---	---	10.5	---	---	10.5	17.0	---	24.0	24.0	23.5
18	20.0	---	---	10.5	---	---	12.0	---	21.5	23.5	23.5	---
19	20.5	---	---	10.5	---	11.0	12.0	---	---	24.0	24.0	---
20	19.5	---	---	---	8.5	---	13.0	---	---	---	24.0	---
21	---	---	---	---	8.5	11.0	---	17.0	---	---	24.0	22.0
22	---	---	---	10.5	8.5	11.5	12.0	17.5	23.0	---	---	---
23	20.0	---	---	10.5	9.0	---	---	---	22.0	24.0	---	---
24	19.5	---	---	9.0	---	---	16.0	---	22.0	24.0	---	24.0
25	20.5	---	---	9.0	---	---	16.0	17.5	23.5	24.0	24.5	---
26	---	---	---	9.0	---	9.5	16.0	---	23.5	24.5	24.5	23.5
27	---	---	---	---	---	10.0	15.5	---	23.5	---	24.5	23.5
28	---	---	---	---	---	---	---	---	23.5	---	24.5	23.5
29	---	---	---	9.0	---	10.5	---	18.5	23.5	---	---	---
30	20.0	---	---	9.0	---	---	15.0	---	---	24.5	---	---
31	20.0	---	---	---	---	---	---	18.0	---	24.5	---	---
MEAN	21.0	---	---	11.0	8.0	10.5	12.5	16.5	22.0	24.0	24.0	23.5

BRAZOS RIVER BASIN

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 (30 m) upstream from bridge on Farm Road 4, 300 ft (91 m) downstream from Dark Valley Creek, 6.5 mi (10.5 km) north of Palo Pinto, and at mile 667.3 (1,073.7 km).

DRAINAGE AREA.--23,811 mi² (61,670 km²), of which 9,566 mi² (24,776 km²) 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 (253.359 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1933, nonrecording gage at site 19 mi (31 km) downstream at datum 38.19 ft (11.640 m) lower.

REMARKS.--Records good. Since 1941, flow largely regulated by Possum Kingdom Lake (station 08088500) 20 mi (32 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1925-40) prior to completion of Possum Kingdom Lake, 1,262 ft³/s (35.74 m³/s), 914,300 acre-ft/yr (1,130 hm³/yr); 39 years (water years 1941-79) regulated, 922 ft³/s (26.11 m³/s), 668,000 acre-ft/yr (824 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s (2,710 m³/s) June 16, 1930, at site 19 mi (31 km) downstream from Mineral Wells, gage height, 30 ft (9.1 m), present site and datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage occurred in 1876, from data by Corps of Engineers, and was several feet higher than the flood of June 16, 1930, which reached a stage of about 30 ft (9.1 m) and was the highest since at least 1876.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) May 22, gage height, 8.73 ft (2.661 m); minimum daily, 23 ft³/s (0.65 m³/s) Jan. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2150	492	44	32	161	39	230	916	957	107	245	875
2	2150	89	39	1180	58	38	249	1190	971	48	86	899
3	1240	57	37	852	44	38	931	1000	779	34	51	865
4	1120	50	253	95	40	222	822	1210	486	31	39	772
5	957	48	161	55	40	203	915	1150	126	200	34	788
6	357	47	57	44	40	63	1010	1040	1130	88	32	697
7	202	86	92	37	40	46	1020	1470	1000	49	31	711
8	85	73	602	35	37	41	749	1490	996	39	30	666
9	49	46	634	32	34	37	111	1480	991	166	29	564
10	39	38	95	30	79	34	75	1480	1380	168	26	294
11	221	34	53	31	54	34	81	1480	1400	77	26	548
12	944	33	44	31	42	34	77	1480	1400	70	30	370
13	906	30	37	31	40	34	64	1490	1380	68	400	90
14	94	34	36	1420	40	34	57	1490	1380	37	503	52
15	48	53	36	548	312	36	52	1170	1370	27	510	43
16	37	2540	36	226	357	43	50	1160	1390	28	516	39
17	32	1310	34	63	364	49	118	1140	1390	31	452	37
18	30	277	34	47	127	54	628	1170	1390	81	85	36
19	29	75	34	44	62	60	481	1030	1380	93	45	36
20	28	52	455	51	1460	254	1110	1020	1390	57	35	36
21	110	45	273	46	359	169	979	1720	1380	43	36	318
22	67	42	64	37	184	223	925	5350	1370	39	179	399
23	42	246	43	28	97	219	961	2000	1370	34	204	601
24	54	75	37	23	53	730	440	1620	971	33	235	543
25	64	48	35	26	43	1030	410	1140	955	31	255	384
26	40	75	32	30	40	1020	379	987	614	159	329	399
27	158	198	30	31	39	800	333	1000	95	354	187	487
28	53	1000	30	31	39	441	148	1090	56	445	362	603
29	35	154	30	31	---	486	69	1570	276	422	316	590
30	33	60	30	32	---	2080	59	1080	593	398	655	515
31	96	---	32	43	---	703	---	1080	---	369	678	---
TOTAL	11470	7407	3449	5242	4285	9294	13533	43693	30366	3826	6641	13257
MEAN	370	247	111	169	153	300	451	1409	1012	123	214	442
MAX	2150	2540	634	1420	1460	2080	1110	5350	1400	445	678	899
MIN	28	30	30	23	34	34	50	916	56	27	26	36
AC-FT	22750	14690	6840	10400	8500	18430	26840	86670	60230	7590	13170	26300
CAL YR 1978	TOTAL	289550.4	MEAN	793	MAX	52800	MIN	7.8	AC-FT	574300		
WTR YR 1979	TOTAL	152463.0	MEAN	418	MAX	5350	MIN	23	AC-FT	302400		

08090300 LAKE PALO PINTO NEAR SANTO, TX

LOCATION.--Lat 32°38'53", long 98°15'56", Palo Pinto County, Hydrologic Unit 12060201, on left bank near left end of dam on Palo Pinto Creek, 4.0 mi (6.4 km) upstream from bridge on Farm Road 4, 4.4 mi (7.1 km) north-end west of Santo, 7.5 mi (12.1 km) upstream from Big Sunday Creek, and 18.7 mi (30.1 km) upstream from mouth.

DRAINAGE AREA.--461 mi² (1,194 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1964 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 (Freese and Nichols, Consulting Engineers, bench mark).

REMARKS.--The lake is formed by a rock-faced earthfill dam 1,300 ft (400 m) long with a 550-foot (170 m) uncontrolled ogee-crested emergency spillway at right end of dam. The dam was completed and storage began in April 1964. During the summer of 1965, the dam was raised 2 ft (0.6 m) and the spillway crest was raised 4 ft (1.2 m) and lengthened from 500 to 550 ft (150 to 170 m). The lake is the property of Palo Pinto County Municipal Water District No. 1 and was built to impound water for municipal use, principally for the city of Mineral Wells. Water is released to the downstream channel through a 30-inch (762 mm) gated concrete pipe. It then flows 15 mi (24 km) downstream to a diversion lake where it is then pumped to the city of Mineral Wells. In addition, water is circulated through a steam generating powerplant owned by the Brazos Electric Power Co-Operative, Inc. The capacity table is based on a survey completed in 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.....	898.0	-
Design flood.....	893.0	163,200
Crest of spillway.....	867.0	44,090
Lowest gated outlet (invert).....	835.0	1,900

COOPERATION.--Capacity table furnished by Freese and Nichols, Consulting Engineers, for Palo Pinto Municipal Water District No. 1. Records of diversions furnished by the city of Mineral Wells.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 56,060 acre-ft (69.1 hm³) Oct. 31, 1974, elevation, 871.15 ft (265.57 m); minimum since initial filling to present spillway elevation, 18,750 acre-ft (23.1 hm³) Jan. 18, 1979, elevation, 854.96 ft (260.592 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 44,310 acre-ft (54.6 hm³) May 23, elevation, 867.08 ft (264.286 m); minimum, 18,750 acre-ft (23.1 hm³) Jan. 18, elevation, 854.96 ft (260.592 m).

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

854.0	17,260	864.0	36,570
860.0	27,810	868.0	46,810

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21750	20220	20220	19030	20150	19630	33440	38320	43800	41480	40870	38560
2	21690	20170	20120	18990	20150	19670	33500	38290	43720	41430	40770	38490
3	21630	20130	20080	18990	20120	19690	33590	38270	43700	41330	40700	38390
4	21590	20070	20020	18950	20130	19640	33530	38250	43620	41250	40620	38340
5	21640	20100	19970	18910	20220	19660	33620	38200	43540	41200	40500	38220
6	21640	20130	19920	18950	20220	19630	33530	38170	43460	41100	40400	38150
7	21540	20070	19850	18880	20180	19610	33570	38170	43410	41050	40300	38120
8	21490	20000	19800	18860	20150	19610	33530	38120	43330	40950	40200	38020
9	21420	19950	19760	18860	20100	19560	33480	38100	43230	40900	40070	37880
10	21370	19940	19740	18890	20080	19580	33640	38070	43120	40850	40100	37780
11	21330	19850	19690	18920	20070	19550	33570	38050	43070	40820	39950	37710
12	21280	19840	19660	18920	20030	19480	33550	38020	42990	40750	39850	37620
13	21160	19800	19590	18890	20050	19430	33530	37980	42910	40700	39750	37570
14	21150	19890	19560	18830	20000	19420	33480	37930	42840	40600	39650	37420
15	21040	20100	19560	18800	19900	19480	33480	37900	42760	40520	39620	37210
16	20990	20380	19500	18780	19920	19480	33440	37880	42680	40450	39500	37090
17	20960	20400	19460	18800	19890	19550	33980	37860	42580	40370	39370	37090
18	20870	20400	19430	18910	19850	19550	36570	37830	42520	42190	39270	36950
19	20860	20380	19450	19400	19800	20690	36640	37810	42470	42110	39150	36950
20	20810	20380	19380	20100	19790	23500	36570	37810	42370	42030	39030	36950
21	20740	20400	19350	20170	19760	23670	36500	39470	42260	41980	39230	36950
22	20690	20420	19350	20100	19740	24860	36400	40050	42210	41870	39000	36870
23	20640	20400	19290	20070	19720	24900	36310	44310	42130	41800	39300	36830
24	20620	20380	19260	20070	19740	24840	36260	44260	42060	41720	39230	36690
25	20550	20420	19220	20180	19690	24840	36220	44200	41980	41640	39150	36640
26	20490	20400	19180	20220	19640	24820	36170	44150	41900	41590	39080	36570
27	20450	20330	19160	20180	19670	24820	36120	44090	41850	41510	39000	36520
28	20380	20300	19140	20180	19640	24780	36080	44040	41740	41360	38930	36570
29	20350	20250	19110	20180	---	25560	36050	43990	41670	41200	38830	36330
30	20280	20200	19050	20150	---	32940	36570	43960	41590	41080	38710	36290
31	20250	---	19100	20150	---	33370	---	43910	---	41000	38640	---
MAX	21750	20420	20220	20220	20220	33370	36640	44310	43800	42190	40870	38560
MIN	20250	19800	19050	18780	19640	19420	33440	37810	41590	40370	38640	36290
(†)	855.89	855.86	855.18	855.83	855.52	862.61	864.00	866.93	866.04	865.81	864.86	863.88
(+)	-1530	-50	-1100	+1050	-510	+13730	+3200	+7340	-2320	-590	-2360	-2350
(††)	316	282	276	322	261	276	242	307	356	479	457	390
CAL YR 1978	MAX	31580	MIN	19050	±	-12440	††	3970				
WTR YR 1979	MAX	44310	MIN	18780	±	+14510	††	3960				

† Elevation, in feet, at end of month.

± Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by city of Mineral Wells.

NOTE.--No elevation record Apr. 20 to May 28.

BRAZOS RIVER BASIN

08090300 LAKE PALO PINTO NEAR SANTO, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAY 30...	1105	332	23.5	120	24	39	6.1	17	.7
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)
MAY 30...		4.5	120	0	32	25	.2	5.1	188

BRAZOS RIVER BASIN

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08090800 BRAZOS RIVER NEAR DENNIS, TX

LOCATION.--Lat 32°36'56", long 97°55'32", Parker County, Hydrologic Unit 12060201, at downstream side of bridge on Farm Road 1543, 0.2 mi (0.3 km) south of Dennis, 1.0 mi (1.6 km) upstream from Patrick Creek, and at mile 589.8 (949.0 km).

DRAINAGE AREA.--25,237 mi² (65,364 km²), of which 9,566 mi² (24,776 km²) 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 (212.650 m) National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench marks).

REMARKS.--Water-discharge records good. Flow is largely regulated by releases from storage in Possum Kingdom Lake (station 08088500) and Lake Palo Pinto (station 08090300). Flow is affected at times by discharge from the flood-detention pools of ten floodwater-retarding structures with a combined detention capacity of 11,890 acre-ft (14.7 hm³). These structures control runoff from 46.5 mi² (120.4 km²) in the East Keechi and Pollard Creeks drainage basins. There are many diversions above station for irrigation, municipal supply, and oil-field operations.

AVERAGE DISCHARGE.--11 years (water year 1969-79), 829 ft³/s (23.48 m³/s), 600,600 acre-ft/yr (741 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,300 ft³/s (1,680 m³/s) Aug. 10, 1978, gage height, 25.86 ft (7.882 m), from floodmarks; minimum, 0.87 ft³/s (0.025 m³/s) Aug. 2, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1930, 31.8 ft (9.69 m) in May 1957, from floodmark, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,400 ft³/s (379 m³/s) May 23, gage height, 14.29 ft (4.356 m); minimum, 7.5 ft³/s (0.21 m³/s) Jan. 2.

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

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1930	80	276	29	37	89	1540	534	1530	193	335	571
2	2030	63	171	20	40	75	751	1500	1510	533	311	649
3	2070	192	93	25	39	76	414	2190	1420	276	301	840
4	1960	235	65	883	55	70	476	1910	1340	175	230	861
5	1250	152	52	577	89	61	838	1140	902	123	138	826
6	1270	117	40	260	73	59	822	1180	816	95	94	752
7	714	89	81	153	62	121	936	1100	835	82	71	771
8	459	69	106	88	58	181	1000	1110	1570	113	54	671
9	312	63	66	84	44	123	970	1410	1290	126	44	650
10	254	64	325	71	47	78	577	1410	1280	89	50	589
11	199	69	471	68	48	60	302	1370	1330	72	64	477
12	159	79	227	69	46	53	253	1330	1600	78	40	325
13	221	71	133	63	41	49	220	1360	1590	140	34	431
14	942	59	87	49	68	39	183	1370	1390	105	33	313
15	612	50	67	60	69	36	143	1370	1370	76	42	197
16	283	135	50	962	40	51	109	1240	1550	75	351	119
17	165	1020	44	590	36	62	575	1010	1530	72	411	79
18	120	1910	46	404	157	78	4020	981	1550	76	422	54
19	94	854	48	329	375	186	4160	1000	1340	188	396	44
20	78	409	49	417	219	250	3810	993	1550	113	209	43
21	66	220	35	278	188	332	2880	880	1560	114	145	45
22	62	144	34	132	1090	492	1690	4730	1540	156	123	41
23	51	114	290	90	513	465	1220	11000	1530	97	110	34
24	50	95	169	70	278	586	1070	4740	1530	71	114	245
25	91	83	104	66	254	396	911	2580	1420	58	136	428
26	88	158	68	78	190	863	521	2050	1080	46	192	391
27	66	111	52	66	127	1000	448	1720	1000	43	213	305
28	59	73	44	53	119	1020	405	1490	591	42	279	318
29	68	211	43	49	---	660	364	3910	314	92	215	428
30	87	562	33	45	---	3360	275	2500	209	330	241	482
31	106	---	30	38	---	3520	---	1820	---	336	305	---
TOTAL	15916	7551	3399	6166	4402	14491	31883	62928	38667	4185	5703	11979
MEAN	513	252	110	199	157	467	1063	2030	1289	135	184	399
MAX	2070	1910	471	962	1090	3520	4160	11000	16000	533	422	861
MIN	50	50	30	20	36	36	109	534	209	42	33	34
AC-FT	31570	14980	6740	12230	8730	28740	63240	124800	76700	8300	11310	23760

CAL YR 1978 TOTAL 302682.2 MEAN 829 MAX 52800 MIN 1.2 AC-FT 600400
WTR YR 1979 TOTAL 207270.0 MEAN 568 MAX 11000 MIN 20 AC-FT 411100

BRAZOS RIVER BASIN

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 TEMPERATURES: October 1970 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,880 micromhos Aug. 29, 1976; minimum daily, 300 micromhos Mar. 27, 1977.

WATER TEMPERATURES: Maximum daily, 38.5°C July 26, 1976; minimum daily, 0.0°C on several days during winter months 1977-79.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,150 micromhos Oct. 21; minimum daily, 332 micromhos Apr. 20.

WATER TEMPERATURES: Maximum daily, 36.0°C July 28; minimum daily, 0.0°C Jan. 4-6, 14, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 30...	1800	650	2340	--	27.0	420	320	120	29	340
JAN 31...	1945	49	1570	--	.0	270	150	75	20	210
FEB 28...	1700	90	1990	--	15.0	320	210	84	26	270
MAR 31...	1700	3900	692	7.7	17.0	160	66	49	8.2	71
APR 03...	1900	440	542	--	10.0	150	58	48	6.9	49
JUN 12...	1745	1370	2040	--	29.5	360	240	100	26	300
AUG 31...	1750	325	2300	--	31.5	370	270	100	28	330
SEP 30...	0745	490	2400	--	27.0	400	290	110	31	340

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 30...	7.2	6.8	120	0	260	570	.3	3.8	1390
JAN 31...	5.6	5.5	140	0	170	310	.2	4.6	864
FEB 28...	6.6	5.8	130	0	210	440	.3	3.1	1100
MAR 31...	2.5	4.2	110	0	58	120	.2	6.3	371
APR 03...	1.8	3.8	110	0	47	86	.2	7.9	303
JUN 12...	6.9	7.2	140	0	--	460	.3	5.1	--
AUG 31...	7.5	7.8	120	0	230	520	.4	5.7	1280
SEP 30...	7.4	8.2	140	0	250	550	.4	5.3	1360

BRAZOS RIVER BASIN

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08090800 BRAZOS RIVER NEAR DENNIS, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	15916	2860	1680	72000	670	28700	330	14400	490
NOV. 1978.....	7551	2350	1360	27700	530	10800	270	5430	420
DEC. 1978.....	3399	2450	1420	13000	560	5120	280	2590	430
JAN. 1979.....	6166	1840	1030	17200	390	6440	200	3300	340
FEB. 1979.....	4402	1920	1090	12900	410	4890	210	2520	350
MAR. 1979.....	14491	1190	650	25600	230	9060	120	4640	260
APR. 1979.....	31883	903	500	43000	180	15300	91	7790	200
MAY 1979.....	62928	1270	710	120000	260	43700	130	22300	250
JUNE 1979.....	38667	2020	1150	120000	440	45700	220	23300	370
JULY 1979.....	4185	2250	1300	14600	500	5680	250	2880	400
AUG. 1979.....	5703	2310	1330	20500	520	7970	260	4030	410
SEPT 1979.....	11979	2380	1370	44300	540	17300	270	8810	420
TOTAL	207270	**	**	531000	**	201000	**	102000	**
WTD. AVG.	568	1670	950	**	360	**	180	**	310

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2820	3030	2380	1340	1570	1970	936	1400	1420	2220	2240	2360
2	2790	3030	2420	1440	1490	1970	612	794	1600	2320	2100	2360
3	2800	3000	2440	2440	1690	1980	542	700	1700	2340	2260	2360
4	2840	3000	2420	1790	1690	2020	572	726	1870	2360	2200	2360
5	2790	3000	2500	1620	1600	2040	518	1470	1810	2340	2300	2360
6	2800	2910	2460	2140	1920	2050	1190	1810	1890	2380	2300	2360
7	2800	2930	2120	1900	1970	2040	1800	1960	1400	2400	2360	2360
8	2840	2970	2580	1900	1880	2080	1930	2000	1700	2410	2360	2360
9	2880	2970	2580	2080	1920	2120	1970	2030	1860	2420	2400	2360
10	2920	2970	2580	1900	1870	2120	2000	2080	1940	2460	2360	2360
11	2940	2980	2340	1490	1780	2110	1960	2070	2000	2480	2320	2360
12	2950	3000	2340	1840	1720	2110	1960	2080	2040	2500	2320	2360
13	2970	3010	2340	2080	1940	2110	1890	2090	2080	2500	2060	2400
14	3010	3030	2400	2080	1740	2110	2000	2090	2080	2540	2200	2420
15	2970	2950	2400	2180	1010	2060	1940	2050	2100	2560	2200	2420
16	3040	2900	2460	2020	1180	1960	1900	2040	2120	2560	2460	2420
17	3100	2070	2480	2020	1950	1990	1130	2090	2160	2340	2460	2420
18	3120	2100	2490	2020	1990	2040	418	2090	2200	2340	2460	2420
19	3120	2210	2520	1710	1970	1630	446	2100	2200	2160	2460	2420
20	3140	2230	2540	1710	1950	1380	332	2100	2200	1790	2420	2360
21	3150	2270	2560	1540	1950	1380	650	2110	2200	1400	2360	2340
22	3140	2280	2560	1640	1980	1560	456	1080	2200	1930	2380	2400
23	3130	2300	2600	1560	1980	1280	992	402	2240	1890	2240	2400
24	3130	2330	2520	1630	1960	1210	1450	582	2240	2080	2300	2400
25	3100	2340	2480	1660	1990	1310	1700	942	2240	2120	2300	2360
26	3080	2340	2460	1670	1990	1310	1730	1420	2240	2100	2160	2420
27	3120	2370	2480	1640	2000	1130	1760	1590	2240	2020	2040	2420
28	3120	2400	2500	1620	1990	1650	1840	1670	2240	1900	2240	2440
29	3110	2350	2620	1590	---	1920	1770	1200	2240	1900	2300	2420
30	3070	2310	2620	1570	---	922	1730	1360	2240	2200	2300	2420
31	3060	---	2490	1570	---	692	---	1680	---	2360	2300	---
MEAN	3000	2650	2470	1790	1810	1750	1340	1610	2020	2240	2300	2390

BRAZZOS RIVER BASIN

08090800 BRAZOS RIVER NEAR DENNIS, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	20.0	10.0	1.0	3.0	10.0	20.0	22.0	24.0	31.5	29.5	32.0
2	23.5	26.5	16.0	1.0	4.0	---	16.0	22.0	22.0	32.5	33.0	33.0
3	23.5	21.0	12.0	1.0	5.0	11.0	10.0	20.5	24.0	---	29.0	---
4	25.0	---	7.0	.0	5.0	14.0	17.0	15.0	26.0	30.5	33.5	26.5
5	25.0	20.0	12.0	.0	4.0	---	18.0	20.0	28.0	32.0	33.0	27.0
6	---	16.0	8.0	.0	3.5	13.0	21.0	22.5	30.0	28.5	33.0	28.0
7	20.0	17.0	6.0	1.0	3.0	17.5	18.0	24.0	29.0	28.0	33.5	27.0
8	22.0	16.5	4.5	1.0	3.0	15.0	21.0	25.0	---	---	33.5	27.0
9	21.0	12.5	---	3.0	6.0	17.0	19.0	24.5	28.0	30.0	34.5	29.0
10	20.0	14.0	2.0	3.0	8.0	16.0	19.0	25.0	27.0	32.0	28.5	24.0
11	25.5	15.0	4.5	6.0	11.0	---	18.0	19.0	25.0	---	26.5	28.5
12	22.0	18.0	7.0	6.0	8.0	12.0	23.0	---	29.5	34.0	27.5	24.0
13	22.5	19.0	8.0	3.0	10.0	---	23.0	22.0	28.0	34.0	32.0	24.0
14	22.0	17.0	7.0	.0	16.0	15.0	25.0	24.0	26.0	31.0	33.0	25.0
15	20.0	13.0	4.5	2.0	16.0	11.0	27.0	24.0	27.0	33.0	35.0	24.0
16	22.5	10.0	8.0	4.0	7.0	11.0	26.0	25.5	28.0	34.0	31.5	---
17	21.5	10.5	7.0	4.0	1.0	17.0	20.0	24.5	28.0	30.5	31.5	19.5
18	18.0	---	7.0	12.0	4.0	20.0	19.0	23.5	27.0	30.0	31.5	20.0
19	23.5	13.0	14.0	11.0	4.0	15.0	21.0	---	28.0	29.5	32.5	21.0
20	18.0	12.0	13.5	9.5	7.0	16.0	20.0	16.0	29.0	30.0	33.0	21.0
21	22.0	12.0	12.0	7.0	9.0	20.0	21.0	27.0	32.0	31.5	29.0	20.0
22	22.0	12.0	12.0	9.0	14.0	21.0	21.0	23.0	29.0	32.0	32.5	28.5
23	18.0	16.0	12.0	6.0	15.5	15.5	23.0	23.0	31.0	32.5	30.5	29.0
24	20.0	17.0	9.0	6.0	9.0	12.0	24.0	23.0	---	34.0	34.0	23.0
25	21.5	18.0	8.0	5.0	12.0	15.0	26.0	24.5	29.0	34.0	28.0	22.5
26	17.0	18.0	8.0	6.0	7.0	16.0	---	24.0	29.0	31.5	30.0	22.0
27	15.5	14.0	9.0	5.5	9.0	17.0	22.0	26.0	29.5	34.0	29.5	27.0
28	15.0	9.0	9.0	---	15.0	19.0	20.0	25.5	---	36.0	32.0	26.5
29	19.0	---	12.0	3.0	---	19.0	20.0	22.5	33.5	---	30.0	28.0
30	16.0	27.0	7.0	5.0	---	18.0	21.0	23.5	34.0	---	30.0	27.0
31	16.0	---	2.0	.0	---	17.0	---	24.0	---	31.5	31.5	---
MEAN	21.0	16.0	8.5	4.0	8.0	15.5	20.5	23.0	28.0	32.0	31.5	25.5

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 (4.2 km) upstream from Fall Creek, 7.5 mi (12.1 km) southeast of Granbury, and at mile 542.5 (872.9 km).

DRAINAGE AREA.--25,679 mi² (66,509 km²), of which 9,566 mi² (24,776 km²) 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--The lake is formed by an Ambursen-type concrete and earthfill dam 2,256 ft (688 m) long, including a 932 ft (284 m) 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 (11.0 by 10.7 m) tainter gates and two 7- by 8-foot (2.1 by 2.4 m) sluice gates. The outflow from the sluice gates discharges into a bay where it is then controlled by two 4- by 4.5-foot (1.2 by 1.4 m) sluice gates with invert at 625.8 ft (190.74 m). Flow is affected at times by discharge from the flood-detention pools of 11 floodwater-retarding structures with a combined detention capacity of 13,350 acre-ft (16.5 hm³). These structures control runoff from 52.7 mi² (136 km²) in the East Keachi, 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. Total monthly diversions given in the table below were furnished by the Brazos River Authority. The largest diversion was 22,830 acre-ft (28.1 hm³) for industrial uses. Records furnished by the city of Granbury show that 414 acre-ft (510,500 m³) of sewage effluent was returned above station during the current year. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam.....	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 furnished by the Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 158,800 acre-ft (196 hm³) Mar. 27, 1977, elevation, 693.60 ft (211.409 m); minimum since first filling in October 1969, 97,600 acre-ft (120 hm³) Aug. 9, 1978, elevation 685.28 ft (208.873 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 157,900 acre-ft (195 hm³) May. 3, elevation, 693.50 ft (211.379 m); minimum, 144,200 acre-ft (178 hm³) May. 4, elevation, 691.90 ft (210.891 m).

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

690.0	129,200
692.0	145,000
694.0	162,300

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148800	146800	150000	149700	146800	147200	147200	150800	146900	150200	149500	148300
2	148600	146600	151500	149200	146800	147000	146700	148600	148100	150800	149800	148200
3	148700	146600	149700	149100	146800	147600	147500	148300	149300	151100	152000	148800
4	149000	146600	149500	149400	146700	147100	147200	146800	150000	150700	151600	149000
5	148300	147300	150300	150000	147100	147000	147400	149100	148000	151100	151200	148600
6	148500	147700	149600	150100	147300	146800	147100	150000	147100	150700	150800	148300
7	149300	146900	150000	149900	146700	146700	147200	149300	147600	150600	150400	149300
8	149300	146600	149500	149400	147200	146300	147400	148700	150400	150100	150100	149500
9	149600	146300	149000	149400	146600	146700	147400	148100	151100	150300	149400	149400
10	149700	146600	149300	150100	146700	146500	147400	148500	149800	150100	150000	149100
11	149700	146200	150400	150000	146700	146300	147000	148300	148300	150100	148500	149400
12	149400	146200	150600	150000	146500	146000	146800	147000	147500	149900	148200	149400
13	149200	146200	150700	150600	146200	145900	146800	146500	146700	149600	148100	149800
14	149400	146700	150300	149500	146200	145700	146900	147200	147200	149700	147800	149600
15	149300	146600	150400	148800	146600	146300	147100	149100	147200	149700	147700	148900
16	149500	146600	150500	148800	146400	146400	146700	150400	147300	149400	148000	148500
17	149400	147200	150100	149200	146300	146200	149700	150100	148000	149400	148700	148400
18	149500	149500	150200	150400	146100	147100	147800	150000	148300	149400	149000	148300
19	149700	148800	150000	149100	146500	149500	148800	150200	148400	149700	149600	148600
20	149600	149100	150000	147900	146800	147500	149500	150500	148800	149900	150100	148600
21	148900	148600	149700	147900	146700	146700	148500	150200	149300	149900	150000	148300
22	149400	148800	149400	147700	147400	149400	147500	150000	149700	149900	150400	148100
23	148800	148800	149500	148200	147800	147600	147600	152100	149600	149800	150100	147900
24	148300	148800	149500	147600	148200	147500	148300	147000	149500	149600	149900	148100
25	148500	148900	149500	147500	147200	147200	149200	147800	150000	149400	150000	148800
26	148100	149400	149400	147800	147200	147000	148000	147700	149100	149400	150100	149400
27	147800	149000	149000	147800	147300	146200	148300	147200	149200	149000	150200	149700
28	147500	148800	149000	147400	147300	146000	148200	147000	149700	148600	150500	150000
29	147300	148900	149700	147400	---	146600	148500	147700	150200	148300	150300	150400
30	147200	149600	149600	147400	---	149400	148300	148000	150300	148400	150200	150600
31	147000	---	150000	147100	---	150300	---	148600	---	149000	149400	---
MAX	149700	149600	151500	150600	148200	150300	149700	152100	151100	151100	152000	150600
MIN	147000	146200	149000	147100	146100	145700	146700	146500	146700	148300	147700	147900
(†)	692.24	692.55	692.59	692.25	692.28	692.63	692.40	692.43	692.63	692.48	692.52	692.67
(‡)	-2000	+2600	+400	-2900	+200	+3000	-2000	+300	+1700	-1300	+400	+1200
(††)	559	2750	2160	1900	4790	4930	2420	293	390	1630	1610	3260
CAL YR 1978	MAX	152300	MIN	98500	±	+22200	††	55220				
WTR YR 1979	MAX	152100	MIN	145700	±	+1600	††	26690				

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for irrigation, municipal, and industrial uses.

BRAZOS RIVER BASIN

08090900 LAKE GRANBURY NEAR GRANBURY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1970 to current year.

32227097412101 LAKE GRANBURY SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
14...	1230	1.0	2920	8.2	7.5	1.80	11.5	102	470	360
14...	1232	10	2920	8.2	7.5	--	11.5	101	--	--
14...	1234	20	2920	8.2	7.0	--	11.4	100	--	--
14...	1236	30	2920	8.2	7.0	--	11.4	100	--	--
14...	1238	40	2920	8.2	7.0	--	11.3	99	--	--
14...	1240	50	2910	8.2	6.5	--	11.3	97	--	--
14...	1242	60	2900	8.1	6.5	--	11.0	95	--	--
14...	1244	68	2900	8.1	6.0	--	10.7	91	480	370
MAY										
17...	1220	1.0	918	8.0	22.0	.60	7.7	90	190	91
17...	1222	10	918	8.0	21.5	--	7.7	89	--	--
17...	1224	20	930	7.8	20.5	--	6.8	76	--	--
17...	1226	30	970	7.8	20.5	--	6.9	78	--	--
17...	1228	40	990	7.6	20.0	--	5.2	58	--	--
17...	1230	50	970	7.5	19.0	--	2.8	30	--	--
17...	1232	55	1420	7.4	18.5	--	1.7	18	--	--
17...	1234	60	2120	7.3	17.0	--	.2	2	--	--
17...	1236	66	2430	7.3	16.0	--	.2	2	430	290
AUG										
09...	1440	1.0	1520	8.2	29.5	2.00	7.1	94	290	170
09...	1442	10	1520	8.2	29.0	--	7.1	93	--	--
09...	1444	20	1520	8.0	29.0	--	6.5	86	--	--
09...	1446	30	1520	7.4	28.5	--	1.4	18	--	--
09...	1448	40	1460	7.2	26.5	--	.0	0	--	--
09...	1450	50	1460	7.2	25.0	--	.0	0	--	--
09...	1452	60	1420	7.2	23.5	--	.0	0	--	--
09...	1454	66	1420	7.2	22.0	--	.1	1	280	120
FEB										
14...	130	35	430	8.6	10	130	0	350	700	.3
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	130	37	430	8.6	10	130	0	340	720	--
MAY										
17...	56	12	110	3.5	4.8	120	0	83	170	.2
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	120	31	350	7.4	6.9	170	0	260	550	--
AUG										
09...	79	22	210	5.4	5.5	140	0	150	330	.3
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	78	20	180	4.7	5.0	190	0	120	290	--

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322227097412101 LAKE GRANBURY SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	5.1	1720	.03	.01	--	.030	--	10	10
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	.05	.02	--	.030	--	10	10
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	5.1	1740	.03	.02	--	.040	--	0	20
MAY									
17...	5.1	500	.26	.01	.09	.030	.09	90	10
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	.25	.03	.09	.030	.09	310	20
17...	--	--	--	--	--	--	--	--	--
17...	--	--	.28	.03	.12	.040	.12	540	270
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	5.5	1410	.10	.43	.12	.040	.12	410	2800
AUG									
09...	5.6	871	.01	.01	--	.010	.03	0	0
09...	--	--	--	--	--	--	--	--	--
09...	--	--	.00	.00	--	.020	.06	0	40
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	10	799	.00	.82	--	.270	.83	770	1800

32231097412001 LAKE GRANBURY SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1300	1.0	2920	8.2	8.0	11.6	104
14...	1302	10	2920	8.2	7.5	11.6	103
14...	1304	20	2920	8.2	7.5	11.5	102
14...	1306	30	2920	8.2	7.5	11.5	102
14...	1308	35	2920	8.2	7.5	11.4	101
MAY							
17...	1300	1.0	918	7.8	22.0	7.4	86
17...	1302	10	918	7.8	21.5	7.4	85
17...	1304	20	930	7.7	21.0	6.6	75
17...	1306	30	980	7.7	20.5	6.7	75
17...	1308	40	980	7.5	20.0	4.8	53
17...	1310	45	980	7.4	19.5	3.2	36
AUG							
09...	1520	1.0	1520	8.2	29.5	7.1	94
09...	1522	10	1520	8.2	29.5	7.1	94
09...	1524	23	1520	8.0	29.0	6.2	82

322345097421901 LAKE GRANBURY SITE BR

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1150	1.0	2920	8.3	9.0	11.7	107
14...	1152	10	2920	8.3	8.5	11.6	105
14...	1154	20	2910	8.3	8.0	11.3	101
14...	1156	30	2910	8.2	7.0	11.2	98
14...	1158	44	2910	8.2	7.0	10.9	96
MAY							
17...	1155	1.0	888	8.1	23.0	8.5	101
17...	1157	10	888	8.1	22.5	8.4	98
17...	1159	20	770	7.5	20.5	5.7	64
17...	1201	30	830	7.5	20.5	5.4	61
AUG							
09...	1410	1.0	1590	8.2	29.5	7.1	94
09...	1412	10	1590	8.2	29.5	7.0	93
09...	1414	18	1590	7.4	29.5	1.9	25

BRAZOS RIVER BASIN

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322341097420601 LAKE GRANBURY SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1130	1.0	2920	8.3	9.0	11.8	108
14...	1132	10	2920	8.3	8.5	11.8	107
14...	1134	20	2910	8.3	8.0	11.5	103
14...	1136	30	2910	8.2	7.0	11.4	100
14...	1138	40	2900	8.2	7.0	11.3	99
14...	1140	50	2900	8.2	7.0	11.3	99
14...	1142	60	2900	8.2	6.5	10.9	94
14...	1144	64	2890	8.2	6.5	10.8	93
MAY							
17...	1140	1.0	888	8.1	22.5	8.4	98
17...	1142	10	888	8.1	22.5	8.4	98
17...	1144	20	770	7.6	20.5	5.7	64
17...	1146	30	810	7.5	20.0	5.0	56
17...	1148	40	790	7.5	19.5	3.6	39
17...	1150	50	840	7.4	19.0	2.6	28
17...	1152	62	2380	7.3	16.5	.2	2
AUG							
09...	1355	1.0	1590	8.2	30.5	7.2	97
09...	1357	10	1590	8.1	30.0	7.0	93
09...	1359	20	1590	7.4	29.0	1.2	16
09...	1401	30	1590	7.2	28.0	.0	0
09...	1403	40	1590	7.2	27.0	.1	1
09...	1405	50	1440	7.2	26.0	.1	1
09...	1407	63	1400	7.2	24.0	.1	1

322337097415401 LAKE GRANBURY SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1205	1.0	2920	8.3	8.5	11.8	107
14...	1207	10	2920	8.3	8.5	11.9	108
14...	1209	20	2910	8.3	8.0	11.7	104
14...	1211	30	2910	8.2	7.5	11.5	102
14...	1213	43	2910	8.2	7.0	11.2	98
MAY							
17...	1205	1.0	888	8.1	23.0	8.3	99
17...	1207	10	920	7.9	22.0	7.6	88
17...	1209	20	790	7.5	20.5	5.7	64
17...	1211	30	830	7.5	20.5	5.2	58
17...	1213	35	830	7.5	20.0	4.6	51
AUG							
09...	1345	1.0	1590	8.2	30.5	7.1	95
09...	1347	10	1590	8.1	30.0	6.7	89
09...	1349	23	1590	7.4	30.0	2.2	29

322537097414501 LAKE GRANBURY SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1110	1.0	2920	8.3	9.5	11.3	106
14...	1112	10	2920	8.3	9.0	11.4	105
14...	1114	19	2910	8.2	10.0	10.9	103
MAY							
17...	1120	1.0	813	8.6	25.5	10.7	132
17...	1122	10	813	7.9	24.0	7.1	86
17...	1124	15	813	7.5	23.0	4.8	57
AUG							
09...	1315	1.0	1560	8.2	31.5	7.2	98
09...	1317	10	1560	8.1	30.5	6.2	83
09...	1319	16	1560	7.8	31.0	5.2	70

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322422097423901 LAKE GRANBURY SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1040	1.0	2920	8.3	9.5	11.4	107
14...	1042	10	2920	8.3	9.0	11.4	105
14...	1044	20	2910	8.3	8.0	11.3	101
14...	1046	30	2910	8.2	7.5	11.1	98
14...	1048	40	2910	8.2	7.0	10.8	95
14...	1050	50	2900	8.1	6.5	10.7	92
14...	1052	58	2900	8.1	6.5	10.7	92
MAY							
17...	1040	1.0	832	8.4	24.0	9.4	113
17...	1042	10	832	8.0	23.0	8.1	96
17...	1044	20	800	7.4	20.5	4.8	54
17...	1046	30	960	7.5	20.5	4.4	49
17...	1048	40	1070	7.5	20.0	4.5	50
17...	1050	50	1110	7.4	19.5	2.8	31
17...	1052	56	1660	7.2	18.0	.2	2
AUG							
09...	1235	1.0	1590	8.2	31.0	7.4	100
09...	1237	10	1590	8.2	30.0	7.1	95
09...	1239	20	1650	7.5	29.0	2.5	33
09...	1241	30	1690	7.3	28.5	.4	5
09...	1243	40	1690	7.2	27.5	.1	1
09...	1245	50	1690	7.1	26.0	.1	1
09...	1247	56	1690	7.1	24.5	.1	1

322437097423901 LAKE GRANBURY SITE DL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1025	1.0	2920	8.3	9.5	11.3	106
14...	1027	10	2920	8.2	9.0	11.3	104
14...	1029	21	2920	8.2	8.5	11.3	103
MAY							
17...	1100	1.0	832	8.3	24.0	9.3	112
17...	1102	10	832	7.9	23.0	7.8	93
17...	1104	20	800	7.4	21.0	4.9	56
17...	1106	30	890	7.4	20.5	4.3	48
17...	1108	35	1080	7.5	20.5	4.2	47
AUG							
09...	1255	1.0	1590	8.2	31.5	7.0	95
09...	1257	10	1590	8.2	30.5	7.2	97
09...	1259	21	1590	7.4	30.0	2.2	29

322458097443101 LAKE GRANBURY SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1000	1.0	2880	8.3	8.5	11.6	105
14...	1002	10	2880	8.3	8.0	11.7	104
14...	1004	20	2880	8.3	7.5	11.6	103
14...	1006	30	2840	8.2	7.0	11.4	100
14...	1008	40	2840	8.0	7.0	10.8	95
14...	1010	52	2810	8.0	7.0	10.5	92
MAY							
17...	1015	1.0	819	7.8	23.5	7.4	88
17...	1017	10	819	7.8	23.0	7.2	86
17...	1019	20	850	7.5	21.0	5.2	59
17...	1021	30	1110	7.5	20.5	5.0	56
17...	1023	40	1530	7.6	20.5	5.2	58
17...	1025	50	1560	7.6	20.5	4.9	55
17...	1027	53	1560	7.5	20.5	4.7	53
AUG							
09...	1210	1.0	1590	8.0	31.5	6.8	93
09...	1212	10	1590	8.1	31.0	6.8	92
09...	1214	20	1640	7.7	29.5	4.4	58
09...	1216	30	1740	7.4	28.5	1.4	18
09...	1218	40	1750	7.3	28.0	.8	10
09...	1220	52	1750	7.1	26.0	.1	1

BRAZOS RIVER BASIN
LAKE GRANBURY NEAR GRANBURY, TX--Continued

322619097463301 LAKE GRANBURY SITE FC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
14...	1350	1.0	2660	8.4	9.0	1.20	11.9	109	460	340
14...	1352	10	2660	8.4	8.5	--	11.9	108	--	--
14...	1354	20	2660	8.4	8.5	--	11.7	106	--	--
14...	1356	30	2770	8.3	7.5	--	11.4	101	--	--
14...	1358	35	2810	8.2	7.0	--	10.8	95	--	--
14...	1400	43	2830	8.1	8.0	--	10.3	92	470	360
MAY										
17...	1345	1.0	758	8.0	23.5	.50	8.0	95	170	70
17...	1347	10	758	8.1	23.0	--	8.0	95	--	--
17...	1349	20	980	7.7	21.5	--	5.9	68	--	--
17...	1351	30	1660	7.8	21.0	--	5.7	65	--	--
17...	1353	40	1800	7.7	20.5	--	5.3	60	--	--
17...	1355	42	1800	7.6	20.5	--	5.0	56	320	190
AUG										
09...	1600	1.0	1570	8.4	30.5	.90	8.1	109	300	190
09...	1602	10	1570	8.3	30.5	--	8.1	109	--	--
09...	1604	20	1610	7.8	29.5	--	5.0	66	--	--
09...	1606	30	1750	7.3	28.5	--	1.0	13	--	--
09...	1608	40	1750	7.3	28.0	--	.3	4	320	210

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
14...	130	34	390	7.9	9.2	150	0	300	670
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	130	36	420	8.4	9.7	140	0	340	650
MAY									
17...	51	10	84	2.8	4.4	120	0	68	130
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	92	21	240	5.9	5.8	150	0	190	390
AUG									
09...	81	23	210	5.3	5.5	130	2	150	340
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	87	26	240	5.8	6.0	140	0	180	390

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	4.1	1610	.01	.01	--	.040	--	10	10
14...	--	--	--	--	--	--	--	--	--
14...	--	--	.00	.02	--	.040	--	0	10
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	4.7	1660	.01	.03	--	.040	--	10	30
MAY									
17...	5.8	412	.28	.03	.15	.050	.15	0	0
17...	--	--	--	--	--	--	--	--	--
17...	--	--	.25	.07	.15	.050	.15	280	30
17...	--	--	.08	.07	.09	.030	.09	10	20
17...	--	--	--	--	--	--	--	--	--
17...	4.8	1020	.07	.12	.15	.050	.15	10	50
AUG									
09...	5.5	881	.00	.00	--	.040	.12	0	0
09...	--	--	.00	.01	--	.040	.12	0	10
09...	--	--	.01	.06	--	.030	.09	0	20
09...	--	--	--	--	--	--	--	--	--
09...	6.5	1000	.00	.07	--	.060	.18	0	190

315

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1430	1.0	2630	8.3	10.0	11.5	108
14...	1432	10	2640	8.4	8.5	11.6	105
14...	1434	20	2640	8.3	7.5	10.9	96
14...	1436	25	2640	8.2	8.0	10.6	95
MAY							
17...	1545	1.0	751	7.9	24.0	7.7	93
17...	1547	10	800	7.7	22.5	6.9	80
17...	1549	23	670	7.2	21.0	1.7	19
AUG							
09...	1635	1.0	1600	8.3	31.0	8.4	114
09...	1637	10	1600	8.2	30.0	6.9	92
09...	1639	22	1600	7.8	29.5	5.1	68

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DTS SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
FEB										
14...	1500	1.0	2420	8.4	9.0	1.20	11.8	108	420	300
14...	1502	10	2420	8.4	7.5	--	11.4	101	--	--
14...	1504	20	2580	8.3	7.0	--	10.7	94	--	--
14...	1506	33	2620	8.2	7.5	--	10.8	96	460	340
MAY										
17...	1510	1.0	1040	8.0	23.5	.30	7.7	92	220	100
17...	1512	10	1610	8.2	23.0	--	7.5	89	--	--
17...	1514	20	1880	7.9	22.5	--	6.2	72	--	--
17...	1516	30	1890	7.7	21.5	--	4.9	56	--	--
17...	1518	32	1890	7.5	21.5	--	3.4	39	340	210
AUG										
09...	1655	1.0	1680	8.3	29.5	.50	7.9	105	--	--
09...	1657	10	1720	7.9	29.0	--	5.9	78	--	--
09...	1659	20	1730	7.8	29.0	--	4.8	63	--	--
09...	1701	33	1780	7.2	28.5	--	.0	0	--	--

[illegible]

BRAZOS RIVER BASIN

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322834097470801 LAKE GRANBURY SITE HC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	3.5	1430	.01	.01	--	.040	--	10	20
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	4.0	1530	.00	.01	--	.040	--	10	20
MAY									
17...	6.1	572	.16	.05	.15	.050	.15	0	0
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	5.0	1080	.06	.19	.18	.060	.18	10	110
AUG									
09...	--	--	.00	.01	--	.030	.09	0	10
09...	--	--	--	--	--	--	--	--	--
09...	--	--	.01	.04	--	.120	.37	0	50
09...	--	--	.00	.05	--	.100	.31	60	870

322819097483201 LAKE GRANBURY SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1530	1.0	2340	8.3	10.0	11.2	105
14...	1532	10	2340	8.3	8.0	10.7	96
14...	1534	21	2370	8.2	8.5	10.1	92
MAY							
17...	1445	1.0	1360	8.2	24.0	8.3	100
17...	1447	10	1450	8.0	22.5	6.8	79
17...	1449	20	1300	7.4	21.5	2.5	29
AUG							
09...	1715	1.0	1750	8.2	30.0	8.2	109
09...	1717	10	1720	7.8	29.0	5.4	71
09...	1719	20	1720	7.5	28.5	3.4	44

323318097480101 LAKE GRANBURY SITE JC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
14...	1640	1.0	2000	8.5	10.0	12.6	118
14...	1642	10	2000	8.4	9.0	12.3	113
14...	1644	23	2200	8.2	8.5	10.9	98
MAY							
17...	1630	1.0	1940	8.4	24.5	9.1	111
17...	1632	10	2000	8.4	24.0	9.2	111
17...	1634	20	2020	8.0	23.0	7.2	86
17...	1636	23	2020	8.0	23.0	7.0	83
AUG							
09...	1735	1.0	1790	8.3	30.5	8.8	117
09...	1737	10	1790	7.8	29.5	6.3	85
09...	1739	24	1470	7.2	27.0	.1	1

BRAZOS RIVER BASIN

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LAKE GRANBURY NEAR GRANBURY, TX--Continued

323435097492001 LAKE GRANBURY SITE KC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CAO3)	HARD- NESS, NONCAR- BONATE (MG/L CAO3)
FEB										
14...	1610	1.0	1740	8.6	10.5	.82	14.0	135	340	210
14...	1612	5.0	1740	8.5	9.5	--	13.6	126	--	--
14...	1614	13	1790	8.4	9.5	--	12.2	113	350	230
MAY										
17...	1700	1.0	2020	8.4	24.5	.50	8.9	109	360	240
17...	1702	5.0	2020	8.3	24.5	--	8.8	107	--	--
17...	1704	10	2020	8.2	24.0	--	7.9	95	--	--
17...	1706	13	2020	8.2	24.0	--	7.9	95	350	230
AUG										
09...	1755	1.0	1790	8.6	32.5	.50	12.0	166	310	220
09...	1757	10	1790	8.0	30.0	--	7.0	93	--	--
09...	1759	18	1570	7.1	27.5	--	.0	0	290	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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
14...	98	24	220	5.2	6.7	150	4	200	370
14...	--	--	--	--	--	--	--	--	--
14...	100	25	230	5.3	6.7	150	2	200	370
MAY									
17...	98	27	290	6.7	6.6	140	0	230	460
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	98	25	270	6.3	6.5	140	0	200	450
AUG									
09...	78	27	260	6.5	6.3	100	2	180	400
09...	--	--	--	--	--	--	--	--	--
09...	77	23	220	5.7	5.8	150	0	150	340

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
14...	3.8	1000	.01	.04	--	.050	--	10	20
14...	--	--	--	--	--	--	--	--	--
14...	3.8	1010	.01	.07	--	.070	--	0	20
MAY									
17...	3.8	1180	.06	.03	.09	.030	.09	0	10
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	3.7	1120	.06	.01	.12	.040	.12	0	20
AUG									
09...	5.8	1010	.00	.00	--	.070	.21	0	20
09...	--	--	--	--	--	--	--	--	--
09...	7.2	898	.01	.17	--	.060	.18	210	1300

BRAZOS RIVER BASIN

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322227097412101 LAKE GRANBURY SITE AQ

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	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)
FEB							
14...	1230	1.0	1	100	0	10	2
14...	1236	30	--	--	--	--	--
14...	1244	68	1	0	0	10	2
MAY							
17...	1220	1.0	1	100	1	0	0
17...	1226	30	--	--	--	--	--
17...	1230	50	--	--	--	--	--
17...	1236	66	1	200	1	0	0
AUG							
09...	1440	1.0	1	0	0	10	1
09...	1444	20	--	--	--	--	--
09...	1454	66	6	0	0	0	0

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
FEB							
14...	10	0	10	.0	0	0	20
14...	10	--	10	--	--	--	--
14...	0	0	20	.0	0	0	20
MAY							
17...	90	0	10	.2	0	0	10
17...	310	--	20	--	--	--	--
17...	540	--	270	--	--	--	--
17...	410	0	2800	.1	0	0	20
AUG							
09...	0	0	0	.0	0	0	7
09...	0	--	40	--	--	--	--
09...	770	0	1800	.0	0	0	6

LAKE GRANBURY NEAR GRANBURY, TX--Continued

322227097412101 LAKE GRANBURY SITE AC

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 14, 79 1231	MAY 17, 79 1219	AUG 9, 79 1441
TOTAL CELLS/ML	630	1800	500000
DIVERSITY: DIVISION	1.9	1.6	0.1
..CLASS	1.9	1.6	0.1
..ORDER	2.1	1.7	0.3
...FAMILY	2.7	2.5	0.6
....GENUS	2.9	3.2	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
...COELASTRUM	--	-	180	10	*	0
...OOCYSTACEAE						
...ANKISTRODESMUS	10	2	26	1	*	0
...OOCYSTIS	--	-	280#	15	*	0
...SELENASTRUM	--	-	--	-	*	0
...SCENEDESMACEAE						
...CRUCIGENIA	--	-	51	3	*	0
...SCENEDESMUS	20	3	310#	17	*	0
...TETRASTRUM	--	-	100	6	*	0
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	20	3	--	-	--	-
...CHLAMYDOMONAS	60	10	--	-	*	0
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCEAE						
...CYCLOTELLA	10	2	420#	23	*	0
...MELOSIRA	--	-	90	5	--	-
...STEPHANODISCUS	--	-	39	2	--	-
...PENNALES						
...ACHNANTHACEAE						
...COCONEIS	--	-	39	2	--	-
...NITZSCHACEAE						
...NITZSCHIA	20	3	13	1	--	-
..CHRYSTOPHYCEAE						
...CHRYSONOMADALES						
...MALLOMONADACEAE						
...MALLOMONAS	5	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	170#	27	100	6	--	-
...CRYPTOMONADACEAE						
...CRYPTOMONAS	190#	30	13	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM					12000	2
...ANACYSTIS	60	10	150	8	*	0
...COCCOCHLORIS	20	3	--	-	--	-
...HORMOGONALES						
...NOSTOCACEAE						
...ANABAENOPSIS	--	-	--	-	38000	8
...OSCILLATORIACEAE						
...OSCILLATORIA	--	-	--	-	440000#	89
...SPIRULINA	--	-	--	-	*	0
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...TRACHELOMONAS	25	4	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	20	3	--	-	--	-

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

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

BRAZOS RIVER BASIN

LAKE GRANBURY NEAR GRANBURY, TX--Continued

323435097492001 LAKE GRANBURY SITE KC

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	FEB 14, 79 1611	MAY 17, 79 1659	AUG 9, 79 1754
TOTAL CELLS/ML	5800	7900	850000
DIVERSITY: DIVISION	1.9	1.5	0.1
..CLASS	1.9	1.5	0.1
...ORDER	2.2	1.7	0.2
....FAMILY	2.5	2.0	0.8
....GENUS	2.7	2.4	0.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	73	1	240	3	*	0
....DICTYOSPHAERIUM	--	--	--	--	*	0
....OOCYSTIS	290	5	1500#	19	--	--
....SELENASTRUM	--	--	*	0	--	--
....TETRAEDRON	--	--	100	1	*	0
...SCENEDESMACEAE						
....CRUCIGENIA	730	13	--	--	--	--
....SCENEDESMUS	150	2	740	9	*	0
....TETRASTRUM	--	--	130	2	--	--
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	330	6	--	--	--	--
....CHLAMYDOMONAS	110	2	200	3	*	0
....CHLOROGONIUM	--	--	--	--	*	0
...ZYGNEMATALES						
....DESMIDIACEAE						
....STAURASTRUM	--	--	--	--	*	0
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCEAE						
....CYCLOTELLA	--	--	*	0	--	--
....MELOSIRA	--	--	200	3	--	--
...PENNALES						
....ACHNANTHACEAE						
....COCCONEIS	--	--	--	--	*	0
....FRAGILARIACEAE						
....SYNEDRA	36	1	--	--	--	--
....NAVICULACEAE	--	--	*	0	--	--
....ENTOMONEIS	36	1	--	--	--	--
....NAVICULA	--	--	440	6	*	0
....NITZSCHIA	--	--				
...CHRYSOPHYCEAE						
...CHRYSONOMADALES						
...OCHROMONADACEAE						
....OCHROMONAS	36	1	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHROOMONAS	110	2	--	--	--	--
...CRYPTOMONADACEAE						
....CRYPTOMONAS	2500#	42	170	2	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....ANACYSTIS	730	13	4000#	51	6300	1
...HORMOGONALES						
....NOSTOCACEAE						
....ANABAEENOPSIS	--	--	--	--	140000#	17
...OSCILLATORIA						
....OSCILLATORIA	--	--	--	--	690000#	81
...SPIRULINA	--	--	--	--	*	0
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	--	*	0	--	--
....TRACHELOMONAS	690	12	--	--	--	--
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
....GYMNODINIACEAE						
....GYMNODINIUM	36	1	--	--	--	--
...PERIDINIALES						
....GLENODINIACEAE						
....GLENODINIUM	--	--	--	--	*	0

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

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

BRAZOS RIVER BASIN

321

08091000 BRAZOS RIVER NEAR GLEN ROSS, 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 (180 m) downstream from Georges Creek, 4.1 mi (6.6 km) upstream from Paluxy River, 6 mi (10 km) northeast of Glen Rose, and at mile 511.2 (822.5 km).

DRAINAGE AREA.--25,818 mi² (66,869 km²), of which 9,566 mi² (24,776 km²) probably is noncontributing.

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1058: 1932. WSP 1512: 1946-47, 1949. WSP 1712: 1928(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 567.82 ft (173.072 m) National Geodetic Vertical Datum of 1929. Prior to May 7, 1931, nonrecording gage at site 2.5 mi (4.0 km) downstream at same datum. May 7, 1931, to Sept. 30, 1957, water-stage recorder at site 2.4 mi (3.9 km) 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. Flow is largely regulated since September 1969 by Lake Granbury (station 08090900) 31 mi (50 km) upstream. Many diversions above station for irrigation, municipal supply, and oilfield operation. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years (water years 1924-69) prior to regulation by Lake Granbury, 1,567 ft³/s (44.38 m³/s), 1,135,000 acre-ft/yr (1.40 km³/yr); 10 years (water years 1970-79) regulated, 828 ft³/s (23.45 m³/s), 599,900 acre-ft/yr (740 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,600 ft³/s (2,760 m³/s) May 18, 1935, gage height, 23.68 ft (7.218 m), site then in use, from floodmarks; maximum gage height, 33.89 ft (10.330 m), present site, May 27, 1957; no flow at times prior to construction of Morris Sheppard Dam (1941) on the Brazos River forming Possum Kingdom Lake.

Maximum stage since at least 1876, that of May 27, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 reached a stage of 27 ft (8.2 m), and flood in May 1922 reached a stage of 29.5 ft (8.99 m), which could have equaled or exceeded flood in 1957 at present site, each at site 2.4 mi (3.9 km) downstream, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,400 ft³/s (1,570 m³/s) May 4, gage height, 27.60 ft (8.412 m); minimum, 9.8 ft³/s (0.28 m³/s) Nov. 1-5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	10	163	26	37	52	4830	909	2850	60	43	808
2	2110	10	75	25	36	54	2540	1490	3000	52	38	951
3	2100	10	80	44	35	92	493	20900	989	56	50	630
4	1960	10	170	49	35	108	326	26400	912	59	242	363
5	1660	14	88	711	42	70	441	1950	2030	91	301	809
6	990	49	53	388	48	47	790	1670	3490	150	243	967
7	499	45	40	156	50	49	998	1920	933	76	149	551
8	200	33	33	337	49	48	1020	2340	361	157	122	372
9	208	29	38	184	37	45	1010	2290	373	141	59	367
10	58	26	142	58	26	45	1160	2240	1600	63	134	720
11	35	23	66	58	32	46	844	2780	1920	43	720	565
12	27	21	44	136	32	36	980	2840	2040	46	1160	209
13	95	20	42	69	30	39	270	2650	2010	32	168	319
14	51	19	166	60	33	43	190	1800	1610	30	68	201
15	411	19	177	176	33	48	95	975	1260	40	46	141
16	333	56	58	483	32	95	75	987	1650	46	37	306
17	63	53	42	866	33	95	109	1140	1360	44	37	219
18	47	90	35	314	38	114	4030	1580	1050	54	35	76
19	32	1070	31	603	38	647	5490	1290	1380	38	31	53
20	25	895	28	1270	40	2270	5990	1240	1400	39	55	56
21	22	362	26	733	40	2030	5020	1290	1430	36	39	141
22	19	321	25	181	82	422	2990	2130	1150	33	63	73
23	16	108	26	67	273	389	2260	9680	1500	41	63	39
24	15	55	25	63	266	498	1010	11700	1590	55	50	35
25	14	44	40	59	349	444	938	5090	1600	64	92	31
26	13	39	43	45	236	449	1060	1970	1750	55	118	27
27	12	35	34	41	130	1340	803	2180	1230	38	83	24
28	12	30	28	37	67	1340	452	1690	991	35	62	30
29	11	31	25	39	---	1040	457	4840	270	42	47	56
30	11	30	23	40	---	1860	477	8350	79	44	147	144
31	11	---	24	36	---	3680	---	967	---	41	180	---
TOTAL	12210	3557	1890	7354	2179	17535	47148	129278	43808	1801	4682	9283
MEAN	394	119	61.0	237	77.8	566	1572	4170	1460	58.1	151	309
MAX	2110	1070	177	1270	349	3680	5990	26400	3490	157	1160	967
MIN	11	10	23	25	26	36	75	909	79	30	31	24
AC-FT	24220	7060	3750	14590	4320	34780	93520	256400	86890	3570	9290	18410
CAL YR 1978	TOTAL	259172.7	MEAN	710	MAX	38900	MIN	7.0	AC-FT	514100		
WTR YR 1979	TOTAL	280725.0	MEAN	769	MAX	26400	MIN	10	AC-FT	556800		

08091730 SQUAW CREEK RESERVOIR NEAR GLEN ROSE, TX

LOCATION.--Lat 32°17'28", long 97°45'49", Somervell County, Hydrologic Unit 12060202, on downstream side of outlet tower at dam, 3.9 mi (6.3 km) north of Glen Rose, and 4.3 mi (6.9 km) upstream from mouth.

DRAINAGE AREA.--64.0 mi² (166 km²).

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 (1,330 m) 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 (30 m) 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 ft (1 by 2 m) slide gates and a 6 by 6 ft (2 by 2 m) slide gate, which feed into a 6-foot (2 m) inside diameter concrete conduit that extends through the dam. 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, furnished by Texas Utilities Services Inc., was prepared by Freese and Nichols Inc., Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 153,100 acre-ft (189 hm³) June 5, 1979, elevation, 775.64 ft (236.415 m); minimum since initial filling of reservoir on May 3, 1979, 147,000 acre-ft (181 hm³) Sept. 16, 17, 1979, elevation, 773.78 ft (235.848 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 153,100 acre-ft (188 hm³) June 5, elevation, 775.64 ft (236.415 m); minimum, 98,770 acre-ft (122 hm³) Oct. 1, elevation 757.16 ft (230.782 m).

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

757.0	98,360	771.0	138,200
760.0	106,200	774.0	147,700
764.0	117,300	776.0	154,200
768.0	129,000		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98900	103200	108000	110300	113200	118900	127700	138200	151900	151000	149200	147500
2	99030	103400	108100	110300	113300	119300	127900	138600	151900	150900	149200	147500
3	99160	103600	108100	110200	113500	119500	128100	151900	151900	150800	149100	147400
4	99310	103800	108100	110200	113800	119600	128300	151900	151800	150800	149000	147300
5	99520	104300	108100	110200	114000	119800	128400	152000	153000	150700	149000	147300
6	99650	104500	108100	110200	114400	120000	128600	152000	152800	150700	148900	147300
7	99780	104600	108100	110200	114500	120100	128800	151900	152600	150600	148800	147400
8	99900	104800	108100	110100	114700	120300	129000	151900	152500	150600	148800	147400
9	100000	104900	108000	110100	114800	120500	129200	151900	152500	150500	148700	147300
10	100200	105100	107900	110200	115000	120700	129500	152000	152200	150400	148700	147300
11	100400	105000	107900	110200	115200	120900	129900	152400	152100	150300	148800	147200
12	100500	105000	108000	110200	115400	121000	130100	152300	152000	150200	148700	147200
13	100600	105100	108100	110100	115600	121200	130200	152200	151900	150100	148700	147100
14	100800	105300	108100	110100	115800	121400	130400	152100	151800	150000	148600	147100
15	100900	105700	108200	110100	116000	121900	130600	152000	151700	149900	148500	147000
16	101100	106000	108300	110100	116200	122200	130700	151900	151600	149900	148500	147000
17	101100	106100	108400	110100	116500	122400	130700	151900	151500	150100	148400	147000
18	101100	106300	108500	110400	116600	122800	133300	151800	151400	150000	148400	147100
19	101100	106500	108700	110800	116800	124100	133500	151800	151300	149900	148300	147300
20	101100	106700	108800	111100	117000	124500	133900	151700	151300	149900	148200	147400
21	101370	106800	109000	111300	117100	124600	134200	151800	151300	149900	148200	147400
22	101500	107000	109200	111500	117400	125300	134400	151800	151200	149800	148100	147500
23	101600	107200	109400	111600	117600	125400	134600	151700	151200	149800	148100	147500
24	101800	107300	109600	111700	118000	125600	134800	151600	151100	149700	148000	147600
25	102100	107500	109800	112000	118100	125800	135100	151500	151300	149700	148000	147600
26	102200	107700	110000	112200	118300	126000	135200	151500	151300	149600	147900	147700
27	102400	107700	110100	112400	118600	126200	135400	151400	151300	149500	147900	147700
28	102500	107800	110300	112500	118700	126400	135500	151400	151200	149400	147800	147800
29	102700	107900	110300	112700	---	126700	136000	151900	151200	149300	147700	147800
30	102800	107900	110300	112900	---	127200	136200	151900	151100	149300	147700	147800
31	103000	---	110400	113000	---	127500	---	151900	---	149200	147600	---
MAX	103000	107900	110400	113000	118700	127500	136200	152400	153000	151000	149200	147800
MIN	98900	103200	107900	110100	113200	118900	127700	138200	151100	149200	147600	147000
(†)	758.80	760.63	761.54	762.46	764.51	767.52	770.36	775.28	775.04	774.47	773.97	774.04
(‡)	+4230	+4900	+2500	+2600	+5700	+8800	+8700	+15700	-800	-1900	-1600	+200

CAL YR 1978 MAX 110400 MIN 62590 † +47790
WTR YR 1979 MAX 153000 MIN 98900 ‡ +49030

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

BRAZOS RIVER BASIN

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 bridge on State Highway 144, 2.1 mi (3.4 km) upstream from mouth, 2.5 mi (4.0 km) downstream from Squaw Creek Dam, and 2.8 mi (4.5 km) northeast of Glen Rose.

DRAINAGE AREA.--70.3 mi² (182.1 km²).

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 (182.575 m) National Geodetic Vertical Datum of 1929.

REMARKS.--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 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.--6 years, 7.83 ft³/s (0.222 m³/s), 5,670 acre-ft/yr (6.99 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,030 ft³/s (256 m³/s) Apr. 8, 1975, gage height, 11.90 ft (3.627 m), from rating curve extended above 1,000 ft³/s (283 m³/s) on basis of velocity-area study; minimum, 0.02 ft³/s (0.001 m³/s) Aug. 28, 29, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1934, about 20.5 ft (6.25 m) in May 1957, from information by State Department of Highways and Public Transportation (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,290 ft³/s (121 m³/s) May 3, gage height, 9.10 ft (2.774 m); minimum, 0.79 ft³/s (0.022 m³/s) Aug. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.3	2.3	7.5	3.8	4.0	5.0	45	31	7.8	2.9	5.7
2	2.1	2.3	2.3	6.7	3.7	4.3	4.6	6.1	36	7.2	2.9	6.1
3	2.1	2.3	2.3	5.9	3.7	5.6	4.6	781	33	6.2	3.0	6.1
4	2.1	2.1	1.9	5.7	3.4	4.3	4.3	66	28	5.6	2.9	6.1
5	2.2	2.5	1.9	4.5	3.5	4.3	4.3	46	117	5.6	2.8	6.1
6	2.3	4.4	1.9	4.0	4.3	4.3	4.3	43	116	5.2	3.8	6.1
7	2.3	2.7	1.9	4.6	3.5	4.3	4.3	38	98	4.8	7.0	6.4
8	2.2	2.5	1.8	5.0	3.4	4.3	4.0	34	84	4.5	7.7	5.2
9	2.1	2.5	1.3	5.7	3.4	4.3	4.1	32	74	3.8	4.9	4.8
10	2.1	2.4	1.2	5.8	3.4	4.3	4.0	32	68	3.4	5.0	4.5
11	2.1	1.9	1.1	6.6	3.4	4.0	4.3	72	51	3.4	5.3	4.6
12	2.1	1.7	1.1	5.8	3.4	4.0	2.5	71	42	3.4	5.2	4.5
13	2.1	1.7	1.1	5.3	3.4	4.0	2.5	59	35	3.7	5.2	4.3
14	2.1	2.0	1.4	5.2	3.4	4.0	2.7	49	29	3.6	4.9	4.0
15	2.1	2.7	2.1	4.9	3.7	4.7	2.8	42	23	3.4	3.9	3.7
16	2.1	5.8	3.2	6.9	3.7	7.9	2.7	35	20	3.4	3.7	3.7
17	2.1	2.3	4.0	4.9	4.3	5.4	25	30	18	4.8	3.7	3.7
18	1.6	2.1	4.9	16	4.0	9.9	14	26	14	4.6	5.6	3.7
19	1.4	2.6	7.4	10	4.0	34	4.1	23	8.7	2.8	5.3	4.6
20	2.2	2.3	6.8	5.0	4.0	12	3.5	21	7.9	2.7	5.3	4.2
21	2.2	2.3	6.5	4.9	4.0	5.6	3.2	19	7.8	2.5	6.0	3.8
22	2.1	2.3	6.5	4.9	3.8	5.7	2.9	21	7.8	2.3	5.7	3.4
23	2.1	2.3	6.8	5.0	3.7	4.6	3.0	23	8.4	2.5	5.9	3.3
24	2.1	2.3	7.0	4.8	5.1	4.6	2.9	19	9.4	2.7	5.7	3.2
25	2.3	2.3	7.0	4.8	4.0	4.5	2.9	13	11	2.6	6.1	3.2
26	2.5	2.3	7.0	4.9	4.0	1.9	2.7	9.2	10	2.6	6.1	3.2
27	2.5	2.3	7.3	4.9	4.0	1.9	2.7	7.2	9.5	2.9	6.0	3.4
28	2.5	2.3	7.0	4.9	4.0	1.9	2.7	6.6	9.7	3.2	5.7	3.5
29	2.5	2.3	7.0	4.9	---	2.0	4.3	27	9.8	3.2	6.0	3.4
30	2.4	2.3	7.0	4.9	---	30	2.9	35	8.8	3.2	6.0	3.2
31	2.3	---	8.7	4.6	---	7.8	---	33	---	2.9	5.7	---
TOTAL	67.0	74.1	129.7	179.5	106.0	204.4	137.8	1764.1	1025.8	120.5	155.9	131.7
MEAN	2.16	2.47	4.18	5.79	3.79	6.59	4.59	56.9	34.2	3.89	5.03	4.39
MAX	2.5	5.8	8.7	16	5.1	34	25	781	117	7.8	7.7	6.4
MIN	1.4	1.7	1.1	4.0	3.4	1.9	2.5	6.1	7.8	2.3	2.8	3.2
AC-FT	133	147	257	356	210	405	273	3500	2030	239	309	261
CAL YR 1978	TOTAL	800.46	MEAN	2.19	MAX	14	MIN	.89	AC-FT	1590		
WTR YR 1979	TOTAL	4096.50	MEAN	11.2	MAX	781	MIN	1.1	AC-FT	8130		

08091900 LAKE PAT CLEBURNE NEAR CLEBURNE, TX

LOCATION.--Lat 32°17'20", long 97°24'54", Johnson County, Hydrologic Unit 12030109, at side of walkway from dam to outlet structure, near left end of Cleburne Dam on Nolan River, 2.2 mi (3.5 km) upstream from Buffalo Creek, 4.3 mi (6.9 km) south of Cleburne, and 21.4 mi (34.4 km) upstream from mouth.

DRAINAGE AREA.--100 mi² (259 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Homer Hunter Associates, Consulting Engineers bench mark).

REMARKS.--The lake is formed by a rock-faced earthfill dam 5,050 ft (1,540 m) long, including a 150-foot-wide (46 m) uncontrolled concrete service spillway at left end of dam. An emergency spillway, 500 ft (150 m) wide, is cut in natural ground on the right bank about 400 ft (120 m) from right end of dam. Storage began Aug. 4, 1964. Lake is the property of city of Cleburne and was built to impound water for municipal use. Capacity table based on survey of 1958 from Geological Survey topographic maps. Records furnished by city of Cleburne indicate that 2,950 acre-ft (3.64 hm³) of sewage effluent was returned to a tributary of Nolan River which enters below this 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.....	753.0	-
Top of design flood pool.....	752.3	66,700
Crest of spillway.....	744.0	45,430
Crest of spillway (top of conservation pool).....	733.5	25,560
Lowest gated outlet (invert).....	690.0	115

COOPERATION.--Records of diversions furnished by the city of Cleburne. Capacity table furnished by Homer Hunter Associates, Consulting Engineers for the city of Cleburne.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,850 acre-ft (49.1 hm³) May 3, 1979, elevation, 741.41 ft (225.982 m); minimum, 13,870 acre-ft (17.1 hm³) Jan. 16-17, 1979, elevation, 724.23 ft (220.745 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 39,850 acre-ft (49.1 hm³) May 3, elevation, 741.41 ft (225.982 m); minimum, 13,870 acre-ft (17.1 hm³) Jan. 16-17, elevation, 724.23 ft (220.745 m).

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

724.0	13,640	736.0	29,630
728.0	18,030	740.0	37,000
732.0	23,320	742.0	41,080

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15240	14470	14420	13990	14380	14580	23960	26980	27270	25560	24540	23950
2	15220	14450	14430	13950	14380	14710	24010	26800	27030	25500	24540	23900
3	15190	14420	14390	13940	14360	14760	24090	38150	26740	25450	24600	23950
4	15140	14410	14360	13940	14370	14760	24120	30350	26560	25420	24580	23920
5	15150	14460	14350	13940	14410	14760	24170	28180	29170	25390	24570	23890
6	15120	14440	14320	13940	14450	14770	24200	27300	27810	25360	24550	23860
7	15080	14410	14320	13920	14440	14770	24230	26820	27140	25360	24510	23830
8	15040	14390	14270	13900	14440	14760	24290	26580	26880	25330	24450	23800
9	15010	14350	14230	13890	14410	14770	24300	26440	26640	25270	24460	23760
10	14980	14350	14210	13930	14400	14750	24350	26390	26390	25230	24430	23680
11	14970	14320	14200	13930	14400	14730	24430	26930	26200	25170	24450	23650
12	14940	14290	14190	13920	14400	14720	24480	26720	26120	25110	24430	23610
13	14910	14290	14180	13910	14400	14720	24480	26530	26070	25070	24420	23570
14	14870	14360	14160	13890	14400	14700	24480	26390	26030	25020	24380	23490
15	14840	14410	14150	13890	14450	14830	24490	26290	25980	24990	24360	23430
16	14810	14500	14140	13870	14400	15080	24490	26220	25950	24950	24350	23390
17	14770	14490	14120	13870	14420	15180	25020	26150	25900	24920	24330	23350
18	14750	14480	14110	14410	14400	15410	25950	26110	25870	24950	24300	23300
19	14730	14510	14110	14490	14400	18860	26180	26090	25850	24900	24260	23380
20	14710	14510	14110	14500	14400	20000	26340	26040	25850	24990	24200	23390
21	14660	14500	14090	14460	14400	20210	26310	26040	25820	24950	24170	23380
22	14660	14500	14080	14450	14430	20560	26260	26110	25810	24900	24110	23350
23	14620	14500	14070	14450	14430	20570	26220	26070	25780	24870	24140	23320
24	14600	14490	14040	14430	14530	20600	26170	26030	25760	24840	24090	23290
25	14640	14490	14020	14440	14500	20620	26170	25980	25730	24730	24200	23260
26	14580	14500	14010	14450	14500	20700	26070	25950	25730	24700	24170	23230
27	14560	14490	13990	14430	14580	20750	26040	25930	25710	24660	24140	23200
28	14540	14460	13980	14400	14590	20810	26010	25930	25680	24630	24110	23160
29	14520	14450	13990	14410	---	20910	26060	26830	25670	24580	24060	23150
30	14500	14440	13980	14400	---	23640	26060	27920	25620	24540	24020	23120
31	14490	---	14010	14390	---	23830	---	27210	---	24520	23990	---
MAX	15240	14510	14430	14500	14590	23830	26340	38150	29170	25560	24600	23950
MIN	14490	14290	13980	13870	14360	14580	23960	25930	25620	24520	23990	23120
(†)	724.84	724.79	724.37	724.74	724.94	732.35	733.82	734.54	733.54	732.82	732.46	731.86
(+)	-780	-50	-430	+380	+200	+9240	+2230	+1150	-1590	-1100	-530	-870
(††)	311	258	243	240	211	230	223	218	248	338	293	291

CAL YR 1978 MAX 20040 MIN 13980 + -5970 †† 3450
WTR YR 1979 MAX 38150 MIN 13870 + -7850 †† 3100

† Elevation, in feet, at end of month.

+ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by city of Cleburne.

BRAZOS RIVER BASIN

08091900 LAKE PAT CLEBURNE NEAR CLEBURNE, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAR 06...	1545	296	12.5	110	0	37	4.1	12	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITUENTS, DIS- SOLVED (MG/L)
MAR 06...	3.3	140	0	18	9.2	.3	4.2	157

08092000 NOLAN RIVER AT BLUM, TX

LOCATION.--Lat 32°09'02", long 97°24'09", revised, Hill County, Hydrologic Unit 12060202, on right bank 60 ft (18 m) upstream from bridge on Farm Road 933, 0.6 mi (1.0 km) northwest of Blum, 2.8 mi (4.5 km) downstream from Mustang Creek, 3.0 mi (4.8 km) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.2 mi (5.1 km) upstream from Rock Creek, and 8.5 mi (13.7 km) upstream from mouth.

DRAINAGE AREA.--282 mi² (730 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to September 1925, November 1947 to current year.

REVISED RECORDS.--WSP 1312: 1925(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 551.48 ft (168.091 m) National Geodetic Vertical Datum of 1929. July 29, 1924, to Sept. 30, 1925, and Nov. 14, 1947, to May 28, 1949, nonrecording gage at railway bridge (now abandoned) 0.5 mi (0.8 km) upstream at datum 5.00 ft (1.524 m) higher. May 29 to July 7, 1949, nonrecording gage at present site and datum then in use, 5.00 ft (1.524 m) higher than present datum.

REMARKS.--Water-discharge records good. Since August 1964, flow from 100 mi² (259 km²) affected by storage in Lake Pat Cleburne (station 08091900) located 13 mi (21 km) upstream. Records furnished by the city of Cleburne show that during the current year 3,100 acre-ft (3.82 hm³) was diverted from Lake Pat Cleburne and 2,950 acre-ft (3.64 hm³) of sewage effluent was returned to a tributary upstream from the gage.

AVERAGE DISCHARGE.--17 years (water years 1925, 1949-64) prior to regulation by Lake Pat Cleburne, 66.1 ft³/s (1.872 m³/s), 47,890 acre-ft/yr (59.0 hm³/yr); 15 years (water years 1965-79) regulated, 102 ft³/s (2.889 m³/s), 73,900 acre-ft/yr (91.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,200 ft³/s (1,760 m³/s) May 7, 1969, gage height, 31.23 ft (9.519 m), from rating curve extended above 22,200 ft³/s (629 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, 35.0 ft (10.67 m) May 8, 1922, present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 19	0315	5,020 142	8.93 2.722	Mar. 30	0800	11,400 323	13.88 4.231
Mar. 20	0145	13,600 385	15.35 4.679	May 3	2345	*41,800 1,180	27.79 8.470
				May 29	1415	5,540 157	9.41 2.868

Minimum discharge, 0.65 ft³/s (0.018 m³/s) Oct. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.7	2.9	9.2	12	28	116	279	317	14	6.9	2.5
2	2.1	1.7	2.4	7.4	12	22	78	316	439	13	9.0	2.5
3	2.2	2.0	2.7	4.3	12	176	65	8350	245	12	48	3.1
4	1.6	1.6	2.7	4.1	11	54	60	12900	156	12	36	3.9
5	1.4	1.4	2.7	4.5	13	29	52	1710	1980	12	14	4.0
6	2.1	3.2	3.1	4.9	26	23	47	696	1240	10	9.6	3.9
7	3.0	7.2	3.0	4.6	26	22	42	341	460	11	7.2	3.4
8	3.5	4.7	2.9	4.3	19	20	44	211	244	13	6.4	2.3
9	2.6	3.2	2.8	4.1	16	18	39	157	187	12	6.2	4.2
10	2.3	2.8	3.1	4.2	16	17	37	138	129	11	5.5	2.8
11	2.3	2.3	3.4	10	15	16	37	935	82	11	11	2.5
12	2.4	2.1	3.5	7.4	15	16	35	721	60	10	14	2.6
13	2.3	2.3	3.3	5.0	14	16	31	211	47	8.0	7.2	2.2
14	1.8	3.0	3.0	4.5	14	15	30	145	41	8.5	5.6	2.3
15	1.1	7.6	2.8	3.7	14	17	30	123	35	8.3	4.7	1.8
16	1.0	47	3.2	3.5	13	277	28	109	31	7.8	5.1	2.0
17	1.7	24	3.3	3.7	14	152	35	98	28	8.2	4.4	1.9
18	1.5	6.5	3.4	5.0	14	71	520	91	25	8.6	4.9	1.9
19	1.5	5.4	3.7	1270	20	1710	101	81	23	17	4.9	2.9
20	1.5	14	3.4	48	18	3860	87	75	22	12	4.1	4.4
21	1.3	6.4	3.1	22	19	164	88	75	21	31	3.8	8.1
22	2.2	4.6	3.2	16	18	131	77	96	20	17	4.0	6.1
23	2.2	3.8	3.5	15	17	82	66	94	20	11	3.7	3.3
24	2.0	3.3	3.4	13	82	58	57	79	19	9.8	7.5	2.1
25	2.2	3.2	3.2	13	62	51	50	68	17	8.8	15	2.0
26	2.6	3.9	3.5	13	27	51	47	59	21	7.2	15	2.0
27	2.4	5.2	3.5	15	21	66	37	52	23	8.0	4.8	2.1
28	2.7	4.6	3.6	14	45	47	34	50	19	7.5	3.5	1.7
29	2.9	3.4	3.7	13	---	47	45	2240	18	7.5	2.7	2.3
30	2.4	3.0	3.7	12	---	3810	40	2800	16	6.8	2.7	1.6
31	2.1	---	5.7	12	---	291	---	610	---	5.9	2.7	---
TOTAL	64.3	185.1	101.4	1570.4	605	11357	2055	33910	5985	339.9	280.1	88.4
MEAN	2.07	6.17	3.27	50.7	21.6	366	68.5	1094	200	11.0	9.04	2.95
MAX	3.5	47	5.7	1270	82	3860	520	12900	1980	31	48	8.1
MIN	1.0	1.4	2.4	3.5	11	15	28	50	16	5.9	2.7	1.6
AC-FT	128	367	201	3110	1200	22530	4080	67260	11870	674	556	175
CAL YR 1978	TOTAL	2461.56	MEAN	6.74	MAX	319	MIN	.26	AC-FT	4880		
WTR YR 1979	TOTAL	56541.60	MEAN	155	MAX	12900	MIN	1.0	AC-FT	112200		

BRAZOS RIVER BASIN

08092000 NOLAN RIVER AT BLUM, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV 29...	1130	3.3	478	8.1	12.0	11.3	110	1.2	120	0
FEB 15...	0955	14	527	8.4	15.5	11.6	121	2.4	160	0
MAR 14...	1026	15	602	9.0	15.5	14.4	147	2.4	200	20
MAY 16...	0840	190	418	7.7	19.5	8.5	92	1.4	170	13
JUL 16...	1610	8.2	620	8.6	32.5	>20.0	>276	1.6	200	0
SEP 18...	1357	1.9	600	8.7	23.0	15.3	180	1.5	130	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 29...	41	4.4	48	1.9	7.0	160	0	47	32	.3
FEB 15...	55	4.7	50	1.7	4.6	190	2	62	35	.4
MAR 14...	71	5.8	48	1.5	4.4	180	20	70	40	.4
MAY 16...	60	4.6	19	.6	3.2	190	0	30	15	.5
JUL 16...	69	6.7	64	2.0	3.9	220	12	59	41	.5
SEP 18...	46	4.0	65	2.5	5.7	170	12	58	46	.5

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, 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, KJEL- DAHL, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 29...	5.9	264	.46	.01	.47	.01	.48	.49	2.10
FEB 15...	.8	308	.45	.10	.55	.01	.88	.89	1.20
MAR 14...	.1	348	.89	.08	.97	.03	.42	.45	.370
MAY 16...	7.6	234	1.1	.06	1.2	.01	.44	.45	.190
JUL 16...	10	375	.05	.02	.07	.00	--	--	--
SEP 18...	5.8	327	.01	.02	.03	.03	.68	.71	1.40

08092500 WHITNEY LAKE 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 (3.9 km) upstream from Coon Creek, 3.5 mi (5.6 km) upstream from Iron Creek, 7.4 mi (11.9 km) southwest of Whitney, and at mile 442.4 (712.0 km).

