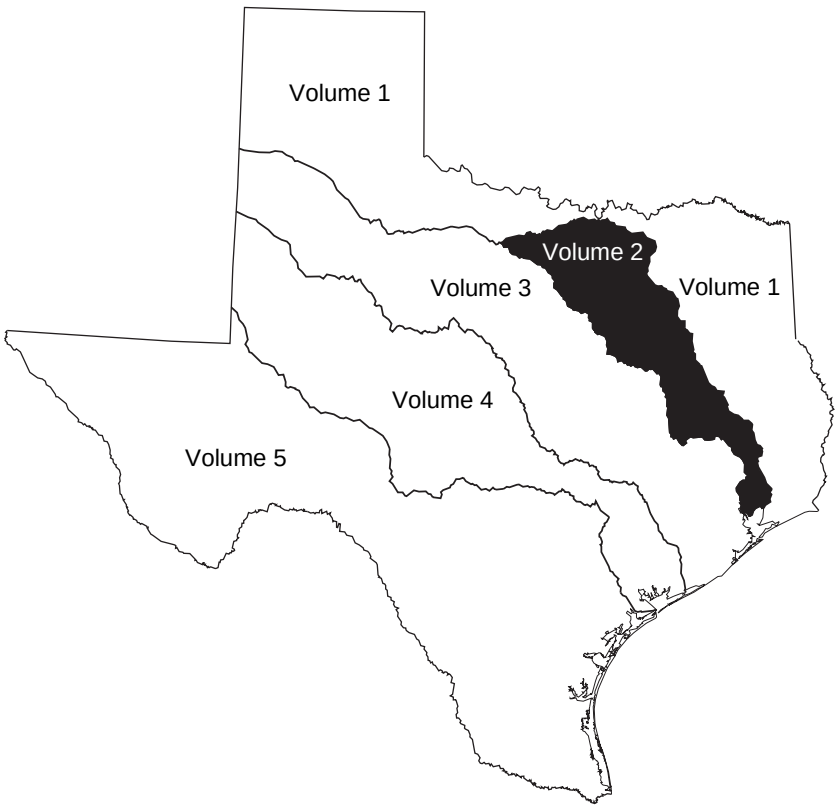
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data
Texas
Water Year 1999

Volume 2. Trinity River Basin

By S.C. Gandara, W.J. Gibbons, D.L. Barbie, and R.E. Jones

Water-Data Report TX-99-2



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

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

Charles G. Groat, Director

For additional information write to:
District Chief, Water Resources Division
U.S. Geological Survey
8027 Exchange Dr.
Austin, Texas 78754-4733

2000

PREFACE

This edition of the annual hydrologic data report of Texas is one of a series of annual reports that document hydrologic data collected from the U.S. Geological Survey's collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by Federal, State, local agencies, and the private sector for developing and managing land and water resources in Texas which are contained in 6 volumes:

Volume 1.	Arkansas River Basin, Red River Basin, Sabine River Basin, Neches River Basin, and Intervening Coastal Basins
Volume 2.	Trinity River Basin
Volume 3.	San Jacinto River Basin, Brazos River Basin, San Bernard River Basin, and Intervening Coastal Basins
Volume 4.	Colorado River Basin, Lavaca River Basin and Intervening Coastal Basins
Volume 5.	Guadalupe River Basin, Nueces River Basin, Rio Grande Basin, and Intervening Coastal Basins
Volume 6.	Ground-Water Data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had the primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, most of the data were collected, computed, and processed from Subdistrict and Field Offices. The following supervised the collection, processing, and tabulation of the data:

Mick Baldys
Mike E. Dorsey
Debra A. Sneck-Fahrer
Bradley L. Mansfield
Addis M. Miller III
Jimmy G. Pond
Roberto Perez
Jeffery T. Sandlin
Ken VanZandt

The following individuals contributed to the collection, processing and preparation of the data:

Houston Subdistrict Office

Cindy Billington
Jacqueline Braden
Dexter W. Brown
J. Pat Bruchmiller
Mike R. Burnich
Al Campodonico
Laura S. Coplin
Jeff W. East
Lee B. Goldstein
Jim S. Hutchison
Mark C. Kasmarek
Patrick O. Keefe
Dale Melton
Edna M. Paul
S. Lyle Phipps
Cervando S. Ramirez
Horatio X. Santos
Jasper D. Schaer

San Antonio Subdistrict Office

James M. Briers
Allan K. Clark
Allen L. Furlow
Jon R. Gilhousen
Ken C. Grimm
C.A. Hartmann, Jr.
Stephanie Marr
Cecillo R. Martinez
Vidal Mendoza
Michael Nyman
Cassi L. Otero
Joan T. Patton
Jorge O. Pena
Brian L. Petri
Roel Reyna
Richard N. Slattery
John A. Tomlinson
John F. Wojcik

Fort Worth Field Office

Patrick B. Allen
Jack D. Benton
Martin J. Danz
Judith H. Donohue
Vernon L. Hastings
Fred Liscum
Paul W. McKee
G. Dan McElhany
Darryl G. Pinion
Clyde T. Schoultz
J.M. Taylor
David V. Tudor

Austin Field Office

Freeman L. Andrews
Searcy M. Jacobs
Milton M. Miller
Vemezia Muniz
C.E. Ranzau
Keith R. Snider
Randy A. Samuelson
Milton W. Sunvison
K. Craig Weiss

Wichita Falls Field Office

Paul Bennett
Benjamin J. Carr
Jackie D. Kelly
Michael T. Pettibon
Anita M. Ross

San Angelo Field Office

Hector H. Garza
Henry Jacques, Jr.
Lawanna M. Kiser
James B. Schiller
Tim E. Teagarden

This report was prepared in cooperation with the State of Texas and other agencies under the supervision of Jayne E. May, District Data Chief.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 2000	Annual--Oct. 1, 1998 to Sept. 30, 1999

4. TITLE AND SUBTITLE
Water Resources Data--Texas, Water Year 1999, Volume 2
Trinity River Basins

5. FUNDING NUMBERS

6. AUTHOR(S)
S.C. Gandara, W.J. Gibbons, D.L. Barbie, and R.E. Jones

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
Texas District
8027 Exchange Dr.
Austin, TX 78754-4733

8. PERFORMING ORGANIZATION REPORT NUMBER
USGS-WDR-TX-99-2

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
Texas District
8027 Exchange Dr.
Austin, TX 78754-4733

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
USGS-WDR-TX-99-2

11. SUPPLEMENTARY NOTES
Prepared in cooperation with Federal, State, and local agencies.

12a. DISTRIBUTION / AVAILABILITY STATEMENT
No restriction on distribution.
This report may be purchased from
National Technical Information Service
Springfield, VA 22161

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 1999 water year for Texas are presented in six volumes, and consist of records of stage, discharge, and water quality of streams and canals; stage, contents, and water-quality of lakes and reservoirs; and water levels and water quality of ground-water wells. Volume 2 contains records for water discharge at 47 gaging stations; stage only at 2 gaging stations; stage and contents at 18 lakes and reservoirs; water quality at 35 gaging stations; and data for 3 partial-record stations comprised of 2 flood-hydrograph and 1 crest-stage stations. Also included are lists of discontinued surface-water discharge or stage-only stations and discontinued surface-water-quality stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Texas. Records for a few pertinent stations in the bordering States also are included.

14. SUBJECT TERMS
*Texas, *hydrologic data, *surface water, *water quality, flow rate, gaging stations, lakes, reservoirs, chemical analyses, sediments, water temperature, sampling sites.

15. NUMBER OF PAGES
333

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

CONTENTS

ILLUSTRATIONS

TABLES

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

[Type of data collected: (d) discharge; (c) chemical; (b) biological; (t) water temperature; (s) sediment; (e) elevation, gage heights, or contents.]