DRAINAGE AREA.--27,189 mi² (70,420 km²), approximately, of which 9,566 mi² (24,776 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1951 to current year. Prior to October 1970, published as Whitney 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 Corps of Engineers).

REMARKS.--The lake is formed by a concrete-gravity and rolled earthfill dam 17,695 ft (5,393 m) long, including spillway. The dam was completed in April 1951 and deliberate impoundment began Dec. 10, 1951. The concrete spillway is 680 ft (210 m) long and includes 17 tainter gates 38.0 by 40.0 ft (11.6 by 12.2 m) each. The outlet works are comprised of 16 gate-operated conduits that are 5.0 by 9.0 ft (1.5 by 2.7 m) each. The space between elevations 522.0 and 571.0 ft (159.11 and 174.04 m) is reserved for flood-control storage. At a maximum design elevation of 573.0 ft (174.65 m), the spillway is designed to discharge 684,000 ft³/s (19,400 m³/s). The 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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,980,000 acre-ft (2.44 km³) May 29, 1957, elevation, 570.25 ft (173.812 m); minimum daily since power pool elevation first reached in April 1954, 250,200 acre-ft (308 hm³) Nov. 1, 1956, elevation, 509.52 ft (155.302 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 770,200 acre-ft (950 hm³) May 5, elevation, 538.65 ft (164.181 m); minimum, 452,800 acre-ft (558 hm³) Mar. 2, elevation, 524.52 ft (159.874 m).

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

520.0	379,100	535.0	675,500
525.0	461,000	540.0	807,300
530.0	559,200		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	595700	587100	572200	529300	493900	453800	538200	613400	659800	627800	585300	537400
2	598200	586000	572900	521700	492600	454300	544200	618500	659800	626900	586900	537400
3	600900	584900	573100	521500	492000	455900	547000	676000	654700	624500	586700	538900
4	601800	584900	572000	522100	490900	456200	547000	768300	648600	621100	585800	538400
5	605700	586700	571600	523100	491700	455900	547400	750100	647900	620800	585300	537400
6	608100	586500	572700	525000	492400	456200	548700	727700	649100	620800	584200	536700
7	609200	585100	572400	524300	489000	456400	551500	704600	644800	620100	582400	537600
8	609200	583500	570700	522100	489000	455900	554500	682800	639500	619000	581000	536500
9	608300	581700	567400	520200	484900	455900	556400	661300	637400	617300	579300	536700
10	607400	581500	567200	521700	484500	456700	556000	651700	635500	616400	578600	536700
11	605700	581300	567200	519600	484500	456500	560100	653400	634300	615000	579500	537800
12	604100	579700	565600	517300	482700	456500	561400	652700	634300	613600	582200	538600
13	604300	579500	564300	515900	480100	457400	563000	649800	633800	612000	581300	538400
14	603400	581000	561200	508100	474700	457000	563200	645700	633100	611100	579700	538600
15	603000	576400	560100	505700	474700	458200	564100	640200	630900	610400	577900	538600
16	603200	569400	559400	505900	469500	460400	564100	633500	631900	609000	576000	538200
17	602100	567200	556900	505700	467400	461300	564700	631900	633100	610100	574200	537200
18	601400	567200	554900	505300	464900	462000	569800	630400	633800	610100	571600	536100
19	599800	569600	553600	510200	461000	469900	581900	633300	631200	609700	569400	536700
20	598200	572400	552100	512200	459600	486200	588000	636200	629500	612700	566700	535500
21	597300	573300	549400	512400	457700	492000	600900	637600	628000	612900	563800	532400
22	596400	573800	547400	510800	456900	499400	607400	636400	625900	612900	563200	529300
23	595500	574400	547000	510000	456200	498600	611100	638600	626900	609000	561400	526200
24	594400	574600	543600	508500	457700	498000	609900	649800	628300	605500	557500	524100
25	594800	574600	542100	507700	456400	497400	609200	652200	630200	601600	555800	521900
26	594400	577300	539700	506100	455700	497300	609200	646900	637400	595500	553000	519200
27	593700	573800	537000	504100	454800	499000	611300	642100	637800	594600	550000	516900
28	592800	572400	534700	501600	454500	500400	611300	640500	638100	590100	547400	514800
29	591700	572900	533200	499200	---	501000	613200	649100	632100	586000	544400	513000
30	590500	572900	532200	497400	---	522100	612700	663500	629200	583700	542100	510800
31	588300	---	532600	496100	---	528500	---	659800	---	582400	538400	---
MAX	609200	587100	573100	529300	493900	528500	613200	768300	659800	627800	586900	538900
MIN	588300	567200	532200	496100	454500	453800	538200	613400	625900	582400	538400	510800
(†)	531.31	530.62	528.75	526.93	524.62	528.55	532.38	534.36	533.09	531.05	529.03	527.68
(+)	-5800	-15400	-40300	-36500	-41600	+74000	+84200	+47100	-30600	-46800	-44000	-27600

CAL YR 1978 MAX 638700 MIN 383100 † +114500
WTR YR 1979 MAX 768300 MIN 453800 † -86000

† Elevation, in feet, at end of month.

+ Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08092500 WHITNEY LAKE NEAR WHITNEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: November 1961 to current year.

315203097222601 WHITNEY LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
22...	1004	1.0	2650	8.4	7.5	2.70	11.5	101	460	350
22...	1006	10	2650	8.4	7.0	--	11.4	99	--	--
22...	1008	20	2650	8.4	7.0	--	11.4	99	--	--
22...	1010	30	2650	8.4	7.0	--	11.4	99	--	--
22...	1012	40	2650	8.4	6.5	--	11.4	97	--	--
22...	1014	50	2650	8.3	6.5	--	11.4	97	--	--
22...	1016	60	2650	8.3	6.5	--	11.4	97	--	--
22...	1018	70	2650	8.3	6.5	--	11.4	97	--	--
22...	1020	80	2650	8.3	6.0	--	11.3	96	--	--
22...	1022	92	2650	8.3	6.0	--	11.2	95	460	340
JUN										
11...	1515	1.0	1460	8.3	25.5	1.60	7.9	96	300	190
11...	1517	10	1460	8.3	25.0	--	8.0	98	--	--
11...	1519	20	1460	8.3	25.0	--	7.9	96	--	--
11...	1521	30	1460	8.2	24.5	--	7.2	87	--	--
11...	1523	40	1460	8.2	24.5	--	7.1	86	--	--
11...	1525	50	1460	8.2	24.0	--	7.1	85	--	--
11...	1527	60	1830	7.6	21.5	--	2.8	32	--	--
11...	1529	70	1970	7.5	21.0	--	1.6	18	--	--
11...	1531	80	2090	7.4	20.5	--	1.2	13	--	--
11...	1532	90	2140	7.4	20.0	--	.2	2	--	--
11...	1535	101	2340	7.5	18.0	--	.2	2	390	250
AUG										
10...	1015	1.0	1250	7.9	29.0	2.70	6.3	83	250	140
10...	1017	10	1250	7.9	28.5	--	6.1	79	--	--
10...	1019	20	1250	7.7	28.5	--	5.1	66	--	--
10...	1021	30	1250	7.7	28.5	--	4.8	62	--	--
10...	1023	40	1330	7.2	27.5	--	.1	1	--	--
10...	1025	50	1460	7.2	24.5	--	.1	1	--	--
10...	1027	60	1540	7.2	23.5	--	.1	1	--	--
10...	1029	70	1660	7.2	22.5	--	.1	1	--	--
10...	1031	80	1770	7.3	21.5	--	.1	1	--	--
10...	1033	90	2180	7.3	20.5	--	.1	1	390	240
10...	1035	96	2180	7.3	20.0	--	.1	1	--	--

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB										
22...	130	33	380	7.7	9.4	140	0	300	630	.3
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	130	32	390	7.9	9.4	140	0	300	630	--
JUN										
11...	90	19	180	4.5	5.5	140	0	160	300	.3
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	110	28	330	7.3	7.3	170	0	260	500	--
AUG										
10...	71	17	160	4.4	4.8	130	0	150	250	.3
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	110	28	300	6.6	6.6	180	0	240	470	--

BRAZOS RIVER BASIN

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WHITNEY LAKE NEAR WHITNEY, TX--Continued

315203097222601 WHITNEY LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
22...	5.6	1560	.06	.02	--	.010	--	20	20
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	.06	.02	--	.010	--	10	10
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	5.3	1570	.08	.02	--	.010	--	20	20
JUN									
11...	5.0	829	.20	.04	.03	.010	.03	<0	<1
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	.38	.03	.06	.020	.06	10	40
11...	--	--	--	--	--	--	--	--	--
11...	--	--	.21	.04	.06	.020	.06	10	10
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	7.2	1330	.08	.45	.09	.030	.09	20	1800
AUG									
10...	4.4	722	.00	.02	--	.010	.03	0	10
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.00	.01	--	.020	.06	0	20
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.00	.04	--	.010	.03	0	50
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	9.1	1250	.00	.72	--	.190	.58	200	1900

315214097222001 WHITNEY LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	0947	1.0	2650	8.3	7.5	11.6	102
22...	0949	10	2650	8.3	7.0	11.5	100
22...	0951	20	2650	8.3	7.0	11.4	99
22...	0953	30	2650	8.3	7.0	11.3	98
22...	0956	40	2650	8.3	7.0	11.1	97
JUN							
11...	1500	1.0	1460	8.2	25.0	7.7	94
11...	1502	10	1460	8.2	25.0	7.7	94
11...	1504	20	1460	8.2	24.5	7.5	90
11...	1506	30	1460	8.1	24.5	7.3	88
11...	1508	40	1460	8.1	24.5	7.2	86
11...	1510	46	1460	8.0	24.5	6.9	83
AUG							
10...	1105	1.0	1250	7.9	29.0	6.4	84
10...	1107	10	1250	7.9	28.5	6.1	79
10...	1109	20	1250	7.8	28.5	5.4	70
10...	1111	30	1250	7.7	28.5	5.1	66
10...	1113	41	1280	7.3	28.0	1.6	21

BRAZOS RIVER BASIN

WHITNEY LAKE NEAR WHITNEY, TX--Continued

315308097222801 WHITNEY LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1028	1.0	2650	8.4	7.0	11.4	99
22...	1030	10	2650	8.4	7.0	11.4	99
22...	1032	20	2650	8.4	7.0	11.4	99
22...	1034	30	2650	8.4	6.5	11.5	98
22...	1035	40	2650	8.4	6.5	11.5	98
22...	1037	50	2650	8.4	6.5	11.5	98
22...	1039	60	2650	8.4	6.5	11.4	97
22...	1041	70	2650	8.4	6.5	11.4	97
22...	1043	80	2650	8.4	6.5	11.3	97
22...	1045	88	2650	8.3	6.0	11.1	94
JUN							
11...	1615	1.0	1460	8.4	25.0	8.1	99
11...	1617	10	1460	8.3	25.0	7.9	96
11...	1619	20	1460	8.2	24.0	7.3	87
11...	1621	30	1460	8.2	24.0	7.0	83
11...	1623	40	1460	8.2	24.0	7.2	86
11...	1625	50	1610	7.9	23.0	5.2	61
11...	1627	60	1790	7.6	21.5	2.8	31
11...	1629	70	2010	7.4	20.5	1.0	11
11...	1631	80	2080	7.4	20.0	.3	3
11...	1633	90	2160	7.4	19.0	.2	2
11...	1635	97	2280	7.6	18.0	.6	6
AUG							
10...	1130	1.0	1250	8.1	29.5	7.2	95
10...	1132	10	1250	8.1	29.0	7.1	93
10...	1134	20	1250	8.1	29.0	6.8	89
10...	1136	30	1250	7.7	28.5	4.9	64
10...	1138	40	1280	7.2	27.5	.1	1
10...	1140	50	1370	7.2	25.0	.1	1
10...	1142	60	1470	7.2	23.5	.1	1
10...	1144	70	1570	7.2	22.5	.1	1
10...	1146	80	1730	7.3	21.5	.1	1
10...	1148	94	1810	7.2	20.5	.1	1

315432097234601 WHITNEY LAKE SITE CC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1055	1.0	2650	8.4	7.5	11.6	102
22...	1056	10	2650	8.4	7.5	11.6	102
22...	1058	20	2650	8.4	7.5	11.5	101
22...	1059	30	2650	8.4	7.0	11.4	99
22...	1100	40	2650	8.4	7.0	11.4	99
22...	1102	50	2650	8.4	6.5	11.5	98
22...	1103	60	2650	8.4	6.5	11.3	97
22...	1105	70	2650	8.4	6.5	11.3	97
22...	1107	81	2650	8.3	6.5	11.2	96
JUN							
11...	1645	1.0	1360	8.4	25.0	8.0	98
11...	1647	10	1360	8.3	25.0	7.9	96
11...	1649	20	1360	8.2	24.5	7.1	86
11...	1651	30	1390	8.2	24.0	7.0	83
11...	1653	40	1440	8.1	24.0	6.5	77
11...	1655	50	1670	7.7	22.0	3.8	44
11...	1657	60	1780	7.6	21.5	2.9	36
11...	1659	70	1930	7.4	20.5	1.2	13
11...	1701	80	1990	7.4	20.0	.6	7
11...	1703	91	2070	7.4	20.0	.2	2
AUG							
10...	1240	1.0	1250	8.1	30.5	6.8	91
10...	1242	10	1250	8.1	29.5	6.9	91
10...	1244	20	1250	7.8	29.0	5.4	71
10...	1246	30	1250	7.5	29.0	3.5	46
10...	1248	40	1290	7.3	28.0	2.0	26
10...	1250	50	1380	7.2	25.5	1.0	12
10...	1252	60	1390	7.2	24.0	1.0	12
10...	1254	70	1520	7.2	23.5	1.0	12
10...	1256	80	1710	7.2	22.5	1.0	12
10...	1258	88	1710	7.2	21.5	1.0	11

BRAZOS RIVER BASIN

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WHITNEY LAKE NEAR WHITNEY, TX--Continued

315722097240201 WHITNEY LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
22...	1142	1.0	2650	8.4	8.0	1.60	11.6	103	460	340
22...	1145	10	2650	8.4	8.0	--	11.6	103	--	--
22...	1148	20	2650	8.4	7.5	--	11.6	102	--	--
22...	1150	30	2650	8.4	7.5	--	11.4	100	--	--
22...	1152	40	2650	8.4	7.0	--	11.3	98	--	--
22...	1154	50	2650	8.4	7.0	--	11.2	97	--	--
22...	1157	60	2650	8.4	7.0	--	11.2	97	--	--
22...	1200	70	2650	8.4	7.0	--	10.9	95	460	340
JUN										
11...	1800	1.0	1100	8.3	25.5	1.00	7.8	95	230	110
11...	1802	10	1120	8.3	25.5	--	7.7	94	--	--
11...	1804	20	1270	8.2	24.5	--	6.9	83	--	--
11...	1806	30	1330	8.1	24.5	--	6.4	77	--	--
11...	1808	40	1610	7.6	22.5	--	3.5	41	--	--
11...	1810	50	1710	7.5	21.5	--	2.3	26	--	--
11...	1812	60	1860	7.4	20.5	--	.9	10	--	--
11...	1814	70	1950	7.3	20.5	--	.4	4	--	--
11...	1816	80	1960	7.3	20.5	--	.2	2	340	220
AUG										
10...	1415	1.0	1230	8.3	30.0	1.50	8.1	108	220	120
10...	1417	10	1230	8.2	29.5	--	7.7	102	--	--
10...	1419	20	1230	8.0	29.5	--	6.9	91	--	--
10...	1421	30	1230	7.3	28.5	--	2.4	31	--	--
10...	1423	40	1260	7.3	28.0	--	1.4	18	--	--
10...	1425	50	1360	7.2	25.0	--	1.0	12	--	--
10...	1427	60	1480	7.2	23.5	--	1.0	12	--	--
10...	1429	70	1570	7.2	22.5	--	1.1	13	--	--
10...	1431	76	1710	7.2	22.5	--	1.2	14	320	170

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
22...	130	32	380	7.7	9.3	140	0	300	630
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	130	33	380	7.7	9.3	150	0	300	630
JUN									
11...	72	13	130	3.7	4.8	150	0	120	210
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	100	23	280	6.6	6.5	150	0	220	420
AUG									
10...	65	15	140	4.1	4.7	130	0	130	240
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	92	23	220	5.3	5.7	190	0	180	350

BRAZOS RIVER BASIN
WHITNEY LAKE NEAR WHITNEY, TX--Continued

315722097240201 WHITNEY LAKE SITE DC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
22...	5.1	1560	.05	.01	--	.010	--	10	20
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	.04	.01	--	.020	--	10	0
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	4.8	1560	.02	.01	--	.010	--	20	20
JUN									
11...	5.5	629	.22	.04	.06	.020	.06	<0	<1
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	.23	.05	.06	.020	.06	10	0
11...	--	--	--	--	--	--	--	--	--
11...	--	--	.34	.04	.00	.000	.00	10	30
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	6.6	1130	.40	.06	.09	.030	.09	0	480
AUG									
10...	4.4	663	.00	.01	--	.010	.03	<10	6
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.01	.00	--	.010	.03	0	40
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.00	.06	--	.020	.06	0	100
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	9.1	975	.00	.62	--	.160	.49	280	1500

315943097244101 WHITNEY LAKE SITE EC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1228	1.0	2630	8.5	7.5	11.4	100
22...	1230	10	2630	8.5	7.5	11.4	100
22...	1231	20	2630	8.4	7.0	11.0	96
22...	1232	30	2630	8.4	7.0	10.9	95
22...	1234	40	2630	8.4	7.0	10.8	94
22...	1235	50	2630	8.4	7.0	10.7	93
22...	1237	59	2630	8.3	7.0	10.7	93
JUN							
12...	0945	1.0	991	8.1	25.5	7.8	78
12...	0947	10	991	8.1	25.0	7.2	88
12...	0949	20	1080	8.0	24.5	6.9	83
12...	0951	30	1350	7.5	23.0	3.5	41
12...	0953	40	1560	7.4	22.5	3.0	34
12...	0955	50	1660	7.2	21.5	1.2	14
12...	0957	60	1800	7.2	20.5	.5	6
12...	0959	67	1810	7.2	20.5	.1	1
AUG							
10...	1800	1.0	1230	8.2	30.0	8.0	107
10...	1802	10	1230	8.2	29.5	7.6	101
10...	1804	20	1230	8.0	29.0	6.5	86
10...	1806	30	1250	7.3	29.0	2.2	29
10...	1808	40	1280	7.2	28.0	.8	10
10...	1810	50	1290	7.2	25.5	.8	10
10...	1812	63	1470	7.2	23.5	.9	11

WHITNEY LAKE NEAR WHITNEY, TX--Continued

320122097260901 WHITNEY LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB											
22...	1309	1.0	2620	8.5	8.0	1.20	11.5	102	430	310	
22...	1312	10	2620	8.5	7.5	--	11.5	102	--	--	
22...	1315	20	2620	8.5	7.5	--	11.5	102	--	--	
22...	1318	30	2620	8.5	7.5	--	11.4	100	--	--	
22...	1322	40	2620	8.4	6.5	--	10.9	93	--	--	
22...	1326	53	2620	8.3	6.5	--	10.6	91	460	330	
JUN											
12...	1035	1.0	887	8.2	26.0	.50	8.6	106	210	85	
12...	1037	10	900	7.9	25.5	--	6.3	77	--	--	
12...	1039	20	960	7.7	24.5	--	5.0	60	--	--	
12...	1041	30	1120	7.3	23.0	--	1.4	16	--	--	
12...	1043	40	1580	7.2	21.5	--	.7	8	--	--	
12...	1045	50	1690	7.2	21.0	--	.2	2	--	--	
12...	1047	57	1690	7.2	21.0	--	.2	2	310	190	
AUG											
10...	1540	1.0	1170	8.2	31.0	.90	8.2	111	220	110	
10...	1542	10	1170	8.0	30.0	--	7.0	95	--	--	
10...	1544	20	1170	7.9	29.5	--	6.5	86	--	--	
10...	1546	30	1170	7.3	29.5	--	3.3	44	--	--	
10...	1548	40	1170	7.2	29.0	--	.8	11	--	--	
10...	1550	50	1170	7.2	26.0	--	.8	10	--	--	
10...	1552	54	1380	7.2	25.5	--	.8	10	250	78	

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
22...	120	32	380	8.0	9.2	150	0	300	620
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	130	32	380	7.7	9.1	150	0	300	630
JUN									
12...	65	11	96	2.9	4.6	150	0	76	160
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	94	18	220	5.4	6.5	150	0	190	350
AUG									
10...	63	14	140	4.2	4.6	130	0	130	230
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	74	16	160	4.4	4.8	210	0	130	270

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
22...	3.9	1540	.02	.02	--	.020	--	0	20
22...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
22...	--	--	.02	.01	--	.020	--	0	0
22...	--	--	--	--	--	--	--	--	--
22...	3.9	1560	.02	.03	--	.020	--	20	30
JUN									
12...	5.8	492	.09	.05	.06	.020	.06	10	<1
12...	--	--	--	--	--	--	--	--	--
12...	--	--	.28	.06	.06	.020	.06	30	0
12...	--	--	.44	.03	.09	.030	.09	30	40
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	5.9	959	.41	.06	.12	.040	.12	10	420
AUG									
10...	4.7	650	.00	.01	--	.020	.06	<10	5
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.01	.01	--	.010	.03	0	20
10...	--	--	--	--	--	--	--	--	--
10...	--	--	.00	.04	--	.040	.12	30	220
10...	--	--	--	--	--	--	--	--	--
10...	9.0	770	.00	.79	--	.090	.28	620	2400

BRAZOS RIVER BASIN

WHITNEY LAKE NEAR WHITNEY, TX--Continued

320124097291101 WHITNEY LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1342	1.0	2450	8.4	8.0	11.4	101
22...	1345	10	2450	8.4	7.5	11.2	98
22...	1348	20	2540	8.2	6.5	9.9	85
22...	1351	30	2610	8.3	6.0	9.8	83
22...	1355	40	2610	8.2	6.0	9.2	78
JUN							
12...	1115	1.0	880	8.4	26.5	10.7	134
12...	1117	10	880	7.9	25.0	6.5	79
12...	1119	20	880	7.7	25.0	5.2	63
12...	1121	30	1210	7.2	22.0	.6	7
12...	1123	40	1520	7.2	21.0	.1	1
12...	1125	50	1610	7.2	21.5	.2	2
AUG							
10...	1620	1.0	1140	7.8	30.0	6.7	89
10...	1622	10	1140	7.5	29.5	4.6	61
10...	1624	20	1140	7.2	29.5	1.5	20
10...	1626	30	1140	7.1	29.0	.4	5
10...	1628	45	1090	7.2	28.5	.5	6

315729097253701 WHITNEY LAKE SITE P5

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1125	1.0	2650	8.4	8.0	11.6	103
22...	1127	10	2650	8.3	8.0	11.5	102
22...	1130	20	2650	8.3	8.0	11.0	97
JUN							
11...	1730	1.0	1090	8.4	26.0	8.4	104
11...	1732	10	1030	8.2	25.5	7.7	94
11...	1734	20	840	7.8	24.5	5.6	67
11...	1736	29	660	7.6	24.0	4.0	48
AUG							
10...	1355	1.0	1250	8.2	31.5	8.0	109
10...	1357	10	1250	8.0	30.5	6.5	87
10...	1359	20	1250	7.8	30.0	6.0	80
10...	1401	25	1250	7.4	30.0	3.3	44

315907097222801 WHITNEY LAKE SITE P7

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB								
22...	1210	1.0	2650	8.4	8.5	--	11.5	104
22...	1212	10	2650	8.4	8.0	--	11.4	101
22...	1214	20	2650	8.4	7.5	--	11.0	96
22...	1216	30	2650	8.3	7.5	--	10.9	96
22...	1218	44	2650	8.3	7.5	--	10.5	92
JUN								
11...	1845	1.0	1140	8.3	26.0	--	7.8	96
11...	1847	10	1140	8.1	25.0	--	6.3	77
11...	1849	20	1160	7.7	24.0	--	4.1	49
11...	1851	30	1200	7.4	22.5	--	1.7	20
11...	1853	40	1400	7.3	22.0	--	.8	9
11...	1855	50	1570	7.3	21.0	--	.2	2
AUG								
10...	1455	1.0	1220	8.3	31.5	1.40	9.2	125
10...	1457	10	1220	8.3	30.5	--	9.5	128
10...	1459	20	1200	8.1	30.5	--	8.2	110
10...	1501	30	1180	7.4	29.5	--	2.9	38
10...	1503	40	1180	7.2	28.5	--	1.0	13
10...	1505	47	1180	7.2	28.5	--	1.0	13

WHITNEY LAKE NEAR WHITNEY, TX--Continued

320011097262201 WHITNEY LAKE SITE P8

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
FEB							
22...	1250	1.0	2630	8.4	8.0	11.2	99
22...	1252	10	2630	8.4	8.0	11.1	98
22...	1254	20	2630	8.4	8.0	11.1	98
22...	1257	28	2630	8.3	8.0	10.4	92
JUN							
12...	1015	1.0	960	8.1	26.0	7.7	95
12...	1017	10	970	8.0	25.5	7.2	88
12...	1019	20	980	7.9	25.5	6.8	83
12...	1021	30	1370	7.3	22.5	1.5	17
12...	1023	42	1570	7.2	21.5	.3	3
AUG							
10...	1740	1.0	1220	8.2	30.0	8.5	113
10...	1742	10	1220	8.1	29.5	7.7	102
10...	1744	20	1220	8.0	29.5	7.0	93
10...	1746	30	1160	7.8	29.0	5.9	78
10...	1748	40	1020	7.1	28.0	.5	6

320509097275901 - WHITNEY LAKE SITE P12

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
22...	1412	1.0	2220	8.5	9.0	.70	12.8	116	390	260
22...	1418	10	2320	8.3	8.0	--	11.0	97	--	--
22...	1423	20	2400	8.1	7.5	--	10.3	90	420	300
JUN										
12...	1150	1.0	667	7.9	27.0	.50	7.1	89	160	41
12...	1152	10	940	7.9	27.0	--	7.1	89	--	--
12...	1154	20	940	7.6	26.0	--	4.9	60	--	--
12...	1156	28	924	7.4	26.0	--	3.3	41	210	91
AUG										
10...	1640	1.0	1090	8.2	31.5	.50	9.3	127	220	97
10...	1642	10	1090	7.5	30.0	--	5.8	77	--	--
10...	1644	25	1010	7.0	29.5	--	.4	5	220	79

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
22...	110	27	310	6.9	8.3	150	0	250	490
22...	--	--	--	--	--	--	--	--	--
22...	120	30	340	7.2	8.5	150	0	270	560
JUN									
12...	53	7.7	61	2.1	4.2	150	0	54	100
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	66	12	100	3.0	4.6	150	0	81	160
AUG									
10...	65	14	130	3.8	4.7	150	0	110	210
10...	--	--	--	--	--	--	--	--	--
10...	66	13	120	3.5	4.7	170	0	89	180

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB									
22...	3.7	1270	.06	.04	--	.040	--	10	60
22...	--	--	--	--	--	--	--	--	--
22...	3.8	1410	.03	.05	--	.020	--	0	60
JUN									
12...	7.0	361	.34	.06	.15	.050	.15	<0	1
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	6.6	504	.23	.20	.15	.050	.15	<0	60
AUG									
10...	6.2	614	.00	.01	--	.050	.15	<10	30
10...	--	--	--	--	--	--	--	--	--
10...	7.2	564	.00	.06	--	.040	.12	70	560

BRAZOS RIVER BASIN
WHITNEY LAKE NEAR WHITNEY, TX--Continued

320721097293301 WHITNEY LAKE SITE P14
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB										
22...	1433	1.0	2410	8.3	9.0	.90	11.7	106	420	290
22...	1438	10	2450	8.3	9.0	--	11.4	104	--	--
22...	1444	20	2560	8.1	8.5	--	10.5	95	460	320
JUN										
12...	1220	1.0	1130	7.9	27.5	.80	7.1	91	240	120
12...	1222	10	1130	7.8	27.0	--	6.3	80	--	--
12...	1224	20	1130	7.8	27.0	--	6.2	78	--	--
12...	1226	33	1090	7.4	26.5	--	2.9	36	240	110
AUG										
10...	1700	1.0	1130	8.0	31.0	.50	7.6	103	230	100
10...	1702	10	1130	7.8	31.0	--	7.0	95	--	--
10...	1704	20	1140	7.7	30.5	--	5.9	79	--	--
10...	1706	27	1190	7.3	30.0	--	2.9	39	260	120

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB									
22...	120	30	340	7.2	8.6	160	0	300	520
22...	--	--	--	--	--	--	--	--	--
22...	130	33	360	7.3	8.7	170	0	290	610
JUN									
12...	72	15	130	3.6	5.0	150	0	110	210
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	72	14	130	3.7	4.8	150	0	110	200
AUG									
10...	68	15	130	3.7	4.8	160	0	110	220
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	73	18	140	3.8	4.8	170	0	120	230

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/FE)	MANGA- NESE, DIS- SOLVED (UG/MN)
FEB									
22...	3.8	1400	.05	.02	--	.040	--	10	50
22...	--	--	--	--	--	--	--	--	--
22...	4.4	1520	.05	.01	--	.020	--	10	60
JUN									
12...	6.1	622	.15	.05	.03	.010	.03	0	3
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	6.7	612	.21	.16	.15	.050	.15	<0	90
AUG									
10...	6.6	633	.00	.01	--	.030	.09	<10	8
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	8.2	678	.00	.02	--	.030	.09	120	270

BRAZOS RIVER BASIN

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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 (5.5 km) upstream from gaging station near Whitney, 4.0 mi (6.4 km) upstream from Iron Creek, and 7.4 mi (11.9 km) southwest of Whitney.

DRAINAGE AREA.--26,190 mi² (67,830 km²), of which 9,240 mi² (23,930 km²) probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: October 1947 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to current year.

WATER TEMPERATURES: October 1947 to current year.

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 micromhos Aug. 24, 1978; minimum daily, 203 micromhos 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, 2,780 micromhos Oct. 1; minimum daily, 1,230 micromhos Sept. 15.

WATER TEMPERATURES: Maximum daily, 27.0°C Sept. 23; minimum daily, 5.5°C on several days during February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 02...	0830	700	2740	--	26.0	410	310	110	32	420
DEC 30...	0800	1150	2660	--	11.5	420	310	120	30	370
JAN 31...	0915	1800	2680	--	6.0	470	340	130	35	380
MAR 29...	0805	1300	2580	8.0	13.0	430	320	120	32	370
APR 06...	0810	250	2560	--	17.0	430	320	120	32	370
MAY 24...	0850	5100	1870	--	21.0	340	220	98	22	260
JUN 09...	0800	2500	1570	--	21.5	300	190	89	20	210
JUL 27...	0810	1840	1540	--	23.5	300	180	90	18	210
SEP 25...	0805	1380	1240	--	25.0	240	130	70	16	160

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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...	9.1	9.1	120	0	310	670	.3	5.8	1620
DEC 30...	7.8	8.4	140	0	300	600	.3	6.0	1500
JAN 31...	7.6	7.7	160	0	280	610	.3	5.1	1530
MAR 29...	7.8	7.2	140	0	280	570	.3	4.8	1450
APR 06...	7.8	7.5	130	0	290	620	.4	4.4	1510
MAY 24...	6.2	6.0	140	0	210	400	.3	4.0	1070
JUN 09...	5.2	5.9	140	0	170	330	.3	5.1	899
JUL 27...	5.3	5.2	150	0	150	320	.3	6.5	874
SEP 25...	4.5	5.6	130	0	140	250	.3	5.4	711

BRAZOS RIVER BASIN

08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	18327	2670	1560	77200	620	30900	310	15300	440
NOV. 1978.....	20410	2600	1520	83700	600	33100	300	16500	430
DEC. 1978.....	25031	2660	1550	105000	620	41900	310	21000	440
JAN. 1979.....	30425	2680	1570	129000	630	51700	310	25500	450
FEB. 1979.....	30866	2640	1540	128000	620	51700	310	25800	440
MAR. 1979.....	14363	2590	1510	58600	600	23400	300	11700	430
APR. 1979.....	13492	2490	1450	52700	570	20800	290	10400	420
MAY 1979.....	181378	2180	1250	612000	490	238000	240	119000	380
JUNE 1979.....	78331	1690	940	199000	340	72700	170	36800	320
JULY 1979.....	27773	1580	880	66200	320	24100	160	12000	300
AUG. 1979.....	31978	1460	810	70200	300	25500	150	12700	280
SEPT 1979.....	25892	1300	720	50600	260	18300	130	9300	250
TOTAL	498266	**	**	1630000	**	632000	**	316000	**
WTD.AVG.	1370	2120	1200	**	470	**	230	**	370

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2780	2620	2660	2680	2640	2600	2540	2400	1840	1640	1450	1380
2	2740	2620	2660	2680	2640	2660	2580	2400	1740	1630	1460	1430
3	2700	2600	2660	2680	2640	2620	2580	2480	1440	1650	1530	1390
4	2620	2600	2660	2680	2640	2620	2520	2340	1750	1650	1510	1380
5	2620	2600	2660	2680	2640	2640	2540	2340	1770	1620	1510	1410
6	2620	2590	2660	2680	2640	2640	2560	2340	1780	1600	1510	1400
7	2620	2590	2660	2680	2640	2640	2560	2320	1840	1620	1500	1410
8	2700	2590	2660	2680	2640	2640	2560	2320	1770	1610	1500	1380
9	2700	2600	2660	2680	2640	2640	2540	2280	1570	1610	1500	1400
10	2700	2600	2660	2680	2640	2640	2540	2280	1560	1610	1500	1390
11	2700	2600	2660	2680	2640	2640	2560	2260	1580	1580	1460	1400
12	2700	2600	2660	2680	2640	2620	2560	2180	1630	1590	1480	1390
13	2660	2600	2660	2680	2640	2620	2520	2100	1660	1630	1490	1340
14	2660	2600	2660	2680	2640	2620	2520	2100	1660	1610	1490	1250
15	2660	2600	2660	2680	2640	2620	2540	2140	1670	1620	1490	1230
16	2660	2600	2660	2680	2640	2620	2540	2100	1790	1610	1470	1240
17	2660	2600	2660	2680	2640	2620	2540	2100	1770	1580	1470	1240
18	2660	2600	2660	2680	2640	2620	2560	2100	1770	1550	1470	1250
19	2660	2600	2660	2680	2640	2640	2540	2180	1660	1570	1470	1270
20	2660	2600	2660	2680	2640	2620	2500	2180	1640	1370	1460	1250
21	2660	2600	2660	2680	2640	2620	2520	2180	1590	1600	1460	1240
22	2660	2590	2660	2680	2640	2600	2500	2100	1580	1580	1440	1250
23	2660	2590	2660	2680	2640	2560	2480	1880	1680	1590	1450	1240
24	2660	2590	2660	2680	2640	2580	2440	1870	1680	1580	1430	1240
25	2660	2590	2660	2680	2640	2580	2460	1840	1680	1560	1430	1240
26	2660	2520	2660	2680	2640	2580	2400	1880	1650	1530	1430	1260
27	2660	2580	2660	2680	2640	2580	2420	1960	1670	1540	1450	1270
28	2660	2590	2660	2680	2640	2580	2420	1970	1570	1560	1450	1290
29	2660	2590	2660	2680	---	2580	2480	1910	1550	1570	1430	1270
30	2660	2590	2660	2680	---	2580	2420	1970	1650	1560	1410	1250
31	2660	---	2660	2680	---	2560	---	1870	---	1540	1410	---
MEAN	2670	2590	2660	2680	2640	2610	2510	2140	1670	1590	1470	1310

BRAZOS RIVER BASIN

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08092600 BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	21.0	16.0	---	6.0	6.5	13.0	20.0	20.0	22.0	23.5	24.5
2	26.0	21.0	16.0	8.5	6.0	6.5	14.0	20.0	21.0	22.0	23.5	24.5
3	26.0	21.0	16.0	8.5	6.0	6.5	14.0	18.0	21.0	22.0	23.5	24.5
4	25.5	21.0	16.0	8.5	6.0	6.5	14.0	18.0	21.0	22.0	23.5	24.5
5	25.5	21.0	16.0	8.5	6.0	6.5	16.0	18.0	21.0	22.0	23.5	24.5
6	25.5	21.0	16.0	8.5	6.0	6.5	17.0	18.0	21.5	22.0	23.5	24.5
7	26.0	21.0	16.0	8.5	5.5	6.5	14.5	18.0	21.0	22.0	23.5	25.5
8	26.0	21.0	16.0	8.5	5.5	6.5	15.0	19.5	21.0	22.0	23.5	25.5
9	26.0	20.0	13.5	8.5	5.5	8.5	16.0	19.5	21.5	---	24.0	25.5
10	26.0	20.0	13.5	6.5	6.0	---	16.0	19.5	21.5	22.0	24.0	25.5
11	---	20.0	13.5	6.5	6.0	---	14.5	19.5	21.0	22.0	24.0	25.5
12	24.5	20.0	11.5	6.5	5.5	8.5	15.0	20.5	21.0	22.0	24.0	25.5
13	24.0	20.0	11.5	---	5.5	9.5	15.0	20.5	21.0	22.0	24.0	24.5
14	24.0	19.0	11.5	---	5.5	8.5	16.5	19.5	23.5	22.0	24.0	25.5
15	24.0	19.0	11.5	6.5	5.5	8.5	16.5	19.5	---	22.0	24.0	24.5
16	24.0	19.0	11.5	6.5	5.5	9.5	16.5	19.5	22.0	22.0	24.0	26.0
17	23.5	18.0	11.0	6.5	6.0	11.0	16.5	20.0	22.0	22.0	24.5	26.5
18	23.5	---	11.0	6.0	5.5	11.0	16.5	19.5	22.0	22.0	24.5	26.5
19	23.5	---	11.0	6.0	5.5	11.0	14.5	20.0	22.0	22.0	24.5	26.5
20	23.5	18.0	11.0	6.0	5.5	11.0	15.0	20.0	22.0	22.0	24.5	26.5
21	23.0	18.0	11.5	6.0	5.5	11.0	16.0	---	22.0	23.0	24.5	26.5
22	23.0	17.0	12.0	6.0	6.0	11.0	16.0	20.0	22.0	23.0	24.5	26.0
23	23.0	17.0	11.0	6.0	6.0	11.0	16.0	21.0	22.0	22.0	24.5	27.0
24	23.0	17.0	11.0	6.0	6.0	10.0	16.0	21.0	22.0	22.0	24.5	25.0
25	23.0	17.0	11.0	6.0	6.0	13.0	16.0	20.0	22.0	23.5	24.5	25.0
26	21.5	17.0	11.0	6.5	6.0	12.0	16.0	20.0	22.0	23.5	24.5	25.0
27	21.5	17.0	11.5	6.0	6.5	11.0	20.0	20.0	22.0	23.5	24.5	---
28	21.5	17.0	11.5	6.0	6.5	13.0	20.0	20.0	22.0	23.5	24.5	25.0
29	21.5	17.0	11.5	6.0	---	13.0	20.0	20.5	23.5	23.5	24.5	26.5
30	21.5	16.0	11.5	6.0	---	13.0	20.0	20.0	22.0	23.5	24.5	26.0
31	21.0	---	---	6.0	---	13.0	---	20.0	---	23.5	24.5	---
MEAN	24.0	19.0	13.0	7.0	6.0	9.5	16.0	19.5	21.5	22.5	24.0	25.5

BRAZOS RIVER BASIN

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 bridge on Farm Road 2114, 2.0 mi (3.2 km) downstream from Tener Creek, 4.9 mi (7.9 km) downstream from Iron Creek, 5.4 mi (8.7 km) southwest of Aguilla, 9.0 mi (14.5 km) downstream from Whitney Dam, and at mile 434.0 (698.3 km).

DRAINAGE AREA.--27,244 mi² (70,560 km²), of which 9,570 mi² (24,790 km²) probably is noncontributing.

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1974, published as Brazos River near Whitney.

REVISED RECORDS.--WRD TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 404.29 ft (123.228 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 1 1948, nonrecording gage at site 13.9 mi (22.4 km) upstream at datum 27.77 ft (8.464 m) higher. Oct. 1, 1948, to Feb. 12, 1975, at site 5.6 mi (9.0 km) upstream at datum 13.10 ft (3.993 m) higher.

REMARKS.--Records good. Most of flow is released from storage in Whitney Lake (station 08092500). 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 at this site during the year. A crest-stage gage was installed on July 16, 1979.

AVERAGE DISCHARGE.--13 years (water years 1939-51) prior to regulation by Whitney Lake, 1,802 ft³/s (51.03 m³/s), 1,306,000 acre-ft/yr (1.61 km³/yr); 28 years (water-years 1952-79) regulated, unadjusted, 1,430 ft³/s (40.50 m³/s), 1,036,000 acre-ft/yr (1.28 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,800 ft³/s (2,030 m³/s) May 18, 1949, gage height, 31.03 ft (9.458 m), site and datum in use from Oct. 1, 1948, to Feb. 12, 1975; minimum daily, 0.4 ft³/s (0.011 m³/s) May 9, 1953. Maximum discharge since construction of Whitney Dam in 1951, 58,200 ft³/s (1,650 m³/s) May 28, 1957, gage height, 27.34 ft (8.333 m), site and datum in use from Oct. 1, 1948, to Feb. 12, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1853, 45 ft (13.7 m) 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, 15,900 ft³/s (450 m³/s) May 5, gage height, 18.48 ft (5.633 m); minimum daily, 23 ft³/s (0.65 m³/s) Oct. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	950	736	33	1160	1050	293	279	2330	5680	744	362	1280
2	692	500	33	1260	1170	649	254	829	5220	685	214	796
3	567	975	33	300	565	100	530	1050	5060	1050	72	667
4	1180	812	34	28	745	57	563	7580	5000	1380	338	766
5	1170	393	32	26	610	409	452	15700	5080	936	674	1050
6	38	504	33	24	559	75	230	15400	4850	67	865	1080
7	26	537	294	188	1450	59	62	15200	4920	410	681	979
8	23	152	1410	964	1220	58	55	15000	4960	871	946	726
9	144	929	715	1080	1350	59	243	14400	2510	981	917	350
10	753	476	62	559	592	53	373	12500	2400	691	899	66
11	1080	536	34	956	81	50	70	5140	2300	773	434	45
12	1410	499	475	995	1210	51	49	4830	2350	421	69	42
13	440	497	987	1700	1480	54	46	4780	2270	471	756	41
14	47	539	1130	3630	1450	54	46	4610	2330	608	718	40
15	27	2240	1070	1250	2280	55	47	4610	2390	639	1180	39
16	92	5500	1160	474	1810	444	86	4620	1040	358	1040	39
17	648	2230	966	540	1730	613	579	2800	621	352	813	183
18	574	91	1120	1060	1180	499	883	2330	786	53	1340	761
19	872	67	1120	1140	2190	416	731	725	2120	40	1250	742
20	1300	50	2060	1030	1280	183	800	214	2350	269	1240	1540
21	540	38	791	737	948	83	76	1560	2420	70	1430	1770
22	162	37	677	992	1050	175	58	3660	2300	41	1330	1800
23	854	35	906	1080	789	360	125	5130	731	1630	1330	1790
24	700	34	952	721	921	1400	1920	5090	536	2230	1760	1360
25	213	34	974	725	832	1160	2350	5080	527	1970	1550	1380
26	321	43	1540	1370	760	1130	672	5100	210	1830	1510	1380
27	68	1210	1620	896	683	1220	313	5100	870	1850	1610	1240
28	342	616	1210	1330	881	1180	329	3970	2230	2380	1700	1450
29	600	65	1170	1210	---	1340	131	3760	2390	2170	1580	1280
30	534	35	1140	1180	---	1500	1140	5140	1880	1010	1560	1210
31	1960	---	1250	1820	---	584	---	5040	---	793	1810	---
TOTAL	18327	20410	25031	30425	30866	14363	13492	181378	78331	27773	31978	25892
MEAN	591	680	807	981	1102	463	450	5851	2611	896	1032	863
MAX	1960	5500	2060	3630	2280	1500	2350	15700	5680	2380	1810	1800
MIN	23	34	32	24	81	50	46	214	210	40	69	39
AC-FT	36350	40480	49650	60350	61220	28490	26760	359800	155400	55090	63430	51360
CAL YR 1978	TOTAL	164472	MEAN	451	MAX	5500	MIN 22	AC-FT	326200			
WTR YR 1979	TOTAL	498266	MEAN	1365	MAX	15700	MIN 23	AC-FT	988300			

BRAZOS RIVER BASIN

343

08093400 COBB CREEK NEAR ABBOTT, TX

LOCATION.--Lat 31°55'11", long 97°05'57", Hill County, Hydrologic Unit 12060202, at downstream side of bridge on service road on downstream side of Interstate Highway 35, 1.5 mi (2.4 km) downstream from Missouri, Kansas, and Texas Railroad Co. bridge, 2.8 mi (4.5 km) northwest of Abbott, and 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--12.4 mi² (32.1 km²).

PERIOD OF RECORD.--December 1966 to September 1979 (discontinued).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder with low-water concrete control since Aug. 1, 1975. Datum of gage is 575.00 ft (175.260 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. No known diversion or regulation above station. Recording rain gage located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years (water years 1968-79), 7.31 ft³/s (0.207 m³/s), 8.01 in/yr (203 mm/yr), 5,300 acre-ft/yr (6.53 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,840 ft³/s (80.4 m³/s) June 24, 1976, gage height, 9.56 ft (2.914 m); maximum gage height, 10.50 ft (3.200 m) May 9, 1968; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1932, 11.1 ft (3.38 m), date unknown, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Apr. 19	2000	615	17.4	5.70	1.737
May 29	0730	*1,080	30.6	6.81	2.076
June 1	1330	604	17.1	5.65	1.722

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	.22	.02	1.2	46	3.9	138	4.6	.00	.00
2	.00	.00	.00	.20	.03	11	25	15	52	2.7	3.4	.00
3	.00	.00	.00	.20	.04	36	20	6.7	39	1.8	.13	.00
4	.00	.00	.00	.20	.04	14	17	9.0	30	1.1	.07	.00
5	.00	.00	.00	.19	.26	10	13	8.0	37	.63	.03	.00
6	.00	.00	.00	.18	11	8.5	10	7.2	29	.27	.00	.00
7	.00	.00	.00	.18	4.4	7.5	8.4	5.8	21	1.8	.22	.00
8	.00	.00	.00	.16	2.0	6.4	8.4	4.6	18	8.0	.03	.00
9	.00	.00	.00	.16	.93	5.6	5.8	4.3	15	5.4	.00	.00
10	.00	.00	.00	1.6	.91	4.6	5.8	12	12	3.3	.00	.00
11	.00	.00	.00	.27	.91	4.3	4.3	126	9.5	1.8	.00	.00
12	.00	.00	.00	.19	.67	4.2	3.9	29	6.7	1.1	.00	.00
13	.00	.00	.00	.19	.44	4.0	3.6	20	5.0	.63	.59	.00
14	.00	.00	.00	.18	.45	3.3	3.0	16	3.3	.32	.06	.00
15	.00	.00	.00	.16	.34	3.9	2.7	13	2.0	.19	.05	.00
16	.00	.00	.00	.16	.20	93	2.5	11	1.4	.14	.03	.00
17	.00	.00	.00	.14	.19	32	19	9.3	1.1	1.4	.01	.00
18	.00	.00	.00	.22	.26	26	25	7.6	.84	.20	.00	.00
19	.00	3.7	.00	.19	.36	21	84	6.3	.63	.13	.00	.00
20	.00	.84	.00	.22	.41	23	30	5.0	.54	.13	.00	.00
21	.00	.46	.00	.14	.41	24	19	5.8	.46	.10	.00	.00
22	.00	.27	.00	.09	.43	49	15	25	.46	.12	.00	.00
23	.00	.19	.00	.06	.39	18	12	10	.39	.13	.00	.00
24	.00	.40	.00	.05	6.1	13	8.9	7.0	.39	.12	.00	.00
25	.00	.13	.00	.04	3.6	10	5.8	4.9	.32	.10	.00	.00
26	.00	2.1	.00	.07	2.2	9.2	3.6	3.9	31	.07	.00	.00
27	.00	.32	.00	.05	2.0	26	3.6	3.3	13	.06	.00	.00
28	.00	.20	.00	.02	1.8	15	3.3	16	12	.03	.00	.00
29	.00	.16	.00	.03	---	14	13	177	9.3	.02	.00	.00
30	.00	.10	.00	.05	---	95	6.2	35	7.2	.01	.00	.00
31	.00	---	7.2	.03	---	29	---	25	---	.00	.00	---
TOTAL	.00	8.87	7.23	5.84	40.79	621.7	427.8	632.6	496.53	36.40	4.62	.00
MEAN	.000	.30	.23	.19	1.46	20.1	14.3	20.4	16.6	1.17	.15	.000
MAX	.000	3.7	7.2	1.6	11	95	84	177	138	8.0	3.4	.00
MIN	.00	.00	.00	.02	.02	1.2	2.5	3.3	.32	.00	.00	.00
CFSM	.000	.02	.02	.02	.12	1.62	1.15	1.65	1.34	.09	.01	.000
IN.	.00	.03	.02	.02	.12	1.86	1.28	1.90	1.49	.11	.01	.00
AC-FT	.00	18	14	12	81	1230	849	1250	985	72	9.2	.00
CAL YR 1978	TOTAL	359.49	MEAN	.98	MAX	27	MIN	.00	CFSM	.08	IN	1.08
WTR YR 1979	TOTAL	2282.38	MEAN	6.25	MAX	177	MIN	.00	CFSM	.50	IN	6.85
									AC-FT	713	AC-FT	4530

BRAZOS RIVER BASIN

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 (1.6 km) southeast of Aquilla, 1.2 mi (1.9 km) downstream from Cobb Creek, and 18.2 mi (29.3 km) upstream from mouth.

DRAINAGE AREA.--308 mi² (798 km²).

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 (137.611 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records fair. Records furnished by the city of Hillsboro show that 822 acre-ft (1.01 hm³) of sewage effluent was discharged into a tributary above gage during year. Flow is affected at times by discharge from flood-detention pools of nine floodwater-retarding structures with combined detention capacity of 5,320 acre-ft (6.56 hm³). These structures control runoff from 17.0 mi² (44.0 km²) in the Aquilla and Hackberry Creeks drainage basins.

AVERAGE DISCHARGE.--40 years (water years 1940-79), 121 ft³/s (3.427 m³/s), 5.34 in/yr (136 mm/yr), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s (1,140 m³/s) May 10, 1968 gage height, 30.32 ft (9.242 m), from rating curve extended above 25,900 ft³/s (733 m³/s) on basis of slope-area measurement of 74,200 ft³/s (2,100 m³/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 (10.4 m), from information by local resident. Flood of Sept. 27, 1936, was the highest since 1887 and reached a stage of 33 ft (10.1 m), from floodmark; discharge 84,500 ft³/s (2,390 m³/s), by slope-area measurement at site 9 mi (14 km) downstream, and 74,200 ft³/s (2,100 m³/s), adjusted to gage site.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 11	2115	6,220	176	25.19	7.678
May 29	1445	*7,190	204	25.94	7.907

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.12	23	.41	5.0	518	241	2520	12	3.5	.65
2	.00	.00	.12	2.4	.37	9.9	310	394	3060	9.0	105	.46
3	.00	.00	.13	.72	.29	507	128	172	561	6.0	8.3	.17
4	.00	.00	.17	.49	.24	312	96	1430	278	5.3	1.6	.13
5	.00	.00	.37	.49	.51	88	53	592	588	5.0	.95	.12
6	.00	.00	.45	.60	239	37	72	183	455	5.0	.75	.10
7	.00	.00	.52	.60	282	27	40	74	168	5.2	36	.17
8	.00	.00	.54	.49	61	23	43	56	103	7.3	4.4	.10
9	.00	.00	.51	.35	14	19	36	43	161	45	.72	.04
10	.00	.00	.45	4.4	6.1	16	30	118	65	18	.51	.04
11	.00	.00	.39	32	4.4	15	13	3650	29	5.3	.49	.02
12	.00	.00	.92	9.5	4.1	16	14	3410	17	4.6	5.9	.00
13	.00	.00	.44	3.2	3.3	15	19	545	22	4.6	133	.00
14	.00	.00	.54	1.8	3.0	14	16	250	22	4.4	57	.00
15	.00	.00	.35	1.1	2.9	12	16	93	24	4.2	.76	.00
16	.00	.00	.31	.78	2.2	834	15	72	21	4.3	.62	.03
17	.00	.00	.39	.44	1.7	777	69	61	18	5.8	.58	.03
18	.00	.00	.44	.17	1.4	458	905	45	17	8.3	.54	.11
19	.00	.00	.49	.29	1.6	270	423	36	16	12	.54	.19
20	.00	.00	.72	80	2.1	320	673	32	14	463	.50	.20
21	.00	.00	.72	27	2.1	429	150	34	13	100	.39	.09
22	.00	.00	.60	5.4	2.3	564	68	1150	12	10	.46	.04
23	.00	.00	.39	2.2	2.5	478	37	451	11	4.3	.49	.05
24	.00	.00	.31	1.0	14	219	20	124	10	1.6	.51	.05
25	.00	.00	.24	.65	50	106	27	46	9.7	.82	.54	.09
26	.00	.05	.18	.45	17	41	23	35	423	.71	.54	.09
27	.00	.17	.18	.45	9.4	204	18	30	203	.65	.57	.09
28	.00	.00	.18	.56	6.6	165	18	145	113	.60	.71	.09
29	.00	.07	.28	.51	---	85	324	4240	46	.53	.62	.07
30	.00	.12	.28	.42	---	1090	159	2420	18	.49	.49	.04
31	.00	---	45	.35	---	1690	---	458	---	.49	.62	---
TOTAL	.00	.41	56.73	201.81	734.52	8845.9	4333	20630	9017.7	754.49	367.60	3.26
MEAN	.000	.014	1.83	6.51	26.2	285	144	665	301	24.3	11.9	.11
MAX	.00	.17	45	80	282	1690	905	4240	3060	463	133	.65
MIN	.00	.00	.12	.17	.24	5.0	13	30	9.7	.49	.39	.00
CFSM	.000	.000	.006	.02	.09	.93	.47	2.16	.98	.08	.04	.000
IN.	.00	.00	.01	.02	.09	1.07	.52	2.49	1.09	.09	.04	.00
AC-FT	.00	.8	113	400	1460	17550	8590	40920	17890	1500	729	6.5
CAL YR 1978	TOTAL	4127.27	MEAN	11.3	MAX	1720	MIN	.00	CFSM	.04	IN	.50
WTR YR 1979	TOTAL	44945.42	MEAN	123	MAX	4240	MIN	.00	CFSM	.40	IN	5.43
										AC-FT	8190	
										AC-FT	89150	

08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1965 to June 1966, October 1967 to current year. Chemical and biochemical analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to June 1966, October 1967 to current year.

WATER TEMPERATURES: October 1965 to June 1966, October 1967 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,080 micromhos Dec. 31, 1975; minimum daily, 182 micromhos Oct. 31, 1974.

WATER TEMPERATURES: Maximum daily, 30.0°C on several days during summer months; minimum daily, 0.0°C Jan. 8, 1976, Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,850 micromhos Nov. 26; minimum daily, 190 micromhos May 29, June 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV										
29...	0857	.05	1380	7.9	11.0	5.4		6.9	130	0
DEC										
29...	0845	.28	1250	--	11.0	--	--	--	170	0
JAN										
17...	1230	.24	1010	--	8.0	--	--	--	180	0
FEB										
15...	1204	3.0	748	7.8	16.5	8.5	90	3.9	230	68
MAR										
14...	0823	14	706	7.9	14.0	8.6	85	2.6	220	56
MAY										
15...	1638	9.2	606	7.9	22.0	7.8	89	2.6	250	67
JUL										
16...	1335	4.2	840	7.4	30.0	10.8	142	1.6	310	100
SEP										
18...	1140	2.7	1020	7.3	20.0	8.0	89	2.1	350	120

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV										
29...	46	4.5	250	9.4	8.3	400	0	270	68	1.0
DEC										
29...	57	5.9	230	7.8	7.5	400	0	250	67	1.0
JAN										
17...	63	5.2	150	4.9	6.7	260	0	210	48	.8
FEB										
15...	86	4.1	61	1.7	5.0	200	0	150	34	.5
MAR										
14...	82	3.7	59	1.7	2.1	200	0	130	27	.6
MAY										
15...	93	3.7	31	.9	3.7	220	0	110	16	.6
JUL										
16...	110	8.0	59	1.5	3.6	250	0	170	33	.5
SEP										
18...	120	11	70	1.6	4.6	270	0	230	44	.5

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, 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									
29...	9.3	854	.09	.01	.10	.01	2.0	2.0	1.70
DEC									
29...	9.2	825	--	--	--	--	--	--	--
JAN									
17...	15	627	--	--	--	--	--	--	--
FEB									
15...	8.8	448	2.1	.14	2.2	.22	1.3	1.5	.340
MAR									
14...	4.2	407	9.5	.55	10	.22	.42	.64	.070
MAY									
15...	8.6	375	2.7	.08	2.8	.07	.82	.89	.170
JUL									
16...	8.3	516	.17	.02	.19	.03	.64	.67	.010
SEP									
18...	7.2	620	.30	.02	.32	.06	.62	.68	.020

BRAZOS RIVER BASIN

08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	0	*****	*****	0	*****	0	*****	0	****
NOV. 1978.....	0.41	1750	1150	1.3	93	0.1	370	0.4	470
DEC. 1978.....	56.73	752	460	71	32	4.9	140	22	200
JAN. 1979.....	201.81	916	570	310	42	23	180	98	240
FEB. 1979.....	734.52	484	290	580	17	33	86	171	130
MAR. 1979.....	8845.9	434	260	6240	13	313	75	1780	120
APR. 1979.....	4333	496	300	3490	17	198	88	1030	130
MAY 1979.....	20630	257	150	8560	3	176	36	1990	68
JUNE 1979.....	9017.7	259	150	3760	3	83	36	877	69
JULY 1979.....	754.49	385	230	474	10	21	64	131	100
AUG. 1979.....	367.6	537	330	323	20	19	97	96	140
SEPT 1979.....	3.26	1040	650	5.8	50	0.4	210	1.8	280
TOTAL	44945.4	**	**	23800	**	871	**	6200	**
WTD.AVG.	123	327	190	**	7	**	51	**	87

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1700	630	680	684	453	520	200	655	655	900
2		---	1230	648	685	678	530	450	190	665	475	940
3		---	1250	644	682	450	507	535	245	672	530	970
4		---	1270	576	680	500	509	325	320	690	620	1010
5		---	1270	585	682	628	582	455	230	703	700	1030
6		---	1260	580	357	630	597	510	250	712	745	1080
7		---	1300	575	474	628	518	530	310	718	600	1100
8		---	1350	573	676	674	540	560	346	720	640	1140
9		---	1400	750	682	671	557	595	381	550	680	1190
10		---	1420	1000	690	637	551	510	415	670	720	1220
11		---	1400	966	700	600	553	200	453	780	740	1250
12		---	1440	954	706	528	597	205	489	820	700	---
13		---	1720	850	719	520	509	295	525	810	525	---
14		---	1260	750	622	600	530	320	560	820	550	---
15		---	1240	636	648	702	560	365	596	835	610	---
16		---	1240	800	657	450	582	390	632	840	636	1110
17		---	1250	1010	670	476	551	415	670	825	662	1130
18		---	1240	1150	690	480	409	435	703	800	690	1100
19		---	1250	1300	710	483	551	460	720	650	715	1070
20		---	1270	1020	730	480	531	505	750	280	739	1050
21		---	1300	900	720	446	539	485	765	350	765	1090
22		---	1430	875	680	400	623	300	780	440	790	1130
23		---	1270	854	650	446	636	335	795	475	817	1120
24		---	1290	1000	600	550	700	370	810	487	842	1150
25		---	1300	725	450	650	720	430	820	545	868	1140
26		1850	1310	607	807	702	600	465	500	585	894	1160
27		1750	1330	620	799	612	542	480	560	610	920	1170
28		---	1320	610	801	511	550	390	595	630	900	1190
29		1780	1270	612	---	515	400	190	630	650	909	1210
30		1700	1260	694	---	347	551	210	645	665	920	1200
31		---	600	695	---	319	---	300	---	670	905	---
MEAN		1770	1300	780	666	548	553	404	530	656	725	1110

BRAZOS RIVER BASIN

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08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			15.0	2.0	6.0	10.0	20.0					
2			15.0	1.0	6.0	10.0	15.0					
3			12.0	3.0	7.0	9.0	14.0					
4			9.0	3.0	---	---	14.0					
5			11.0	4.0	5.0	9.0	15.0					
6			10.0	---	5.0	9.0	15.0					
7			9.0	---	7.0	10.0	16.0					
8			7.0	4.0	7.0	12.0	---					
9			7.0	4.0	8.0	14.0	18.0					
10			---	4.0	---	15.0	21.0					
11			5.0	4.0	---	---	20.0					
12			7.0	5.0	7.0	17.0	20.0					
13			8.0	---	8.0	17.0	20.0					
14			8.0	---	8.0	17.0	---					
15			8.0	7.0	7.0	12.0	---					
16			9.0	9.0	7.0	---	20.0					
17			---	9.0	---	14.0	20.0					
18			11.0	9.0	---	---	19.0					
19			10.0	9.0	---	16.0	20.0					
20			11.0	7.0	---	17.0	27.0					
21			11.0	---	---	17.0	21.0					
22			10.0	5.0	---	17.0	22.0					
23			9.0	7.0	---	17.0	22.0					
24			---	7.0	---	---	---					
25			---	6.0	---	---	22.0					
26			7.0	6.0	9.0	15.0	22.0					
27			8.0	---	10.0	15.0	19.0					
28			10.0	---	9.0	17.0	---					
29			11.0	7.0	---	18.0	---					
30			---	7.0	---	20.0	20.0					
31			---	6.0	---	20.0	---					
MEAN			9.5	5.5	7.5	14.5	19.5					

BRAZOS RIVER BASIN

08093700 NORTH BOSQUE RIVER AT STEPHENVILLE, TX

LOCATION.--Lat 32°12'56", long 98°11'55", Erath County, Hydrologic Unit 12060204, in center of stream at downstream side of bridge on State Highway 108 (Graham Street) at Stephenville, 0.5 mi (0.8 km) southeast of Erath County Courthouse, 1.5 mi (2.4 km) downstream from Gulf, Colorado, and Santa Fe Railway bridge, and 120.7 mi (194.2 km) upstream from mouth.

DRAINAGE AREA.--95.9 mi² (248.4 km²).

PERIOD OF RECORD.--March 1958 to September 1979 (discontinued).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,223.60 ft (372.953 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 25,250 acre-ft (31.1 hm³). These structures control runoff from 59.8 mi² (154.9 km²). No diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1959-79), 14.2 ft³/s (0.402 m³/s), 10,290 acre-ft/yr (12.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (343 m³/s) Oct. 4, 1959, gage height, 19.90 ft (6.066 m), from floodmark, from rating curve extended above 4,250 ft³/s (120 m³/s) on basis of contracted-opening measurements of 40,000 and 49,000 ft³/s (1,130 and 1,390 m³/s); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, 23.5 ft (7.16 m) May 19, 1955, from floodmarks, discharge, 49,000 ft³/s (1,390 m³/s), by contracted-opening measurement of peak flow. The flood of May 23, 1952, reached a stage of 22.2 ft (6.77 m), from floodmarks, discharge 40,000 ft³/s (1,130 m³/s), by contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,100 ft³/s (173 m³/s) May 3, gage height, 17.94 ft (5.468 m), no other peak above base of 1,000 ft³/s (28.3 m³/s); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.19	.42	199	2.6	.00	.62	.00
2	.00	.00	.00	.00	.03	.45	.56	14	2.3	.00	.38	.00
3	.00	.00	.00	.00	.03	2.9	.36	2720	1.2	.00	.11	.00
4	.00	.00	.00	.00	.05	.48	.36	821	.94	.00	.05	.00
5	.36	.56	.00	.00	3.2	.10	.34	595	4.0	.01	.04	.00
6	.54	4.3	.00	.00	5.8	.07	.33	338	.84	.01	.04	.00
7	.12	.57	.00	.00	2.0	.06	.36	181	.80	.02	.04	.00
8	.03	.01	.00	.00	.31	.06	.37	72	.69	.02	.02	.00
9	.00	.00	.00	.00	.15	.07	.25	23	.72	.02	.00	.00
10	.00	.00	.00	4.1	.08	.06	.55	16	.57	.01	1.3	.00
11	.00	.00	.00	2.9	.18	.11	8.0	14	.47	.01	19	.00
12	.00	.00	.00	.86	.08	.08	.81	12	.53	.00	.74	.00
13	.00	.00	.00	.10	.05	.10	.43	10	.49	.00	.12	.00
14	.00	.00	.00	.04	.05	.10	.39	6.5	.47	.00	.07	.00
15	.00	.00	.00	.03	.05	5.8	.36	4.4	.51	.00	.08	.00
16	.00	7.1	.00	.02	.04	8.6	.35	3.0	.52	.00	.05	.00
17	.00	2.0	.00	.01	.05	2.1	10	2.2	.56	7.7	.03	.00
18	.00	.28	.00	9.6	.84	9.4	10	1.7	.57	10	.00	.00
19	.00	.29	.00	7.7	3.0	26	1.6	1.5	.52	1.6	.00	.00
20	.00	.27	.00	1.4	.51	41	.56	1.3	.54	.12	.00	.00
21	.00	.07	.00	.14	.15	4.0	.50	2.7	.48	.06	.10	.00
22	.00	.03	.00	.05	.13	32	.52	7.2	.49	.05	.05	.00
23	.00	.02	.00	.04	.13	6.0	.32	7.2	.46	.04	.06	.00
24	.00	.01	.00	.04	5.5	1.1	.31	5.6	.45	.02	.04	.00
25	.00	.00	.00	.04	2.2	.49	.24	3.4	.67	.02	.05	.00
26	.00	.01	.00	.14	.27	1.3	.21	2.4	5.3	.02	.09	.00
27	.00	.00	.00	.14	.15	1.8	.23	1.9	.05	.01	.03	.00
28	.00	.00	.00	.05	.40	.47	.21	1.7	.00	.00	.00	.00
29	.00	.00	.00	.04	---	.37	5.1	1.5	.00	.00	.00	.00
30	.00	.00	.00	.04	---	6.2	.75	3.4	.00	.00	.00	.00
31	.00	---	.00	.03	---	.81	---	3.5	---	.00	.00	---
TOTAL	1.05	15.52	.00	27.51	25.46	152.27	44.79	5076.1	27.74	19.74	23.11	.00
MEAN	.034	.52	.000	.89	.91	4.91	1.49	164	.92	.64	.75	.000
MAX	.54	7.1	.00	9.6	5.8	.46	10	2720	5.3	10	19	.00
MIN	.00	.00	.00	.00	.03	.01	.21	1.3	.00	.00	.00	.00
AC-FT	2.1	31	.00	55	50	302	89	10070	55	39	46	.00
CAL YR 1978	TOTAL	150.09	MEAN	.41	MAX	40	MIN	.00	AC-FT	298		
WTR YR 1979	TOTAL	5413.29	MEAN	14.8	MAX	2720	MIN	.00	AC-FT	10740		

BRAZOS RIVER BASIN

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08094800 NORTH BOSQUE RIVER AT HICO, TX

LOCATION.--Lat 31°58'41", long 98°02'04", Hamilton County, Hydrologic Unit 1206020204, on left bank at downstream side of bridge on U.S. Highway 281 near south boundary of Hico, 2.6 mi (4.2 km) downstream from Gilmore Creek, 5.0 mi (8.0 km) upstream from Honey Creek, and 92.4 mi (148.7 km) upstream from mouth.

DRAINAGE AREA.--359 mi² (930 km²).

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 (299.454 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow is affected at times by discharge from flood-detention pools of 40 floodwater-retarding structures with combined detention capacity of 65,720 acre-ft (81.0 hm³). These structures control runoff from 202 mi² (523 km²) in North Bosque and Green Creek drainage basin. Records furnished by the city of Stephenville show that during the year 1,280 acre-ft (1.58 hm³) of sewage effluent was discharged into river above station.

AVERAGE DISCHARGE.--17 years (water years 1963-79), 45.7 ft³/s (1.294 m³/s), 33,110 acre-ft/yr (40.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s (564 m³/s) Apr. 30, 1977, gage height, 22.27 ft (6.788 m), from rating curve extended above 9,000 ft³/s (255 m³/s); no flow at times in 1962-65, 1967-68, 1971, 1974, 1976, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 27.6 ft (8.41 m) May 23, 1952, from flood-marks, discharge 87,800 ft³/s (2,490 m³/s) by contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,140 ft³/s (259 m³/s) May 3, gage height, 18.70 ft (5.700 m), no other peak above base of 2,500 ft³/s (70.8 m³/s); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.07	1.5	3.4	3.2	39	200	27	3.8	33	2.1
2	.00	.00	.07	1.6	3.4	3.0	16	126	23	3.3	27	2.0
3	.00	.00	.06	1.9	3.4	4.5	14	3500	23	3.0	12	1.9
4	.00	.00	.04	1.9	3.5	4.1	13	3140	21	3.0	6.9	1.8
5	.00	.00	.03	1.9	4.4	4.7	14	1260	19	3.0	5.1	1.8
6	.00	.00	.02	2.0	5.1	3.6	13	864	22	2.9	4.1	1.8
7	.00	.00	.00	2.0	7.2	3.2	13	626	23	3.0	3.7	1.6
8	.00	.00	.00	2.0	4.4	3.0	14	459	21	3.2	3.4	1.4
9	.00	.00	.00	2.1	3.8	3.2	15	301	19	3.3	3.2	1.4
10	.00	.00	.00	3.4	3.2	3.4	16	204	16	3.0	2.8	1.4
11	.00	.00	.00	9.2	2.8	3.5	59	231	16	3.2	35	1.4
12	.00	.00	.04	9.7	2.6	3.4	34	159	14	3.5	22	1.4
13	.00	.00	.07	3.7	2.6	3.7	31	120	13	3.7	8.0	1.3
14	.00	.00	.13	3.0	2.7	3.9	31	94	13	3.9	5.3	1.3
15	.00	.00	.25	3.0	2.8	6.1	25	74	13	4.0	4.3	1.1
16	.00	.00	.34	2.4	2.7	16	20	54	12	3.9	3.4	.91
17	.00	.01	.44	2.4	3.8	17	23	42	12	4.5	3.0	.76
18	.00	2.2	.50	28	5.0	10	65	36	12	9.9	2.9	.76
19	.00	1.4	.56	377	5.0	18	41	33	12	12	2.6	.83
20	.00	.95	.56	9.7	6.0	70	31	30	12	9.5	2.4	1.2
21	.00	.65	.62	4.1	6.4	24	28	29	12	7.1	2.1	1.2
22	.00	.54	.62	2.8	5.2	90	23	31	12	5.8	2.4	1.2
23	.00	.50	.69	2.8	4.8	49	23	33	12	5.2	21	1.2
24	.00	.48	.76	2.6	4.6	14	22	27	11	5.2	7.4	1.2
25	.00	.41	.83	2.3	6.0	7.7	21	26	10	5.2	4.4	1.2
26	.00	.34	.99	2.2	7.1	5.8	20	23	20	4.9	3.2	.91
27	.00	.20	.99	2.4	3.9	8.0	19	21	23	5.1	3.0	.76
28	.00	.13	.99	2.8	5.7	7.6	19	21	11	5.2	2.8	.83
29	.00	.10	1.1	3.1	---	7.3	22	21	5.9	5.2	2.6	.83
30	.00	.09	1.1	3.4	---	96	28	21	4.4	5.2	2.3	.69
31	.00	---	1.3	3.4	---	74	---	27	---	5.1	2.1	---
TOTAL	.00	8.00	13.17	500.3	121.5	570.9	752	11833	464.3	148.8	243.4	38.18
MEAN	.000	.27	.42	16.1	4.34	18.4	25.1	382	15.5	4.80	7.85	1.27
MAX	.00	2.2	1.3	377	7.2	96	65	3500	27	12	35	2.1
MIN	.00	.00	.00	1.5	2.6	3.0	13	21	4.4	2.9	2.1	.69
AC-FT	.00	16	26	992	241	1130	1490	23470	921	295	483	76
CAL YR 1978	TOTAL	1997.43	MEAN	5.47	MAX	218	MIN	.00	AC-FT	3960		
WTR YR 1979	TOTAL	14693.55	MEAN	40.3	MAX	3500	MIN	.00	AC-FT	29140		

BRAZOS RIVER BASIN

08095000 NORTH BOSQUE RIVER NEAR CLIFTON, TX

LOCATION.--Lat 31°47'09", long 97°34'04", Bosque County, Hydrologic Unit 12060204, near right bank on downstream side of bridge on Farm Road 219, 0.5 mi (0.8 km) northeast of Clifton, 2.5 mi (4.0 km) downstream from Meridian Creek, and 42.0 mi (67.6 km) upstream from mouth.

DRAINAGE AREA.--968 mi² (2,507 km²).

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. Datum of gage is 605.43 ft (184.535 m) 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 (1.8 km) upstream at datum 17.02 ft (5.188 m) higher; Oct. 1, 1955, to Apr. 22, 1957, and Mar. 27, 1958, to Sept. 30, 1959, water-stage recorder (destroyed by floods of Apr. 27, 1957, and Oct. 4, 1959); and Oct. 1, 1959, to Jan. 1, 1961, nonrecording gage at present site and datum.

REMARKS.--Records good. The city of Clifton diverted 82 acre-ft (101,000 m³) from the river above the station for municipal use and returned 279 acre-ft (344,000 m³) of sewage effluent below station and pumpage from wells. The city of Meridian discharged sewage effluent into the river at about mile 56 (90 km, amount unknown). Flow is regulated at times by Soil Conservation Service reservoirs above North Bosque River near Hico (station 08094800).

AVERAGE DISCHARGE.--44 years (water years 1924-67) unregulated, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr); 12 years (water years 1968-79) regulated, 203 ft³/s (5.749 m³/s), 147,100 acre-ft/yr (181 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,800 ft³/s (2,630 m³/s) Oct. 4, 1959, gage height, 34.88 ft (10.631 m), from rating curve extended above 34,000 ft³/s (963 m³/s) on basis of contracted-opening measurement of 92,800 ft³/s (2,630 m³/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 (9.8 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,300 ft³/s (235 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 30	1030	15,900 450	18.67 5.691
May 4	0230	*34,300 971	30.15 9.190

Minimum daily discharge, 0.64 ft³/s (0.018 m³/s) Nov. 1, 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.64	4.6	3.9	16	28	719	468	786	68	85	26
2	.71	.67	4.7	3.9	16	28	460	848	896	58	428	26
3	.67	.66	5.2	3.1	16	44	355	6660	439	51	159	26
4	.69	.64	4.8	2.7	17	43	304	14700	334	43	86	25
5	.91	1.3	4.5	2.7	24	38	264	1940	324	43	59	24
6	.96	5.8	4.3	2.8	108	36	234	1380	292	44	48	23
7	.94	5.1	4.2	2.8	63	31	208	1020	247	44	41	24
8	.94	3.0	4.2	2.8	40	29	223	812	220	41	37	21
9	.90	2.0	3.9	2.6	33	28	191	634	205	39	34	21
10	.85	1.5	3.2	3.6	30	26	176	523	181	37	32	20
11	.85	1.7	3.1	19	30	25	195	636	156	34	41	20
12	.85	1.8	3.0	5.8	28	24	408	681	140	32	52	18
13	.83	1.7	2.9	5.6	26	24	252	465	126	31	74	17
14	.82	1.6	2.7	4.0	25	24	189	362	115	30	64	17
15	.79	2.0	2.5	3.3	24	26	169	295	99	28	48	16
16	.81	3.4	2.4	2.9	21	333	153	256	90	27	40	15
17	.74	4.9	2.2	2.5	20	191	172	228	84	28	35	15
18	.82	4.1	2.1	2.5	21	123	775	198	76	29	32	16
19	.77	7.6	2.0	548	21	326	522	190	70	28	30	16
20	.83	2.5	2.0	358	23	1940	335	188	66	30	29	18
21	.83	2.0	1.8	90	24	610	260	188	63	32	28	17
22	.74	1.8	1.5	44	23	864	224	183	59	37	31	17
23	.74	1.5	1.6	33	23	586	192	178	56	37	33	19
24	.74	1.4	2.1	26	34	355	169	171	51	32	28	18
25	.90	1.6	1.8	22	50	256	152	162	50	28	35	16
26	.79	4.6	1.6	21	38	205	136	140	165	28	79	15
27	.69	8.1	1.7	20	35	538	118	130	203	26	54	14
28	.72	6.0	2.0	19	31	292	110	155	133	25	41	14
29	.71	5.0	2.3	18	---	236	118	835	108	24	35	13
30	.69	4.5	2.6	18	---	4720	137	420	84	23	31	11
31	.67	---	3.8	18	---	1040	---	510	---	22	27	---
TOTAL	24.59	89.11	91.3	1311.5	860	13069	7920	35556	5918	1079	1876	558
MEAN	.79	2.97	2.95	42.3	30.7	422	264	1147	197	34.8	60.5	18.6
MAX	.96	8.1	5.2	548	108	4720	775	14700	896	68	428	26
MIN	.67	.64	1.5	2.5	16	24	110	130	50	22	27	11
AC-FT	49	177	181	2600	1710	25920	15710	70530	11740	2140	3720	1110
CAL YR 1978	TOTAL	4970.44	MEAN	13.6	MAX	648	MIN	.52	AC-FT	9860		
WTR YR 1979	TOTAL	68352.50	MEAN	187	MAX	14700	MIN	.64	AC-FT	135600		

BRAZOS RIVER BASIN

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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 (1.3 km) downstream from Thompson Hollow, 0.8 mi (1.3 km) north of intersection of State Highway 6 and Farm Road 56 in Valley Mills, and 28.0 mi (45.1 km) upstream from mouth.

DRAINAGE AREA.--1,146 mi² (2,968 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 524.55 ft (159.883 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 29, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair. 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 (82.4 hm³). These structures control runoff from 207 mi² (536 km²). 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 (7.448 m³/s), 3.12 in/yr (79 mm/yr), 190,500 acre-ft/yr (235 hm³/yr); 12 years (water years 1968-79) regulated, 247 ft³/s (6.995 m³/s), 179,000 acre-ft/yr (221 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft³/s (3,030 m³/s) Oct. 4, 1959, gage height, 40.22 ft (12.259 m), from floodmark, from rating curve extended above 28,200 ft³/s (799 m³/s) on basis of slope-area measurement of 107,000 ft³/s (3,030 m³/s); no flow Oct. 5-12, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1868, 43 ft (13.1 m) in May 1908. Floods in September 1936 and April 1945 reached a stage of about 38 ft (11.6 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge above 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Mar. 30	1345	16,300	462	26.82	8.175
May 4	0930	*31,600	895	35.48	10.814

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Oct. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	3.4	4.8	15	25	45	988	522	1250	111	81	38
2	.70	3.3	3.5	11	24	43	677	1040	1940	99	312	37
3	.61	3.5	3.1	11	24	65	526	2050	717	91	187	36
4	.54	4.3	3.2	11	23	69	467	18500	490	85	114	35
5	.61	7.1	3.6	11	29	56	410	2460	501	79	85	34
6	.70	25	3.8	11	114	55	375	1700	436	82	71	34
7	.61	14	3.7	10	119	49	339	1220	359	89	62	33
8	.54	11	3.7	8.9	69	45	356	948	316	86	57	32
9	.61	8.7	3.7	8.4	54	43	322	742	292	78	53	30
10	2.0	7.4	3.5	11	48	39	293	584	271	74	50	29
11	.64	6.2	4.1	166	46	37	294	718	246	70	58	28
12	.69	3.7	4.1	65	44	36	474	876	225	66	70	28
13	.61	3.4	3.6	37	41	36	364	530	212	64	75	28
14	.53	3.1	2.9	26	39	36	290	427	196	62	84	25
15	.49	2.9	3.4	20	37	36	260	360	178	61	66	25
16	.50	3.9	3.7	18	34	366	242	313	165	59	56	24
17	.51	6.4	3.8	15	32	282	241	280	153	59	51	29
18	.58	9.7	4.4	14	32	168	797	254	145	63	48	29
19	.68	54	4.0	385	32	331	696	236	138	63	45	29
20	.64	45	4.3	417	35	2510	441	221	131	65	44	33
21	.70	18	3.4	143	36	777	362	265	124	64	41	30
22	.70	10	2.9	71	37	1040	317	409	118	64	40	27
23	.69	7.0	3.4	51	36	558	284	280	111	66	55	28
24	1.1	3.0	3.0	40	45	380	254	236	104	62	43	30
25	2.2	1.8	2.7	35	78	291	235	210	101	58	41	29
26	3.8	5.6	5.3	33	62	242	216	191	150	56	85	27
27	3.9	31	5.0	31	51	811	199	180	259	55	72	26
28	3.4	16	3.5	28	49	375	187	238	175	54	56	26
29	4.0	10	3.3	27	---	285	185	1450	152	52	47	25
30	4.2	6.4	3.6	26	---	5430	208	472	130	49	43	23
31	3.5	---	16	26	---	1670	---	695	---	47	40	---
TOTAL	41.77	334.8	127.0	1782.3	1295	16206	11299	38607	9785	2133	2232	887
MEAN	1.35	11.2	4.10	57.5	46.3	523	377	1245	326	68.8	72.0	29.6
MAX	4.2	54	16	417	119	5430	988	18500	1940	111	312	38
MIN	.49	1.8	2.7	8.4	23	36	185	180	101	47	40	23
AC-FT	83	664	252	3540	2570	32140	22410	76580	19410	4230	4430	1760
CAL YR 1978	TOTAL	6801.60	MEAN	18.6	MAX	545	MIN	.49	AC-FT	13490		
WTR YR 1979	TOTAL	84729.87	MEAN	232	MAX	18500	MIN	.49	AC-FT	168100		

BRAZOS RIVER BASIN

08095300 MIDDLE BOSQUE RIVER NEAR MCGREGOR, TX

LOCATION.--Lat 31°31'33", long 97°21'56", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on county road, 1,100 ft (335 m) downstream from Pecan Creek, 5.2 mi (8.4 km) northeast of McGregor, and 7.4 mi (11.9 km) upstream from mouth.

DRAINAGE AREA.--182 mi² (471 km²).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 530.51 ft (161.699 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1959, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--20 years, 89.7 ft³/s (2.540 m³/s), 64,990 acre-ft/yr (80.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,300 ft³/s (943 m³/s) Oct. 31, 1974, gage height, 24.62 ft (7.504 m); no flow at times in 1960-64, 1967, 1971, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Historical flood information begins with a flood in 1889, which reached a stage of 28.5 ft (8.69 m). A flood in 1957 reached a stage of 28.2 ft (8.60 m); and floods in 1913 and 1942 or 1943 reached a stage of about 28 ft (8.5 m), from information by local residents.