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Texas have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the title page of this report.

[Letters after station name designate the type of data collected: (d) discharge, (e) elevation (stage only).]

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Trinity River Basin:			
North Creek SWS No. 28-A near Jermyn (e)	08042650	6.82	1972-80
North Creek near Jacksboro (d)	08042700	21.60	1956-80
Beans Creek at Wizard Wells (e)	08042900	29.60	1993-95
West Fork Trinity River at Bridgeport (d)	08043100	1,113	1984-89
West Fork Trinity River at Bridgeport (d)	08043500	1,147	1908-30
Big Sandy Creek near Bridgeport (d)	08044000	333	1937-95
Garrett Creek near Paradise (e)	08044135	52.5	1992-95
Salt Creek near Paradise (e)	08044140	52.7	1992-95
Walker Creek near Boyd (e)	08044200	2.95	1965-74
West Fork Trinity River at Lake Worth, Fort Worth (d)	08045500	2,069	1924-34
Clear Fork Trinity River near Aledo (d)	08046000	251	1947-75
Marine Creek at Fort Worth (d)	08048500	16.80	1950-58
Sycamore Creek at I.H. 35W, Fort Worth (d)	08048520	17.70	1970-76
Sycamore Creek Trib. above Seminary South, Fort Worth (d)	08048530	0.97	1970-76
Sycamore Creek Trib. at I.H. 35W, Fort Worth (d)	08048540	1.35	1970-76
Dry Branch at Fain Street at Fort Worth (d)	08048600	2.15	1969-76
Big Fossil Creek at Haltom City (d)	08048800*	52.8	1959-73
Little Fossil Creek at I.H. 820, Fort Worth (e)	08048820	5.64	1969-73
Little Fossil Creek at Mesquite Street, Fort Worth (d)	08048850	12.30	1969-76
Deer Creek Tributary near Crowley (e)	08048900	5.86	1967-74
Village Creek at Kennedale (d)	08048980	100	1986-89
Village Creek near Handley (d)	08049000	126	1925-30
Big Bear Creek near Grapevine (d)	08049550	29.6	1967-79
Trigg Branch at DFW Airport near Euless (d)	08049565	1.73	1983-87
Mountain Creek near Cedar Hill (d)	08049600	119	1961-84
Mountain Creek above Duncanville (e)	08049850	224	1986-87
Mountain Creek near Duncanville (e)	08049900	225	1971-90
Mountain Creek near Grand Prairie (d)	08050000	273	1925-33
Elm Fork Trinity River SWS 6-O near Muenster (e)	08050200	0.77	1957-73
Elm Fork Trinity River near Muenster (d)	08050300	46	1957-73
Elm Fork Trinity River near Sanger (d)	08050500	381	1949-85
Isle Du Bois Creek near Pilot Point (d)	08051000	266	1949-85
Elm Fork Trinity River near Pilot Point (d)	08051130	692	1985-92
Elm Fork Trinity River above Aubrey (e)	08051190	684	1981-89
Elm Fork Trinity River near Denton (d)	08052000	1,084	1924-27
Lake Dallas near Lake Dallas (e)	08052500	1,165	1929-57
Little Elm Creek SWS #10 near Gunter (e)	08052630	2.10	1966-72
Little Elm Creek near Celina (d)	08052650	46.70	1966-76
Hickory Creek at Denton (d)	08052780	129	1985-87
Indian Creek at Hebron Parkway at Carrollton (d)	08053010	15.0	1987-90
Furneaux Creek at Josey Lane at Carrollton (d)	08053030	4.10	1987-90
Hutton Branch at Broadway at Carrollton	08053090	9.10	1987-90
Jones Valley Creek Tributary near Forestburg (e)	08053100	1.70	1966-74
Denton Creek near Roanoke (d)	08054000	621	1924-28, 1939-55
Gamble Branch near Argyle (e)	08054200	0.50	1965-74
Denton Creek near Grapevine (d)	08055000	705	1948-91
Joe's Creek at Royal Lane, Dallas (e)	08055580	1.94	1973-78
Joes Creek near Dallas (e)	08055600	7.4	1964-79
Bachman Branch at Dallas (d)	08055700	10	1964-79
Turtle Creek at Dallas (d)	08056500	7.98	1952-80, 1984-91
Coombs Creek at Sylvan Avenue, Dallas (e)	08057020	4.75	1965-78

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Cedar Creek at Bonnie View Road, Dallas (e)	08057050	9.42	1965-78
White Rock Creek at Keller Springs Road, Dallas (d)	08057100	29.40	1961-79
Spanky Branch at McCallum Lane at Dallas (e)	08057120	6.77	1962-78
Rush Branch at Arapaho Road, Dallas (e)	08057130	1.22	1973-78
Cottonwood Creek at Forest Lane, Dallas (e)	08057140	8.50	1962-78
Floyd Branch at Forrest Lane, Dallas (e	08057160	4.17	1962-78
White Rock Creek at White Rock Lake, Dallas (d)	08057300	100	1963-79
Ash Creek at Highland Road, Dallas (e)	08057320	6.92	1963-78
Forney Creek at Lawnview Avenue, Dallas (e)	08057340	1.84	1963-72
White Rock Creek at Scyene Road, Dallas (d)	08057400	122	1963-79
Elm Creek at Seco Boulevard, Dallas (e)	08057415	1.25	1973-78
Fivemile Creek at Kiest Boulevard, Dallas (e)	08057418	7.65	1974-78
Fivemile Creek at US Highway 77 West, Dallas (e)	08057420	14.30	1965-78
Woody Branch at US Highway 77 West, Dallas (e)	08057425	10.30	1965-78
Fivemile Creek at Lancaster Road, Dallas (e)	08057430	37.90	1965-78
Newton Creek at Interstate Highway 635, Dallas (e)	08057135	5.91	1974-78
White Branch at Interstate Highway 635, Dallas (e)	08057440	2.53	1974-78
Tenmile Creek at State Highway 342 at Lancaster (d)	08057450	52.80	1970-79
Honey Creek SWS #11 near McKinney	08057500	2.14	1952-73
Honey Creek SWS #12 near McKinney	08058000	1.26	1952-77
Honey Creek near McKinney (d)	08058500	39	1951-73
East Fork Trinity River near McKinney (d)	08059000	190	1949-75
Arls Branch near Westminster (e)	08059200	0.52	1965-74
Sister Grove Creek near Princeton (d)	08059500	113	1949-75
East Fork Trinity River above Pilot Grove near Lavon (d)	08060000	324	1949-53
East Fork Trinity River near Lavon (d)	08061000	773	1954-89
East Fork Trinity River near Rockwall (d)	08061500	840	1924-54
Duck Creek at Buckingham Road, Garland (e)	08061620	8.05	1969-76
Duck Creek near Garland (d)	08061700	31.6	1958-93
South Mesquite Creek at State Highway 352, Mesquite (e)	08061920	13.40	1969-76
South Mesquite Creek at Mercury Road near Mesquite (d)	08061950	23	1969-79
Cedar Creek Reservoir Spillway Outflow near Trinidad (d)	08062650	1,007	1966-82
Cedar Creek near Kemp (d)	08062800	189	1963-87
Bachelor Creek near Terrell (e)	08062850	13.0	1967-74
Kings Creek near Kaufman (d)	08062900	233	1963-87
Lacey Fork near Mabank (d)	08062980	118	1983-84
Cedar Creek near Mabank (d)	08063000	733	1939-66
South Twin Creek near Eustace (d)	08063003	27.40	1983-84
Red Oak Branch near Eustace (e)	08063005	0.90	1966-74
Cedar Creek at Trinidad (d)	08063020	1,011	1965-71
Briar Creek Tributary near Corsicana (e)	08063180	0.72	1966-74
Pin Oak Creek near Hubbard (d)	08063200	17.60	1956-72
Richland Creek near Richland (d)	08063500	734	1939-88
Alvarado Branch near Alvarado (e)	08063550	0.84	1966-74
Kings Branch near Reagor Springs (e)	08063620	0.62	1966-74
Waxahachie Creek near Waxahachie (e)	08063685	111	1981-82, 1986-87
Chambers Creek near Corsicana (d)	08064500	963	1939-84
Richland Creek near Fairfield (d)	08064600	1,957	1972-83
Saline Branch Tributary near Bethel (e)	08064630	0.22	1967-74
Catfish Creek near Tennessee Colony (d)	08064800	207	1962-89
Mayes Branch near Latexo (e)	08065320	4.26	1967-74
Trinity River near Midway (d)	08065500	14,450	1939-71
Caney Creek near Madisonville (d)	08065700	112	1963-77
Nelson Creek near Riverside (e)	08065950	86.4	1949, 1965, 1970-74
Harmon Creek near Huntsville (e)	08065975	89.2	1973-81
West Carolina Creek near Oakhurst (e)	08066050	15.2	1949, 1966-73
White Rock Creek near Trinity (e)	08066100	222	1974-85
White Rock Creek near Trinity (e)	08066130	228	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Tantaboque Creek near Trinity (e)	08066140	61.3	1966-73
Caney Creek near Groveton (e)	08066145	41.4	1966-73
Brushy Creek near Onalaska (d)	08066150	29.1	1966-70
Rocky Creek near Onalaska (e)	08066180	40.6	1966-73
Livingston Reservoir outflow weir near Goodrich (d)	08066191	16,583	1969-94
Long King Creek near Goodrich (d)	08066210	220	1972-81
Bluff Creek Tributary near Livingston (e)	08066280	0.62	1965-74
Big Creek near Shepherd	08066400	38.80	1966-89
Gaylor Creek near Moss Hill (e)	08066800	32.3	1966-73
Devers Canal near Liberty (d)	08067080	N/A	1972-82

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 1999 water year. Daily records of specific conductance, temperature, sediment, color, pH, dissolved oxygen, or chloride were collected and published for the record shown for each station.

[SC, specific conductance; T, temperature; S, sediment; C, color; pH, pH; DO, dissolved oxygen; Cl, chloride.]

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Big Sandy Creek near Bridgeport	08044000	333	SC, T, S	1968-77,
Lake Worth above Fort Worth	08045400	2,064	pH, Cl	
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl	1949-52,
			T	1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46	SC	1967-68,
			T	1957-58,
				1966-68,
			S	1957-68
Clear Creek near Sanger	08051500	295	SC, T, S	1968-77
Little Elm Creek near Celina	08052650	46.70	SC	1967-75,
			T, S	1966-75
Little Elm Creek near Aubrey	08052700	75.50	SC	1967-75,
			T, S	1966-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC	1982-86,
			T	1976-86
Duck Creek near Garland	08061700	31.6	SC, pH, T, DO	1988-89
East Fork Trinity River above Seagoville	08061970	1,183	SC, T, pH, DO	1987-93
East Fork Trinity River at Seagoville	08061980	1,224	SC, pH, T, DO	1987-96
Cedar Creek near Mabank	08063000	733	SC, T, pH, Cl	1956-57
Pin Oak Creek near Hubbard	08063200	17.60	SC	1967-72,
			T	1957-60,
				1965-72,
			S	1957-60,
				1962-72
Richland Creek near Richland	08063500	734	SC, T, pH, Cl	1968-69,
			SC, T	1983-89
Chambers Creek near Corsicana	08064500	963	SC, T, pH, Cl	1961-70
Richland Creek near Fairfield	08064600	1,957	SC, T, pH, Cl	1956-66,
				1972,
			SC, T	1973-83
Trinity River near Oakwood	08065000	12,833	SC, T, pH, Cl	1948-54,
			SC, T, S	1977-81
Bedias Creek near Madisonville	08065800	321	SC, T	1985-87,
			S	1986
Long King Creek at Livingston	08066200	141	SC, T, pH, Cl	1963-72
Trinity River near Goodrich	08066250	16,844	SC, T	1970-73
Trinity River near Moss Bluff	08067100	17,738	SC, pH, Cl	1950-65
Old River near Cove	08067200	19.0	SC, pH, Cl	1950-65,
			T	1965
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65

This page intentionally left blank.

WATER RESOURCES DATA—TEXAS, 1999

VOLUME 2

TRINITY RIVER BASIN

INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs, and water levels and water quality of ground water wells. Volume 2 contains records for water discharge at 47 gaging stations; stage only at 2 gaging stations; stage and contents at 18 lakes and reservoirs; and water quality at 35 gaging stations. Also included are data for 3 partial-record stations comprised of 2 flood-hydrograph and 3 crest-stage stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating Federal, State, and City agencies in Texas.

This series of annual reports for Texas began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to its present format, with data on quantities and quality of surface water contained in each of three volumes, and expanding to five volumes beginning with the 1999 water year. Ground-water levels and water quality have been published in a separate volume beginning with the 1991 water year.

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

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water Data Report TX-99-2." For archiving and general distribution, the reports for the 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or may be purchased on microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161, (703) 605-6000.

Additional information, including the current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (512) 927-3500.

COOPERATION

Federal agencies that assisted the U.S. Geological Survey in the collection of data in this report in the form of funds or services in water year 1999 are:

- Corps of Engineers, U.S. Army.
- International Boundary and Water Commission United States and Mexico, U.S. Section.
- U.S. Bureau of Reclamation.

Organizations that assisted in the collection of data in this report through joint funding agreements through the Texas Water Development Board or through direct joint funding agreements with the U.S. Geological Survey are:

Texas Water Development Board, G.E. Kretzschmar, Executive Administrator; the cities of Abilene, Arlington, Austin, Corpus Christi, Fort Worth, Gainesville, Garland, Georgetown, Graham, Houston, Lubbock, Nacogdoches, San Angelo, and Wichita Falls; Bexar, Medina, and Atascosa Counties Water Improvement District No. 1; Barton Springs/Edwards Aquifer Authority; Brazos River Authority; Canadian Municipal Water Authority; Coastal Water Authority; Colorado River Municipal Water District; Dallas Public Works Department; Dallas Water Utilities; Fort Bend Subsidence District; Franklin County Water District; Galveston County; Greenbelt Municipal and Industrial Water Authority; Guadalupe-Blanco River Authority; Harris-Galveston Coastal Subsidence District; Harris County Office of Emergency Management; Harris County Flood Control District; Houston-Galveston Area Council; Lavaca-Navidad River Authority; Lower Colorado River Authority; Lower Neches Valley Authority; North Central Texas Council of Governments; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; North Texas Municipal Water District; Pecos River Commission; Red Bluff Water Power Control District; Red River Authority; Sabine River Authority of Texas; Sabine River Compact Administration; San Antonio City Public Service Board; San Antonio River Authority; San Antonio Water System; San Jacinto River Authority; Somervell County Water District; Tarrant Regional Water District; Texas Soil & Water Conservation Board; Texas State Department of Highways & Public Transportations; Texas Natural Resources Conservation Commission; Texas Water Development Board; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; West Central Texas Municipal Water District; and Wichita County Water Improvement District No. 2.

HYDROLOGIC CONDITIONS

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

Streamflow across the State averaged normal during water year 1999.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,481,000 acre-feet, increased from 75 percent at the end of September 1998 to 76 percent at the end of September 1999. Records from these reservoirs indicate that storage decreased in 42, increased in 34, and remained the same in 1.