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

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
June 1	1445	*12,100	343	13.27	4.045
June 2	1045	10,200	289	12.04	3.670

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.5	15	38	64	444	539	3290	67	16	6.6
2	.00	.00	1.7	11	39	67	324	231	2520	59	72	6.2
3	.00	.00	1.8	9.2	42	184	292	150	683	55	66	5.5
4	.00	.00	1.7	8.2	44	98	262	143	453	50	29	5.5
5	.00	.00	1.5	9.2	169	80	238	105	996	46	22	5.3
6	.00	.56	1.5	11	708	77	199	91	489	862	18	4.7
7	.00	.37	1.7	13	343	72	176	90	320	245	16	4.4
8	.00	.11	2.0	15	266	69	193	84	262	121	14	3.7
9	.00	.06	2.0	15	179	67	165	73	250	89	25	3.4
10	.00	.03	1.8	366	185	63	160	83	221	77	22	3.0
11	.00	.01	1.8	503	170	61	149	1150	192	67	76	2.7
12	.00	.01	1.8	165	149	60	120	381	171	58	68	2.6
13	.00	.00	1.8	110	126	60	105	204	159	51	31	2.2
14	.00	.00	1.8	100	124	55	97	161	140	46	25	2.1
15	.00	.01	1.8	91	103	76	88	131	120	42	20	1.8
16	.00	.04	1.8	85	82	380	76	109	110	37	18	1.6
17	.00	.04	1.8	80	77	367	92	98	97	39	17	1.5
18	.00	.02	1.8	73	78	280	143	86	90	38	15	2.0
19	.00	.11	1.8	74	88	490	133	83	82	39	14	5.9
20	.00	.22	1.9	80	88	789	134	75	76	92	12	13
21	.00	.11	1.7	65	86	694	102	78	71	57	11	14
22	.00	.06	1.4	55	89	724	93	263	67	41	9.5	8.5
23	.00	.01	1.2	53	84	351	80	122	62	35	25	8.0
24	.00	.01	.95	43	80	286	80	86	57	32	24	5.3
25	.00	.01	.99	45	82	251	74	77	53	29	15	4.7
26	.00	.37	.99	53	70	212	67	70	765	27	14	4.0
27	.00	1.4	.99	53	70	911	62	68	248	26	12	5.2
28	.00	1.4	.99	46	73	331	61	265	117	25	11	4.4
29	.00	1.5	.99	44	---	311	60	2060	89	22	8.8	3.3
30	.00	1.5	1.0	45	---	961	64	809	79	19	8.0	3.0
31	.00	---	22	42	---	430	---	311	---	17	7.1	---
TOTAL	.00	7.96	68.50	2377.6	3732	8921	4333	8280	12329	2510	741.4	144.1
MEAN	.000	.27	2.21	76.7	133	288	144	267	411	81.0	23.9	4.80
MAX	.00	1.5	22	503	708	961	444	2060	3290	862	76	14
MIN	.00	.00	.95	8.2	38	55	60	68	53	17	7.1	1.5
AC-FT	.00	16	136	4720	7400	17690	8590	16420	24450	4980	1470	286
CAL YR 1978	TOTAL	638.40	MEAN	1.75	MAX	45	MIN	.00	AC-FT	1270		
WTR YR 1979	TOTAL	43444.56	MEAN	119	MAX	3290	MIN	.00	AC-FT	86170		

BRAZOS RIVER BASIN

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08095400 HOG CREEK NEAR CRAWFORD, TX

LOCATION.--Lat 31°33'20", long 97°21'22", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 185, 5.6 mi (9.0 km) east of Crawford, and 9.8 mi (15.8 km) upstream from South Bosque River.

DRAINAGE AREA.--78.2 mi² (203 km²).

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

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 560.54 ft (170.853 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow is affected at times by discharge from flood-detention pool of a floodwater-retarding structure with detention capacity of 6,900 acre-ft (8.51 hm³). This structure controls runoff from 29.3 mi² (75.9 km²) in the Hog Creek drainage basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 37.7 ft³/s (1.068 m³/s), 27,310 acre-ft/yr (33.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,400 ft³/s (436 m³/s) Oct. 4, 1959, gage height, 14.31 ft (4.362 m); no flow at times in 1959, 1963-64, 1971, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 17.5 ft (5.33 m) Sept. 26, 1936. Flood in April or May 1957 reached a stage of 15.7 ft (4.79 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) June 2, gage height, 6.38 ft (1.945 m); no flow Oct. 1-25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.49	1.1	15	28	196	112	570	20	27	3.8
2	.00	.04	.46	1.0	16	28	159	93	901	17	37	3.3
3	.00	.03	.28	1.1	16	47	135	67	495	17	35	3.0
4	.00	.03	.17	.96	16	42	116	57	293	15	29	2.8
5	.00	.14	.11	1.0	38	36	97	49	266	15	27	2.5
6	.00	.31	.09	1.2	157	32	73	41	193	174	26	2.4
7	.00	.09	.08	1.3	119	30	37	36	148	55	25	2.1
8	.00	.06	.12	1.1	87	28	37	31	118	27	25	1.9
9	.00	.04	.16	1.1	62	27	51	29	96	20	27	1.7
10	.00	.04	.21	1.9	55	25	49	31	81	19	24	1.6
11	.00	.04	.24	175	49	24	47	126	64	19	51	1.6
12	.00	.03	.26	43	43	23	42	103	55	18	30	1.5
13	.00	.02	.29	30	39	23	38	59	50	17	25	1.4
14	.00	.02	.37	21	38	21	37	47	46	16	18	1.2
15	.00	.07	.40	19	34	27	35	40	42	5	14	1.1
16	.00	.17	.37	19	29	72	33	35	38	13	11	1.2
17	.00	.06	.33	18	28	108	40	32	34	12	8.7	1.1
18	.00	.04	.33	20	29	86	49	29	31	10	7.4	1.8
19	.00	.13	.40	20	29	134	42	27	29	10	6.4	2.6
20	.00	.06	.40	25	29	468	39	26	27	80	5.0	2.7
21	.00	.04	.40	21	28	236	36	27	25	16	5.1	1.9
22	.00	.05	.40	20	29	330	34	60	24	16	4.5	2.4
23	.00	.04	.49	19	27	220	31	67	22	15	6.8	2.0
24	.00	.02	.40	17	29	172	29	48	21	14	7.1	1.7
25	.00	.10	.49	17	49	142	27	36	20	12	6.3	1.5
26	.18	.22	.49	20	34	117	25	30	308	11	6.3	1.3
27	.08	.20	.40	19	31	208	23	27	89	11	5.5	1.2
28	.04	.39	.43	16	30	158	23	72	44	11	4.7	1.1
29	.03	.28	.54	17	---	140	24	404	26	27	5.9	.92
30	.03	.51	.47	17	---	286	25	159	22	27	4.6	.85
31	.03	---	2.5	15	---	221	---	110	---	27	4.1	---
TOTAL	.39	3.30	12.57	616.86	1185	3539	1669	2110	4178	786	519.4	56.17
MEAN	.013	.11	.41	19.9	42.3	114	55.6	68.1	139	25.4	16.8	1.87
MAX	.18	.51	2.5	175	157	468	196	404	901	174	51	3.8
MIN	.00	.02	.08	.96	15	21	23	26	20	13	4.1	.85
AC-FT	.8	6.5	25	1220	2350	7020	3310	4190	8290	1560	1030	111
CAL YR 1978	TOTAL	222.59	MEAN	.61	MAX	18	MIN	.00	AC-FT	442		
WTR YR 1979	TOTAL	14675.69	MEAN	40.2	MAX	901	MIN	.00	AC-FT	29110		

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 (7.4 km) upstream from mouth.

DRAINAGE AREA.--1,652 mi² (4,279 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 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 Corps of Engineers).

REMARKS.--The lake is formed by a rolled earthfill dam 24,618 ft (7,504 m) 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 ft (12.2 by 10.7 m) tainter gates. The outlet works consists of three gate-controlled outlets, 6.7 by 20.0 ft (2.0 by 6.1 m), opening into a 20.0-foot-diameter (6.1 m) concrete conduit and two 54-inch (1,370 mm) concrete pipes. Low-flow releases are made through two 54-inch (1,370 mm) butterfly valves. Flow into two wet wells is controlled by four 5.0 by 6.0 ft (1.5 by 1.8 m) slide gates that are used to release water downstream for the city of Waco municipal water supply. Capacity table No. 2C is based on a sedimentation survey completed in December 1970. Flow is affected at times by discharge from the flood-detention pools of 43 floodwater-retarding structures with a combined detention capacity of 73,700 acre-ft (90.9 hm³). These structures control runoff from 236 mi² (611 km²) in the Bosque River drainage basin. 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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 292,100 acre-ft (360 hm³) May 15, 1968, elevation, 470.86 ft (143.518 m); minimum since initial filling, 92,880 acre-ft (115 hm³) Oct. 25, 1978, elevation, 446.28 ft (136.026 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 192,300 acre-ft (237 hm³) May 5, elevation, 460.64 ft (140.403 m); minimum, 92,880 acre-ft (115 hm³) Oct. 25, elevation, 446.28 ft (136.026 m).

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

446.0	91,320	456.0	156,500
448.0	102,700	458.0	171,500
450.0	114,900	460.0	187,100
452.0	128,100	462.0	203,600
454.0	142,000		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100700	96320	97050	96150	114000	133400	170900	151900	176200	149800	149800	150500
2	100400	96200	97050	96150	114300	134400	168000	154700	182000	150000	150500	150300
3	100300	96030	97050	96090	114500	135800	164400	156500	179800	150100	151100	150100
4	100000	95920	96940	96150	114600	136300	160300	190100	175300	150300	151400	150000
5	99800	96490	96830	96200	116800	136900	158000	190800	173200	150500	151400	149800
6	99740	96430	96710	96430	120100	137200	156300	185700	168000	152800	151500	149700
7	99510	96320	96600	96490	121500	137700	153300	179800	163500	153800	151500	149500
8	99390	96200	96430	96540	122800	138100	150300	173200	159800	154000	151400	149300
9	99110	96030	96320	96600	123700	138400	149600	166300	155800	153800	151300	149000
10	98990	95920	96150	98940	124500	138700	150300	162900	152200	153800	152100	148800
11	98880	95810	96090	104200	125200	138900	150300	168900	149900	153200	153700	148600
12	98650	95750	95980	105500	125900	139100	150000	166700	149600	152500	153900	148500
13	98360	95640	95860	106200	126600	139300	149600	162900	150500	151900	154000	148200
14	98140	95750	95810	106500	127200	139600	149300	158600	151100	151100	154100	148000
15	97960	95750	95750	106900	127700	140800	149200	153600	151100	150500	153800	147600
16	97680	96090	95690	107400	128000	143300	149400	150600	151000	150100	153200	147400
17	97510	95980	95640	107900	128400	145800	150400	150100	150900	150600	152500	147200
18	97280	95920	95580	108300	128800	147500	151900	150000	150600	150800	151900	147900
19	97110	96200	95520	108600	129100	149200	154400	150000	150300	150900	151200	148300
20	97000	96490	95520	110600	129500	157200	155900	149900	150100	155800	150500	148500
21	96830	96830	95470	111200	130000	162400	155300	150200	150100	156200	150200	148500
22	96660	96830	95350	111700	130400	166200	153000	152100	150300	156400	150200	148400
23	96430	96830	95240	112000	130800	163500	150500	152500	150600	156000	151100	148300
24	96320	96770	95240	112200	131400	159900	149300	152500	150800	154400	151100	148200
25	97110	96770	95130	112500	131800	155800	149300	152400	151200	152600	151100	148200
26	97110	97280	94900	112800	132200	154600	149400	152200	157100	151100	151000	148000
27	96940	97220	94900	113100	132600	158300	149500	151900	156300	149800	151000	148000
28	96770	97170	94790	113300	133100	160500	149500	153900	152500	149800	150900	147800
29	96710	97170	94790	113500	---	162300	149700	169900	149800	149800	150900	147700
30	96540	97110	94790	113700	---	171900	149800	172100	149600	149800	150700	147600
31	96430	---	95980	113800	---	173100	---	168000	---	149800	150600	---
MAX	100700	97280	97050	113800	133100	173100	170900	190800	182000	156400	154100	150500
MIN	96320	95640	94790	96090	114000	133400	149200	149900	149600	149800	149800	147200
(†)	446.91	447.03	446.83	449.83	452.73	458.21	455.06	457.55	455.06	455.08	455.20	454.78
(+)	-4370	+680	-1130	+17820	+19300	+40000	-23300	+18200	-18400	+200	+800	-3000
(††)	2570	1940	2000	2220	1860	2020	2050	2080	2340	2430	2660	2490
CAL YR 1978	MAX	127700	MIN	94790	±	-21220	††	29520				
WTR YR 1979	MAX	190800	MIN	94790	±	+46800	††	26660				

† Elevation, in feet, at end of month.

± Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by the city of Waco.

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAY 23...	1759	362	23.5	150	23	56	3.6	12	.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)
MAY 23...	3.4	160	0	31	14	.3	7.6	207

BRAZOS RIVER BASIN

08095600 BOSQUE RIVER NEAR WACO, TX

LOCATION.--Lat 31°36'04", long 97°11'36", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 1637, 1.8 mi (2.9 km) downstream from Waco Lake Dam, 2.8 mi (4.5 km) upstream from mouth, and 4.7 mi (7.6 km) northwest of courthouse in Waco.

DRAINAGE AREA.--1,656 mi² (4,289 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 365.44 ft (111.386 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 21, 1960, nonrecording gage, and from Jan. 21 to Aug. 20, 1960, nonrecording gage below 11.38 ft (3.469 m) and water-stage recorder above. All gages at same site and datum. Dec. 30, 1959, to Aug. 29, 1967, auxiliary water-stage recorder 2.7 mi (4.3 km) downstream at datum 4.66 ft (1.420 m) lower. Since Aug. 30, 1967, auxiliary water-stage recorder 0.7 mi (1.1 km) downstream at datum 4.66 ft (1.420 m) lower.

REMARKS.--Records poor. Backwater from the Brazos River. Discharges below 2,000 ft³/s (56.6 m³/s) for the year is record of releases furnished by Corps of Engineers from Waco Lake. Flow is regulated by Waco Lake (see station 08095550). Records furnished by the city of Waco show that 26,670 acre-ft (32.9 hm³) was diverted for municipal use above station.

COOPERATION.--Records of releases furnished by the Corps of Engineers and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--20 years, 443 ft³/s (12.55 m³/s), 321,000 acre-ft/yr (396 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft³/s (1,950 m³/s) Oct. 4, 1959, gage height, 39.8 ft (12.13 m), from floodmark, from rating curve extended above 51,000 ft³/s (1,440 m³/s) on basis of computation of peak flow through gates at old Lake Waco; no flow at times in 1963-64, 1966-67, 1970, and 1972-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 44.5 ft (13.56 m) Sept. 27, 1936, discharge 96,000 ft³/s (2,720 m³/s), from information by local resident. Maximum stage may be the result of backwater from the Brazos River because the discharges on Apr. 22, 1945, 140,000 ft³/s (3,960 m³/s), and Apr. 20, 1957, 103,000 ft³/s (2,920 m³/s), exceeded the discharge corresponding to the maximum stage. The discharges for the 1936, 1945, and 1957 floods were obtained from rating curve for tainter gates at old Lake Waco.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,800 ft³/s (164 m³/s) May 6, gage height, 13.39 ft (4.081 m); maximum gage height, 13.41 ft (4.087 m) May 7, 8 (backwater from Brazos Lake); no flow at times.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	2810	300	4310	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	2940	300	4160	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	2930	300	4130	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	2930	300	4300	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	2050	4330	5020	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	570	5800	4560	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	2370	5730	3180	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	2300	5720	2860	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	1960	5700	2950	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	4430	2510	300	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	4000	2360	300	.00	.00
12	.00	.00	.00	.00	.00	.00	600	3560	.00	300	.00	.00
13	.00	.00	.00	.00	.00	.00	600	3310	.00	300	.00	.00
14	.00	.00	.00	.00	.00	.00	600	3170	.00	300	.00	.00
15	.00	.00	.00	.00	.00	.00	300	3110	300	300	.00	.00
16	.00	.00	.00	.00	.00	.00	300	2020	300	300	300	.00
17	.00	.00	.00	.00	.00	.00	.00	860	300	.00	300	.00
18	.00	.00	.00	.00	.00	.00	.00	430	300	.00	300	.00
19	.00	.00	.00	.00	.00	.00	.00	300	300	.00	300	.00
20	.00	.00	.00	.00	.00	.00	.00	300	300	.00	300	.00
21	.00	.00	.00	.00	.00	.00	.00	300	300	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	1680	300	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	3000	1680	300	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	2780	1680	300	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	3310	300	300	.00	865	.00	.00
26	.00	.00	.00	.00	.00	1470	150	300	.00	865	.00	.00
27	.00	.00	.00	.00	.00	.00	150	300	2370	865	.00	.00
28	.00	.00	.00	.00	.00	.00	150	300	2900	865	.00	.00
29	.00	.00	.00	.00	---	.00	150	300	2360	.00	.00	.00
30	.00	.00	.00	.00	---	.00	150	2340	300	.00	.00	.00
31	.00	---	.00	.00	---	2710	---	3980	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	13270.00	29350.00	62990	50370.00	5560.00	1500.00	.00
MEAN	.0000	.0000	.0000	.0000	.0000	428	978	2032	1679	179	48.4	.0000
MAX	.00	.00	.00	.00	.00	3310	2940	5800	5020	865	300	.00
MIN	.00	.00	.00	.00	.00	.00	.00	300	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	26320	58220	124900	99910	11030	2980	.00

CAL YR 1978 TOTAL 0.00 MEAN .0000 MAX .00 MIN .00 AC-FT 0
WTR YR 1979 TOTAL 163040.00 MEAN 447 MAX 5800 MIN .00 AC-FT 323400

BRAZOS RIVER BASIN

357

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 (3.5 km) downstream from bridge on La Salle Avenue and at mile 400.7 (644.7 km).

DRAINAGE AREA.--29,573 mi² (76,594 km²), approximately, of which 9,566 mi² (24,780 km²) 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 (106.479 m) 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 (6.3 km) upstream at datum 7.46 ft (2.274 m) higher.

REMARKS.--Water-discharge records good. Flow is largely regulated by Whitney and Waco Lakes (stations 08092500 and 08095550). Combined capacity of 18 reservoirs above station, 4,135,000 acre-ft (5.10 km³), of which 2,194,000 acre-ft (2.71 km³) is flood-control storage in Whitney and Waco Lakes. Records furnished by city of Waco show that during year they diverted 26,670 acre-ft (32.9 hm³) for municipal use above station; records furnished by the Brazos River Authority show that during year they returned 23,060 acre-ft (28.4 hm³) of treated sewage effluent above station. Many other small diversions above station for municipal supply, irrigation, and oilfield operation will not appreciably affect flow. Several observations of water temperature were made during the year. National Weather Service gage-height telemeter at station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08093500.

AVERAGE DISCHARGE.--42 years (water years 1899-1940) unregulated, 2,560 ft³/s (72.50 m³/s), 1,855,000 acre-ft/yr (2.29 km³/yr); 39 years (water years 1940-79) regulated, 2,275 ft³/s (64.43 m³/s), 1,648,000 acre-ft/yr (2.03 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft³/s (6,970 m³/s) Sept. 27, 1936, gage height, 40.90 ft (12.466 m), 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 (10.555 m) May 28, 1885, from Floodmark at site 3.9 mi (6.3 km) upstream.

EXTREME FOR CURRENT YEAR.--Maximum discharge, 19,700 ft³/s (558 m³/s) May 11, gage height, 18.49 ft (5.636 m); minim daily, 57 ft³/s (1.61 m³/s) Dec. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351	1210	94	1480	1670	783	4720	1880	13000	1560	707	1670
2	638	449	82	2280	972	617	3890	2930	17300	758	448	771
3	382	495	107	2460	1140	1020	3660	1040	11600	922	498	769
4	498	312	57	325	627	535	3730	4830	10100	1020	292	618
5	1030	248	66	224	1100	314	3200	17200	10600	1800	524	710
6	328	417	73	183	1580	513	257	19300	10700	584	646	957
7	170	517	65	168	1340	230	2560	19100	9100	380	862	937
8	128	262	304	433	1710	185	2380	19000	8240	703	712	775
9	79	316	1100	640	1450	189	1410	19000	6010	966	963	601
10	111	529	370	1420	1190	159	478	16200	5680	1510	869	354
11	512	377	167	1370	653	158	877	17800	4730	1030	1380	217
12	763	374	131	1180	293	155	892	16200	3060	1140	457	200
13	679	370	613	1050	1390	158	851	10700	2620	915	273	182
14	222	398	813	3430	1380	145	685	8910	2730	960	939	174
15	108	447	961	2100	2120	347	529	8500	3010	966	946	168
16	75	3530	986	1180	1440	874	363	7540	2930	875	1320	169
17	152	2870	845	444	1840	1900	481	3810	1470	529	1270	169
18	409	970	952	876	1570	1200	1040	3220	1350	514	1040	435
19	374	450	1000	1090	1270	932	1530	2620	1370	311	1400	696
20	666	248	1350	1250	2280	1240	2030	1050	2850	730	1320	689
21	720	228	1060	1090	861	792	1540	958	2690	916	1220	1220
22	282	154	815	807	1240	2060	1880	4450	2500	424	1520	1440
23	314	108	785	1030	805	4020	1790	5990	2390	366	1440	1490
24	593	88	808	1080	967	3810	1760	5470	788	2670	1240	1530
25	543	80	1010	587	1070	5390	2010	5380	847	2680	1650	1050
26	278	237	740	795	923	3950	2200	5320	2140	2630	1320	1190
27	388	138	1370	1400	938	1630	521	5270	2360	2420	1380	1090
28	160	925	1240	907	856	1650	557	4590	4240	1760	1470	1030
29	311	410	1060	1320	---	1540	628	12000	3970	2160	1400	1160
30	380	152	1040	1330	---	2660	840	14400	3060	1870	1360	1080
31	350	---	1800	1210	---	5810	---	11100	---	1080	1370	---
TOTAL	11994	17309	21864	35139	34675	44966	49289	275758	153435	37149	32236	23541
MEAN	387	577	705	1134	1238	1451	1643	8895	5115	1198	1040	785
MAX	1030	3530	1800	3430	2280	5810	4720	19300	17300	2680	1650	1670
MIN	75	80	57	168	293	145	257	958	788	311	273	168
AC-FT	23790	34330	43370	69700	68780	89190	97760	547000	304300	73690	63940	46690
CAL YR 1978	TOTAL	171851	MEAN	471	MAX	4200	MIN	27	AC-FT	340900		
WTR YR 1979	TOTAL	737355	MEAN	2020	MAX	19300	MIN	57	AC-FT	1463000		

BRAZOS RIVER BASIN

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 (14 m) downstream from bridge on Farm Road 413, 1.4 mi (2.3 km) downstream from Highbank Slough and Spring Branch, 2.6 mi (4.2 km) south of Highbank, and at mile 346.6 (557.7 km).

DRAINAGE AREA.--30,436 mi² (78,829 km²), of which 9,566 mi² (24,776 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

CAGE.--Water-stage recorder. Datum of gage is 279.29 ft (85.128 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Many diversions for municipal supply, irrigation, and industrial use above gage (amount unknown). Flow is affected by 20 upstream reservoirs with a combined capacity of 4,181,000 acre-ft (5.16 km³). During the year, Texas Power and Light Co. had no diversions to Tradinghouse Reservoir above this station. Flow is affected at times by discharge from flood-detention pools of 70 floodwater-retarding structures with combined detention capacity of 83,040 acre-ft (102 hm³). These structures control runoff from 234 mi² (606 km²) in the Tehuacana Creek, Castleman Creek, and Cow Bayou drainage basins. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 2,658 ft³/s (75.27 m³/s), 1,926,000 acre-ft/yr (2.37 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,900 ft³/s (1,640 m³/s) May 11, 1968, gage height, 21.88 ft (6.669 m); minimum daily, 41 ft³/s (1.16 m³/s) July 12, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1909, 42 ft (12.8 m) in December 1913 and 40 ft (12.2 m) in September 1936, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) June 2, gage height, 19.38 ft (5.907 m); minimum daily, 115 ft³/s (3.26 m³/s) Dec. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	574	411	391	2140	1260	1020	10800	1090	25300	3180	1340	1490
2	277	1020	229	1910	1660	983	17000	2680	37300	1950	1030	1720
3	476	623	173	2500	1170	840	10500	2820	25800	1210	903	1030
4	580	549	145	2230	1270	1250	7720	1770	17200	1160	691	959
5	395	551	149	823	1070	990	5600	9140	19900	1270	633	877
6	744	438	126	522	2340	697	3210	19400	21000	1940	505	847
7	729	475	120	414	4040	697	1030	20600	16400	1120	820	1090
8	330	429	120	370	3460	515	2380	20500	13100	1000	1030	1080
9	213	608	115	333	2610	403	2340	20500	10900	894	881	936
10	166	298	813	817	1770	349	1590	20100	7250	1240	1130	772
11	140	498	644	2280	1460	344	819	30500	8330	1780	1790	670
12	191	539	340	2440	1040	307	949	37900	5720	1420	2380	398
13	587	452	211	2180	708	285	1010	26000	3380	1400	1250	311
14	751	451	286	1510	1230	271	954	16300	2540	1220	736	268
15	536	453	809	3180	1390	276	858	12900	2570	1350	902	243
16	205	525	978	2030	1880	441	748	10300	2440	1250	1100	222
17	155	2670	1010	1230	1490	1970	797	7370	2460	1170	1490	207
18	129	2550	963	870	1720	3260	712	4180	1600	1110	1430	243
19	199	1290	998	828	1510	2050	1690	3200	1510	965	1240	348
20	369	740	1070	1160	1370	8540	3500	2410	1690	779	1520	848
21	462	655	1260	1250	2000	5380	3270	2560	1920	1530	1470	925
22	719	417	1260	1230	1150	4240	2560	16000	1980	1390	1410	1320
23	568	377	904	1020	1320	5910	2260	10000	1840	976	1670	1480
24	237	294	839	1150	1190	6140	2030	9380	1900	667	1870	1510
25	440	216	934	1150	1200	4610	1950	7140	1010	2470	1490	1540
26	757	217	1050	913	1250	5840	2150	6030	1150	2720	1790	1150
27	593	243	938	880	1120	3460	2160	5640	3050	3220	1510	1240
28	347	330	1340	1350	1060	1820	980	5560	6240	2680	1520	1180
29	350	763	1340	1060	---	1690	881	14300	5460	2150	1600	1120
30	186	705	1180	1340	---	1610	901	32100	4220	2300	1540	1230
31	356	---	1390	1350	---	3640	---	28700	---	2040	1500	---
TOTAL	12761	19787	22125	42460	44738	69828	93349	407070	255160	49551	40171	27254
MEAN	412	660	714	1370	1598	2253	3112	13130	8505	1598	1296	908
MAX	757	2670	1390	3180	4040	8540	17000	37900	37300	3220	2380	1720
MIN	129	216	115	333	708	271	712	1090	1010	667	505	207
AC-FT	25310	39250	43880	84220	88740	138500	185200	807400	506100	98280	79680	54060
CAL YR 1978	TOTAL	212578	MEAN	582	MAX	9750	MIN	41	AC-FT	421600		
WTR YR 1979	TOTAL	1084254	MEAN	2971	MAX	37900	MIN	115	AC-FT	2151000		

BRAZOS RIVER BASIN

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: November 1967 to current year. Pesticide analyses: October 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1967 to current year.

WATER TEMPERATURES: 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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,000 micromhos Aug. 24, 1978; minimum daily, 267 micromhos July 31, 1971, May 25, 1975, and Apr. 29, 1976.

WATER TEMPERATURES (1967-78): Maximum daily, 35.5°C July 15, 16, 1978; minimum daily, 1.0°C Jan. 9, 1968.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,850 micromhos Oct. 5; minimum daily, 332 micromhos Mar. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)
OCT											
03...	1115	527	2590	8.3	25.5	3.0	7.7	97	.8	36	50
NOV											
28...	1610	338	1540	8.3	14.0	30	10.5	105	1.1	770	620
DEC											
20...	1123	1110	2640	7.6	16.0	20	9.1	96	.9	24	K13
JAN											
18...	1100	887	2220	8.2	9.5	20	9.8	88	1.4	33	740
FEB											
14...	1225	1490	1790	8.2	15.0	35	9.7	99	1.0	60	130
MAR											
13...	1336	290	1500	8.1	18.0	6.0	11.2	122	1.6	43	K2
APR											
10...	1048	1800	580	8.1	18.0	50	8.6	95	1.3	93	400
MAY											
15...	1102	13000	1050	7.6	21.5	160	7.8	87	1.8	680	2100
JUN											
26...	1400	747	1460	8.0	30.5	9.2	10.6	139	2.8	40	20
JUL											
17...	1043	853	950	7.6	30.5	22	8.2	108	2.2	37	28
AUG											
21...	1300	1590	1100	7.7	30.5	60	8.6	115	1.4	K16	K8
SEP											
17...	1540	185	1300	7.7	25.0	3.6	11.8	142	1.0	K2	<1

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
03...	440	320	120	33	390	8.1	9.5	140	0	250
NOV										
28...	310	170	93	20	190	4.7	7.0	180	0	180
DEC										
20...	460	330	130	32	360	7.3	8.9	150	0	270
JAN										
18...	390	260	110	28	310	6.8	7.1	160	0	260
FEB										
14...	370	230	110	22	250	5.7	6.2	170	0	210
MAR										
13...	320	160	97	20	180	4.3	5.2	200	0	180
APR										
10...	180	43	63	6.2	43	1.4	3.1	170	0	53
MAY										
15...	230	110	72	12	110	3.2	5.2	140	0	120
JUN										
26...	290	130	84	20	190	4.8	5.2	200	0	150
JUL										
17...	240	100	77	12	100	2.8	4.6	170	0	110
AUG										
21...	240	140	73	15	130	3.6	4.2	130	0	120
SEP										
17...	300	130	84	23	160	4.0	5.5	210	0	140

BRAZOS RIVER BASIN

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	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)
OCT 03...	620	.6	3.8	1580	1500	.55	.08	.63	.17	.53
NOV 28...	300	.3	6.7	901	886	.87	.06	.93	.12	.66
DEC 20...	580	.3	3.8	1510	1460	.37	.03	.40	.09	.51
JAN 18...	500	.3	6.1	1330	1300	.74	.06	.80	.48	.52
FEB 14...	390	.4	5.3	1060	1080	1.2	.08	1.3	.10	.70
MAR 13...	270	.4	.3	861	852	.16	.02	.18	.02	.98
APR 10...	53	.3	7.9	329	313	.77	.04	.81	.04	.45
MAY 15...	180	.4	6.5	585	575	.45	--	--	--	.78
JUN 26...	270	.3	7.6	848	826	.33	.02	.35	.01	.54
JUL 17...	150	.3	7.7	544	545	.14	.02	.16	.03	.69
AUG 21...	190	.3	6.7	598	603	.27	.04	.31	.02	.60
SEP 17...	220	.3	5.3	740	742	.03	.02	.05	.15	.43

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	.70	.76	.270	.260	--	4.9	.3	8	11	95
NOV 28...	.78	.70	.180	.140	5.0	--	--	38	35	93
DEC 20...	.60	.57	.150	.140	5.9	--	--	34	102	85
JAN 18...	1.0	.81	.150	.110	5.2	--	--	32	77	95
FEB 14...	.80	.60	.090	.070	--	5.1	1.0	77	310	91
MAR 13...	1.0	.31	.030	.030	5.3	--	--	6	4.7	88
APR 10...	.49	.47	.110	.020	5.7	--	--	111	539	81
MAY 15...	.80	--	--	--	7.9	--	--	475	16700	69
JUN 26...	.55	.46	.040	.050	--	10	.5	27	54	97
JUL 17...	.72	.43	.100	.050	5.1	--	--	43	99	98
AUG 21...	.62	1.7	.130	.010	--	4.1	.5	72	309	91
SEP 17...	.58	.15	.020	.010	3.4	--	--	18	9.0	89

DATE	LENGTH OF EXPOSURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT 03...	27	16.0	16.5	45.9	.870	--
FEB 14...	27	.160	.160	.300	.040	--
MAR 13...	27	18.4	20.8	14.8	.000	--
AUG 21...	35	44.6	47.7	29.4	2.59	105

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

BRAZOS RIVER BASIN

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
OCT 03...	1115	.0	.00	.00	.0	.00	.00	.00	.06
FEB 14...	1225	.0	--	.00	.0	.00	.00	.00	.01
JUN 26...	1400	.0	--	.00	.0	.00	.00	.00	.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)	METHYL PARA- THION, TOTAL (UG/L)
OCT 03...	.00	.00	.00	.00	.00	.00	.01	.00	.00
FEB 14...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN 26...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 03...	.00	.00	.00	0	.00	.01	.00	.00
FEB 14...	.00	.00	.00	0	.00	.10	.01	.00
JUN 26...	.00	.00	.00	0	.00	.02	.00	.00

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 28,78 1610	MAR 13,79 1336	MAY 15,79 1102	JUN 26,79 1400
TOTAL CELLS/ML	100	180	640	2300
DIVERSITY: DIVISION	0.0	0.5	1.6	1.2
...CLASS	0.0	0.5	1.6	1.2
...ORDER	0.0	0.5	2.0	2.1
...FAMILY	1.1	1.9	2.3	2.9
...GENUS	1.1	1.9	2.3	3.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	180	8
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
...GOLENKINIA	--	-	--	-	--	-	67	3
...MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	22	13	64	10	250	11
...DICTYOSPHAERIUM	--	-	--	-	--	-	67	3
...SELENASTRUM	--	-	--	-	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	130	6
...CRUCIGENIA	--	-	--	-	--	-	200	9
...SCENEDESMUS	--	-	--	-	260#	40	34	1
...TETRASTRUM	--	-	--	-	--	-	130	6
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	--	-	17	1
...CHLAMYDOMONAS	--	-	--	-	64	10	300	13
...CHLOROGONIUM	--	-	--	-	--	-	67	3
...PLATYMONAS	--	-	--	-	--	-	--	-
...ZYGNEMATALES								
...DESMIDIACEAE								
...COSMARIUM	--	-	--	-	--	-	--	-

BRAZOS RIVER BASIN

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08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979--Continued

DATE TIME	NOV 28,78 1610		MAR 13,79 1336		MAY 15,79 1102		JUN 26,79 1400	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
....CYCLOTELLA	--	-	--	-	--	-	180	8
....MELOSIRA	--	-	--	-	--	-	150	7
....STEPHANODISCUS	--	-	--	-	--	-	--	-
...PENNALES								
...CYMBELLACEAE								
....AMPHORA	14	14	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	44#	25	--	-	--	-
....NAVICULACEAE								
....ENTOMONEIS	--	-	--	-	--	-	--	-
....NAVICULA	72#	71	44#	25	--	-	--	-
....NITZSCHIAEAE								
....NITZSCHIA	14	14	--	-	64	10	390#	17
....SURIPELLACEAE								
....SURIPELLA	--	-	66#	38	--	-	--	-
..CHRYSOPHYCEAE								
...CHRYSOMONADALES								
....OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
..XANTHOPHYCEAE								
...HETEROCOCCALES								
....CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	17	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	100	4
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-
....SCHIZOTRIX	--	-	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	17	1
....TRACHELOMONAS	--	-	--	-	130#	20	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
....GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	64	10	--	-

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

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

BRAZOS RIVER BASIN

08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 17, 79 1043	AUG 21, 79 1300	SEP 17, 79 1540
TOTAL CELLS/ML	5500	4600	600
DIVERSITY: DIVISION	1.5	1.5	0.6
...CLASS	1.6	1.5	0.6
...ORDER	2.3	2.3	1.4
...FAMILY	2.6	3.2	2.0
...GENUS	2.9	3.3	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	*	0	--	-	--	-
...COELASTRACEAE						
...COELASTRUM	200	4	240	5	--	-
...MICRACTINIACEAE						
...GOLINKINIA	--	-	--	-	--	-
...MICRACTINIUM	--	-	120	3	--	-
...OOCYSTACEAE						
...ANKISTRODESMUS	82	1	45	1	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-
...SELENASTRUM	82	1	--	-	--	-
...TETRAEDRON	*	0	--	-	--	-
...TREUBARIA	41	1	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	--	-	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	200	4	800#	17	--	-
...TETRASTRUM	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	--	-
...CHLAMYDOMONAS	180	3	45	1	--	-
...CHLOROGONIUM	--	-	--	-	--	-
...PLATYMONAS	--	-	180	4	--	-
...ZYGNEMATALES						
...DESMIDIACEAE						
...COSMARIUM	--	-	--	-	14	2
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...NITZSCHIA	940#	17	45	1	58	10
...SURIRELLACEAE						
...SURIRELLA	--	-	--	-	--	-
..CHRYSTOPHYCEAE						
...CHRYSONOMADALES						
...OCHROMONADACEAE						
...OCHROMONAS	--	-	*	0	--	-
..XANTHOPHYCEAE						
...HETEROCOCCALES						
...CHLOROTHECIACEAE						
...OPHIOCYTIUM	41	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	82	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	160	3	1000#	22	--	-
...ANACYSTIS	490	9	--	-	140#	24
...HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	--	-	240	5	170#	29
...OSCILLATORIACEAE						
...OSCILLATORIA	2500#	44	--	-	220#	36
...SCHIZOTHRIX	--	-	710#	15	--	-
...RIVULARIACEAE						
...RAPIDIOPSIS	--	-	400	9	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...EUGLENA	--	-	--	-	--	-
...TRACHELOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	*	0	--	-	--	-

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

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

BRAZOS RIVER BASIN

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08098290 BRAZOS RIVER NEAR HIGHBANK, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	12761	2560	1460	50400	580	20100	280	9500	440
NOV. 1978.....	19787	2250	1280	68500	500	26500	240	12900	400
DEC. 1978.....	22125	2290	1310	78100	510	30300	250	14700	410
JAN. 1979.....	42460	2070	1180	135000	440	51000	220	25200	380
FEB. 1979.....	44738	1960	1110	135000	420	50300	210	25100	370
MAR. 1979.....	69828	896	500	94500	140	26100	93	17600	230
APR. 1979.....	93349	722	400	101000	95	23900	75	18900	200
MAY 1979.....	407070	1160	650	719000	200	223000	120	134000	270
JUNE 1979.....	255160	833	470	321000	120	81900	86	59400	220
JULY 1979.....	49551	1090	610	81500	180	23800	110	15100	260
AUG. 1979.....	40171	1230	690	74500	210	22900	130	13700	280
SEPT 1979.....	27254	1180	660	48400	200	14500	120	8890	270
TOTAL	1084254	**	**	1910000	**	594000	**	355000	**
WTD.AVG.	2970	1160	650	**	200	**	120	**	270

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2340	2070	1900	2090	2420	2160	760	1580	584	1020	1500	1300
2	2590	2330	1950	2150	2440	1920	600	1370	730	1200	1540	1310
3	2730	2410	2000	2250	2430	1860	544	1300	644	1350	1600	1280
4	2760	2460	2020	2380	2380	1960	485	1470	842	1400	1650	976
5	2850	2430	2020	2260	2250	1880	562	1700	638	1390	1700	1000
6	2780	2300	1980	2320	1580	1800	708	1820	630	1370	1750	1080
7	2690	2250	1960	2150	1340	1730	726	1850	894	1300	1350	1110
8	2670	2300	1910	1870	1230	1760	778	1870	1240	1220	1260	1130
9	2660	2270	1870	1920	1580	1770	563	1850	1200	1270	1400	1250
10	2640	2260	1720	1980	1410	1780	600	1840	1160	1280	1170	1260
11	2630	2230	1980	1410	1660	1700	723	896	978	1320	1040	1290
12	2620	2190	2020	1300	1860	1590	684	679	1040	1150	1000	1260
13	2450	2290	2040	1380	2000	1510	631	794	924	1110	1270	1280
14	2410	2360	2070	1800	1830	1420	996	900	1100	1190	989	1270
15	2670	2320	2100	2150	2130	1400	764	1070	1250	1100	1000	1260
16	2730	2180	2170	2410	2150	1350	703	1210	1410	1010	1090	1250
17	2650	2430	2340	2360	2310	1100	723	1280	1400	906	1120	1280
18	2620	2470	2370	2240	2350	996	757	1360	1350	933	1100	1250
19	2650	2420	2400	2140	2370	1040	593	1490	1310	974	1050	1150
20	2500	2390	2420	2130	2330	332	573	1570	1270	914	1100	1060
21	2390	2300	2440	2250	2360	409	1160	1500	1200	802	1080	930
22	2550	2180	2520	2240	2370	654	1080	471	1150	763	1160	1000
23	2670	1990	2500	2110	2290	935	1060	1130	1250	910	1290	1110
24	2690	1690	2490	2100	2260	446	638	1210	1200	1020	1250	1210
25	2660	1710	2490	2180	2230	587	631	1490	1350	900	1290	1240
26	2430	1670	2470	2120	2160	595	558	1550	1330	802	1250	1260
27	2380	1710	2480	2180	2110	1040	1680	1600	909	1050	1300	1210
28	2330	1610	2470	2230	2170	1030	1770	1460	571	1080	1260	1210
29	2380	1550	1930	2360	---	1660	1750	821	584	1120	1220	1250
30	2310	1700	2490	2320	---	1620	1670	600	750	1100	1230	1190
31	2070	---	2250	2410	---	1200	---	693	---	1250	1240	---
MEAN	2560	2150	2190	2100	2070	1330	849	1300	1030	1100	1270	1190

BRAZOS RIVER BASIN

08098290 BRAZOS RIVER NEAR Highbank, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	---	17.0	3.0	5.0	11.5	18.5	22.5	22.5	---	---	---
2	28.5	---	21.0	---	5.0	10.5	---	23.0	22.5	---	---	---
3	28.5	---	12.0	4.0	5.0	15.0	---	---	23.5	---	---	---
4	28.0	---	13.0	5.0	5.0	12.0	16.0	---	24.0	---	---	---
5	29.0	---	14.0	4.0	---	15.0	16.0	---	24.0	---	---	---
6	22.5	---	12.0	5.0	5.0	15.0	20.5	21.5	---	---	---	---
7	22.0	---	8.0	3.0	5.0	16.0	20.0	21.5	---	---	---	---
8	---	---	5.0	---	4.0	18.0	20.0	22.0	---	---	---	---
9	22.0	---	4.5	---	3.5	---	20.0	22.0	---	34.0	---	---
10	26.0	---	6.0	5.0	5.0	13.0	21.5	22.0	---	34.5	---	---
11	27.0	---	7.0	6.0	12.5	---	24.5	---	---	---	---	---
12	28.0	---	9.0	---	13.5	12.5	25.0	19.5	---	---	---	---
13	27.0	---	10.0	5.5	---	13.0	24.0	---	---	---	---	---
14	24.0	24.0	9.0	---	16.5	18.0	25.0	---	---	---	---	---
15	22.0	16.5	---	6.5	14.5	---	---	---	---	---	---	---
16	24.0	26.0	11.0	8.0	9.0	---	27.0	---	---	---	---	---
17	21.0	16.5	12.5	9.5	6.0	---	22.5	---	---	---	---	---
18	23.0	18.5	12.5	13.0	6.0	17.0	23.0	---	---	---	---	---
19	24.0	---	15.5	14.0	4.5	17.0	22.5	---	---	---	---	---
20	---	---	16.5	11.5	7.5	16.5	22.5	---	---	---	---	---
21	24.0	14.0	16.5	9.5	7.0	17.0	23.0	---	---	---	---	---
22	22.0	15.5	15.0	10.5	11.0	17.0	20.0	---	---	---	---	---
23	25.0	15.5	---	8.0	14.0	18.0	23.0	---	---	---	---	---
24	23.0	19.5	11.5	8.5	---	17.0	24.5	---	---	---	---	---
25	21.0	20.0	9.5	6.5	---	17.0	26.0	---	---	---	---	---
26	---	19.5	10.5	7.5	---	19.0	24.0	---	---	---	---	---
27	---	14.5	9.5	6.0	9.5	19.0	24.0	22.5	28.5	---	---	---
28	---	15.0	11.5	7.5	11.5	18.0	24.0	23.0	29.5	---	---	---
29	---	---	---	6.0	---	17.5	21.5	23.5	---	---	---	---
30	---	16.5	---	7.5	---	20.0	---	---	---	---	---	---
31	---	---	---	5.0	---	---	---	23.5	---	---	---	---
MEAN	24.5	18.0	11.5	7.0	8.0	16.0	22.5	22.0	25.0	34.5	---	---

BRAZOS RIVER BASIN

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08098300 LITTLE POND CREEK AT BURLINGTON, TX

LOCATION.--Lat 31°01'35", long 96°59'17", Milam County, Hydrologic Unit 12070101, on left bank downstream from bridge on U.S. Highway 77, 1.0 mi (1.6 km) north of Burlington, 2.5 mi (4.0 km) downstream from Keys Creek, and 12.6 mi (20.3 km) upstream from mouth.

DRAINAGE AREA.--23.0 mi² (59.6 km²).

PERIOD OF RECORD.--October 1962 to current year.

Water-quality records: Sediment records: January 1966 to September 1975.

REVISED RECORDS.--WSP 2122: 1965. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 388.51 ft (118.418 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--17 years, 13.9 ft³/s (0.394 m³/s), 8.21 in/yr (209 mm/yr), 10,070 acre-ft/yr (12.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,570 ft³/s (243 m³/s) May 24, 1975, gage height, 16.90 ft (5.151 m); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1938, 17.5 ft (5.33 m) in 1950, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 11	0400	864	24.5	May 11	0400	3,320	94.0
Mar. 20	0230	1,020	28.9	May 21	1930	*7,500	212
Apr. 1	2130	2,680	75.9	May 29	1230	816	23.1
			13.14				10.04
			4.005				3.060

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.01	28	.28	.57	558	6.9	88	.00	.73	.00
2	.00	.00	.00	2.2	.28	.57	220	14	70	.00	.11	.00
3	.00	.00	.00	.92	.28	6.2	14	2.8	5.2	.00	.00	.00
4	.00	.00	.00	2.6	.52	3.9	6.6	78	2.8	.00	.00	.00
5	.00	.00	.00	23	115	1.3	2.7	4.1	319	.00	.00	.00
6	.00	.00	.00	13	355	.70	1.1	1.3	46	.00	.00	.00
7	.00	.00	.00	10	77	.46	.57	.50	2.4	.00	.00	.00
8	.00	.00	.00	2.2	25	.35	.30	.24	.78	.00	.00	.00
9	.00	.00	.00	.79	13	.27	.50	.11	.27	.00	.00	.00
10	.00	.00	.00	78	8.3	.20	.38	.06	.08	.00	.00	.00
11	.00	.00	.00	462	5.4	.19	.44	1230	.04	.00	70	.00
12	.00	.00	.00	12	4.6	.17	.38	132	.01	.00	32	.00
13	.00	.00	.00	3.2	4.4	.14	.24	3.7	.00	.00	.90	.00
14	.00	.00	.00	.99	9.5	.12	.11	1.2	.00	.00	.17	.00
15	.00	.00	.00	.59	4.1	.18	.06	.62	.00	.00	.03	.00
16	.00	.00	.00	.46	4.6	71	.05	.20	.00	.00	.00	.00
17	.00	.00	.00	.44	2.7	69	.05	.11	.00	.00	.00	.00
18	.00	.00	.00	.44	2.5	11	.05	.05	.00	.00	.00	.00
19	.00	.00	.00	.46	2.2	129	4.4	.02	.00	.00	.00	.00
20	.00	.00	.00	.70	2.8	408	75	.01	.00	.00	.00	.00
21	.00	.00	.00	.64	25	454	5.7	1450	.00	.00	.00	.00
22	.00	.83	.00	.43	1.8	119	2.5	1320	.00	.00	.00	.00
23	.00	.13	.00	.31	9.1	14	1.2	11	.00	.00	.00	.00
24	.00	.00	.00	.28	1.6	2.5	.73	2.0	.00	.00	.00	.00
25	.00	.00	.00	.28	.81	1.2	.38	.65	.00	.00	.00	.00
26	.00	12	.00	.28	.65	.73	.17	.27	.00	.00	.00	.00
27	.00	9.0	.00	.28	.57	.49	.06	.13	.00	.00	.00	.00
28	.00	.95	.00	.28	.57	.37	.03	.22	.00	191	.00	.00
29	.00	.18	.00	.28	---	.33	.03	315	.00	31	.00	.00
30	.00	.04	.00	.28	---	.58	.05	280	.00	8.0	.00	.00
31	.00	---	38	.28	---	144	---	34	---	2.8	.00	---
TOTAL	.00	23.13	38.01	645.61	677.56	1440.52	895.98	4910.97	534.58	232.80	103.94	.00
MEAN	.000	.77	1.23	20.8	24.2	46.5	29.9	158	17.8	7.51	3.35	.000
MAX	.00	12	38	462	355	454	558	1450	319	191	70	.00
MIN	.00	.00	.00	.28	.28	.12	.03	.01	.00	.00	.00	.00
CFSM	.000	.03	.05	.90	1.05	2.02	1.30	6.87	.77	.33	.15	.000
IN.	.00	.04	.06	1.04	1.10	2.33	1.45	7.94	.86	.38	.17	.00
AC-FT	.00	46	75	1280	1340	2860	1780	9740	1060	462	206	.00
CAL YR 1978	TOTAL	622.34	MEAN	1.71	MAX	163	MIN	.00	CFSM	.07	IN	1.01
WTR YR 1979	TOTAL	9503.10	MEAN	26.0	MAX	1450	MIN	.00	CFSM	1.13	IN	15.37
									AC-FT	1230		
									AC-FT	18850		

BRAZOS RIVER BASIN

08099000 LEON RESERVOIR NEAR RANGER, TX

LOCATION.--Lat 32°21'46", long 98°40'32", Eastland County, Hydrologic Unit 12070201, at outlet works near left end of dam on Leon River, 7.4 mi (11.9 km) south of Ranger, 8.7 mi (14.0 km) southeast of Eastland, and 274.1 mi (441.1 km) upstream from mouth.

DRAINAGE AREA.--259 mi² (671 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1955 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--The reservoir is formed by a rolled earthfill dam 3,700 ft (1,130 m) long. Storage began in April 1954 and dam was completed in June 1954. The emergency spillway is a 1,200-foot-wide (366 m) cut through natural ground near the left end of dam. The service spillway is an uncontrolled circular concrete drop inlet designed for a maximum discharge of 5,000 ft³/s (142 m³/s) through an 11-foot-diameter (3 m) concrete conduit. The dam is the property of Eastland County Water Supply District and was built to impound water for municipal use by the cities of Ranger, Olden, and Eastland. The capacity table is based on a survey made in 1952. 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.....	1,398.0	-
Crest of spillway.....	1,382.0	40,210
Crest of spillway (top of conservation pool).....	1,375.0	27,290
Lowest gated outlet (invert for water supply).....	1,335.0	869

COOPERATION.--The capacity curve, reservoir elevations, and diversion records were furnished by the Eastland County Water Supply District.

EXTREMES (at 1000) FOR PERIOD OF RECORD.--Maximum contents observed, 40,640 acre-ft (50.1 hm³) June 13, 1967, elevation, 1,382.2 ft (421.29 m); minimum observed since first appreciable storage, 15,880 acre-ft (19.6 hm³) Jan. 11-21, Feb. 5-7, Apr. 29, 30, 1956, elevation, 1,366.2 ft (416.42 m).

EXTREMES (at 1000) FOR CURRENT YEAR.--Maximum contents observed, 29,940 acre-ft (36.9 hm³) May 3, elevation, 1,376.6 ft (419.59 m); minimum, 17,640 acre-ft (21.8 hm³) Jan. 16-20, elevation, 1,367.8 ft (416.91 m).

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

1,367.0	16,740
1,372.0	22,850
1,377.0	30,620

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 1000

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19030	18330	18090	17860	17980	17860	25590	26210	27290	26980	26050	25150
2	18910	18330	18090	17860	17980	17860	25590	29090	27290	26980	26050	25000
3	18910	18210	18090	17860	17860	17980	25590	29940	27290	26980	25900	25000
4	18910	18210	18090	17860	17860	17980	25590	29430	27290	26830	25900	25000
5	18800	18210	18090	17860	17860	17980	25590	28590	27290	26830	25900	24850
6	18800	18210	18090	17750	17860	17980	25590	28270	27290	26830	25900	24850
7	18800	18210	18090	17750	17860	17980	25590	27940	27290	26830	25740	24850
8	18800	18210	18090	17750	17860	17980	25590	27780	27290	26830	25740	24850
9	18800	18210	17980	17750	17860	17980	25590	27620	27290	26830	25740	24850
10	18800	18210	17980	17750	17860	17980	25590	27620	27290	26670	25740	24850
11	18800	18210	17980	17750	17860	17980	25590	27450	27450	26670	25740	24700
12	18800	18210	17980	17750	17860	17980	25590	27450	27620	26670	25590	24700
13	18800	18210	17980	17750	17860	17980	25590	27290	27450	26670	25590	24700
14	18800	18210	17980	17750	17860	17980	25590	27290	27450	26670	25590	24700
15	18800	18210	17980	17750	17860	17980	25590	27290	27450	26670	25590	24560
16	18800	18210	17980	17640	17860	17980	25590	27290	27450	26670	25440	24560
17	18800	18330	17980	17640	17860	17980	25590	27290	27290	26670	25440	24560
18	18680	18330	17980	17640	17860	18090	25900	27290	27290	26670	25440	24560
19	18680	18330	17980	17640	17860	18090	26050	27290	27290	26520	25440	24410
20	18680	18330	17980	17640	17860	20240	26050	27290	27140	26520	25300	24410
21	18680	18330	17980	17750	17860	20490	26050	27290	27140	26520	25300	24410
22	18560	18330	17980	17860	17860	21130	26050	27450	27140	26520	25300	24410
23	18560	18330	17980	17860	17860	21380	26050	27450	27140	26360	25300	24410
24	18560	18210	17980	17860	17860	21910	26050	27450	27140	26360	25300	24260
25	18560	18210	17860	17860	17860	21910	26050	27450	27140	26360	25300	24260
26	18450	18210	17860	17980	17860	22050	26050	27290	27140	26210	25300	24120
27	18450	18210	17860	17980	17860	22050	26050	27290	27140	26210	25300	24120
28	18450	18210	17860	17980	17860	22050	25900	27290	26980	26210	25150	24120
29	18450	18210	17860	17980	---	22050	25900	27290	26980	26050	25150	24120
30	18330	18090	17860	17980	---	22850	25900	27290	26980	26050	25150	23980
31	18330	---	17860	17980	---	25000	---	27290	---	26050	25150	---
MAX	19030	18330	18090	17980	17980	25000	26050	29940	27620	26980	26050	25150
MIN	18330	18090	17860	17640	17860	17860	25590	26210	26980	26050	25150	23980
(†)	1368.4	1368.2	1368.0	1368.1	1368.0	1373.5	1374.1	1375.0	1374.8	1374.2	1373.6	1372.8
(+)	-700	-240	-230	+120	-120	+7140	+900	+1390	-310	-930	-900	-1170
(††)	179	151	155	191	146	145	136	155	183	248	229	211
CAL YR 1978	MAX	20370	MIN	16850	+	-2510	††	2340				
WTR YR 1979	MAX	29940	MIN	17640	+	+4950	††	2130				

† Elevation, in feet, at end of month.

± Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by Ranger, Olden, and Eastland.

BRAZOS RIVER BASIN

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08099000 LEON RESERVOIR NEAR RANGER, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (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
JAN 03...	0750	716	1.0	180	80	52	13	66	2.1
DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	
JAN 03...	9.1	126	0	57	130	.3	3.1	393	

BRAZOS RIVER BASIN

08099100 LEON RIVER NEAR DE LEON, TX

LOCATION.--Lat 32°10'25", long 98°31'58", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on State Highway 16, 1.5 mi (2.4 km) upstream from Flat Creek, 4.4 mi (7.1 km) northeast of De Leon, 6 mi (10 km) downstream from Hog Creek, and 250.1 mi (402.4 km) upstream from mouth.

DRAINAGE AREA.--479 mi² (1,241 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.93 ft (368.787 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow partly regulated by Leon Reservoir (station 08099000). Numerous diversions above station for municipal, steam powerplant operation, and other uses. Recording rain gage was discontinued May 31, 1978. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 45.5 ft³/s (1.289 m³/s), 32,960 acre-ft/yr (40.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,540 ft³/s (214 m³/s) Jan. 21, 1968, gage height, 15.50 ft (4.724 m); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.3 ft (5.88 m) occurred in May 1908 at a point 2,000 ft (610 m) downstream from present gage site and is the highest since that time, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) May 3, gage height, 10.75 ft (3.277 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.25	76	524	3.5	.13	61	.00
2	.00	.00	.00	.00	.00	.60	29	515	4.6	.04	4.0	.00
3	.00	.00	.00	.00	.00	28	18	1050	5.2	.00	.87	.00
4	.00	.00	.00	.00	.00	3.5	16	1100	5.5	.00	.42	.00
5	.00	.00	.00	.00	11	.17	20	472	5.3	.00	.21	.00
6	.00	.00	.00	.00	101	.07	10	275	3.9	.00	.08	.00
7	.00	.00	.00	.00	3.0	.05	6.6	178	2.6	6.8	.03	.00
8	.00	.00	.00	.00	.74	.12	5.7	123	2.0	.87	.00	.00
9	.00	.00	.00	.00	.18	.16	4.5	90	1.6	.42	.00	.00
10	.00	.00	.00	.00	.28	.05	5.1	71	2.8	.21	.00	.00
11	.00	.00	.00	.00	.71	.00	8.5	59	3.2	.08	11	.00
12	.00	.00	.00	.00	.82	.00	3.8	47	46	.03	.68	.00
13	.00	.00	.00	.00	.72	.00	3.4	39	30	.00	.28	.00
14	.00	.00	.00	.00	1.2	.00	2.2	33	23	.00	.11	.00
15	.00	.00	.00	.00	1.0	.09	1.5	28	17	.00	.03	.00
16	.00	.00	.00	.00	.17	32	1.1	23	10	.00	.00	.00
17	.00	.00	.00	.00	.00	3.4	22	20	4.5	.00	.00	.00
18	.00	.00	.00	2.0	6.6	2.5	134	17	2.7	.00	.00	.00
19	.00	.00	.00	107	4.7	145	39	14	1.7	.00	.00	.00
20	.00	.00	.00	40	3.8	622	17	12	1.5	.00	.00	.00
21	.00	.00	.00	15	3.8	62	8.9	12	1.2	.00	.00	.00
22	.00	.00	.00	3.8	3.6	38	5.7	46	.97	.00	174	.00
23	.00	.00	.00	.62	1.2	62	4.3	32	.77	.00	38	.00
24	.00	.00	.00	.03	14	24	3.3	20	.60	.00	7.4	.00
25	.00	.00	.00	.00	5.0	15	2.7	16	.51	.00	3.5	.00
26	.00	.00	.00	.00	.33	12	1.7	12	28	.00	.33	.00
27	.00	.00	.00	.00	.22	8.8	1.3	8.9	3.6	.00	.11	.00
28	.00	.00	.00	.00	.38	6.4	.95	7.6	1.1	.00	.03	.00
29	.00	.00	.00	.00	---	5.3	3.4	7.3	.60	.00	.00	.00
30	.00	.00	.00	.00	---	93	5.0	5.1	.28	.00	.00	.00
31	.00	---	.00	.00	---	149	---	4.3	---	.00	.00	---
TOTAL	.00	.00	.00	168.45	164.45	1313.46	460.65	4861.2	214.23	8.58	302.08	.00
MEAN	.000	.000	.000	5.43	5.87	42.4	15.4	157	7.14	.28	9.74	.000
MAX	.00	.00	.00	107	101	622	134	1100	46	6.8	174	.00
MIN	.00	.00	.00	.00	.00	.00	.95	4.3	.28	.00	.00	.00
AC-FT	.00	.00	.00	334	326	2610	914	9640	425	17	599	.00
CAL YR 1978	TOTAL	73.42	MEAN	.20	MAX	29	MIN	.00	AC-FT	146		
WTR YR 1979	TOTAL	7493.10	MEAN	20.5	MAX	1100	MIN	.00	AC-FT	14860		

BRAZOS RIVER BASIN

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08099300 SABANA RIVER NEAR DE LEON, TX

LOCATION.--Lat 32°06'50", long 98°36'19", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on Farm Road 587, 0.6 mi (1.0 km) downstream from Spring Branch, 4.0 mi (6.4 km) west of De Leon, 4.2 mi (6.8 km) upstream from Turkey Creek, and 12.2 mi (19.6 km) upstream from mouth.

DRAINAGE AREA.--264 mi² (684 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.59 ft (368.683 m) National Geodetic Vertical Datum of 1929 (levels by State Department of Highways and Public Transportation. Prior to Nov. 22, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow is affected by Nabors Lake (capacity unknown) on Spring Branch. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 31.5 ft³/s (0.892 m³/s), 1.62 in/yr (41 mm/yr), 22,820 acre-ft/yr (28.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) June 12, 1967, gage height, 22.05 ft (6.721 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 24 ft (7.3 m) in May 1908, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	0400	1,580 44.7	15.13 4.612
May 1	2330	*3,040 86.1	19.23 5.861
May 4	0130	2,190 62.0	17.41 5.307

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	.00	.26	.50	.84	.49	27	1180	1.6	1.8	5.8	.00		
2	.00	.00	.26	.20	.84	.58	22	754	2.4	1.1	.82	.00		
3	.00	.00	.26	.20	.84	1.2	9.6	546	2.5	.79	.38	.00		
4	.00	.00	.26	.20	.84	.66	5.9	1000	1.8	.63	.23	.00		
5	.00	.00	.26	.20	.84	.46	5.0	110	1.7	.38	.12	.00		
6	.00	.00	.26	.20	.84	.40	4.9	50	1.5	.46	.05	.00		
7	.00	.00	.26	.20	.84	.50	2.6	34	1.2	1.3	.03	.00		
8	.00	.00	.26	.20	.84	.47	1.9	24	1.1	.34	.02	.00		
9	.00	.00	.73	1.9	.84	.45	1.5	19	1.5	.25	.00	.00		
10	.00	.00	.81	2.7	.71	.40	2.3	15	3.8	.19	.00	.00		
11	.00	.00	.98	3.9	.60	.40	3.7	14	26	.11	.00	.00		
12	.00	.00	.98	1.6	.49	.55	3.0	12	19	.08	.00	.00		
13	.00	.00	.98	1.1	.48	.41	2.0	9.7	9.1	.05	.00	.00		
14	.00	.00	.98	1.0	.46	.40	1.3	7.3	4.7	.02	.00	.00		
15	.00	.00	.98	1.1	.39	.63	.96	5.6	2.9	.00	.00	.00		
16	.00	.30	1.1	1.5	.29	1.5	.72	4.7	2.1	.00	.00	.00		
17	.00	.90	1.1	1.7	.51	.99	18	4.0	1.4	.00	.00	.00		
18	.00	.07	1.1	3.0	.60	.90	101	3.7	1.1	.00	.00	.00		
19	.00	.04	1.1	50	.60	40	19	3.4	1.1	.00	.00	.00		
20	.00	.04	1.1	10	.60	621	7.6	2.8	1.1	.00	.00	.00		
21	.00	.05	1.1	1.9	.60	75	3.9	4.2	.94	.00	.00	.00		
22	.00	.10	1.1	1.5	.51	483	1.2	22	.90	.00	.00	.00		
23	.00	.11	1.1	.98	.49	132	.91	7.0	.81	.00	.00	.00		
24	.00	.11	1.1	.84	1.1	30	.77	6.4	.79	.00	.00	.00		
25	.00	.13	1.1	.84	1.0	16	.37	4.7	.92	.00	.00	.00		
26	.00	.20	1.1	.84	.50	10	.75	3.7	31	.00	.00	.00		
27	.00	.20	1.1	.84	.49	6.7	.60	3.2	72	.00	.00	.00		
28	.00	.20	1.1	.84	.49	5.1	.74	2.9	17	.00	.00	.00		
29	.00	.20	1.2	.84	.29	3.8	1.1	3.3	7.9	.00	.00	.00		
30	.00	.23	1.3	.84	---	23	.92	2.4	3.4	.00	.00	.00		
31	.00	---	1.0	.84	---	52	---	1.6	---	.00	.00	---		
TOTAL	.00	2.88	26.32	92.50	18.47	1508.99	251.24	3860.6	223.26	7.50	7.45	.00		
MEAN	.000	.096	.85	2.98	.66	48.7	8.37	125	7.44	.24	.24	.000		
MAX	.00	.90	1.3	50	1.1	621	101	1180	72	1.8	5.8	.00		
MIN	.00	.00	.26	.20	.29	.40	.37	1.6	.79	.00	.00	.00		
CFSM	.000	.000	.003	.01	.003	.18	.03	.47	.03	.001	.001	.000		
IN.	.00	.00	.00	.01	.00	.21	.04	.54	.03	.00	.00	.00		
AC-FT	.00	5.7	52	183	37	2990	498	7660	443	15	15	.00		
CAL YR 1978	TOTAL	617.36	MEAN	1.69	MAX	333	MIN	.00	CFSM	.006	IN	.09	AC-FT	1220
WTR YR 1979	TOTAL	5999.21	MEAN	16.4	MAX	1180	MIN	.00	CFSM	.06	IN	.85	AC-FT	11900

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 (3.2 km) upstream from U.S. Highways 67 and 377, 3.5 mi (5.6 km) west of Proctor, and 228.1 mi (367.0 km) upstream from mouth.

DRAINAGE AREA.--1,259 mi² (3,261 km²).

WATER-DISCHARGE RECORDS

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, nonrecording gage at same site and datum. Corps of Engineers gage-height telemeter at station.

REMARKS.--The lake is formed by a reinforced concrete gated structure and rolled earthfill section, total length 13,460 ft (4,103 m). The lake was operated as a detention basin from Jan. 30 to July 5, 1963. The gates were closed July 6, 1963, but lake was operated to elevation 1,156.0 ft (352.35 m) 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 ft (12.2 by 10.7 m) tainter gates. The spillway was designed to discharge 431,800 ft³/s (12,200 m³/s) at an elevation of 1,201.0 ft (366.06 m). The lake is operated for flood control and water conservation. One major reservoir partly regulates the inflow (see station 08099000). Inflow is affected at times by discharge from the flood-detention pools of 21 floodwater-retarding structures with a combined detention capacity of 32,950 acre-ft (40.6 hm³). These structures control runoff from 131 mi² (339 km²) in the Leon River and Rush Creek watersheds. The capacity table is based on a survey made in 1946. Borrow is not included in capacity totals. 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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 137,500 acre-ft (170 hm³) Jan. 26, 1968, elevation, 1,174.84 ft (358.091 m); minimum since first filling of lake, 23,050 acre-ft (28.4 hm³) Jan. 9, 1979, elevation, 1,151.35 ft (350.931 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 59,020 acre-ft (72.8 hm³) June 10, elevation, 1,161.92 ft (354.153 m); minimum, 23,050 acre-ft (28.4 hm³) Jan. 9, elevation, 1,151.35 ft (350.931 m).

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

1,150.0	20,150	1,158.0	42,790
1,152.0	24,570	1,160.0	50,620
1,154.0	29,790	1,162.0	59,390
1,156.0	35,840		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25430	23630	23740	23280	24570	24940	34030	36760	58480	57660	56040	54020
2	25350	23630	23740	23280	24570	24940	34180	40010	58480	57430	56940	53850
3	25210	23630	23740	23280	24570	24940	34310	46200	58430	57390	57030	53670
4	25080	23630	23740	23210	24650	24940	34340	52350	58430	57250	56980	53540
5	25260	23770	23740	23160	24690	24940	34400	55470	58480	57070	56940	53460
6	25230	23860	23740	23160	24690	24940	34370	56310	58430	56980	56850	53240
7	25210	23860	23740	23160	24690	24940	34370	56890	58340	56890	56760	53370
8	25180	23860	23740	23090	24690	24940	34440	57120	58290	56850	56620	53290
9	25040	23860	23740	23050	24790	24940	34400	57390	58570	56670	56490	53070
10	24940	23770	23630	23280	24820	24940	34560	57700	58480	56580	56580	52900
11	24840	23740	23510	23390	24820	24940	34560	57750	58340	56440	56670	52770
12	24820	23740	23510	23390	24820	24940	34560	57700	58340	56310	56490	52640
13	24740	23740	23510	23390	24820	24940	34500	57700	58250	56090	56350	52470
14	24690	23740	23510	23390	24820	24940	34500	57700	58200	55950	56260	52300
15	24620	23740	23510	23390	24820	24940	34440	57700	58160	55780	56180	52130
16	24570	23740	23510	23320	24820	24940	34470	57700	58110	55640	56040	51960
17	24450	23740	23510	23280	24820	24940	34750	57660	57880	55600	55860	51840
18	24330	23790	23460	23860	24820	25040	35010	57570	57700	55510	55690	51710
19	24210	23770	23390	24210	24820	25880	35330	57570	57610	55380	55510	51630
20	24140	23740	23390	24210	24820	27080	35520	57520	57570	55420	55330	51580
21	24100	23740	23390	24450	24820	28360	35580	57610	57480	55380	55160	51540
22	24100	23740	23390	24570	24820	29680	35620	57930	57340	55330	55160	51420
23	24020	23740	23390	24570	24820	31200	35620	57930	57300	55160	55200	51290
24	24100	23740	23370	24570	24820	31810	35580	57880	57210	55070	55070	51210
25	24020	23740	23300	24570	24820	32020	35580	57880	57160	55030	54980	51080
26	23910	23810	23280	24570	24890	32230	35550	57840	57750	54890	54980	51000
27	23860	23740	23280	24570	24940	32320	35550	57790	57930	54720	54810	50910
28	23860	23740	23280	24570	24940	32350	35490	57880	57930	54540	54630	50750
29	23860	23740	23280	24570	---	32410	35490	58480	57880	54370	54410	50670
30	23790	23740	23280	24570	---	32590	35450	58480	57840	54060	54280	50540
31	23700	---	23280	24570	---	33620	---	58520	---	54020	54190	---
MAX	25430	23860	23740	24570	24940	33620	35620	58520	58570	57660	57030	54020
MIN	23700	23630	23280	23050	24570	24940	34030	36760	57160	54020	54190	50540
(†)	1151.63	1151.65	1151.45	1152.00	1152.15	1155.30	1155.88	1161.81	1161.66	1160.80	1160.84	1159.98
(+)	-1950	+40	-460	+1290	+370	+8680	+1830	+23070	-680	-3820	+170	-3650

CAL YR 1978 MAX 41660 MIN 23280 ± -18200
WTR YR 1979 MAX 58570 MIN 23050 ± +24890

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

BRAZOS RIVER BASIN

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08099400 PROCTOR LAKE NEAR PROCTOR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	
NOV 14...	1010	951	17.5	200	110	42	23	98	3.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
NOV 14...	10	114	0	59	200	.3	4.4	493

BRAZOS RIVER BASIN

08099500 LEON RIVER NEAR HASSE, TX

LOCATION.--Lat 31°57'28", long 98°27'32", Comanche County, Hydrologic Unit 12070201, on left bank at downstream side of bridge on U.S. Highways 67 and 377, 500 ft (150 m) upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 0.3 mi (0.5 km) upstream from Walnut Creek, 2.0 mi (3.2 km) downstream from Proctor Lake, 2.1 mi (3.4 km) northeast of Hasse, and 225.2 mi (362.4 km) upstream from mouth.

DRAINAGE AREA.--1,261 mi² (3,266 km²).

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

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 (339.855 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Proctor Lake (station 08099400) since October 1963. Numerous diversions above station for municipal, steam powerplant operation, and other uses. National Weather Service rain gage and gage-height telemeters at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1940-63) prior to completion of Proctor Lake, 151 ft³/s (4.276 m³/s), 109,400 acre-ft/yr (135 hm³/yr); 16 years (water years 1964-79) regulated, 97.3 ft³/s (2.756 m³/s), 70,490 acre-ft/yr (86.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft³/s (1,090 m³/s) May 24, 1952, gage height, 21.49 ft (6.550 m); maximum gage height, 21.72 ft (6.620 m) 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 site about 2.5 mi (4.0 km) upstream, flood of May 1908 was 9.1 ft (2.77 m) higher than that of May 24, 1952, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) May 3, gage height, 9.14 ft (2.786 m); no flow Nov. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.65	.58	1.8	2.1	1.2	2.4	11	2.2	4.5	29	23
2	1.7	.87	.57	1.3	2.0	1.5	2.2	5.9	2.5	3.9	14	24
3	1.3	.54	.50	.62	2.0	3.2	2.1	312	2.4	3.6	6.2	24
4	.98	1.5	.98	1.0	2.6	2.9	2.1	16	2.0	3.2	6.0	27
5	2.1	5.2	.88	31	3.7	2.7	1.8	6.3	2.1	3.2	5.9	31
6	2.7	4.3	.60	3.3	4.2	2.7	1.6	5.6	1.8	3.0	5.8	34
7	2.7	3.5	.49	.68	3.1	2.7	1.6	4.9	1.5	2.8	8.7	39
8	2.5	3.4	3.2	.46	2.4	1.5	1.8	4.3	1.1	2.3	22	30
9	2.6	1.8	2.1	.54	1.3	1.1	1.6	3.7	1.2	2.0	25	29
10	1.8	1.6	1.6	2.5	1.2	1.1	1.8	3.5	1.4	2.9	29	28
11	1.7	.78	1.4	2.6	1.3	2.4	4.8	4.0	1.5	3.9	32	28
12	1.5	.03	.85	1.5	1.3	2.4	2.3	4.2	1.2	8.5	30	22
13	1.3	1.3	.99	1.9	1.3	2.1	1.6	3.7	.94	25	23	22
14	2.4	2.1	1.2	1.7	1.3	1.7	2.2	3.6	.79	23	6.5	21
15	2.0	1.4	1.1	1.5	1.8	2.7	2.3	2.8	.63	23	5.6	16
16	1.9	3.0	1.2	.86	1.6	4.3	2.5	2.4	.56	23	16	.16
17	1.4	2.0	1.1	.72	2.1	3.4	3.6	2.4	.56	23	39	16
18	32	1.3	1.1	3.0	1.8	4.2	5.3	1.5	.95	25	26	16
19	114	1.2	.92	7.7	1.9	8.3	2.6	1.6	5.8	24	26	17
20	.91	1.4	.73	2.0	2.0	10	2.1	1.6	5.6	24	24	18
21	.16	.95	.70	1.0	2.6	6.7	2.0	2.2	4.5	25	19	18
22	2.9	.72	.73	.82	2.6	8.3	1.8	3.6	5.4	24	23	17
23	5.0	.71	.75	.66	2.7	3.8	1.2	3.6	5.5	24	33	16
24	56	.77	.89	.54	2.4	2.4	1.4	2.9	5.5	24	26	14
25	2.7	.93	.99	.63	1.8	2.0	1.6	2.9	5.4	23	25	11
26	.79	.86	.86	.73	1.1	2.2	3.2	3.0	8.7	23	25	11
27	.95	.71	.76	.63	1.2	1.7	1.8	2.7	7.6	23	25	11
28	.60	.53	1.7	2.8	1.1	1.9	1.5	3.1	5.6	18	25	13
29	.43	.69	1.6	2.6	---	2.1	6.3	18	5.4	18	24	16
30	.36	.58	1.5	2.4	---	2.9	5.2	5.2	5.0	22	22	15
31	.46	---	2.3	2.0	---	2.5	---	2.7	---	29	22	---
TOTAL	249.64	45.32	34.87	81.49	56.5	98.6	74.3	450.9	94.83	486.8	648.7	623
MEAN	8.05	1.51	1.12	2.63	2.02	3.18	2.48	14.5	3.16	15.7	20.9	20.8
MAX	114	5.2	3.2	31	4.2	10	6.3	312	8.2	29	39	39
MIN	.16	.03	.49	.46	1.1	1.1	1.2	1.5	.56	2.0	5.6	11
AC-FT	495	90	69	162	112	196	147	894	188	966	1290	1240

CAL YR 1978 TOTAL 4426.68 MEAN 12.1 MAX 136 MIN .03 AC-FT 8780
WTR YR 1979 TOTAL 2944.95 MEAN 8.07 MAX 312 MIN .03 AC-FT 5840

BRAZOS RIVER BASIN

375

08100000 LEON RIVER NEAR HAMILTON, TX

LOCATION.--Lat 31°47'19", long 98°07'16", Hamilton County, Hydrologic Unit 12070201, on downstream side of bridge on U.S. Highway 281, 2.2 mi (3.5 km) upstream from Mesquite Creek, 3.6 mi (5.8 km) downstream from Bear Creek, 5.9 mi (9.5 km) north of Hamilton, and 172.9 mi (278.3 km) upstream from mouth.

DRAINAGE AREA.--1,891 mi² (4,898 km²).

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 (291.200 m) National Geodetic Vertical Datum of 1929. Jan. 7, 1925, to Sept. 30, 1931, nonrecording gage 1.4 mi (2.3 km) downstream at datum 1.87 ft (0.570 m) higher. Sept. 1 to Nov. 22, 1960, nonrecording gage at same site and at 5.00-foot (1.524 m) higher datum. Nov. 22, 1960, to Sept. 30, 1972, recording gage at same site and at 5.00-foot (1.524 m) higher datum.

REMARKS.--Records good. Since 1960, at least 10 percent of drainage area is regulated by Proctor Lake (station 08099400) and by other smaller reservoirs. Numerous diversions above station for irrigation, municipal supply, and 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 (14.3 hm³). These structures control runoff from 43.9 mi² (113.7 km²) in the (northeast tributaries) drainage basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1926-31) unregulated, 130 ft³/s (3.682 m³/s), 94,180 acre-ft/yr (116 hm³/yr); 19 years (water years 1961-79) regulated, 152 ft³/s (4.305 m³/s), 110,100 acre-ft/yr (136 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s (527 m³/s) Sept. 9, 1962, gage height, 31.93 ft (9.732 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1858, 38.4 ft (11.70 m) in May 1908 and December 1913; flood in September 1911 reached a stage of 37.0 ft (11.28 m), all at present site and datum, from information by local residents. The flood in October 1959 reached a stage of 34.1 ft (10.39 m), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,820 ft³/s (137 m³/s) May 3, gage height, 23.74 ft (7.236 m); no flow at times.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	.15	.40	.00	4.7	7.1	188	344	80	20	1.0	6.8
2	9.2	.00	.36	.00	4.0	6.2	96	352	69	14	198	5.4
3	3.4	.00	.24	.00	4.2	9.1	69	1850	60	11	140	5.1
4	1.5	.00	.18	.00	5.8	8.1	56	2330	48	8.6	50	4.4
5	.89	.00	.04	.00	7.6	6.5	48	747	44	6.9	15	3.3
6	.42	.00	.03	.00	8.2	5.7	40	331	44	6.6	7.5	3.1
7	.17	.00	.00	.00	8.2	4.9	35	203	37	5.8	4.4	1.9
8	.00	.00	.00	11	7.9	4.4	37	143	33	4.6	2.6	1.1
9	.00	.00	.00	10	8.2	4.3	33	124	31	3.0	2.0	.66
10	.00	.00	.00	8.8	9.3	4.3	31	103	30	2.3	2.0	.32
11	.00	.00	.00	8.5	9.6	4.1	180	92	29	1.6	2.8	6.3
12	.00	.00	.00	6.8	8.8	4.1	163	91	27	.98	57	6.3
13	.00	.00	.00	5.6	8.2	3.8	95	83	25	.74	28	4.4
14	.00	.00	.00	5.1	7.3	3.8	54	76	24	.56	16	4.0
15	.00	.00	.00	4.9	6.6	3.8	38	71	22	.58	14	3.4
16	.00	.00	.00	5.6	5.8	22	31	62	21	.52	9.8	2.4
17	.00	.00	.00	5.1	6.1	33	37	57	20	2.9	6.2	1.6
18	.00	.00	.00	4.9	6.8	16	154	52	19	8.5	4.1	.92
19	.00	32	.00	14	6.8	195	80	47	17	4.0	3.3	2.6
20	.00	4.7	.00	80	7.3	112	72	44	16	2.7	9.8	1.7
21	11	1.6	.00	59	7.9	71	49	44	15	4.0	7.3	.59
22	4.5	1.9	.00	18	8.2	131	37	52	14	4.0	4.6	.52
23	2.2	1.5	.00	11	9.0	126	32	48	13	3.9	33	6.3
24	1.1	1.2	.00	8.2	20	93	28	42	12	4.4	19	6.8
25	.44	1.0	.00	6.8	21	61	26	40	13	3.6	18	5.8
26	.22	.83	.00	6.3	9.8	41	23	38	106	3.0	14	4.9
27	3.8	.74	.00	6.1	7.6	51	22	37	897	2.6	11	3.4
28	2.2	.66	.00	5.6	7.2	34	20	39	115	2.0	10	2.0
29	1.3	.45	.00	5.1	---	29	22	184	50	1.4	11	.92
30	.74	.40	.00	5.1	---	887	24	195	30	1.1	9.6	.32
31	.36	---	.00	4.9	---	290	---	125	---	.82	8.2	---
TOTAL	45.74	47.13	1.25	306.40	232.1	2272.2	1820	8046	1961	136.70	719.2	97.25
MEAN	1.48	1.57	.040	9.88	8.29	73.3	60.7	260	65.4	4.41	23.2	3.24
MAX	11	32	.40	80	21	887	188	2330	897	20	198	6.8
MIN	.00	.00	.00	.00	4.0	3.8	20	37	12	.52	1.0	.32
AC-FT	91	93	2.5	608	460	4510	3610	15960	3890	271	1430	193
CAL YR 1978	TOTAL	2089.27	MEAN	5.72	MAX	229	MIN	.00	AC-FT	4140		
WTR YR 1979	TOTAL	15684.97	MEAN	43.0	MAX	2330	MIN	.00	AC-FT	31110		

BRAZOS RIVER BASIN

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 (240 m) downstream from U.S. Highway 84 bridge in Gatesville, 0.3 mi (0.5 km) downstream from Dodds Creek, 5.2 mi (8.4 km) upstream from Cottonwood Creek, and 99.0 mi (159.3 km) upstream from mouth.

DRAINAGE AREA.--2,342 mi² (6,066 km²).

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 (220.629 m) 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 (240 m) upstream at same datum.

REMARKS.--Records fair. Some upstream regulation by Lake Proctor (08099400) and other smaller reservoirs. Flow at times slightly affected by discharge from 18 floodwater-retarding structures, having a combined detention capacity of 12,600 acre-ft (15.5 hm³). These structures control runoff from 47.0 mi² (121.7 km²) in the northeast tributaries and Pecan Creek drainage basins. Numerous diversions above station for irrigation, municipal supply, and oilfield operation. The city of Hamilton reported that 502 acre-ft (619,000 m³) was diverted above station during the water year for municipal use and 569 acre-ft (702,000 m³) was returned to the Leon River as sewage effluent. The city of Gatesville reported that 764 acre-ft (942,000 m³) of sewage effluent was discharged into the Leon River below station during the water year. The city of Gatesville obtains all their municipal water from ground-water wells. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 253 ft³/s (7.165 m³/s), 183,300 acre-ft/yr (226 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,200 ft³/s (1,450 m³/s) Oct. 4, 1959, gage height, 34.14 ft (10.406 m), from rating curve extended above 41,000 ft³/s (1,160 m³/s); no flow at times in 1951-52, 1954-55, all 1971, all 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, about 35 ft (10.7 m) in May 1908, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,550 ft³/s (2.14 m³/s) June 1, gage height, 25.21 ft (7.684 m); no flow Nov. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.39	.62	1.9	5.4	38	1280	548	4180	116	14	15
2	.62	.50	.64	1.5	5.4	26	438	558	3780	86	69	14
3	.61	.53	.55	1.4	5.4	41	334	575	505	68	107	13
4	.55	.58	.55	1.5	5.8	44	268	1320	327	54	157	10
5	.55	6.2	.55	1.7	16	37	211	3540	506	45	144	8.7
6	.55	5.5	.49	1.7	84	28	200	2410	304	334	97	7.1
7	.55	.13	.53	1.6	55	23	177	630	234	481	65	6.3
8	.55	.00	.48	1.7	53	22	169	450	196	125	46	6.0
9	.55	.01	.48	1.5	37	20	165	353	174	69	34	5.8
10	.58	.23	.48	21	23	17	153	303	160	63	25	5.6
11	.55	.24	.48	123	18	15	169	347	142	47	18	5.5
12	.55	.37	.41	118	14	14	260	316	129	37	13	5.3
13	.51	.51	.41	39	13	13	299	277	117	30	38	4.9
14	.38	.56	.41	12	12	14	200	242	105	25	49	4.8
15	.29	.89	.48	7.5	11	23	157	217	94	21	37	4.6
16	.27	1.4	.49	5.6	9.7	116	131	197	84	18	33	4.5
17	.27	.98	.43	5.3	9.0	177	115	183	76	16	28	4.4
18	.27	.77	.48	5.4	9.0	150	130	171	69	15	25	4.4
19	.27	1.3	.55	5.4	8.6	140	262	162	62	47	21	4.5
20	.27	1.4	.61	5.4	8.6	781	239	154	56	169	16	4.4
21	.27	1.1	.62	5.1	8.6	1230	175	151	49	87	25	4.3
22	.27	2.2	.69	18	9.0	776	156	263	44	56	23	4.1
23	.27	1.8	.69	55	9.4	555	131	177	40	43	29	4.0
24	.24	1.5	.76	44	9.4	311	114	169	36	35	47	3.9
25	1.2	1.3	.76	31	9.7	239	103	151	32	29	31	3.8
26	.60	2.4	.82	17	29	201	93	138	317	27	48	3.7
27	.22	.80	.89	11	41	923	84	129	547	25	46	3.6
28	.14	.64	.96	8.6	41	796	76	196	653	24	36	3.6
29	.14	.59	1.2	7.0	---	268	86	872	430	22	37	3.5
30	.14	.62	1.4	6.2	---	1280	78	611	179	18	24	3.4
31	.26	---	3.6	6.0	---	2950	---	558	---	15	18	---
TOTAL	13.11	35.44	22.51	571.0	560.0	11268	6453	16368	13627	2247	1400	176.7
MEAN	.42	1.18	.73	18.4	20.0	363	215	528	454	72.5	45.2	5.89
MAX	1.2	6.2	3.6	123	84	2950	1280	3540	4180	481	157	15
MIN	.14	.00	.41	1.4	5.4	13	76	129	32	15	13	3.4
AC-FT	26	70	45	1130	1110	22350	12800	32470	27030	4460	2780	350
CAL YR 1978	TOTAL	1949.83	MEAN	5.34	MAX	81	MIN	.00	AC-FT	3870		
WTR YR 1979	TOTAL	52741.76	MEAN	144	MAX	4180	MIN	.00	AC-FT	104600		

BRAZOS RIVER BASIN

377

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 (38 m) downstream from bridge on Farm Road 116, 0.1 mi (0.2 km) downstream from Beehouse Creek, 0.6 mi (1.0 km) northeast of Pidcoke, 4.9 mi (7.9 km) upstream from Table Rock Creek, and 34.6 mi (55.7 km) upstream from mouth.

DRAINAGE AREA.--455 mi² (1,178 km²).

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 (224.549 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--29 years, 91.0 ft³/s (2.577 m³/s), 2.72 in/yr (69 mm/yr), 65,930 acre-ft/yr (81.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,200 ft³/s (1,870 m³/s) Oct. 4, 1959, gage height, 40.1 ft (12.22 m), from floodmark, from rating curve extended above 30,000 ft³/s (850 m³/s) on basis of slope-area measurement of 55,800 ft³/s (1,580 m³/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 above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	0345	4,370 124	12.10 3.688	May 3	2345	5,440 154	13.55 4.130
Mar. 30	1545	6,040 171	14.31 4.362	June 1	1245	*15,400 436	23.93 7.294

Minimum discharge, no flow Oct. 1 to Nov. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.37	.25	1.7	16	261	465	3940	51	12	7.1
2	.00	.00	.21	.10	1.6	.13	195	385	1060	39	357	6.5
3	.00	.00	.10	.08	1.6	12	161	627	421	31	68	6.3
4	.00	.00	.09	.09	2.4	11	144	1110	310	28	26	5.8
5	.00	.02	.08	.10	26	11	129	224	614	26	19	5.7
6	.00	.08	.07	.09	112	10	111	155	353	436	16	5.5
7	.00	.06	.06	.08	80	9.6	91	132	278	141	15	4.9
8	.00	.05	.06	.04	75	9.6	88	114	239	83	14	4.9
9	.00	.04	.05	.04	53	8.8	83	102	215	49	13	4.6
10	.00	.04	.05	.82	42	7.8	78	94	190	36	12	4.3
11	.00	.04	.05	90	34	7.5	88	133	172	29	33	4.1
12	.00	.04	.04	32	27	7.1	143	105	155	24	40	4.0
13	.00	.04	.04	21	22	7.0	83	83	141	22	19	3.5
14	.00	.04	.04	7.2	20	6.6	63	72	128	21	15	3.3
15	.00	.04	.04	4.4	18	24	54	65	115	19	13	3.1
16	.00	.04	.04	4.2	11	100	49	60	104	18	12	2.8
17	.00	.04	.04	3.7	11	129	50	56	93	18	11	2.8
18	.00	.04	.04	3.3	13	96	338	53	84	43	11	4.0
19	.00	.04	.04	3.1	13	73	167	50	76	91	10	4.1
20	.00	.05	.05	3.0	12	797	112	49	69	58	9.4	4.2
21	.00	.05	.05	2.2	12	403	88	55	62	40	8.9	4.1
22	.00	.05	.05	1.7	11	500	75	336	55	24	8.8	3.4
23	.00	.05	.05	1.5	11	328	65	75	48	20	33	3.2
24	.00	.05	.04	1.3	9.1	165	59	68	42	19	38	2.9
25	.01	.05	.04	1.4	22	122	55	59	42	17	19	2.7
26	.00	.07	.04	2.2	60	103	49	53	274	16	14	2.5
27	.00	11	.04	2.4	29	734	43	50	411	15	17	2.3
28	.00	8.4	.04	2.1	21	213	41	165	161	15	11	2.3
29	.00	2.0	.05	1.9	---	173	43	576	94	14	9.2	2.0
30	.00	.82	.06	1.9	---	1760	45	1080	68	13	8.4	1.8
31	.00	---	.49	1.8	---	474	---	332	---	12	7.5	---
TOTAL	.01	23.24	2.51	193.99	751.4	6331.0	3051	6983	10014	1468	900.2	118.7
MEAN	.000	.77	.081	6.26	26.8	204	102	225	334	47.4	29.0	3.96
MAX	.01	11	.49	90	112	1760	338	1110	3940	436	357	7.1
MIN	.00	.00	.04	.04	1.6	6.6	41	49	42	12	7.5	1.8
CFSM	.000	.002	.000	.01	.06	.45	.22	.50	.73	.10	.06	.009
IN.	.00	.00	.00	.02	.06	.52	.25	.57	.82	.12	.07	.01
AC-FT	.02	46	5.0	385	1490	12560	6050	13850	19860	2910	1790	235
CAL YR 1978	TOTAL	357.90	MEAN	.98	MAX	37	MIN	.00	CFSM	.002	IN	.03
WTR YR 1979	TOTAL	29837.05	MEAN	81.7	MAX	3940	MIN	.00	CFSM	.18	IN	2.44
									AC-FT	710		
									AC-FT	59180		

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 (2.6 km) upstream from bridge on State Highway 317, 3.5 mi (5.6 km) north of Belton, 8.9 mi (14.3 km) upstream from Nolan Creek, and 16.7 mi (26.9 km) upstream from mouth.

DRAINAGE AREA.--3,531 mi² (9,145 km²).

WATER-DISCHARGE RECORDS

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 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 (1,684 m) long, including a 1,300-foot (396 m) uncontrolled broad-crested spillway in a saddle near left end of dam and a 418-foot-long (127 m) 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 (6.7 m) conduit that is controlled by three 7.0 by 22.0 ft (2.1 by 6.7 m) broome-type gates. The service outlet consists of a 36- by 36-inch (914 by 914 mm) gated outlet that discharges into the flood-control conduit. Beginning January 1976, the capacity table is based on a sedimentation survey made in 1966. There are many small diversions upstream for irrigation, municipal supply, and oilfield operations. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see Leon River near Hamilton (station 08100000). 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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 870,300 acre-ft (1,070 hm³) June 6, 1957, elevation, 620.45 ft (189.113 m); minimum since initial filling, 113,400 acre-ft (140 hm³) Dec. 16, 1956, elevation, 553.06 ft (168.573 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 562,400 acre-ft (693 hm³) June 7, elevation, 603.01 ft (183.797 m); minimum, 316,200 acre-ft (390 hm³) Dec. 29, elevation, 582.76 ft (177.625 m).

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

581.0	298,700	595.0	454,500
583.0	318,700	597.0	480,400
585.0	339,300	599.0	506,900
587.0	360,700	601.0	534,200
589.0	382,800	603.0	562,200
591.0	405,800	605.0	591,100
593.0	429,700		

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324400	318200	320700	319200	333800	350800	416200	450700	507500	445700	442200	440900
2	324200	318000	320700	318700	334000	351300	420000	455200	523800	442400	444500	440600
3	324000	317800	320700	318700	334200	351900	422200	459200	539200	442000	445600	440500
4	323600	317700	320600	319000	334900	352100	423600	462200	542000	441700	445700	440400
5	323300	319700	320400	319200	337200	352200	424700	464100	554400	442000	446000	440000
6	322800	320300	320100	319300	341500	352500	425400	468000	560700	445100	446000	439900
7	322500	320000	320300	319200	342400	352700	427300	471900	560100	448900	446100	439800
8	322100	319800	319500	318700	343600	352500	428700	472000	554400	449900	446000	439400
9	321700	319600	319300	318700	344000	352600	429400	470400	547300	449500	445700	438900
10	321400	319500	318700	324400	344500	353000	430200	469100	539100	448200	446200	438600
11	321500	319400	318800	329400	345100	353100	431400	472100	530800	447000	448100	438500
12	321400	319200	318700	330800	346000	353100	432200	475500	523200	445600	448200	437900
13	321000	319200	318500	331300	346100	353100	433100	475000	517400	444300	448200	437500
14	320500	319400	318200	331300	346200	353400	434000	472400	511700	443700	448100	437000
15	320100	319400	318100	331600	347600	353800	434700	469000	505700	442900	447500	436400
16	319900	319900	318000	331700	347600	356300	435400	465700	499200	442400	446300	435900
17	319800	319500	317800	332000	347600	357300	436800	462200	492500	443000	445500	435700
18	319500	319600	317600	332100	347600	358800	437900	458500	486000	443500	444200	436500
19	319400	320200	317700	332300	347700	360800	439900	454500	480000	444000	443200	437700
20	319100	320300	317900	333000	348100	364000	441000	447700	475800	447000	442500	437900
21	318600	320400	317400	333100	348300	369800	442000	452000	474500	447600	442200	437300
22	318300	320300	317100	333600	348900	377200	442600	460000	470600	448200	442100	437200
23	318300	320200	316800	333200	349000	380900	443100	461800	466700	447600	442200	436900
24	317900	320100	317100	333100	349700	383200	443500	462400	463000	445700	442400	436800
25	319400	320300	316900	333600	349900	384400	444000	463000	459000	443900	442000	436500
26	319500	321500	317100	333800	349900	386200	444300	463500	457600	442700	442000	436300
27	319200	321400	316400	333800	350300	388500	444300	464200	457100	442600	441700	435800
28	318900	321100	316400	333900	350700	391500	444700	466700	454500	442500	441500	435600
29	318700	320900	316500	334000	---	395100	445300	472900	452100	442400	441400	435400
30	318600	320900	316700	334100	---	401100	445200	483500	449500	442100	441100	435200
31	318300	---	319100	333800	---	407500	---	484300	---	442000	441000	---
MAX	324400	321500	320700	334100	350700	407500	445300	484300	560700	449900	448200	440900
MIN	317900	317700	316400	318700	333800	350800	416200	447700	449500	441700	441000	435200
(†)	582.96	583.22	583.04	584.47	586.07	591.14	594.26	597.30	594.60	594.00	593.92	593.45
(‡)	-6200	+2600	-1800	+14700	+16900	+56800	+37700	+39100	-34800	-7500	-1000	-5800
(††)	2580	2020	1940	2290	1920	2030	2020	2180	2660	5690	3000	2730
CAL YR 1978	MAX	411700	MIN	316400	†	-86800	††	29330				
WTR YR 1979	MAX	560700	MIN	316400	†	+110700	††	28400				

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by Bell County Water Control Irrigation District.

BRAZOS RIVER BASIN

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08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1961 to current year.

310640097283701 BELTON LAKE SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
13...	1015	1.0	409	8.3	23.5	3.5	7.7	94	150	25
13...	1018	10	409	8.3	23.5	--	7.7	94	--	--
13...	1021	20	409	8.3	23.5	--	7.5	91	--	--
13...	1024	30	409	8.3	23.5	--	7.2	87	--	--
13...	1029	40	409	8.3	23.5	--	7.2	87	--	--
13...	1034	50	448	7.6	22.5	--	2.0	24	--	--
13...	1039	60	452	7.6	18.0	--	.5	5	--	--
13...	1042	70	452	7.6	16.5	--	.5	5	--	--
13...	1045	80	452	7.5	16.0	--	.5	5	--	--
13...	1048	90	452	7.5	15.5	--	.5	5	--	--
13...	1053	100	452	7.4	15.5	--	.5	5	180	14
FEB										
21...	1230	1.0	420	8.4	8.0	2.90	11.2	98	150	20
21...	1232	10	420	8.4	7.5	--	11.2	97	--	--
21...	1234	20	420	8.4	7.5	--	11.0	96	--	--
21...	1237	30	420	8.4	7.5	--	11.0	96	--	--
21...	1239	40	420	8.4	7.5	--	11.0	96	--	--
21...	1242	50	420	8.4	7.5	--	11.0	96	--	--
21...	1244	60	420	8.4	7.5	--	10.9	95	--	--
21...	1246	70	420	8.4	7.5	--	11.0	96	--	--
21...	1248	80	420	8.4	7.0	--	11.0	94	--	--
21...	1250	90	420	8.4	7.0	--	11.1	95	--	--
21...	1253	97	420	8.4	7.0	--	11.1	95	160	15
MAY										
31...	1135	1.0	400	8.4	24.5	3.3	8.5	102	160	27
31...	1137	10	400	8.4	23.0	--	8.6	101	--	--
31...	1139	20	400	8.4	23.0	--	8.4	99	--	--
31...	1141	30	400	8.4	22.5	--	8.2	95	--	--
31...	1143	40	413	8.2	21.5	--	6.9	78	--	--
31...	1145	50	420	8.0	20.0	--	5.6	62	--	--
31...	1147	60	422	7.8	18.0	--	4.7	50	--	--
31...	1149	70	433	7.6	16.0	--	3.5	36	--	--
31...	1151	80	433	7.6	15.0	--	2.6	26	--	--
31...	1153	90	433	7.5	14.0	--	1.8	18	--	--
31...	1155	102	433	7.5	14.0	--	1.5	15	170	26
AUG										
03...	1115	1.0	334	8.3	29.0	1.90	7.4	97	140	29
03...	1117	10	334	8.3	28.5	--	7.5	99	--	--
03...	1119	20	334	8.2	28.5	--	6.8	89	--	--
03...	1121	30	380	7.6	27.5	--	2.8	36	--	--
03...	1123	40	400	7.4	25.5	--	.1	1	--	--
03...	1125	50	400	7.4	24.0	--	.1	1	--	--
03...	1127	60	400	7.4	23.5	--	.1	1	--	--
03...	1129	70	400	7.4	22.5	--	.1	1	--	--
03...	1131	80	400	7.4	21.5	--	.1	1	--	--
03...	1133	90	400	7.4	20.5	--	.1	1	--	--
03...	1135	100	430	7.4	18.0	--	.1	1	--	--
03...	1137	105	444	7.3	15.5	--	.2	2	180	12

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

310640097283701 BELTON LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
13...	43	9.8	23	.8	3.8	150	0	27	36	.2
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	55	9.9	23	.8	3.6	200	0	17	33	--
FEB										
21...	46	9.6	23	.8	3.2	160	2	27	37	.3
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	47	9.7	23	.8	3.2	170	2	27	37	--
MAY										
31...	48	9.2	20	.7	3.4	160	0	28	28	.4
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
31...	50	9.9	22	.7	3.6	170	0	27	30	--
AUG										
03...	41	8.0	15	.6	3.2	130	0	26	22	.2
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	54	10	22	.7	2.3	200	0	18	32	--

BRAZOS RIVER BASIN

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BELTON LAKE NEAR BELTON, TX--Continued

310640097283701 BELTON LAKE SITE AC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
13...	5.9	223	.00	.00	--	.010	--	10	0
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.01	.00	--	.010	--	<10	50
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.00	.04	--	.010	--	20	170
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	12	253	.00	.36	--	.120	--	590	500
FEB									
21...	7.1	234	.05	.02	--	.010	--	0	0
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	.08	.02	--	.010	--	0	0
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	7.1	240	.05	.02	--	.020	--	10	0
MAY									
31...	4.8	221	.42	.01	.03	.010	.03	10	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	.48	.02	.03	.010	.03	10	0
31...	--	--	--	--	--	--	--	--	--
31...	--	--	.42	.01	.03	.010	.03	0	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	7.3	234	.34	.02	.06	.020	.06	20	110
AUG									
03...	5.3	185	.03	.00	--	.010	.03	0	10
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.03	.00	--	.010	.03	0	30
03...	--	--	.08	.02	--	--	.03	0	20
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	12	249	.00	.78	--	.190	.58	10	10

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

310646097283301 BELTON LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	0945	1.0	409	8.2	24.0	7.8	96
13...	0947	10	409	8.2	24.0	7.8	95
13...	0949	20	409	8.2	23.5	7.2	88
13...	0951	30	409	8.1	23.5	7.1	86
13...	0953	40	409	8.1	23.0	6.9	83
13...	0955	50	448	7.4	19.0	.5	6
13...	0957	60	452	7.4	17.5	.5	5
13...	0959	70	452	7.3	16.5	.5	5
13...	1001	80	452	7.3	16.0	.5	5
13...	1003	90	452	7.3	15.5	.5	5
13...	1005	95	452	7.2	15.5	.5	5
FEB							
21...	1202	1.0	420	8.4	7.5	11.4	99
21...	1203	10	420	8.4	7.5	11.4	99
21...	1205	20	420	8.4	7.5	11.3	98
21...	1206	30	420	8.3	7.5	11.2	97
21...	1208	40	420	8.3	7.5	11.2	97
21...	1209	50	420	8.3	7.0	11.0	94
21...	1211	60	420	8.3	7.0	11.0	94
21...	1213	70	420	8.3	7.0	11.0	94
21...	1215	80	420	8.3	7.0	11.0	94
21...	1217	90	420	8.3	7.0	11.0	94
21...	1219	99	420	8.3	7.0	10.9	93
MAY							
31...	1210	1.0	400	8.4	24.5	8.5	102
31...	1212	10	400	8.4	23.0	8.7	102
31...	1214	20	400	8.4	23.0	8.4	99
31...	1216	30	400	8.4	22.5	8.0	92
31...	1218	40	413	8.2	21.0	7.0	79
31...	1220	50	420	8.0	19.5	5.5	60
31...	1222	60	422	7.8	18.0	4.4	47
31...	1224	70	433	7.6	16.0	3.4	35
31...	1226	80	433	7.6	15.0	2.7	27
31...	1228	90	433	7.5	15.0	2.1	21
AUG							
03...	1150	1.0	334	8.4	29.0	7.4	97
03...	1152	10	334	8.4	29.0	7.9	104
03...	1154	20	334	8.4	28.5	7.7	101
03...	1156	30	380	7.5	27.0	.7	9
03...	1158	40	400	7.3	25.5	.1	1
03...	1200	50	400	7.3	25.0	.1	1
03...	1202	60	400	7.4	24.0	.1	1
03...	1204	70	400	7.4	23.0	.1	1
03...	1206	80	400	7.3	22.0	.1	1
03...	1208	92	400	7.3	21.5	.1	1

BRAZOS RIVER BASIN

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BELTON LAKE NEAR BELTON, TX--Continued

310711097302201 BELTON LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1120	1.0	409	8.4	23.5	7.5	92
13...	1122	10	409	8.4	23.5	7.4	90
13...	1124	20	409	8.4	23.5	7.1	86
13...	1126	30	409	8.4	23.5	6.9	84
13...	1128	40	409	8.3	23.0	5.6	67
13...	1130	50	448	7.6	19.0	1.5	17
13...	1132	60	452	7.5	16.5	.5	5
13...	1134	70	452	7.5	16.0	.5	5
13...	1137	80	452	7.5	16.0	.5	5
13...	1140	91	452	7.4	15.5	.5	5
FEB							
21...	1320	1.0	420	8.4	8.0	11.4	100
21...	1321	10	420	8.4	7.5	11.4	99
21...	1323	20	420	8.4	7.5	11.3	98
21...	1324	30	420	8.4	7.5	11.3	98
21...	1326	40	420	8.4	7.0	11.3	97
21...	1327	50	420	8.4	7.0	11.3	97
21...	1329	60	420	8.4	7.0	11.2	96
21...	1330	70	420	8.4	7.0	11.2	96
21...	1332	80	420	8.4	7.0	11.1	95
21...	1334	93	420	8.3	7.0	11.1	95
MAY							
31...	1243	1.0	400	8.4	25.0	8.3	101
31...	1245	10	400	8.4	23.0	8.4	99
31...	1247	20	400	8.4	23.0	8.3	98
31...	1249	30	400	8.4	22.0	8.2	94
31...	1251	40	413	8.0	20.5	5.6	62
31...	1253	50	420	7.9	19.5	5.3	58
31...	1255	60	420	7.7	18.5	3.9	42
31...	1257	70	433	7.6	17.0	1.9	20
31...	1259	80	433	7.4	15.0	.9	9
31...	1301	90	433	7.4	14.5	.4	4
31...	1303	103	433	7.4	14.0	.3	3
AUG							
03...	1030	1.0	334	8.2	28.5	7.6	100
03...	1032	10	334	8.2	28.5	7.5	99
03...	1034	20	334	8.1	28.5	6.9	91
03...	1036	30	360	7.4	27.5	2.1	27
03...	1038	40	385	7.2	26.0	.1	1
03...	1040	50	385	7.2	24.5	.1	1
03...	1042	60	385	7.2	23.0	.1	1
03...	1044	70	385	7.2	22.5	.1	1
03...	1046	80	385	7.1	22.0	.1	1
03...	1048	92	385	7.0	21.0	.1	1

310732097300001 BELTON LAKE SITE BL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1104	1.0	409	8.3	23.5	8.2	100
13...	1106	10	409	8.3	23.5	8.1	99
13...	1108	20	409	8.3	23.5	8.0	97
13...	1110	33	409	8.3	23.5	7.6	93
FEB							
21...	1303	1.0	420	8.4	8.0	11.4	100
21...	1304	10	420	8.4	7.5	11.4	99
21...	1306	20	420	8.4	7.5	11.4	99
21...	1307	30	420	8.4	7.5	11.4	99
21...	1309	37	420	8.4	7.5	11.4	99
MAY							
31...	1316	1.0	400	8.4	25.5	8.5	104
31...	1318	10	400	8.4	23.0	8.6	101
31...	1320	20	400	8.4	23.0	8.4	99
31...	1322	30	400	8.3	22.5	8.0	93
31...	1324	43	419	8.0	21.0	5.9	66
AUG							
03...	1058	1.0	334	8.3	29.0	7.9	104
03...	1100	10	334	8.3	29.0	7.8	103
03...	1102	20	334	8.2	28.5	7.8	103
03...	1104	30	334	8.2	28.5	7.5	99
03...	1106	43	385	7.2	25.5	.1	1

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

310829097312201 BELTON LAKE SITE CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1200	1.0	409	8.6	24.0	8.0	98
13...	1201	10	409	8.4	24.0	7.9	97
13...	1203	20	409	8.4	24.0	7.7	95
13...	1205	30	409	8.4	24.0	7.4	90
13...	1207	40	409	8.3	23.5	6.7	81
13...	1209	50	459	7.5	19.0	.5	6
13...	1211	60	459	7.5	18.0	.5	5
13...	1213	71	459	7.4	16.5	.5	5
FEB							
21...	1417	1.0	420	8.5	8.5	11.5	103
21...	1418	10	420	8.5	8.0	11.5	101
21...	1419	20	420	8.4	8.0	11.2	98
21...	1421	30	420	8.4	8.0	11.1	97
21...	1422	40	420	8.4	8.0	11.0	96
21...	1423	50	420	8.4	7.5	10.8	94
21...	1425	60	420	8.3	7.5	10.8	94
21...	1427	75	420	8.3	7.5	10.8	94
MAY							
31...	1336	1.0	400	8.4	25.0	8.2	100
31...	1338	10	400	8.4	23.5	8.2	98
31...	1340	20	400	8.3	23.0	7.9	93
31...	1342	30	400	8.3	22.5	7.6	88
31...	1344	40	420	7.9	20.5	5.5	61
31...	1346	50	420	7.9	20.0	4.9	54
31...	1348	60	420	7.7	18.5	3.5	38
31...	1350	70	433	7.5	17.0	1.1	11
31...	1352	84	433	7.4	16.0	.4	4
AUG							
03...	1230	1.0	334	8.3	29.5	5.2	69
03...	1232	10	334	8.3	29.0	7.7	101
03...	1234	20	334	8.3	29.0	7.6	100
03...	1236	30	334	8.2	28.5	6.7	88
03...	1238	40	380	7.3	26.5	.1	1
03...	1240	50	390	7.3	25.0	.1	1
03...	1242	60	390	7.2	23.5	.1	1
03...	1244	70	390	7.2	23.0	.1	1
03...	1246	80	390	7.2	23.0	.1	1
03...	1248	87	390	7.2	22.5	.1	1

310923097332601 BELTON LAKE SITE DC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
13...	1232	1.0	409	8.4	24.5	1.20	8.2	101	150	27
13...	1236	10	409	8.4	24.0	--	8.2	100	--	--
13...	1240	20	409	8.4	24.0	--	7.9	97	--	--
13...	1244	27	409	8.2	23.5	--	6.7	82	150	17
FEB										
21...	1351	1.0	412	8.5	8.5	.12	11.9	106	160	22
21...	1354	10	412	8.5	8.0	--	11.8	104	--	--
21...	1357	20	412	8.5	8.0	--	11.8	104	--	--
21...	1400	30	412	8.5	7.5	--	11.2	97	--	--
21...	1404	42	412	8.5	7.5	--	11.2	97	160	25
MAY										
31...	1406	1.0	400	8.3	26.0	1.20	7.8	96	160	19
31...	1408	10	400	8.3	23.0	--	7.6	89	--	--
31...	1410	20	400	8.3	23.0	--	7.5	88	--	--
31...	1412	30	408	7.9	22.0	--	5.3	61	--	--
31...	1414	40	417	7.7	21.0	--	3.7	42	160	24
AUG										
03...	1310	1.0	333	8.3	29.5	.90	7.5	100	140	23
03...	1312	10	333	8.3	29.0	--	7.3	96	--	--
03...	1314	20	333	7.0	29.0	--	8.2	108	--	--
03...	1316	30	260	7.5	26.0	--	3.9	49	--	--
03...	1318	38	231	7.5	26.0	--	4.0	50	110	1

BRAZOS RIVER BASIN

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BELTON LAKE NEAR BELTON, TX--Continued

310923097332601 BELTON LAKE SITE DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
13...	45	10	23	.8	3.9	150	2	27	36
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	43	9.9	23	.8	3.9	160	0	27	36
FEB									
21...	48	9.4	22	.8	3.2	160	3	27	34
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	49	9.1	21	.7	3.1	160	2	28	34
MAY									
31...	49	8.7	19	.7	3.3	170	0	27	23
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	50	9.4	20	.7	3.4	170	0	27	24
AUG									
03...	41	8.6	15	.6	2.9	140	0	26	22
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	34	5.4	3.8	.2	2.6	130	0	12	7.0

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
13...	6.0	227	.00	.00	--	.010	--	10	0
13...	--	--	.00	.00	--	.010	--	<10	2
13...	--	--	--	--	--	--	--	--	--
13...	6.2	228	.01	.00	--	.040	--	10	10
FEB									
21...	6.6	232	.12	.02	--	.020	--	10	0
21...	--	--	--	--	--	--	--	--	--
21...	--	--	.09	.01	--	.020	--	0	0
21...	--	--	--	--	--	--	--	--	--
21...	6.4	231	.13	.02	--	.030	--	10	0
MAY									
31...	4.9	219	.36	.03	.03	.010	.03	10	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	.36	.03	.03	.010	.03	10	0
31...	--	--	--	--	--	--	--	--	--
31...	6.1	224	.49	.01	.03	.010	.03	10	0
AUG									
03...	5.4	190	.00	.00	--	.020	.06	0	0
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.00	.00	--	.020	.06	0	0
03...	--	--	.10	.00	--	.040	.12	0	10
03...	6.9	137	.15	.00	--	.050	.15	870	10

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

310829097294301 BELTON LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1300	1.0	409	8.3	24.5	7.5	93
13...	1302	10	409	8.3	24.5	7.5	92
13...	1303	20	409	8.2	24.0	7.3	90
13...	1305	30	409	8.1	24.0	6.2	76
13...	1306	40	409	8.0	23.5	5.8	71
13...	1308	50	459	7.4	19.5	.5	6
13...	1309	60	459	7.4	17.0	.5	5
13...	1311	70	459	7.4	16.5	.5	5
13...	1312	80	459	7.4	16.0	.5	5
13...	1314	88	459	7.3	16.0	.5	5
FEB							
21...	1437	1.0	420	8.4	8.5	11.3	101
21...	1438	10	420	8.4	8.5	11.3	101
21...	1439	20	420	8.4	8.0	11.2	98
21...	1441	30	420	8.4	8.0	11.0	96
21...	1442	40	420	8.4	7.5	11.0	96
21...	1444	50	420	8.4	7.5	11.1	97
21...	1445	60	420	8.4	7.5	11.1	97
21...	1447	70	420	8.4	7.5	11.1	97
21...	1449	80	420	8.4	7.0	11.0	94
21...	1450	92	420	8.4	7.0	10.9	93
MAY							
31...	1440	1.0	400	8.4	25.0	8.7	106
31...	1442	10	400	8.4	23.5	9.0	107
31...	1444	20	400	8.3	23.0	8.6	101
31...	1446	30	400	8.3	22.0	7.9	91
31...	1448	40	416	8.1	21.0	6.4	72
31...	1450	50	420	7.9	20.0	5.4	60
31...	1452	60	427	7.7	19.0	3.5	38
31...	1454	70	433	7.5	16.5	1.3	13
31...	1456	80	433	7.4	15.5	.3	3
31...	1458	90	433	7.4	14.5	.2	2
31...	1500	103	433	7.4	14.5	.2	2
AUG							
03...	1400	1.0	334	8.4	29.5	8.2	109
03...	1402	10	334	8.4	29.5	8.3	111
03...	1404	20	334	8.3	29.0	6.1	80
03...	1406	30	345	7.5	28.0	2.7	35
03...	1408	40	400	7.3	26.0	.1	1
03...	1410	50	400	7.3	24.5	.1	1
03...	1412	60	400	7.3	23.5	.1	1
03...	1414	70	400	7.2	22.5	.1	1
03...	1416	80	400	7.1	22.0	.1	1
03...	1418	90	400	7.1	21.5	.1	1
03...	1420	100	410	7.0	20.5	.1	1

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

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310938097300201 BELTON LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1330	1.0	412	8.3	24.0	7.4	91
13...	1332	10	412	8.3	24.0	7.4	90
13...	1334	20	412	8.2	24.0	7.1	87
13...	1335	30	412	8.1	24.0	6.6	80
13...	1337	40	415	7.8	23.5	4.5	54
13...	1339	50	459	7.3	21.0	.5	6
13...	1340	60	459	7.2	18.5	.5	6
13...	1342	66	459	7.2	17.5	.5	5
FEB							
21...	1500	1.0	420	8.4	8.0	11.2	98
21...	1501	10	420	8.4	8.0	11.2	98
21...	1503	20	420	8.4	8.0	11.1	97
21...	1504	30	420	8.4	7.5	11.1	97
21...	1506	40	420	8.4	7.5	11.1	97
MAY							
31...	1523	1.0	400	8.4	25.0	8.6	105
31...	1525	10	400	8.4	23.5	8.8	105
31...	1527	20	400	8.4	23.0	8.4	99
31...	1529	30	412	7.9	22.0	5.7	66
31...	1531	40	412	7.7	20.5	3.9	43
31...	1533	50	412	7.7	20.5	4.0	44
31...	1535	60	433	7.6	18.5	2.7	29
31...	1537	70	433	7.4	17.5	.4	4
31...	1539	79	433	7.4	16.0	.2	2
AUG							
03...	1430	1.0	330	8.4	29.5	8.1	108
03...	1432	10	330	8.3	29.5	8.1	108
03...	1434	20	330	8.2	29.0	7.2	95
03...	1436	30	340	7.5	28.5	3.7	49
03...	1438	40	377	7.2	26.5	.1	1
03...	1440	50	400	7.2	25.0	.1	1
03...	1442	60	400	7.1	23.5	.1	1
03...	1444	70	410	7.0	23.0	.1	1
03...	1446	76	410	7.0	22.5	.2	2

311004097275601 BELTON LAKE SITE GC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
13...	1355	1.0	415	8.3	24.5	7.7	94
13...	1357	10	415	8.3	24.5	7.6	94
13...	1359	20	415	8.3	24.0	7.5	92
13...	1402	30	415	8.2	24.0	7.3	89
13...	1404	40	415	8.0	23.5	5.2	63
13...	1407	50	415	7.7	23.0	3.4	41
FEB							
21...	1518	1.0	420	8.4	8.5	11.2	100
21...	1521	10	420	8.4	8.5	11.1	99
21...	1524	20	420	8.4	8.0	11.1	97
21...	1526	30	420	8.4	8.0	11.1	97
21...	1529	40	420	8.4	8.0	11.0	96
21...	1532	54	420	8.3	8.0	10.7	94
MAY							
31...	1556	1.0	400	8.4	25.0	8.6	105
31...	1558	10	400	8.4	24.5	8.4	101
31...	1600	20	400	8.3	24.0	7.6	90
31...	1602	30	400	7.9	22.5	5.5	64
31...	1604	40	400	7.6	21.5	3.5	40
31...	1606	50	400	7.5	20.5	2.3	26
31...	1608	60	415	7.4	20.0	1.2	13
31...	1610	66	433	7.4	19.0	.3	3
AUG							
03...	1455	1.0	320	8.4	29.5	8.5	113
03...	1457	10	320	8.3	29.0	7.9	104
03...	1459	20	320	8.0	29.0	6.5	86
03...	1501	30	330	7.5	27.5	2.5	32
03...	1503	40	380	7.1	27.0	.1	1
03...	1505	50	400	7.1	24.5	.1	1
03...	1507	61	410	7.0	24.0	.2	2

BRAZOS RIVER BASIN
BELTON LAKE NEAR BELTON, TX--Continued

311042097300701 BELTON LAKE SITE HC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
13...	1429	1.0	415	8.3	24.0	.50	7.7	94	150	22
13...	1433	10	415	8.3	23.5	--	7.7	93	--	--
13...	1438	20	415	8.3	23.5	--	7.6	92	--	--
13...	1443	32	415	8.1	23.5	--	6.4	77	140	22
FEB										
21...	1549	1.0	430	8.5	8.0	.90	11.5	101	160	24
21...	1553	10	430	8.5	8.0	--	11.5	101	--	--
21...	1557	20	430	8.4	7.5	--	11.2	97	--	--
21...	1602	27	430	8.4	7.5	--	11.2	97	160	27
MAY										
31...	1639	1.0	400	8.3	25.0	1.70	8.3	101	170	20
31...	1641	10	400	8.4	23.5	--	8.4	100	--	--
31...	1643	20	400	8.2	23.0	--	7.5	88	--	--
31...	1645	30	400	8.1	23.0	--	6.4	75	--	--
31...	1647	41	400	7.3	21.0	--	.6	7	160	15
AUG										
03...	1520	1.0	320	8.1	29.0	1.10	7.0	92	130	16
03...	1522	10	320	8.1	29.0	--	7.0	92	--	--
03...	1524	20	320	8.0	29.0	--	6.0	79	--	--
03...	1526	30	325	7.7	28.5	--	4.8	63	--	--
03...	1528	39	331	7.2	28.5	--	.3	4	140	26

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
13...	42	9.8	25	.9	4.0	150	0	28	38
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	42	9.7	25	.9	4.0	150	0	27	38
FEB									
21...	50	8.7	23	.8	3.0	160	3	32	36
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	50	8.8	23	.8	3.0	160	2	32	36
MAY									
31...	56	6.8	17	.6	3.5	180	0	28	19
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	54	6.8	16	.5	3.4	180	0	27	20
AUG									
03...	41	6.8	14	.5	3.0	140	0	23	19
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	45	6.8	14	.5	3.0	140	0	21	21

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
13...	6.5	227	.00	.00	--	.030	--	30	0
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.01	.01	--	.030	--	<10	3
13...	6.6	226	.01	.02	--	.040	--	10	0
FEB									
21...	6.1	241	.54	.01	--	.020	--	10	0
21...	--	--	.50	.02	--	.010	--	0	10
21...	--	--	--	--	--	--	--	--	--
21...	6.1	240	.39	.01	--	.010	--	10	0
MAY									
31...	4.3	223	1.1	.01	.03	.010	.03	0	0
31...	--	--	--	--	--	--	--	--	--
31...	--	--	1.1	.03	.03	.010	.03	10	20
31...	--	--	--	--	--	--	--	--	--
31...	7.1	223	1.2	.03	.06	.020	.06	10	70
AUG									
03...	6.4	182	.00	.01	--	.020	.06	0	0
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.00	.01	--	.030	.09	0	60
03...	7.8	188	.00	.06	--	.070	.21	0	230

BRAZOS RIVER BASIN

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BELTON LAKE NEAR BELTON, TX--Continued

311254097291301 BELTON LAKE SITE IC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
13...	1511	1.0	419	8.6	23.5	.40	8.5	103	140	25
13...	1515	10	419	8.6	23.5	--	8.5	103	--	--
13...	1520	20	419	8.6	23.5	--	8.4	101	140	23
FEB										
21...	1615	1.0	457	8.8	8.5	.70	12.8	114	180	31
21...	1619	10	474	8.7	8.0	--	12.6	111	--	--
21...	1623	24	474	8.5	7.5	--	11.3	98	190	36
MAY										
31...	1723	1.0	413	8.4	25.5	.40	9.9	120	170	18
31...	1725	10	405	8.3	23.5	--	8.0	95	--	--
31...	1727	20	404	8.0	23.0	--	6.1	72	--	--
31...	1729	30	346	7.6	21.5	--	5.2	59	--	--
31...	1731	35	348	7.5	21.5	--	4.4	50	130	28
AUG										
03...	1545	1.0	329	8.2	29.5	.60	7.2	96	130	14
03...	1547	10	329	8.1	29.5	--	6.6	88	--	--
03...	1549	20	334	7.7	29.0	--	4.9	64	--	--
03...	1551	31	351	7.3	29.0	--	1.0	13	150	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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
13...	41	9.8	27	1.0	4.2	140	2	30	41
13...	--	--	--	--	--	--	--	--	--
13...	40	10	27	1.0	4.1	140	2	29	42
FEB									
21...	61	6.9	23	.7	2.7	170	6	37	31
21...	--	--	--	--	--	--	--	--	--
21...	65	6.7	23	.7	2.7	180	4	38	31
MAY									
31...	58	7.0	16	.5	3.3	190	0	28	19
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
31...	48	3.6	17	.6	1.4	130	0	33	25
AUG									
03...	41	6.5	14	.5	3.0	140	0	23	20
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	49	6.6	15	.5	3.0	150	0	22	20

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
13...	6.3	230	.01	.00	--	.050	--	10	0
13...	--	--	.00	.00	--	.050	--	<10	2
13...	6.3	229	.00	.01	--	.060	--	10	0
FEB									
21...	5.6	257	2.8	.02	--	.020	--	20	10
21...	--	--	--	--	--	--	--	--	--
21...	5.7	265	2.1	.02	--	.020	--	20	0
MAY									
31...	2.0	227	1.2	.01	.06	.020	.06	10	10
31...	--	--	--	--	--	--	--	--	--
31...	--	--	1.3	.04	.06	.020	.06	10	0
31...	--	--	--	--	--	--	--	--	--
31...	6.5	199	2.6	.18	.25	.080	.25	0	0
AUG									
03...	7.9	184	.00	.01	--	.040	.12	10	0
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.00	.02	--	.040	.12	0	50
03...	8.7	198	.01	.13	--	.070	.21	0	170

BRAZOS RIVER BASIN

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 (427 m) upstream from bridge on Farm Road 817, 2,000 ft (610 m) upstream from concrete dam, 1.0 mi (1.6 km) upstream from bridge on Interstate Highway 35 and U.S. Highway 81, 1.6 mi (2.6 km) northeast of Belton, 3.2 mi (5.1 km) downstream from Belton Dam, 5.2 mi (8.4 km) upstream from Nolan Creek, and 13.1 mi (21.1 km) upstream from mouth.

DRAINAGE AREA.--3,542 mi² (9,174 km²).

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 (145.292 m) National Geodetic Vertical Datum of 1929. Prior to May 21, 1931, nonrecording gage.

REMARKS.--Records good. The city of Temple reported that during the year 7,510 acre-ft (9.26 hm³) was diverted from pool at gage for municipal use and 3,430 acre-ft (4.23 hm³) of treated sewage effluent was returned to Little Elm Creek. The Brazos River Authority reported that 5,220 acre-ft (6.44 hm³) of treated sewage effluent was returned to the Leon River below station from their Temple-Belton plant. Flow regulated by Belton Lake (station 08102000) since Mar. 8, 1954. Corps of Engineers telemeter at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1924-53) unregulated, 659 ft³/s (18.66 m³/s), 477,400 acre-ft/yr (589 hm³/yr); 26 years (water years 1954-79) regulated, 551 ft³/s (15.60 m³/s), 399,200 acre-ft/yr (492 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,500 ft³/s (1,600 m³/s) Apr. 22, 1945, gage height, 24.41 ft (7.440 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1913 reached a stage of 25 ft (7.6 m), and flood in September 1921 reached a stage of 21 ft (6.4 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,590 ft³/s (158 m³/s) June 9, gage height, 7.96 ft (2.426 m); minimum daily, 8.1 ft³/s (0.23 m³/s) Oct. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	13	13	30	26	36	125	324	1910	2130	45	12
2	12	19	12	26	26	39	69	35	123	1750	42	17
3	12	22	16	24	27	39	56	27	109	410	39	13
4	12	23	14	20	30	39	57	32	1410	60	38	13
5	12	31	17	14	44	41	50	638	1620	62	37	14
6	8.1	25	15	17	46	37	45	1130	109	69	35	16
7	11	15	16	24	36	41	50	671	2010	67	33	16
8	10	14	20	30	34	39	52	1030	4710	60	35	17
9	17	15	21	25	36	41	53	1680	5260	241	38	16
10	17	15	21	39	41	37	56	1680	5260	692	34	13
11	17	15	19	41	39	34	53	1180	5240	692	43	14
12	13	15	16	22	39	27	52	52	4730	682	37	15
13	14	15	20	23	42	22	51	898	3830	565	34	16
14	16	15	20	23	42	23	45	1960	3660	358	32	17
15	16	16	21	23	44	26	38	2230	3660	366	211	17
16	13	17	21	20	44	33	35	2230	3660	303	358	19
17	11	15	23	21	42	29	41	2230	3660	52	332	17
18	10	17	23	24	42	27	40	2220	3640	63	320	24
19	13	16	23	26	39	35	43	3020	3620	60	321	26
20	11	19	22	24	36	32	46	3710	2660	74	230	24
21	11	17	22	25	39	48	38	2730	846	55	19	21
22	10	15	22	27	37	34	31	211	2160	56	24	22
23	11	16	20	24	39	36	29	80	2160	319	17	20
24	9.8	16	21	25	39	36	30	78	2140	981	35	20
25	21	14	24	25	39	39	32	79	2140	973	37	21
26	25	20	23	27	36	42	30	81	2140	706	34	19
27	20	18	23	24	39	42	31	79	2140	52	12	19
28	12	17	22	25	39	43	31	82	2140	49	11	19
29	14	16	23	30	---	46	37	81	2140	48	12	20
30	11	12	22	26	---	47	217	85	2130	44	12	19
31	13	---	41	27	---	45	---	985	---	44	12	---
TOTAL	416.9	513	636	781	1062	1135	1563	31548	81017	12083	2519	536
MEAN	13.4	17.1	20.5	25.2	37.9	36.6	52.1	1018	2701	390	81.3	17.9
MAX	25	31	41	41	46	48	217	3710	5260	2130	358	26
MIN	8.1	12	12	14	26	22	29	27	109	44	11	12
AC-FT	827	1020	1260	1550	2110	2250	3100	62580	160700	23970	5000	1060
CAL YR 1978	TOTAL	33655.2	MEAN	92.2	MAX	1060	MIN	4.4	AC-FT	66760		
WTR YR 1979	TOTAL	133809.9	MEAN	367	MAX	5260	MIN	8.1	AC-FT	265400		

BRAZOS RIVER BASIN

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08102600 NOLAN CREEK AT BELTON, TX

LOCATION.--Lat 31°03'06", long 97°27'25", Bell County, Hydrologic Unit 12070201, on left bank 43 ft (13 m) downstream from northbound service road of Interstate Highway 35, 0.5 mi (0.8 km) southeast of the courthouse at Belton, and 3.1 mi (5.0 km), upstream from mouth.

DRAINAGE AREA.--112 mi² (290 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 480.84 ft (146.560 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Low flow is sustained by sewage effluent from Fort Hood military installation and by the cities of Killeen, Nolanville, and Harker Heights. Records indicate that 15,750 acre-ft (19.4 hm³) of treated sewage effluent was returned to the stream above station during the current year. Flow is affected at times by discharge from the flood-detention pools of 13 floodwater-retarding structures with a combined detention capacity of 15,430 acre-ft (19.0 hm³). These structures control runoff from 47.4 mi² (122.8 km²). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years, 86.0 ft³/s (2.436 m³/s), 62,310 acre-ft (76.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,100 ft³/s (1,020 m³/s) Oct. 31, 1974, gage height, 26.90 ft (8.199 m); minimum, 6.8 ft³/s (0.19 m³/s) July 22, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1900, 26.90 ft (8.199 m) Oct. 31, 1974. Floods in December 1913, September 1921, May 1957, and May 1965 reached a stage of 24.5 ft (7.47 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,070 ft³/s (172 m³/s) May 21, gage height, 16.72 ft (5.096 m); minimum daily, 13 ft³/s (0.37 m³/s) Nov. 2-4, Dec. 25, 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	21	74	22	45	340	533	916	85	46	18
2	17	13	21	33	24	48	159	379	287	80	114	17
3	18	13	26	27	26	107	110	209	141	76	48	23
4	17	13	22	26	71	55	99	162	129	73	37	21
5	18	44	20	44	358	50	91	103	1240	72	33	37
6	18	345	22	32	384	46	85	90	607	122	31	21
7	19	26	21	27	120	45	81	85	497	96	29	21
8	17	18	21	23	82	47	94	79	395	71	31	21
9	17	16	18	21	63	44	83	78	311	65	44	21
10	19	15	21	46	56	42	106	78	264	65	36	20
11	19	14	22	682	53	44	83	237	232	58	144	20
12	20	15	21	117	50	45	71	170	211	53	55	21
13	17	18	20	76	46	45	67	86	200	49	32	21
14	17	16	19	56	46	43	65	84	192	46	30	21
15	16	22	18	52	44	73	64	83	179	43	27	20
16	17	82	18	47	41	250	62	83	168	40	27	20
17	17	53	18	46	41	120	71	82	160	50	27	21
18	15	23	19	46	43	87	93	82	155	76	25	64
19	16	51	17	42	41	95	99	84	146	123	23	99
20	17	58	16	42	43	114	109	85	137	225	22	80
21	16	37	15	36	42	546	74	1510	129	87	23	33
22	16	35	15	30	43	303	68	1480	121	60	30	26
23	15	32	14	29	83	147	67	400	115	52	55	24
24	17	24	14	23	90	107	64	317	111	48	31	25
25	89	22	13	20	58	94	60	252	106	46	26	23
26	85	144	13	30	49	88	59	207	256	43	22	23
27	26	61	14	29	47	80	57	184	116	61	21	24
28	20	34	15	32	47	80	58	290	104	47	21	22
29	18	26	17	31	87	76	266	93	42	21	23	23
30	18	22	16	27	---	140	78	495	88	36	20	22
31	17	---	243	23	---	103	---	212	---	38	20	---
TOTAL	684	1309	790	1869	2113	3220	2693	8485	7806	2128	1151	852
MEAN	22.1	43.6	25.5	60.3	75.5	104	89.8	274	260	68.6	37.1	28.4
MAX	89	345	243	682	384	546	340	1510	1240	225	144	99
MIN	15	13	13	20	22	42	57	78	88	36	20	17
AC-FT	1360	2600	1570	3710	4190	6390	5340	16830	15480	4220	2280	1690
CAL YR 1978	TOTAL	9731.8	MEAN	26.7	MAX	370	MIN	9.8	AC-FT	19300		
WTR YR 1979	TOTAL	33100.0	MEAN	90.7	MAX	1510	MIN	13	AC-FT	65650		

BRAZOS RIVER BASIN

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 (240 m) upstream from centerline of U.S. Highway 190, 0.6 mi (1.0 km) upstream from Mesquite Creek, 0.8 mi (1.3 km) west of Kempner, 0.9 mi (1.4 km) downstream from Sulphur Creek, and 72.3 mi (116.4 km) upstream from mouth.

DRAINAGE AREA.--818 mi² (2,119 km²).

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 828.38 ft (252.490 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1967, at site 800 ft (240 m) downstream.

REMARKS.--Records good. 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 (47.6 hm³). These structures control runoff from 131 mi² (339 km²) in the Sulphur and Bennett Creeks drainage basins. There are many small diversions above the station for irrigation and municipal supply. Records furnished by the city of Lampasas show that 486 acre-ft (0.599 hm³) of sewage effluent was returned to Sulphur Creek above this station.

AVERAGE DISCHARGE.--17 years, 140 ft³/s (3.965 m³/s), 101,400 acre-ft/yr (125 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,000 ft³/s (2,010 m³/s) May 16, 1965, gage height, 32.98 ft (10.052 m); minimum daily, 1.4 ft³/s (0.040 m³/s) July 17, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1871 occurred in September 1873 (stage unknown). Flood of May 13, 1957, reached a stage of 37 ft (11.3 m), and flood of Oct. 4, 1959, reached a stage of 34 ft (10.4 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 30	0400	4,360	123	8.74	2.664
June 1	1530	5,960	169	9.93	3.027
Aug. 2	1030	*11,100	314	12.86	3.920

Minimum daily discharge, 9.0 ft³/s (0.25 m³/s) Oct. 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	13	35	17	28	179	916	1790	65	32	29
2	11	11	13	19	17	29	136	476	1000	58	2910	29
3	10	12	13	18	17	38	120	179	566	52	1080	29
4	10	12	13	18	18	32	114	340	401	46	500	29
5	9.3	14	12	18	43	29	104	176	942	44	218	29
6	9.7	39	12	18	106	29	94	132	604	474	123	27
7	10	15	12	18	73	29	86	111	416	128	93	26
8	9.3	13	12	17	52	27	93	97	326	85	77	32
9	11	12	12	16	42	27	92	86	283	60	78	27
10	9.7	11	12	24	39	27	92	82	231	55	65	26
11	9.6	11	12	50	39	27	91	86	212	49	91	24
12	9.6	11	12	34	37	26	83	114	180	48	140	22
13	10	11	12	27	35	25	80	83	167	45	81	20
14	9.1	11	13	22	35	24	72	73	146	42	64	22
15	9.4	12	13	21	33	26	69	67	130	42	55	17
16	10	16	13	21	30	55	66	62	118	39	48	18
17	10	16	13	19	29	65	83	59	109	37	46	19
18	9.5	14	13	18	29	47	225	55	99	309	43	19
19	9.4	20	13	18	29	41	149	55	92	167	42	27
20	9.6	24	14	21	29	66	108	54	81	98	42	27
21	9.6	14	14	19	29	272	93	57	76	84	41	27
22	9.0	13	14	18	29	211	83	498	73	66	38	26
23	9.4	13	14	18	31	182	77	104	68	60	145	23
24	9.6	12	14	17	30	95	73	74	64	53	87	22
25	30	12	14	17	28	79	71	64	62	48	51	22
26	27	27	14	17	26	72	65	59	297	46	42	21
27	13	25	14	19	26	64	60	57	207	42	38	21
28	13	16	14	18	27	64	56	678	116	39	35	21
29	12	14	16	18	27	65	54	651	87	32	31	20
30	11	13	16	18	---	712	59	1750	73	31	31	19
31	11	---	74	18	---	436	---	523	---	30	30	---
TOTAL	352.8	455	470	649	975	2949	2827	7818	9016	2474	6397	720
MEAN	11.4	15.2	15.2	20.9	34.8	95.1	94.2	252	301	79.8	206	24.0
MAX	30	39	74	50	106	712	225	1750	1790	474	2910	32
MIN	9.0	11	12	16	17	24	54	62	30	30	30	17
AC-FT	700	902	932	1290	1930	5850	5610	15510	17880	4910	12690	1430
CAL YR 1978	TOTAL	6115.8	MEAN	16.8	MAX	357	MIN	3.3	AC-FT	12130		
WTR YR 1979	TOTAL	35102.8	MEAN	96.2	MAX	2910	MIN	9.0	AC-FT	69630		

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DRAINAGE AREA.--33.3 mi² (86.2 km²).

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 and concrete control. Datum of gage is 955.8 ft (291.33 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Three recording rain gages located in watershed, one at station and two above station.

AVERAGE DISCHARGE.--16 years, 12.0 ft³/s (0.340 m³/s), 4.89 in/yr (124 mm/yr), 8,690 acre-ft/yr (10.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD—Maximum discharge, 31,200 ft³/s (884 m³/s) June 19, 1976—stage height, 22.70 ft (6.919 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurements of 3,580 and 8,510 ft³/s (101 and 241 m³/s) and conveyance-slope study; no flow for many days each year for 1963-74 and 1976-79.

Maximum stage since at least 1904, 22.70 ft (6.919 m) June 19, 1976.

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

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 21	1515	1,190	33.7	5.60	1.707
July 6	1100	*3,940	112	9.94	3.030

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	3.9	8.6	17	28	89	25	17	1.9	.34
2	.00	.00	.00	2.1	8.3	17	27	22	29	15	2.2	.30
3	.00	.00	.00	1.8	8.3	30	26	17	23	14	2.4	.24
4	.00	.00	.00	2.2	17	18	24	14	21	12	2.1	.22
5	.00	.00	.00	2.9	123	16	22	13	61	12	1.8	.23
6	.00	.00	.00	2.8	145	16	19	12	33	940	1.4	.19
7	.00	.00	.00	2.6	66	15	19	11	27	106	1.3	.10
8	.00	.00	.00	2.6	52	14	22	9.7	25	20	1.3	.00
9	.00	.00	.00	2.5	41	14	19	9.3	25	13	1.1	.00
10	.00	.00	.00	17	41	12	33	9.2	21	9.0	1.0	.00
11	.00	.00	.00	52	37	12	21	20	19	6.7	1.8	.00
12	.00	.00	.00	20	35	12	16	18	18	5.6	1.9	.00
13	.00	.00	.00	16	32	12	15	11	17	5.3	1.4	.00
14	.00	.00	.00	11	30	12	14	9.5	15	4.8	1.1	.00
15	.00	.00	.00	12	28	12	14	8.3	14	4.4	.95	.00
16	.00	.00	.00	13	24	30	13	7.7	12	3.9	.88	.00
17	.00	.00	.00	13	24	24	18	7.5	12	3.9	.92	.00
18	.00	.00	.00	14	26	20	21	7.4	12	3.8	.85	.00
19	.00	.00	.00	15	26	18	15	6.9	12	4.1	.74	.00
20	.00	.00	.00	13	26	21	14	6.1	12	18	.62	.03
21	.00	.00	.00	10	24	71	13	123	12	8.3	.53	.13
22	.00	.00	.00	9.6	24	46	13	75	12	5.6	.46	.01
23	.00	.00	.00	9.0	22	33	12	24	12	4.5	5.7	.00
24	.00	.00	.00	8.0	24	30	11	19	12	4.0	3.0	.00
25	.00	.00	.00	8.6	20	29	9.8	17	11	3.5	1.3	.00
26	.00	.00	.00	11	18	27	8.6	16	66	3.3	.94	.00
27	.00	.00	.00	11	18	25	8.0	15	26	3.0	.75	.00
28	.00	.00	.00	9.6	20	26	7.7	41	24	2.9	.62	.00
29	.00	.00	.00	9.6	---	28	15	33	21	2.7	.50	.00
30	.00	.00	.00	10	---	41	12	21	20	2.4	.45	.00
31	.00	---	3.4	9.0	---	30	---	19	---	2.1	.40	---
TOTAL	.00	.00	3.40	324.8	968.2	728	510.1	711.6	649	1260.8	42.31	1.79
MEAN	.0000	.0000	.11	10.5	34.6	23.5	17.0	23.0	21.6	40.7	1.36	.060
MAX	.00	.00	3.4	52	145	71	33	123	66	940	5.7	.34
MIN	.00	.00	.00	1.8	8.3	12	7.7	6.1	11	2.1	.40	.00
CFSM	.0000	.0000	.003	.32	1.04	.71	.51	.69	.65	1.22	.04	.002
IN.	.00	.00	.00	.36	1.08	.81	.57	.79	.72	1.41	.05	.00
AC-FT	.00	.00	6.7	644	1920	1440	1010	1410	1290	2500	84	3.0

CAL YR 1978	TOTAL	16.56	MEAN	.045	MAX	3.4	MIN	.00	CFSM	.001	IN	.02	AC-FT	33
WTR YR 1979	TOTAL	5200.00	MEAN	14.2	MAX	940	MIN	.00	CFSM	.43	IN	5.81	AC-FT	10310

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

BRAZOS RIVER BASIN

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08103900 SOUTH FORK ROCKY CREEK NEAR BRIGGS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 17...	--	--	--	--	--	--	--	--	--
NOV 14...	--	--	--	--	--	--	--	--	--
DEC 05...	--	--	--	--	--	--	--	--	--
JAN 04...	13	.3	6.6	244	236	.16	.010	4	.01
FEB 08...	12	.3	7.8	266	262	.46	.030	4	.59
MAR 06...	14	.5	6.1	256	277	.47	.010	11	.48
MAR 08...	--	--	--	--	--	--	--	4	.17
APR 03...	11	.5	6.6	234	254	.29	.000	17	1.2
APR 17...	--	--	--	--	--	--	--	0	.00
MAY 09...	14	.4	8.6	258	272	.11	.000	21	.57
MAY 30...	--	--	--	--	--	--	--	14	.83
JUN 12...	9.9	.5	8.4	254	257	.15	.000	10	.49
JUL 10...	9.6	.4	9.8	259	255	.16	.000	3	.48
JUL 17...	--	--	--	--	--	--	--	0	.00
AUG 02...	10	.4	11	220	248	.08	.010	8	.05
AUG 22...	--	--	--	--	--	--	--	13	.02

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
FEB 08...	1030	0	0	0	0	4	10
MAY 09...	1045	1	100	1	10	3	30

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
FEB 08...	5	0	.0	1	0	10
MAY 09...	240	0	.0	0	0	20

BRAZOS RIVER BASIN

08103900 SOUTH FORK ROCKY CREEK NEAR BRIGGS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
FEB 08...	1030	<6.6	<.4	3.0	<.4	2.8	<.4	.05	1.0

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
FEB 08...	1030	.0	.00	.0	.00	.00	.00	.00

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)	METHYL PARA- THION, TOTAL (UG/L)
FEB 08...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
FEB 08...	.00	.00	.00	0	.00	.00	.00	.00

08104000 LAMPASAS RIVER AT YOUNGSPORT, TX

LOCATION.--Lat 30°57'26", long 97°42'30", Bell County, Hydrologic Unit 12070203, on left bank 600 ft (180 m) downstream from county road low-water crossing, 2,000 ft (610 m) downstream from bridge on county road, 0.7 mi (1.1 km) east of Youngsport, 4.5 mi (7.2 km) downstream from Rocky Creek, and 40.8 mi (65.6 km) above mouth.

DRAINAGE AREA.--1,240 mi² (3,212 km²).

PERIOD OF RECORD.--February 1924 to current year.

REVISED RECORDS.--WSP 788: 1926, 1928, 1931. WSP 1632: 1957. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 630.88 ft (192.29 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Mar. 14, 1931, nonrecording gage, and Mar. 14, 1931, to Mar. 11, 1965, water-stage recorder at site 1,000 ft (305 m) upstream at datum 2.58 ft (0.786 m) higher.

REMARKS.--Records good. Many small diversions above station for irrigation and municipal supply. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08103800. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--55 years, 277 ft³/s (7.845 m³/s), 200,700 acre-ft/yr (247 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,900 ft³/s (2,490 m³/s) May 17, 1965, gage height, 37.7 ft (11.49 m), from floodmarks, from rating curve extended above 40,000 ft³/s (1,130 m³/s) on basis of maximum discharge of May 13, 1957, measured at highway bridge 22 mi (35 km) downstream; no flow at times in 1925, 1934, 1950-52, 1954, 1956, 1963-67, 1971, and 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1873, 45.2 ft (13.78 m) Sept. 8, 1873, from information by local residents at time the former gage was established 1,000 ft (305 m) upstream, adjusted to present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,800 ft³/s (164 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 21	1815	*14,100	399	15.78	4.810
July 6	1930	9,790	277	12.41	3.783
Aug. 2	1830	7,110	201	10.28	3.133

Minimum daily discharge, 4.4 ft³/s (0.12 m³/s) Oct. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	9.1	17	92	72	151	683	523	1560	211	88	58
2	8.2	8.7	16	66	69	148	550	1130	2440	184	1830	56
3	8.0	8.6	16	41	71	146	477	478	1330	165	1530	54
4	6.6	8.6	15	35	82	146	428	427	1060	150	868	51
5	6.1	12	15	33	298	146	404	441	2130	143	485	49
6	5.7	28	14	31	1010	143	372	334	1620	2080	316	46
7	5.2	34	14	31	628	141	350	292	1160	899	223	45
8	5.0	32	14	30	462	138	364	262	988	360	178	44
9	5.0	20	14	30	378	138	347	242	899	222	172	45
10	5.4	15	14	52	330	138	397	229	798	188	155	45
11	5.8	13	14	322	310	138	373	255	737	170	220	41
12	5.8	13	14	233	282	138	324	389	678	156	309	40
13	5.8	13	14	155	266	136	299	284	631	151	231	39
14	5.8	13	14	119	247	131	281	232	590	141	161	35
15	5.3	13	13	99	232	129	265	207	542	132	138	33
16	4.7	16	14	94	215	296	251	189	501	124	121	34
17	4.7	16	14	94	201	325	251	177	463	117	109	31
18	4.7	15	14	93	185	280	329	169	422	126	101	35
19	4.7	17	14	92	173	262	433	163	393	504	94	44
20	4.7	18	14	92	170	318	353	156	361	422	88	49
21	4.7	21	13	88	167	802	301	3000	332	331	81	49
22	4.7	25	14	84	162	740	272	2240	308	207	78	43
23	4.4	20	13	80	156	655	250	924	283	169	87	39
24	4.5	17	13	77	156	520	234	675	262	147	208	37
25	6.9	16	13	72	156	454	220	577	240	132	139	34
26	12	22	13	76	156	419	204	525	306	123	100	32
27	21	30	14	82	156	388	188	490	528	122	85	31
28	23	34	14	81	154	373	179	608	376	122	74	29
29	15	26	14	77	---	376	196	1690	291	111	68	28
30	12	20	14	76	---	411	208	1820	247	102	64	28
31	10	---	30	75	---	1080	---	1190	---	93	60	---
TOTAL	243.6	554.0	453	2704	6944	9806	9783	20318	22476	8304	8461	1224
MEAN	7.86	18.5	14.6	87.2	248	316	326	655	749	268	273	40.8
MAX	31	34	30	322	1010	1080	683	3000	2440	2080	1830	58
MIN	4.4	8.6	13	30	69	129	179	156	240	93	60	28
AC-FT	483	1100	899	5360	13770	19450	19400	40300	44580	16470	16780	2430
CAL YR 1978	TOTAL	7412.32	MEAN	20.3	MAX	563	MIN	.00	AC-FT	14700		
WTR YR 1979	TOTAL	91270.60	MEAN	250	MAX	3000	MIN	4.4	AC-FT	181000		

BRAZOS RIVER BASIN

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 (8 km) southwest of Belton, and 16.0 mi (25.7 km) upstream from mouth.

DRAINAGE AREA.--1,313 mi² (3,401 km²).

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 (4,762 m) long, including a 1,650-foot (503 m) spillway and 5,894 ft (1,796 m) 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 (503 m) long located near right end of dam. The flood-control outlet consists of a 12.0-foot-diameter (3.7 m) conduit controlled by two 5.67 by 12.0 ft (1.7 by 3.7 m) slide gates at an invert elevation of 515.0 ft (156.97 m). The capacity curve is based on maps prepared by Brazos River Authority in 1937 and supplemented by contour maps prepared by the Corps of Engineers in 1958. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08103800. Corps of Engineers 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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 347,100 acre-ft (428 hm³) May 2, 3, 1977, elevation, 637.26 ft (194.237 m); minimum since conservation storage was reached on Apr. 12, 1969, 183,300 acre-ft (226 hm³) Nov. 5, 1978, elevation, 613.13 ft (186.882 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 286,300 acre-ft (353 hm³) June 11, elevation, 629.38 ft (191.835 m); minimum, 183,300 acre-ft (226 hm³) Nov. 5, elevation, 613.13 ft (186.882 m).

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

612.0	177,300	622.0	235,700
614.0	188,000	624.0	248,800
616.0	199,200	626.0	262,300
618.0	210,900	628.0	276,400
620.0	223,100	630.0	290,800

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188300	186200	188500	188900	195400	208400	243200	238300	259900	240500	237100	236000
2	188000	186100	188700	189100	195600	209000	244900	241100	265000	238200	240800	236000
3	187900	186000	188600	189100	195700	209500	245800	242500	267500	236600	243800	236000
4	187800	185900	188600	189200	196400	209900	245800	243300	269400	235800	244900	236000
5	187700	187000	188500	189400	198100	210300	244500	242600	275700	235400	245600	236000
6	187500	187000	188400	189400	200900	210600	243600	241700	278900	240400	245800	236000
7	187400	186900	188400	189400	202400	210900	241300	240600	280900	242200	246300	235900
8	187300	186900	188200	189400	203500	211100	240200	239300	282800	243200	245600	235800
9	187200	186800	188100	189400	204300	211400	239600	238000	284400	243100	244400	235600
10	187100	186800	188000	190800	205100	211700	238300	237000	285600	242300	243400	235600
11	187100	186800	188100	191300	205800	211900	237200	236500	286300	241500	242800	235500
12	187100	186800	188000	191700	208400	212100	236000	237100	285700	240500	242000	235400
13	186900	186800	188000	192300	206800	212400	235500	237600	283500	239500	240900	235300
14	186800	186900	188000	192500	207400	212600	235600	238000	280700	238700	239600	234900
15	186700	187000	188000	192700	207400	213100	235600	238300	277600	237600	238500	234700
16	186500	187200	188000	192900	207400	215400	235800	238400	274500	236600	237100	234400
17	186400	187200	187900	193200	207500	217300	236500	238400	271300	236100	235700	234400
18	186400	187200	187900	193500	207500	218100	237200	238200	268200	236200	235200	234700
19	186300	187400	188000	193900	207500	219300	238200	238000	264900	237100	235200	235400
20	186300	187500	188000	194000	207500	222000	239300	238000	262200	238900	235200	235400
21	186100	187500	188000	194100	207500	224200	239700	248100	260300	239600	235300	235400
22	186100	187600	187900	194300	207800	226100	240000	254400	258200	239800	235300	235400
23	186000	187600	187900	194300	207900	227700	239700	256100	256300	239400	235300	235500
24	185900	187700	187800	194300	207900	229200	238000	257200	254300	239500	235700	235500
25	186400	187800	187800	194600	207900	230600	236400	256300	252200	238100	235800	235500
26	186300	188500	187700	194700	207900	231900	235400	252900	250200	236800	235800	235400
27	186300	188400	187700	194800	208000	233100	235500	250300	248700	236400	235900	235400
28	186300	188400	187800	194900	208100	234300	235800	247700	246800	236600	236000	235400
29	186200	188400	187800	195100	---	235300	236300	249100	244800	236700	235900	235400
30	186200	188400	188900	195200	---	237900	236300	252500	242800	236700	236000	235300
31	186200	---	188800	195200	---	240300	---	254600	---	236700	236000	---
MAX	188300	188500	188900	195200	208400	240300	245800	257200	286300	243200	246300	236000
MIN	185900	185900	187700	188900	195400	208400	235400	236500	242800	235400	235200	234400
(†)	613.67	614.07	614.14	615.30	617.54	622.71	622.09	624.86	623.09	622.16	622.05	621.94
(‡)	-2100	+2200	+400	+6400	+12900	+32200	-4000	+18300	-11800	-6100	-700	-700
(††)	24	18	22	27	20	19	19	21	29	29	29	28
CAL YR 1978	MAX	231700	MIN	185900	±	-37400	††	297				
WTR YR 1979	MAX	286300	MIN	185900	±	+47000	††	285				

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by Comanche Hills Utility District.

BRAZOS RIVER BASIN

399

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CaCO_3)	HARDNESS, NONCARBONATE (MG/L CaCO_3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO
JAN 25...	1215	592	7.5	180	19	37	22	38	1.2
AUG 23...	0915	470	25.0	170	30	38	18	28	.9

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO_3)	CARBONATE (MG/L AS CO_3)	SULFATE DIS-SOLVED (MG/L AS SO_4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO_2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
JAN 25...	3.3	200	0	25	63	.3	8.3	296
AUG 23...	2.6	170	0	26	51	.3	6.9	255

BRAZOS RIVER BASIN

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 (7 m) upstream from upstream bridge of three bridges on Interstate Highway 35 and U.S. Highway 81, 3.5 mi (5.6 km) downstream from Stillhouse Hollow Dam, 4.1 mi (6.6 km) southwest of Belton, and 12.7 mi (20.4 km) upstream from mouth.

DRAINAGE AREA.--1,321 mi² (3,421 km²).

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 476.58 ft (145.262 m), State Department of Highways and Public Transportation datum.

REMARKS.--Records good. Many small diversions above station for irrigation and municipal supply. Since Sept. 2, 1966, flow largely regulated by Stillhouse Hollow Lake (station 08104050). Corps of Engineers telemeter located at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1964-79), 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,900 ft³/s (2,210 m³/s) May 17, 1965, gage height, 43.58 ft (13.283 m); no flow Aug. 9, 10, 12-15, Sept. 5, 6, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1877, 45 ft (13.7 m) September 1921, from information by local residents. Flood of May 1957 reached a stage of 44.4 ft (13.53 m), discharge, 83,500 ft³/s (2,360 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) May 26, gage height, 11.64 ft (3.548 m); minimum daily, 3.5 ft³/s (0.099 m³/s) Oct. 1-22, Nov. 7-9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.9	5.9	9.8	9.5	11	178	239	385	1230	21	13
2	3.5	3.9	5.9	7.0	8.8	11	24	22	51	1230	20	13
3	3.5	4.4	7.6	6.4	8.8	12	23	21	45	901	18	13
4	3.5	4.4	7.0	7.0	9.3	11	395	20	42	600	16	12
5	3.5	8.4	7.0	6.4	15	11	1080	530	62	282	16	12
6	3.5	7.5	7.0	5.9	18	10	1080	912	44	27	16	12
7	3.5	3.5	7.0	6.4	14	10	1080	912	43	27	16	12
8	3.5	3.5	6.4	6.4	13	10	1080	912	43	25	412	12
9	3.5	3.5	6.4	6.4	13	10	1080	912	44	306	755	12
10	3.5	3.9	4.4	10	13	9.5	1080	916	44	606	755	12
11	3.5	3.9	4.4	51	14	9.5	1070	570	215	610	775	12
12	3.5	4.3	4.4	25	14	9.9	903	24	904	607	766	12
13	3.5	5.0	4.4	11	15	10	563	23	1600	606	766	11
14	3.5	4.9	4.4	10	15	9.7	303	22	1900	606	765	11
15	3.5	6.4	4.8	10	16	9.6	219	21	1890	606	762	11
16	3.5	7.9	4.9	10	16	10	134	101	1900	606	762	11
17	3.5	6.9	4.9	10	16	10	53	197	1900	422	762	11
18	3.5	6.4	4.9	10	15	10	36	197	1890	22	377	11
19	3.5	7.7	5.4	10	14	11	24	197	1880	20	17	11
20	3.5	8.6	5.9	10	14	11	23	197	1670	95	16	11
21	3.5	7.6	6.7	10	14	18	21	312	1250	23	15	11
22	3.5	7.0	7.6	10	13	14	21	120	1250	23	14	11
23	3.7	7.0	7.6	10	15	14	383	32	1250	22	14	11
24	3.9	7.6	7.9	10	14	15	1080	32	1250	399	13	11
25	5.5	7.6	8.8	10	12	16	1080	623	1240	750	13	11
26	5.3	13	8.1	10	11	17	621	2040	1240	751	13	11
27	4.4	7.0	7.6	10	11	18	143	2030	1240	403	13	11
28	4.4	6.4	7.6	10	11	19	21	2030	1230	22	13	11
29	4.2	6.4	7.6	10	---	19	21	1190	1230	20	13	11
30	3.9	5.9	7.6	10	---	21	163	39	1230	19	13	11
31	3.9	---	16	9.5	---	22	---	35	---	19	13	---
TOTAL	116.2	184.4	206.1	338.2	372.4	399.2	13982	15428	28962	11885	7960	345
MEAN	3.75	6.15	6.65	10.9	13.3	12.9	466	498	965	383	257	11.5
MAX	5.5	13	16	51	18	22	1080	2040	1900	1230	775	13
MIN	3.5	3.5	4.4	5.9	8.8	9.5	21	20	42	19	13	11
AC-FT	230	366	409	671	739	792	27730	30600	57450	23570	15790	684
CAL YR 1978	TOTAL	20807.5	MEAN	57.0	MAX	733	MIN	3.1	AC-FT	41270		
WTR YR 1979	TOTAL	80178.5	MEAN	220	MAX	2040	MIN	3.5	AC-FT	159000		

BRAZOS RIVER BASIN

401

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 (8 m) downstream from State Highway 95, 2.4 mi (3.9 km) southeast of Little River, 5 mi (8 km) downstream from confluence of Leon and Lampasas Rivers, and 95.8 mi (154.2 km), revised, upstream from mouth.

DRAINAGE AREA.--5,228 mi² (13,541 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to May 1929, August 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.11 ft (121.954 m) National Geodetic Vertical Datum of 1929. Oct. 5, 1923, to May 27, 1929, nonrecording gage on railroad bridge 0.5 mi (0.8 km) upstream at same datum.

REMARKS.--Water-discharge records good. Many small diversions 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. Corps of Engineers gage-height telemeter at station. For statement regarding regulation by Soil Conservation Service flood-water-retarding structures, see station 08102600.

AVERAGE DISCHARGE.--5 years (water years 1924-28) unregulated, 709 ft³/s (20.08 m³/s), 513,700 acre-ft/yr (633 hm³/yr); 17 years (water years 1963-79) regulated, 938 ft³/s (26.56 m³/s), 679,600 acre-ft/yr (838 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,600 ft³/s (2,250 m³/s) May 17, 1965, gage height, 42.85 ft (13.061 m); minimum daily, 8.2 ft³/s (0.23 m³/s) Aug. 6, 19, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 46.8 ft (14.26 m) in September 1921, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s (459 m³/s) May 22, gage height, 34.44 ft (10.497 m); minimum daily, 30 ft³/s (0.85 m³/s) Oct. 14, 15, 19, 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	39	74	269	132	225	4390	1750	8150	3760	225	148
2	43	38	72	152	136	225	3680	844	5120	3600	293	142
3	41	84	140	144	339	954	515	1380	2170	246	146	146
4	39	37	94	134	156	259	808	463	1620	928	215	147
5	38	38	72	154	1430	220	1670	813	6290	791	207	153
6	38	546	71	160	2450	211	1620	2120	2020	391	204	146
7	35	108	67	136	664	205	1580	2200	2240	426	198	140
8	36	60	65	125	426	207	1610	1780	5450	390	307	137
9	35	51	67	123	327	200	1560	2800	6050	539	939	133
10	38	51	64	118	306	198	1650	2810	5930	1630	945	132
11	40	51	67	799	288	198	1550	3100	5870	1650	1300	131
12	35	51	71	419	271	198	1350	763	6260	1630	1110	131
13	34	51	71	243	262	198	1050	891	5960	1600	972	130
14	30	51	72	220	254	192	766	2110	6080	1290	963	127
15	30	74	71	222	245	200	610	2460	6080	1270	1090	125
16	31	130	72	207	236	723	569	2450	6040	1210	1440	125
17	32	154	71	198	229	596	433	2620	6000	850	1450	125
18	31	67	72	193	222	369	603	2620	6010	388	1250	185
19	30	76	74	193	220	345	517	3080	5960	413	687	288
20	30	152	74	189	216	810	549	3820	5280	895	656	309
21	32	94	72	173	216	2000	407	7060	2320	482	234	175
22	32	95	72	142	214	963	372	10500	3890	305	175	146
23	32	82	72	134	361	624	413	1620	3860	278	246	141
24	34	65	71	132	429	438	1380	1150	3850	1350	191	139
25	40	62	69	132	332	385	1390	982	3820	1980	171	135
26	201	186	72	148	248	356	1170	2850	3970	1920	166	132
27	77	252	72	156	240	332	509	2810	3840	1160	170	131
28	51	116	72	144	240	327	330	2850	3820	316	159	130
29	43	92	76	142	---	338	340	3160	3790	259	155	127
30	41	82	76	142	---	383	377	1550	3780	242	151	125
31	39	---	360	136	---	419	---	1120	---	230	150	---
TOTAL	1334	2989	2529	5975	10894	12683	34207	75661	140730	34343	16665	4481
MEAN	43.0	99.6	81.6	193	389	409	1140	2441	4691	1108	538	149
MAX	201	546	360	799	2450	2000	4390	10500	8150	3760	1450	309
MIN	30	37	64	118	132	192	330	463	1380	230	150	125
AC-FT	2650	5930	5020	11850	21610	25160	67850	150100	279100	68120	33060	8890
CAL YR 1978	TOTAL	76605	MEAN 210	MAX	1250	MIN 30	AC-FT	151900				
WTR YR 1979	TOTAL	342491	MEAN 938	MAX	10500	MIN 30	AC-FT	679300				

BRAZOS RIVER BASIN

08104500 LITTLE RIVER NEAR LITTLE RIVER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1964 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1973.

WATER TEMPERATURE: October 1964 to September 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,140 micromhos Oct. 28, 1964; minimum daily, 245 micromhos May 16, 1965.

WATER TEMPERATURES: Maximum, 38.0°C July 7, 1969, Sept. 15, 1972; minimum, 3.0°C Jan. 10, 1973.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 02...	1130	40	579	17.5	200	33	59	12	35
DEC 12...	1105	72	629	4.0	230	28	67	14	40
JAN 30...	1245	144	575	8.0	230	27	73	12	25
MAR 12...	1540	197	583	15.0	230	21	69	13	26
APR 19...	0840	425	547	20.5	240	38	76	11	20
JUN 04...	1200	1130	556	23.0	270	36	90	9.9	17
JUL 18...	0940	310	556	24.5	230	32	67	15	27
AUG 23...	1450	220	516	26.5	220	26	68	11	23
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 02...	1.1	5.1	200	0	35	51	.3	8.9	305
DEC 12...	1.2	5.0	240	0	45	46	.4	9.1	345
JAN 30...	.7	3.0	250	0	38	39	.3	6.7	320
MAR 12...	.8	2.6	250	0	39	33	.4	6.1	312
APR 19...	.6	2.4	240	0	35	28	.4	9.2	300
JUN 04...	.5	2.6	280	0	34	19	.3	13	324
JUL 18...	.8	2.7	240	0	31	38	.3	10	309
AUG 23...	.7	2.8	230	0	33	31	.4	9.9	292

BRAZOS RIVER BASIN

403

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 1.5 mi (2.4 km) upstream from Middle Fork San Gabriel River, 2.7 mi (4.3 km) upstream from Interstate Highway 35, 2.7 mi (4.3 km) northwest of Georgetown, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--248 mi² (642 km²).

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 (210.025 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Beginning on Apr. 6, 1976, flow was partly regulated by detention basin at North Fork Lake (under construction) located about 1 mi (2 km) upstream from gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 88.1 ft³/s (2.495 m³/s), 63,830 acre-ft/yr (78.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Sept. 17, 1974, gage height, 26.20 ft (7.986 m); no flow July 23-25, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 39.5 ft (12.04 m) in September 1921. Flood in April 1957 reached a stage of 34.5 ft (10.52 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft³/s (83.0 m³/s) July 6, gage height, 9.01 ft (2.746 m); minimum daily, 0.07 ft³/s (0.002 m³/s) Oct. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.30	2.9	8.1	31	97	434	257	471	68	28	7.8
2	.17	.30	2.8	5.8	30	92	678	361	800	63	51	7.4
3	.17	.34	3.6	5.4	30	96	463	345	485	61	72	7.2
4	.13	.36	2.8	4.9	35	107	431	321	357	60	40	6.7
5	.10	1.6	2.7	4.9	84	99	405	299	406	56	30	6.6
6	.10	.39	2.3	4.9	412	88	372	249	535	251	26	7.5
7	.10	.62	2.3	4.5	480	83	333	204	360	361	22	7.6
8	.09	.49	2.3	3.4	443	83	297	148	306	202	21	6.6
9	.09	.33	1.9	3.3	377	79	264	184	294	120	20	5.9
10	.09	.19	1.9	6.1	329	76	241	149	281	80	19	5.5
11	.09	.13	1.9	100	236	75	242	143	232	68	20	5.4
12	.09	.13	1.9	181	196	73	217	156	195	58	21	5.6
13	.09	.13	1.9	115	169	73	195	178	198	53	23	5.1
14	.13	.13	1.5	68	150	69	183	170	198	48	20	4.5
15	.13	19	1.6	50	134	65	169	136	198	44	19	3.9
16	.10	11	1.8	48	118	104	157	118	192	42	18	3.5
17	.10	7.5	1.8	51	105	179	153	108	171	40	17	3.4
18	.09	5.2	1.6	49	103	181	178	104	158	39	16	7.8
19	.07	4.8	1.4	45	103	162	188	102	147	53	15	8.9
20	.09	4.9	1.4	43	104	306	193	97	139	50	15	9.8
21	.10	4.9	1.5	39	111	957	185	144	127	61	14	8.7
22	.10	4.5	1.2	32	111	675	159	885	117	54	14	6.9
23	.10	4.3	1.2	31	116	626	146	582	105	45	15	6.0
24	.13	3.1	1.6	30	139	440	134	555	100	39	15	5.4
25	.17	2.2	1.5	30	124	410	129	246	93	36	12	4.9
26	.30	4.1	1.5	30	113	374	119	199	89	41	11	4.7
27	.23	4.1	1.5	32	102	331	112	183	86	56	11	4.1
28	.23	3.6	1.5	33	100	271	103	436	86	47	10	3.8
29	.23	3.6	1.5	33	---	239	164	1170	83	39	9.2	3.8
30	.23	3.6	1.5	32	---	243	276	410	74	35	8.3	3.8
31	.30	---	6.4	32	---	272	---	306	---	31	8.2	---
TOTAL	4.31	95.84	63.2	1155.3	4585	6925	7320	8945	7083	2301	640.7	178.8
MEAN	.14	3.19	2.04	37.3	164	223	244	289	236	74.2	20.7	5.96
MAX	.30	19	6.4	181	480	957	678	1170	800	361	72	9.8
MIN	.07	.13	1.2	3.3	30	65	103	97	74	31	8.2	3.4
AC-FT	8.5	190	125	2290	9090	13740	14520	17740	14050	4560	1270	355
CAL YR 1978	TOTAL	1022.48	MEAN	2.80	MAX	37	MIN	.04	AC-FT	2030		
WTR YR 1979	TOTAL	39297.15	MEAN	108	MAX	1170	MIN	.07	AC-FT	77950		

BRAZOS RIVER BASIN

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 (1.8 km) southwest of the courthouse at Georgetown, and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--133 mi² (345 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948, 1962-67, December 1967 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 687.72 ft (209.617 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1969-79), 46.7 ft³/s (1.323 m³/s), 4.77 in/yr (121 mm/yr), 33,830 acre-ft/yr (41.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s (572 m³/s) Oct. 31, 1974, gage height, 16.61 ft (5.063 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, about 41 ft (12.5 m) Apr. 24, 1957, from information by local residents.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 21	0630	3,850 109	8.62 2.627	May 28	2115	*4,610 131	9.23 2.813
Apr. 1	1815	4,220 120	8.92 2.719	July 6	0915	2,580 73.1	7.43 2.265

Minimum daily discharge, 0.01 ft³/s (0.0003 m³/s) Sept. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.06	.05	3.4	13	17	53	1010	380	240	53	22	10		
2	.07	.04	3.4	6.9	15	54	374	211	247	48	107	12		
3	.19	.04	7.6	2.9	16	81	219	157	186	44	61	13		
4	.15	.03	5.0	4.3	22	66	178	161	154	42	30	12		
5	.13	2.4	3.1	11	84	55	157	134	188	33	24	12		
6	.10	1.1	4.2	5.5	533	53	143	124	175	197	17	8.1		
7	.09	.25	4.8	9.4	171	52	138	113	148	77	15	9.9		
8	.07	.10	2.5	7.4	115	50	160	109	142	53	14	9.2		
9	.07	.07	2.6	4.3	88	49	167	107	146	31	13	12		
10	.07	3.8	4.0	13	80	48	164	106	133	30	12	7.7		
11	.07	.53	4.1	235	76	50	158	113	126	28	13	4.2		
12	.07	.26	2.0	70	69	47	142	142	120	21	14	1.7		
13	.07	.20	1.1	44	63	46	134	121	115	19	13	.57		
14	.07	.13	1.8	32	61	43	122	143	110	17	10	.81		
15	.06	57	7.2	28	58	42	121	136	106	20	8.2	.01		
16	.05	8.2	4.3	27	53	187	144	130	100	16	5.8	1.7		
17	.05	5.0	1.7	25	51	134	150	126	97	15	4.1	9.7		
18	.05	1.8	2.5	26	52	100	159	123	87	15	5.1	3.5		
19	.05	10	2.1	26	50	96	148	121	82	28	7.3	13		
20	.05	8.6	1.6	25	51	263	178	143	80	64	7.0	7.4		
21	.05	4.5	1.2	22	50	1200	131	256	76	39	5.8	7.5		
22	.05	4.1	.90	20	49	335	123	391	72	35	5.0	9.6		
23	.05	5.7	.67	20	140	200	115	201	70	35	37	11		
24	.05	5.6	2.2	20	107	154	112	165	69	33	24	7.4		
25	.05	4.7	8.1	19	71	143	106	149	67	32	17	2.4		
26	.05	7.6	4.1	18	60	135	103	159	63	40	17	1.6		
27	.05	5.2	2.9	18	58	131	98	182	62	119	14	1.0		
28	.05	2.0	.45	17	57	130	97	573	58	68	9.3	.50		
29	.05	3.0	.90	17	---	130	279	322	54	44	9.1	7.8		
30	.05	2.7	1.1	18	---	150	149	163	53	23	8.6	1.4		
31	.05	---	22	17	---	153	---	151	---	19	8.7	---		
TOTAL	2.14	144.70	113.52	821.7	2317	4430	5479	5612	3426	1338	558.0	198.69		
MEAN	.069	4.82	3.66	26.5	82.8	143	183	181	114	43.2	18.0	6.62		
MAX	.19	57	22	235	533	1200	1010	573	247	197	107	13		
MIN	.05	.03	.45	2.9	15	42	97	106	53	15	4.1	.01		
CFSM	.001	.04	.03	.20	.62	1.08	1.38	1.36	.86	.33	.14	.05		
IN.	.00	.04	.03	.23	.65	1.24	1.53	1.57	.96	.37	.16	.06		
AC-FT	4.2	287	225	1630	4600	8790	10870	11130	6800	2650	1110	394		
CAL YR 1978	TOTAL	1308.81	MEAN	3.59	MAX	57	MIN	.00	CFSM	.03	IN	.37	AC-FT	2600
WTR YR 1979	TOTAL	24440.75	MEAN	67.0	MAX	1200	MIN	.01	CFSM	.50	IN	6.84	AC-FT	48480

BRAZOS RIVER BASIN

405

08105100 BERRY CREEK NEAR GEORGETOWN, TX

LOCATION.--Lat 30°41'28", long 97°39'21", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of upstream service road on Interstate Highway 35, 2.9 mi (4.7 km) north of the county courthouse at Georgetown, and 63.2 mi (100.2 km) upstream from mouth.