The area for which water resources data are presented in volume 2 includes the Trinity River Basin and Intervening Costal Basins. The area described in volume 2 and the location of selected streamflow and water-quality stations in the area are shown in figure 1.

Streamflow

In the area covered in volume 2, streamflow averaged normal during water year 1999. Streamflow for water year 1999 and for the period of record at two selected stations (fig. 1) for which data are included in volume 2 is presented in table 1.

At the four long-term hydrologic index stations in the State, monthly mean streamflow during water year 1999 was normal. Monthly mean discharges for water year 1999 and the median of the long-term monthly means for water years 1961–90 for the four long-term hydrologic index stations in the State are shown in figure 2. Streamflow at the hydrologic index station Neches River near Rockland was above normal during October through February and normal for the remaining 7 months. The station North Bosque River near Clifton had above normal streamflow during November and December, below normal streamflow during May, August, and September and normal streamflow for the remaining 7 months. The station North Concho River near Carlsbad had normal streamflow for each month of water year 1999. Streamflow for the station Guadalupe River near Spring Branch was above normal during October through December, below normal during September and normal for the remaining 8 months.

Conservation storage in 14 selected reservoirs in this area of the State, with a total combined conservation capacity of 6,816,000 acre-feet, remained at 87 percent of capacity from the end of September 1998 to the end of September 1999. Records from these reservoirs indicate that storage increased in 5, decreased in 9.

Water Quality

Dissolved-solids concentrations in most streams in the State are inversely related to streamflow discharges. During years when precipitation and runoff are less than normal, streamflow

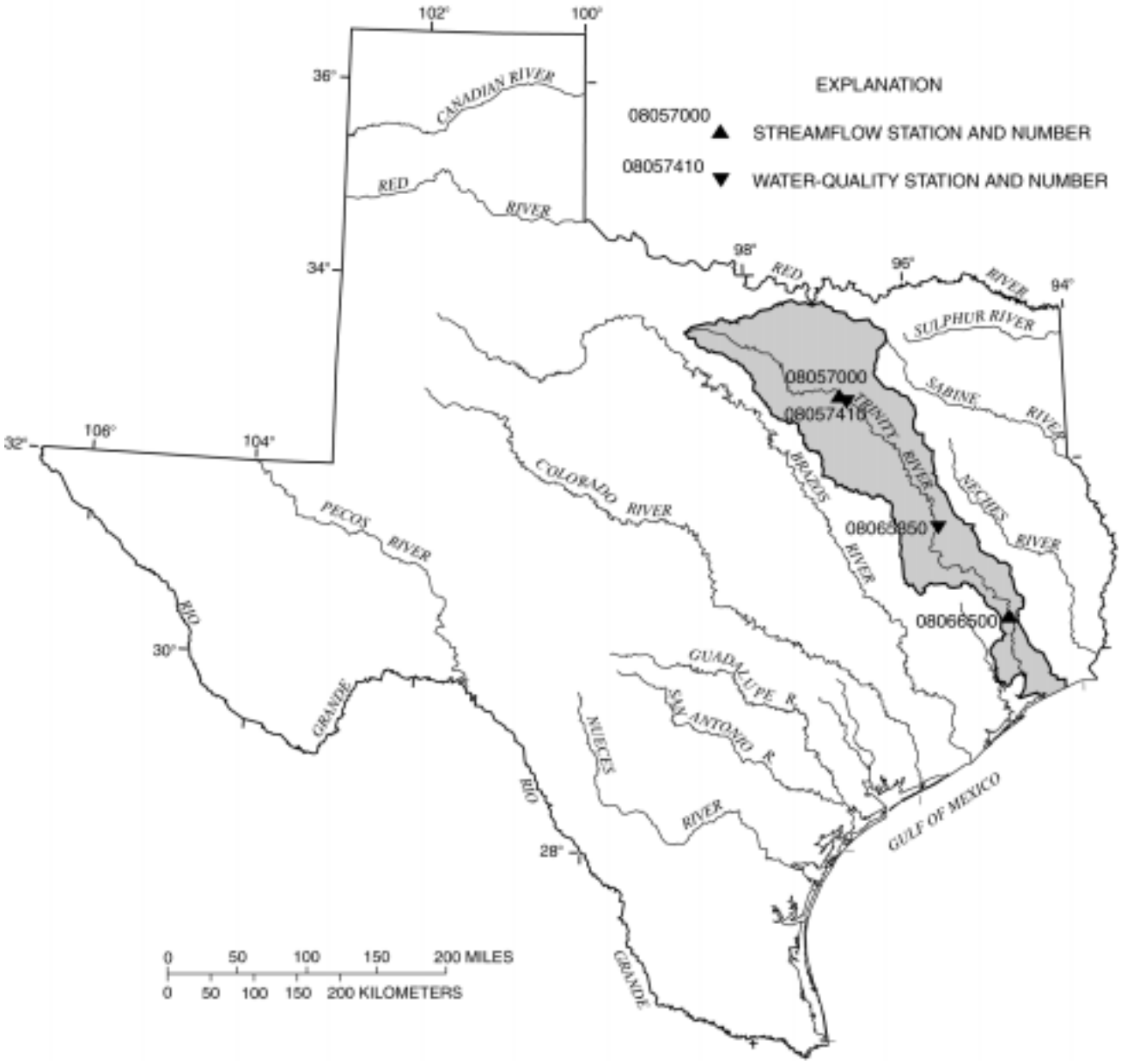
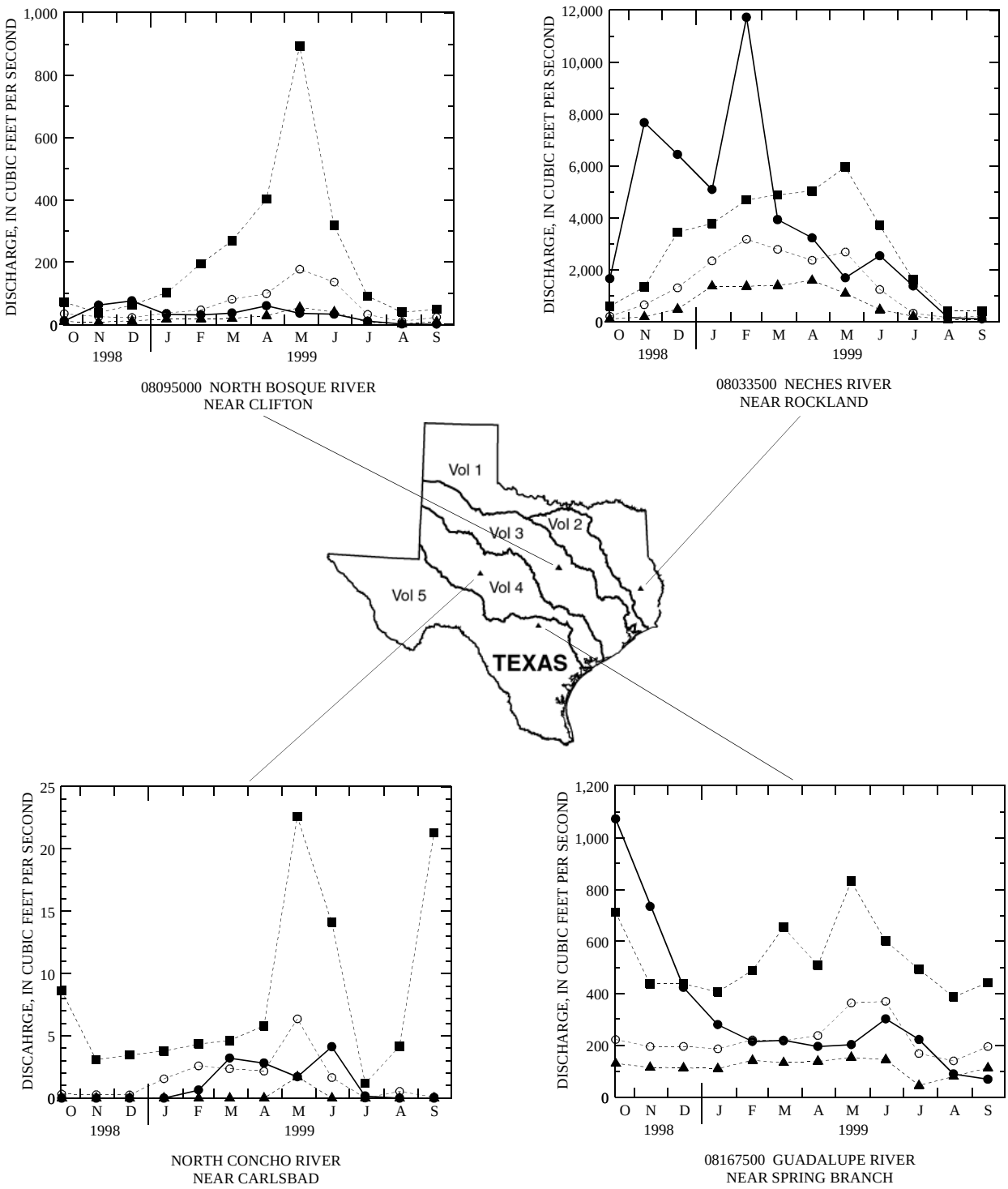


Figure 1. Area of Texas covered by volume 2 (shaded) and location of selected streamflow and water-quality stations in volume 2.



EXPLANATION

MONTHLY MEAN DISCHARGE FOR 1999 WATER YEAR

MEDIAN OF MONTHLY MEAN DISCHARGE FOR 1961–90 WATER YEARS

25 PERCENT QUARTILE

75 PERCENT QUARTILE

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 1999 water year and median of the monthly mean discharges for 1961–90 water years.

commonly is more mineralized than during years when precipitation and runoff are normal or greater than normal. However, for streams in which discharge is controlled by reservoirs, the dissolved-solids concentrations may remain relatively constant despite substantial fluctuations in precipitation and runoff.

Records of discharge-weighted-average concentrations of dissolved solids for water year 1999 are compared with those for water years 1994–99 for selected long-term daily or continuous-record water-quality stations (fig. 1) in the Trinity River Basin. Results are shown in table 2.

Table 1. Streamflow at two selected stations

Station no. and name		Discharge during 1999 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
		Maximum instantaneous	Minimum daily mean	Mean	Maximum instantaneous	Minimum daily mean	Mean
Trinity River Basin							
08057000	Trinity River at Dallas, Tex.	14,800	355	1,234	111,000	10	1,827 (1931-99)
08066500	Trinity River at Romayor, Tex.	98,600	754	11,200	122,000	104	7,834 (1924-99)

Table 2. Comparison of records of discharge-weighted-average concentrations of dissolved solids for the 1999 and 1995-99 water years

Station no. and name		Mean discharge (cubic feet per second)		Discharge-weighted-average concentration of dissolved solids (milligrams per liter)	
		1999	1995-99	1999	1995-99
Trinity River Basin					
08057410	Trinity River below Dallas, Tex.	1,580	2,850	321	253
08065350	Trinity River near Crockett, Tex.	7,130	8,130	213	212

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 40 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of the constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

Additional information about the NASQAN program is available through the world wide web at:

http://water.usgs.gov/nasqan/

The National Atmospheric Deposition Program/National Trends Network (NAPD/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of over 200 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 and NOx scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

http://nadp.sws.uiuc.edu

National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. There are currently two NAWQA Programs operating in Texas; the Trinity NAWQA and the South Central Texas NAWQA.

Additional information about the NAWQA Program is available through the world wide web at:

http://water.usgs.gov/nawqa/nawqa_home.html
http://tx.usgs.gov/trin
http://tx.usgs.gov/sctx

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

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1999 water year that began October 1, 1998, and ended September 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order Numbering

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 08057000, which appears just to the left of the station name, includes the 2-digit Part number "08" plus the 6-digit downstream-order number "057000." The Part number designates the major river basin; for example, Part "08" is the Western Gulf of Mexico basin.

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Flood-hydrograph partial records, "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow channel gain and loss studies, may be considered as partial records, but they are presented separately in this report. Instantaneous peak discharges are presented for all but the low-flow partial-record stations.

Data Collection and Computation

The data obtained at a complete record gaging station on a stream or canal consist of records of stage (that is recorded every 15, 30, or 60 minutes), measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information such as weather records, are used to compute daily mean discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute lake storage.

Records of stage are obtained with recorders at selected time intervals. Measurements of discharge are made with current meters and indirect procedures using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, TWRI, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves then are constructed. From these curves, rating tables indicating the discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves can be extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques. Stage-discharge ratings at gaging stations are described in TWRI, Book 3, Chapter A10.

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

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

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

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

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consists of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly-mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7- day low-flow minimums, and flow duration.

Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station

name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

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

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

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

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

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

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

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

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

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the daily mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period, expressed as "FOR WATER YEARS ____- ____, BY WATER YEAR (WY)," will list the first and last water years of the range selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. However, data for partial water years, if any, will only be used in the statistical calculations, if appropriate. For example, all of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the column heading. When this occurs, it should be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data is omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period.

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

The accuracy attributed to the records is indicated under “REMARKS.” “Excellent” means that about 95 percent of the daily discharges are within 5 percent of their true values; “good,” within 10 percent; and “fair,” within 15 percent.

Records that do not meet the criteria mentioned are rated “poor.” Different accuracies may be attributed to different parts of a given record.

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

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

Arrangement of Records

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

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Records of surface-water quality at some National Water Quality Accounting (NAWQA) Sites include data collected by different government agencies as identified in the water-quality data tables under AGENCY COLLECTING SAMPLE (CODE NUMBER). Values for this code are given below:

1028 - U.S. Geological Survey
84823 - International Boundary & Water Commission

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

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

10 - Equal Width Increment (EWI)
20 - Equal Discharge Increment (EDI)
25 - Timed Sampling Interval
30 - Single Vertical
40 - Multiple Verticals
50 - Point Sample
60 - Weighted Bottle
70 - Grab Sample (DIP)
90 - Discharge Integrated, Centroid
120 - Velocity Integrated
8010 - Other

Detailed information on sampling methods may be found in the following publications: OFR-90-127 "Guidelines for Collection and Analysis of Water-Quality Samples from Streams in Texas", OFR-94-455 "Field Guide for Collecting and Processing Stream-Water Samples for the National Water-Quality Assessment Program", and OFR-94-539 "U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water". Specific questions pertaining to water-quality sample collection may be directed to the District

Water-Quality Specialist in Austin, Texas, or the Regional Water-Quality Specialist in Denver, Colorado.

Additional information about the NASQAN program is available through the world wide web at:

http://water.usgs.gov/public/nasqan/

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.

For chemical-quality stations equipped with water-quality monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly readings beginning at 0100 hours and ending at 2400 hours for the day of record.

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the U.S. Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Historical and current (1999) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remarks Codes

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

PRINTED OUTPUT	REMARK
e or E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (Organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blanks.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (mg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the mg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (303-491-5643).