DRAINAGE AREA.--83.1 mi² (215.2 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 659.97 ft (201.159 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No regulation or diversion.

AVERAGE DISCHARGE.--12 years, 29.1 ft³/s (0.824 m³/s), 4.76 in/yr (121 mm/yr), 21,080 acre-ft/yr (26.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s (439 m³/s) Oct. 31, 1974, gage height, 19.33 ft (5.892 m); no flow at times in 1967, 1971-72, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1921 occurred September 1921, 25 ft (7.6 m), from information by State Department of Highways and Public Transportation and local residents. Discharge not determined.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 11	0300	1,380 39.1	8.23 2.509	May 21	2215	3,440 97.4	11.16 3.402
Feb. 6	0500	1,910 54.1	9.16 2.792	May 28	2230	4,620 131	12.33 3.758
Mar. 21	0715	3,890 110	11.64 3.548	June 1	1730	3,630 103	11.37 3.466
Apr. 1	1845	*5,700 161	13.26 4.042				

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.04	.97	12	34	1300	159	975	39	21	7.8
2	.00	.00	.04	1.2	12	33	254	121	295	37	20	7.7
3	.00	.00	.14	1.6	12	46	163	85	159	36	31	7.4
4	.00	.00	.09	1.7	13	39	127	108	124	34	23	7.2
5	.00	.00	.08	2.4	248	32	102	75	377	33	21	7.2
6	.00	.00	.08	2.9	692	31	91	71	169	55	20	7.1
7	.00	.00	.08	3.5	106	31	83	66	119	53	19	6.8
8	.00	.00	.08	3.6	70	30	94	62	106	47	18	6.6
9	.00	.00	.08	3.8	54	28	84	61	101	39	17	6.5
10	.00	.00	.08	6.2	48	28	80	59	90	37	16	6.3
11	.00	.00	.08	329	48	27	83	63	84	37	16	6.2
12	.00	.00	.08	42	44	27	72	77	79	34	15	6.0
13	.00	.00	.10	25	40	27	67	67	75	32	15	5.8
14	.00	.00	.10	15	38	27	65	60	73	31	15	5.7
15	.00	4.5	.10	9.9	37	25	63	57	69	29	15	5.5
16	.00	.05	.10	10	32	164	61	55	66	28	14	5.5
17	.00	.00	.12	13	30	109	60	53	65	28	13	5.4
18	.00	.00	.12	12	31	78	65	52	62	28	12	6.3
19	.00	.64	.12	15	32	65	67	53	59	32	12	5.8
20	.00	.01	.15	15	33	318	71	51	58	34	11	5.7
21	.00	.00	.15	12	34	1110	65	562	55	43	11	5.4
22	.00	.00	.15	11	33	259	61	800	54	30	11	5.3
23	.00	.00	.15	11	102	125	60	130	51	27	11	5.2
24	.00	.00	.18	11	64	91	59	94	50	25	10	5.0
25	.00	.00	.18	11	51	82	57	80	47	24	10	5.0
26	.00	.05	.18	11	39	76	56	73	46	24	10	5.0
27	.00	.03	.21	11	38	67	54	68	44	28	9.8	5.0
28	.00	.03	.21	11	38	66	53	711	44	29	9.1	4.9
29	.00	.03	.21	11	---	68	57	372	42	25	8.7	4.8
30	.00	.03	.21	12	---	82	64	119	40	23	8.4	4.8
31	.00	---	1.7	12	---	89	---	111	---	22	8.0	---
TOTAL	.00	5.39	5.39	637.77	2031	3314	3638	4575	3678	1023	451.0	178.9
MEAN	.000	.18	.17	20.6	72.5	107	121	148	123	33.0	14.5	5.96
MAX	.00	4.5	1.7	329	692	1110	1300	800	975	55	31	7.8
MIN	.00	.00	.04	.97	12	25	53	51	40	22	8.0	4.8
CFSM	.000	.002	.002	.25	.87	1.29	1.46	1.78	1.48	.40	.17	.07
IN.	.00	.00	.00	.29	.91	1.48	1.63	2.05	1.65	.46	.20	.08
AC-FT	.00	11	11	1270	4030	6570	7220	9070	7300	2030	895	355

CAL YR 1978	TOTAL	61.05	MEAN	.17	MAX	4.5	MIN	.00	CFSM	.002	IN	.03	AC-FT	121
WTR YR 1979	TOTAL	19537.43	MEAN	53.5	MAX	1300	MIN	.00	CFSM	.64	IN	8.75	AC-FT	38750

BRAZOS RIVER BASIN

08105100 BERRY CREEK NEAR GEORGETOWN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Sediment records: October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
DEC 11...	1110	.07	6.0	40	.01
JAN 22...	1115	11	10.5	36	1.1
MAR 03...	1405	30	14.0	32	2.6
APR 19...	1255	65	22.0	7	1.2
MAY 29...	1325	20	19.5	230	12
JUL 07...	1130	36	24.0	8	.78
10...	1130	36	24.0	33	3.2
AUG 31...	1345	8.2	24.0	81	2.4

BRAZOS RIVER BASIN

407

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 (0.8 km) upstream from Manske Branch, 4.7 mi (7.6 km) east of Georgetown, and 54.8 mi (88.2 km) upstream from mouth.

DRAINAGE AREA.--563 mi² (1,458 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 582.04 ft (177.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. During the current year, the city of Georgetown released 1,216 acre-ft (1.50 hm³) of sewage effluent into the river 6.5 mi (10.5 km) above this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s (513 m³/s) Apr. 15, 1977, gage height, 14.90 ft (4.542 m); minimum daily, 0.45 ft³/s (0.013 m³/s) Aug. 22, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) Apr. 1, gage height, 13.36 ft (4.072 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Nov. 9-14.

x	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979											
	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.0	20	109	99	247	3760	1090	2500	174	116	40
2	4.5	3.7	20	51	99	243	1850	967	2100	159	188	51
3	4.4	2.9	28	43	105	352	1260	690	1200	149	198	52
4	4.4	2.3	27	42	151	308	1090	672	950	146	135	49
5	4.2	6.6	22	45	976	267	922	583	1470	142	116	50
6	4.4	14	21	49	2810	241	815	501	1310	819	104	50
7	4.3	2.5	21	40	1270	231	748	427	844	602	95	51
8	4.1	2.0	21	38	991	222	732	352	723	431	93	49
9	4.4	1.9	20	937	782	217	649	385	709	291	91	48
10	4.4	1.9	19	831	625	215	612	347	632	238	86	48
11	4.4	1.9	19	394	481	217	602	364	538	220	84	46
12	4.0	1.9	19	249	413	211	534	421	469	195	88	45
13	4.1	1.9	19	176	362	202	482	378	459	186	86	43
14	3.2	1.9	19	150	329	194	455	344	470	177	81	41
15	2.1	111	19	139	302	189	434	303	490	171	76	40
16	2.1	49	21	138	264	883	409	278	453	166	72	38
17	2.8	33	21	140	243	569	409	263	379	162	72	41
18	3.1	23	20	144	245	401	459	253	351	159	68	56
19	3.1	34	19	133	246	335	470	245	317	164	70	55
20	3.1	40	19	117	243	1180	537	233	312	209	65	54
21	3.1	26	19	112	246	3730	449	1510	288	204	61	49
22	2.8	24	19	109	244	1930	401	2760	267	178	55	46
23	2.6	21	19	106	607	1270	369	1160	254	157	65	46
24	2.5	20	19	99	494	940	347	1030	241	141	68	46
25	2.7	20	20	99	353	841	325	531	228	133	60	43
26	4.2	58	22	104	296	759	307	419	216	128	57	42
27	4.4	30	21	101	272	681	289	388	211	220	56	40
28	4.4	23	21	100	263	612	276	2150	205	191	50	39
29	4.4	22	20	102	---	578	622	3070	195	144	50	39
30	4.1	21	19	106	---	623	609	1050	183	128	51	39
31	4.1	---	189	99	---	696	---	691	---	118	42	---
TOTAL	115.2	604.4	802	5102	13811	19584	21223	23855	18964	6702	2599	1376
MEAN	3.72	20.1	25.9	165	493	632	707	770	632	216	83.8	45.9
MAX	4.8	111	189	937	2810	3730	3760	3070	2500	819	198	56
MIN	2.1	1.9	19	38	99	189	276	233	183	118	42	38
AC-FT	228	1200	1590	10120	27390	38840	42100	47320	37620	13290	5160	2730
CAL YR 1978	TOTAL	5812.33	MEAN	15.9	MAX	197	MIN	.45	AC-FT	11530		
WTR YR 1979	TOTAL	114737.60	MEAN	314	MAX	3760	MIN	1.9	AC-FT	227600		

BRAZOS RIVER BASIN

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 current year.

INSTRUMENTATION---Water temperature is recorded continuously at this station.

REMARKS---Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum values are not shown, mean value is estimated.

EXTREMES FOR PERIOD OF DAILY RECORD---

WATER TEMPERATURES: Maximum daily, 35.0°C July 24, 1977; minimum daily, 2.5°C Jan. 22, 1978, Jan. 2, 1979.

EXTREMES FOR CURRENT YEAR---

WATER TEMPERATURES: Maximum, 32.5°C Aug. 20; minimum daily, 2.5°C Jan. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT 05...	0847	4.1	540	8.4	25.5	10	25	6.2	78	2.5	200	13
NOV 27...	1230	28	520	8.1	15.5	32	70	7.5	78	5.7	220	35
DEC 19...	1530	19	600	8.0	15.0	5	10	10.4	107	1.2	270	43
JAN 19...	0914	135	518	8.0	15.0	3	20	7.8	81	1.2	230	44
FEB 16...	0948	267	532	8.4	13.0	2	15	9.4	92	1.0	250	38
MAR 12...	1010	212	538	8.1	13.5	6	3.0	10.3	102	.7	240	30
APR 09...	1148	642	528	8.0	18.5	5	8.0	9.4	103	1.0	250	28
MAY 17...	0818	264	502	7.7	22.0	3	4.1	6.1	70	1.2	240	27
JUN 27...	1637	214	462	8.0	28.5	10	3.5	10.8	138	.6	210	17
JUL 18...	1810	159	480	7.8	28.5	5	3.2	9.4	122	.8	230	36
AUG 23...	1437	55	500	7.6	28.5	10	1.9	12.5	162	1.2	230	45
SEP 19...	1445	50	520	7.5	21.5	5	.40	9.0	102	.9	230	14

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 05...	49	19	32	1.0	2.3	220	4	22	41	.2	9.7	288
NOV 27...	65	13	17	.5	2.8	220	0	33	28	.2	8.4	276
DEC 19...	81	17	20	.5	2.1	280	0	34	31	.2	1.2	325
JAN 19...	75	11	12	.3	2.0	230	0	31	19	2	9.0	273
FEB 16...	81	12	11	.3	1.4	260	0	32	20	.3	6.6	293
MAR 12...	76	13	12	.3	1.2	260	0	30	19	.3	5.8	285
APR 09...	80	12	11	.3	1.3	270	0	23	16	.2	9.3	286
MAY 17...	73	14	11	.3	1.0	260	0	23	16	.3	7.5	274
JUN 27...	61	15	13	.4	1.0	240	0	21	15	.3	11	256
JUL 18...	70	14	12	.3	1.5	240	0	25	18	.3	9.6	269
AUG 23...	67	14	13	.4	1.3	220	0	25	21	.2	9.4	259
SEP 19...	68	14	12	.3	1.7	260	0	22	21	.2	7.6	275

BRAZOS RIVER BASIN

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08105300 SAN GABRIEL RIVER NEAR WEIR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (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)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 05...	47	4	.01	.00	.01	.01	1.8	1.8	.320	6.4	1	.20
NOV 27...	99	17	1.9	.19	2.1	.46	.74	1.2	--	4.3	0	.30
DEC 19...	20	8	2.3	.08	2.4	.02	.78	.80	.300	3.3	1	.10
JAN 19...	26	4	3.2	.10	3.3	.18	.48	.66	.100	3.4	2	.00
FEB 16...	23	5	2.8	.04	2.8	.06	.44	.50	.040	1.9	1	.00
MAR 12...	11	5	1.1	.04	1.1	.02	.17	.19	.020	2.7	0	.10
APR 09...	13	2	1.4	.02	1.4	.01	.31	.32	.020	3.6	0	.00
MAY 17...	13	8	1.4	.04	1.4	.03	.25	.28	.030	2.8	0	.10
JUN 27...	10	10	1.6	.06	1.7	.02	.42	.44	.030	7.3	1	.00
JUL 18...	14	5	1.1	.08	1.2	.02	.39	.41	.050	4.8	0	.00
AUG 23...	5	0	1.7	.21	1.9	.02	.62	.64	.120	3.4	1	.00
SEP 19...	16	5	2.3	.19	2.5	.05	.50	.55	.030	2.6	0	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 05...	0847	5	0	0	0	2	20
FEB 16...	0948	1	0	0	10	0	20
JUN 27...	1637	1	50	<1	0	0	<0
AUG 23...	1437	1	0	0	0	0	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 05...	0	0	.0	0	0	10
FEB 16...	0	0	.0	2	0	10
JUN 27...	0	4	.0	0	0	<3
AUG 23...	0	20	.1	0	0	10

BRAZOS RIVER BASIN

08105300 SAN GABRIEL RIVER NEAR WEIR, TX--Continued

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

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

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

BRAZOS RIVER BASIN

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08105300 SAN GABRIEL RIVER NEAR WEIR, TX--Continued

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

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

BRAZOS RIVER BASIN

08105700 SAN GABRIEL RIVER AT LANEPORT, TX

LOCATION.--Lat 30°41'40", long 97°16'43", Williamson County, Hydrologic Unit 12070205, on right bank 22 ft (7 m) downstream from county bridge, 0.2 mi (0.3 km) north of Laneport, 3.4 mi (5.5 km) downstream from Willis Creek, 7.5 mi (12.1 km) northwest of Thrall, and 26.2 mi (42.2 km) upstream from mouth.

DRAINAGE AREA.--738 mi² (1,911 km²).

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 (125.760 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow partly regulated by Laneport Reservoir under construction during the 1978 water year.

AVERAGE DISCHARGE.--14 years, 289 ft³/s (8.184 m³/s), 209,400 acre-ft/yr (258 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s (884 m³/s) Oct. 31, 1974, gage height, 30.80 ft (9.388 m); minimum daily, 0.28 ft³/s (0.008 m³/s) Aug. 25-28, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1910, occurred September 1921, 39.6 ft (12.07 m); April 1957, 34.6 ft (10.55 m); and October 1959, 33.8 ft (10.30 m); from floodmarks at present site and datum. Discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,090 ft³/s (116 m³/s) Mar. 21, gage height, 16.23 ft (4.947 m); minimum daily, 0.33 ft³/s (0.009 m³/s) Oct. 13-18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.4	28	537	4.6	310	1190	906	1340	282	198	72
2	1.8	4.0	27	157	283	293	3330	1550	2710	267	165	70
3	.95	2.3	26	82	266	364	2600	960	2320	252	185	68
4	.60	1.7	30	72	167	381	1670	759	1740	238	201	69
5	.72	7.3	30	87	683	325	1120	710	1550	234	176	69
6	.82	39	14	105	3070	293	920	639	1720	297	155	68
7	.68	46	29	95	2650	272	833	581	1420	562	140	67
8	.58	19	43	77	1110	261	803	531	1070	568	131	65
9	.54	12	29	67	876	251	756	477	898	507	127	63
10	.54	9.3	27	86	747	244	684	483	802	406	122	60
11	.49	8.2	26	1300	638	246	661	696	713	337	119	59
12	.36	7.7	26	867	544	242	616	556	649	284	119	57
13	.33	8.1	27	465	466	223	548	528	610	248	118	55
14	.33	8.5	26	290	424	238	446	501	581	226	115	52
15	.33	8.1	26	210	401	215	473	455	578	212	113	50
16	.33	151	25	186	361	640	460	414	565	199	107	48
17	.33	58	28	179	324	1250	272	395	543	189	103	48
18	.33	39	28	182	316	712	10	380	501	180	100	57
19	.34	32	27	189	320	871	956	372	477	180	96	82
20	.35	47	29	189	319	1630	1370	364	446	189	93	91
21	.35	54	37	167	321	2640	703	603	419	216	90	87
22	.35	36	25	146	320	3660	584	3180	406	216	86	78
23	.35	30	25	138	433	2500	537	3050	393	199	87	70
24	.36	28	23	127	739	1200	501	2170	377	180	90	64
25	.43	26	23	122	529	934	472	1250	359	166	93	62
26	.71	80	23	132	394	833	441	679	344	158	90	58
27	.71	135	28	134	348	715	414	584	332	613	85	55
28	.71	50	26	124	329	689	395	603	323	623	80	53
29	.70	36	26	123	---	639	587	3050	316	472	76	52
30	.62	30	26	93	---	643	835	3260	297	357	74	49
31	.60	---	389	7.3	---	988	---	2190	---	262	74	---
TOTAL	18.74	1014.6	1202	6735.3	17382.6	24702	25187	32876	24799	9319	3608	1898
MEAN	.60	33.8	38.8	217	621	797	840	1061	827	301	116	63.3
MAX	2.1	151	389	1300	3070	3660	3330	3260	2710	623	201	91
MIN	.33	1.4	14	7.3	4.6	215	10	364	297	158	74	48
AC-FT	37	2010	2380	13360	34480	49000	49960	65210	49190	18480	7160	3760
CAL YR 1978	TOTAL	9952.95	MEAN	27.3	MAX	486	MIN	.28	AC-FT	19740		
WTR YR 1979	TOTAL	148742.24	MEAN	408	MAX	3660	MIN	.33	AC-FT	295000		

BRAZOS RIVER BASIN

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08105700 SAN GABRIEL RIVER AT LANEPOR, 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 current year.

INSTRUMENTATION.--Water temperature is recorded continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum values are not shown, mean value is estimated.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT 04...	1308	.25	700	7.8	24.5	3	8.0	8.0	99	.9	240	46
NOV 27...	1550	79	560	7.8	15.5	18	120	8.7	90	2.6	190	33
DEC 19...	1656	20	640	8.0	14.5	10	17	9.6	98	.8	250	27
JAN 18...	1720	182	516	8.1	10.5	5	35	9.9	93	1.0	220	42
FEB 16...	1458	327	521	8.4	13.0	1	40	10.8	106	.8	250	46
MAR 12...	1515	228	524	8.1	15.0	3	8.0	11.8	120	.6	240	40
APR 09...	1352	752	540	8.0	19.5	10	35	9.6	108	1.1	240	25
MAY 16...	1252	320	504	7.7	23.0	5	27	8.8	101	1.0	240	33
JUN 27...	1502	256	521	7.5	28.5	20	16	7.7	99	1.0	230	31
JUL 18...	1612	180	480	7.5	29.0	5	26	7.6	99	.6	220	54
AUG 23...	1100	87	540	7.3	27.5	20	27	7.2	92	.8	220	56
SEP 19...	1210	82	530	7.6	22.0	10	25	7.8	90	1.1	200	45

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 04...	71	16	44	1.2	4.2	240	0	37	75	.4	14	380
NOV 27...	59	10	34	1.1	3.5	190	0	49	43	.3	9.3	302
DEC 19...	73	16	26	.7	2.5	270	0	41	41	.2	5.5	338
JAN 18...	74	9.1	13	.4	2.2	220	0	37	21	.2	9.0	274
FEB 16...	84	10	13	.4	1.6	240	5	36	22	.3	7.6	298
MAR 12...	75	12	14	.4	1.3	240	0	33	20	.3	5.1	279
APR 09...	79	10	11	.3	1.5	260	0	26	18	.3	9.6	284
MAY 16...	74	13	14	.4	1.2	250	0	29	19	.4	7.7	282
JUN 27...	68	14	17	.5	1.4	240	0	33	27	.3	12	291
JUL 18...	66	13	16	.5	1.6	200	0	30	23	.3	9.8	258
AUG 23...	65	14	19	.6	1.6	200	0	71	27	.3	11	307
SEP 19...	59	13	24	.7	1.6	190	0	38	33	.3	11	273

COLORADO RIVER BASIN

08105700 SAN GABRIEL RIVER AT LANEPOR, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (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)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 04...	10	1	.70	.01	.71	.05	.59	.64	.030	5.6	1	.20
NOV 27...	194	18	.52	.03	.55	.12	.78	.90	.280	6.0	1	.10
DEC 19...	27	4	2.4	.02	2.4	.00	.50	.50	.090	3.4	1	.00
JAN 18...	58	5	3.9	.08	4.0	.21	.45	.66	.100	5.2	0	.00
FEB 16...	68	10	3.3	.06	3.4	.05	.46	.51	.030	5.5	3	.10
MAR 12...	20	8	2.1	.06	2.2	.02	.26	.28	.010	2.2	0	.10
APR 09...	61	7	1.6	.02	1.6	.02	.34	.36	.030	4.2	0	.00
MAY 16...	68	19	2.1	.04	2.1	.03	.29	.32	.030	3.0	1	.10
JUN 27...	41	6	2.7	.08	2.8	.01	.42	.43	.020	4.3	0	.00
JUL 18...	45	27	1.4	.04	1.4	.01	.47	.48	.010	2.3	0	.00
AUG 23...	48	7	2.5	.19	2.7	.04	.54	.58	.060	5.8	0	.00
SEP 19...	42	25	2.8	.12	2.9	.06	.62	.68	.030	3.3	0	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 04...	1308	3	100	0	0	5	20
FEB 16...	1458	1	0	0	0	0	0
JUN 27...	1502	1	60	<1	10	1	<0
AUG 23...	1100	2	50	<1	20	1	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 04...	0	0	.0	1	0	10
FEB 16...	0	0	.0	2	0	10
JUN 27...	0	4	.0	0	0	<3
AUG 23...	0	2	.1	1	0	<3

BRAZOS RIVER BASIN

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08105700 SAN GABRIEL RIVER AT LANEPORT, TX--Continued

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

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

BRAZOS RIVER BASIN

08105700 SAN GABRIEL RIVER AT LANEPORT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	24.0	23.0	24.0	---	---	28.0	29.0	19.5	28.0	28.5	19.5	28.0
2	23.0	22.0	22.5	---	---	28.5	29.0	27.5	28.5	28.5	27.5	28.0
3	23.5	22.5	23.0	---	---	28.5	29.0	27.5	28.0	29.0	19.5	28.0
4	24.5	23.5	24.0	---	---	28.5	29.0	27.0	28.0	28.5	27.5	28.0
5	24.5	23.5	24.0	---	---	26.0	30.0	27.5	28.5	28.5	27.5	28.0
6	25.5	23.5	24.5	---	---	25.0	30.0	27.5	29.0	28.5	27.5	28.0
7	27.0	25.0	25.5	---	---	24.5	30.0	19.5	29.0	28.0	27.5	28.0
8	27.5	26.0	26.5	---	---	26.0	29.5	28.0	29.0	28.5	27.5	28.0
9	27.5	26.0	26.5	---	---	27.0	29.0	27.5	28.5	28.0	26.5	27.5
10	26.5	25.5	26.0	---	---	27.5	29.0	27.5	28.5	27.0	25.5	26.5
11	25.5	23.5	24.5	---	---	28.5	29.0	19.5	27.5	27.5	26.0	26.5
12	25.0	23.0	24.0	---	---	28.5	28.0	27.0	27.5	27.0	26.0	26.5
13	25.5	23.5	24.5	---	---	27.5	28.5	27.0	28.0	27.0	25.5	26.0
14	26.5	24.0	25.0	---	---	28.0	28.5	27.0	28.0	26.5	25.0	25.5
15	---	---	24.5	---	---	28.5	29.0	27.0	28.0	24.5	23.0	24.0
16	---	---	25.0	---	---	28.5	29.0	27.5	28.5	24.0	22.5	23.0
17	---	---	25.0	---	---	29.0	29.0	19.5	28.0	23.5	22.5	23.0
18	---	---	25.5	---	---	26.5	28.5	19.5	27.5	24.5	23.0	24.0
19	---	---	26.0	---	---	26.5	28.5	19.5	27.5	24.0	23.0	23.5
20	---	---	26.0	---	---	27.0	28.5	27.5	28.0	23.5	23.0	23.5
21	---	---	26.5	---	---	28.5	29.0	27.5	28.5	24.5	23.0	23.5
22	---	---	27.0	---	---	29.5	29.0	27.5	28.5	25.0	23.5	24.5
23	---	---	27.0	---	---	30.0	28.0	26.5	27.5	26.0	25.0	25.5
24	---	---	27.5	---	---	30.0	28.5	27.0	27.5	26.0	25.0	25.5
25	---	---	28.0	29.5	28.0	28.5	28.5	27.0	27.5	26.0	25.0	25.5
26	---	---	28.0	28.5	27.5	28.0	28.0	27.0	28.0	25.5	24.5	25.0
27	---	---	27.5	28.0	24.0	25.5	28.5	27.5	28.0	26.5	25.0	25.5
28	---	---	26.5	27.0	24.5	25.5	28.5	27.0	28.0	27.0	25.0	26.0
29	---	---	26.0	28.0	26.0	27.0	28.5	19.5	28.0	27.5	25.5	26.0
30	---	---	27.5	29.0	26.5	27.5	28.5	19.5	27.5	27.5	25.5	26.5
31	---	---	---	29.0	27.5	28.5	29.0	19.5	28.0	---	---	---
MONTH	---	---	25.5	---	---	27.5	30.0	19.5	28.0	29.0	19.5	26.0

BRAZOS RIVER BASIN

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08106300 BRUSHY CREEK NEAR ROCKDALE, TX

LOCATION (revised).--Lat 30°41'38", long 97°04'40", Mill County, Hydrologic Unit 12070205, on right bank 46 ft (14 m) downstream from bridge on Farm Road 908, 2.8 mi (4.5 km) upstream from mouth, and 5.3 mi (8.5 km) northwest of Rockdale.

DRAINAGE AREA.--505 mi² (1,308 km²).

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

REVISED RECORDS.--WRD TX-73-1: 1972. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 325.56 ft (99.231 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 5, 1970, water-stage recorder at site 104 ft (32 m) downstream at datum 5.00-foot (1.524 m) higher. Feb. 5 to Sept. 30, 1970, nonrecording gage at site 46 ft (14 m) upstream at present datum. Sept. 4, 1970, to Oct. 4, 1978, water-stage recorder at site 102 ft (31 m) upstream at present datum. Since Oct. 10, 1974, auxiliary water-stage recorder on the San Gabriel River at Farm Road 487, 4.0 mi (6.4 m) downstream at datum 13.97-foot (4.258 m) lower.

REMARKS.--Records poor except those for low-flow, which are fair. Flow is affected at times by the discharge from the flood-detention pools of 46 floodwater-retarding structures with a combined detention capacity of 46,140 acre-ft (56.9 hm³). These structures control runoff from 144 mi² (373 km²). In 1970, the channel was rectified in the vicinity of the gage. Backwater occurs at times from the San Gabriel River. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 206 ft³/s (5.834 m³/s), 149,200 acre-ft/yr (184 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) July 27, 1979, gage height, 28.39 ft (8.653 m); maximum gage height, 31.09 ft (9.476 m) Jan. 20, 1968, prior to channel rectification, present datum, from floodmark; minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Sept. 4, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1903, 54.5 ft (16.61 m), present datum, in September 1921, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,000 ft³/s (425 m³/s) July 27, gage height, 28.39 ft (8.653 m); minimum daily, 0.49 ft³/s (0.014 m³/s) Oct. 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	1.2	7.4	900	50	112	2130	760	350	36	76	11
2	.78	1.2	5.5	300	42	119	1800	1500	3000	37	61	11
3	.78	1.2	4.5	140	43	114	1000	450	2000	38	53	8.8
4	.78	1.1	4.2	95	59	132	500	250	400	38	51	7.7
5	.77	1.6	3.7	80	828	134	300	276	600	38	47	8.1
6	1.8	226	3.6	120	2870	124	275	217	1600	38	40	17
7	1.8	273	3.6	80	3580	116	256	186	300	84	34	12
8	1.2	35	3.6	70	1390	99	224	160	200	98	30	10
9	.83	12	3.8	67	507	91	212	136	140	53	28	9.0
10	.72	6.2	3.8	65	344	82	202	125	130	37	25	8.0
11	.67	4.1	3.6	1530	278	75	191	1170	126	34	25	7.1
12	.67	3.3	3.6	1270	242	75	178	800	115	34	24	6.1
13	.67	3.0	3.6	378	219	75	173	300	110	32	23	5.6
14	.58	3.0	3.6	237	200	82	146	255	108	31	23	5.6
15	.49	3.0	3.6	163	184	76	130	183	106	28	22	5.6
16	.49	24	3.6	122	168	2690	115	148	99	26	19	5.3
17	.62	136	3.6	101	148	1250	106	132	90	24	18	5.1
18	.62	30	3.6	91	128	417	1020	118	83	25	17	5.1
19	.62	10	3.6	93	123	1030	792	116	76	24	16	5.9
20	.72	12	3.6	101	117	4360	900	104	71	30	14	14
21	.67	125	3.6	93	112	4200	400	3600	64	29	13	23
22	.72	247	3.6	86	115	3000	296	7000	61	79	11	19
23	.72	57	3.6	68	119	2000	240	4000	55	54	10	12
24	.77	19	3.6	53	271	700	195	500	51	38	10	9.3
25	.77	10	3.4	49	282	485	158	150	47	31	10	7.8
26	.88	167	3.4	49	191	375	128	100	44	27	9.7	7.1
27	.94	99	3.4	52	141	320	115	70	43	6760	8.9	6.5
28	1.1	34	3.2	61	125	252	106	1500	42	3290	8.7	6.2
29	1.2	17	3.0	55	---	221	181	2800	40	358	12	5.9
30	1.5	9.9	3.0	55	---	294	344	2000	38	154	16	5.6
31	1.5	---	733	55	---	1600	---	400	---	98	10	---
TOTAL	27.16	1571.8	846.5	6679	12876	24700	12813	29506	10189	11703	765.3	270.4
MEAN	.88	52.4	27.3	215	460	797	427	952	340	378	24.7	9.01
MAX	1.8	273	733	1530	3580	4360	2130	7000	3000	6760	76	23
MIN	.49	1.1	3.0	49	42	75	106	70	38	24	8.7	5.1
AC-FT	54	3120	1680	13250	25540	48990	25410	58530	20210	23210	1520	536
CAL YR 1978	TOTAL	8667.50	MEAN	23.7	MAX	1330	MIN	.15	AC-FT	17190		
WTR YR 1979	TOTAL	111947.16	MEAN	307	MAX	7000	MIN	.49	AC-FT	222000		

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 (616 m) upstream from bridge on U.S. Highway 77, 1.1 mi (1.8 km) upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2 mi (3 km) southeast of Cameron, and 33.6 mi (54.1 km) upstream from mouth.

DRAINAGE AREA.--7,065 mi² (18,298 km²).

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 (85.920 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nov. 2, 1916, to Sept. 30, 1922, nonrecording gage at site 1.8 mi (2.9 km) upstream at different datum. Oct. 1, 1922, to Apr. 8, 1926, nonrecording gage at McCowan Bridge 30 ft (9 m) downstream at same datum. Apr. 9, 1926, to Oct. 9, 1933, nonrecording gage at bridge on U.S. Highway 77, 2,020 ft (616 m) downstream at 1.58 ft (0.482 m) lower datum.

REMARKS.--Water-discharge records good. Many small diversions for irrigation and municipal supply affect very low flows. Since 1954, at least 10 percent of the drainage area has been regulated by reservoirs. Some regulation by Belton Lake (station 08102000) on Leon River beginning Mar. 8, 1954, and by Stillhouse Hollow Lake (station 08104050) on Lampasas River beginning Sept. 2, 1966. Records of the Aluminum Co. of America indicate that they diverted 4,290 acre-ft (5.29 hm³) from river above gage during the current year for use at their Rockdale plant. Flow is affected at times by discharge from the flood-detention pools of 67 floodwater-retarding structures with a combined detention capacity of 73,910 acre-ft (91.1 hm³). These structures control runoff from 221 mi² (572 km²) in the Nolan, Donahoe, and Brushy Creek drainage basins. National Weather Service gage-height telemeter located at station.

AVERAGE DISCHARGE.--36 years (water years 1918-53) unregulated, 1,807 ft³/s (51.17 m³/s), 1,309,000 acre-ft/yr (1.61 km³/yr); 26 years (water years 1954-79) regulated, 1,686 ft³/s (47.75 m³/s), 1,222,000 acre-ft/yr (1.51 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 647,000 ft³/s (18,300 m³/s) Sept. 10, 1921, gage height, 53.2 ft (16.22 m), present datum, from floodmark, from rating curve extended above 110,000 ft³/s (3,120 m³/s) on basis of slope-area measurement of 647,000 ft³/s (18,300 m³/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. Flood in December 1913 reached a stage of 49.0 ft (14.94 m). Stages based on information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,300 ft³/s (1,850 m³/s) July 27, gage height, 36.69 ft (11.183 m); minimum daily, 8.9 ft³/s (0.25 m³/s) Oct. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	16	129	2850	262	797	6110	1820	4300	3840	1110	333
2	29	15	115	2500	244	754	9220	5540	10400	3800	900	338
3	29	14	112	793	515	730	12400	4990	15200	3610	806	318
4	34	18	122	435	459	894	5750	2150	7180	2470	793	305
5	42	15	137	352	1250	910	3300	1780	4250	1410	725	306
6	40	305	153	531	6870	756	3180	1740	9470	1260	658	301
7	22	683	120	882	11000	697	2950	2800	7310	1140	608	293
8	18	347	103	586	7160	663	2750	2960	4150	1260	568	284
9	16	126	135	380	2450	644	2740	2300	6280	958	951	277
10	17	82	117	350	1740	620	2610	3180	6820	1000	1250	268
11	13	53	110	3760	1430	607	2600	5970	6710	1900	1270	259
12	12	48	108	6510	1250	606	2480	8280	6550	1970	1900	252
13	14	45	110	2400	1120	603	2280	3290	6670	1750	1560	244
14	14	44	110	1160	1020	585	1860	1690	6520	1500	1290	236
15	13	49	106	769	952	585	1540	2640	6530	1350	1250	231
16	11	55	105	612	875	2020	1380	2870	6520	1250	1280	223
17	11	219	102	561	803	7480	1330	2840	6460	1100	1600	218
18	11	248	103	544	744	3380	1410	2910	6400	1050	1640	219
19	13	185	106	541	727	2170	2440	2910	6320	1000	1530	272
20	9.2	115	106	565	727	9740	4680	3150	6240	1490	1010	458
21	8.9	204	105	558	728	10000	4020	4170	5430	2220	909	561
22	11	446	112	507	731	12700	1860	16300	3230	1240	631	420
23	13	272	106	450	959	10600	1410	36200	4030	892	454	310
24	9.7	177	96	417	2280	5530	1280	14400	4080	670	479	271
25	9.4	115	93	394	1850	2460	1890	4470	4040	1320	448	265
26	12	548	90	382	1240	2010	2000	2590	4000	1990	398	259
27	26	787	88	388	939	1760	1850	3290	4100	26000	378	240
28	103	500	90	417	842	1580	1210	3430	3980	40800	371	234
29	35	298	93	407	---	1450	1110	6830	3920	8790	357	228
30	24	175	105	385	---	1750	1600	12800	3890	1940	349	222
31	19	---	1280	346	---	4130	---	10100	---	1400	336	---
TOTAL	670.2	6204	4567	31732	51167	89211	91240	180390	180980	122370	27809	8645
MEAN	21.6	207	147	1024	1827	2878	3041	5819	6033	3947	897	288
MAX	103	787	1280	6510	11000	12700	12400	36200	15200	40800	1900	561
MIN	8.9	14	88	346	244	585	1110	1690	3230	670	336	218
AC-FT	1330	12310	9060	62940	101500	176900	181000	357800	359000	242700	55160	17150
CAL YR 1978	TOTAL	97285.2	MEAN	267	MAX	2080	MIN	8.9	AC-FT	193000		
WTR YR 1979	TOTAL	794985.2	MEAN	2178	MAX	40800	MIN	8.9	AC-FT	1577000		

BRAZOS RIVER BASIN

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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.

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 micromhos Sept. 25, 26, 1963; minimum daily, 154 micromhos Sept. 13, 1974.

WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 6, 1964, Aug. 1, 1969; minimum daily, 3.0 °C Jan. 3, 14, 15, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 762 micromhos Oct. 27; minimum daily, 177 micromhos July 28.

WATER TEMPERATURES: Maximum daily, 30.0°C July 14; minimum daily, 3.0°C July 3, 14, 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 04...	0849	35	708	7.9	25.0	35	6.1	76	2.9	7300	420
NOV 28...	1010	624	384	7.6	14.0	300	8.8	87	3.4	10000	19000
DEC 21...	0909	96	760	8.0	13.5	25	9.0	89	1.6	5700	1200
JAN 17...	1110	548	516	7.9	6.0	70	11.5	95	2.1	2000	3600
FEB 13...	1642	1010	568	8.0	12.5	70	9.7	94	1.3	55	360
MAR 13...	0914	550	610	8.4	15.0	20	9.8	100	.8	77	100
APR 11...	0908	2460	582	8.1	17.5	90	8.8	97	1.6	800	2500
MAY 14...	1547	1560	494	7.6	20.5	200	8.3	90	3.0	1500	2800
JUN 27...	0928	4130	482	7.6	22.0	100	8.3	93	1.4	540	690
JUL 18...	1113	845	520	7.4	25.5	66	7.4	89	.9	2000	770
AUG 22...	0702	702	565	7.4	26.0	52	7.1	88	.3	K220	99
SEP 17...	1215	216	720	7.7	22.0	10	10.0	115	1.3	15000	120

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 04...	240	25	69	16	52	1.5	5.0	260	0	51
NOV 28...	130	18	41	5.5	23	.9	4.1	130	0	37
DEC 21...	270	28	80	16	54	1.4	4.5	290	0	55
JAN 17...	200	39	67	8.6	21	.6	3.1	200	0	43
FEB 13...	240	55	83	8.7	20	.6	2.6	230	0	43
MAR 13...	240	41	78	12	27	.8	2.1	240	4	48
APR 11...	230	32	67	15	29	.8	2.4	240	0	32
MAY 14...	200	29	65	9.4	22	.7	2.7	210	0	37
JUN 27...	180	9	51	13	26	.8	3.0	210	0	25
JUL 18...	210	43	60	14	26	.8	3.1	200	0	31
AUG 22...	220	48	65	14	25	.7	2.9	210	0	36
SEP 17...	250	37	74	16	34	.9	3.1	260	0	53

BRAZOS RIVER BASIN

08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	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)
OCT 04...	57	.5	9.8	403	389	1.5	.08	1.6	.37	.93
NOV 28...	27	.3	9.4	222	211	1.1	.04	1.1	.10	.77
DEC 21...	58	.3	6.8	428	418	2.5	.03	2.5	.11	1.4
JAN 17...	28	.2	9.0	298	279	3.2	.10	3.3	.39	.71
FEB 13...	30	.3	9.0	319	310	3.7	.12	3.8	.16	.54
MAR 13...	35	.3	3.8	339	329	1.4	.04	1.4	.02	.41
APR 11...	45	.3	9.1	326	318	.54	.02	.56	.02	.51
MAY 14...	24	.4	8.2	282	272	1.2	--	--	--	.78
JUN 27...	29	.3	8.5	278	259	.93	.02	.95	.01	.83
JUL 18...	40	.3	8.5	298	282	.29	.02	.31	.02	.64
AUG 22...	33	.3	8.7	316	289	1.3	.12	1.4	.04	.52
SEP 17...	42	.4	9.2	400	360	2.2	.04	2.2	.06	.77

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	1.3	1.0	.990	.930	--	1.1	1.1	53	5.0	99
NOV 28...	.87	.24	.480	.360	14	--	--	542	913	100
DEC 21...	1.5	1.1	.900	.820	4.8	--	--	55	14	90
JAN 17...	1.1	.70	.200	.120	5.8	--	--	144	213	99
FEB 13...	.70	.61	.100	.080	--	4.4	1.9	156	425	96
MAR 13...	.43	.45	.060	.040	3.4	--	--	38	56	98
APR 11...	.53	.36	.100	.020	7.5	--	--	306	2030	91
MAY 14...	.81	--	--	--	11	--	--	450	1900	93
JUN 27...	.84	.58	.110	.210	--	6.1	2.6	374	4170	81
JUL 18...	.66	.39	.180	.070	4.4	--	--	174	397	96
AUG 22...	.56	2.9	.180	.040	--	5.9	1.0	130	246	98
SEP 17...	.83	.43	.240	.190	3.3	--	--	22	13	98

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 04...	0849	8	7	0	0	100	0	0	0	0
FEB 13...	1642	4	3	100	0	100	1	1	0	20
JUN 27...	0928	3	1	100	40	60	1	0	<1	0
AUG 22...	0702	3	3	0	0	0	0	0	5	0

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
OCT 04...	0	0	0	0	0	6	3	3	950	940
FEB 13...	10	10	3	3	0	9	8	1	1900	1900
JUN 27...	0	0	3	0	<3	18	17	1	3900	3900
AUG 22...	0	0	1	1	0	4	0	5	1800	1600

BRAZOS RIVER BASIN

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08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 04...	10	4	4	0	50	50	0	.0	.0	.0
FEB 13...	0	4	4	0	100	100	0	.1	.1	.0
JUN 27...	0	23	23	0	180	180	<1	.1	.0	.1
AUG 22...	200	4	0	5	110	20	90	.1	.0	.2

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 04...	1	1	0	0	0	0	30	20	10
FEB 13...	2	1	1	0	0	0	50	40	10
JUN 27...	0	0	0	0	0	0	100	90	8
AUG 22...	1	0	1	0	0	0	10	0	110

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 03...	27	14.5	18.0	62.2	15.2
FEB 13...	26	.080	.160	.010	.000

BRAZOS RIVER BASIN

08106500 LITTLE RIVER AT CAMERON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979					
	NOV 28, 78 1010	MAR 13, 79 0914	MAY 14, 79 1547	JUN 27, 79 0928	JUL 18, 79 1113	AUG 22, 79 0702
TOTAL CELLS/ML	120	1600	320	360	190	210
DIVERSITY: DIVISION	0.0	1.6	0.7	1.7	1.2	0.9
...CLASS	0.0	1.6	0.7	1.7	1.2	0.9
...ORDER	0.0	2.2	0.7	1.7	1.2	1.0
...FAMILY	1.0	2.5	0.7	1.7	1.9	1.0
...GENUS	1.0	2.6	0.7	1.7	1.9	1.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	130	8	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	260#	80	--	-	52#	27	20	10
....SELENASTRUM	--	-	130	8	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	87	5	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	210#	57	77#	40	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	110	7	--	-	--	-	--	-	--	-
...ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	--	-	--	-	--	-	--	-	--	-	10	5
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCAEAE												
....CYCLOTELLA	--	-	310#	19	--	-	--	-	26	13	--	-
...PENNALES												
...FRAGILARIACEAE												
....SYNEDRA	--	-	44	3	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	--	-	22	1	64#	20	51	14	--	-	--	-
...NITZSCHIAEAE												
....NITZSCHIA	58#	50	130	8	--	-	--	-	--	-	10	5
...SURIRELLACEAE												
....SURIRELLA	58#	50	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	51	14	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	660#	40	--	-	--	-	39#	20	--	-
...HORMOGONALES												
...RIVULARIACEAE												
....RAPIDIOPSIS	--	-	--	-	--	-	--	-	--	-	170#	80
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	22	1	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	51	14	--	-	--	-

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

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

BRAZOS RIVER BASIN

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08106500 LITTLE RIVER AT CAMERON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	670.2	680	380	684	47	85	48	87	260
NOV. 1978.....	6204	496	280	4640	34	578	35	586	190
DEC. 1978.....	4567	577	320	3950	40	493	41	506	220
JAN. 1979.....	31732	429	240	20400	30	2550	30	2610	170
FEB. 1979.....	51167	445	250	34500	31	4290	32	4360	170
MAR. 1979.....	89211	385	220	51800	27	6430	27	6600	150
APR. 1979.....	91240	469	260	64400	32	8010	33	8200	180
MAY 1979.....	180390	384	210	104000	27	13000	27	13200	150
JUNE 1979.....	180980	457	260	125000	32	15400	33	15900	180
JULY 1979.....	122370	329	180	60600	23	7470	23	7750	130
AUG. 1979.....	27809	560	310	23500	39	2930	40	2980	220
SEPT 1979.....	8645	659	370	8580	46	1070	47	1090	250
TOTAL	794985.12	**	**	502000	**	62300	**	63900	**
WTD.AVG.	2180	419	230	**	29	**	30	**	160

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	684	714	605	400	647	564	379	532	407	481	520	670
2	684	715	597	475	674	586	350	368	408	479	575	668
3	682	720	595	407	620	589	291	376	403	471	622	681
4	668	725	592	410	608	575	399	371	378	505	645	680
5	625	727	562	412	500	564	489	487	498	552	643	680
6	617	692	538	415	414	586	510	526	408	570	647	679
7	570	583	579	434	332	575	560	522	360	590	651	700
8	579	498	606	487	354	566	577	505	502	540	646	677
9	582	508	642	543	420	585	559	526	467	509	570	680
10	591	498	650	575	455	586	582	501	461	548	534	668
11	605	485	665	345	487	583	580	417	460	552	564	677
12	614	507	685	320	520	568	580	391	460	497	548	676
13	634	535	691	348	555	588	582	427	466	504	470	677
14	655	523	687	400	577	594	585	491	490	505	528	672
15	669	469	686	422	584	591	590	500	495	513	547	675
16	681	442	696	457	593	350	599	460	493	525	554	680
17	698	426	705	496	596	277	602	470	492	534	542	720
18	714	552	712	527	590	364	605	474	482	536	506	674
19	725	597	732	552	596	457	441	476	487	566	500	668
20	730	563	735	581	603	294	496	474	482	602	520	641
21	737	616	736	600	607	297	426	456	481	380	523	628
22	740	500	726	605	611	335	488	310	534	443	515	614
23	747	475	735	610	541	319	539	301	508	505	573	622
24	750	525	731	615	459	386	585	312	493	528	599	608
25	752	570	730	620	500	457	602	396	492	538	610	612
26	754	400	726	622	508	502	570	468	488	438	630	626
27	762	286	733	624	528	532	585	519	485	250	647	650
28	720	454	731	625	530	559	594	561	478	177	650	645
29	718	554	726	628	---	575	605	493	479	343	660	652
30	713	654	650	630	---	589	496	328	479	456	668	633
31	713	---	346	634	---	457	---	329	---	487	687	---
MEAN	681	550	662	510	536	498	528	444	467	488	584	661

BRAZOS RIVER BASIN

08106500 LITTLE RIVER AT CAMERON, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	17.0	13.0	4.0	5.0	14.0	19.0	20.0	22.0	23.0	27.0	27.0
2	23.0	17.0	16.0	4.0	5.0	14.0	18.0	20.0	20.0	23.0	27.0	27.0
3	24.0	18.0	15.0	3.0	7.0	15.0	17.0	21.0	21.0	23.0	27.0	27.0
4	23.0	18.0	13.0	4.0	7.0	14.0	15.0	20.0	22.0	24.0	26.5	26.5
5	23.0	18.0	13.0	5.0	6.0	14.0	15.0	19.0	22.0	24.0	27.0	26.0
6	23.0	18.0	12.0	5.0	6.0	14.0	16.0	19.0	21.0	24.0	27.5	26.5
7	22.0	15.0	11.0	4.0	5.0	15.0	17.0	19.0	23.0	24.0	28.0	26.5
8	22.0	15.0	10.0	4.0	7.0	15.0	18.0	19.0	24.0	25.0	28.0	26.0
9	22.0	14.0	8.0	4.0	7.0	16.0	17.0	20.0	23.0	26.0	27.5	26.0
10	21.0	14.0	7.0	4.0	6.0	15.0	17.0	19.0	21.0	27.0	27.5	25.0
11	22.0	15.0	5.0	4.0	9.0	14.0	18.0	19.0	20.0	27.0	26.0	25.0
12	23.0	16.0	5.0	4.0	11.0	15.0	18.0	16.0	19.0	27.0	24.0	25.5
13	23.0	18.0	6.0	5.0	12.0	16.0	18.0	17.0	20.0	28.0	24.5	24.5
14	21.0	18.0	7.0	3.0	14.0	16.0	18.0	18.0	20.0	30.0	25.0	24.0
15	20.0	17.0	8.0	3.0	15.0	15.0	19.0	19.0	19.0	28.0	25.0	23.0
16	19.0	16.0	9.0	5.0	12.0	14.0	20.0	19.0	20.0	26.0	24.5	23.0
17	19.0	16.0	9.0	8.0	9.0	11.0	21.0	18.0	20.0	26.0	25.0	22.0
18	19.0	15.0	10.0	10.0	7.0	15.0	20.0	18.0	20.0	25.0	25.5	22.0
19	18.0	14.0	13.0	11.0	7.0	15.0	20.0	18.0	21.0	25.0	25.5	22.5
20	18.0	14.0	15.0	12.0	7.0	16.0	21.0	19.0	21.0	25.0	25.0	22.0
21	18.0	13.0	13.0	11.0	9.0	16.0	21.0	19.0	22.0	25.0	25.5	21.0
22	19.0	13.0	11.0	10.0	11.0	17.0	21.0	19.0	23.0	26.0	26.5	21.0
23	20.0	13.0	10.0	10.0	15.0	17.0	21.0	18.0	22.0	26.5	26.0	22.5
24	19.0	14.0	10.0	8.0	14.0	16.0	20.0	20.0	23.0	28.0	26.0	23.0
25	19.0	15.0	10.0	8.0	13.0	15.0	21.0	21.0	22.0	27.0	26.5	22.0
26	19.0	17.0	10.0	8.0	13.0	16.0	20.0	21.0	22.0	25.0	26.5	22.0
27	19.0	16.0	10.0	8.0	13.0	18.0	19.0	22.0	22.0	24.0	26.5	22.5
28	18.0	14.0	10.0	8.0	14.0	19.0	18.0	21.0	22.0	24.0	27.0	23.0
29	17.0	13.0	11.0	7.0	---	19.0	19.0	20.0	22.0	26.0	27.0	23.0
30	17.0	13.0	11.0	7.0	---	19.0	19.0	20.0	23.0	28.0	26.5	25.0
31	18.0	---	6.0	5.0	---	19.0	---	20.0	---	26.0	26.5	---
MEAN	20.5	15.5	10.0	6.5	9.5	15.5	18.5	19.5	21.5	25.5	26.0	24.0

BRAZOS RIVER BASIN

425

08109000 BRAZOS RIVER NEAR BRYAN, TX

LOCATION.--Lat 30°36'52", long 96°29'10". Brazos-Burleson County line, Hydrologic Unit 12070101, on left bank 2.4 mi (3.9 km) downstream from Little Brazos River, 5 mi (8 km) downstream from Texas and New Orleans Railroad Co. bridge, 9 mi (14 km) southwest of Bryan, and at mile 281.1 (452.3 km).

DRAINAGE AREA.--39,515 mi² (102,344 km²), approximately, of which 9,566 mi² (24,776 km²) probably is noncontributing.

PERIOD OF RECORD.--August 1899 to December 1902, February 1918 to January 1926, June 26 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 (58.622 m) 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 (12.1 km) downstream at different datum. Sept. 11, 1925, to Oct. 24, 1932, nonrecording gage at site 3,000 ft (910 m) upstream at present datum.

REMARKS.--Records fair. Flow is partly regulated by four upstream reservoirs with a combined capacity of 4,447,600 acre-ft (5.48 km³), of which 3,200,800 acre-ft (3.95 km³) is for flood control. Many small diversions above station for irrigation, municipal and industrial uses, and oilfield operation. Flow is affected at times by discharge from the flood-detention pools of 137 floodwater-retarding structures with a combined detention capacity of 156,950 acre-ft (194 km³). These structures control runoff from 455 mi² (1,178 km²). Since 1941, at least 10 percent of drainage area is regulated by upstream reservoirs.

AVERAGE DISCHARGE.--24 years (water years 1900-1902, 1919-25, 1927-40), 5,652 ft³/s (160.1 m³/s), 4,095,000 acre-ft/yr (5.05 km³/yr); 39 years (water years 1941-79) regulated, 5,054 ft³/s (143.1 m³/s), 3,662,000 acre-ft/yr (4.52 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 54 ft (16.5 m) Sept. 12, 1921, present site and datum (discharge not determined); minimum daily, 89 ft³/s (2.52 m³/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 (15.5 m), present site and datum, from information by Texas and New Orleans Railroad Co. at their bridge 5 mi (8 km) 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, 58,700 ft³/s (1,660 m³/s) June 3, gage height, 26.60 ft (8.108 m); minimum daily, 166 ft³/s (4.70 m³/s) Oct. 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	296	1090	3700	1730	2110	19300	2750	48400	8620	6380	1940
2	292	375	834	6000	1630	1930	33000	4050	43700	7640	3880	1900
3	482	519	606	5600	1970	1780	41000	9860	57200	6310	3010	2090
4	453	879	456	4000	1790	1510	29800	7960	46500	5350	2540	1630
5	562	579	391	3710	2480	1900	18700	5110	27700	4050	2050	1390
6	521	686	365	2510	7160	1910	12300	12800	34400	3030	1870	1440
7	484	611	367	3720	18700	1430	8960	21400	35800	3340	1600	1330
8	833	959	349	2810	19800	1220	5820	23600	24900	2820	1610	1450
9	605	1020	306	1960	11700	1170	6620	23500	18700	2610	1800	1520
10	380	741	325	1460	6000	1000	6620	23500	18600	2310	2040	1430
11	279	613	1020	2640	4050	912	5630	27700	15400	2470	2640	1300
12	220	448	850	12000	3320	865	4430	45800	14300	3660	4060	1030
13	180	567	530	11200	2580	824	4260	48100	13100	3640	5590	843
14	194	525	500	5690	2070	798	4040	32300	11500	3470	3700	707
15	574	483	480	3630	2170	754	3430	23000	10700	3330	2520	631
16	657	473	1000	4150	2450	2070	2950	18900	10700	3040	2210	589
17	468	538	1200	3620	2710	4990	2810	15800	10800	2950	2540	554
18	301	1800	1200	2380	2550	11600	4740	11800	10300	2800	3210	577
19	212	3240	1200	1970	2510	8120	3990	8830	9080	2600	3330	729
20	166	2130	1200	1650	2380	16200	6560	7840	8780	2700	3060	1240
21	173	1290	1300	1910	2110	31100	13400	8370	8820	3430	2720	1660
22	328	1240	1500	2070	2740	32100	10400	27900	8980	4640	2580	1880
23	470	1190	1500	2080	2320	29900	5780	52300	6680	3260	2680	1870
24	640	973	1100	1740	9720	24600	4410	47900	7240	2210	2450	1980
25	495	738	1100	1640	8330	14200	3900	32400	7220	1580	2710	1940
26	343	1170	1100	1680	6110	9040	4230	15800	5830	3380	2180	1920
27	523	1790	1200	1520	3770	8940	4480	10900	5740	24700	2310	1660
28	656	1710	1100	1300	2510	6550	4280	11200	8440	47400	2020	1550
29	504	1130	1500	1700	---	4540	2770	17600	9180	45900	2040	1530
30	474	1010	1500	1640	---	5120	2260	43900	9850	18000	2090	1420
31	413	---	1400	1670	---	10300	---	57500	---	9490	2050	---
TOTAL	13179	29723	28569	103350	137360	239483	280870	702370	548540	240730	85470	41730
MEAN	425	991	922	3334	4906	7725	9362	22660	18280	7765	2757	1391
MAX	833	3240	1500	12000	19800	32100	41000	57500	57200	47400	6380	2090
MIN	166	296	306	1300	1630	754	2260	2750	5740	1580	1600	554
AC-FT	26140	58960	56670	205000	272500	475000	557100	1393000	1088000	477500	169500	82770
CAL YR 1978	TOTAL	362769	MEAN	994	MAX	13800	MIN	166	AC-FT	719600		
WTR YR 1979	TOTAL	2451374	MEAN	6716	MAX	57500	MIN	166	AC-FT	4862000		

BRAZOS RIVER BASIN

08109500 BRAZOS RIVER NEAR COLLEGE STATION, TX

LOCATION.--Lat 30°32'33", long 96°25'21", Brazos County, Hydrologic Unit 12070101, at bridge on Farm Road 60, 6.5 mi (10.5 km) south of College Station, 9 mi (14 km) downstream from gaging station near Bryan, and at mile 271.9 (437.6 km).

DRAINAGE AREA.--39,599 mi² (102,561 km²), of which 9,566 mi² (24,776 km²) probably is noncontributing.

PERIOD OF RECORD.--Chemical analyses: August 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1961 to current year.

WATER TEMPERATURES: August 1961 to current year.

REMARKS.--Sampling at this site began in September 1966. From August 1961 to September 1965, samples were collected at State Highway 21 near Bryan 17 mi (27 km) upstream and, from October 1965 to September 1966, at the gaging station near Bryan 9 mi (14 km) upstream. 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 (1961-71, 1972-79): Maximum daily, 2,810 micromhos Aug. 27, 1978; minimum daily, 235 micromhos Feb. 14, 1977.

WATER TEMPERATURES: Maximum daily, 34.5°C June 16, 1971; minimum daily, 2.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,690 micromhos Oct. 9; minimum daily, 262 micromhos July 29.

WATER TEMPERATURES: Maximum daily, 31.5°C Aug. 31; minimum daily, 3.5°C Jan. 2, 3, 7, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT									
03...	1330	450	2220	27.5	410	240	110	34	310
NOV									
30...	2125	1030	754	15.0	180	69	54	10	76
DEC									
31...	1615	2000	1470	7.0	290	180	84	20	210
JAN									
04...	1650	4000	1000	3.0	210	110	66	12	120
FEB									
08...	1730	19000	498	6.0	160	43	53	6.3	37
MAR									
21...	1125	30000	299	18.0	130	15	45	4.2	12
MAY									
31...	1015	57000	454	22.0	130	33	44	5.3	35
JUN									
12...	1315	14300	725	23.5	200	55	66	9.1	61
AUG									
31...	2000	2100	1090	31.5	230	100	64	18	130

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT									
03...	6.6	7.8	210	0	250	480	.3	2.5	1300
NOV									
30...	2.5	4.6	130	0	74	120	.3	9.2	412
DEC									
31...	5.3	6.3	140	0	160	350	.3	5.8	905
JAN									
04...	3.6	5.4	130	0	110	180	.4	9.9	568
FEB									
08...	1.3	3.9	140	0	48	49	.3	9.0	276
MAR									
21...	.5	3.7	140	0	26	12	.3	9.7	182
MAY									
31...	1.3	4.5	120	0	41	50	.3	8.1	247
JUN									
12...	1.9	3.6	180	0	65	90	.3	7.6	391
AUG									
31...	3.7	5.2	160	0	110	200	.3	7.6	614

BRAZOS RIVER BASIN

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08109500 BRAZOS RIVER NEAR COLLEGE STATION, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	13179	2330	1350	48200	510	18200	260	9290	420
NOV. 1978.....	29723	1650	950	76200	330	26500	180	14300	330
DEC. 1978.....	28569	1780	1030	79100	360	28100	190	14900	350
JAN. 1979.....	103350	1080	610	171000	180	49700	110	30400	260
FEB. 1979.....	137360	875	490	183000	130	47200	85	31600	230
MAR. 1979.....	239483	508	290	184000	55	35300	45	29300	180
APR. 1979.....	280870	487	270	206000	43	32300	41	31400	170
MAY 1979.....	702370	829	470	887000	120	232000	81	154000	230
JUNE 1979.....	548540	626	350	514000	65	96700	56	83000	200
JULY 1979.....	240730	480	270	173000	49	31600	42	27600	170
AUG. 1979.....	85470	831	460	107000	110	25700	80	18400	230
SEPT 1979.....	41730	1020	570	64700	160	18300	100	11600	250
TOTAL	2451374	**	**	2690000	**	642000	**	456000	**
WTD. AVG.	6720	724	410	**	96	**	69	**	210

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	1990	953	1200	1960	1170	600	1080	445	541	566	1110
2	2040	1980	1120	923	1930	1310	423	869	521	552	833	1150
3	2200	2050	1200	966	1970	1390	328	852	485	668	887	1160
4	2390	2130	1270	1000	2000	1400	339	750	442	717	913	1180
5	2250	2070	1290	1580	1230	1250	376	788	576	685	877	1100
6	2090	1790	1260	1370	907	1300	444	809	716	623	872	1050
7	2360	2050	1300	792	550	1310	522	1800	518	877	907	1060
8	2500	2110	1330	722	501	1210	581	1720	622	1060	857	1060
9	2690	1750	1340	673	533	1160	624	1680	750	958	930	1060
10	2550	1370	1300	792	646	1110	729	1710	836	954	958	1050
11	2400	1650	1330	800	878	1060	587	1650	826	833	914	1040
12	2320	1880	1320	540	840	1040	600	855	727	891	835	1090
13	2260	1830	1500	592	893	1040	608	529	708	898	750	1060
14	2220	1990	1660	611	1060	1010	634	608	703	812	660	1040
15	2170	1960	1470	671	1020	991	640	668	659	818	720	985
16	2470	1930	1410	1400	1260	504	634	817	701	763	700	975
17	2350	1910	1460	1780	1440	444	766	920	801	833	752	957
18	2170	1990	1520	1720	1550	432	448	1020	820	776	760	908
19	2220	2190	1860	1680	1760	592	502	978	708	744	830	820
20	2290	2040	1910	1480	1800	549	493	1140	671	700	815	659
21	2250	1950	2040	1500	1870	307	448	1050	664	686	781	822
22	2190	1840	2100	1580	1730	312	493	576	760	559	865	845
23	2380	1730	2180	1740	1650	329	607	300	862	571	904	867
24	2480	1450	2250	1750	554	368	730	341	905	613	823	898
25	2290	1400	2290	1710	648	496	816	512	887	653	955	902
26	2280	841	2260	1680	676	451	624	786	755	701	933	1060
27	2320	934	2230	1750	882	485	607	1080	723	483	935	1110
28	2460	617	2200	1700	1120	800	584	1170	952	266	921	1120
29	2450	653	2160	1640	---	798	844	909	697	262	1030	1100
30	2320	756	2320	1750	---	792	1050	673	805	347	1020	1120
31	2040	---	1530	1800	---	818	---	446	---	418	1090	---
MEAN	2310	1690	1660	1290	1210	846	589	938	708	686	858	1010

BRAZOS RIVER BASIN

08109500 BRAZOS RIVER NEAR COLLEGE STATION, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.0	23.5	17.5	---	6.0	17.0	---	21.0	23.0	27.0	28.0	31.0
2	29.0	23.5	20.5	3.5	7.0	17.0	18.0	22.0	22.5	25.5	28.0	31.0
3	29.0	---	15.5	3.5	8.0	17.0	17.0	21.5	22.0	27.0	28.5	30.0
4	28.0	23.0	13.5	4.5	7.5	15.5	10.5	19.5	23.0	25.5	30.0	28.5
5	---	22.0	14.0	5.0	7.5	15.5	17.0	18.0	23.5	25.5	31.0	30.0
6	24.0	19.5	12.5	5.0	6.5	16.0	18.0	19.5	23.5	26.5	30.0	29.5
7	25.0	18.0	10.0	3.5	---	16.5	---	---	23.5	26.5	30.5	31.0
8	23.0	17.5	6.0	4.0	7.5	17.5	20.5	21.0	25.0	26.5	---	30.5
9	23.5	---	7.0	3.5	6.5	19.5	19.5	21.5	25.5	29.0	30.5	29.5
10	24.5	19.5	7.0	4.5	7.5	15.0	---	---	24.0	27.5	30.5	30.0
11	26.5	20.5	8.0	5.0	10.0	15.0	---	20.5	22.0	27.0	29.5	29.0
12	27.0	22.0	8.0	6.0	11.5	15.0	---	19.0	22.0	28.5	29.0	28.5
13	26.0	22.5	9.0	5.5	13.5	10.0	---	---	22.0	28.0	29.0	29.0
14	23.0	23.5	9.5	4.5	16.0	18.5	---	19.0	22.0	28.0	28.5	28.0
15	22.5	19.0	10.0	5.0	17.5	16.5	---	20.0	23.5	29.0	28.0	25.0
16	23.5	14.5	12.0	6.5	11.0	12.0	---	21.5	23.0	28.0	29.0	24.0
17	23.0	16.0	12.5	9.0	8.0	13.5	---	21.5	23.0	28.5	30.5	24.5
18	22.0	16.5	11.0	11.0	7.0	15.5	---	21.0	23.0	28.0	30.0	24.0
19	23.5	14.5	14.5	14.0	8.0	17.0	---	21.5	24.0	26.5	29.5	---
20	24.0	14.5	17.0	12.5	9.0	18.5	21.5	21.5	25.0	27.0	29.0	23.5
21	24.5	14.5	14.5	10.5	---	19.0	21.0	22.0	25.0	28.0	29.5	24.5
22	24.0	14.5	11.5	10.5	12.5	19.5	20.0	20.0	26.0	27.5	29.0	26.0
23	---	17.0	13.0	9.5	17.0	18.0	21.5	20.0	27.0	27.0	29.0	27.0
24	23.5	18.0	12.0	8.5	14.5	17.5	22.0	20.0	26.5	29.0	28.0	26.5
25	23.0	20.5	11.0	---	14.0	16.5	23.5	20.0	27.0	27.5	30.5	26.0
26	22.0	19.0	12.5	8.5	13.5	18.0	23.5	22.0	26.0	26.0	30.5	26.0
27	22.5	15.5	12.0	8.5	13.5	18.5	22.0	22.0	24.5	24.0	30.0	27.5
28	22.5	14.0	10.0	8.0	15.5	19.0	22.0	22.0	27.0	23.5	29.0	27.5
29	22.0	15.0	13.0	7.5	---	19.5	21.0	20.0	25.5	27.0	29.5	27.0
30	22.0	15.0	12.0	8.5	---	19.5	21.0	21.0	27.0	26.5	29.0	29.0
31	22.0	---	7.0	5.5	---	21.0	---	22.0	---	27.0	31.5	---
MEAN	24.5	18.5	11.5	7.0	10.5	17.0	20.0	20.5	24.0	27.0	29.5	27.5

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LOCATION.--Lat 30°20'21", long 96°54'16", Lee County, Hydrologic Unit 12070102, on right bank 25 ft (8 m) upstream from centerline of State Highway 21, 4.5 mi (7.2 km) upstream from West Yegua Creek, 5.0 mi (8.0 km) southwest of Dime Box, and 17.5 mi (28.2 km) upstream from mouth.

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 295.4 ft (90.04 m) State Department of Highways and Public Transportation datum. June 30 to July 21, 1970, nonrecording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature made during the year.

AVERAGE DISCHARGE.--17 years, 54.4 ft³/s (1.541 m³/s), 3.13 in/yr (80 mm/yr), 39,410 acre-ft/yr (48.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) May 24, 1975, gage height, 15.16 ft (4.621 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1851, 16 ft (4.9 m) in December 1913, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
May 12	1330	875	24.8	10.09	3.075	June 6	1130	743	21.0	9.82	2.993
May 24	0030	*2,250	63.7	11.50	3.505	June 10	0900	708	20.1	9.72	2.963
June 1	2130	584	16.5	9.33	2.844						

Minimum discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	6.1	32	8.2	17	121	42	326	7.8	18	.00
2	.00	.00	5.2	72	8.1	16	186	44	481	7.1	10	.00
3	.00	.00	4.5	100	8.3	16	265	66	146	6.2	6.9	.00
4	.01	.00	3.6	142	12	16	241	75	70	5.3	4.9	.00
5	.01	.00	2.9	125	64	15	186	89	122	5.0	3.5	.00
6	.00	.00	2.2	61	184	14	136	112	637	5.0	2.6	.00
7	.00	.00	1.7	58	234	13	63	93	531	4.4	2.1	.00
8	.00	.00	1.5	46	235	13	44	47	298	5.5	1.7	.00
9	.00	.00	1.3	38	346	12	38	33	446	8.6	1.2	.00
10	.00	.00	1.2	32	454	12	33	26	670	15	.94	.00
11	.00	.00	1.2	77	233	12	30	413	326	14	.73	.00
12	.00	.00	1.0	80	62	13	27	821	71	9.9	.66	.00
13	.00	.00	.85	96	41	13	24	646	41	7.3	.54	.00
14	.00	.00	.84	132	32	13	22	366	30	6.3	.38	.00
15	.00	.00	.84	91	27	13	20	182	25	5.1	.40	.00
16	.00	.00	.84	32	24	12	18	65	22	4.6	.50	.00
17	.00	.00	.78	21	21	21	18	40	20	3.9	.43	.00
18	.00	.00	.71	18	20	37	27	30	17	3.5	.53	.00
19	.00	.03	.71	19	19	42	72	25	16	3.2	.51	.00
20	.00	.09	.62	18	18	96	109	22	15	3.1	.34	.00
21	.00	.11	.53	15	18	165	98	40	14	4.7	.30	.00
22	.00	.17	.44	13	19	211	102	292	13	8.2	.19	.00
23	.00	.16	.45	11	22	203	69	695	13	18	.43	.00
24	.00	.15	.55	8.8	42	316	43	1820	12	10	.31	.00
25	.00	.14	.54	7.2	36	454	33	1110	12	6.5	.18	.00
26	.00	2.7	.52	7.9	26	360	27	717	11	5.7	.11	.00
27	.00	2.0	.52	7.9	22	102	23	287	10	4.7	.05	.00
28	.00	.47	.52	8.1	19	47	20	76	9.2	3.3	.01	.00
29	.00	.30	.52	8.4	---	37	30	179	8.7	47	.00	.00
30	.00	3.2	.53	9.3	---	42	37	260	8.1	47	.00	.00
31	.00	---	48	9.1	---	95	---	197	---	73	.00	---
TOTAL	.02	9.52	91.71	1395.7	2254.6	2448	2162	8910	4421.0	352.9	58.44	.00
MEAN	.001	.32	2.96	45.0	80.5	79.0	72.1	287	147	11.4	1.89	.000
MAX	.01	3.2	48	142	454	454	265	1820	670	73	1.00	.00
MIN	.00	.00	.44	7.2	8.1	12	18	22	8.1	3.1	.00	.00
CFSM	.000	.001	.01	.19	.34	.34	.31	1.22	.62	.05	.008	.000
IN.	.00	.00	.01	.22	.36	.39	.34	1.40	.70	.06	.01	.00
AC-FT	.04	.19	182	2770	4470	4860	4290	17670	8770	700	116	.00
CAL YR 1978	TOTAL	1564.11	MEAN	4.29	MAX	72	MIN	.00	CFSM	.02	IN	.25
WTR YR 1979	TOTAL	22103.89	MEAN	60.6	MAX	1820	MIN	.00	CFSM	.26	IN	3.48
										AC-FT	3100	
										AC-FT	43840	

BRAZOS RIVER BASIN

08109800 EAST YECUA CREEK NEAR DIME BOX, TX

LOCATION.--Lat 30°24'26", long 96°49'02", Burleson County, Hydrologic Unit 12070102, on left bank 49 ft (15 m) upstream from centerline of State Highway 21, 0.8 mi (1.3 km) downstream from Buffalo Creek, 3.5 mi (5.6 km) north of Dime Box, and 12.2 mi (19.6 km) upstream from mouth.

DRAINAGE AREA.--244 mi² (632 km²).

PERIOD OF RECORD.--August 1962 to current year.

Water-quality records: Sediment records: June 1966 to September 1975.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 284.00 ft (86.56 m) State Department of Highways and Public Transportation datum. Nov. 6 to Dec. 10, 1970, nonrecording gage at present site and datum.

REMARKS.--Records fair. Diversions above station for irrigation. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 60.1 ft³/s (1.702 m³/s), 43,540 acre-ft/yr (53.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) May 24, 1975, gage height, 13.91 ft (4.240 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1886, 17 ft (5.2 m) in 1899 and 1957, from information by local residents.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Mar. 17	2000	2,080	58.9	10.34	3.152	May 22	1900	2,250	63.7	10.46	3.188
Mar. 21	1800	1,210	34.3	9.53	2.905	June 3	1000	1,560	44.2	9.90	3.018
Apr. 1	1300	1,020	28.9	9.29	2.832	June 6	1400	*2,310	65.4	10.50	3.200

Minimum discharge, 0.23 ft³/s (0.007 m³/s) Oct. 13-15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.85	2.6	165	8.2	12	896	57	244	5.5	14	4.2
2	.51	.85	3.0	178	8.2	11	904	56	1110	5.4	8.8	4.3
3	.46	.91	1.8	193	9.9	12	687	114	1500	5.0	7.4	4.0
4	.42	.97	1.4	60	21	10	310	118	972	4.6	6.8	3.2
5	.38	1.1	1.7	40	144	9.5	172	94	277	4.3	6.2	3.5
6	.35	2.5	2.3	58	500	8.8	65	64	1660	4.3	5.3	3.7
7	.38	6.0	2.6	115	890	8.2	44	34	1440	4.4	4.4	3.3
8	.50	6.5	2.6	80	747	7.7	39	26	811	4.6	3.6	2.6
9	.50	3.7	2.8	42	298	7.5	35	22	202	4.7	3.2	1.9
10	.42	2.3	3.3	31	53	7.3	32	21	48	6.1	2.9	1.4
11	.32	1.6	3.0	175	28	8.2	31	172	33	5.5	2.6	1.1
12	.32	1.3	2.6	220	22	8.2	30	491	25	4.6	2.6	.91
13	.26	1.2	2.4	276	18	8.2	25	648	21	4.1	3.5	.84
14	.26	1.0	2.2	122	16	7.9	24	534	18	4.0	4.1	.73
15	.26	.69	2.1	26	15	7.5	23	147	16	4.4	3.3	.63
16	.32	1.0	1.9	18	13	93	22	34	14	4.9	3.0	.59
17	.35	2.0	1.8	14	12	1010	23	26	13	4.9	3.2	.59
18	.38	2.3	1.8	15	12	1390	43	22	12	4.4	3.0	.81
19	.42	5.7	1.8	21	11	772	57	20	11	5.4	2.6	1.5
20	.55	6.3	1.7	20	11	715	59	18	9.7	5.0	2.3	2.8
21	.42	4.9	1.6	16	12	890	51	61	8.8	4.7	2.0	5.2
22	.42	7.3	1.5	13	14	991	42	1720	9.5	4.7	1.9	6.2
23	.46	16	1.5	11	19	905	34	2040	9.2	6.2	3.4	4.4
24	.50	8.4	1.5	9.1	65	460	27	1360	9.0	4.0	2.9	3.0
25	.59	4.6	1.4	8.1	61	187	24	556	7.5	3.3	3.4	2.2
26	.74	5.0	1.4	8.9	28	42	23	115	6.9	17	4.3	1.6
27	.85	15	1.4	9.7	18	26	22	39	6.5	8.5	4.4	1.2
28	.85	27	1.3	9.0	14	22	21	52	6.3	36	4.3	.86
29	.85	8.2	1.3	8.4	---	20	26	339	5.9	120	4.2	.68
30	.85	3.9	1.4	11	---	42	49	582	5.9	247	4.1	.50
31	.85	---	140	10	---	255	---	447	---	108	4.1	---
TOTAL	15.43	149.07	199.7	1983.2	3068.3	7954.0	3840	10029	8512.2	655.5	131.8	68.44
MEAN	.50	4.97	6.44	64.0	110	257	128	324	284	21.1	4.25	2.28
MAX	.85	27	140	276	890	1390	904	2040	1660	247	14	6.2
MIN	.26	.69	1.3	8.1	8.2	7.3	21	18	5.9	3.3	1.9	.50
AC-FT	31	296	396	3930	6090	15780	7620	19890	16880	1300	261	136
CAL YR 1978	TOTAL	3665.17	MEAN	10.0	MAX	322	MIN	.00	AC-FT	7270		
WTR YR 1979	TOTAL	36606.64	MEAN	100	MAX	2040	MIN	.26	AC-FT	72610		

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 (32.2 km) upstream from mouth.

DRAINAGE AREA.--1,007 mi² (2,608 km²).

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. Corps of Engineers gage-height telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 20,210 ft (6,160 m) long, with a 4,715-foot-long (1,437 m) dike and a 1,250-foot-long (381 m) uncontrolled spillway. Deliberate impoundment began Jan. 3, 1967, and the dam was completed Oct. 27, 1967. The emergency spillway is an uncontrolled ogee weir 1,250 ft (381 m) wide located near right end of dam. The low-flow outlet consists of one 10.0-foot-diameter (3.0 m) conduit that is controlled by two 5.0 by 10.0 ft (1.5 by 3.0 m) tractor-type gates. Capacity table is based on Geological Survey topographic maps dated 1959. The lake was designed for flood control and water conservation. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam.....	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 Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 311,000 acre-ft (383 hm³) June 9, 1979, elevation, 248.55 ft (75.758 m); minimum, 98,070 acre-ft (121 hm³) Sept. 7, 1978, elevation, 231.80 ft (70.653 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 311,000 acre-ft (383 hm³) June 9, elevation, 248.55 ft (75.758 m); minimum, 102,400 acre-ft (126 hm³) Nov. 5, elevation, 232.30 ft (70.805 m).

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

232.0	99,800	242.0	210,100
234.0	118,100	244.0	238,300
236.0	138,200	246.0	268,800
238.0	160,100	248.0	301,600
240.0	184,000	250.0	336,900

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106400	103100	115300	127100	159800	159000	179900	165400	222700	218700	169000	156700
2	106200	103100	115500	131000	160100	159400	181900	164400	224400	216300	167000	156600
3	106500	103000	115500	132400	160100	159500	186400	163500	226500	214200	165100	156600
4	106500	102900	115500	133500	161700	159500	190100	163200	228900	212400	163000	156400
5	106300	103300	115300	135300	167900	159500	190600	161700	231100	210500	161100	156200
6	106000	103800	115400	139400	176000	159500	189700	160800	286700	208500	160100	156000
7	105900	103300	115700	144900	180900	159400	188500	159900	302600	207000	159900	156500
8	105800	103200	115500	143500	183700	159400	187100	160100	309500	205100	160100	156100
9	105700	103200	115300	144000	184000	159500	185400	160100	310500	203000	159900	156500
10	105400	103100	115100	145600	183900	159800	183700	160300	308500	201400	159700	156200
11	105200	103100	115100	151100	183400	159900	182300	162900	305900	199300	159900	155600
12	105100	102900	115100	155000	182200	159900	179900	175400	301600	197100	159700	155200
13	105100	103200	115100	157800	180900	159900	178700	185700	296700	195000	159500	154900
14	104500	103100	115100	158500	179400	159400	176900	189700	291800	193300	159400	154400
15	104700	103100	115100	159300	178000	159400	174900	190000	286500	191300	159200	154000
16	104400	103200	115100	159700	175900	160300	173100	188800	281100	189300	159000	153500
17	104200	103100	115100	160100	174700	161000	173600	186900	276800	189100	158700	153300
18	104200	103000	115100	160700	172600	162000	174500	185000	272000	187100	158700	154200
19	104000	104200	115300	161800	171100	165300	176100	182800	266000	186400	158400	156600
20	104000	104200	115300	162500	169800	169800	178800	180600	261600	184400	158300	156800
21	103800	104700	115200	162200	167700	175200	181500	181700	256800	182400	158200	156600
22	103800	104900	115000	161000	166400	180700	181700	204100	252100	180400	158400	156500
23	103600	104900	115200	160900	165200	185400	180200	212400	247200	178600	158400	156400
24	103500	104900	115000	160300	164400	186600	178700	218900	243200	176600	158100	156200
25	103600	104900	114900	160200	163900	186600	176900	222200	238300	174600	157800	156100
26	103700	110100	114900	160500	161100	185900	174800	223900	233800	173600	157600	156000
27	103500	113800	114800	160200	159900	184800	172500	224400	229300	172400	157600	155900
28	103300	114300	114800	159800	159300	183500	170400	223100	225600	172400	157400	155800
29	103300	114700	115200	159900	---	181700	169000	221700	223200	172400	157300	155700
30	103300	114800	115500	160100	---	180900	167500	221100	221100	171600	157100	155600
31	103200	---	120600	160100	---	180400	---	221400	---	170600	156900	---
MAX	106500	114800	120600	162500	184000	186600	190600	224400	310500	218700	169000	156800
MIN	103200	102900	114800	127100	159300	159000	167500	159900	221100	170600	156900	153300
(†)	232.39	233.66	234.26	238.00	237.93	239.71	238.64	242.82	242.80	238.90	237.72	237.60
(*)	-3300	+11600	+5800	+39500	-800	+21100	-12900	+53900	-300	-50500	-13700	-1300
(††)	170	144	150	187	144	149	157	150	173	177	195	185

CAL YR 1978 MAX 164000 MIN 98240 † -18700 †† 2160
WTR YR 1979 MAX 310500 MIN 102900 † +49100 †† 1980

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by the city of Brenham.