WATER QUALITY-CONTROL DATA

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample, and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sample preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential sample - a type of replicate sample in which the samples collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with necessary telemetry and historic daily-mean and peak-flow discharge

data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

http://tx.usgs.gov

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape, 3-1/2 inch floppy disk or CD-ROM. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

DEFINITION OF TERMS

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

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 325,851 gallons or 1,233 cubic meters.

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

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

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

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-sha-ped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at +35 °C ± 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at +44.5 °C ± 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 the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms that produce red or pink colonies within 48 hours at +35 °C ± 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Benthic organisms (invertebrates) are the group of animals inhabiting the bottom of an aquatic invironment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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. Ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

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

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

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

Bottom material: See "Bed material".

Cells/volume refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.

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 BOD or with carbonaceous organic pollution from sewage or industrial wastes.

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

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

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

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

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

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

Cubic foot per second per day [$(ft^3/s)/d$] is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

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

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

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

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

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

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to reflect the change.

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

Drainage basin is a part of the surface of the earth that is occupied by a drainage system with a common outley for it's surface runoff, 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.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream bottom sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of th stream bottom sediments.

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

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

Supplementary gage is a gage used to obtain additional data. A supplementary gage may be used in place of the principal gage if the latter is isolated or cut

off from the channel, or registers only above (or below) a certain gage height. One or more supplementary gages may be used on bypass channels or overflow channels, or on streams that flow in several channels, each of which is rated independently.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide.

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.

Low tide is the minimum height reached by each falling tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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

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

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

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

Microsiemens per centimeter (µS/cm, US/CM) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Organism is any living entity.

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

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

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

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

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

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

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

Classification	Size (mm)			Method of analysis
Clay	0.00024	-	0.004	Sedimentation
Silt	0.004	-	0.062	Sedimentation
Sand	0.062	-	2.0	Sedimentation/sieve
Gravel	2.0	-	64.0	Sieve

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

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

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

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

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

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

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

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

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

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

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

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

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

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

Milligrams of oxygen per area or volume per unit time [mg 0/(m^2/time)] for periphyton and macrophytes and [mg 0/(m^3/time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To

achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

Sea level was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports and refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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

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

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

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

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

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

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

Suspended-sediment load is a general term that refers to material in suspension. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either discharge or concentration.

Suspended total residue at 105 ºC concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

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

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with total-sediment discharge.

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 ºC. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with

clean streamside rocks) and multiplate samplers (made of hard-board) for benthic organism collection, and plexiglass strips for periphyton collection.

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

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

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

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

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

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

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

Synoptic Studies Short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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

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

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

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

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

Tons per day (T/DAY) is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 poinds per day, or 0.9072 metric tons per day.

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

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

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

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

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxid and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1990, is called the "1990 water year."

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

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

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

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

1-D2. ***Guidelines for collection and field analysis of ground-water samples for selected unstable constituents***, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. ***Application of surface geophysics to ground-water investigations***, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. ***Application of seismic-refraction techniques to hydrologic studies***, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

2-E1. ***Application of borehole geophysics to water-resources investigations***, by W.S. Keys and L.M. MacCary: USGS--TWRI 11.0

2-E2. ***Borehole geophysics applied to ground-water investigations***, by W.S. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

2-F1. ***Application of drilling, coring, and sampling techniques to test holes and wells***, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

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

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

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

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

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

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

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

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

3-A9. ***Measurement of time of travel in streams by dye tracing***, by F.A. Kilpatrick, and J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. ***Discharge ratings at gaging stations***, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

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 pages.

3-A12. ***Fluorometric procedures for dye tracing***, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12, 1986. 41 pages.

3-A13. ***Computations of continuous records of streamflow***, by E.J. Kennedy: USGS-- TWRI Book 3, Chapter A13, 1983. 53 pages.

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

3-A15. ***Computation of water-surface profiles in open channels***, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. ***Measurement of discharge using tracers***, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. ***Acoustic velocity meter systems***, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. ***Determination of stream reaeration coefficients by use of tracers***, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. ***Levels of streamflow gaging stations***, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.

3-A20. ***Simulation of soluble waste transport and buildup in surface waters using tracers***, by F.A. Kilpatrick: USGS --TWRI Book 3, Chapter A20. 1993. 38 pages.

3-A21. ***Stream-gaging cableways***, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.

Section B. Ground-Water Techniques

3-B1. ***Aquifer-test design, observation, and data analysis***, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. ***Introduction to ground-water hydraulics, a programmed text for self instruction***, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. ***Type curves for selected problems of flow to wells in confined aquifers***, by J.E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. ***Regression modeling of ground-water flow***, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B4. ***Supplement 1. Regression modeling of ground-water flow-Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems***, by R.L. Cooley. USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.

3-B5. ***Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction***, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. ***The principle of superposition and its application in ground-water hydraulics***, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-B7. ***Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow***, by E.J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.

Section C. Sedimentation and Erosion Techniques

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

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 pages.

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

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

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

4-A2. ***Frequency curves***, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

Section B. Surface Water

4-B1. ***Low-flow investigations***, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. ***Storage analyses for water supply***, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. ***Regional analyses of streamflow characteristics***, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. ***Computation of rate and volume of stream depletion by wells***, by C.T. Jenkins: USGS--TWRI Book 4,Chapter D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. ***Methods for determination of inorganic substances in water and fluvial sediments***, by M.J. Fishman and L.C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

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 pages.

5-A3. ***Methods for the determination of organic substances in water and fluvial sediments***, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.

5-A4. ***Methods for collection and analysis of aquatic biological and microbiological samples***, by L.J. Britton and P.E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

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 pages.

5-A6. ***Quality assurance practices for the chemical and biological analyses of water and fluvial sediments***, by L.C. Friedman and D.E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

Section A. Sediment Analysis

5-C1. ***Laboratory theory and methods for sediment analysis***, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. ***A modular three-dimensional finite-difference ground-water flow model***, by M.G. McDonald and A.W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

6-A2. ***Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model***, by S.A. Leake and D.E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. ***A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual***, by L.J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.

6-A4. ***A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions***, by R.L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. ***A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details***, by L.J. Torak. USGS--TWRI Book 6, Chapter A5. 1993. 243 pages.

6-A6. ***A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction***, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. ***Finite difference model for aquifer simulation in two dimensions with results of numerical experiments***, by pages.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. ***Computer model of two-dimensional solute transport and dispersion in ground water***, by L.F. Konikow and J.D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. ***A model for simulation of flow in singular and interconnected channels***, by R.W. Schaffrannek, R.A. Baltzer, and D.E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1983. 110 pages.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. ***Methods of measuring water levels in deep wells***, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. ***Installation and service manual for U.S. Geological Survey manometers***, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

Section B. Instruments for Measurement of Discharge

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 pages.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. ***National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling,*** by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A1. 1998. 47 pages.

9-A2. ***National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling,*** edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A2. 1998. 94 pages.

9-A3. ***National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling,*** edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A3. 1998. 75 pages.

9-A5. ***National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples,*** edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS--TWRI Book 9, Chapter A5. 1999. 149 pages.

9-A6. ***National Field Manual for the Collection of Water-Quality Data: Field Measurements***, edited by F.D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A6. 1998. Variously paginated.

9-A7. ***National Field Manual for the Collection of Water-Quality Data: Biological Indicators***, edited by D.N. Myers and F.D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.

9-A7. ***National Field Manual for the Collection of Water-Quality Data: Five-Day Biochemical Oxygen Demand,*** by G.C. Delzer and S.W. McKenzie: USGS-TWRI Book 9, Chapter A7.2. 1999. 28 pages.

9-A8. ***National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples***, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.

9-A9. ***National Field Manual for the Collection of Water-Quality Data: Saafety in Field Activities***, by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 pages.