BRAZOS RIVER BASIN

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 SITE AC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT										
11...	1115	1.0	479	7.8	24.0	.70	7.6	93	140	82
11...	1120	10	479	7.7	23.5	--	7.3	89	--	--
11...	1125	23	479	7.4	23.5	--	6.5	78	140	81
JAN										
09...	1205	1.0	445	7.6	5.5	.70	12.2	99	130	77
09...	1210	10	445	7.6	5.5	--	12.2	99	--	--
09...	1215	20	445	7.6	5.5	--	12.2	99	--	--
09...	1225	28	445	7.6	5.5	--	12.1	98	120	74
JUN										
19...	1225	1.0	299	7.5	27.5	.60	7.4	92	81	44
19...	1227	10	299	7.4	27.5	--	7.3	91	--	--
19...	1229	20	299	7.2	27.0	--	6.9	87	--	--
19...	1231	30	310	7.2	27.0	--	6.5	82	--	--
19...	1233	37	331	6.4	25.0	--	.4	5	96	53
AUG										
03...	1310	1.0	279	8.4	31.0	1.10	8.7	116	85	42
03...	1314	10	279	8.4	31.0	--	8.6	115	--	--
03...	1318	20	279	8.2	30.5	--	8.1	107	--	--
03...	1322	29	279	7.7	30.5	--	6.4	84	85	42

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
11...	40	8.8	34	1.3	6.6	66	0	90	57	.2
11...	--	--	--	--	--	--	--	--	--	--
11...	40	8.6	34	1.3	6.6	66	0	87	57	--
JAN										
09...	37	8.5	31	1.2	6.3	61	0	78	53	.2
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	36	8.2	31	1.2	6.2	61	0	71	51	--
JUN										
19...	23	5.8	21	1.0	5.1	46	0	50	30	.2
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	27	6.9	25	1.1	5.2	52	0	55	32	--
AUG										
03...	25	5.5	18	.9	5.2	52	0	43	29	.2
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	25	5.4	19	.9	5.2	52	0	44	29	--

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
11...	11	280	.00	.01	--	.060	--	10	0
11...	--	--	.01	.01	--	.060	--	<10	1
11...	11	277	.00	.01	--	.070	--	20	40
JAN									
09...	8.6	253	.05	.06	--	.040	--	10	3
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	8.6	242	.05	.06	--	.040	--	0	6
JUN									
19...	6.9	165	.16	.01	.09	.030	.09	100	5
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	9.6	187	.23	.07	.15	.050	.15	110	440
AUG									
03...	7.7	159	.00	.00	--	.040	.12	0	10
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.00	.01	--	.040	.12	0	10
03...	8.2	162	.00	.01	--	.040	.12	0	180

BRAZOS RIVER BASIN

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SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301940096315801 SOMERVILLE LAKE SITE AL

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT								
11...	1126	1.0	479	7.7	24.0	.40	7.2	89
11...	1128	10	479	7.7	23.5	--	7.2	87
11...	1130	23	479	7.7	23.5	--	7.2	87
JAN								
09...	1227	1.0	445	7.6	5.5	--	12.0	98
09...	1229	10	445	7.6	5.5	--	11.9	97
09...	1231	20	445	7.6	5.5	--	11.8	96
09...	1233	29	445	7.6	5.5	--	11.8	96
JUN								
19...	1310	1.0	299	7.4	27.5	--	7.2	91
19...	1312	10	299	7.4	27.5	--	7.1	90
19...	1314	20	299	7.3	27.0	--	7.1	89
19...	1316	31	299	7.4	27.0	--	7.1	89
AUG								
03...	1340	1.0	279	8.5	31.5	--	8.6	116
03...	1344	14	279	8.4	31.0	--	8.5	113

302026096341501 SOMERVILLE LAKE SITE BC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT								
11...	1304	1.0	479	8.4	24.0	.40	8.1	100
11...	1307	9.0	479	8.3	24.0	--	7.8	96
JAN								
09...	1246	1.0	424	7.6	5.0	.60	12.4	99
09...	1255	13	424	7.6	5.0	--	12.6	101
JUN								
19...	1335	1.0	299	7.7	28.5	.60	7.6	98
19...	1337	10	299	7.7	28.5	--	7.5	97
19...	1339	19	299	7.6	28.5	--	7.4	95
AUG								
03...	1535	1.0	279	8.1	31.0	--	7.9	105
03...	1539	14	279	7.5	30.0	--	6.0	79

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT							
11...	.00	.00	--	.070	--	<10	<1
11...	.00	.01	--	.070	--	<10	<1
JAN							
09...	.05	.08	--	.050	--	10	20
09...	.05	.10	--	.060	--	10	20
JUN							
19...	.06	.03	.09	.030	.09	60	10
19...	--	--	--	--	--	--	--
19...	.08	.04	.09	.030	.09	70	0
AUG							
03...	.00	.01	--	.040	.12	0	10
03...	.04	.01	--	.050	.15	10	10

BRAZOS RIVER BASIN
SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301805096332501 SOMERVILLE LAKE SITE CC
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT								
11...	1232	1.0	479	7.8	23.5	.60	7.2	88
11...	1235	10	479	7.7	23.5	--	7.0	84
JAN								
09...	1342	1.0	445	7.6	5.5	.70	12.2	99
09...	1350	10	445	7.6	5.0	--	12.0	96
JUN								
19...	1540	1.0	308	7.1	27.0	.60	6.6	84
19...	1542	10	308	7.1	27.0	--	6.5	82
19...	1544	20	308	6.8	26.5	--	4.4	55
AUG								
03...	1555	1.0	279	7.9	30.5	--	7.7	101
03...	1559	11	279	7.3	29.5	--	5.9	78

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PLYS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT							
11...	.01	.01	--	.070	--	<10	3
11...	.00	.01	--	.070	--	<10	1
JAN							
09...	.05	.10	--	.040	--	0	20
09...	.04	.04	--	.050	--	0	20
JUN							
19...	.21	.02	.06	.020	.06	80	20
19...	--	--	--	--	--	--	--
19...	.21	.04	.09	.030	.09	150	80
AUG							
03...	.00	.01	--	.040	.12	0	0
03...	.00	.01	--	.040	.12	0	0

301847096334601 SOMERVILLE LAKE SITE DR
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
11...	1238	1.0	479	8.0	23.5	7.6	93
11...	1240	10	479	7.9	23.5	7.4	89
11...	1242	18	479	7.6	23.5	6.5	78
JAN							
09...	1325	1.0	415	7.5	5.0	12.2	98
09...	1327	10	415	7.5	5.0	12.2	98
09...	1329	23	415	7.5	5.0	12.2	98
JUN							
19...	1415	1.0	258	7.3	27.5	7.0	89
19...	1417	10	268	7.2	27.5	6.9	87
19...	1419	20	268	7.1	27.0	6.3	79
19...	1421	32	308	6.6	26.0	2.1	26
AUG							
03...	1430	1.0	283	8.3	31.0	8.2	109
03...	1434	10	283	8.0	30.0	7.6	100
03...	1438	20	283	7.0	29.5	4.5	59
03...	1442	24	283	6.7	29.0	.6	8

BRAZOS RIVER BASIN

435

SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301904096335601 SOMERVILLE LAKE SITE DC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- FAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
11...	1248	1.0	479	8.0	24.0	.60	7.5	93	140	83
11...	1251	10	479	7.9	24.0	--	7.3	89	--	--
11...	1254	20	479	7.6	23.5	--	6.6	81	140	82
JAN										
09...	1303	1.0	415	7.5	5.0	.50	12.2	98	110	65
09...	1308	10	415	7.5	5.0	--	12.1	97	--	--
09...	1311	20	415	7.5	5.0	--	12.1	97	--	--
09...	1317	28	415	7.5	5.0	--	11.9	95	110	65
JUN										
19...	1350	1.0	258	7.5	28.0	.50	7.5	96	74	39
19...	1352	10	268	7.3	27.5	--	6.9	87	--	--
19...	1354	20	268	7.3	27.5	--	6.9	87	--	--
19...	1356	34	314	6.6	26.0	--	1.4	17	88	47
AUG										
03...	1410	1.0	283	8.5	31.0	--	8.8	117	85	41
03...	1414	10	283	7.9	30.0	--	7.1	93	--	--
03...	1418	20	283	7.2	29.5	--	5.6	74	--	--
03...	1422	28	283	6.9	29.5	--	2.8	37	78	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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
11...	40	8.6	34	1.3	6.5	.64	0	89	56
11...	--	--	--	--	--	--	--	--	--
11...	40	8.7	34	1.3	6.5	65	0	85	56
JAN									
09...	32	7.5	28	1.2	6.0	56	0	68	46
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	32	7.5	28	1.2	5.9	56	0	69	49
JUN									
19...	21	5.2	18	.9	5.2	42	0	43	26
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	25	6.3	22	1.0	5.2	51	0	50	32
AUG									
03...	25	5.6	20	.9	5.3	54	0	44	30
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	22	5.7	18	.9	5.2	54	0	43	29

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
11...	11	277	.01	.01	--	.070	--	20	0
11...	--	--	--	--	--	--	--	--	--
11...	11	273	.00	.01	--	.070	--	10	0
JAN									
09...	8.2	223	.08	.06	--	.060	--	10	10
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	8.3	227	.08	.10	--	.050	--	10	7
JUN									
19...	7.1	146	.10	.01	.09	.030	.09	160	10
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	8.6	175	.17	.18	.06	.020	.06	80	480
AUG									
03...	8.1	165	.02	.00	--	.050	.15	0	10
03...	--	--	--	--	--	--	--	--	--
03...	--	--	.00	.01	--	.040	.12	0	40
03...	8.5	158	.00	.03	--	.050	.15	0	200

BRAZOS RIVER BASIN

SOMERVILLE LAKE NEAR SOMERVILLE, TX--Continued

301817096364101 SOMERVILLE LAKE SITE EC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT							
11...	1212	1.0	479	7.8	24.0	7.2	88
11...	1214	10	479	7.7	23.5	6.9	83
11...	1216	17	479	7.6	23.5	6.5	79
JAN							
09...	1401	1.0	395	7.5	5.0	12.1	97
09...	1403	10	395	7.5	5.0	11.9	95
09...	1405	22	395	7.5	5.0	11.5	92
JUN							
19...	1435	1.0	266	7.0	27.0	6.3	79
19...	1437	10	266	7.0	27.0	6.2	78
19...	1439	20	278	6.9	27.0	5.9	74
19...	1441	30	290	6.8	26.5	5.2	65
AUG							
03...	1520	1.0	284	8.2	30.5	8.7	115
03...	1524	10	284	7.4	29.5	6.5	85
03...	1528	24	284	6.9	29.5	3.9	51

301754096380801 SOMERVILLE LAKE SITE FC

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT										
11...	1153	1.0	474	8.1	23.5	--	7.6	92	140	84
11...	1202	8.0	474	7.8	23.5	--	6.6	80	140	80
JAN										
09...	1413	1.0	207	6.9	3.0	.20	12.6	96	56	32
09...	1417	14	207	7.0	4.5	--	13.0	103	52	29
JUN										
19...	1505	1.0	205	6.8	28.0	.30	5.6	71	59	22
19...	1507	10	205	6.8	27.5	--	5.3	67	--	--
19...	1509	20	238	6.6	26.5	--	3.4	42	67	31
AUG										
03...	1500	1.0	322	8.1	31.5	--	8.7	118	99	52
03...	1504	13	307	6.9	29.5	--	3.2	42	92	46

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
11...	41	8.8	33	1.2	6.8	67	0	89	54
11...	40	8.6	33	1.2	6.9	67	0	89	56
JAN									
09...	16	3.8	15	.9	5.0	29	0	38	21
09...	15	3.6	13	.8	2.4	29	0	35	21
JUN									
19...	17	3.9	12	.7	4.4	44	0	30	20
19...	--	--	--	--	--	--	--	--	--
19...	19	4.8	16	.9	4.6	44	0	37	23
AUG									
03...	29	6.4	22	1.0	5.5	57	0	50	35
03...	27	6.0	21	1.0	5.3	56	0	47	32

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
11...	10	276	.00	.01	--	.140	--	40	0
11...	10	277	.00	.02	--	.160	--	20	0
JAN									
09...	9.4	123	.38	.16	--	.190	--	80	20
09...	9.0	113	.47	.19	--	.160	--	120	20
JUN									
19...	8.8	118	.11	.02	.18	.060	.18	320	130
19...	--	--	--	--	--	--	--	--	--
19...	8.6	135	.23	.07	.15	.050	.15	170	220
AUG									
03...	10	186	.00	.00	--	.070	.21	10	20
03...	9.2	175	.01	.03	--	.080	.25	0	180

BRAZOS RIVER BASIN

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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 (12 m) downstream from bridge on State Highway 36, 860 ft (262 m) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.0 mi (1.6 km) downstream from Somerville Lake, 2.0 mi (3.2 km) south of Somerville, 5.0 mi (8.0 km) upstream from Davidson Creek, and 18.4 mi (29.6 km) upstream from mouth.

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

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 (60.719 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 30, 1934, nonrecording gage at railway bridge 860 ft (262 m) upstream at datum 34.30 ft (10.455 m) higher. Jan. 30, 1934, to Nov. 30, 1970, water-stage recorder at highway bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Water-discharge records good above 1.0 ft³/s (0.028 m³/s) and fair below. Flow regulated by Somerville Lake (station 08109900) since Feb. 3, 1966. Corps of Engineers gage-height telemeter located at station.

AVERAGE DISCHARGE.--41 years (water years 1925-65) unregulated, 290 ft³/s (8.312 m³/s), 210,100 acre-ft/yr (259 hm³/yr); 14 years (water years 1966-79) regulated, 324 ft³/s (9.176 m³/s), 234,700 acre-ft/yr (289 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,800 ft³/s (1,610 m³/s) July 1, 1940, gage height, 19.27 ft (5.873 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 22 ft (6.7 m) Dec. 5, 1913, present site and datum, from information by Gulf, Colorado, and Santa Fe Railway Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) June 13, gage height, 8.71 ft (2.655 m); minimum daily, 0.02 ft³/s (0.001 m³/s) Oct. 17-19, 21-25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.05	.35	23	103	315	1100	1130	1240	1030	795	2.3
2	.11	.06	.29	5.8	103	12	1120	1120	1240	1030	790	2.4
3	.11	.06	.25	2.3	103	3.1	913	1110	1240	1040	778	2.6
4	.11	.06	.20	1.9	109	1.7	314	1140	1240	1040	778	2.6
5	.11	.08	.18	1.9	152	1.2	949	1140	1240	1040	776	2.4
6	.10	.28	.16	5.2	113	.89	1060	1140	1240	1040	547	2.3
7	.08	.24	.15	10	181	.69	1060	1140	1240	1040	21	2.2
8	.07	.20	.15	4.1	792	.58	1070	1120	1240	1040	2.6	2.0
9	.06	.16	.15	2.1	1010	.62	1070	1120	1290	1040	2.5	1.8
10	.06	.15	.13	1.7	1050	.64	1060	1120	1680	1040	1.3	.82
11	.06	.13	.15	15	1050	.80	1070	1120	1770	1040	1.5	.65
12	.06	.11	.15	6.8	1040	.85	1070	1120	1970	1040	1.8	.70
13	.06	.10	.15	3.2	1040	.78	1070	1120	2200	1040	1.4	.78
14	.05	.08	.15	1.8	1040	.73	1070	1130	2200	1040	1.3	.83
15	.03	.06	.16	1.2	1040	.68	1060	1140	2200	1030	1.2	.91
16	.03	.07	.19	1.1	1020	1.7	1060	1160	2190	1020	1.6	1.0
17	.02	.11	.18	1.0	1020	2.8	1060	1180	2180	1020	2.1	1.1
18	.02	.11	.18	1.3	1020	2.0	914	1180	2180	1020	2.3	1.3
19	.02	.34	.19	3.6	1020	1.7	78	1190	2170	1000	2.3	2.0
20	.03	.87	.20	4.6	1020	3.2	5.5	1190	2160	1000	2.7	4.3
21	.02	.88	.19	232	1030	15	1.6	1190	2150	1000	3.1	1.6
22	.02	.85	.17	651	1030	18	362	1220	2130	997	3.1	.85
23	.02	.84	.17	603	1040	148	973	1220	2110	994	3.2	.66
24	.02	.71	.18	332	1040	753	1000	1220	2100	986	2.8	.59
25	.02	.56	.16	252	1040	1060	1040	1230	2100	986	2.8	.56
26	.07	20	.16	118	1040	1090	1130	1230	2090	986	3.2	.58
27	.08	8.0	.16	104	951	1090	1150	1230	2080	815	2.8	.53
28	.08	1.3	.16	102	679	1090	1140	1230	1960	52	2.3	.52
29	.06	.73	.21	102	---	1090	1140	1230	1430	2.7	2.4	.65
30	.06	.53	.29	105	---	1100	1130	1240	1110	317	2.6	.73
31	.06	---	13	104	---	1110	---	1240	---	771	2.5	---
TOTAL	1.81	37.72	18.56	2802.6	21876	8915.66	27240.1	36290	53370	28536.7	4540.4	42.26
MEAN	.058	1.26	.60	90.4	781	288	908	1171	1779	921	146	1.41
MAX	.11	20	13	651	1050	1110	1150	1240	2200	1040	795	4.3
MIN	.02	.05	.13	1.0	103	.58	1.6	1110	1110	2.7	1.2	.52
AC-FT	3.6	75	37	5560	43390	17680	54030	71980	105900	56600	9010	84
CAL YR 1978	TOTAL	44752.09	MEAN 123	MAX 851	MIN .02	AC-FT 88770						
WTR YR 1979	TOTAL	183671.81	MEAN 503	MAX 2200	MIN .02	AC-FT 364300						

BRAZOS RIVER BASIN

08110000 YEGUA CREEK NEAR SOMERVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: September 1961 to September 1967, October 1968 to September 1979
 (continued). Water temperatures: September 1961 to September 1967.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 02...	1516	.11	737	30.5	200	150	58	13	61
NOV 15...	1434	.10	1130	21.0	340	280	100	21	82
JAN 04...	1510	1.8	954	5.5	260	220	81	13	84
FEB 01...	1415	103	431	6.5	120	81	37	7.7	3
MAR 20...	1226	3.5	1530	18.5	430	390	130	25	14
APR 30...	1640	1130	383	22.0	100	59	28	7.3	2
JUN 12...	1054	1900	328	24.5	93	56	27	6.3	1
JUL 26...	1525	986	284	28.5	80	38	23	5.5	
SEP 04...	1550	2.4	526	29.0	150	100	45	9.0	

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)	SOI SUI CON TU S (
OCT 02...	1.9	8.1	54	0	130	110	.2	15	
NOV 15...	1.9	10	69	0	220	190	.2	13	
JAN 04...	2.3	7.4	40	0	190	150	.2	19	
FEB 01...	1.3	6.4	52	0	79	50	.2	7.8	
MAR 20...	2.9	8.8	48	0	300	270	.7	15	
APR 30...	1.2	5.7	50	0	70	41	.2	11	
JUN 12...	1.1	5.0	45	0	61	37	.2	7.5	
JUL 26...	.9	4.7	51	0	46	28	.2	7.3	
SEP 04...	1.4	7.0	58	0	82	76	.2	10	

BRAZOS RIVER BASIN

439

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 (25 m) downstream from Farm Road 60, 1.2 mi (1.9 km) downstream from Berry Creek, 2.8 mi (4.5 km) northeast of Lyons, and 10.7 mi (17.2 km) upstream from mouth.

DRAINAGE AREA.--195 mi² (505 km²).

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 (67.135 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. During year, the city of Cadwell discharged 251 acre-ft (0.309 hm³) of sewage effluent into creek above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 68.6 ft³/s (1.943 m³/s), 4.78 in/yr (121 mm/yr), 49,700 acre-ft/yr (61.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s (657 m³/s) June 24, 1968, gage height, 18.67 ft (5.691 m); no flow at times each year.

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 (5.2 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Jan. 1	1800	1,500	42.5	14.38	4.383	May 22	1900	5,680	161	16.41	5.002
Mar. 17	1430	1,830	51.8	15.04	4.584	June 6	1800	*9,690	274	17.52	5.340
Mar. 20	1700	2,310	65.4	15.33	4.673						

Minimum discharge, no flow for several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	3.4	1370	20	15	573	63	236	5.2	32	8.2
2	.00	.00	2.2	648	11	13	681	49	113	4.4	18	4.4
3	.02	.00	2.3	75	21	13	1300	76	318	4.0	13	3.3
4	18	.00	4.8	33	88	15	657	118	487	3.6	9.8	2.8
5	4.4	.01	3.9	157	847	12	149	68	192	4.4	8.2	3.6
6	1.3	.11	2.0	430	1160	9.5	70	44	4550	4.6	6.7	2.8
7	.51	.02	1.4	682	1080	8.4	45	34	3570	4.2	6.0	3.3
8	.35	.00	1.1	221	473	7.7	36	29	1440	4.4	5.4	2.0
9	.21	.00	.80	63	102	7.2	30	23	471	5.4	4.8	1.3
10	.13	.00	1.0	34	45	7.3	29	21	93	4.6	5.0	1.2
11	.11	.00	1.1	446	31	9.3	29	181	54	3.8	4.4	1.2
12	.09	.00	.89	317	25	10	29	696	37	4.0	4.8	1.1
13	.07	.00	.77	94	22	9.2	25	185	29	5.0	8.8	.90
14	.03	.00	.62	37	19	8.4	21	105	23	4.4	8.8	.80
15	.00	.00	.62	20	17	7.4	18	42	20	4.8	5.6	.62
16	.00	.02	.62	15	16	448	16	27	18	4.2	4.6	.62
17	.00	.06	.55	13	14	1450	68	22	15	3.6	4.4	.54
18	.00	.05	.54	12	14	1140	770	21	13	7.5	4.0	.71
19	.00	5.4	.59	52	14	559	761	19	12	5.8	3.1	2.6
20	.00	5.9	.62	76	14	1320	257	17	10	6.7	2.4	26
21	.00	13	.44	37	14	1780	218	30	9.8	4.6	2.4	24
22	.00	7.2	.39	18	15	1770	96	3430	9.3	2.3	2.4	11
23	.00	3.3	.44	12	51	1230	58	2560	9.1	1.3	2.9	9.3
24	.00	2.1	.52	8.8	277	373	43	1330	8.0	1.0	3.6	6.2
25	.00	2.0	.46	6.9	103	93	34	374	7.8	.90	4.6	5.0
26	.00	227	.46	6.5	44	54	29	82	6.5	105	3.6	4.0
27	.00	269	.46	6.7	25	38	25	51	6.2	171	3.8	3.6
28	.00	31	.46	7.8	19	31	22	47	5.2	75	5.2	2.6
29	.00	13	.54	6.9	---	26	22	256	5.0	336	4.8	1.6
30	.00	6.2	.62	20	---	26	77	484	5.0	455	4.6	1.5
31	.00	---	463	46	---	563	---	564	---	132	3.6	---
TOTAL	25.22	585.37	497.61	4971.6	4581	11053.4	6188	11048	11772.9	1378.70	201.3	136.79
MEAN	.81	19.5	16.1	160	164	357	206	356	392	44.5	6.49	4.56
MAX	18	269	463	1370	1160	1780	1300	3430	4550	455	.32	26
MIN	.00	.00	.39	6.5	11	7.2	16	17	5.0	.90	2.4	.54
CFSM	.004	.10	.08	.82	.84	1.83	1.06	1.83	2.01	.23	.03	.02
IN.	.00	.11	.09	.95	.87	2.11	1.18	2.11	2.25	.26	.04	.03
AC-FT	50	1160	987	9860	9090	21920	12270	21910	23350	2730	399	271
CAL YR 1978	TOTAL	4812.78	MEAN	13.2	MAX	632	MIN	.00	CFSM	.07	IN	.92
WTR YR 1979	TOTAL	52439.89	MEAN	144	MAX	4550	MIN	.00	CFSM	.74	IN	10.00
										AC-FT	9550	
										AC-FT	104000	

BRAZOS RIVER BASIN

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 (3.9 km) upstream from Navasota River, 2.5 mi (4.0 km) north of Washington, and at mile 228.8 (368.1 km).

DRAINAGE AREA.--41,192 mi² (106,687 km²), approximately, of which 9,566 mi² (24,776 km²) probably is noncontributing.

PERIOD OF RECORD.--November 1965 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 (42.712 m) National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder 1.8 mi (2.9 km) downstream at same datum.

REMARKS.--Records fair. Backwater at times from Navasota River. Many diversions above station for irrigation, municipal, industrial, and oilfield operations. At times, flow is affected by five upstream reservoirs with a combined capacity of 4,955,000 acre-ft (6.11 km³). Flow is also affected at times by discharge from the flood-detonation pools of 139 floodwater-retarding structures with a combined detention capacity of 157,400 acre-ft (194 km³). These structures control runoff from 456 mi² (1,181 km²) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 5,456 ft³/s (154.5 m³/s), 3,953,000 acre-ft/yr (4.87 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,500 ft³/s (2,340 m³/s) Jan. 24, 1968, gage height, 33.60 ft (10.241 m); maximum gage height, 36.74 ft (11.198 m) Apr. 28, 1966 (backwater from Navasota River); minimum discharge, 170 ft³/s (4.81 m³/s) Oct. 22, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1856, 62.0 ft (18.90 m) Dec. 6, 1913, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,900 ft³/s (1,720 m³/s) June 1, gage height, 31.82 ft (9.699 m); maximum gage height, 32.74 ft (9.979 m) June 4 (backwater from Navasota River); minimum discharge, 170 ft³/s (4.81 m³/s) Oct. 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	496	879	8870	3170	4730	20200	3910	56600	10600	11800	2790
2	320	379	949	10400	3250	3740	30800	4780	44300	9010	8610	2670
3	316	369	835	9150	3250	3210	43500	8000	53400	8200	6610	2620
4	480	499	638	5380	3680	2960	39000	13200	54200	7430	5620	2940
5	511	916	587	5350	4700	2780	26000	8100	35600	6420	5190	2030
6	615	859	543	5270	6770	3540	17000	7080	31400	5280	4960	1670
7	614	831	469	6250	13000	3610	12100	17700	43500	4440	4520	1640
8	528	698	516	5300	18600	3240	8580	21400	37900	4580	3790	1540
9	861	1050	494	3640	16300	3150	6920	21200	24000	4140	3770	1600
10	710	1120	452	2480	12000	3010	8090	20100	19000	3990	3820	1650
11	489	840	429	2330	8850	2720	8270	20700	17200	3920	3970	1530
12	366	714	441	5930	7340	2490	7530	34100	15700	3780	4550	1380
13	290	549	956	12300	6670	2360	7280	42200	15400	4180	6490	1220
14	240	605	867	10800	6050	2240	7620	33100	14300	3950	6940	991
15	229	591	668	7160	5250	2140	7450	21600	14000	3910	5230	817
16	522	536	566	5110	6010	3890	6670	18100	13900	3730	4050	728
17	748	544	609	5930	6700	9310	5980	16500	13800	3610	3690	671
18	615	572	1080	5050	7030	16700	6350	13400	13700	3540	3960	687
19	429	2370	1320	3860	6220	16200	7110	9870	12900	3400	4790	791
20	314	4050	1250	3270	5820	15400	6810	7910	12300	3310	4820	1320
21	229	2610	1210	2680	5610	28900	10400	6220	12200	3450	4460	1740
22	215	1610	1320	3020	5880	33700	13500	17400	12800	4460	4160	1780
23	285	1420	1460	3700	6500	33700	9050	44700	11100	4790	3950	1890
24	467	1270	1720	3380	10600	28300	6380	53600	10200	3730	3930	1940
25	725	1020	1260	3270	14800	20400	5490	45200	10700	3170	3680	2070
26	633	1510	1120	3280	12800	11900	5280	24000	9920	2880	3850	2020
27	444	3620	1140	3260	10100	9640	5950	14000	9170	11100	3200	1950
28	525	2770	1230	3030	6880	9780	6270	12300	9940	45600	3280	1630
29	724	1680	1320	2840	---	7550	5780	16800	11300	49000	2860	1580
30	609	1040	1520	3400	---	6560	4110	38300	11200	32900	2920	1640
31	526	---	3520	3180	---	10100	---	56700	---	15200	2850	---
TOTAL	14842	37138	31368	158870	223830	307950	355470	672170	651630	277700	146320	49525
MEAN	479	1238	1012	5125	7994	9934	11850	21680	21720	8958	4720	1651
MAX	861	4050	3520	12300	18600	33700	43500	56700	56600	49000	11800	2940
MIN	215	369	429	2330	3170	2140	4110	3910	9170	2880	2850	671
AC-FT	29440	73660	62220	315100	444000	610800	705100	1333000	1293000	550800	290200	98230
CAL YR 1978	TOTAL	458860	MEAN	1257	MAX	9410	MIN	215	AC-FT	910100		
WTR YR 1979	TOTAL	2926813	MEAN	8019	MAX	56700	MIN	215	AC-FT	5805000		

08110300 LAKE MEXIA NEAR MEXIA, TX

LOCATION.--Lat 31°38'37", long 96°34'43", Limestone County, Hydrologic Unit 12070103, 550 ft (168 m) downstream from Cedar Creek, 610 ft (186 m) upstream from spillway of dam on Navasota River, 1.0 mi (1.6 km) upstream from Echo Dam, 1.6 mi (2.6 km) upstream from Jacks Creek, 6 mi (10 km) southwest of Mexia, and 180.0 mi (289.6 km) upstream from mouth.

DRAINAGE AREA.--196 mi² (508 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 420.0 ft (128.02 m) National Geodetic Vertical Datum of 1929.

REMARKS.--The lake is formed by an earthfill dam, 1,645 ft (501 m) long, including a 520-foot (158 m) uncontrolled concrete ogee-type spillway near the center of dam. The dam was completed and deliberate impoundment of water began June 5, 1961. The Bistone Municipal Water Supply District reported a diversion of 1,980 acre-ft (2.44 hm³) for municipal use during the current year. 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.....	42.3	-
Crest of spillway.....	28.3	9,400
Lowest gated outlet (invert).....	2.1	531

COOPERATION.--Capacity table was computed from data furnished by Fowler and Grafe, Inc., Consulting Engineers, Dallas. Data was based on a preconstruction survey in 1958 and was not adjusted for borrow in the lake area. Diversions from lake for municipal use were furnished by the Bistone Municipal Water Supply District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 22,460 acre-ft (27.7 hm³) May 11, 1979, gage height, 35.36 ft (10.778 m); minimum, 3,730 acre-ft (4.60 hm³) Jan. 15, 1964, gage height, 21.40 ft (6.523 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,460 acre-ft (27.7 hm³) May 11, gage height, 35.36 ft (10.778 m); minimum, 4,980 acre-ft (6.14 hm³) Dec. 28, gage height, 23.93 ft (7.294 m).

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

23.0	4,430	28.0	8,970
25.0	5,760	32.0	15,410
		36.0	23,890

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5550	5160	5270	6530	9160	9560	14120	9530	10060	8930	9140	9180
2	5520	5150	5290	6590	9200	9580	11400	9570	10800	8880	9100	9160
3	5520	5130	5290	6610	9200	9770	10000	9710	9930	8860	9070	9130
4	5520	5120	5260	6630	9230	9700	9710	9610	9710	8820	9060	9130
5	5520	5120	5240	6660	9570	9610	9610	9610	10000	8780	9010	9080
6	5500	5150	5240	6800	10750	9560	9570	9560	9860	8770	8980	9060
7	5480	5110	5240	6910	10240	9510	9560	9530	9700	8780	8920	9030
8	5460	5090	5260	6920	9790	9480	9560	9500	9600	8780	8880	8980
9	5430	5070	5200	6930	9630	9470	9500	9470	9560	8740	8840	8940
10	5410	5060	5180	7040	9570	9440	9480	10170	9480	8720	8830	8920
11	5430	5060	5180	8110	9540	9430	9500	15970	9460	8690	9770	8880
12	5410	5040	5160	8640	9530	9400	9470	11750	9440	8640	9670	8860
13	5380	5030	5150	8780	9510	9400	9460	10030	9410	8610	9560	8820
14	5350	5030	5140	8690	9500	9360	9440	9710	9380	8570	9500	8770
15	5330	5030	5140	8690	9510	9460	9410	9630	9360	8540	9470	8720
16	5310	5060	5120	8680	9430	10420	9400	9570	9310	8520	9440	8680
17	5290	5050	5100	8690	9430	10110	9660	9540	9260	8630	9400	8640
18	5270	5030	5100	8730	9400	9810	10390	9510	9230	8890	9370	8730
19	5260	5260	5090	8740	9380	9690	10630	9500	9200	9270	9330	8830
20	5240	5290	5110	8930	9400	9700	11330	9480	9170	9280	9280	9300
21	5210	5300	5080	9230	9380	9910	10030	9540	9140	9270	9240	9310
22	5200	5300	5060	9260	9410	10170	9740	9970	9100	9240	9460	9300
23	5190	5300	5060	9230	9440	9940	9630	9840	9060	9210	9500	9270
24	5170	5290	5030	9200	9710	9690	9580	9660	9030	9170	9440	9240
25	5240	5290	5010	9210	9660	9580	9560	9580	9010	9140	9430	9230
26	5250	5350	5010	9240	9600	9540	9510	9540	9030	9200	9380	9180
27	5230	5340	5000	9210	9600	9540	9500	9510	9060	9170	9360	9170
28	5210	5320	4990	9180	9570	9510	9460	10010	9040	9140	9330	9140
29	5200	5320	4990	9200	---	9510	9480	12880	9010	9110	9300	9110
30	5180	5300	5000	9260	---	9570	9470	12380	8970	9070	9270	9080
31	5180	---	5480	9180	---	9890	---	10430	---	9040	9230	---
MAX	5550	5350	5480	9260	10750	10420	14120	15970	10800	9280	9770	9310
MIN	5170	5030	4990	6530	9160	9360	9400	9470	8970	8520	8830	8640
(†)	24.21	24.38	24.62	28.15	28.42	28.64	28.35	29.02	28.00	28.05	28.18	28.08
(‡)	-390	+120	+180	+3700	+390	+320	-420	+960	+1460	+70	+190	-150
(††)	161	148	132	187	163	157	154	176	171	181	182	168

CAL YR 1978 MAX 13490 MIN 4990 † -10 †† 2322
WTR YR 1979 MAX 15970 MIN 4990 † +3510 †† 1980

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Diversions, in acre-feet, for municipal use by Bistone Municipal Water Supply District.

BRAZOS RIVER BASIN

08110300 LAKE MEXIA NEAR MEXIA, TX--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JAN 16...	1745	285	5.0	93	3	32	3.2	15	.7
MAY 22...	1820	147	23.5	59	0	21	1.6	3.6	.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 16...	4.6	110	0	17	19	.2	3.5	149
MAY 22...	3.4	72	0	5.1	3.3	.1	8.6	82

BRAZOS RIVER BASIN

443

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX

LOCATION.--Lat 31°34'27", long 96°31'14", Limestone County, Hydrologic Unit 12070103, in city of Groesbeck water supply pumping plant, 1.2 mi (1.9 km) downstream from Springfield Lake, 3.7 mi (6.0 km) north of Groesbeck, and 161.4 mi (259.7 km) upstream from mouth.

DRAINAGE AREA.--239 mi² (619 km²).

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. Datum of gage is 396.65 ft (120.899 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow is partly regulated by Lake Mexia (station 08110300) 7.4 mi (11.9 km) upstream, capacity 9,400 acre-ft (11.6 hm³), and Springfield Lake 1.2 mi (1.9 km) upstream, approximate capacity 3,100 acre-ft (3.81 hm³). Several diversions above station for irrigation, municipal supply, and oilfield operation (total amount unknown). The city of Groesbeck diverted 396 acre-ft (488,000 m³) for municipal use from pool at gage during the water year and returned 15.3 acre-ft (18,900 m³) of washwater and 154 acre-ft (190,000 m³) of sewage effluent below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,200 ft³/s (770 m³/s) May 11, 1979, gage height, 15.06 ft (4.590 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 26 ft (7.925 m) in 1910 and 1944, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,200 ft³/s (770 m³/s) May 11, gage height, 15.06 ft (4.590 m); no flow Oct. 5, 12-28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.15	.38	1.4	.77	46	1800	16	722	1.9	.91	.31
2	.12	.09	.46	.69	.78	37	6640	18	709	1.9	.85	.30
3	.06	.13	.45	.62	.96	57	1670	25	882	1.5	.73	.31
4	.01	.13	.37	.46	1.3	86	336	66	274	1.6	.66	.34
5	.00	.12	.44	.46	2.6	91	127	62	233	1.3	.61	.29
6	.02	.30	.58	.63	323	77	79	58	391	1.5	.53	.25
7	.01	.15	.77	.64	1100	58	60	48	210	1.6	.46	.14
8	.02	.08	.59	.41	518	37	51	36	112	1.5	.60	.17
9	.02	.13	.52	.40	168	28	43	25	78	1.4	.54	.20
10	.01	.20	.70	.92	83	23	32	23	57	1.6	.45	.21
11	.01	.37	.43	2.9	61	17	38	17300	35	1.6	11	.15
12	.00	.35	.38	.98	45	12	34	9320	23	1.2	68	.13
13	.00	.60	.65	.76	36	9.2	25	1450	20	1.0	75	.12
14	.00	.43	.74	.58	25	8.0	17	332	15	1.1	52	.08
15	.00	.56	.68	.59	24	7.9	13	128	11	1.1	35	.01
16	.00	1.2	.67	.63	21	121	9.7	63	8.1	1.0	23	.00
17	.00	1.0	.63	.98	14	688	11	53	5.8	2.1	15	.03
18	.00	.54	.71	1.2	11	407	257	40	4.0	1.6	9.1	1.9
19	.00	4.6	.78	1.2	8.1	184	716	28	2.6	1.2	5.3	2.1
20	.00	2.0	.83	1.5	6.9	120	2060	20	2.4	1.1	3.7	32
21	.00	1.9	.65	1.2	6.8	130	1390	16	2.1	1.1	2.1	38
22	.00	1.3	.69	.88	6.2	318	370	80	1.9	1.0	6.9	26
23	.00	.85	.68	2.4	8.1	528	149	309	1.9	.94	7.8	17
24	.00	.86	.57	1.2	40	259	87	192	1.6	1.0	5.0	12
25	.00	.87	.52	.86	100	115	64	92	1.6	1.1	3.4	8.8
26	.00	3.6	.62	1.0	74	75	49	65	2.1	1.3	1.9	5.8
27	.00	1.0	.68	.91	58	56	33	48	1.8	1.3	1.1	4.4
28	.00	.65	.67	.82	59	41	22	67	2.1	1.0	.69	2.6
29	.01	.56	.71	1.0	---	29	20	3160	2.1	.90	.49	1.9
30	.14	.48	.77	1.5	---	31	17	6530	2.1	.85	.46	1.6
31	.19	---	4.7	1.0	---	41	---	3220	---	.80	.35	---
TOTAL	.76	25.20	23.02	30.72	2802.51	3737.1	16219.7	42890	3814.2	40.09	333.63	157.14
MEAN	.025	.84	.74	.99	100	121	541	1384	127	1.29	10.8	5.24
MAX	.19	4.6	4.7	2.9	1100	688	6640	17300	882	2.1	75	38
MIN	.00	.08	.37	.40	.77	7.9	9.7	16	1.6	.80	.35	.00
AC-FT	1.5	50	46	61	5560	7410	32170	85070	7570	80	662	312
CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		
WTR YR 1979	TOTAL	70074.00	MEAN	192	MAX	17300	MIN	.00	AC-FT	139000		

BRAZOS RIVER BASIN

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 TEMPERATURES: 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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,590 micromhos Oct. 8, 9, 1969; minimum daily, 71 micromhos June 4, 1973.

WATER TEMPERATURES: 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, 1,090 micromhos Oct. 11; minimum daily, 90 micromhos May 11.

WATER TEMPERATURES: Maximum daily, 28.0°C on many days during summer months; minimum daily, 11.0 °C Feb. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 31...	1030	.18	--	--	--	--	--	--	--
DEC 06...	1503	.39	568	11.0	160	46	52	7.6	54
JAN 16...	1414	.58	411	5.0	120	38	38	6.2	33
FEB 27...	1722	53	394	12.0	110	16	39	4.2	31
MAR 31...	0730	34	303	20.0	110	14	40	3.0	15
APR 30...	0800	18	264	21.0	110	4	40	2.6	9.5
MAY 31...	0800	4010	216	23.0	84	46	28	3.4	5.3
AUG 31...	0845	.58	340	28.0	130	3	49	3.0	14
SEP 17...	2000	.81	413	27.0	170	1	64	3.3	14

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 31...	--	--	--	--	--	--	--	--	--
DEC 06...	1.9	6.3	140	0	45	89	.2	11	334
JAN 16...	1.3	5.1	100	0	40	49	.2	13	234
FEB 27...	1.3	4.2	120	0	27	43	.3	5.0	213
MAR 31...	.6	3.9	120	0	24	17	.2	7.8	170
APR 30...	.4	3.6	130	0	19	10	.2	12	161
MAY 31...	.3	4.3	46	0	47	6.2	.1	7.8	125
AUG 31...	.5	3.9	160	0	10	22	.2	11	192
SEP 17...	.5	3.3	210	0	9.8	19	.3	14	231

BRAZOS RIVER BASIN

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08110325 NAVASOTA RIVER ABOVE GROESBECK TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	0.76	778	440	1	73	0.1	46	0.08	270
NOV. 1978.....	25.2	489	280	19	46	3	29	2.1	170
DEC. 1978.....	23.02	516	290	18	48	2.9	31	1.9	180
JAN. 1979.....	30.72	544	310	26	51	3.9	32	2.5	190
FEB. 1979.....	2802.51	404	230	1740	38	284	24	183	140
MAR. 1979.....	3737.1	325	180	1850	30	307	19	194	110
APR. 1979.....	16219.69	231	130	5670	22	948	14	605	80
MAY 1979.....	42890	145	82	9510	13	1550	8	973	50
JUNE 1979.....	3814.2	183	100	1060	17	177	11	112	63
JULY 1979.....	40.09	421	240	26	39	4.3	25	2.6	150
AUG. 1979.....	333.63	294	170	151	28	25	18	16	100
SEPT 1979.....	157.14	363	210	87	34	14	22	9.1	130
TOTAL	70074	**	**	20200	**	3320	**	2100	**
WTD. AVG.	192	189	110	**	17	**	11	**	65

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	900	550	520	523	580	403	250	396	160	396	495	343
2	930	545	531	525	582	410	202	463	167	403	502	347
3	975	540	535	530	616	408	240	301	170	407	369	348
4	1020	530	528	533	592	410	167	290	178	416	481	351
5	---	544	531	535	576	394	180	276	192	428	494	355
6	1030	546	521	538	545	374	195	273	189	411	445	376
7	1070	549	537	534	400	376	204	287	235	421	461	361
8	1060	548	497	560	378	378	208	290	225	409	495	359
9	1050	549	536	536	368	384	216	293	223	435	513	363
10	1070	511	554	545	370	399	237	294	229	448	424	368
11	1090	504	537	449	381	418	244	90	249	448	491	377
12	---	554	531	447	376	409	289	121	257	441	350	376
13	---	540	541	541	381	394	328	136	255	455	242	379
14	---	532	543	550	385	470	251	140	252	461	247	392
15	---	549	545	553	391	402	258	431	265	465	262	385
16	---	530	471	555	395	397	278	329	284	339	270	---
17	---	487	542	556	462	371	275	162	279	382	284	413
18	---	496	543	564	399	319	351	172	290	434	286	409
19	---	436	532	561	400	292	264	280	324	467	290	411
20	---	496	551	570	405	286	245	220	320	397	294	404
21	---	500	557	572	410	295	264	206	321	364	303	408
22	---	509	556	564	415	286	338	217	358	423	328	345
23	---	504	545	565	420	282	224	363	345	399	337	328
24	---	479	557	572	401	275	250	187	350	309	326	300
25	---	481	537	583	300	256	237	214	353	490	328	305
26	---	476	426	572	340	273	257	302	383	394	331	310
27	---	466	542	577	395	276	249	273	360	487	335	309
28	---	486	505	583	398	284	254	227	383	358	348	311
29	570	509	508	572	---	293	262	338	390	514	378	343
30	556	501	559	553	---	299	266	170	398	513	345	313
31	559	---	458	570	---	308	---	206	---	391	348	---
MEAN	914	515	528	548	431	349	249	256	279	423	368	358

BRAZOS RIVER BASIN

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	21.0	18.0	14.0	17.0	20.0	22.0	23.0	27.0	28.0	28.0
2	---	19.0	23.0	---	16.0	18.0	19.0	22.0	24.0	27.0	28.0	28.0
3	---	19.0	19.0	19.0	16.0	18.0	19.0	23.0	24.0	28.0	28.0	28.0
4	---	19.0	20.0	19.0	16.0	18.0	17.0	22.0	25.0	28.0	28.0	28.0
5	---	19.0	22.0	19.0	15.0	17.0	18.0	21.0	25.0	27.0	28.0	28.0
6	---	19.0	20.0	20.0	15.0	17.0	18.0	21.0	25.0	27.0	28.0	28.0
7	---	19.0	18.0	20.0	15.0	17.0	19.0	22.0	25.0	27.0	28.0	28.0
8	---	19.0	20.0	18.0	12.0	18.0	20.0	22.0	26.0	27.0	---	28.0
9	---	18.0	20.0	19.0	13.0	19.0	19.0	22.0	27.0	27.0	28.0	28.0
10	---	19.0	18.0	19.0	11.0	18.0	19.0	23.0	27.0	28.0	28.0	28.0
11	---	19.0	19.0	17.0	12.0	17.0	22.0	22.0	26.0	28.0	28.0	28.0
12	---	19.0	12.0	18.0	12.0	16.0	21.0	20.0	26.0	28.0	28.0	28.0
13	---	19.0	13.0	17.0	14.0	18.0	21.0	20.0	26.0	28.0	28.0	28.0
14	---	19.0	13.0	15.0	14.0	19.0	21.0	21.0	27.0	28.0	28.0	27.0
15	---	19.0	13.0	16.0	15.0	19.0	21.0	22.0	26.0	28.0	28.0	26.0
16	---	20.0	13.0	15.0	15.0	18.0	22.0	22.0	26.0	28.0	28.0	---
17	---	23.0	14.0	15.0	18.0	18.0	21.0	22.0	26.0	28.0	28.0	25.0
18	---	23.0	15.0	20.0	---	18.0	22.0	22.0	26.0	28.0	28.0	25.0
19	---	21.0	15.0	17.0	16.0	18.0	22.0	23.0	27.0	28.0	28.0	25.0
20	---	22.0	16.0	19.0	---	19.0	22.0	24.0	27.0	28.0	28.0	26.0
21	---	21.0	16.0	18.0	16.0	18.0	22.0	24.0	27.0	28.0	28.0	25.0
22	---	21.0	16.0	16.0	16.0	19.0	22.0	23.0	27.0	28.0	28.0	25.0
23	---	21.0	16.0	18.0	15.0	18.0	22.0	23.0	27.0	28.0	28.0	25.0
24	---	21.0	16.0	17.0	16.0	18.0	22.0	23.0	---	28.0	28.0	24.0
25	---	21.0	16.0	17.0	16.0	17.0	22.0	23.0	27.0	28.0	28.0	25.0
26	---	19.0	16.0	17.0	15.0	19.0	22.0	23.0	27.0	28.0	28.0	24.0
27	---	21.0	17.0	17.0	17.0	19.0	22.0	24.0	27.0	28.0	28.0	25.0
28	---	21.0	16.0	16.0	17.0	20.0	21.0	25.0	27.0	28.0	28.0	25.0
29	---	22.0	16.0	15.0	---	20.0	22.0	23.0	27.0	28.0	28.0	25.0
30	19.0	21.0	17.0	15.0	---	20.0	21.0	23.0	27.0	28.0	28.0	24.0
31	19.0	---	17.0	14.0	---	20.0	---	23.0	---	28.0	28.0	---
MEAN	19.0	20.0	17.0	17.5	15.0	18.0	20.5	22.5	26.0	28.0	28.0	26.5

BRAZOS RIVER BASIN

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08110400 NAVASOTA RIVER NEAR GROESBECK, TX

LOCATION.--Lat 31°30'45", long 96°27'03", Limestone County, Hydrologic Unit 12070103, on left bank 43 ft (13 m) downstream from State Highway 164, 0.4 mi (0.6 km) downstream from Pin Oak Creek, 5 mi (8 km) east of Groesbeck, and 154.6 mi (248.8 km) upstream from mouth.

DRAINAGE AREA.--311 mi² (805 km²).

PERIOD OF RECORD.--March 1965 to April 1979 (discontinued).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 353.84 ft (107.850 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1972, gage height at 5.0 ft (1.52 m) higher datum.

REMARKS.--Water-discharge records fair. Flow partly regulated by Lake Mexia (station 08110300) 14.4 mi (23.2 km) upstream, capacity 9,400 acre-ft (11.6 hm³), and Springfield Lake 8.0 mi (12.9 km) upstream, approximate capacity 3,100 acre-ft (3.82 hm³). Several diversions above station for irrigation, municipal supply, and oilfield operation (total amount unknown). For diversions and sewage effluents above this station see Navasota River above Groesbeck (station 08110325).

AVERAGE DISCHARGE.--13 years (water years 1966-78), 194 ft³/s (5.494 m³/s), 140,600 acre-ft/yr (173 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Nov. 1, 1974, gage height, 25.55 ft (7.788 m); no flow at times in 1967, 1969, 1971-72, 1978, and 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902 occurred in 1944 (stage unknown), from information by local residents. Maximum stage known occurred in 1932 and reached a stage of 28.7 ft (8.75 m), from information by State Department of Highways and Public Transportation.

EXTREMES FOR PERIOD OCTOBER TO APRIL.--Maximum discharge, 8,410 ft³/s (238 m³/s) Apr. 2, gage height, 23.22 ft (7.077 m); no flow Oct. 18-22.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1978 TO APRIL 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.27	3.3	359	7.7	64	1330					
2	.44	.27	2.5	41	5.5	46	6860					
3	.31	.27	2.2	12	5.2	42	3330					
4	.30	.24	2.0	5.9	7.3	75	892					
5	.27	.23	1.8	6.6	232	88	240					
6	.23	.34	1.6	5.7	585	79	133					
7	.30	.40	1.7	5.4	1200	64	99					
8	.30	.69	1.7	5.2	894	48	86					
9	.30	.88	1.7	5.2	298	31	79					
10	.30	.63	1.7	5.0	121	25	71					
11	.22	.56	1.7	4.9	79	20	65					
12	.18	.75	1.7	4.9	61	17	74					
13	.13	1.0	1.7	4.9	47	13	61					
14	.06	1.0	1.8	4.9	37	11	56					
15	.05	.96	2.0	4.9	29	10	53					
16	.05	.96	2.0	4.9	28	214	53					
17	.04	7.6	1.8	5.0	23	748	56					
18	.00	6.7	1.7	5.0	18	580	254					
19	.00	143	1.7	11	16	257	630					
20	.00	431	1.7	40	14	413	2070					
21	.00	44	1.7	35	14	332	2070					
22	.00	34	1.7	11	14	504	799					
23	.05	13	1.7	6.9	15	667	295					
24	.06	6.3	1.7	5.3	30	367	225					
25	.26	4.3	1.6	5.0	183	156	188					
26	13	134	1.6	4.4	103	83	134					
27	10	172	1.6	4.1	77	57	90					
28	3.1	18	1.6	4.0	64	42	64					
29	1.2	6.8	1.6	4.0	---	30	46					
30	.53	4.5	1.7	4.0	---	59	31					
31	.31	---	347	9.4	---	312	---					
TOTAL	32.43	1034.65	401.5	634.5	4207.7	5454	20434					
MEAN	1.05	34.5	13.0	20.5	150	176	681					
MAX	13	431	347	359	1200	748	6860					
MIN	.00	.23	1.6	4.0	5.2	10	31					
AC-FT	64	2050	796	1260	8350	10820	40530					
CAL YR 1978	TOTAL	16467.16	MEAN	45.1	MAX	6540	MIN	.00	AC-FT	32660		
WTR YR 1979	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-		

BRAZOS RIVER BASIN

08110430 BIG CREEK NEAR FREESTONE, TX

LOCATION.--Lat 31°30'25", long 96°19'31", Limestone County, Hydrologic Unit 12070103, on left bank at downstream side of bridge on State Highway 164, 5.1 mi (8.2 km) southwest of Freestone, and 8.2 mi (13.2 km) upstream from mouth.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

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 (110.624 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for Mar. 6-21 and Aug. 12 to Sept. 16, which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s (56.4 m³/s) May 30, gage height, 13.99 ft (4.264 m); no flow Sept 23-26, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 19 ft (5.8 m) in April 1957, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 7	0600	515 14.6	11.70 3.566	Apr. 21	0600	892 25.3	12.73 3.880
Mar. 19	2400	668 18.9	12.22 3.725	May 30	0400	*1,990 56.4	13.99 4.264
Apr. 2	0730	1,940 54.9	13.95 4.252				

Minimum daily discharge, 0.01 ft³/s (0.0003 m³/s) Nov. 10-13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.17	3.1	436	22	13	988	19	477	8.1	1.4	.17
2	.07	.13	2.7	198	14	12	1450	30	145	5.1	.97	.15
3	.14	.09	3.0	32	14	14	684	32	58	3.1	.72	.14
4	.11	.07	2.8	18	22	27	284	69	39	2.2	.52	.14
5	.11	.05	2.6	19	169	17	109	95	30	1.7	.44	.13
6	.13	.08	2.3	78	381	11	59	37	55	1.4	.36	.12
7	.05	.02	2.2	269	463	7.6	41	23	50	1.1	.27	.10
8	.04	.02	2.3	164	186	5.7	34	17	27	1.8	.19	.09
9	.06	.02	2.4	37	54	4.7	30	13	19	4.2	.14	.08
10	.07	.01	2.0	23	29	4.6	26	10	15	2.8	.16	.07
11	.08	.01	2.0	226	23	8.2	26	9.9	12	1.9	.78	.06
12	.10	.01	2.2	343	18	7.9	28	15	10	1.7	1.16	.06
13	.07	.01	2.0	94	15	6.9	21	15	8.5	1.3	.51	.06
14	.07	.02	1.8	27	14	4.7	15	11	7.9	1.0	.25	.05
15	.07	.04	1.7	14	13	3.0	12	7.9	4.7	1.1	9.4	.05
16	.09	.47	1.6	13	11	2.1	10	6.4	7.1	1.1	3.5	.05
17	.10	6.0	1.7	12	9.9	181	11	5.1	7.2	1.2	1.6	.04
18	.09	8.7	1.7	12	9.7	318	105	4.1	4.0	1.0	.96	.05
19	.09	15	1.6	42	9.5	346	149	3.9	6.2	.96	.77	.10
20	.07	253	1.9	86	9.3	427	451	4.0	5.8	.97	.65	83
21	.08	195	2.2	80	10	265	704	18	4.7	1.1	.65	209
22	.08	54	2.0	30	11	369	234	41	1.9	.93	1.7	72
23	.07	27	1.7	17	12	294	85	54	1.7	.80	.91	21
24	.06	12	1.6	12	34	120	52	24	3.7	.68	.59	12
25	.11	5.6	1.7	11	82	46	36	11	3.7	.64	.45	7.6
26	1.1	42	1.7	9.3	49	32	27	7.2	22	.60	.34	5.1
27	18	163	1.5	11	19	26	22	5.4	198	5.1	.26	3.4
28	4.0	60	1.6	9.8	14	20	17	23	81	14	.21	2.6
29	1.2	9.7	1.6	8.5	---	18	16	898	20	5.8	.18	1.8
30	.47	4.5	9.3	9.5	---	133	20	1740	12	3.0	.17	1.4
31	.26	---	291	16	---	724	---	993	---	1.9	.17	---
TOTAL	27.09	856.72	359.5	2357.1	1717.4	3468.4	5746	4241.9	1337.1	78.28	297.68	420.61
MEAN	.87	28.6	11.6	76.0	61.3	112	192	137	44.6	2.53	9.60	14.0
MAX	18	253	291	436	463	724	1450	1740	477	14	116	209
MIN	.04	.01	1.5	8.5	9.3	2.1	10	3.9	1.7	.60	.14	.04
CFSM	.02	.50	.20	1.33	1.07	1.96	3.36	2.40	.78	.04	.17	.25
IN.	.02	.56	.23	1.54	1.12	2.26	3.74	2.76	.87	.05	.19	.27
AC-FT	54	1700	713	4680	3410	6880	11400	8410	2650	155	590	834
CAL YR 1978	TOTAL	-	MEAN	-	MAX	-	MIN	-	CFSM	-	IN	-
WTR YR 1979	TOTAL	20907.78	MEAN	57.3	MAX	1740	MIN	.01	CFSM	1.00	IN	13.62
										AC-FT		41470

NOTE.--No gage-height record Mar. 6-21 and Aug. 12 to Sept. 16.

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 (12.1 km) northwest of Marquez, and 124 mi (200 km) upstream from mouth.

DRAINAGE AREA.--675 mi² (1,748 km²).

PERIOD OF RECORD.--November 1978 to September 1979.

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

REMARK.--The lake is formed by a rolled earthfill dam 11,395 ft (3,473 m) long, including the spillway. The lake was built for water conservation. Deliberate impoundment began on Oct. 16, 1978. The emergency spillway is an uncontrolled broadcrested weir 3,000 ft (914 m) 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 (12 by 9 m) tainter gates. There are two 4- by 8-foot (1 by 2 m) slide gates, located one each in the two center piers of the service 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 (0.25 m) cast iron pipe, is located in the left end of the pier. In addition, there are two 36-inch (0.91 m, outside diameter) steel cylinder pipes located in the right end pier for water supply releases. The lowest invert from low flow and for water supply releases is at elevation 325.50 ft (99.212 m). The city of Mexia released 388 acre-ft (478,000 m³) of sewage effluent into stream above lake for the period November 1978 to September 1979. 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 emergency spillway.....	369.6	327,760
Top of gates.....	365.0	253,905
Concrete gated spillway.....	363.0	225,440
Top of conservation pool.....	337.0	21,125
Lowest gated outlet (invert).....	322.0	265

COOPERATION.--Records of daily lake elevation 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 CURRENT YEAR.--Maximum contents during period November 1978 to September 1979, 241,100 acre-ft (297 hm³) May 30, elevation, 364.12 ft (110.984 m); minimum, 10,740 acre-ft (13.2 hm³) Nov. 30, elevation, 332.63 ft (101.386 m).

Listed below are miscellaneous measurements of releases from Lake Limestone made during the 1979 water year:

June 27.....	2.22 ft ³ /s
Aug. 6.....	1.77 ft ³ /s
Sept. 17.....	.74 ft ³ /s

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

332.0	9,580	350.0	87,400
336.0	18,330	355.0	131,400
340.0	31,250	360.0	186,600
345.0	54,460	365.0	253,900

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	10800	16640	34070	56390	128000	202200	224900	225200	225000	225300
2		---	10820	19010	34310	56780	155700	202300	224900	224800	225200	225200
3		---	11000	19980	34470	57180	170300	204200	225300	224600	224600	225200
4		---	10870	20270	34600	57010	174400	203700	224600	224500	224500	225300
5		---	10870	20610	36270	57120	175100	203600	225300	224500	224400	225000
6		---	10950	21970	39090	57350	175300	203500	226000	224400	224100	224900
7		---	11000	23920	42910	57580	175400	203500	226000	224000	223800	224800
8		---	11020	24990	47630	57520	176500	203600	225400	224000	223800	224600
9		---	10930	25490	49430	57970	176200	203700	225700	223800	223600	224200
10		---	10910	25850	50330	57920	175300	204100	226000	223800	223300	224000
11		---	10910	27290	50700	57920	176500	208800	225400	223300	226300	223700
12		---	10910	29450	51130	57860	176500	228600	225200	223200	226000	223700
13		---	10970	31760	51180	57970	176500	225600	225000	223000	225300	223300
14		---	10930	31560	51180	58140	176500	225200	224800	222900	225400	222900
15		---	10910	31640	52340	58430	176400	225600	224600	222900	225400	222200
16		---	10980	31720	51870	59500	176300	225600	224400	222800	225300	221800
17		---	10950	31800	51920	61410	177500	225600	223800	222900	225200	221400
18		---	10910	31990	51870	64460	179600	225300	223700	224000	224900	222500
19		---	10930	32500	51870	76180	183000	225300	223400	224000	224600	225600
20		---	11080	32970	51920	91560	190500	225000	223400	223800	224500	225200
21		---	10970	33290	52080	97240	198100	226800	223400	223600	224100	224900
22		---	10950	33700	52240	102500	201100	227000	223200	223400	225900	224500
23		---	11020	33820	52930	106100	201400	225900	222800	223200	225900	224400
24		---	10970	33700	54460	107700	201800	224900	222800	223200	226000	224400
25		---	10950	33740	54970	108000	201800	224500	223000	223000	225900	224100
26		---	10980	33780	55540	108500	202000	224100	226300	222800	225600	224000
27		---	10930	33940	55930	108500	202200	224200	226600	225900	225400	223800
28		---	10930	33940	56270	108500	201800	225900	226400	225400	225300	223400
29		---	10970	33990	---	108600	202000	235500	226000	225400	225900	223400
30		10740	11210	34520	---	112200	202000	240000	225600	225300	225900	223400
31		---	13590	34230	---	117700	---	231300	---	225200	225400	---
MAX		---	13590	34520	56270	117700	202200	240000	226600	225900	226300	225600
MIN		---	10800	16640	34070	56390	128000	202200	222800	196600	223300	221400
(†)		322.63	334.04	340.75	345.32	353.55	361.23	363.42	363.01	362.98	363.00	362.85
(‡)		---	+2850	+20640	+22040	+61430	+84300	+29300	-5700	-400	+200	-2000

CAL YR 1978 MAX - MIN - (‡) -
WTR YR 1979 MAX - MIN - (‡) -

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

BRAZOS RIVER BASIN

08110500 NAVASOTA RIVER NEAR EASTERLY, TX

LOCATION (revised).--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 (1.6 km) upstream from Missouri Pacific Railroad Co. bridge, 7 mi (11 km) northeast of Easterly, and 105.7 mi (170.1 km).

DRAINAGE AREA.--968 mi² (2,507 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1924 to current year.

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 (revised).--Water-stage recorder. Datum of gage is 271.46 ft (82.741 m) National Geodetic Vertical Datum of 1929. Prior to June 11, 1932, nonrecording gage at railroad bridge 1.0 mi (1.6 km) downstream at 19.86-foot (6.053 m) higher datum. June 11, 1932, to Sept. 30, 1978, water-stage recorder 46 ft (14 m) upstream at 5.00-foot (1.524 m) higher datum.

REMARKS.--Water-discharge records good. Flow is largely regulated by Lakes Mexia and Limestone (stations 08110300 and 08110470). Numerous diversions above station for irrigation, municipal supply, and oilfield operation. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1925-60) unregulated, 406 ft³/s (11.50 m³/s), 5.70 in/yr (145 mm/yr), 294,100 acre-ft/yr (363 hm³/yr); 19 years (water years 1961-79) regulated, 479 ft³/s (13.57 m³/s), 6.72 in/yr (171 mm/yr), 347,000 acre-ft/yr (428 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s (1,710 m³/s) May 2, 1944, gage height, 27.13 ft (8.269 m), revised; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1845, 29 ft (8.8 m), revised, in June 1899, from information by local residents, discharge, 90,000 ft³/s (2,550 m³/s), from rating curve extended above 60,000 ft³/s (1,700 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,900 ft³/s (847 m³/s) May 30, gage height, 24.20 ft (7.376 m); minimum daily, 1.4 ft³/s (0.040 m³/s) Oct. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.2	28	941	27	62	1560	76	14100	139	36	36
2	3.6	3.2	22	649	26	50	2460	85	8820	48	26	23
3	3.2	2.6	15	423	29	45	3690	91	3510	30	21	21
4	3.0	2.4	11	112	38	39	1860	91	1460	23	18	24
5	2.9	2.7	8.7	76	169	35	433	91	1090	21	16	37
6	4.1	8.2	8.0	345	726	33	149	141	720	31	15	49
7	3.8	7.7	8.5	1350	1090	31	104	81	1050	87	14	26
8	3.3	5.6	8.9	718	807	27	91	60	833	379	13	23
9	3.3	5.6	8.0	240	309	24	85	50	411	251	11	19
10	3.3	4.7	6.8	107	95	22	82	55	110	73	13	17
11	3.2	3.8	6.1	274	62	23	76	49	82	40	32	16
12	3.0	3.6	5.8	399	49	21	70	172	67	30	583	11
13	2.7	3.5	6.0	474	42	20	66	6090	57	37	808	8.4
14	2.2	3.6	6.5	198	38	18	60	7760	53	29	290	7.4
15	1.6	3.8	7.2	72	36	25	54	3750	48	25	64	7.2
16	1.5	6.5	6.7	51	32	181	50	502	40	20	37	6.4
17	1.5	18	6.3	44	30	439	54	84	36	16	25	5.6
18	1.5	22	6.1	48	34	521	314	66	33	15	21	11
19	1.4	16	6.8	115	34	562	605	56	29	37	22	163
20	1.6	19	7.4	174	33	9330	645	50	27	41	19	694
21	1.8	63	6.9	147	34	8480	924	57	26	27	16	1400
22	1.9	157	6.5	75	35	3750	1360	288	24	21	18	960
23	1.9	123	6.6	49	464	1950	442	733	24	17	75	327
24	1.9	82	6.5	39	1160	1040	138	1120	21	15	61	68
25	2.7	41	6.2	33	1030	367	98	756	20	14	58	39
26	11	88	6.3	32	658	138	82	141	161	15	51	31
27	18	305	6.6	32	172	98	70	67	423	1210	36	26
28	16	177	7.1	29	86	82	63	56	563	1770	31	25
29	8.5	108	8.8	27	---	76	68	1060	507	959	27	23
30	5.1	49	12	29	---	416	73	11100	237	164	26	21
31	3.8	---	353	30	---	2350	---	24900	---	59	77	---
TOTAL	127.3	1338.7	616.3	7332	7345	30255	15826	59678	34582	5643	2560	4125.0
MEAN	4.11	44.6	19.9	237	262	976	528	1925	1153	182	82.6	138
MAX	18	305	353	1350	1160	9330	3690	24900	14100	1770	808	1400
MIN	1.4	2.4	5.8	27	26	18	50	49	20	14	11	5.6
CFSM	.004	.05	.02	.25	.27	1.01	.55	1.99	1.19	.19	.09	.14
IN.	.00	.05	.02	.28	.28	1.16	.61	2.29	1.33	.22	.10	.16
AC-FT	252	2660	1220	14540	14570	60010	31390	118400	68590	11190	5080	8180
CAL YR 1978	TOTAL	31931.85	MEAN	87.5	MAX	4410	MIN	.64	CFSM	.09	IN	1.23
WTR YR 1979	TOTAL	169428.30	MEAN	464	MAX	24900	MIN	1.4	CFSM	.48	IN	6.51
									AC-FT	63340	AC-FT	336100

BRAZOS RIVER BASIN

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08110500 NAVASOTA RIVER NEAR EASTERLY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1968 to current year. Sediment records: October 1968 to September 1973.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 24...	1605	13	552	21.0	110	48	30	9.3	61
DEC 05...	1654	8.7	314	5.0	70	35	18	6.2	30
JAN 10...	--	100	199	5.0	48	28	12	4.3	14
FEB 27...	1110	167	226	11.0	59	28	15	5.2	18
JUN 27...	1354	412	308	26.0	73	40	19	6.2	25
AUG 06...	1245	15	416	30.0	100	49	27	8.1	40
SEP 17...	1301	5.8	431	23.5	100	43	27	8.0	43

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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 24...	2.5	4.5	79	0	70	82	.2	14	310
DEC 05...	1.6	4.4	43	0	46	36	.2	16	178
JAN 10...	.9	4.5	24	0	34	21	.2	12	114
FEB 27...	1.0	4.5	38	0	32	26	.2	13	133
JUN 27...	1.3	5.1	40	0	43	40	.2	9.4	168
AUG 06...	1.7	3.9	63	0	56	57	.2	17	240
SEP 17...	1.9	4.1	70	0	56	63	.2	15	251

BRAZOS RIVER BASIN

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 (4.9 km) upstream from Shepard Creek, 17 mi (27 km) north-east of Bryan, and 68.4 mi (110.1 km) upstream from mouth.

DRAINAGE AREA.--1,454 mi² (3,766 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1951 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 224.64 ft (68.470 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow is largely regulated by Lakes Mexia and Limestone (stations 08110300 and 08110470). There are numerous diversions above station for irrigation, municipal, and oilfield operation.

AVERAGE DISCHARGE.--9 years (water years 1952-60) unregulated, 437 ft³/s (12.38 m³/s), 316,600 acre-ft/yr (390 hm³/yr); 19 years (water years 1961-79) regulated, 632 ft³/s (17.90 m³/s), 457,900 acre-ft/yr (565 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,200 ft³/s (1,080 m³/s) Apr. 29, 1966, gage height, 16.57 ft (5.951 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1840, 19.5 ft (5.94 m) in June 1899, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,300 ft³/s (858 m³/s) June 1, gage height, 15.78 ft (4.810 m); minimum daily, 3.8 ft³/s (0.11 m³/s) Oct. 24, Nov. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	12	178	1040	87	1030	4350	235	29000	520	2630	88
2	9.3	8.6	101	1060	87	459	6450	257	20900	271	1330	145
3	10	4.8	70	1220	87	277	5070	261	12600	159	516	96
4	18	3.8	52	1230	94	215	4060	303	8630	94	264	65
5	11	7.2	43	890	349	177	4230	291	5700	63	171	60
6	7.8	10	36	547	912	145	3460	239	5380	53	122	86
7	6.9	9.6	31	1190	1360	121	2050	222	3760	50	98	95
8	6.7	12	28	1210	1390	108	1040	210	2580	82	124	93
9	6.6	17	27	1440	1570	101	524	161	2020	458	149	72
10	6.4	18	26	1520	1560	95	350	128	1580	667	109	56
11	6.4	14	26	1270	1060	92	285	114	972	589	94	45
12	6.4	12	25	868	450	92	260	114	397	273	143	37
13	6.2	11	24	766	241	94	246	128	229	131	327	34
14	6.1	10	23	833	179	89	210	524	168	90	646	31
15	5.9	9.4	23	722	150	84	177	1590	136	74	760	27
16	5.6	9.2	22	360	132	305	154	5380	117	73	415	24
17	5.4	9.4	22	186	118	836	136	5090	105	71	158	22
18	5.0	9.7	22	143	114	937	548	2920	92	57	96	22
19	4.7	16	22	154	122	1090	1650	1160	80	47	73	32
20	4.4	30	22	298	142	1420	1780	355	72	43	61	232
21	4.2	91	21	403	141	7450	1710	190	67	48	57	602
22	3.9	294	21	424	135	17400	1500	957	62	61	52	861
23	3.9	258	21	324	340	11300	1480	1700	56	55	55	1110
24	3.8	287	21	189	1470	6190	1580	1940	51	45	147	1210
25	4.2	210	20	129	1380	4180	1210	2270	48	38	234	827
26	4.7	724	19	110	1800	2820	560	2250	51	38	188	291
27	4.6	1240	19	101	2080	1690	281	1710	164	678	128	142
28	4.9	518	18	102	1710	854	199	871	452	1980	100	99
29	6.0	518	19	98	---	421	190	1250	662	3230	79	79
30	12	332	22	89	---	426	242	2780	716	4830	66	67
31	15	---	225	84	---	2150	---	9600	---	3970	61	---
TOTAL	215.9	4705.7	1249	19000	19260	62648	45982	45200	96847	18838	9453	6650
MEAN	6.96	157	40.3	613	688	2021	1533	1458	3228	608	305	222
MAX	18	1240	225	1520	2080	17400	6450	9600	29000	4830	2630	1210
MIN	3.8	3.8	18	84	87	84	136	114	48	38	52	22
AC-FT	428	9330	2480	37690	38200	124300	91210	89650	192100	37370	18750	13190
CAL YR 1978	TOTAL	46080.50	MEAN 126	MAX 3940	MIN .27	AC-FT 91400						
WTR YR 1979	TOTAL	330048.60	MEAN 904	MAX 29000	MIN 3.8	AC-FT 654700						

BRAZOS RIVER BASIN

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08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1958 to current year. Sediment records: October 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1958 to current year.

WATER TEMPERATURES: October 1958 to current year.

SUSPENDED-SEDIMENT DISCHARGE: 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, 4,190 micromhos Feb. 8, 1964; minimum daily, 55 micromhos Sept. 17, 1964.

WATER TEMPERATURES: Maximum daily, 33.0°C July 14, 17, 1978; minimum daily, 1.0°C Jan. 13, 1962.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 438 mg/L Feb. 15, 1978; minimum daily mean, 10 mg/L Sept. 5, 6, 1977.

SEDIMENT LOADS: Maximum daily, 9400 tons June 1, 1979; minimum daily, 0.03 tons Aug. 23-25, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 745 micromhos Oct. 2; minimum daily, 75 micromhos June 1.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 282 mg/L Feb. 25; minimum daily mean, 20 mg/L Oct. 25.

SEDIMENT LOADS: Maximum daily, 9,400 tons June 1; minimum daily, 0.23 tons Oct. 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
02...	1252	9.2	750	7.8	24.5	43	25	6.8	83	5.5
DEC										
21...	1336	21	322	7.3	12.0	100	50	8.7	83	1.5
FEB										
13...	1052	240	281	6.8	10.5	150	80	9.8	90	1.5
MAR										
22...	1400	18200	--	--	17.0	--	--	--	--	--
23...	1342	11700	--	--	18.0	--	--	--	--	--
23...	1715	10200	92	7.3	18.0	--	--	--	--	--
APR										
10...	1528	336	340	6.8	20.0	120	65	6.6	77	2.6
MAY										
02...	1620	258	418	--	21.0	--	--	--	--	--
JUN										
26...	0730	46	514	6.6	28.0	50	60	5.4	68	1.7
JUL										
31...	1200	4170	120	--	28.0	--	--	--	--	--
AUG										
21...	0820	58	324	6.5	27.5	100	52	5.8	73	1.5

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
02...	160	95	46	12	81	2.8	6.5	84	0	61
DEC										
21...	82	51	22	6.6	28	1.3	4.3	38	0	45
FEB										
13...	69	46	18	5.9	22	1.2	4.1	28	0	48
MAR										
22...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	25	8	7.0	1.8	6.3	.5	3.3	20	0	16
APR										
10...	97	58	25	8.4	26	1.1	4.3	47	0	51
MAY										
02...	110	68	29	10	32	1.3	4.4	55	0	65
JUN										
26...	130	72	33	11	46	1.8	4.2	68	0	78
JUL										
31...	26	6	6.4	2.5	12	1.0	3.6	25	0	17
AUG										
21...	93	51	26	6.8	23	1.0	3.8	51	0	40

BRAZOS RIVER BASIN

08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 02...	150	.2	12	410	46	10	.00	.01	.01	.02
DEC 21...	45	.1	18	188	81	15	.12	.00	.12	.02
FEB 13...	39	.1	12	163	112	6	.26	.02	.28	.09
MAR 22...	--	--	--	--	--	--	--	--	--	--
MAR 23...	--	--	--	--	--	--	--	--	--	--
MAR 23...	8.5	.1	3.9	57	--	--	--	--	--	--
APR 10...	42	.1	18	198	106	11	.11	.04	.15	.09
MAY 02...	55	.2	16	239	--	--	--	--	--	--
JUN 26...	62	.2	20	288	97	12	.09	.02	.11	.01
JUL 31...	15	.1	8.2	77	--	--	--	--	--	--
AUG 21...	47	.2	12	185	--	--	.03	.02	.05	.06

DATE	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)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 02...	.89	.91	.130	13	1	.10	--	--	--
DEC 21...	.58	.60	.100	8.7	1	.10	--	--	--
FEB 13...	.82	.91	.030	12	1	.00	--	--	--
MAR 22...	--	--	--	--	--	--	179	8800	96
MAR 23...	--	--	--	--	--	--	167	5280	98
MAR 23...	--	--	--	--	--	--	--	--	--
APR 10...	.89	.98	.080	17	1	.00	--	--	--
MAY 02...	--	--	--	--	--	--	--	--	--
JUN 26...	.89	.90	.080	12	1	.00	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--
AUG 21...	.53	.59	.120	9.5	1	.00	--	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 02...	1252	1	100	0	0	1	30
FEB 13...	1052	0	0	1	10	3	190
JUN 26...	0730	1	100	<1	0	0	70
AUG 21...	0820	1	400	2	0	2	780

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 02...	0	130	.0	0	0	0
FEB 13...	0	90	.0	0	0	10
JUN 26...	0	130	.0	0	0	<3
AUG 21...	5	160	.2	0	0	20

BRAZOS RIVER BASIN

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08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
MAR							
22...	1400	18200	17.0	179	8800	84	86
23...	1342	11700	18.0	167	5280	81	83
		SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
DATE							
MAR							
22...	90	93	94	96	98	99	100
23...	86	87	94	98	98	98	100

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	215.9	541	300	175	80	46	61	36	140
NOV. 1978.....	4705.7	204	110	1430	28	352	23	293	53
DEC. 1978.....	1249	254	140	476	34	116	29	97	66
JAN. 1979.....	19000	209	120	5960	28	1450	24	1220	54
FEB. 1979.....	19260	233	130	6680	32	1640	26	1380	60
MAR. 1979.....	62648	152	84	14300	21	3480	17	2900	39
APR. 1979.....	45982	180	100	12400	24	3040	20	2530	46
MAY 1979.....	45200	184	100	12500	25	3040	21	2540	47
JUNE 1979.....	96847	115	64	16700	16	4080	13	3460	30
JULY 1979.....	18838	144	80	4070	20	994	16	834	37
AUG. 1979.....	9453	205	110	2900	28	708	23	593	53
SEPT 1979.....	6650	259	140	2600	35	631	29	528	67
TOTAL	330048.48	**	**	80200	**	19600	**	16400	**
WTD. AVG.	904	162	90	**	22	**	18	**	42

BRAZOS RIVER BASIN

08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	729	486	165	220	473	233	120	420	75	210	140	335
2	745	480	180	210	497	290	110	418	85	240	162	290
3	600	400	190	190	520	334	115	415	95	263	185	295
4	487	482	205	185	500	378	123	400	116	271	205	300
5	519	485	219	210	410	410	112	405	133	280	220	304
6	527	500	225	245	300	435	158	420	157	286	240	290
7	530	525	232	200	205	459	203	430	178	317	275	280
8	532	448	240	190	200	484	249	445	195	290	260	285
9	531	425	245	170	175	498	294	455	219	200	250	310
10	534	420	251	150	180	514	340	470	240	175	265	340
11	535	427	258	165	220	527	335	460	265	199	290	355
12	533	438	265	185	270	542	325	480	281	197	270	375
13	530	450	270	200	281	550	320	450	298	224	245	385
14	532	460	277	175	290	560	322	300	315	230	247	400
15	537	475	280	195	295	585	318	250	330	238	230	410
16	538	485	287	310	304	525	316	200	348	300	246	420
17	535	480	296	350	312	460	315	180	364	356	261	435
18	536	465	303	385	320	430	295	210	381	379	277	440
19	539	440	310	375	327	390	255	235	398	395	290	420
20	540	410	316	295	335	337	245	290	414	410	310	360
21	541	365	322	250	342	183	257	345	430	425	324	310
22	539	300	329	240	350	83	261	250	447	410	335	285
23	540	310	338	263	295	90	265	190	464	430	330	215
24	541	285	345	285	210	106	250	170	481	450	260	190
25	500	300	350	305	229	130	295	150	497	471	220	200
26	485	260	360	333	222	164	315	155	514	475	235	260
27	462	110	369	357	218	190	340	175	430	220	270	310
28	401	125	375	380	225	214	400	220	350	139	295	335
29	520	130	370	405	---	235	430	160	215	105	315	365
30	511	150	355	427	---	260	400	120	170	95	340	390
31	507	---	290	450	---	150	---	100	---	127	350	---
MEAN	537	384	284	268	304	347	269	302	296	284	263	330

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	20.0	---	---	---	14.0	---	---	---	---	30.0	---
2	25.0	20.0	---	---	---	---	---	---	---	---	29.0	---
3	---	20.0	---	---	---	16.0	---	---	---	31.0	---	---
4	25.0	20.0	---	---	---	15.0	---	---	---	29.0	---	---
5	25.0	20.0	---	---	---	14.0	---	---	---	28.0	---	---
6	24.0	---	---	---	---	16.0	---	---	---	28.0	---	---
7	---	16.0	---	---	---	15.0	---	---	---	29.0	---	---
8	---	16.0	---	---	---	16.0	---	---	---	---	---	---
9	---	---	---	---	---	16.0	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	15.0	---	---	---	28.0	---	---
12	---	---	---	---	---	---	---	---	---	30.0	---	---
13	---	---	---	---	---	17.0	---	---	---	31.0	30.0	---
14	---	---	---	---	---	17.0	---	---	---	---	30.0	---
15	---	---	---	---	---	---	---	---	---	28.0	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	29.0	---	---
18	---	---	---	---	---	---	---	---	---	29.0	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	17.0	---	---	---	29.0	---	---
21	---	---	---	---	---	17.0	16.0	---	---	30.0	---	---
22	---	---	---	---	---	19.0	---	---	---	---	---	---
23	---	---	---	---	---	18.0	---	---	---	---	---	---
24	---	---	---	---	---	17.0	---	---	---	32.0	---	---
25	---	---	---	---	13.0	19.0	---	---	---	---	---	---
26	---	---	---	---	13.0	19.0	---	---	---	---	---	---
27	---	---	---	---	12.0	---	---	---	---	---	---	---
28	---	---	---	---	---	13.0	---	---	---	32.0	---	---
29	20.0	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	31.0	---	---
MEAN	24.0	19.0	---	---	12.5	16.5	16.0	---	---	29.5	30.0	---

BRAZOS RIVER BASIN

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08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	9.9	60	1.6	12	45	1.5	178	82	39
2	9.3	60	1.5	8.6	40	.93	101	88	24
3	10	65	1.8	4.8	38	.49	70	100	19
4	18	82	4.0	3.8	37	.38	52	102	14
5	11	58	1.7	7.2	50	.97	43	102	12
6	7.8	52	1.1	10	45	1.2	36	110	11
7	6.9	52	.97	9.6	35	.91	31	102	8.5
8	6.7	50	.90	12	47	1.5	28	100	7.6
9	6.6	50	.89	17	52	2.4	27	100	7.3
10	6.4	50	.86	18	52	2.5	26	90	6.3
11	6.4	50	.86	14	48	1.8	26	90	6.3
12	6.4	50	.86	12	42	1.4	25	87	5.9
13	6.2	50	.84	11	40	1.2	24	87	5.6
14	6.1	50	.82	10	40	1.1	23	82	5.1
15	5.9	45	.72	9.4	35	.89	23	80	5.0
16	5.6	45	.68	9.2	37	.92	22	80	4.8
17	5.4	50	.73	9.4	27	.69	22	80	4.8
18	5.0	40	.54	9.7	25	.65	22	78	4.6
19	4.7	45	.57	16	32	1.4	22	78	4.6
20	4.4	48	.57	30	70	5.7	22	72	4.3
21	4.2	45	.51	91	140	34	21	60	3.4
22	3.9	40	.42	294	210	167	21	60	3.4
23	3.9	30	.32	258	135	94	21	60	3.4
24	3.8	25	.26	287	92	71	21	60	3.4
25	4.2	20	.23	210	70	40	20	62	3.3
26	4.7	25	.32	724	95	186	19	60	3.1
27	4.6	25	.31	1240	185	619	19	58	3.0
28	4.9	30	.40	518	112	157	18	52	2.5
29	6.0	37	.60	518	82	115	19	50	2.6
30	12	55	1.8	332	82	74	22	45	2.7
31	15	45	1.8	---	---	---	225	78	47
TOTAL	215.9	---	29.48	4705.7	---	1585.53	1249	---	277.5
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	1040	155	435	87	55	13	1030	108	300
2	1060	118	338	87	52	12	459	97	120
3	1220	90	296	87	50	12	277	95	71
4	1230	82	272	94	70	18	215	95	55
5	890	95	228	349	127	120	177	95	45
6	547	90	133	912	192	473	145	95	37
7	1190	98	315	1360	195	716	121	95	31
8	1210	110	359	1390	120	450	108	95	28
9	1440	90	350	1570	87	369	101	85	23
10	1520	85	349	1560	85	358	95	77	20
11	1270	90	309	1060	85	243	92	70	17
12	868	90	211	450	80	97	92	67	17
13	766	155	321	241	87	57	94	67	17
14	833	118	265	179	85	41	89	70	17
15	722	92	179	150	67	27	84	67	15
16	360	87	85	132	55	20	305	110	91
17	186	90	45	118	52	17	836	208	469
18	143	90	35	114	52	16	937	210	531
19	154	85	35	122	58	19	1090	142	418
20	298	85	68	142	52	20	1420	110	422
21	403	121	132	141	50	19	7450	195	3920
22	424	142	163	135	52	19	17400	185	8690
23	324	122	107	340	80	73	11300	105	3200
24	189	87	44	1470	215	853	6190	65	1090
25	129	70	24	1380	282	1050	4180	60	677
26	110	60	18	1800	255	1240	2820	62	472
27	101	55	15	2080	194	1090	1690	70	319
28	102	50	14	1710	145	669	854	72	166
29	98	50	13	---	---	---	421	65	74
30	89	55	13	---	---	---	426	60	69
31	84	55	12	---	---	---	2150	150	871
TOTAL	19000	---	5183	19260	---	8111	62648	---	22292

BRAZOS RIVER BASIN

08111000 NAVASOTA RIVER NEAR BRYAN, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	4350	152	1790	235	85	54	29000	120	9400
2	6450	88	1530	257	105	73	20900	60	3390
3	5070	60	821	261	110	78	12600	38	1290
4	4060	58	636	303	107	88	8630	45	1050
5	4230	52	594	291	107	84	5700	57	877
6	3460	55	514	239	108	70	5380	62	901
7	2050	52	288	222	97	58	3760	60	609
8	1040	55	154	210	88	50	2580	63	439
9	524	57	81	161	82	36	2020	62	338
10	350	60	57	128	72	25	1580	68	290
11	285	62	48	114	72	22	972	88	231
12	260	62	44	114	70	22	397	89	95
13	246	65	43	128	67	23	229	87	54
14	210	65	37	524	80	113	168	90	41
15	177	65	31	1590	135	580	136	82	30
16	154	65	27	5380	77	1120	117	67	21
17	136	65	24	5090	37	508	105	67	19
18	548	87	129	2920	45	355	92	67	17
19	1650	155	691	1160	72	226	80	62	13
20	1780	182	875	355	72	69	72	64	12
21	1710	130	600	190	77	40	67	65	12
22	1500	105	425	957	90	233	62	65	11
23	1480	85	340	1700	100	459	56	67	10
24	1580	70	299	1940	88	461	51	65	9.0
25	1210	67	219	2270	52	319	48	65	8.4
26	560	75	113	2250	45	273	51	70	9.6
27	281	80	61	1710	62	286	164	130	58
28	199	75	40	871	80	188	452	148	181
29	190	72	37	1250	125	422	662	105	188
30	242	65	42	2780	125	938	716	77	149
31	---	---	---	9600	95	2460	---	---	---
TOTAL	45982	---	10590	45200	---	9733	96847	---	19753.0

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	520	62	87	2630	40	284	88	90	21
2	271	70	51	1330	40	144	145	140	55
3	159	92	39	516	38	53	96	108	28
4	94	112	28	264	38	27	65	60	11
5	63	117	20	171	40	18	60	32	5.2
6	53	112	16	122	40	13	86	32	7.4
7	50	107	14	98	41	11	95	35	9.0
8	82	112	25	124	38	13	93	50	13
9	458	178	220	149	42	17	72	60	12
10	667	172	310	109	55	16	56	60	9.1
11	589	117	186	94	65	16	45	57	6.9
12	273	85	63	143	58	22	37	60	6.0
13	131	65	23	327	72	64	34	57	5.2
14	90	62	15	646	92	160	31	55	4.6
15	74	45	9.0	760	100	205	27	48	3.5
16	73	40	7.9	415	87	97	24	48	3.1
17	71	62	12	158	67	29	22	38	2.3
18	57	60	9.2	96	57	15	22	37	2.2
19	47	60	7.6	73	55	11	32	52	4.5
20	43	60	7.0	61	52	8.6	232	155	97
21	48	60	7.8	57	52	8.0	602	182	296
22	61	60	9.9	52	52	7.3	861	100	232
23	55	55	8.2	55	50	7.4	1110	70	210
24	45	55	6.7	147	62	25	1210	50	163
25	38	50	5.1	234	72	45	827	42	94
26	38	48	4.9	188	62	31	291	45	35
27	678	80	146	128	60	21	142	45	17
28	1980	165	882	100	62	17	99	45	12
29	3230	130	1130	79	62	13	79	55	12
30	4830	67	874	66	62	11	67	60	11
31	3970	48	515	61	61	10	---	---	---
TOTAL YEAR	18838 330048.6	---	4739.3 85101.11	9453	---	1419.3	6650	---	1388.0

BRAZOS RIVER BASIN

459

08111010 NAVASOTA RIVER NEAR COLLEGE STATION, TX

LOCATION.--Lat 30°36'26", long 96°10'53", Grimes County, Hydrologic Unit 12070103, on left bank at downstream side of bridge on State Highway 30, 0.5 mi (0.8 km) downstream from Wickson Creek, 9.8 mi (15.8 km) east of the Post Office in College Station, and 35.2 mi (56.6 km) upstream from mouth.