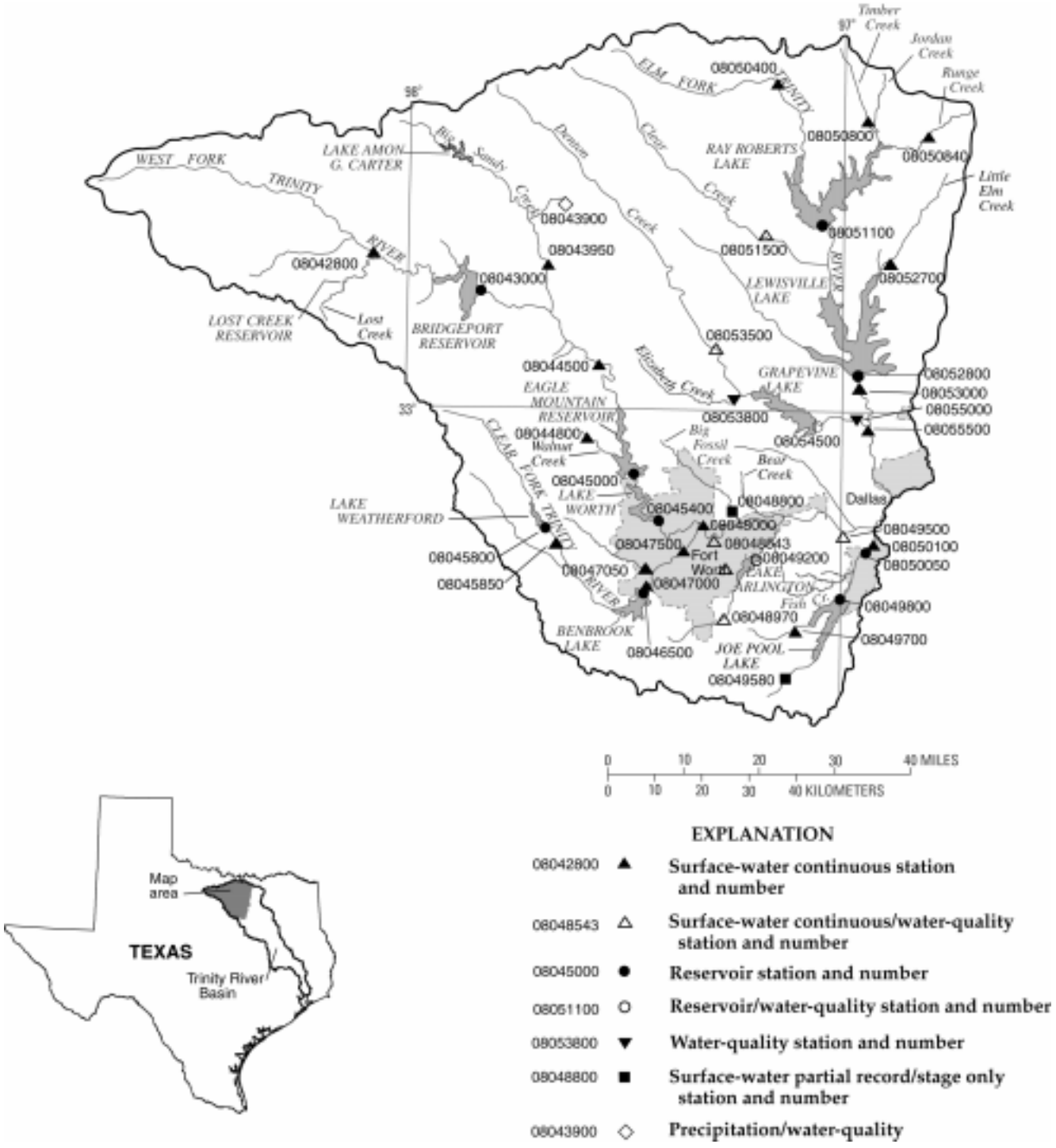


Figure 3.-- Map showing location of gaging stations in the first section of the Trinity River Basin

08042800 WEST FORK TRINITY RIVER NEAR JACKSBORO, TX

LOCATION.--Lat 33°17'30", long 98°04'49", Jack County, Hydrologic Unit 12030101, on upstream side of bridge on State Highway 59, 4 mi downstream from Big Cleveland Creek, 7 mi upstream from Carroll Creek, 7 mi northeast of Jacksboro and at mile 660.

DRAINAGE AREA.--683 mi^2.

PERIOD OF RECORD.--Mar 1956 to current year.
Water-quality records.--Sediment records: Oct 1976 to Sep 1978.

GAGE.--Water-stage recorder. Datum of gage is 869.28 ft above sea level, from Texas Department of Transportation Sep 20, 1960, to May 30, 1961, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since 1974, at least 10% of contributing drainage area has been affected by discharge from the flood-detention pools of 21 floodwater-retarding structures with a combined detention capacity of 19,780 acre-ft. These structures control runoff from 70.9 mi^2 in the West Fork Trinity River drainage basin upstream from this station. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--18 years (water years 1956-73), 104 ft^3/s (75,350 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1956-73).--Maximum discharge, 35,100 ft^3/s Apr 27, 1957 (gage height, 32.10; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jun 1941 reached a stage of 30 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.5	.00	.00	5.4	.00	6.0	6.1	655	.00	.00	.00
2	.00	5.7	.00	.00	55	.00	3.4	9.9	426	.00	.00	.00
3	.00	3.3	.00	.00	25	.00	1.9	20	151	.00	.00	.00
4	.00	1.3	.00	.00	9.8	.00	1.2	9.0	31	.00	.00	.00
5	.00	.64	.00	.02	5.9	.00	.97	3.9	8.1	.00	.00	.00
6	.00	.15	.00	.00	4.3	.00	.77	1.9	3.2	.00	.00	.00
7	.00	.02	.00	.00	3.3	.00	.63	.99	1.4	.00	.00	.00
8	.00	.01	.00	.00	3.0	1.5	.52	.69	.82	.00	.00	.00
9	.00	.00	.00	.00	2.6	.24	.48	.53	.52	.00	.00	.00
10	.00	.00	.00	.00	2.3	.00	.85	.39	1.0	.00	.00	.00
11	.00	.00	.00	.00	2.4	.14	.96	.31	1.0	.00	.00	.00
12	.00	.00	.00	.00	1.8	32	.87	.47	.42	.00	.00	.00
13	.00	.13	.00	.00	1.5	58	.62	.31	.04	.00	.00	.00
14	.00	.07	.00	.00	1.1	35	5.7	.11	.01	.00	.00	.00
15	.00	.01	.00	.00	.76	16	9.2	.03	.00	.00	.00	.00
16	.00	.00	.00	.00	.63	15	4.6	.03	.00	.00	.00	.00
17	2.1	.00	.00	.00	.39	7.1	2.4	.01	.00	.00	.00	.00
18	10	.00	.24	.00	.22	107	1.8	.00	.00	.00	.00	.00
19	3.1	.00	.43	.00	.08	870	1.9	.00	.00	.00	.00	.00
20	1.5	.00	.02	.00	.03	930	1.3	.00	.00	.00	.00	.00
21	.78	.00	.64	.00	.01	719	.89	.00	.00	.00	.00	.00
22	.19	.00	1.0	.00	.00	448	.71	.00	.00	.00	.00	.00
23	.02	.00	.63	.00	.00	188	.55	.00	.00	.00	.00	.00
24	.00	.00	.30	.00	.00	52	.50	.00	.00	.00	.00	.00
25	.00	.00	.24	.00	.00	18	.64	.00	.00	.00	.00	.00
26	.00	.00	.46	.00	.00	6.9	111	78	.00	.00	.00	.00
27	.00	.00	.04	.00	.00	4.3	393	159	.00	.00	.00	.00
28	.00	.00	.12	.00	.00	7.4	205	666	.00	.00	.00	.00
29	.00	.00	.02	1.3	---	21	33	744	.00	.00	.00	.00
30	.00	.00	.01	2.5	---	28	12	683	.00	.00	.00	.00
31	.00	---	.00	4.5	---	11	---	920	---	.00	.00	---
TOTAL	17.69	15.83	4.15	8.32	125.52	3575.58	803.36	3304.67	1279.51	0.00	0.00	0.00
MEAN	.57	.53	.13	.27	4.48	115	26.8	107	42.7	.000	.000	.000
MAX	10	5.7	1.0	4.5	55	930	393	920	655	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00	.00
AC-FT	35	31	8.2	17	249	7090	1590	6550	2540	.00	.00	.00