DRAINAGE AREA.--1,809 mi² (4,685 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 178.00 ft (54.254 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period Oct. 7 to Nov. 16, which are fair. Since 1961, flow regulated to some extent by upstream reservoirs. Numerous diversions above station for irrigation, municipal, and oilfield operation. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) June 2, 1979, gage height, 22.13 ft (6.745 m); minimum daily, 0.07 ft³/s (0.002 m³/s) Aug. 31, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 41 ft (12 m) ± 3 ft (1 m) in 1899. Flood of 1913 reached a stage of about 36 ft (11 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,400 ft³/s (748 m³/s) June 2, gage height, 22.13 ft (6.745 m); minimum daily, 10 ft³/s (0.28 m³/s) Oct. 22-24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	652	2020	157	1960	1780	349	8940	562	4560	111
2	14	16	384	2810	137	1940	4700	1000	23200	600	4450	103
3	13	15	223	2490	196	1500	7550	498	17900	456	3720	98
4	12	17	146	1890	269	755	6810	1180	10300	266	2620	94
5	14	20	107	1580	1140	500	5230	1410	7370	157	1230	88
6	64	25	86	1800	2130	400	4380	981	6800	106	440	70
7	34	30	70	2310	3370	300	4240	556	7570	81	213	86
8	28	35	60	2580	3290	250	3760	377	5960	69	147	141
9	25	40	51	2460	2500	210	2700	309	4450	65	120	120
10	22	45	44	2070	1990	190	1650	255	3390	197	150	101
11	20	40	40	1830	1770	180	843	216	2580	489	165	78
12	18	35	38	2040	1700	170	493	241	1900	625	148	62
13	17	30	36	1970	1320	160	371	197	1150	510	161	51
14	16	25	35	1560	671	150	325	174	510	263	231	43
15	15	22	33	1120	354	220	286	265	265	151	401	38
16	14	21	32	950	245	350	241	649	184	105	599	33
17	13	20	32	764	208	500	210	1200	150	84	630	29
18	12	50	31	514	323	800	428	2430	132	81	370	29
19	12	100	29	536	388	900	1590	4340	118	77	171	45
20	11	370	29	719	296	1000	3180	3680	104	117	108	625
21	11	286	28	943	250	1570	3330	2410	92	85	82	996
22	10	428	27	757	244	3700	2720	3050	85	60	68	805
23	10	503	27	590	284	16900	2400	3520	77	57	80	812
24	10	479	26	497	1320	11000	1920	2880	70	61	75	908
25	11	360	26	354	2070	6750	1680	1920	64	59	119	1050
26	12	556	25	233	2270	5230	1620	1500	60	297	199	1150
27	13	1540	25	182	2050	4190	1350	1320	56	2390	246	890
28	15	1950	24	158	1860	3190	753	1700	85	5320	260	381
29	19	1880	25	146	---	2250	429	3350	233	5290	167	181
30	25	1210	26	159	---	1360	337	5900	415	4720	140	121
31	20	---	498	193	---	916	---	6690	---	4120	125	---
TOTAL	547	10166	2915	38225	32802	69491	67306	54547	104210	27520	22195	9339
MEAN	17.6	339	94.0	1233	1172	2242	2244	1760	3474	888	716	311
MAX	64	1950	652	2810	3370	16900	7550	6690	23200	5320	4560	1150
MIN	10	15	24	146	137	150	210	174	56	57	68	29
AC-FT	1080	20160	5780	75820	65060	137800	133500	108200	206700	54590	44020	18520

CAL YR 1978 TOTAL 75492.82 MEAN 207 MAX 3340 MIN .07 AC-FT 149700
WTR YR 1979 TOTAL 439263.00 MEAN 1203 MAX 23200 MIN 10 AC-FT 871300

NOTE.--No gage-height record Oct. 7 to Nov. 16.

BRAZOS RIVER BASIN

08111500 BRAZOS RIVER NEAR HEMPSTEAD, TX

LOCATION.--Lat 30°07'35", long 96°11'05", Washington-Waller County line, Hydrologic Unit 12070101, at downstream side of bridge on U.S. Highway 290, 6,000 ft (1,830 m) upstream from Texas and New Orleans Railroad Co. bridge, 6.5 mi (10.5 km) northwest of Hempstead, 10.5 mi (16.9 km) upstream from Caney Creek, and at mile 193.8 (311.8 km).

DRAINAGE AREA.--43,880 mi² (113,649 km²), approximately, of which 9,566 mi² (24,776 km²) 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 (35.936 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1940, nonrecording gage at railroad bridge 6,000 ft (1,830 m) downstream at datum 5.80 ft (1.768 m) lower. Nov. 1, 1940, to Sept. 30, 1963, nonrecording gage at site 1,500 ft (457 m) downstream at present datum. Oct. 1, 1964, to July 31, 1974, water-stage recorder 1,500 ft (457 m) downstream at present datum.

REMARKS.--Records fair. There are many small diversions above station for irrigation, municipal and industrial uses, and oilfield operations. At times, flow is affected by reservoirs on the Brazos River above Waco 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.

AVERAGE DISCHARGE.--41 years, 6,731 ft³/s (190.6 m³/s), 4,877,000 acre-ft/yr (6.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s (4,050 m³/s) May 2, 1957, gage height, 44.21 ft (13.475 m), at site 1,500 ft (457 m) downstream; minimum daily, 137 ft³/s (3.88 m³/s) Nov. 6, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 56.1 ft (17.10 m) Dec. 8, 1913, at site 1,500 ft (457 m) downstream at present datum, from information by Texas and New Orleans Railroad Co., obtained at bridge 6,000 ft (1,830 m) downstream. Flood of July 4, 1899, reached a stage of 53.6 ft (16.34 m), at site 1,500 ft (457 m) downstream at present datum, from information by Texas and New Orleans Railroad Co.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83,800 ft³/s (2,370 m³/s) June 7, gage height, 35.93 ft (10.951 m); minimum daily, 434 ft³/s (12.3 m³/s) Oct. 4, 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474	560	3180	10100	2320	6850	14900	4760	60800	11500	18000	2670
2	440	511	2990	13000	2300	5590	23300	4570	55700	10700	14300	2540
3	438	492	2830	12000	2260	4910	40900	5350	54100	9460	11300	2430
4	434	473	2910	11000	2320	4590	43800	19700	62400	8540	9810	2420
5	434	523	1790	11000	5270	4220	36100	20400	59900	7740	8790	2530
6	474	952	1370	15000	12900	3830	26900	13100	63900	6550	7810	2140
7	609	902	1600	20000	18600	3660	20900	16500	77900	5260	6630	1960
8	638	835	1330	15000	23200	2990	16900	21900	63200	5080	4810	1880
9	626	817	1080	10000	23400	2410	13400	22200	48900	4880	3560	1810
10	795	963	904	8000	17500	2170	12200	21200	37500	4340	3060	1910
11	704	981	765	8000	12700	2030	11700	20900	32700	4170	2870	1910
12	570	841	679	9000	9890	1870	10100	27600	28000	4010	3040	1790
13	493	733	653	11000	8190	1760	7950	40300	24600	4660	3740	1650
14	473	615	933	13000	6990	1680	6560	40800	21800	5440	5520	1510
15	472	622	928	9000	5990	1580	5920	28800	19000	5320	5080	1320
16	583	630	795	6340	5180	1770	5240	21200	16400	5080	3790	1170
17	599	600	694	5260	5030	7420	4620	18300	15100	4590	3260	1080
18	652	580	698	5130	5330	10500	4870	16200	14500	4340	3350	1100
19	596	911	998	5400	5290	15600	11800	13600	14000	4150	3700	1290
20	540	3660	1140	5920	4860	14100	12900	11400	12800	4060	4090	5160
21	500	3600	1150	4650	4780	20600	12300	11000	12300	4080	3880	5850
22	470	2600	1130	3830	4440	33900	15900	18800	12100	4230	3420	3610
23	470	2060	1160	3890	4470	36100	15000	40700	12300	5540	3210	3520
24	500	1920	1290	3720	4890	34400	11500	52900	10500	5130	3140	3450
25	547	1810	1430	3150	9120	32500	9170	52700	10200	3940	3150	3350
26	656	4020	1170	2660	11300	26100	7810	39700	10300	3270	3070	3270
27	605	10400	1050	2450	9900	21200	7340	24900	9440	4340	3020	3220
28	552	5720	1050	2200	8520	19300	7350	18500	8860	27800	2830	3210
29	590	3970	1190	1850	---	16600	7240	17300	10200	41700	2860	2980
30	672	3460	1520	1930	---	13100	6230	28000	11300	41900	2720	2830
31	617	---	2560	2680	---	11700	---	54000	---	26600	2740	---
TOTAL	17223	56761	42967	236160	236940	365030	430800	747280	890700	288400	160550	75560
MEAN	556	1892	1386	7618	8462	11780	14360	24110	29690	9303	5179	2519
MAX	795	10400	3180	20000	23400	36100	43800	54000	77900	41900	18000	5850
MIN	434	473	653	1850	2260	1580	4620	4570	8860	3270	2720	1080
AC-FT	34160	112600	85230	468400	470000	724000	854500	1482000	1767000	572000	318500	149900
CAL YR 1978	TOTAL	612396	MEAN	1678	MAX	10900	MIN	434	AC-FT	1215000		
WTR YR 1979	TOTAL	3548371	MEAN	9722	MAX	77900	MIN	434	AC-FT	7038000		

BRAZOS RIVER BASIN

461

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 (2 m) downstream from State Highway 36, 5.0 mi (8.0 km) southeast of Bellville, 6.0 mi (9.7 km) upstream from Brazos River, and 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--376 mi² (974 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2122: 1965(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage records. Datum of gage is 122.82 ft (37.436 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those for period of no gage-height record, which are poor. During the year, the city of Bellville discharged about 290 acre-ft (358,000 m³) of sewage effluent into a tributary of Mill Creek above gage.

AVERAGE DISCHARGE.--16 years, 258 ft³/s (7.307 m³/s), 9.29 in/yr (236 mm/yr), 186,900 acre-ft/yr (230 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,400 ft³/s (1,260 m³/s) June 13, 1973, gage height, 17.95 ft (5.471 m); minimum daily, 0.08 ft³/s (0.002 m³/s) July 22, 23, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1899, 22.8 ft (6.95 m) in 1940, from information by local residents and the State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (156 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Nov. 27	2100	6,960	197	13.57	4.136	May 4	2200	13,000	368	14.49	4.417
Jan. 7	1700	5,990	170	13.40	4.084	May 22	1400	27,800	787	16.32	4.974
Feb. 6	0600	7,670	217	13.68	4.170	June 7	0400	*35,500	1,010	17.64	5.377
Apr. 2	unknown	10,300	292	14.10	4.298	Sept. 20	1100	7,400	210	13.64	4.157
Apr. 19	unknown	9,530	270	13.98	4.261						

Minimum daily discharge, 9.4 ft³/s (0.27 m³/s) Nov. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	25	14	129	3980	186	118	150	222	3580	52	43	21		
2	23	9.7	101	3490	290	114	8000	238	1130	50	33	19		
3	21	9.4	271	878	641	497	7000	218	664	49	29	18		
4	20	9.5	337	224	3470	241	2000	8360	484	48	26	17		
5	19	10	128	394	5830	124	600	8070	364	47	24	18		
6	18	50	319	2020	5050	83	300	1830	3220	46	23	22		
7	16	43	647	5530	1000	76	200	375	21000	45	28	95		
8	15	25	241	3350	350	70	160	229	5050	80	25	46		
9	14	21	141	548	250	68	130	182	1120	60	37	28		
10	13	17	95	254	220	67	120	167	336	52	53	21		
11	14	15	83	2280	210	79	170	177	224	47	41	18		
12	13	15	76	3280	200	84	170	411	172	43	34	16		
13	13	15	73	1090	196	75	130	266	142	40	31	15		
14	12	15	74	297	195	70	100	154	127	42	27	13		
15	11	15	104	220	182	66	90	117	116	45	30	12		
16	11	14	97	180	159	65	80	95	108	39	26	11		
17	11	22	79	200	162	65	76	85	100	40	22	11		
18	10	20	70	245	263	65	300	79	93	108	20	16		
19	10	41	68	1000	264	70	8000	74	88	118	19	335		
20	10	113	68	2630	228	80	7000	68	83	81	18	6280		
21	10	127	63	2100	215	1000	2000	65	79	57	17	1800		
22	11	57	56	558	224	1500	500	19800	75	56	22	308		
23	9.8	44	54	235	225	700	300	11600	71	40	23	127		
24	9.5	36	53	184	224	300	210	3350	68	34	19	82		
25	9.8	32	50	190	186	200	167	400	65	32	19	67		
26	18	540	49	262	142	140	137	250	62	34	21	55		
27	18	4860	48	213	125	125	116	200	60	54	19	48		
28	14	3600	48	164	125	120	99	300	58	63	54	44		
29	11	425	167	258	---	120	229	200	56	61	61	41		
30	11	189	313	341	---	140	355	150	54	41	33	38		
31	10	---	644	204	---	200	---	2110	---	38	27	---		
TOTAL	431.1	10403.6	4746	36799	20812	6722	38889	59842	38849	1642	904	9642		
MEAN	13.9	347	153	1187	743	217	1296	1930	1295	53.0	29.2	321		
MAX	25	4860	647	5530	5830	1500	8000	19800	21000	118	61	6280		
MIN	9.5	9.4	48	164	125	65	76	65	54	32	17	11		
CFSM	.04	.92	.41	3.16	1.98	.58	3.45	5.13	3.44	.14	.08	.85		
IN.	.04	1.03	.47	3.64	2.06	.67	3.85	5.92	3.84	.16	.09	.95		
AC-FT	855	20640	9410	72990	41280	13330	77140	118700	77060	3260	1790	19120		
CAL YR 1978	TOTAL	49412.0	MEAN	135	MAX	6660	MIN	2.4	CFSM	.36	IN	4.89	AC-FT	98010
WTR YR 1979	TOTAL	229681.7	MEAN	629	MAX	21000	MIN	9.4	CFSM	1.67	IN	22.72	AC-FT	455600

NOTE.--No gage-height record Mar. 14 to Aug. 24.

BRAZOS RIVER BASIN

08111700 MILL CREEK NEAR BELLVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1968 to current year. Sediment records: October 1966 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 06...	1140	93	604	7.4	14.5	230	19	86	4.3	30
APR 24...	1605	203	627	7.4	24.0	210	0	78	4.2	29
MAY 30...	1900	151	584	7.5	28.0	190	0	71	4.2	30
JUL 17...	1435	37	549	7.3	31.5	210	22	77	4.4	29

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	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)
DEC 06...	.9	3.8	260	0	13	56	.2	19	340
APR 24...	.9	3.3	290	0	15	36	.3	20	329
MAY 30...	.9	2.6	260	0	13	34	.3	19	302
JUL 17...	.9	2.4	230	0	13	44	.3	20	303

08114000 BRAZOS RIVER AT RICHMOND, TX

LOCATION.--Lat 29°34'56", long 95°45'27", Fort Bend County, Hydrologic Unit 12070104, on right bank at downstream side of downstream bridge on U.S. Highway 59 in Richmond, 925 ft (282 m) downstream from Texas and New Orleans Railroad Co. bridge, and at mile 92.0 (148.0 km).

DRAINAGE AREA.--45,007 mi² (116,568 km²), approximately, of which 9,566 mi² (24,776 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1903 to June 1906 and 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 (11.564 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1922, various types of nonrecording gages at railroad bridge 925 ft (282 m) upstream at different datums. Oct. 1, 1922, to Sept. 30, 1931, nonrecording chain gage at Rosenberg 7.6 mi (12.2 km) upstream at datum about 7 ft (2.1 m) higher; Oct. 1, 1931, to Sept. 30, 1975, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records good. Considerable water diverted above station for irrigation and municipal supply. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08110200.

AVERAGE DISCHARGE.--20 years (water years 1904-5, 1923-40) unregulated, 7,209 ft³/s (204.2 m³/s), 5,223,000 acre-ft/yr (6.44 km³/yr); 39 years (water years 1941-79) regulated, 7,452 ft³/s (211.0 m³/s), 5,399,000 acre-ft/yr (6.66 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/s (3,480 m³/s) June 6, 1929, gage height, 43.6 ft (13.29 m), from floodmarks, present site and datum; minimum daily, 35 ft³/s (0.99 m³/s) Aug. 23, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 51.2 ft (15.61 m) Dec. 10, 1913, present datum, from floodmarks on right bank 1,000 ft (305 m) 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 (14.23 m); June 13, 1885, 47.7 ft (14.54 m); July 1899, 48.6 ft (14.81 m); May 2, 1915, 46.3 ft (14.11 m); May 9, 1922, 43.9 ft (13.38 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 88,100 ft³/s (2,490 m³/s) June 8, gage height, 35.29 ft (10.756 m); minimum daily, 441 ft³/s (12.5 m³/s) Oct. 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	617	5150	4100	3580	9950	13100	9510	52700	10900	27200	3140
2	929	666	4340	11900	3870	8460	15100	8660	62700	11300	18800	3120
3	824	628	3990	16300	3680	7140	34200	8140	63400	10900	15100	3000
4	789	601	3950	15000	3960	6770	51900	10300	62000	9880	12400	2860
5	719	573	4470	13500	6050	6220	50900	29300	66400	9020	10600	2930
6	702	637	3730	13600	13700	5440	40800	28200	66300	8190	9540	3090
7	732	679	2900	18800	22800	4880	30300	18200	71400	7290	8640	3390
8	776	885	4080	23200	25900	4560	23700	18200	86100	6220	7560	2970
9	793	942	3620	16600	26000	4210	19600	23000	83200	5330	6210	2560
10	810	774	2630	11700	24500	3560	16400	23500	66200	5650	4730	2350
11	786	748	2030	10100	19300	3070	14800	22500	45700	4940	3790	2220
12	846	780	1690	10600	14600	2830	14300	22300	35100	4510	3350	2280
13	905	878	1440	11200	11800	2660	13200	28600	28900	4240	3100	2270
14	747	796	1290	13200	9920	2490	11300	38500	24500	4230	3320	2160
15	625	706	1210	14900	8640	2350	9590	38700	21800	5020	4240	2000
16	542	604	1270	12000	7620	2120	8420	29600	19200	5470	5590	1860
17	488	604	1420	8920	6700	2070	7670	22600	16800	5270	4930	1710
18	484	710	1310	7240	6240	3490	7110	19600	15500	4900	3900	1840
19	465	736	1180	7670	6380	9490	9090	17700	14900	4500	3390	4330
20	594	793	1090	12800	6620	15400	21500	15700	14200	4320	3590	14600
21	660	1160	1220	14600	6290	15800	25000	13700	13300	4190	3950	20100
22	634	3190	1450	11400	6010	23500	19900	17900	12600	4080	4210	16800
23	557	3470	1490	7580	5840	36200	18100	41700	12300	3980	4050	10700
24	508	3280	1830	6020	5620	38300	17500	52700	12200	4480	3670	7310
25	471	2240	1490	5600	5820	36100	14600	57500	11200	5560	3480	5930
26	441	2230	1570	5150	7590	33100	12100	56100	10300	5180	3450	5160
27	476	8640	1720	4560	11500	27200	10500	43900	10300	4270	3420	4690
28	607	15200	1590	4130	11400	22200	9500	28200	9900	3900	3410	4420
29	676	13200	1500	3780	---	20000	9580	21000	9090	23400	3370	4110
30	628	7440	1810	3520	---	17700	9650	19100	9400	38900	3220	3930
31	560	---	2960	3230	---	14800	---	31600	---	39100	3230	---
TOTAL	20824	74407	71070	322900	291930	392060	559410	816210	1027590	269120	199440	147830
MEAN	672	2480	2293	10420	10430	12650	18650	26330	34250	8681	6434	4928
MAX	1050	15200	5150	23200	26000	38300	51900	57500	86100	39100	27200	20100
MIN	441	573	1090	3230	3580	2070	7110	8140	9090	3900	3100	1710
AC-FT	41300	147600	141000	640500	579000	777700	1110000	1619000	2038000	533800	395600	293200
CAL YR 1978	TOTAL	766245	MEAN	2099	MAX	15200	MIN	441	AC-FT	1520000		
WTR YR 1979	TOTAL	4192791	MEAN	11490	MAX	86100	MIN	441	AC-FT	8316000		

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1945 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: February 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1945 to current year.

WATER TEMPERATURES: November 1950 to current year.

SUSPENDED-SEDIMENT DISCHARGE: January 1966 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,600 micromhos Sept. 4, 1978; minimum daily, 187 micromhos Aug. 31, 1947.

WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 5, 1951; minimum daily, 1.0°C Jan. 8, 1970.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 13,500 mg/L Apr. 4, 1979; minimum daily mean, 8 mg/L Nov. 29, 1967.

SEDIMENT LOADS: Maximum daily, 1,860,000 tons Apr. 4, 1979; minimum daily, 15 tons Apr. 8-10, 1967.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,200 micromhos Oct. 25; minimum daily, 255 micromhos Aug. 1, Sept. 23.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 13,500 mg/L Apr. 4; minimum daily mean, 10 mg/L Nov. 4.

SEDIMENT LOADS: Maximum daily, 1,860,000 tons Apr. 4; minimum daily, 16 tons Nov. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
15...	0800	629	1900	8.2	--	--	--	--	--	--
NOV										
14...	1545	778	1770	8.3	24.5	20	20	9.4	115	1.0
28...	1630	634	--	--	13.0	--	--	--	--	--
DEC										
21...	0430	1130	1080	8.2	10.0	--	--	--	--	--
JAN										
04...	1630	14600	--	--	6.0	--	--	--	--	--
30...	1625	3530	1060	7.7	8.5	50	110	10.5	93	2.1
FEB										
26...	0430	6150	1180	7.6	10.0	--	--	--	--	--
28...	1630	11140	--	--	12.0	--	--	--	--	--
MAR										
07...	1320	4840	740	7.5	15.0	120	55	9.0	92	4.7
APR										
20...	0600	19100	--	--	21.0	--	--	--	--	--
21...	0515	25790	308	7.3	20.0	--	--	--	--	--
MAY										
26...	0500	57200	--	--	21.0	--	--	--	--	--
31...	1200	31480	920	7.2	25.0	10	390	6.9	85	2.1
JUN										
08...	1700	88100	--	--	26.0	--	--	--	--	--
JUL										
10...	1535	5680	630	8.0	30.0	10	200	6.8	91	1.3
18...	0500	5040	727	7.4	29.0	--	--	--	--	--
30...	0500	37400	--	--	27.0	--	--	--	--	--
AUG										
27...	0500	3470	749	7.7	29.0	--	--	--	--	--
SEP										
11...	1405	2210	1020	8.0	28.5	20	35	7.5	97	2.5

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT									
15...	360	160	100	27	240	5.5	7.3	250	0
NOV									
14...	340	190	96	24	230	5.4	7.5	180	0
28...	--	--	--	--	--	--	--	--	--
DEC									
21...	290	95	92	15	110	2.8	4.3	240	0
JAN									
04...	--	--	--	--	--	--	--	--	--
30...	230	96	68	14	140	4.0	4.7	160	0
FEB									
26...	260	130	78	15	140	3.8	5.4	150	0
28...	--	--	--	--	--	--	--	--	--
MAR									
07...	180	72	56	9.3	77	2.5	4.7	130	0
APR									
20...	--	--	--	--	--	--	--	--	--
21...	100	12	34	4.3	15	.6	3.3	110	0
MAY									
26...	--	--	--	--	--	--	--	--	--
31...	210	100	65	11	100	3.0	4.9	130	0
JUN									
08...	--	--	--	--	--	--	--	--	--
JUL									
10...	190	45	59	11	48	1.5	3.8	180	0
18...	220	72	68	12	61	1.8	3.9	180	0
30...	--	--	--	--	--	--	--	--	--
AUG									
27...	210	52	60	14	72	2.2	4.4	190	0
SEP									
11...	260	100	73	18	110	3.0	5.1	190	0

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
OCT 15...	180	370	.3	6.0	1050	--	--	--	--
NOV 14...	170	360	.4	3.0	980	21	0	.09	.01
28...	--	--	--	--	--	--	--	--	--
DEC 21...	120	150	.2	12	622	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--
30...	140	190	.2	10	646	328	104	.91	.08
FEB 26...	130	220	.1	7.3	670	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
MAR 07...	76	120	.3	8.5	416	226	50	.63	.04
APR 20...	--	--	--	--	--	--	--	--	--
21...	23	17	.2	9.4	160	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--
31...	95	150	.3	7.3	498	1700	178	.73	.04
JUN 08...	--	--	--	--	--	--	--	--	--
JUL 10...	52	71	.3	9.6	343	426	48	.59	.02
18...	71	87	.3	9.4	401	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
AUG 27...	66	110	.3	8.9	429	--	--	--	--
SEP 11...	96	170	.3	8.1	574	65	0	.00	.02

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. STREE DIAM. % FINER THAN .062 MM
OCT 15...	--	--	--	--	--	--	--	--	--
NOV 14...	.10	.01	.50	.51	.180	5.8	--	--	--
28...	--	--	--	--	--	--	1870	3200	85
DEC 21...	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	1230	48500	76
30...	.99	.23	.69	.92	.250	9.5	--	--	--
FEB 26...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	1650	49600	90
MAR 07...	.67	.04	.89	.93	.080	9.8	--	--	--
APR 20...	--	--	--	--	--	--	3040	157000	83
21...	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	4080	630000	84
31...	.77	.05	1.9	1.9	.300	12	--	--	--
JUN 08...	--	--	--	--	--	--	2860	680000	76
JUL 10...	.61	.03	--	--	--	9.4	--	--	--
18...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	7360	743000	87
AUG 27...	--	--	--	--	--	--	--	--	--
SEP 11...	.02	.03	.76	.79	.100	4.6	--	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 14...	1545	6	600	0	0	1	40
JAN 30...	1625	3	0	1	0	4	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 14...	1	10	.0	1	0	10
JAN 30...	0	0	.0	0	0	10

BRAZOS RIVER BASIN

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 14...	1545	.0	0	.00	.00	.0	.0	0	.00	.0
JAN 30...	1625	.0	0	--	.00	.0	.0	0	.00	.2

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 14...	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
JAN 30...	.00	.7	.00	.2	.01	.00	.1	.00	.00	.0

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
NOV 14...	.00	.00	.0	.00	.0	.00	.0	.00	.00
JAN 30...	.00	.00	.0	.00	.0	.00	.0	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 14...	.00	.00	.00	0	0	.00	.00	.00	.00
JAN 30...	.00	.00	.00	0	0	.00	.01	.00	.00

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
NOV 28...	1630	634	13.0	1870	3200	21	28
JAN 04...	1630	14600	6.0	1230	48500	48	49
FEB 28...	1630	11140	12.0	1650	49600	62	66
APR 20...	0600	19100	21.0	3040	157000	43	48
MAY 26...	0500	57200	21.0	4080	630000	44	44
JUN 08...	1700	88100	26.0	2860	680000	43	48
JUL 30...	0500	37400	27.0	7360	743000	44	51

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
NOV 28...	58	75	82	85	95	99	100
JAN 04...	58	67	70	76	90	99	100
FEB 28...	72	81	84	90	96	99	100
APR 20...	53	63	77	83	97	99	100
MAY 26...	55	62	69	84	94	99	100
JUN 08...	48	58	70	76	92	99	100
JUL 30...	59	69	78	87	96	99	100

BRAZOS RIVER BASIN

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08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	20824	1770	980	54900	350	19900	170	9430	340
NOV. 1978.....	74407	1040	570	115000	180	35300	99	19800	250
DEC. 1978.....	71070	771	430	81700	120	22500	73	14100	210
JAN. 1979.....	322900	623	340	300000	77	67300	59	51600	180
FEB. 1979.....	291930	686	380	298000	92	72600	65	51300	190
MAR. 1979.....	392060	472	260	276000	51	54000	45	47500	140
APR. 1979.....	559410	403	220	336000	38	57300	38	57700	130
MAY 1979.....	816210	703	390	854000	100	220000	67	148000	200
JUNE 1979.....	1027590	480	270	736000	51	142000	46	127000	140
JULY 1979.....	269120	543	300	217000	62	44900	52	37500	160
AUG. 1979.....	199440	468	260	139000	49	26400	45	24000	140
SEPT 1979.....	147830	537	300	118000	62	24900	51	20400	160
TOTAL	4192791	**	**	3530000	**	787000	**	608000	**
WTD.AVG.	11500	565	310	**	70	**	54	**	160

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	1970	613	1400	1120	551	392	525	723	670	255	852
2	1460	1960	466	1000	1100	618	470	490	500	650	270	845
3	1490	1960	449	678	1170	616	582	477	400	725	285	836
4	1560	1940	460	705	1050	614	445	510	408	710	300	801
5	1600	1950	394	752	800	632	361	552	444	696	330	875
6	1610	1940	366	555	694	683	325	377	416	557	359	851
7	1620	1960	359	478	606	758	314	402	400	600	418	859
8	1720	1720	371	432	506	797	320	472	291	621	420	855
9	1750	1920	420	450	577	848	331	671	397	660	427	920
10	1790	1960	450	505	492	961	360	1510	416	635	441	950
11	1920	1850	476	480	436	975	382	1570	437	591	460	979
12	1940	1760	530	460	450	995	403	1630	505	696	480	990
13	1850	1680	565	500	440	1040	433	1680	530	743	505	1020
14	1860	1830	632	550	440	1060	450	1540	560	750	593	984
15	1900	1800	696	609	506	1080	470	789	585	650	701	975
16	1900	1740	756	561	596	1050	490	593	520	600	777	984
17	1880	1760	842	521	621	1080	514	614	448	700	810	969
18	1800	1840	901	558	615	985	544	700	599	727	750	900
19	1720	1500	941	521	611	970	573	750	620	732	676	650
20	1740	1400	1050	600	709	489	333	841	635	711	787	406
21	1850	1230	1080	633	768	430	308	905	726	700	655	286
22	1930	1120	1050	595	911	417	309	398	745	678	681	283
23	2020	1050	1200	650	1100	473	353	450	700	715	637	255
24	2100	1470	1340	744	1150	400	443	531	650	702	671	279
25	2200	1780	1350	790	1170	316	397	355	633	668	707	399
26	2150	1700	1370	846	1180	320	379	298	657	615	746	425
27	1870	1150	1640	865	1260	325	450	349	681	621	749	455
28	1940	760	1780	920	1040	358	472	424	755	555	743	532
29	2000	378	1880	975	---	343	500	501	760	562	807	600
30	1380	443	1900	1050	---	323	586	637	710	284	820	639
31	1800	---	1700	1140	---	334	---	857	---	260	840	---
MEAN	1800	1580	904	694	790	672	423	723	562	638	584	722

BRAZOS RIVER BASIN

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	20.0	13.0	---	---	13.0	19.0	21.0	21.0	---	28.0	23.0
2	25.0	20.0	13.0	---	8.0	14.0	19.0	21.0	---	28.0	---	---
3	25.0	20.0	18.0	6.0	9.0	---	20.0	22.0	21.0	27.0	28.0	28.0
4	26.0	20.0	---	6.0	7.0	18.0	17.0	---	21.0	---	---	28.0
5	---	---	15.0	7.0	---	13.0	17.0	20.0	21.0	27.0	---	28.0
6	26.0	---	15.0	7.0	9.0	13.0	17.0	---	21.0	27.0	28.0	28.0
7	25.0	18.0	15.0	6.0	9.0	---	17.0	15.0	21.0	---	25.0	28.0
8	26.0	18.0	---	5.0	9.0	14.0	---	19.0	---	28.0	---	28.0
9	---	18.0	---	4.0	5.0	16.0	17.0	22.0	21.0	28.0	28.0	---
10	24.0	18.0	---	4.0	6.0	16.0	17.0	22.0	26.0	26.0	28.0	28.0
11	24.0	---	9.0	---	9.0	---	17.0	---	26.0	28.0	---	28.0
12	24.0	18.0	8.0	4.0	---	17.0	19.0	---	26.0	28.0	---	27.0
13	24.0	18.0	8.0	---	---	16.0	19.0	21.0	---	28.0	29.0	27.0
14	24.0	18.0	8.0	---	12.0	---	---	21.0	---	---	27.0	27.0
15	---	18.0	9.0	4.0	14.0	17.0	---	21.0	24.0	---	29.0	---
16	23.0	18.0	9.0	6.0	12.0	17.0	---	21.0	24.0	---	29.0	23.0
17	23.0	15.0	9.0	10.0	10.0	---	23.0	21.0	21.0	29.0	29.0	23.0
18	---	15.0	9.0	12.0	---	18.0	23.0	---	26.0	29.0	---	---
19	20.0	15.0	9.0	14.0	---	18.0	23.0	---	29.0	29.0	29.0	---
20	20.0	---	11.0	---	6.0	---	21.0	24.0	26.0	29.0	---	23.0
21	---	14.0	10.0	12.0	10.0	---	20.0	24.0	26.0	---	---	23.0
22	---	14.0	10.0	11.0	12.0	17.0	21.0	21.0	26.0	29.0	29.0	23.0
23	21.0	---	---	---	15.0	17.0	20.0	---	---	29.0	29.0	23.0
24	20.0	14.0	---	9.0	---	17.0	20.0	21.0	---	29.0	29.0	23.0
25	20.0	14.0	---	---	12.0	17.0	20.0	21.0	26.0	29.0	29.0	---
26	21.0	15.0	13.0	10.0	10.0	---	22.0	21.0	27.0	29.0	29.0	---
27	20.0	---	13.0	11.0	11.0	17.0	22.0	21.0	27.0	27.0	29.0	23.0
28	---	13.0	11.0	---	12.0	17.0	22.0	21.0	22.0	29.0	29.0	23.0
29	20.0	13.0	11.0	14.0	---	17.0	---	21.0	---	29.0	29.0	---
30	25.0	13.0	12.0	---	---	19.0	21.0	21.0	---	27.0	---	23.0
31	20.0	---	---	12.0	---	19.0	---	21.0	---	28.0	---	---
MEAN	23.0	16.5	11.0	8.5	10.0	16.5	19.5	21.0	24.0	28.0	28.5	25.5

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1050	30	85	617	16	27	5150	500	6950
2	929	30	75	666	14	25	4340	450	5270
3	824	21	47	628	42	42	3990	320	3450
4	789	22	47	601	10	16	3950	220	2350
5	719	20	39	573	15	23	4470	250	3020
6	702	20	38	637	22	38	3730	320	3220
7	732	21	42	679	18	33	2900	320	2510
8	776	22	46	885	40	96	4080	438	4830
9	793	20	43	942	26	66	3620	482	4710
10	810	16	35	774	28	59	2630	360	2560
11	786	19	40	748	25	50	2030	258	1410
12	846	16	37	780	22	46	1690	440	2010
13	905	23	56	878	20	47	1440	230	894
14	747	21	42	796	24	52	1290	90	313
15	625	22	37	706	20	38	1210	60	196
16	542	14	20	604	18	29	1270	43	147
17	488	17	22	604	16	26	1420	34	130
18	484	22	29	710	16	31	1310	40	141
19	465	20	25	736	16	32	1180	40	127
20	594	22	35	793	20	43	1090	28	82
21	660	22	39	1160	28	88	1220	32	105
22	634	23	39	3190	150	1290	1450	28	110
23	557	23	35	3470	345	3230	1490	28	113
24	508	22	30	3280	310	2750	1480	43	172
25	471	18	23	2240	210	1270	1490	38	153
26	441	26	31	2230	600	3610	1570	44	187
27	476	22	28	8640	1480	31600	1720	23	107
28	607	23	38	15200	1670	68500	1590	18	77
29	676	22	40	13200	2000	71300	1500	16	65
30	628	23	39	7440	970	19500	1810	16	78
31	560	18	27	---	---	---	2960	50	400
TOTAL	20824	---	1209	74407	---	203957	71070	---	45887

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	4100	333	4070	3580	160	1550	9950	1720	46200
2	11900	2520	88800	3870	172	1800	8460	1170	26700
3	16300	1900	83400	3680	162	1610	7140	700	13500
4	15000	1250	50600	3960	190	2030	6770	480	8770
5	13500	1370	49900	6050	784	14000	6220	450	7560
6	13600	1350	49600	13700	1100	40700	5440	320	4700
7	18800	1710	89700	22800	1450	89300	4880	220	2900
8	23200	2130	135000	25900	1750	122000	4560	210	2590
9	16600	1280	57400	26000	2000	140000	4210	190	2160
10	11700	950	30000	24500	2800	185000	3560	152	1460
11	10100	720	19600	19300	2470	129000	3070	130	1080
12	10600	670	19200	14600	1950	76900	2830	110	841
13	11200	670	20300	11800	1420	45200	2660	95	682
14	13200	620	22100	9920	900	24100	2490	75	504
15	14900	1000	40200	8640	600	14000	2350	60	381
16	12000	1900	61600	7620	550	11300	2120	58	332
17	8920	1800	43400	6700	450	8140	2070	52	291
18	7240	1200	23500	6240	370	6230	3490	140	1780
19	7670	820	17000	6380	315	5430	9490	861	23900
20	12800	1050	36300	6620	290	5180	15400	2100	87700
21	14600	1000	39400	6290	300	5090	15800	2200	93900
22	11400	750	23100	6010	270	4380	23500	2420	166000
23	7580	550	11300	5840	218	3440	36200	4310	422000
24	6020	420	6830	5620	200	3030	38300	3700	383000
25	5600	350	5290	5820	180	2830	36100	2900	283000
26	5150	250	3480	7590	190	3890	33100	2370	212000
27	4560	230	2830	11500	750	23300	27200	1870	137000
28	4130	190	2120	11400	1500	46200	22200	1520	91100
29	3780	175	1790	---	---	---	20000	1220	65900
30	3520	165	1570	---	---	---	17700	1020	48700
31	3230	160	1400	---	---	---	14800	1000	40000
TOTAL	322900	---	1040780	291930	---	1015630	392060	---	2176631

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	13100	700	24800	9510	450	11600	52700	5310	745000
2	15100	825	34900	8660	500	11700	62700	3550	601000
3	34200	9660	1050000	8140	320	7030	63400	2750	471000
4	51900	13500	1860000	10300	1710	57400	62000	2700	452000
5	50900	3100	426000	29300	2490	191000	66400	3000	538000
6	40800	500	55100	28200	1750	133000	66300	2400	430000
7	30300	522	42700	18200	1270	62400	71400	2880	555000
8	23700	645	41300	18200	1150	56500	86100	2600	604000
9	19600	610	32300	23000	1600	99400	83200	1500	337000
10	16400	270	12000	23500	2120	135000	66200	1680	300000
11	14800	140	5590	22500	2250	137000	45700	1800	222000
12	14300	68	2630	22300	2200	132000	35100	1600	152000
13	13200	65	2320	28600	2640	212000	28900	1300	101000
14	11300	70	2140	38500	4110	427000	24500	1120	74100
15	9590	85	2200	38700	3650	381000	21800	1100	64700
16	8420	130	2960	29600	2570	205000	19200	900	46700
17	7670	215	4450	22600	2020	123000	16800	800	36300
18	7110	298	5720	19600	1600	84700	15500	700	29300
19	9090	1570	49800	17700	1270	60700	14900	700	28200
20	21500	2800	158000	15700	1020	43200	14200	670	25700
21	25000	1650	111000	13700	700	25900	13300	600	21500
22	19900	580	31200	17900	1260	85000	12600	600	20400
23	18100	720	35200	41700	3560	393000	12300	520	17300
24	17500	1500	70900	52700	3670	522000	12200	620	20400
25	14600	2250	88700	57500	4620	717000	11200	650	19700
26	12100	870	28400	56100	3670	556000	10300	500	13900
27	10500	600	17000	43900	2420	287000	10300	500	13900
28	9500	520	13300	28200	1900	145000	9900	530	14200
29	9580	550	14200	21000	1470	83300	9090	560	13700
30	9650	500	13000	19100	1270	65500	9400	575	14600
31	---	---	---	31600	3250	319000	---	---	---
TOTAL	559410	---	4237810	816210	---	5769330	1027590	---	5982600

BRAZOS RIVER BASIN

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	10900	572	16800	27200	2900	213000	3140	105	890
2	11300	560	17100	18800	2150	109000	3120	85	716
3	10900	600	17700	15100	1320	53800	3000	75	607
4	9880	550	14700	12400	560	18700	2860	70	541
5	9020	480	11700	10600	500	14300	2930	62	490
6	8190	430	9510	9540	462	11900	3090	150	1250
7	7290	472	9290	8640	425	9910	3390	380	3480
8	6220	582	9770	7560	385	7860	2970	530	4250
9	5330	470	6760	6210	325	5450	2560	350	2420
10	5650	532	8120	4730	250	3190	2350	150	952
11	4940	580	7740	3790	225	2300	2220	85	509
12	4510	398	4850	3350	220	1990	2280	70	431
13	4240	460	5270	3100	230	1930	2270	55	337
14	4230	450	5140	3320	200	1790	2160	65	379
15	5020	420	5690	4240	150	1720	2000	50	270
16	5470	372	5490	5590	115	1740	1860	55	276
17	5270	332	4720	4930	170	2260	1710	75	346
18	4900	310	4100	3900	290	3050	1840	95	472
19	4500	282	3430	3390	430	3940	4330	3380	46000
20	4320	258	3010	3590	335	3250	14600	3300	130000
21	4190	270	3050	3950	270	2880	20100	2450	133000
22	4080	280	3080	4210	225	2560	16800	1550	70300
23	3980	242	2600	4050	238	2600	10700	1100	31800
24	4480	332	4020	3670	182	1800	7310	780	15400
25	5560	435	6530	3480	135	1270	5930	420	6720
26	5180	580	8110	3450	100	931	5160	270	3760
27	4270	625	7210	3420	105	970	4690	350	4430
28	3900	1200	12600	3410	108	994	4420	230	2740
29	23400	4290	275000	3370	115	1050	4110	110	1220
30	38900	6260	660000	3220	128	1110	3930	90	955
31	39100	4400	465000	3230	125	1090	---	---	---
TOTAL YEAR	269120 4192791	---	1618090 23045200	199440	---	488335	147830	---	464941

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 (2.4 km) downstream from Coon Creek, 5.5 mi (8.8 km) north of Needville, and 10.5 mi (16.9 km) upstream from Fairchild Creek, and 33.0 mi (53.1 km) upstream from mouth.

DRAINAGE AREA.--42.8 mi² (110.9 km²).

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 (18.102 m) 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 (3.048 m) higher datum. March 1952 to May 28, 1959, and Mar. 30, 1960, to Sept. 30, 1967, water-stage recorder at 10.00 ft (3.048 m) higher datum.

REMARKS.--Records fair. Channel rectification was completed in April 1955. No diversion above station. Low flow supplemented by drainage from irrigated fields. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years (water years 1948-49, 1953-79), 34.5 ft³/s (0.977 m³/s), 25,000 acre-ft/yr (30.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s (295 m³/s) June 26, 1960, gage height, 23.81 ft (7.257 m); maximum gage height, 24.03 ft (7.324 m) Oct. 31, 1959; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, 24.4 ft (7.44 m) in August 1945 before channel rectification, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 3	2000	1,770 50.1	18.74 5.712	Apr. 20	2400	2,390 67.7	19.91 6.069
Nov. 26	2130	1,490 42.2	18.09 5.514	Apr. 29	1500	1,220 34.6	17.36 5.291
Jan. 6	2000	3,550 101	21.52 6.559	May 4	1130	2,110 59.8	19.43 5.922
Feb. 6	0500	1,920 54.4	19.04 5.803	Sept. 20	0500	*7,140 202	23.13 7.050
Apr. 3	1930	2,220 62.9	19.63 5.983				

Minimum daily discharge, 0.31 ft³/s (0.009 m³/s) Oct. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.54	35	462	17	1.1	7.2	106	2.5	4.4	4.4	22
2	.31	.53	17	140	8.7	1.1	15	138	29	4.0	3.7	12
3	446	.52	11	51	26	1.0	454	47	27	3.5	3.3	6.7
4	250	.51	8.2	27	74	1.0	483	1060	15	3.3	3.2	4.4
5	24	.50	5.7	178	745	1.0	93	274	11	3.1	3.2	3.0
6	8.6	42	4.1	1710	1140	1.0	35	93	9.4	3.7	3.5	27
7	4.6	17	8.5	1060	202	1.0	16	42	8.6	8.7	3.7	73
8	2.6	5.5	33	124	67	1.0	8.5	19	7.8	9.7	4.0	67
9	1.9	6.6	31	50	29	.96	5.0	10	7.0	6.2	3.7	55
10	1.3	3.9	16	27	15	.96	3.6	7.1	6.2	4.8	3.5	30
11	1.1	2.6	9.7	306	9.4	.96	2.6	5.3	5.4	3.2	3.3	15
12	.90	1.5	5.9	108	6.4	.96	1.8	4.1	4.4	62	5.3	10
13	.80	1.0	4.0	45	4.6	.96	1.3	3.6	3.5	42	17	7.0
14	.70	.80	3.3	20	3.8	.96	1.1	4.1	3.2	23	18	5.0
15	.65	.70	3.6	9.9	2.9	.91	1.0	3.0	2.9	14	14	4.0
16	.60	.60	3.5	7.0	2.3	.91	.95	2.2	2.7	10	11	3.0
17	.57	.55	3.1	6.0	2.0	.91	.90	1.9	2.6	6.2	9.1	4.0
18	.55	.50	2.8	5.4	1.8	.91	.90	1.7	2.6	4.8	7.8	103
19	.55	14	2.4	5.7	1.7	4.6	88	1.6	2.8	3.2	5.9	2930
20	.75	20	2.1	279	1.5	113	1320	1.5	2.9	4.0	4.8	5580
21	.75	5.1	1.7	114	1.5	139	800	1.5	2.8	12	4.4	1880
22	.70	2.4	1.4	37	1.4	301	114	2.0	2.7	4.6	4.4	612
23	.75	1.5	1.2	17	1.3	153	49	2.8	2.7	3.4	10	276
24	.73	1.2	1.1	12	1.3	43	24	3.6	2.8	4.6	27	106
25	.70	1.0	1.0	8.1	1.2	17	13	3.3	2.7	16	23	54
26	.67	392	.90	9.3	1.2	11	8.4	3.0	2.7	32	15	28
27	.65	581	.85	7.0	1.1	6.5	5.6	2.8	3.1	28	9.2	16
28	.62	114	.80	4.8	1.1	4.4	3.6	2.6	6.5	24	4.4	11
29	.60	163	5.5	4.2	---	3.2	450	2.6	5.7	10	6.8	7.1
30	.58	84	20	108	---	2.7	173	2.5	5.0	6.9	45	4.7
31	.56	---	113	53	---	12	---	2.4	---	5.6	41	---
TOTAL	754.11	1465.05	357.35	4995.4	2370.2	828.00	4179.45	1854.2	193.2	370.9	322.6	11955.9
MEAN	24.3	48.8	11.5	161	84.7	26.7	139	59.8	6.44	12.0	10.4	399
MAX	446	561	113	1710	1140	301	1320	1060	29	62	45	5580
MIN	.31	.50	.80	4.2	1.1	.91	.90	1.5	2.5	3.1	3.2	3.0
AC-FT	1500	2910	709	9910	4700	1640	8290	3680	383	736	640	23710
CAL YR 1978	TOTAL	9791.49	MEAN	26.8	MAX	835	MIN	.31	AC-FT	19420		
WTR YR 1979	TOTAL	29646.36	MEAN	81.2	MAX	5580	MIN	.31	AC-FT	58800		

BRAZOS RIVER BASIN

08116400 DRY CREEK NEAR ROSENBERG, TX

LOCATION.--Lat 29°30'42", long 95°44'45", Fort Bend County, Hydrologic Unit 12070104, on right bank 38 ft (12 m) downstream from county road bridge, 5.0 mi (8.0 km) southeast of Rosenberg, and 8.2 mi (13.2 km) upstream from Smither's Lake (Lake George) spillway.

DRAINAGE AREA.--8.65 mi² (22.40 km²). See REMARKS.

PERIOD OF RECORD.--October 1958 to September 1979 (discontinued).

REVISED RECORDS.--WSP 1732: Drainage area. WSP 1922: 1959-60. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 71.90 ft (21.915 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Runoff given herein includes return flow from irrigation, and at times flow is supplemented by water from Richmond Irrigation Co.'s canal (station 08113500). Publication of supplemental peak discharges was discontinued in September 1977 because of increased releases of water into Dry Creek from Richmond Canal. Water is stored in Smither's Lake and used for cooling of electrical power generators and for irrigation. Recording rain gage in basin from January 1969 to September 1974.

AVERAGE DISCHARGE.--21 years, 12.3 ft³/s (0.348 m³/s), 8,910 acre-ft/yr (11.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) Oct. 31, 1959, gage height, 12.66 ft (3.859 m); no flow for many days each year.

Highest flood since at least 1932, that of Oct. 31, 1959, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 745 ft³/s (21.1 m³/s) Jan. 6, gage height, 11.14 ft (3.395 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.2	89	1.6	.00	1.4	35	61	.13	3.2	.00
2	.00	.00	.85	6.8	.71	.00	.54	22	58	.09	2.9	.02
3	71	.00	.42	2.0	9.5	.00	212	10	6.3	.24	3.1	2.0
4	39	.00	1.1	1.1	38	.00	78	400	4.5	.27	3.2	34
5	3.0	.00	.75	65	209	.00	7.9	60	7.3	.19	3.3	138
6	.85	4.2	.75	416	223	.00	1.9	10	3.3	.35	3.4	165
7	.22	2.6	.96	198	22	.00	.52	5.0	1.4	.73	3.4	155
8	.07	.57	.76	20	5.8	.00	.24	2.0	.72	1.0	4.0	29
9	.01	51	1.9	10	2.1	.00	.10	1.5	.35	2.3	4.7	6.4
10	.00	199	.52	10	.83	.00	.04	1.2	.16	3.0	4.0	1.8
11	.00	200	.18	81	.53	.00	.01	1.0	17	1.9	5.7	.19
12	.00	206	.07	17	.38	.00	.00	2.0	12	3.0	5.6	.00
13	.00	208	.03	8.1	.31	.00	.00	3.5	7.1	2.4	3.9	.00
14	.00	202	.08	3.6	.25	.00	.00	3.2	26	2.2	2.7	.00
15	.00	194	.30	2.6	.14	.00	.00	7.2	5.6	1.9	1.9	.00
16	.00	189	.91	2.3	.05	.00	.00	15	.26	1.6	.91	.00
17	.00	138	.28	2.1	.00	.00	.00	9.7	.23	1.4	.25	.00
18	.00	1.5	.10	1.9	.01	.00	.00	3.9	.21	1.2	1.2	75
19	.00	1.8	.04	3.0	.10	84	60	2.9	.17	1.1	3.2	581
20	.00	9.2	.01	88	.30	33	450	5.4	.17	1.1	3.2	591
21	.00	1.6	.00	8.1	.17	69	179	.17	.14	6.2	3.0	74
22	.00	1.6	.00	2.0	.10	76	10	28	.13	2.0	4.8	19
23	.00	.17	.00	1.3	.06	12	3.7	5.1	.22	1.1	5.8	9.2
24	.00	.03	.00	1.4	.05	2.8	.90	2.4	.17	.72	3.8	4.3
25	.00	.00	.00	.46	.00	.89	.23	1.6	.20	22	2.5	1.4
26	.00	115	.00	2.2	.00	.26	.03	2.9	.44	46	1.2	.56
27	.00	73	.00	2.1	.00	.08	.00	3.8	4.5	45	.91	.26
28	.00	3.8	.00	.53	.00	.03	.00	3.4	17	29	.61	.15
29	.00	34	2.1	.16	---	.01	99	2.5	2.5	9.5	.21	.10
30	.00	6.8	5.9	36	---	.00	12	1.4	.43	5.8	.03	.08
31	.00	---	6.5	7.1	---	2.8	---	25	---	3.8	.00	---
TOTAL	114.15	1842.87	26.71	1088.85	514.99	280.87	1117.51	693.6	237.50	197.22	86.62	1887.46
MEAN	3.68	61.4	.86	35.1	18.4	9.06	37.3	22.4	7.92	6.36	2.79	62.9
MAX	71	208	6.5	416	223	84	450	400	61	46	5.8	591
MIN	.00	.00	.00	.16	.00	.00	.00	1.0	.13	.09	.00	.00
AC-FT	226	3660	53	2160	1020	557	2220	1380	471	391	172	3740
CAL YR 1978	TOTAL	6287.63	MEAN	17.2	MAX	213	MIN	.00	AC-FT	12470		
WTR YR 1979	TOTAL	8088.35	MEAN	22.2	MAX	591	MIN	.00	AC-FT	16040		

BRAZOS RIVER BASIN

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08116650 BRAZOS RIVER NEAR ROSHARON, TX
(National stream-quality accounting network)

LOCATION.--Lat 29°20'58", long 95°34'56", Fort Bend-Brazoria County, Hydrologic Unit 12070104, on right bank at downstream side of bridge on Farm Road 1462, 2.0 mi (3.2 km) downstream from Big Creek, 2.1 mi (3.4 km) upstream from Cow Creek, and 7.3 mi (11.7 km) west of Rosharon and at mile 56.7 (91.2 km).

DRAINAGE AREA.--45,339 mi² (117,428 km²), approximately, of which 9,566 mi² (24,776 km²) probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1967 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.--Water-discharge records fair. Water diverted above station for irrigation, industrial, and municipal supply materially affects low flow. For statement regarding regulation by Soil Conservation Service flood-water-retarding structures, see station 08110200.

AVERAGE DISCHARGE.--12 years (water years 1968-79), 8,017 ft³/s (227.0 m³/s), 5,808,000 acre-ft/yr (7.16 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,900 ft³/s (2,260 m³/s), May 14, 1968, elevation, 50.74 ft (15.466 m); minimum daily, 40 ft³/s (1.13 m³/s) Apr. 7-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1884, 56.4 ft (17.19 m) about Dec. 11, 1913, from information by State Department of Highways and Public Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76,500 ft³/s (2,170 m³/s) June 9, elevation, 48.56 ft (14.801 m); minimum daily, 422 ft³/s (12.0 m³/s) Oct. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	925	526	6560	2920	2930	10500	13300	9820	43700	8660	33400	3180
2	766	441	4630	6850	3270	8970	12700	9330	59100	9560	22500	3760
3	742	506	3750	13100	3350	7700	21500	8210	65900	9710	16400	3460
4	834	450	3400	13900	3330	6710	45900	9450	64200	8990	13000	3030
5	1080	450	3610	12900	6080	6710	51600	22500	64700	8070	10600	2750
6	746	521	3670	13500	14700	6040	44900	33600	65900	7390	9230	2840
7	664	557	2780	20800	24600	5390	34500	23600	64800	6700	8290	3620
8	687	600	2480	26600	28900	4820	26400	17100	71600	6040	7370	4210
9	725	737	3330	22300	28400	4550	21000	20800	76100	5150	6480	3280
10	753	737	2600	14600	27400	4010	17000	23600	72300	4730	5250	2590
11	786	573	1740	11500	23400	3350	14100	23100	57700	5200	4180	2230
12	783	573	1320	11200	17600	2960	13000	22200	40200	4450	3750	2100
13	848	600	1060	11000	13400	2850	12300	24800	31700	4520	3370	2030
14	888	708	938	11000	10800	2560	10700	34600	26200	5270	3230	1950
15	737	827	846	13300	9100	2160	8880	39200	22700	4900	3690	1810
16	626	740	778	12800	7920	1980	7530	33600	19800	5130	4670	1660
17	462	647	835	9790	6940	1800	6760	25100	17000	4980	5110	1550
18	422	654	900	7350	6240	1690	6290	19900	14700	4540	4280	2210
19	423	799	858	6300	6030	4860	6220	17200	13600	4130	3500	13100
20	450	884	746	8750	6330	12300	17700	14900	13100	3820	3270	30800
21	547	907	682	13500	6320	17000	29700	12500	12300	3750	3420	35700
22	573	1670	805	13000	5960	20700	26600	11500	11400	3610	3770	32500
23	600	3470	982	9280	5750	35600	20100	30900	10900	3510	3920	22000
24	615	3300	1050	6430	5410	40600	18500	47200	10700	3610	3650	12200
25	573	2600	1040	5470	5280	38600	15800	53600	10500	4960	3370	7240
26	536	2500	1040	5050	5770	35800	12200	54600	9310	10000	3230	5460
27	511	4100	1120	4630	8680	31100	9900	48600	8990	8590	3190	4570
28	547	8850	1190	4070	11100	25300	8480	34000	8980	7180	3090	4100
29	708	13600	1110	3610	---	21600	8430	22900	8360	13000	3130	3810
30	766	9370	1090	3260	---	19300	11100	18000	7930	34400	3040	3830
31	696	---	1550	3150	---	16100	---	21900	---	40900	3040	---
TOTAL	21019	62897	58490	321910	304990	403610	553090	788310	1004370	255450	208420	223570
MEAN	678	2097	1887	10380	10890	13020	18440	25430	33480	8240	6723	7452
MAX	1080	13600	6560	25600	28900	40600	51600	54600	76100	40900	33400	35700
MIN	422	441	682	2920	2930	1690	6220	8210	7930	3510	3040	1550
AC-FT	41690	124800	116000	638500	604900	800600	1097000	1564000	1992000	506700	413400	443500
CAL YR 1978	TOTAL	649669	MEAN	1780	MAX	13600	MIN	74	AC-FT	1289000		
WTR YR 1979	TOTAL	4206126	MEAN	11520	MAX	76100	MIN	422	AC-FT	8343000		

BRAZOS RIVER BASIN

08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: February 1968 to current year. Sediment records: October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1967 to current year.

WATER TEMPERATURES: October 1967 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (1968-79): Maximum daily, 4,430 micromhos Aug. 8, 1971; minimum daily, 203 micromhos Oct. 26, 1970.

WATER TEMPERATURES: Maximum daily, 31.0°C on several days during summer months; minimum daily, 4.0°C Jan. 12, 13, 1973, Jan. 22, 23, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,140 micromhos Oct. 27; minimum daily, 253 micromhos Aug. 1.

WATER TEMPERATURES: Maximum daily, 30.0°C on many days during summer months; minimum daily, 5.0°C on several days during January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 25...	1130	573	1960	8.1	22.5	--	10	7.0	82	1.5	32
NOV 16...	1350	731	1780	8.3	24.5	--	30	9.4	115	1.4	98
DEC 21...	1305	719	1010	8.0	14.5	--	25	8.8	89	1.1	12
JAN 30...	1330	3230	990	7.6	8.5	--	75	9.7	86	1.4	320
FEB 14...	1400	10600	400	7.5	13.5	--	300	10.7	106	1.8	550
MAR 28...	1130	25340	300	7.7	18.5	--	320	7.1	78	2.6	920
APR 26...	1300	12060	340	7.7	23.5	--	780	7.2	87	1.4	2800
MAY 09...	1515	21750	520	7.9	23.0	30	400	7.3	87	1.6	270
JUN 09...	1615	76500	360	7.7	--	50	600	5.3	66	1.8	800
JUL 11...	1535	5130	600	8.0	28.5	--	290	6.3	82	2.0	600
AUG 08...	1135	7350	420	7.8	29.5	--	190	6.7	88	2.2	320
SEP 12...	1100	2130	970	8.0	28.0	--	57	6.8	87	2.4	36

DATE	TIME	STREP- TOCOCCHI FECAL KF ACAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 25...	6	400	180	110	30	250	5.5	6.0	270	0	200	
NOV 16...	76	330	180	93	24	210	5.0	7.0	180	0	160	
DEC 21...	14	280	72	86	15	100	2.6	6.1	250	0	100	
JAN 30...	580	240	130	78	12	100	2.8	4.6	140	0	120	
FEB 14...	4800	120	30	40	5.8	31	1.2	3.7	110	0	40	
MAR 28...	600	120	13	39	4.6	21	.8	3.9	130	0	26	
APR 26...	720	120	31	40	5.1	20	.8	3.8	110	0	35	
MAY 09...	250	130	48	43	6.1	46	1.7	3.9	100	0	61	
JUN 09...	4600	100	11	33	4.6	27	1.2	3.7	110	0	29	
JUL 11...	2600	200	56	60	11	46	1.4	3.9	170	0	52	
AUG 08...	110	130	44	40	6.4	36	1.4	4.0	100	0	43	
SEP 12...	22	240	74	69	16	100	2.8	5.1	200	0	87	

BRAZOS RIVER BASIN

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08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 25...	390	.3	5.9	1140	1130	--	--	.01	.00	.01	.01
NOV 16...	350	.3	3.2	993	936	--	--	.04	.01	.05	.01
DEC 21...	150	.2	13	592	594	--	--	.81	.02	.83	.07
JAN 30...	160	.2	10	553	554	--	--	.89	.08	.97	.17
FEB 14...	43	.2	8.5	247	226	--	--	1.4	.12	1.5	.13
MAR 28...	24	.2	9.9	177	193	--	--	.72	.06	.78	.01
APR 26...	37	.3	9.0	213	204	1250	162	1.3	.04	1.3	.05
MAY 09...	61	.3	3.6	275	274	--	--	.83	.02	.85	.03
JUN 09...	33	.2	9.4	204	194	1120	154	.41	.06	.47	.06
JUL 11...	69	.3	9.8	301	336	--	--	.52	.02	.54	.09
AUG 08...	51	.2	8.7	233	239	--	--	.14	.02	.16	.01
SEP 12...	150	.3	8.8	539	535	--	--	.00	.02	.00	.03

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 25...	.57	.58	.55	.140	.080	3.7	--	--	25	39	72
NOV 16...	.44	.45	.47	.220	.130	4.3	--	--	47	93	97
DEC 21...	.53	.60	.70	.240	.190	--	4.3	.4	43	83	99
JAN 30...	.70	.87	1.1	.230	.120	--	--	--	245	2140	85
FEB 14...	1.1	1.2	.59	.100	.060	16	--	--	926	26500	82
MAR 28...	1.4	1.4	.68	.280	.060	--	6.1	1.3	1550	106000	90
APR 26...	1.3	1.3	.59	.610	.130	24	--	--	1340	43600	87
MAY 09...	1.6	1.6	1.6	.080	.060	20	--	--	1300	76300	79
JUN 09...	1.0	1.1	--	.470	--	19	--	--	1650	341000	82
JUL 11...	.59	.68	.46	--	.080	8.1	--	--	87	1220	93
AUG 08...	.99	1.0	2.1	.200	.060	--	5.5	5.1	671	13300	87
SEP 12...	.83	.86	.50	.150	.040	6.2	--	--	150	863	97

BRAZOS RIVER BASIN

08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 21...	1305	6	6	200	0	200	0	0	<1	10
MAR 28...	1130	9	2	400	300	70	0	0	<1	30
AUG 08...	1135	3	2	0	0	0	2	0	2	20

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
DEC 21...	0	10	2	0	<3	7	5	2	900	890
MAR 28...	30	0	15	12	<3	50	46	4	24000	24000
AUG 08...	20	0	5	5	0	61	55	6	11000	11000

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
DEC 21...	10	5	5	0	40	30	10	.0	.0	.0
MAR 28...	60	85	84	1	690	690	<1	.0	.0	.0
AUG 08...	10	21	20	1	390	390	0	.1	.0	.1

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 21...	0	0	1	0	0	0	20	0	30
MAR 28...	1	1	0	3	3	0	380	370	6
AUG 08...	1	1	0	0	0	0	50	20	30

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
DEC 21...	35	2.60	3.23	.090	.000

BRAZOS RIVER BASIN

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08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 16...	1350	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	1400	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 09...	1515	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
AUG 08...	1135	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 16...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 09...	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TOTAL TRI- THION IN BOT- TOM MA- TERIAL (UG/KG)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--

BRAZOS RIVER BASIN

08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 1350	MAR 28,79 1130	MAY 9,79 1515	JUN 9,79 1615
TOTAL CELLS/ML	12000	1000	810	0
DIVERSITY: DIVISION	1.5	0.7	1.4	0.0
..CLASS	1.5	0.7	1.4	0.0
..ORDER	2.3	0.7	1.7	0.0
...FAMILY	2.6	0.7	1.7	0.0
....GENUS	2.9	0.7	1.7	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
....MICRACTINIACEAE								
....MICRACTINIUM	140	1	--	-	--	-	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	70	1	--	-	120	14	--	-
....CHODATELLA	70	1	--	-	--	-	--	-
....DICTYOSPHAERIUM	280	2	--	-	--	-	--	-
....GLOEOACTINIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	280	2	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	210	2	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	70	1	--	-	--	-	--	-
....SCENEDESMUS	840	7	830#	80	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	280	2	--	-	--	-	--	-
....CHLAMYDOMONAS	560	5	--	-	120	14	--	-
...ZYGNEMATALES								
....DESMIDIACEAE								
....STAUROSTRUM	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	3800#	32	--	-	--	-	--	-
....SKELETONEMA	140	1	--	-	--	-	--	-
...PENNALES								
....NAVICULACEAE								
....NAVICULA	140	1	--	-	--	-	--	-
...NITZSCHIA								
....NITZSCHIA	1800#	15	--	-	120	14	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	560	5	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	460#	57	--	-
...HORMOGONALES								
....OSCILLATORIACEAE	--	-	--	-	--	-	--	-
....OSCILLATORIA	2700#	23	--	-	--	-	--	-
....PHORMIDIUM	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....TRACHELONAS	--	-	210#	20	--	-	--	-

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

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

BRAZOS RIVER BASIN

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08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 11, 79 1535	AUG 8, 79 1135	SEP 12, 79 1100
TOTAL CELLS/ML	520	14000	74000
DIVERSITY: DIVISION	0.0	0.6	1.0
..CLASS	0.0	0.6	1.0
..ORDER	0.0	0.7	1.2
...FAMILY	1.0	0.8	1.8
....GENUS	1.5	0.8	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	4800	6
...MICRACTINIACEAE						
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	130#	25	100	1	2100	3
....CHODATELLA	--	-	--	-	1200	2
....DICTYOSPHAERIUM	--	-	--	-	1900	3
....GLOEOACTINIUM	--	-	520	4	--	-
....KIRCHNERIELLA	--	-	--	-	1600	2
....OOCYSTIS	--	-	100	1	1800	2
....SELENASTRUM	130#	25	--	-	--	-
....TETRAEDRON	--	-	--	-	*	0
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	1500	2
....CRUCIGENIA	--	-	--	-	600	1
....SCENEDESMUS	260#	50	620	4	11000	15
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	--	-	--	-	*	0
....CHLAMYDOMONAS	--	-	--	-	--	-
...ZYGNEATALES						
...DESMIDIACEAE						
....STAUSTRUM	--	-	100	1	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	310	2	--	-
....SKELETONEMA	--	-	--	-	--	-
...PENNALES						
...NAVICULACEAE						
....NAVICULA	--	-	--	-	--	-
...NITZSCHACEAE						
....NITZSCHIA	--	-	--	-	890	1
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROCOCCALES						
...CHROCOCCACEAE						
....AGMENELLUM	--	-	--	-	37000#	50
....ANACYSTIS	--	-	--	-	6900	9
...HORMOGONALES						
...OSCILLATORIA	--	-	--	-	1200	2
....OSCILLATORIA	--	-	12000#	88	--	-
....PHORMIDIUM	--	-	--	-	1200	2
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	--	-	--	-

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

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

BRAZOS RIVER BASIN

08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	21019	1720	950	53900	330	18700	170	9470	350
NOV. 1978.....	62897	1050	580	98100	180	29900	97	16600	260
DEC. 1978.....	58490	685	380	59800	95	15000	62	9860	200
JAN. 1979.....	321910	558	310	269000	65	56300	49	43000	170
FEB. 1979.....	304990	629	350	287000	80	66100	56	46000	190
MAR. 1979.....	403610	448	250	271000	48	52000	40	43300	140
APR. 1979.....	553090	393	220	327000	38	56500	35	52300	130
MAY 1979.....	788310	699	390	821000	97	207000	63	134000	200
JUNE 1979.....	1004370	469	260	705000	49	134000	42	113000	150
JULY 1979.....	255450	565	310	217000	64	44500	50	34600	170
AUG. 1979.....	208420	443	240	138000	45	25600	39	22100	140
SEPT 1979.....	223570	445	250	148000	47	28500	39	23800	140
TOTAL	4206126	**	**	3390000	**	734000	**	548000	**
WTD. AVG.	11500	540	300	**	65	**	48	**	160

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1570	1770	517	1650	1020	679	348	571	818	756	253	791
2	1330	1870	615	930	1080	543	424	485	469	655	268	752
3	1400	1970	459	750	1090	608	475	470	397	748	293	790
4	1440	1930	452	690	1140	570	390	467	382	667	307	807
5	1050	1930	499	625	909	614	480	433	452	557	333	803
6	1320	1750	393	534	669	632	333	407	421	617	364	839
7	1510	1770	373	430	525	702	308	376	390	558	385	770
8	1600	1910	392	437	530	760	317	411	319	638	422	673
9	1640	1830	417	373	410	800	326	510	342	625	420	708
10	1680	1770	374	466	460	853	336	1120	385	664	437	842
11	1720	1800	405	526	478	956	366	1510	409	630	459	921
12	1810	1830	453	435	426	1020	390	1610	445	602	462	912
13	1930	1890	555	442	413	990	410	1660	522	678	477	964
14	1920	1670	573	353	417	1020	445	1680	550	622	505	1010
15	1900	1710	634	366	444	1040	503	952	581	735	570	989
16	1880	1780	701	629	528	1050	490	614	578	792	684	979
17	1860	1750	746	571	608	1070	494	612	546	766	783	995
18	1880	1700	812	528	609	1000	517	633	549	750	800	964
19	1860	1720	898	554	580	980	544	684	583	732	807	379
20	1740	1730	944	496	625	653	537	795	593	736	740	279
21	1710	1660	1000	421	712	383	349	853	654	717	629	294
22	1780	1320	1050	602	781	384	309	925	722	714	662	328
23	1880	1150	1100	599	922	466	304	872	738	688	674	365
24	1970	1190	1120	641	1080	336	377	412	649	722	644	334
25	2010	1430	1290	738	1090	312	426	506	627	686	674	317
26	2050	1750	1370	784	1160	321	370	305	623	525	709	398
27	2140	1410	1330	826	1200	329	411	326	664	517	746	451
28	2100	979	1550	851	1310	320	461	400	656	491	740	451
29	1990	452	1720	917	---	354	473	443	746	526	729	519
30	1900	345	1810	943	---	321	499	553	725	485	803	572
31	1850	---	1840	1020	---	323	---	706	---	288	797	---
MEAN	1760	1590	851	649	758	658	414	719	551	642	567	673

BRAZOS RIVER BASIN

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08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	21.0	15.0	12.0	8.0	15.0	21.0	23.0	25.0	30.0	28.0	29.0
2	25.0	22.0	18.0	6.0	8.0	15.0	21.0	23.0	24.0	30.0	28.0	27.0
3	26.0	22.0	20.0	5.0	10.0	16.0	20.0	23.0	24.0	30.0	29.0	28.0
4	25.0	22.0	15.0	6.0	10.0	14.0	18.0	23.0	25.0	30.0	29.0	28.0
5	25.0	22.0	13.0	6.0	10.0	15.0	17.0	20.0	25.0	29.0	29.0	28.0
6	26.0	20.0	15.0	7.0	9.0	14.0	17.0	20.0	25.0	28.0	29.0	28.0
7	23.0	18.0	16.0	6.0	8.0	15.0	18.0	20.0	25.0	28.0	30.0	27.0
8	22.0	17.0	13.0	5.0	8.0	16.0	19.0	22.0	25.0	29.0	30.0	27.0
9	22.0	15.0	8.0	5.0	7.0	17.0	19.0	23.0	26.0	28.0	30.0	27.0
10	22.0	17.0	8.0	5.0	7.0	18.0	20.0	24.0	27.0	29.0	29.0	27.0
11	23.0	20.0	8.0	5.0	7.0	16.0	21.0	24.0	26.0	28.0	30.0	27.0
12	24.0	20.0	8.0	6.0	8.0	16.0	22.0	22.0	26.0	29.0	28.0	27.0
13	24.0	22.0	9.0	7.0	11.0	17.0	23.0	21.0	26.0	29.0	29.0	27.0
14	23.0	23.0	11.0	5.0	12.0	18.0	22.0	21.0	26.0	29.0	29.0	27.0
15	21.0	23.0	11.0	5.0	12.0	18.0	23.0	20.0	26.0	30.0	29.0	25.0
16	21.0	22.0	12.0	7.0	13.0	16.0	23.0	20.0	26.0	30.0	30.0	24.0
17	21.0	18.0	13.0	8.0	11.0	16.0	23.0	21.0	26.0	30.0	30.0	23.0
18	20.0	18.0	13.0	9.0	10.0	18.0	23.0	22.0	26.0	30.0	30.0	24.0
19	20.0	18.0	15.0	11.0	9.0	20.0	23.0	23.0	27.0	30.0	29.0	23.0
20	20.0	16.0	17.0	12.0	9.0	18.0	22.0	24.0	28.0	30.0	29.0	23.0
21	21.0	15.0	16.0	13.0	10.0	18.0	22.0	24.0	28.0	30.0	29.0	23.0
22	22.0	16.0	13.0	13.0	12.0	18.0	21.0	24.0	28.0	30.0	30.0	23.0
23	22.0	18.0	13.0	13.0	14.0	17.0	21.0	24.0	28.0	30.0	27.0	24.0
24	22.0	18.0	13.0	11.0	15.0	17.0	21.0	23.0	28.0	30.0	29.0	24.0
25	22.0	19.0	12.0	11.0	13.0	18.0	22.0	22.0	28.0	30.0	28.0	24.0
26	23.0	21.0	13.0	11.0	13.0	18.0	23.0	22.0	28.0	27.0	28.0	24.0
27	22.0	20.0	14.0	11.0	13.0	18.0	22.0	22.0	28.0	28.0	29.0	25.0
28	21.0	17.0	13.0	10.0	14.0	19.0	22.0	24.0	28.0	28.0	29.0	25.0
29	20.0	16.0	15.0	10.0	---	19.0	23.0	25.0	29.0	29.0	29.0	25.0
30	19.0	15.0	16.0	9.0	---	20.0	21.0	25.0	29.0	27.0	29.0	25.0
31	20.0	---	16.0	8.0	---	20.0	---	25.0	---	27.0	29.0	---
MEAN	22.5	19.0	13.5	8.5	10.5	17.0	21.0	22.5	26.5	29.0	29.0	25.5

SAN BERNARD RIVER BASIN

08117500 SAN BERNARD RIVER NEAR BOLING, TX

LOCATION.--Lat 29°18'47", long 95°53'36", Wharton-Fort Bend County line, Hydrologic Unit 12090401, near left bank at downstream side of pile bent of bridge on Farm Road 442, 2.5 mi (4.0 km) downstream from Snake Creek, and 4.5 mi (7.2 km) northeast of Boling.

DRAINAGE AREA.--727 mi² (1,883 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1712: 1958. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 30.81 ft (9.391 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Part of low flow is drainage from areas irrigated with diversions from Colorado River. Diversions above station for irrigation and other uses. Several observations of water temperature were made during the current year.

AVERAGE DISCHARGE.--25 years, 508 ft³/s (14.39 m³/s), 368,000 acre-ft/yr (454 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s (600 m³/s) June 28, 1960, gage height, 42.41 ft (12.927 m); minimum daily, 2.4 ft³/s (0.068 m³/s) Nov. 27-30, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 43.5 ft (13.26 m) in 1913 (probably December). Flood in September 1938 reached a stage of 43.3 ft (13.20 m), from information by local resident.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 7	1000	6,820	193	Apr. 21	1400	4,210	119
Jan. 23	1600	3,630	103	May 5	0700	4,700	133
Feb. 9	0400	4,870	138	May 25	1900	3,270	92.6
Apr. 6	0100	3,530	100	Sept. 22	2000	*16,000	453
							21.51 6.556
							22.83 6.959
							18.90 5.761
							38.81 11.829

Minimum daily discharge, 10.0 ft³/s (0.28 m³/s) Nov. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	15	616	1940	469	124	595	774	372	168	279	298
2	308	14	414	2770	333	102	391	2190	1500	144	229	289
3	284	13	279	2480	295	87	932	2390	1760	125	193	255
4	289	12	195	1940	417	74	2840	2930	1460	116	168	245
5	342	10	151	1600	1850	66	3300	4520	925	111	150	282
6	313	84	185	3250	4090	93	3370	4050	805	129	135	535
7	265	479	257	6500	4700	135	2450	4520	775	210	114	833
8	236	814	300	4960	4730	136	1380	4350	694	381	98	1110
9	230	740	440	4200	4810	111	859	3740	620	348	109	1100
10	203	409	451	4060	4370	85	557	2570	658	435	130	1010
11	183	242	525	3970	3410	68	366	1310	803	457	162	736
12	169	156	516	3490	1960	56	248	786	707	369	174	490
13	152	95	390	2680	894	48	170	525	507	334	168	328
14	130	59	260	2640	547	43	122	369	343	318	182	221
15	130	38	172	2450	377	40	97	289	227	307	182	155
16	98	28	117	1600	274	39	82	258	155	293	184	110
17	68	22	83	1010	215	37	74	225	108	256	169	86
18	58	19	66	687	190	35	79	188	93	235	142	569
19	47	19	62	498	170	34	110	148	84	294	138	6420
20	34	22	61	1050	161	110	1750	122	88	436	149	12300
21	29	71	54	2070	164	132	4020	111	87	571	160	14800
22	29	195	45	2980	171	330	3760	105	80	642	173	15800
23	26	196	38	3590	169	681	3450	141	77	705	189	15200
24	23	181	33	3380	161	376	3280	962	78	655	209	12500
25	22	147	29	2360	155	281	2590	3060	78	550	197	9400
26	21	116	26	1250	150	265	1150	2940	124	479	174	6570
27	20	1290	22	760	150	262	524	1880	195	464	153	4830
28	19	1350	20	523	145	213	330	1000	202	449	145	3760
29	18	760	26	376	---	152	287	642	220	411	154	2460
30	17	704	280	299	---	102	737	456	192	375	193	1130
31	16	---	765	447	---	159	---	389	---	315	256	---
TOTAL	4106	8300	6878	71810	35527	4476	39900	47940	14017	11082	5258	113822
MEAN	132	277	222	2316	1269	144	1330	1546	467	357	170	3794
MAX	342	1350	765	6500	4810	681	4020	4520	1760	705	279	15800
MIN	16	10	20	299	145	34	74	105	77	111	98	86
AC-FT	8140	16460	13640	142400	70470	8880	79140	95090	27800	21980	10430	225800
CAL YR 1978	TOTAL	123644	MEAN 339	MAX 4420	MIN 10	AC-FT	245200					
WTR YR 1979	TOTAL	363116	MEAN 995	MAX 15800	MIN 10	AC-FT	720200					

SAN BERNARD RIVER BASIN

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08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: February to September 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1978 to Current year.

WATER TEMPERATURES: February 1978 to Current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 980 micromhos Apr. 13, 1978; minimum daily, 64 micromhos May 25, 1979

WATER TEMPERATURES: Maximum daily, 30.0°C Sept. 21, 22, 1978; minimum daily, 3.5°C Jan. 5.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 755 micromhos Nov. 15; minimum daily, 64 micromhos May. 25.

WATER TEMPERATURES: Minimum daily, 3.5°C Jan. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
24...	1510	23	630	7.5	21.5	20	7.5	87	.9	56	46
NOV											
09...	1150	757	230	7.0	15.5	90	7.4	76	2.7	500	720
DEC											
20...	1430	61	300	7.4	17.0	60	8.8	94	1.4	62	42
JAN											
31...	0945	444	192	8.0	7.0	110	11.2	95	2.5	1400	140
FEB											
15...	1150	375	172	7.5	17.0	90	7.9	84	1.7	3700	100
MAR											
26...	1530	267	230	7.3	19.5	110	7.8	88	2.2	680	6
APR											
26...	0835	1280	146	7.2	23.0	150	6.3	75	2.1	430	750
MAY											
29...	1645	593	166	7.4	24.5	75	6.6	80	2.5	190	360
JUN											
13...	1035	516	192	7.2	23.5	70	6.4	77	1.5	50	207
JUL											
11...	1315	459	430	7.8	27.5	66	6.7	86	2.1	620	2200
AUG											
07...	1415	111	470	8.0	29.5	32	6.2	82	1.3	48	20
SEP											
11...	1015	756	299	7.9	26.0	30	6.2	78	2.0	270	210

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT											
24...	200	33	51	17	51	1.6	4.7	200	0	19	85
NOV											
09...	77	10	21	5.9	13	.6	6.0	82	0	11	24
DEC											
20...	--	--	--	--	--	--	4.1	99	0	70	7.0
JAN											
31...	68	11	21	3.8	12	.6	2.8	70	0	12	19
FEB											
15...	57	8	17	3.5	9.2	.5	2.4	59	0	7.8	14
MAR											
26...	71	13	21	4.4	17	.9	--	70	0	10	23
APR											
26...	53	6	16	3.2	6.4	.4	3.2	58	0	9.1	7.7
MAY											
29...	59	20	18	3.4	9.2	.5	2.9	48	0	14	16
JUN											
13...	65	10	19	4.2	10	.5	2.5	67	0	12	13
JUL											
11...	150	27	42	11	27	1.0	2.8	150	0	22	45
AUG											
07...	150	17	41	11	33	1.2	2.3	160	0	22	56
SEP											
11...	99	8	27	7.6	18	.8	6.9	110	0	11	32

SAN BERNARD RIVER BASIN

08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 24...	.3	29	377	356	--	--	.21	.01	.22	.02	.85
NOV 09...	.1	13	--	135	--	--	.18	.01	.19	.04	1.3
DEC 20...	.1	12	195	142	--	--	.23	.01	.24	.01	.67
JAN 31...	.1	9.2	118	114	--	--	.33	.06	.39	.13	1.4
FEB 15...	.1	8.1	105	91	--	--	.33	.02	.35	.09	.75
MAR 26...	.1	10	127	120	--	--	.14	.00	.14	.02	.98
APR 26...	.2	9.6	110	84	70	15	1.3	.10	1.4	.07	1.1
MAY 29...	.2	7.4	--	95	--	--	.28	.04	.32	.05	.73
JUN 13...	.2	12	130	106	56	36	.38	.01	.39	.07	.93
JUL 11...	.3	20	256	244	--	--	.14	.02	.16	.06	1.0
AUG 07...	.3	18	272	263	--	--	.34	.04	.38	.01	.61
SEP 11...	.2	30	199	187	--	--	.08	.04	.12	.13	.97

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	.87	.79	.160	.140	11	--	--	18	1.1	95
NOV 09...	1.3	3.0	.320	.220	--	13	1.8	99	202	99
DEC 20...	.68	.44	.260	.150	--	8.8	.9	53	8.7	99
JAN 31...	1.5	2.1	.260	.110	--	--	--	342	410	100
FEB 15...	.84	1.6	.100	.040	11	--	--	105	106	96
MAR 26...	1.0	.70	.120	.040	--	12	--	366	264	62
APR 26...	1.2	.93	.220	.060	16	--	--	127	439	85
MAY 29...	.78	.82	.120	.080	11	--	--	70	112	99
JUN 13...	1.0	--	.160	--	26	--	--	54	75	98
JUL 11...	1.1	.64	.220	.110	10	--	--	44	55	98
AUG 07...	.62	.52	.140	.070	--	9.4	.9	46	14	99
SEP 11...	1.1	.97	.260	.180	16	--	--	67	137	86

08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 09...	1150	4	3	100	0	100	0	0	1	0
DEC 20...	1430	2	2	--	--	100	0	--	--	0
MAR 26...	1530	2	1	100	30	70	0	0	<1	20
AUG 07...	1415	3	3	0	0	100	3	2	1	20

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
NOV 09...	0	0	1	0	3	7	2	5	3100	3000
DEC 20...	0	0	2	--	--	9	--	--	1600	--
MAR 26...	20	0	2	0	<3	13	6	7	3900	3700
AUG 07...	10	10	0	0	<3	20	19	1	1200	1200

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	ME RURY S- VED (UG/L AS HG)
NOV 09...	90	3	1	2	60	50	10	.4	.2	.2
DEC 20...	--	5	0	5	30	--	--	.0	.0	.0
MAR 26...	230	51	47	4	100	100	5	.0	.0	.0
AUG 07...	10	39	24	15	70	60	10	.1	.1	.0

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 09...	0	0	1	0	0	0	20	0	20
DEC 20...	0	0	1	1	--	--	10	--	--
MAR 26...	0	0	0	0	0	0	40	30	10
AUG 07...	0	0	0	0	0	0	20	20	4

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 09...	1150	.0	.00	.00	.0	.00	.00	.00	.00

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)	METHYL PARA- THION, TOTAL (UG/L)
NOV 09...	.00	.00	.00	.00	.00	.00	.00	.00	.02

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 09...	.00	.00	.00	0	.00	1.0	.02	.00

SAN BERNARD RIVER BASIN

08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 9,78 1150	MAR 26,79 1530	MAY 29,79 1645	JUN 13,79 1035
TOTAL CELLS/ML	1200	1100	340	420
DIVERSITY: DIVISION	1.6	1.2	0.6	1.0
..CLASS	1.6	1.2	0.6	1.0
...ORDER	1.9	1.8	1.0	1.6
...FAMILY	2.4	2.5	1.0	1.8
...GENUS	2.5	3.1	1.7	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	86	7	35	3	--	--	26	6
....KIRCHNERIELLA	--	--	--	--	--	--	--	--
....OOCYSTIS	--	--	--	--	--	--	51	12
....TETRAEDRON	--	--	35	3	--	--	--	--
...SCENEDESMACEAE								
....CRUCIGENIA	--	--	140	13	100#	31	--	--
....SCENEDESMUS	230#	19	140	13	150#	46	26	6
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	--	--	--	26	8	--	--
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	170	14	140	13	--	--	--	--
....MELOSIRA	--	--	140	13	52#	15	--	--
...PENNALES								
...FRAGILARIACEAE								
....SYNEDRA	--	--	35	3	--	--	--	--
...NAVICULACEAE								
....GYROSIGMA	29	2	--	--	--	--	--	--
....NAVICULA	120	10	140	13	--	--	--	--
...NITZSCHACEAE								
....NITZSCHIA	140	12	250#	22	--	--	13	3
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	--	--	--	--	--	--	--
....ANACYSTIS	430#	36	--	--	--	--	77#	18
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	--	--	--	--	--	--	--
...OSCILLATORIACEAE								
....OSCILLATORIA	--	--	--	--	--	--	230#	55
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	--	70	6	--	--	--	--

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

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

SAN BERNARD RIVER BASIN

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08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 11,79 1315	AUG 7,79 1415	SEP 11,79 1015
TOTAL CELLS/ML	3000	2600	730
DIVERSITY: DIVISION	0.3	0.5	1.3
..CLASS	0.3	0.5	1.3
..ORDER	0.3	0.6	1.3
...FAMILY	0.3	1.5	1.8
....GENUS	0.3	1.5	2.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	100	14
....KIRCHNERIELLA	--	-	--	-	100	14
...OOCYSTIS	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	43	6
...SCENEDESMUS	--	-	--	-	86	12
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCEAE						
....CYCLOTELLA	--	-	--	-	57	8
....MELOSIRA	--	-	--	-	--	-
...PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	--	-
...NAVICULACEAE						
....GYROSIGMA	--	-	--	-	--	-
...NAVICULA	--	-	--	-	--	-
...NITZSCHACEAE						
....NITZSCHIA	130	4	150	6	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	110#	16
....ANACYSTIS	--	-	51	2	230#	31
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	1000#	39	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	2900#	96	1300#	51	--	-
..EUGLENOPHYCEAE						
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	51	2	--	-

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

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

SAN BERNARD RIVER BASIN

08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1978.....	4106	453	250	2770	48	535	17	192	140
NOV. 1978.....	8300	244	130	3010	22	496	9	205	78
DEC. 1978.....	6878	218	120	2230	19	352	8	152	70
JAN. 1979.....	71810	123	68	13100	11	2090	5	924	39
FEB. 1979.....	35527	123	68	6500	11	1020	5	445	39
MAR. 1979.....	4476	305	170	2040	28	338	12	140	97
APR. 1979.....	39900	145	80	8600	12	1350	6	594	46
MAY 1979.....	47940	154	84	10900	14	1750	6	765	49
JUNE 1979.....	14017	237	130	4870	22	840	9	340	76
JULY 1979.....	11082	442	240	7230	47	1400	17	503	140
AUG. 1979.....	5258	514	280	4010	60	848	20	279	160
SEPT 1979.....	113822	130	72	22100	12	3600	5	1530	41
TOTAL	363116	**	**	87400	**	14600	**	6070	**
WTD.AVG.	995	162	89	**	15	**	6.3	**	52

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	375	700	178	200	185	336	200	394	260	520	403	551
2	380	725	195	100	199	380	224	265	186	514	415	537
3	389	744	208	129	250	400	247	243	183	515	423	551
4	405	750	235	135	210	436	193	277	190	578	433	556
5	434	755	256	177	177	434	96	240	209	590	445	543
6	435	578	325	145	152	370	100	76	221	576	465	434
7	437	406	265	123	109	290	122	75	224	530	500	350
8	450	274	242	117	82	282	130	85	222	465	520	320
9	460	251	196	105	76	300	140	98	227	485	515	295
10	470	262	171	102	81	340	155	123	190	450	501	310
11	485	278	116	115	91	376	183	133	158	445	495	302
12	493	300	115	121	117	410	207	151	185	462	488	310
13	500	325	135	110	125	460	269	201	212	478	495	380
14	498	354	166	98	150	500	274	204	231	470	505	385
15	506	392	200	104	205	530	295	230	265	473	515	382
16	510	419	215	110	206	557	350	288	302	477	511	409
17	504	450	270	120	228	555	409	289	338	475	535	450
18	516	465	327	144	336	570	399	289	404	478	551	255
19	550	500	310	207	339	585	375	250	438	479	553	119
20	576	518	315	175	338	410	269	195	459	420	550	111
21	578	421	322	146	325	377	149	300	475	417	545	98
22	590	275	342	101	306	320	117	475	500	405	540	90
23	615	257	352	99	308	165	108	452	514	350	548	100
24	635	254	371	108	310	200	109	250	515	370	575	105
25	638	239	400	120	311	230	125	64	536	407	600	113
26	625	245	420	134	300	263	153	95	520	406	547	130
27	614	186	444	155	305	295	165	120	498	424	575	145
28	616	166	450	188	300	327	176	140	499	435	570	160
29	630	193	417	200	---	358	227	169	521	445	575	175
30	650	191	350	211	---	390	190	192	530	452	570	183
31	676	---	312	196	---	355	---	230	---	441	550	---
MEAN	524	396	278	139	219	381	205	213	340	466	517	295

SAN BERNARD RIVER BASIN

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08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	---	14.5	---	8.5	17.0	---	22.0	26.0	---	30.0	28.0
2	24.5	17.0	15.5	---	8.5	17.0	22.0	22.0	25.0	29.0	---	27.5
3	24.0	19.5	16.0	4.0	---	16.5	17.0	23.0	25.0	30.0	---	27.5
4	23.5	20.0	---	5.5	---	16.0	17.5	22.0	25.0	28.0	21.0	28.0
5	23.5	20.0	---	3.5	9.5	15.0	17.5	19.5	26.0	---	---	27.0
6	24.0	19.0	---	6.5	8.5	15.5	18.0	20.0	26.0	28.0	---	27.0
7	22.0	17.0	---	7.0	8.0	15.5	19.0	21.0	27.0	---	---	---
8	22.0	15.5	---	5.0	8.5	16.0	---	---	28.0	---	---	26.0
9	22.0	16.0	7.0	5.0	8.5	14.0	---	23.0	28.0	---	---	27.0
10	22.0	16.0	7.0	6.0	8.5	15.0	21.0	24.0	28.0	28.0	29.0	26.5
11	21.5	19.0	8.0	7.0	9.5	16.0	23.0	24.0	27.0	28.0	28.0	26.5
12	21.5	---	8.0	8.0	11.5	16.5	25.0	22.0	25.0	28.5	27.0	26.0
13	21.5	---	9.0	---	14.0	---	24.0	---	25.0	29.0	---	25.5
14	21.5	22.0	9.5	5.0	16.0	---	24.5	23.5	25.0	---	29.0	---
15	19.5	22.0	---	5.5	16.0	---	24.5	23.5	---	---	29.0	25.0
16	19.0	20.0	13.0	8.0	15.5	18.5	---	23.5	25.0	---	29.0	24.0
17	18.0	18.5	---	10.5	15.0	19.0	24.0	24.0	20.0	---	29.0	---
18	17.0	17.0	17.0	12.5	10.5	---	23.0	24.5	27.5	29.0	29.0	23.0
19	17.0	17.0	17.0	17.0	10.0	---	23.0	---	28.0	29.0	28.0	25.0
20	12.5	16.0	16.0	---	9.5	---	21.0	24.0	28.0	29.0	29.0	23.0
21	19.0	16.0	14.0	13.5	12.5	20.0	22.0	---	---	27.0	28.5	23.0
22	---	16.5	13.5	13.0	14.0	---	21.5	---	28.0	28.5	28.0	23.5
23	---	18.0	12.5	13.0	---	---	21.5	25.0	28.0	---	27.0	24.0
24	20.5	19.0	12.5	11.5	14.0	---	22.5	---	28.5	---	27.5	---
25	21.0	20.0	12.0	---	14.0	---	---	23.5	30.0	28.5	---	25.0
26	20.5	---	13.0	11.0	15.0	---	23.5	25.0	28.5	28.0	28.0	24.5
27	21.0	19.0	12.5	11.0	---	---	---	---	28.0	27.5	28.0	---
28	20.0	15.0	---	10.0	17.0	---	23.5	24.0	28.0	29.0	28.0	---
29	20.0	13.5	16.0	---	---	---	21.5	24.5	28.5	29.0	28.0	25.5
30	19.5	14.0	17.5	9.5	---	---	21.0	25.0	---	29.5	28.0	24.5
31	19.0	---	15.0	9.0	---	23.0	---	---	---	29.0	28.0	---
MEAN	20.5	18.0	13.0	8.5	12.0	17.0	21.5	23.0	26.5	28.5	28.0	25.5

A low-flow investigation along a watercourse involves making discharge measurements at selected sites in a given reach of a channel. In addition, discharge measurements of inflow and diversions, field commentary relative to observations, water samples and temperature, and other relevant data are collected. Measuring sites are described to the extent that they may be used in subsequent investigations. At times, temporary recording installations are used to supplement records at regular gaging stations in the study of flow trends.

In tabulating these results, the indicated gains or losses may appear incompatible because of diurnal or other flow variations or because of small inaccuracies in open-channel discharge measurements. These trends in a reach may vary with the seasons, because of regulation, or other factors. Successive investigations may serve to delineate a progressive change in flow trends.

BRAZOS RIVER BASIN

San Gabriel River and Tributaries Low-Flow Investigations

PURPOSE.--To determine the changes in quantity and quality of low flows in the North Fork San Gabriel River, South Fork San Gabriel River and Berry Creek.

REACH.--The investigation was made at three streams: The investigation on the North Fork San Gabriel began at river mile 82.5 above mouth of San Gabriel River, or 4.0 miles upstream from U.S. Highway 183, and ended on the San Gabriel River near Weir at river mile 54.9, a distance of 27.6 river miles. The South Fork San Gabriel investigation began at Farm Road 1174 near Bertram and ended at the mouth at Georgetown, involving a distance along the South Fork San Gabriel River of 31.2 river miles. The Berry Creek investigation began at State Highway 183 at Briggs and ended at the mouth, involving a distance of 30.5 river miles.

PREVIOUS INVESTIGATION.--A base flow study was made on the San Gabriel River in 1964.

SUMMARY.--Two investigations were made, one on April 19, 20, 21, 24, 26, and 27, 1978 and the other on August 15, 16, and 17, 1978. During the investigations there was no storm runoff. A gravel plant operation on the South Fork San Gabriel River at river mile 4.8 was the only diversion being made from the streams. During the investigation in April, evapotranspiration losses were probably minimal; however, during the August investigation, evapotranspiration was probably significant since rainfall was deficient and the weather was hot.

Location and description of data-collection sites, San Gabriel River and tributaries

Site No.	Stream	Location	Date 1978	River miles above mouth	Water temp. (°C)	Discharge in cfs		Specific conductance (micro-mhos at 25°C)	Remarks
						Main stream	Tributary		
1	South Fork San Gabriel River	Lat 30°42'56", long 97°03'02", 5 ft below low-water crossing at Farm Road 1174 near Bertram.	Apr. 19 Aug. 17	31.2	20.0	0.02 0		618	Large gravel and rock deposited in the channel. The banks are sandy loam and black clay.
2	Oatmeal Creek	Lat 30°42'09", long 97°02'11", 800 ft upstream from mouth.	Apr. 19 Aug. 17	29.5	22.0		0.24	470	Channel was solid rock.
3	South Fork San Gabriel River	Lat 30°42'10", long 97°01'52", 300 ft below crossing.	Apr. 19 Aug. 17	29.2	21.0	.50 0		480	Cross section was rock and gravel banks solid rock. Water-quality samples taken.
4	Unnamed Tributary to South Fork San Gabriel River	Lat 30°42'09", long 97°01'51", observed at mouth.	Apr. 19 Aug. 17				0 0		No flow at its mouth.
5	Dog Branch	Lat 30°41'31", long 97°59'32", 1,200 ft upstream from mouth.	Apr. 19 Aug. 17	26.3	19.0		.08 0	560	Deep gravel streambed. Banks are black clay. Discharge estimated.
6	Unnamed Tributary to South Fork San Gabriel River	Lat 30°41'38", long 97°59'27", 750 ft upstream from mouth.	Apr. 19 Aug. 17	26.2			0 0		Cross section would be over black dirt.
7	South Fork San Gabriel River	Lat 30°41'31", long 97°59'23", 150 ft below low-water crossing.	Apr. 19 Aug. 17	26.1	18.0	.69 0		480	Banks are black clay above conglomerate.
8	.....do.....	Lat 30°40'31", long 97°57'46", at the 808 Ranch, 150 ft below road crossing.	Apr. 19 Aug. 17	23.9	24.0 26.5	.75 .01		460 360	Cross section is gravel. Small channel dam 200 ft above measuring site.
9	Unnamed Tributary to South Fork San Gabriel River	Lat 30°40'45", long 97°56'59", 40 ft below highway crossing, 0.6 mi upstream from mouth.	Apr. 19 Aug. 17	23.0	20.0		.02 0	500	Cross section was mud and gravel.
10	Little Creek	Lat 30°30'39", long 97°56'26", 0.2 mi upstream from mouth.	Apr. 19 Aug. 17	21.8	21.5		1.06 0	480	Cross section was gravel and rocks.
11	South Fork San Gabriel River	Lat 30°39'34", long 97°56'14", 800 ft below bridge near Liberty Hill.	Apr. 19 Aug. 17	21.7	23.0	1.74 0		450	Cross section was gravel and rock. Large gravel deposit in channel. Banks are clay. No sign of rock.
12	.....do.....	Lat 30°38'56", long 97°54'35", 800 ft below Martha Chapman Dam.	Apr. 20 Aug. 17	19.4	21.0	1.99 0		442	Cross section was solid rock.
13	Jinks Branch	Lat 30°37'43", long 97°54'14", 1.6 mi upstream from mouth.	Apr. 20 Aug. 17	16.5			.02 0	636	Cross section silty, black mud, very marshy.
14	South Fork San Gabriel River	Lat 30°37'15", long 97°51'39", 600 ft below State Highway 183.	Apr. 20 Aug. 17	14.5	19.0 26.0	2.84 20.01		422 450	Cross section was solid rock. Water-quality sample taken.
15	.....do.....	Lat 30°36'42", long 97°49'07", 600 ft below low-water crossing.	Apr. 20 Aug. 17	11.7	23.0	2.77 0		382	Cross section was solid rock.
16	.....do.....	Lat 30°37'11", long 97°46'38", on Mr. Bud Lee's ranch.	Apr. 20 Aug. 17	8.7	27.5	3.02 0		3.84	Went through Mr. Bud Lee's on the left bank. Cross section was solid rock.
17	Unnamed Tributary to South Fork San Gabriel River	Lat 30°37'25", long 97°46'35", on Mr. Bud Lee's ranch, 250 ft upstream from mouth.	Apr. 20 Aug. 17	8.5	21.0		.01 0	596	Cross section consist of pack sand with banks of sand, rock conglomerate, and some black clay.

Location and description of data-collection sites, San Gabriel River and tributaries--Continued

Site No.	Stream	Location	Date 1978	River miles above mouth	Water temp. (°C)	Discharge in cfs		Specific conductance (micro-mhos at 25°C)	Remarks
						Main stream	tributary		
18	South Fork San Gabriel River	Lat 30°37'00", long 97°43'33", at gravel plant.	Apr. 21 Aug. 17	4.8					Gravel plant pumping approximately 1,200 gpm or 1,728,000 gpd (approximately 2.9 cfs). No return water except by seepage with some evaporation from sludge pit.
19	.....do.....	Lat 30°37'13", long 97°42'40".	Apr. 20 Aug. 17	3.8	25.5 34.0	1.78 .02		382 360	Cross section was gravel.
20	.....do.....	Lat 30°37'32", long 97°41'27", 150 ft below gage at Georgetown.	Apr. 21 Aug. 17	2.3	17.5 26.0	5.44 .02		404 490	Cross section was rock and gravel.
21	.....do.....	Lat 30°38'01", long 97°41'05", at State Highway 29 crossing and 300 ft below the crossing (confluence with North Fork at river mile 63.5).	Apr. 21 Aug. 17	1.5	71.5 32.0	6.54 .01		380 400	Cross section was solid rock. Water-quality samples taken.
<u>North Fork San Gabriel River</u>									
1	North Fork San Gabriel River	Lat 30°44'05", long 97°54'54", 50 ft downstream from county road crossing.	Apr. 26 Aug. 26	82.5	17.0	.22 0		430	Cross section was solid rock.
2	.....do.....	Lat 30°42'11", long 97°52'38", 1,000 ft below crossing at U.S. Highway 183.	Apr. 26 Aug. 16	78.5	19.5	.95 0		430	.....do.....
3	.....do.....	Lat 30°41'57", long 97°51'33", 800 ft above Anderson Branch.	Apr. 26 Aug. 16	77.5	21.0	1.18 0		410	Cross section was rock.
4	.....do.....	Lat 30°41'52", long 97°50'44".	Apr. 26 Aug. 16	76.6	26.0	.96 0		420	.....do.....
5	Sowes Branch	Lat 30°41'25", long 97°50'03", 30 ft upstream from mouth.	Apr. 26 Aug. 16	a75.8	23.5		0.02 0	550	Cross section was rock. Estimate made at site.
6	Unnamed Tributary to North Fork San Gabriel River	Lat 30°41'53", long 97°49'29", 200 ft above mouth, 0.8 mi downstream from Sowes Creek, and 200 ft above mouth.	Apr. 26 Aug. 16	a75.0	23.5 24.5	.40 .01		500 564	.....do.....
7	North Fork San Gabriel River	Lat 30°41'26", long 97°48'45", 900 ft above Hunt's Crossing.	Apr. 26 Aug. 16	74.1	27.0 27.0	1.72 .04		450	Cross section was solid rock.
8	Sycamore Hollow Tributary to North Fork San Gabriel River	Lat 30°40'52", long 97°47'16", near mouth.	Apr. 26 Aug. 16	a72.2			0 0	402	Estimate made at this site. Water coming from storage.
9	Hoggs Hollow Tributary to North Fork San Gabriel River	Lat 30°40'19", long 97°46'11", 1,200 ft upstream from mouth.	Apr. 26 Aug. 16	a70.8	21.5		.05 0	490	Discharge estimated. Cross section was solid rock.
10	North Fork San Gabriel River	Lat 30°40'46", long 97°44'45", 5 mi northwest of Georgetown and 50 ft above crossing.	Apr. 26 Aug. 16	69.5	19.5 27.0	3.58 .34		560 498	Cross section was gravel. Water-quality samples taken.
11	.....do.....	Lat 30°39'42", long 97°42'40", 1,500 ft above gage.	Apr. 26 Aug. 16	66.9	22.0 28.5	4.18 .22		480 480	Cross section was gravel.
12	Unnamed Spring Tributary to North Fork San Gabriel River	Lat 30°39'39", long 97°42'35", 300 ft below North Fork San Gabriel gage 08104700.	Apr. 26 Aug. 16	a66.7	20.5 22.0		.20 .17	630 620	Estimate made at this site. Cross section was gravel.
13	Unnamed Tributary to North Fork San Gabriel River	Lat 30°39'46", long 97°42'11", 0.9 mi upstream from Middle Fork San Gabriel River and at mouth.	Apr. 27 Aug. 16	a66.2	21.0		.002 0	590	Discharge estimated.
14	.....do.....	Lat 30°39'37", long 97°39'59", 0.3 mi upstream from mouth of Middle Fork San Gabriel River and 700 ft upstream from mouth.	Apr. 27 Aug. 16	a65.6	21.5 27.0		.02 <.01	440 410	Discharge estimated. Cross section was gravel.
15	North Fork San Gabriel River	Lat 30°39'11", long 97°41'45", 200 ft below County Club Road at Georgetown.	Feb. 14 Aug. 16	65.5	23.0 33.0	4.56 .26		460 456	Cross section was solid rock. Water-quality samples taken.
16	Middle Fork San Gabriel River	Lat 30°39'01", long 97°41'41", 500 ft upstream from mouth.	Feb. 14 Aug. 16	a65.3	23.0 32.0		.74 .01	540 490	Cross section was rock. Water-quality sample taken.
17	San Gabriel River at Georgetown	Lat 30°39'13", long 97°39'13", 300 ft below gage at control notch.	Feb. 15 Aug. 16	62.3	23.5 35.0	15.4 2.10		550 604	Cross section was rock. Discontinued gage station, 1.2 mi below confluence of North and South Fork San Gabriel Rivers. Water-quality samples taken.

LOW-FLOW INVESTIGATION

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Location and description of data-collection sites, San Gabriel River and tributaries--Continued

Site No.	Stream	Location	Date 1978	River miles above mouth	Water	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
North Fork San Gabriel River--Continued									
18	San Gabriel River near Weir	Lat 30°38'45", long 97°35'06", gaging station 08105300.	Feb. 15 Aug. 16	54.9	23.4 33.0	15.9 2.80		490	Gaging station 8.6 mi below confluence of North and South Fork San Gabriel Rivers. Discharge and temperature obtained from rating table.
Berry Creek									
1	Berry Creek	Lat 30°52'47", long 97°55'11", at U.S. Highway 183 at Briggs.	Apr. 21 Aug. 15	30.5	0 0				Gravel in channel.
2	.....do.....	Lat 30°50'36", long 97°51'30", at State Highway 195 near Florence.	Apr. 21 Aug. 15	25.6					.....do.....
3	Stapp Branch	Lat 30°48'52", long 97°51'18", at county road near Florence and 1.6 mi upstream from mouth.	Apr. 21 Aug. 15	a23.0			0 0		.....do.....
4	Berry Creek	Lat 30°48'38", long 97°49'33", at Farm Road 970 near Florence.	Apr. 21 Aug. 15	22.4		0 0			.....do.....
5	South Berry Creek	Lat 30°46'53", long 97°49'53", at County Road 251 near Andice and 2.0 mi upstream from mouth.	Apr. 21 Aug. 15	a19.8			0 0	436	.....do.....
6	Berry Creek	Lat 30°46'45", long 97°47'45", at County Road 241 near Andice.	Apr. 21 Aug. 15	19.4	20.5	.05 0		430	Discharge estimated. Water-quality samples taken.
7	.....do.....	Lat 30°46'09", long 97°45'43", near State Highway 195 near Florence.	Apr. 21 Aug. 15	16.9		0 0			Gravel in channel.
8	Unnamed Tributary of Berry Creek	Lat 30°46'19", long 97°45'09", 0.2 mi downstream from Cobert mailbox at State Highway 195 and 1.1 mi upstream from mouth.	Apr. 21 Aug. 15	a15.5	18.5		.12 0	542	Discharge estimated. Cross section was mud and gravel.
9	.....do.....	Lat 30°45'13", long 97°44'04", at State Highway 195 and 0.4 mi upstream from mouth.	Apr. 21 Aug. 15	a14.3			0 0		
10	Berry Creek	Lat 30°45'01", long 97°43'56", at low-water crossing.	Apr. 21 Aug. 15	14.4		0 0			Gravel in channel.
11	Small Spring Tributary to Berry Creek	Lat 30°44'4", long 97°44'06", 50 ft from Berry Creek low-water channel.	Apr. 21 Aug. 15	a14.0	21.0 23.0		.02 .003	602 590	Discharge estimated. Water flows into Berry Creek.
12	Berry Creek	Lat 30°44'03", long 97°43'37", at 4-T Ranch.	Apr. 21 Aug. 15	12.8		0 0			Gravel in channel.
13	.....do.....	Lat 30°43'06", long 97°43'36", 200 ft above mouth of Cowan.	Apr. 21 Aug. 15	11.5		0 0			.....do.....
14	Cowan Creek	Lat 30°43'11", long 97°43'38", on 4-T Ranch and 600 ft upstream from mouth.	Apr. 21 Aug. 15	a11.4	21.0 25.5		0.83 .21	542 556	Cross section was gravel and rock.
15	Berry Creek	Lat 30°42'10", long 97°39'58".	Apr. 24 Aug. 15	4.9		0 0			Gravel and solid rock in channel.
16	Berry Creek near Georgetown	Lat 30°41'28", long 97°39'21", 600 ft below gage.	Apr. 21 Aug. 15	3.6	20.0	.18 0		458	Cross section was solid rock.
17	Dry Berry Creek	Lat 30°41'03", long 97°38'14", 0.4 mi upstream from mouth.	Apr. 24 Aug. 15	a1.8	23.0		.08 0	540	Cross section was gravel. Estimate made at this site.
18	Berry Creek	Lat 30°40'33", long 97°36'52", 300 ft below road crossing and 0.4 mi upstream from mouth (confluence with San Gabriel River at river mile 57.9).	Apr. 24 Aug. 15	.4	24.5 31.0	3.30 .36		508 380	Cross section was gravel site at discontinued gaging station 08105200. Water-quality samples taken.

a River miles at mouth.

LOW-FLOW INVESTIGATION

BRAZOS RIVER BASIN

Brushy Creek Low-Flow Investigation

PURPOSE.--To determine the changes in quantity and quality of low flow in Brushy Creek.

REACH.--The investigation began on Brushy Creek, 0.2 mile below Soil Conservation Service (SCS) reservoir designated as Dam No. 1, at county road crossing, 1.5 miles northwest of Leander, and ended at country road crossing, 4 miles east of Round Rock. This involved a distance along Brushy Creek of 20.8 miles.

PREVIOUS INVESTIGATIONS.--No investigations were made prior to the 1978 water year.

SUMMARY.--Two investigations were made, one on April 17-18, 1978 and the other on August 17-18, 1978. During the investigation, there was no storm runoff and no known diversions from the creek. During the investigation in April, evapotranspiration losses were probably minimal; however, during the August 17-18 study evapotranspiration was probably significant since April rainfall was deficient and the weather was extremely hot.

Location and description of data-collection sites, Brushy Creek and tributaries

Site No.	Stream	Location	Date 1978	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro mhos at 25°C)	Remarks
1	North Fork Brushy Creek	Lat 30°35'13", long 97°52'42", 0.2 mi below SCS reservoir designated as Dam No. 1 at county road bridge and 1.5 mi northwest of Leander.	Apr. 17 Aug. 17	71.6	18.5	0.04 0		460	Cross section was caliche.
2	South Fork Brushy Creek	Lat 30°34'20", long 97°52'12", country road crossing on County Road 278 and 1.9 mi upstream from mouth.	Apr. 17 Aug. 17	a69.1			0 0		Cross section was metal culvert.
3	.....do.....	Lat 30°34'55", long 97°51'44", at U.S. Highway 183 and 0.7 mi upstream from mouth.	Apr. 17 Aug. 17	a69.1	19.5		.21 0	600	Cross section was solid rock.
4	Brushy Creek	Lat 30°34'55", long 97°50'27", at Farm Road 2243 and 50 ft below bridge crossing near Leander.	Apr. 17 Aug. 17	69	19.4	.63 0		510	Cross section was solid rock. Water-quality samples taken.
5	Mason Creek	Lat 30°34'52", long 97°50'19", 50 ft upstream from mouth.	Apr. 17 Aug. 17	a68.9	19.3 30.0		.04 .08	474 520	Cross section was solid rock.
6	Unnamed Tributary to Brushy Creek	Lat 30°34'54", long 97°48'58", 100 ft upstream from mouth.	Apr. 17 Aug. 17	a67.5	30.0		0 0		.....do.....
7	.....do.....	Lat 30°35'06", long 97°48'41", 500 ft upstream from mouth.	Apr. 17 Aug. 17	a67.2			0 0		Cross section was caliche.
8	Brushy Creek	Lat 30°34'21", long 97°47'24", at County Road 177 and 30 ft above low-water crossing.	Apr. 17 Aug. 17	65.9	23.0	1.01 0		450	Cross section was gravel.
9	Unnamed Tributary to Brushy Creek.	Lat 30°34'36", long 97°46'50", 0.7 mi upstream from mouth.	Apr. 17 Aug. 17	a65.2			0 0		Cross section was silt and mud. Estimate made at this site.
10	Block House Creek	Lat 30°34'42", long 97°47'01", 800 ft upstream from mouth.	Apr. 17 Aug. 17	a63.3			0 0		Cross section was gravel.
11	Brushy Creek	Lat 30°32'22", long 97°46'44", 150 ft below low-water crossing.	Apr. 17 Aug. 17	62.7	24.9	1.21 0		444	Cross section was solid rock. Water-quality samples taken.
12	Spanish Oak Creek	Lat 30°32'14", long 97°47'00", 0.40 mi upstream from mouth.	Apr. 17 Aug. 17	a62.5	25.0		.81 0	380	Cross section was gravel. Estimate was made at this site.
13	South Brushy Creek	Lat 30°31'02", long 97°44'51", 800 ft upstream from mouth.	Apr. 18 Aug. 17	a60.1	20.0		2.02 0	442	Cross section was smooth solid limestone. Estimate made at this site. Water-quality sample taken.
14	Dry Fork Creek	Lat 30°31'41", long 97°43'18", 1,000 ft upstream from mouth.	Apr. 18 Aug. 18	a58.4	23.0		.15 0	438	Cross section was gravel and rocks.
15	Brushy Creek	Lat 30°31'18", long 97°42'48", 300 ft below low-water crossing.	Apr. 18 Aug. 18	57.9	22.0 24.0	5.64 .02		458 588	Cross section was gravel and rock.
16	.....do.....	Lat 30°30'44", long 97°41'04", 3 ft below low-water crossing and 900 ft below U.S. Highway 35.	Apr. 18 Aug. 18	55.8	23.0	6.36 0		502	Cross section was solid limestone.
17	Onion Branch	Lat 30°31'05", long 97°40'24", 100 ft upstream from mouth.	Apr. 18 Aug. 18	a55.0			0 0		Cross section was gravel. Estimate made at this site.
18	Brushy Creek	Lat 30°30'54", long 97°40'04", 100 ft above Round Road Sewer Plant.	Apr. 18 Aug. 18	54.8	24.0	5.33 0		496	Cross section is large gravel. Sewer plant releasing the average of 1.0 million gpd of effluent. Water-quality samples taken above and below sewer plant.
19	Lake Creek	Lat 30°30'39", long 97°39'36", at low-water crossing and 0.9 mi upstream from mouth.	Apr. 18 Aug. 18	a53.6	27.0		.12 0	646	Cross section was gravel and moss.

LOW-FLOW INVESTIGATION

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Location and description of data-collection sites, Brushy Creek and tributaries--Continued

Site No.	Stream	Location	Date 1978	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
20	Chandler Branch	Lat 30°31'46", long 97°37'13", 200 ft below railroad track and 0.3 mi upstream from mouth.	Apr. 18 Aug. 18	a51.0	26.0		0.05 0	540	Cross section was concrete. Estimate made at this site.
21	Brushy Creek	Lat 30°31'49", long 97°36'48", 150 ft below county road crossing and 4 mi east of Round Rock.	Apr. 18 Aug. 18	50.8	23.0 26.0	9.49 .15		740 1,350	Cross section was rock and Water-quality samples taken.

a River miles at mouth.

LOW-FLOW INVESTIGATION

BRAZOS RIVER BASIN

Salado Creek Low-Flow Investigation

PURPOSE.--To determine the changes in quantity and quality of low flow in Salado Creek.

REACH.--The investigation began at State Highway 195, 0.9 mile northwest of Florence and ended 0.4 mile downstream from Interstate Highway 35 at Salado. This involved a distance along Salado Creek of 26.2 miles.

PREVIOUS INVESTIGATIONS.--No investigations were made prior to the 1978 water year.

SUMMARY.--Two investigations were made, one on April 24, 1978 and the other on August 14, 1978. During the investigation there was no storm runoff and no known diversion from the creek. During the investigation on April 24, evapotranspiration losses were probably minimal; however, during August 14, evapotranspiration was probably significant since rainfall was deficient and the weather was extremely hot.

Location and description of data-collection sites, Salado Creek and tributaries									
Site No.	Stream	Location	Date 1978	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream tributary		Specific conductance (micro-mhos at 25°C)	Remarks
1	South Salado Creek	Lat 30°51'07", long 97°48'19", at State Highway 195, 9.0 mi upstream from mouth, and 0.9 mi northwest of Florence.	Apr. 24 Aug. 14	36.0		0 0		460	Estimate made at this site.
2	North Salado Creek	Lat 30°51'23", long 97°46'00", 5.5 mi upstream from mouth.	Apr. 24 Aug. 14	a27.0			0 0	540	Cross section was silt and gravel. Discharge estimated. Windy.
3	.....do.....	Lat 30°51'13", long 97°44'38", 4.0 mi upstream from mouth.	Apr. 24 Aug. 15	a27.0			0 0	420	Cross section was gravel and clay.
4	South Salado Creek	Lat 30°49'37", long 97°41'38", at County Road 232 and 500 ft upstream from mouth.	Apr. 24 Aug. 14	27.1		0 0			Cross section was gravel and rock.
5	North Salado Creek	Lat 30°49'41", long 97°41'35", 250 ft upstream from mouth.	Apr. 24 Aug. 14	a27.0	22.0 25.5		.08 0	520	Cross section was gravel. Discharge estimated.
6	Salado Creek	Lat 30°49'35", long 97°38'36", at County Road 309.	Apr. 24 Aug. 15	23.5		0 0			Cross section was gravel.
7	.....do.....	Lat 30°51'47", long 97°38'05", 300 ft above old road crossing.	Apr. 24 Aug. 14	20.5		.47 22.5		458 510	Cross section was solid rock with numerous seeps coming from banks in vicinity of measurement. Overlay of gravel on solid rock channel. Water-quality sample taken.
8	Unnamed Tributary to Salado Creek	Lat 30°51'54", long 97°38'04", measured at mouth.	Apr. 24 Aug. 14	a20.5			.38		Cross section was solid rock. Discharge estimated.
9	Salado Creek	Lat 30°53'55", long 97°36'52", 200 ft below Ramsey Creek.	Apr. 24 Aug. 14	16.8	31.5 30.0	2.05 .41		358 356	Cross section was gravel. Ramsey Creek was flowing about 0.5 cfs on April 24 and 0.2 cfs on August 14.
10	Watkins Branch	Lat 30°56'59", long 97°33'20", 1,000 ft upstream from mouth.	Apr. 24 Aug. 14	a10.2	31.0 32.0		.35 .34	402 350	Cross section was solid rock.
11	Salado Creek	Lat 30°56'49", long 97°33'16", 10 ft below mouth of Watkins Branch.	Apr. 24 Aug. 14	10.2	31.0 33.5	4.93 .06		378 340	Cross section was gravel.
12	.....do.....	Lat 30°56'43", long 97°31'58", 50 ft above road to park and 0.4 mi downstream from U.S. Highway 35 at Salado.	Apr. 24 Aug. 14	9.8	25.0 25.0	16.1 9.30		503 560	Cross section was solid rock. Water-quality samples taken.

a River miles at mouth.

BRAZOS RIVER BASIN

San Gabriel River and Tributaries Low-Flow Investigations

PURPOSE.--To determine the changes in quantity and quality of low flows in the North Fork San Gabriel River, South Fork San Gabriel River, and Berry Creek.

REACH.--The investigation was made at three streams: The investigation on the North Fork San Gabriel River began at river mile 82.5 above mouth of San Gabriel River, or 4.0 miles upstream from U.S. Highway 183, and ended on the San Gabriel River near Weir at river mile 54.9, a distance of 27.6 river miles. The South Fork San Gabriel River investigation began at Farm Road 1174 near Bertram and ended at the mouth at Georgetown. This involved a distance along the South Fork San Gabriel River of 31.2 river miles. The Berry Creek investigation began at U.S. Highway 183 at Briggs and ended at the mouth. This involved a distance of 30.5 river miles.

PREVIOUS INVESTIGATIONS.--A base flow study on the San Gabriel River was made in 1964 and two were made during the 1978 water year on the North and South Fork San Gabriel Rivers and Berry Creek.

SUMMARY.--Two investigations were made, one on February 13-15, 1979 and the other on August 13-16, 1979. During the investigation there was no storm runoff. A gravel plant operation on the South Fork San Gabriel River at river mile 4.8 was the only diversion known from the streams. During the investigation in February, evapotranspiration losses were probably minimal; however, during the August investigation, evapotranspiration was probably significant since rainfall was deficient and the weather was hot.

Location and description of data-collection sites, San Gabriel River and tributaries

Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
1	South Fork San Gabriel River	Lat 30°42'56", long 98°03'02", 5 ft below low-water crossing at Farm Road 1174 near Bertram.	Feb. 13 Aug. 13	31.2	13.0 25.5	2.88 .39		580 520	Large gravel and rock deposited in the channel. Banks are sandy loam and black clay.
2	Oatmeal Creek	Lat 30°42'09", long 98°02'11", 800 ft upstream from mouth.	Feb. 13 Aug. 13	a29.5	13.0 26.0		8.14 1.18	320 464	Channel was solid rock.
3	South Fork San Gabriel River	Lat 30°42'10", long 98°01'52", 300 ft below crossing.	Feb. 13 Aug. 13	29.2	12.0 25.5	12.4 1.80		560 470	Cross section was rock and gravel. Banks are solid rock. Water-quality samples taken.
4	Unnamed Tributary to South Fork San Gabriel River	Lat 30°42'09", long 98°01'51", observed at mouth.	Feb. 13 Aug. 13	29.2			0 0		No flow at its mouth.
5	Dog Branch	Lat 30°41'31", long 97°59'32", 1,200 ft upstream from mouth.	Feb. 13 Aug. 13	a26.3	15.0 25.0		2.02 .02	490 560	Deep gravel streambed. Banks are black clay. Estimate made at this site.
6	Unnamed Tributary to South Fork San Gabriel River	Lat 30°41'38", long 97°59'29", 750 ft upstream from mouth.	Feb. 13 Aug. 13	a26.2	16.0 26.0		.39 .04	520 602	Cross section was gravel over black dirt. Estimate made at this site.
7	South Fork San Gabriel River	Lat 30°41'31", long 97°59'23", 150 ft below low-water crossing.	Feb. 13 Aug. 13	26.1	14.0 26.0	16.0 2.29		540 456	Banks are black clay above conglomerate.
8	.....do.....	Lat 30°40'31", long 97°57'46", at 808 Ranch 150 ft below road crossing.	Feb. 13 Aug. 13	23.9	14.0 28.5	17.0 2.62		530 410	Cross section was gravel. Small channel dam 200 ft above measuring site.
9	Unnamed Tributary to South Fork San Gabriel River	Lat 30°40'45", long 97°56'59", 40 ft below highway crossing and 0.6 mi upstream from mouth.	Feb. 13 Aug. 13	a23.0	18.0		.25 0	530	Cross section was mud and gravel.
10	Little Creek	Lat 30°39'39", long 97°56'26", 0.2 mi upstream from mouth.	Feb. 14 Aug. 14	a21.8	15.0 25.5		8.39 1.66	560 440	Cross section was gravel and rocks.
11	South Fork San Gabriel River	Lat 30°39'34", long 97°56'14", 800 ft below bridge near Liberty Hill.	Feb. 14 Aug. 14	21.7	14.0 26.5	25.0 5.37		540 422	Cross section was gravel and rock. Large gravel deposit in channel. Banks are clay. No sign of rock.
12	.....do.....	Lat 30°38'56", long 97°54'35", 800 ft below Martha Chapman Dam.	Feb. 14 Aug. 14	19.4	15.0 27.5	34.0 4.83		540 404	Cross section was solid rock.
13	Jinks Branch	Lat 30°37'43", long 97°54'14", 1.6 mi upstream from mouth.	Feb. 14 Aug. 14	a16.5	15.0		.38 0	650	Cross section was silty and very marshy with black mud.
14	South Fork San Gabriel River	Lat 30°37'15", long 97°51'39", 600 ft below U.S. Highway 183.	Feb. 14 Aug. 14	14.5	17.0 28.5	39.2 7.10		544 424	Cross section was solid rock. Water-quality sample taken.
15	.....do.....	Lat 30°36'42", long 97°49'07", 600 ft below low-water crossing.	Feb. 14 Aug. 14	11.7	18.0 29.0	45.2 8.51		530 404	Cross section was solid rock.
16	.....do.....	Lat 30°37'11", long 97°46'38", on Mr. Bud Lee's ranch.	Feb. 14 Aug. 14	8.7	21.0 32.0	46.4 8.84		516 360	Went through Mr. Bud Lee's on the left bank. Cross section was solid rock.
17	Unnamed Tributary to South Fork San Gabriel River	Lat 30°37'25", long 97°46'35", on Mr. Bud Lee's ranch 250 ft	Feb. 14 Aug. 14	a8.5	20.5 24.0		.53 .02	620 584	Cross section consist of pack sand with banks of sand, rock conglomerate, and some black clay.
18	South Fork San Gabriel River	Lat 30°37'00", long 97°43'33", at gravel plant.	Feb. 14 Aug. 15	4.8					Gravel plant pumping approximately 1,200 gpm or 1,728,000 gpd (approximately 2.9 cfs). No return except by seepage with some evaporation from sludge pit.

Location and description of data-collection sites, San Gabriel River and tributaries--Continued

Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
19	South Fork San Gabriel River	Lat 30°37'13", long 97°42'40".	Feb. 15 Aug. 15	3.8	17.0 25.0	55.0 11.7		530 404	Cross section was gravel.
20	.....do.....	Lat 30°37'32", long 97°41'27", 150 ft below gage at Georgetown.	Feb. 15 Aug. 15	2.3	17.0 27.0	55.1 12.3		520 400	Cross section was rock and gravel.
21	.....do.....	Lat 30°38'01", long 97°41'05", at State Highway 29 crossing and 300 ft below the crossing (confluence with North Fork at river mile 63.5).	Feb. 15 Aug. 15	1.5	19.0 29.0	56.2 11.9		520 396	Cross section was solid rock. Water-quality samples taken.
<u>North Fork San Gabriel River</u>									
1	North Fork San Gabriel River	Lat 30°44'05", long 97°54'54", 50 ft downstream from county road crossing.	Feb. 13 Aug. 13	82.5	14.0 25.0	93.2 11.1		510 440	Cross section was solid rock.
2	.....do.....	Lat 30°42'11", long 97°52'38", 1,000 ft below crossing at U.S. Highway 183.	Feb. 13 Aug. 13	78.5	13.5 26.0	93.6 12.9		510 440	.....do.....
3	.....do.....	Lat 30°41'57", long 97°51'33", 800 ft above Anderson Branch.	Feb. 13 Aug. 13	77.5	15.2 27.0	98.0 14.2		500 440	Cross section was rock.
4	.....do.....	Lat 30°41'52", long 97°50'44".	Feb. 13 Aug. 13	76.6	17.0 27.0	105 10.6		490 440	.....do.....
5	Sowes Branch	Lat 30°41'25", long 97°50'03", 30 ft upstream from mouth.	Feb. 13 Aug. 13	a75.8	17.0 27.5		2.15 .01	530 480	Cross section was rock. Estimate made at this site.
6	Unnamed Tributary to North Fork San Gabriel River	Lat 30°41'53", long 97°49'29", 200 ft above mouth, 0.8 mi downstream from Sowes Creek, and 200 ft above mouth.	Feb. 13 Aug. 13	a75.0	19.5 27.5		5.39 .04	550 561	.....do.....
7	North Fork San Gabriel River	Lat 30°41'26", long 97°48'45", 900 ft above Hunt's crossing.	Feb. 13 Aug. 13	74.1	17.5 30.0	119 16.5		505 399	Cross section was solid rock.
8	Sycamore Hollow Tributary to North Fork San Gabriel River	Lat 30°40'52", long 97°47'16", near mouth.	Feb. 14 Aug. 14	a72.2	16.7 24.0		.04 .07	735 521	Estimate made at this site. Water coming from storage.
9	Hoggs Hollow Tributary to North Fork San Gabriel River	Lat 30°40'19", long 97°46'11", 1,200 ft upstream from mouth.	Feb. 14 Aug. 14	a70.8	14.5 24.0		.54 .01	510 430	Cross section was solid rock. Estimated made at this site.
10	North Fork San Gabriel River	Lat 30°40'46", long 97°44'45", 5 mi northwest of Georgetown and 50 ft above crossing.	Feb. 14 Aug. 14	69.5	15.5 27.0	120 18.0		515 440	Cross section was gravel. Water-quality samples taken.
11	North Fork San Gabriel River near Georgetown	Lat 30°39'42", long 97°42'40", 1,500 ft above gage.	Feb. 14 Aug. 14	66.9	16.5 29.0	138 21.0		520 435	Cross section was gravel.
12	Unnamed Spring Tributary to North Fork San Gabriel River	Lat 30°39'39", long 97°42'36", 300 ft below North Fork San Gabriel River gage 08104700.	Feb. 14 Aug. 14	a66.7	21.5		1.20 .04	610 610	Cross section was gravel. Estimate made at this site.
13	Unnamed Tributary to North Fork San Gabriel River	Lat 30°39'46", long 97°42'11", 0.9 mi upstream from Middle Fork San Gabriel River and at mouth.	Feb. 14 Aug. 14	a66.2			.44 0	600	Discharge estimated.
14	.....do.....	Lat 30°39'37", long 97°39'59", 0.3 mi upstream from mouth of Middle Fork San Gabriel River and 700 ft upstream from mouth.	Feb. 14 Aug. 14	a65.6	29.0		.30 .03	575 520	Cross section was gravel. Discharge estimated.
15	North Fork San Gabriel River	Lat 30°39'11", long 97°41'45", 200 ft below County Club Road at Georgetown.	Feb. 14 Aug. 15	65.5	18.3 28.5	137 20.7		512 400	Cross section was solid rock. Water-quality samples taken.
16	Middle Fork San Gabriel River	Lat 30°39'01", long 97°41'41", 100 ft upstream from mouth.	Feb. 14 Aug. 14	a65.3	18.5 28.6		7.37 2.92	545 460	Cross section was rock. Water-quality sample taken.
17	San Gabriel River at Georgetown	Lat 30°39'13", long 97°39'19", 300 ft below gage at control notch.	Feb. 15 Aug. 15	62.3	17.5 26.0	215 61.8		525 500	Cross section was rock. Dis- continued gaging station, 1.2 mi below confluence of North and South Fork San Gabriel Rivers. Water-quality sam- ples taken.
18	San Gabriel River near Weir	Lat 30°38'45", long 97°35'06", gaging station 08105300.	Feb. 15 Aug. 15	54.9	18.5 26.5	323 106		530 470	Gaging station 8.6 mi below confluence of North and South Fork San Gabriel Riv- ers. Discharge from rating table.
<u>Berry Creek</u>									
1	Berry Creek	Lat 30°52'47", long 97°55'11", at U.S. Highway 183 at Briggs.	Feb. 15 Aug. 14	30.5	16.0 25.0	.30 .01		530 518	Cross section was mud and gravel. Estimate made at this site. Water-quality samples taken.

LOW-FLOW INVESTIGATION

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Location and description of data-collection sites, San Gabriel River and tributaries--Continued

Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
Berry Creek--Continued									
2	Berry Creek	Lat 30°50'36", long 97°51'30", at State Highway 195 near Florence.	Feb. 15 Aug. 14	25.6	17.0 27.5	4.49 .38		510 594	Cross section was gravel.
3	Stapp Branch	Lat 30°48'52", long 97°51'18", at county road near Florence and 1.6 mi upstream from mouth.	Feb. 15 Aug. 14	a23.0	17.0		1.37 0	435	Cross section was silt and gravel.
4	Berry Creek	Lat 30°48'38", long 97°49'33", at Farm Road 970 near Florence.	Feb. 15 Aug. 14	22.4	17.5 22.4	11.2 1.15		490 418	Cross section was large rock and gravel.
5	South Berry Creek	Lat 30°46'53", long 97°49'53", at County Road 251 near Andice and 2.0 mi upstream from mouth.	Feb. 15 Aug. 14	a19.8	17.5 28.4		5.61 .62	520 436	Cross section was gravel and moss.
6	Berry Creek	Lat 30°46'45", long 97°47'45", at County Road 241 near Andice.	Feb. 15 Aug. 14	19.4	17.5 28.9	24.6 2.60		420 410	Discharge estimated. Water-quality samples taken.
7	.....do.....	Lat 30°46'09", long 97°45'43", near State Highway 195 near Florence.	Feb. 15 Aug. 14	16.9	18.0 28.3	25.4 3.16		480 406	Cross section was gravel.
8	Unnamed Tributary of Berry Creek	Lat 30°46'19", long 97°45'09", 0.2 mi downstream from Cobert mailbox at State Highway 195 and 1.1 mi upstream from mouth.	Feb. 15 Aug. 14	a15.5	18.5 26.7		1.57 .18	575 550	Cross section was mud and gravel. Discharge estimated.
9	.....do.....	Lat 30°45'13", long 97°44'04", of State Highway 195 and 0.4 mi upstream from mouth.	Feb. 15 Aug. 15	a14.3			0 0		
10	Berry Creek	Lat 30°45'01", long 97°43'56", at low-water crossing.	Feb. 15 Aug. 15	14.4	19.0 33.5	27.8 .47		498 324	Cross section was gravel.
11	Small Spring Tributary to Berry Creek	Lat 30°44'42", long 97°44'06", 50 ft from Berry Creek low-water channel.	Feb. 15 Aug. 15	a14.0	24.0 20.0		.06 .07	580 700	Water flows into Berry Creek. Discharge estimated.
12	Berry Creek	Lat 30°44'03", long 97°43'37", at 4-T Ranch.	Feb. 15 Aug. 15	12.8	19.0	18.6 0		490	Cross section was gravel.
13	.....do.....	Lat 30°43'06", long 97°43'36", 200 ft above mouth of Cowan Creek.	Feb. 15 Aug. 15	11.5	22.0 22.0			470	Cross section was gravel and rock.
14	Cowan Creek	Lat 30°43'11", long 97°43'48", on 4-T Ranch and 600 ft upstream from mouth.	Feb. 15 Aug. 15	a11.4	21.0 26.5		6.50 2.66	600 556	.....do.....
15	Berry Creek	Lat 30°42'10", long 97°39'58".	Feb. 15 Aug. 16	4.9	17.5 24.5	27.0 7.35		495 534	
16	Berry Creek near Georgetown	Lat 30°41'28", long 97°39'21", 600 ft below the gage.	Feb. 15 Aug. 16	3.6	19.5 22.5	33.2 14.3		510 566	Cross section was solid rock.
17	Dry Berry Creek	Lat 30°41'03", long 97°38'14", 0.4 mi upstream from mouth.	Feb. 15 Aug. 16	a1.8	19.0 25.0		7.50 .01	470 430	Cross section was gravel. Estimate made at this site.
18	Berry Creek	Lat 30°40'33", long 97°36'52", 300 ft below road crossing and 0.4 mi upstream from mouth (confluence with San Gabriel River at river mile 57.9).	Feb. 15 Aug. 15	.4	17.2 23.0	54.2 25.3		510 540	Cross section was gravel site of discontinued gaging station 08105200. Water-quality samples taken.

a River miles at mouth.

BRAZOS RIVER BASIN

Brushy Creek Low-Flow Investigation

PURPOSE.--To determine the changes in quantity and quality of low flow in Brushy Creek.

REACH.--The investigation began on Brushy Creek, 0.2 mile below the Soil Conservation Service (SCS) reservoir designated as Dam No. 1 at county road crossing, 1.5 miles northwest of Leander, and ended at country road crossing, 4 miles east of Round Rock. This involved a distance of 20.8 miles along Brushy Creek.

PREVIOUS INVESTIGATIONS.--Two previous investigations were made in the 1978 water year.

SUMMARY.--Two investigations were made, one on February 13-14, 1979 and the other on August 13-14, 1979. During the investigations, there was no storm runoff and no known diversions from the creek. During the investigation in February, evapotranspiration losses were probably minimal; however, during August 13-14, evapotranspiration was probably significant since rainfall was deficient and because the weather was extremely hot.

Location and description of data-collection sites, Brushy Creek and tributaries									
Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
1	North Fork Brushy Creek	Lat 30°35'13", long 97°52'42", 0.2 mi below SCS reservoir designated as Dam No. 1 at county road bridge and 1.5 mi northwest of Leander.	Feb. 13 Aug. 13	71.6	11.5 26.6	5.69 1.85		295 250	Cross section was caliche.
2	South Fork Brushy Creek	Lat 30°34'20", long 97°52'12", at county road crossing on County Road 278 and 1.9 mi upstream from mouth.	Feb. 13 Aug. 13	a69.1	13.0		0.22 0	309	Cross section was metal culvert.
3	.....do.....	Lat 30°34'55", long 97°51'44", at U.S. Highway 183 and 0.7 mi upstream from mouth.	Feb. 13 Aug. 13	a69.1	14.0 24.6		1.12 .32	321 560	Cross section was solid rock.
4	Brushy Creek	Lat 30°34'55", long 97°50'27", at Farm Road 2243 and 50 ft below bridge crossing near Leander.	Feb. 13 Aug. 13	69	13.0 26.0	10.8 3.07		302 400	Cross section was solid rock. Water-quality samples taken.
5	Mason Creek	Lat 30°34'52", long 97°50'19", 50 ft upstream from mouth.	Feb. 13 Aug. 13	a68.9	12.0 27.3		3.24 .20	304 370	Cross section was solid rock.
6	Unnamed Tributary to Brushy Creek	Lat 30°34'54", long 97°48'58", 100 ft upstream from mouth.	Feb. 13 Aug. 13	a67.5	12.5		.34 0	316	.....do.....
7	.....do.....	Lat 30°35'06", long 97°48'41", 500 ft upstream from mouth.	Feb. 13 Aug. 13	a67.2	14.0		.47 0	325	Cross section was caliche.
8	Brushy Creek	Lat 30°34'21", long 97°47'24", at County Road 177 and 30 ft above low-water crossing.	Feb. 13 Aug. 13	65.5	14.5 25.8	21.7 3.66		322 400	Cross section was gravel.
9	Unnamed Tributary to Brushy Creek	Lat 30°34'36", long 97°46'50", 0.7 mi upstream from mouth.	Feb. 13 Aug. 13	a65.2	14.0 25.5		.86 .01	390 476	Cross section was silt and mud. Discharge estimated.
10	Block House Creek	Lat 30°32'42", long 97°47'01", 800 ft upstream from mouth.	Feb. 13 Aug. 13	a63.3	15.0		10.8 0	440	Cross section was gravel.
11	Brushy Creek	Lat 30°22'22", long 97°46'44", 150 ft below low-water crossing.	Feb. 13 Aug. 13	62.7	15.5 28.9	36.7 3.92		444 380	Cooss section was solid rock. Water-quality samples taken.
12	Spanish Oak Creek	Lat 30°32'14", long 97°47'00", 0.4 mi upstream from mouth.	Feb. 13 Aug. 13	a62.5	16.0 28.9		4.25 .02	438 358	Cross section was gravel. Discharge estimated.
13	South Brushy Creek	Lat 30°32'14", long 97°47'00".	Feb. 14 Aug. 13	a60.1	14.0 32.5		11.5 .11	480 354	Cross section was smooth solid limestone. Discharge estimated. Water-quality sample taken.
14	Dry Fork Creek	Lat 30°31'41", long 97°43'18", 1,000 ft upstream from mouth.	Feb. 14 Aug. 13	a58.4	15.5		.58 0	500	Cross section was gravel and rocks.
15	Brushy Creek	Lat 30°31'18", long 97°42'48", 300 ft below low-water crossing.	Feb. 14 Aug. 13	57.9	14.5 27.0	54.3 4.84		495 360	Cross section was gravel for February and rock for August.
16	.....do.....	Lat 30°30'44", long 97°42'48", 3 ft below low-water crossing and 900 ft below U.S. Highway 35.	Feb. 14 Aug. 14	55.8	14.5 26.1	72.9 6.30		500 450	Cross section was solid limestone.
17	Onion Branch	Lat 30°31'05", long 97°40'24", 100 ft upstream from mouth.	Feb. 14 Aug. 14	a55.0	15.5 25.5		.77 .22	585 490	Cross section was gravel. Discharge estimated.
18	Brushy Creek	Lat 30°30'54", long 97°40'04", 100 ft above Round Rock sewer plant.	Feb. 14 Aug. 14	54.8	15.5 27.0	70.6 7.53		500 438	Cross section was large gravel. Sewer plant was releasing an average of 1.5 million gpd of effluent. Water-quality samples taken above and below sewer plant. Conductance below plant was 500 micromhos at a temperature of 16.5°C.
19	Lake Creek	Lat 30°30'39", long 97°39'36", at low-water crossing and 0.9 mi upstream from mouth.	Feb. 14 Aug. 14	a53.6	18.0		5.13 0	690	Cross section was gravel and moss.

LOW-FLOW INVESTIGATION

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Location and description of data-collection sites, Brushy Creek and tributaries--Continued

Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs Main stream	tributary	Specific conductance (micro-mhos at 25°C)	Remarks
20	Chandler Branch	Lat 30°31'46", long 97°37'13", 200 ft below railroad track and 0.3 mi upstream from mouth.	Feb. 14 Aug. 14	a51.0	15.5 24.6		5.48 .31	530 584	Cross section was concrete. Estimate made at this site.
21	Brushy Creek	Lat 30°31'49", long 97°36'48", 150 ft below county road crossing and 4 mi east of Round Rock.	Feb. 14 Aug. 14	50.8	17.5 25.7	98.5 9.61		545 622	Cross section was rock and gravel. Water-quality samples taken.

a River miles at mouth.

LOW-FLOW INVESTIGATION

BRAZOS RIVER BASIN

Salado Creek Low-Flow Investigation

PURPOSE.--To determine the changes in quantity and quality of low flow in Salado Creek.

REACH.--The investigation began at State Highway 195, 0.9 mile northwest of Florence, and ended 0.4 mile downstream from U.S. Highway 35 at Salado. This involved a distance of 26.2 miles along Salado Creek.

PREVIOUS INVESTIGATIONS.--Two base flow investigations were made during the 1978 water year.

SUMMARY.--Two investigations were made, one on February 16, 1979 and the other on August 15, 1979. During the investigation there was no storm runoff and no known diversions from the creek. During the investigation on February 16, evapotranspiration losses were probably minimal; however, during August 15, evapotranspiration was probably significant since rainfall was deficient and the weather was hot.

Location and description of data-collection sites, Salado Creek and tributaries

Site No.	Stream	Location	Date 1979	River miles above mouth	Water temp. (°C)	Discharge in cfs		Specific conductance (micro-mhos at 25°C)	Remarks
						Main stream	tributary		
1	South Salado Creek	Lat 30°51'07", long 97°48'19", at State Highway 195, 9.0 mi upstream from mouth, and 0.9 mi northwest of Florence.	Feb. 16 Aug. 15	36.0	6.0 27.3	0.49 .04		500 460	Cross section was solid rock and caliche. Very windy downstream. Estimate made at this site.
2	North Salado Creek	Lat 30°51'23", long 97°46'00", 5.5 mi upstream from mouth.	Feb. 16 Aug. 15	a27.0	7.0		0.13 0	540	Cross section was silt and gravel. Discharge estimated. Windy.
3	.....do.....	Lat 30°51'13", long 97°44'38", 4.0 mi upstream from mouth.	Feb. 16 Aug. 15	a27.0	8.0		.54 0	420	Cross section was gravel and clay. Windy.
4	South Salado Creek	Lat 30°49'37", long 97°41'38", at County Road 232 and 500 ft upstream from mouth.	Feb. 16 Aug. 15	27.1	8.0 27.1	7.09 .45		502 379	Cross section was gravel and rock. Windy. Water-quality sample taken.
5	North Salado Creek	Lat 30°49'41", long 97°41'35", 250 ft upstream from mouth.	Feb. 16 Aug. 15	a27.0	9.0 25.5		5.38 1.15	552 540	Cross section was solid rock.
6	Salado Creek	Lat 30°49'35", long 97°38'36", at County Road 309.	Feb. 16 Aug. 15	23.5	8.0	4.86 0		500	.....do.....
7	.....do.....	Lat 30°51'47", long 97°38'05", 300 ft above old road crossing.	Feb. 16 Aug. 15	20.5	10.0 24.5	7.1 1.53		540 484	Cross section was large gravel. Numerous seeps coming from banks in vicinity of measurement. Overlay of gravel on solid rock channel. Water-quality sample taken.
8	Unnamed Tributary to Salado Creek	Lat 30°51'54", long 97°38'04", measured at mouth.	Feb. 16 Aug. 15	a20.5	13.5 24.6		.96 .15	590 502	Cross section was solid rock.
9	Salado Creek	Lat 30°53'55", long 97°36'52", 200 ft below Ramsey Creek.	Feb. 16 Aug. 15	16.8	10.5 26.1	21.7 7.22		550 406	Cross section was gravel. Ramsey Creek was flowing about 1.0 cfs on February 16 and 3.0 cfs on August 15.
10	Watkins Branch	Lat 30°56'59", long 97°33'20", 1,000 ft upstream from mouth.	Feb. 16 Aug. 15	a10.2	6.5 24.5		1.80 2.77	605 476	Cross section was solid rock.
11	Salado Creek	Lat 30°56'49", long 97°33'16", 10 ft below mouth of Watkins Branch.	Feb. 16 Aug. 15	10.2	9.0 25.4	47.3 17.1		530 436	.....do.....
12	.....do.....	Lat 30°56'43", long 97°31'58", 50 ft above road to park and 0.4 mi downstream from U.S. Highway 35 at Salado.	Feb. 16 Aug. 15	9.8	12.5 24.9	72.3 53.2		590 510	Cross section was solid rock. Water-quality samples taken.

a River miles at mouth.

BRAZOS RIVER LOW-FLOW INVESTIGATIONS--Continued

WATER-QUALITY DATA FOR SAN GABRIEL RIVER, BRUSHY CREEK, SALADO CREEK, AND TRIBUTARIES, FEBRUARY AND AUGUST 1979

SITE	STREAM	DATE	DISCHARGE (FT ³ /S)	SPECIFIC CONDUCT- ANCE (MICRO MHOS)	PH (UNITS)	TEMP- ATURE (DEG C)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAGNE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION (RATIO)	DIS- SOLVED POTAS- SIUM (P) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (MG/L AS CO ₃)	DIS- SOLVED SUL- FATE (SO ₄) (CL) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (MG/L AS F)	DIS- SOLVED SILICA (SIO ₂ (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)
3	South Fork San Gabriel River	Feb. 13	12.0	543	8.4	12.0	260	50	85	12	12	0.3	1.1	250	4	31	26	0.3	6.9	302
14	.....Do.....	Feb. 14	39	526	8.5	17.0	250	36	81	11	11	.3	1.1	250	4	30	21	.3	7.2	290
21	.....Do.....	Feb. 15	--	501	8.3	19.0	230	37	74	12	9.7	.3	1.2	240	0	30	21	.2	6.8	273
21	.....Do.....	Aug. 15	11	396	8.3	29.0	190	30	53	13	11	.4	1.1	190	0	18	13	.3	12	215
10	North Fork San Gabriel River	Feb. 14	120	500	8.5	15.5	250	43	80	13	8.9	.2	1.5	240	8	30	16	.3	6.7	283
10	.....Do.....	Aug. 14	18	440	8.4	27.0	180	0	46	16	13	.4	1.2	220	0	22	21	.3	11	239
14	.....Do.....	Feb. 14	137	504	8.5	18.5	250	38	78	13	8.9	.2	1.5	240	8	32	19	.3	7.1	286
14	.....Do.....	Aug. 14	20	400	8.2	28.5	190	22	48	18	13	.4	1.4	210	0	19	17	.3	11	231
16	Middle Fork San Gabriel River	Feb. 14	7.4	535	8.3	18.5	260	23	78	16	14	.4	.8	290	0	20	21	.1	5.5	298
16	.....Do.....	Aug. 14	2.9	460	8.2	28.5	210	17	56	18	14	.4	.7	240	0	16	25	.2	13	261
17	San Gabriel River at Georgetown	Feb. 14	225	521	8.4	17.5	250	42	80	13	11	.3	1.6	250	4	31	17	.2	7.3	288
17	.....Do.....	Aug. 14	61	500	8.0	26.0	230	28	65	16	13	.4	1.2	250	0	20	22	.3	11	272
1	Berry Creek	Feb. 15	.30	523	8.2	16.0	230	20	89	2.6	18	.5	2.6	260	0	27	11	.4	14	293
1	.....Do.....	Aug. 14	.01	518	7.7	25.0	260	37	99	2.8	13	.4	.9	270	0	21	7.8	.5	9.8	155
6	.....Do.....	Feb. 15	25	497	8.3	17.5	240	31	90	2.8	12	.3	1.5	250	0	30	16	.4	7.9	284
6	.....Do.....	Aug. 14	2.6	410	8.1	29.0	170	4	63	2.5	12	.4	.9	200	0	18	15	.4	7.8	218
17.5	.....Do.....	Feb. 15	54	503	8.3	19.0	260	44	89	8.6	10	.3	1.4	260	0	29	21	.3	7.7	295
17.5	.....Do.....	Aug. 14	25	540	8.2	23.0	250	24	80	13	9.0	.2	.9	280	0	16	13	.3	10	280
4	Brushy Creek	Feb. 13	11	430	8.6	13.0	220	38	84	2.5	8.2	.2	1.5	190	16	24	16	.3	6.6	253
4	.....Do.....	Aug. 13	3.1	400	7.9	26.0	180	12	70	2.4	8.6	.3	1.0	210	0	18	9.9	.3	8.9	223
11	.....Do.....	Feb. 13	37	456	8.4	15.5	220	35	83	3.6	8.9	.3	1.3	220	4	24	19	.2	7.5	260
11	.....Do.....	Aug. 13	3.9	380	8.2	29.0	170	2	61	3.3	8.8	.3	1.1	200	0	17	12	.3	8.4	211
13	South Fork Brushy Creek	Feb. 14	12	504	8.5	14.0	240	33	76	13	10	.3	1.3	240	8	29	23	.2	6.2	285
13	.....Do.....	Aug. 13	11	354	8.6	32.5	170	7	33	22	9.4	.3	.4	180	11	8.9	13	.2	17	204
18	Brushy Creek	Feb. 14	71	502	8.4	15.5	240	34	81	18.6	11	.3	1.4	240	4	29	23	.2	7.2	284
18	.....Do.....	Aug. 14	7.5	438	8.1	27.5	200	17	61	11	11	.3	1.1	220	0	18	17	.3	11	239
21	.....Do.....	Feb. 14	98	544	8.3	17.5	250	57	88	8.3	16	.4	1.8	240	0	36	30	.3	7.1	306
21	.....Do.....	Aug. 14	9.6	622	8.1	25.5	250	24	80	11	34	.9	2.3	270	0	30	46	.3	11	348
4	South Salado Creek	Feb. 16	7.1	493	8.3	8.0	210	34	78	4.7	19	.6	2.2	220	0	36	24	.3	2.9	276
4	.....Do.....	Aug. 15	.45	379	8.0	27.0	170	19	59	4.7	16	.5	.9	180	0	22	17	.4	9.1	218
7	Salado Creek	Feb. 16	7.2	495	8.3	10.0	240	40	76	11	12	.3	1.2	250	0	24	19	.2	5.5	272
7	Salado Creek	Feb. 16	7.2	495	8.3	10.0	240	30	76	11	12	.3	1.2	250	0	24	19	.2	5.5	272
7	.....Do.....	Aug. 15	1.5	484	8.1	24.5	260	19	75	17	4.1	.1	1.1	290	0	14	12	.3	9.6	276
-	.....Do.....	Feb. 16	72	523	8.2	12.5	260	40	80	15	9.5	.3	.9	270	0	22	22	.2	6.8	290
-	.....Do.....	Aug. 15	53	510	8.1	25.0	250	33	77	15	9.8	.3	1.1	270	0	18	15	.3	11	280

LOW-FLOW INVESTIGATION

BRAZOS RIVER LOW-FLOW INVESTIGATIONS--Continued

WATER-QUALITY DATA FOR SAN GABRIEL RIVER, BRUSHY CREEK, SALADO CREEK, AND TRIBUTARIES, APRIL AND AUGUST 1978

SITE	STREAM	DATE	DISCHARGE (FT ³ /S)	SPECIFIC CONDUCT- ANCE (MICRO MHOS)	PH (UNITS)	TEMP- ATURE (DEG C)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAGNE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION (RATIO)	DIS- SOLVED POTAS- SIUM (P) (MG/L)	SI- CAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (MG/L AS CO ₃)	DIS- SOLVED SUL- FATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (MG/L) AS F	DIS- SOLVED SILICA SiO ₂ (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L)
3	South Fork San Gabriel River	Apr. 17	0.21	616	8.0	19.5	290	29	110	4.1	13	0.3	0.8	320	0	36	19	0.2	6.7	348
20	.....Do.....	Aug. 17	.02	490	7.7	26.0	210	58	61	15	17	.5	1.7	190	0	48	36	.2	19	292
21	.....Do.....	Apr. 21	--	404	8.0	21.5	180	30	48	14	12	.4	1.3	180	0	32	19	.2	4.0	219
5	North Fork San Gabriel River	Aug. 16	.04	402	7.5	27.0	180	36	44	16	15	.5	.2	170	0	36	26	.3	21	242
10	.....Do.....	Apr. 27	--	561	7.9	19.5	240	32	62	20	23	.7	1.9	250	0	29	38	.2	11	308
11	.....Do.....	Aug. 16	.22	480	8.1	28.5	200	32	49	20	13	.4	1.2	210	0	23	24	.2	12	246
14	.....Do.....	Apr. 27	--	461	8.2	23.0	200	36	47	20	18	.6	1.3	200	0	22	29	.2	3.9	240
14	.....Do.....	Aug. 16	.26	456	8.1	33.0	190	34	43	20	16	.5	1.5	190	0	29	27	.2	20	250
17	San Gabriel River	Apr. 27	--	559	7.7	23.5	240	38	66	19	21	.6	1.8	250	0	25	35	.2	6.1	297
17	.....Do.....	Aug. 16	2.1	604	8.6	35.0	230	16	64	16	41	1.2	2.9	240	8	25	58	.2	15	348
6	Berry Creek	Apr. 21	--	443	7.8	20.5	190	29	72	3.1	14	.4	1.3	200	0	41	19	.4	8.8	258
17.5	.....Do.....	Apr. 24	3.3	501	7.9	24.5	250	16	72	16	9.2	.3	1.0	280	0	14	11	.2	8.6	270
17.5	.....Do.....	Aug. 15	.36	380	8.2	31.0	170	8	44	15	9.3	.3	1.1	200	0	10	16	.3	11	205
3	South Fork Brushy Creek	Apr. 17	.21	616	8.0	19.5	290	29	110	4.1	13	.3	.8	320	0	36	19	.2	6.7	348
15	Brushy Creek	Aug. 18	.02	590	7.6	24.0	280	20	80	20	10	.3	.9	320	0	12	21	.1	11	313
18	.....Do.....	Apr. 18	5.3	496	7.9	24.0	230	40	65	16	14	.4	1.3	230	0	29	27	.2	7.5	273
21	.....Do.....	Apr. 18	9.5	743	7.5	23.0	260	48	80	15	49	1.3	2.9	260	0	39	76	.2	9.0	399
21	.....Do.....	Aug. 18	.15	1,340	7.8	26.0	340	49	110	17	140	3.3	5.3	360	0	33	240	.3	6.7	730
7	Salado Creek	Apr. 24	--	459	7.7	23.0	230	17	64	17	6.4	.2	.8	260	0	9.3	11	.1	7.3	244
7	.....Do.....	Aug. 14	.11	510	7.9	25.5	260	12	77	16	7.3	.2	.6	300	0	8.5	13	.1	13	283
9	.....Do.....	Aug. 14	.41	356	8.0	30.0	160	8	41	15	7.8	.3	.9	190	0	6.9	15	.1	14	194
--	.....Do.....	Aug. 14	9.3	523	7.8	25.5	240	20	72	15	9.9	.3	.9	270	0	13	15	.3	11	270

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 of 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 stations during water year 1979

Discharge measurements made at 104 from partial record stations during water year 1979						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Brazos River basin						
08080900	White River below falls near Crosbyton, TX	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)	1951-79	1- 9-79 4- 4-79 8- 7-79	0.75 4.5 .46
08081050	Short Croton Creek at mouth near Jayton, TX	Lat 33°18'27", long 100°31'57", Kent County, at mouth, 0.2 mi upstream from county road crossing on Croton Creek, and 4.7 mi northeast of Jayton.	-	1960-79	10-11-78 11-28-78 1- 9-79 2-20-79 4- 4-79 5-15-79 6-26-79 8- 7-79 9-18-79	0 0 0 0 0 0 0 0 0
08111600	Piney Creek near Bellville, TX	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, 1964-79	7-17-79 8-31-79	9.5 3.2
08111650	West Fork Mill Creek near Industry, TX	Lat 29°58'55", long 96°30'00", Austin County, at bridge on Farm Road 109 and 0.6 mi north of Industry.	75.3	1964-79	8-30-79	1.6

a Not applicable.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 or flood-profile definition. Gages at these stations usually consist of a device that will register the peak stage occurring between inspections of the gage. The years used in the column "Period of record" identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 1979							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
San Jacinto River basin							
08068700	Cypress Creek at Sharp Road near Hockley, TX	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	9-21-79	67.75	-
08072400	Buffalo Bayou near Clodine, TX	Lat 29°43'06", long 95°43'53", Fort Bend County, on private road to Cinco Ranch, 2.8 mi west of Clodine, and 9.0 mi upstream from Barker Reservoir discharge structure.	84.2	1974-79	a1-19-78 9-20-79	97.22 98.70	2,060 2,830
08072700	South Mayde Creek near Addicks, TX	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	1974-79	9-20-79	107.29	1,210
08072800	Langham Creek near Addicks, TX	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	1974-79	9-20-79	101.59	1,980
08073630	Bettina Street Ditch at Houston, TX	Lat 29°46'32", long 95°32'23", Harris County, at intersection of Bettina Street ditch and Kimberly Street in west Houston.	1.37	1979	9-19-79	81.25	510
08074200	Brickhouse Gully at Clarblak Street, Houston, TX	Lat 29°49'53", long 95°31'42", Harris County, at bridge on Clarblak Street in northwest Houston.	2.56	1965-79	9-19-79	87.94	296
08074400	Lazybrook Street Storm Sewer at Houston, TX	Lat 29°48'15", long 95°26'04", Harris County, over 54-inch-diameter storm sewer near intersection of Lazybrook Street and West T. C. Jester Boulevard in northwest Houston.	.13	1979	4-19-79 8-19-79	58.09 58.09	119 119
08074760	Brays Bayou at Alief Road, Alief, TX	Lat 29°42'39", long 95°35'13", Harris County, at bridge on High Star Street in Alief.	14.1	1977-79	9-19-79	17.15	3,270
08074780	Keegans Bayou at Keegan Road near Houston, TX	Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road and about 16 mi southwest of Houston.	7.47	1965-71, 1975-79	9-19-79	78.97	748
08074810	Brays Bayou at Gessner Drive, Houston, TX	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	1977-79	9-19-79	59.21	11,300
08074850	Bintliff Ditch at Bissonnet Street, Houston, TX	Lat 29°41'16", long 95°30'20", Harris County, at bridge on Bissonnet Street in southwest Houston.	4.38	1968-79	6-15-76 6- 2-79 9-19-79	63.19 62.99 62.99	a1,280 1,250 1,250
08074910	Hummingbird Street Ditch at Mullins Street, Houston, TX	Lat 29°39'44", long 95°29'11", Harris County, at intersection of Hummingbird Street ditch and Mullins Street in southwest Houston.	.32	1979	4-19-79	b59.31	149
08075470	Sims Bayou at Martin Luther King Boulevard, Houston, TX	Lat 29°38'42", long 95°20'13", Harris County, at bridge on Martin Luther King Boulevard in south Houston.	48.4	1978-79	9-20-79	37.49	-
08075550	Berry Bayou at Gilpin Street, Houston, TX	Lat 29°38'32", long 95°13'22", Harris County, at bridge on Gilpin Street in southeast Houston.	a2.56	1965-79	9-20-79	b37.07	538
08075780	Greens Bayou at Cutten Road near Houston, TX	Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 mi northwest of Houston.	8.06	1965-79	9-19-79	113.16	576
08076200	Halls Bayou at Deertrail Street near Houston, TX	Lat 29°54'07", long 95°25'21", Harris County, at bridge on Deertrail Street, 0.6 mi west of U.S. Highway 75, and about 11 mi northwest of Houston.	8.99	1965-79	9-20-79	85.02	922
Clear Creek basin							
08077600	Clear Creek near Friendswood, TX	Lat 29°31'02", long 95°10'42", Galveston County, at bridge on Farm Road 528 and 1.5 mi south-east of Friendswood.	-	1966-79	7-26-79 7-27-79	d25.9 19.10	- f9,000

* Operated as a continuous-record station.

a Revised.

b Occurred at different time than peak discharge.

d Estimated.

f Discharge measurement.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

507

Annual maximum stage and (or) discharge during water year 1979--Continued

Annual maximum stage and (or) discharge during water year 1979--continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Elevation (feet)	Discharge (cfs)
Highland Bayou basin							
08077780	Highland Bayou near Texas City, TX	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).	-	1974-79	9-20-79	4.44	-
Brazos River basin							
08079300	Blackwater Draw tributary near Floyd, NM	Lat 34°13'13", long 103°45'05", Roosevelt County, 0.5 mi below section road and about 10 mi west of Floyd.	d10	1963-75, 1979	1979	1.02	†
08080600	Running Water Draw near Clovis, NM	Lat 34°31'56", long 103°12'05", Curry County, 0.25 mi upstream from State Highway 18 and about 8 mi north of Clovis.	109	1953-56, 1957-64*, 1964-75, 1979	1979	1.16	<100

† Not determined.

* Operated as a continuous-record station.

< Less than.

d Estimated.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations of partial-record stations are given in the following table:

Discharge measurements made at miscellaneous sites during water year 1979						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
San Jacinto River basin						
Hummingbird Street Ditch	Willow Waterhole Bayou	Lat 29°39'49", long 94°29'26", Harris County, at bridge near intersection of Hummingbird and Ashcroft Streets in southwest Houston	0.18	-	2- 6-79	2.9
					3-21-79	1.4
					3-22-79	5.6
					4- 3-79	13
					9-18-79	3.4
					9-19-79	42

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

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

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



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