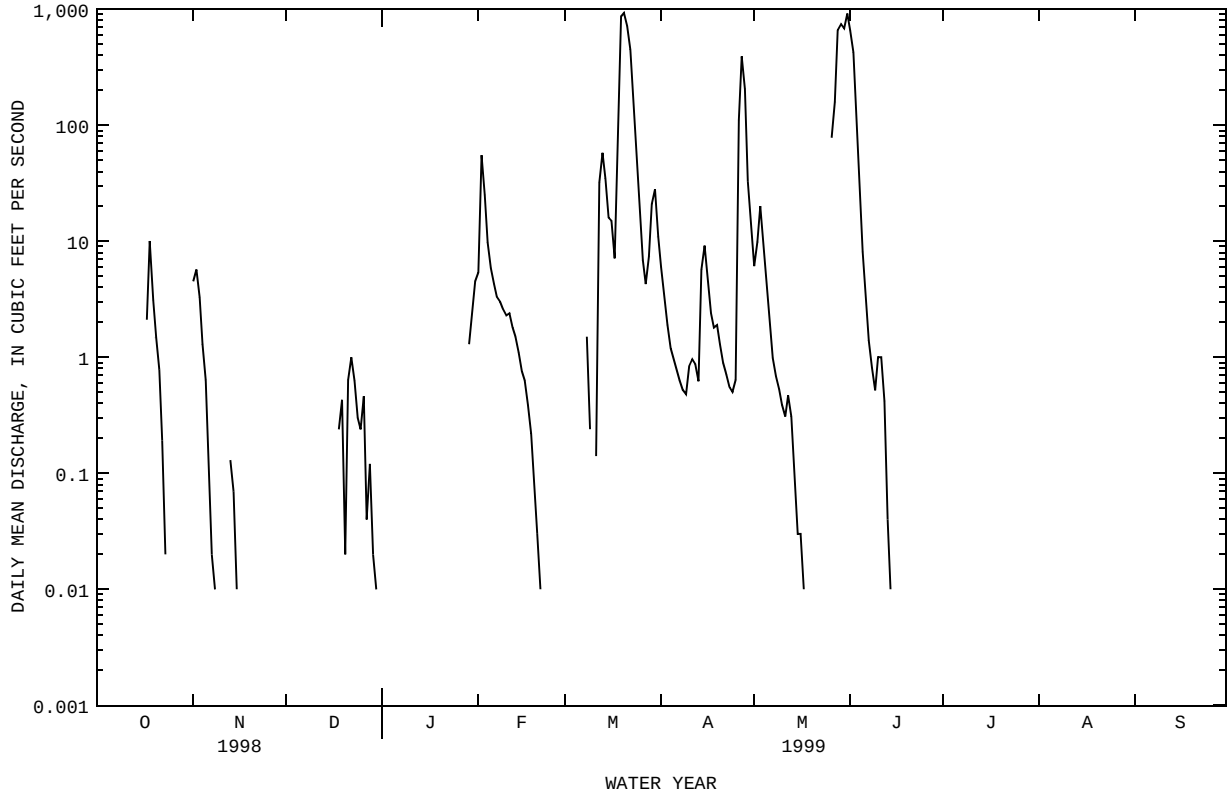
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999z, BY WATER YEAR (WY)

MEAN	152	40.2	65.8	34.4	88.6	120	137	387	266	29.3	18.1	48.0
MAX	2363	219	1025	369	1049	697	2383	3127	1689	251	134	332
(WY)	1982	1975	1992	1985	1997	1990	1990	1989	1989	1975	1989	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1978	1978	1978	1978	1978	1978	1980	1984	1984	1978	1980	1982

08042800 WEST FORK TRINITY RIVER NEAR JACKSBORO, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1974 - 1999z	
ANNUAL TOTAL	12227.44		9134.63			
ANNUAL MEAN	33.5		25.0		116	
HIGHEST ANNUAL MEAN					468	1990
LOWEST ANNUAL MEAN					.072	1984
HIGHEST DAILY MEAN	2660	Mar 17	930	Mar 20	29100	May 17 1989
LOWEST DAILY MEAN	.00	May 18	.00	Oct 1	.00	Apr 6 1974
ANNUAL SEVEN-DAY MINIMUM	.00	May 18	.00	Oct 1	.00	Apr 12 1974
INSTANTANEOUS PEAK FLOW			1050	Mar 20	35100	Apr 27 1957
INSTANTANEOUS PEAK STAGE			14.16	Mar 20	32.10	Apr 27 1957
ANNUAL RUNOFF (AC-FT)	24250		18120		83830	
10 PERCENT EXCEEDS	17		9.8		155	
50 PERCENT EXCEEDS	.00		.00		.99	
90 PERCENT EXCEEDS	.00		.00		.00	

z Period of regulated streamflow.



08043000 BRIDGEPORT RESERVOIR ABOVE BRIDGEPORT, TX

LOCATION.--Lat 33°13'22", long 97°49'54", Wise County, Hydrologic Unit 12030101, in brick valve house on upstream side and near left end of Bridgeport Dam on West Fork Trinity River, 4.6 mi west of Bridgeport, 13 mi upstream from Big Sandy Creek and at mile 626.

DRAINAGE AREA.--1,111 mi^2.

PERIOD OF RECORD.--Apr 1932 to current year. Prior to Oct 1950, end-of-month values only.
Water-quality records.--Chemical data: Oct 1969 to Sep 1984.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Jan 12, 1988, nonrecording gages at various sites in vicinity of present gage at present datum. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 2,040 ft long. The dam was completed in Dec 1931 and storage began Apr 1, 1932. The original dam was 1,900 ft long, but was lengthened to the present length (2,040 ft) in 1971-72. The original service spillway was eliminated during construction (1971-72),and a new spillway with approach and discharge channels was built through natural ground 2,800 ft from the left end of dam. The new spillway is 90 ft wide and has eight vertical lift gates that are 11.25 x 22-ft. The controlled outlet works consist of a 48-inch diameter and an 18-inch diameter pipe encased in a concrete conduit extending through the dam. In addition, a controlled 60-inch diameter steel pipe extends through the service spillway wall to the spillway discharge basin. For elevations of outlet works, see table below. Capacity tables are based on surveys made in 1956 and 1968. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	874.0
Crest of spillway	866.0
Top of gates	842.0
Top of conservation pool	836.0
Sill of gates	820.0
Lowest value outlet (invert)	751.4

COOPERATION.--Capacity table No. 5-C was provided by Tarrant Regional Water District. The table was put into use Oct 1, 1988.

EXTREMES FOR PERIOD OF RECORD.--Prior to Jan 12, 1988, once-daily reading of nonrecording gage at 0700 hours; maximum contents observed, 491,700 acre-ft, May 5, 1990 (elevation, 844.36 ft); minimum contents observed since first appreciable storage in 1935, 7,170 acre-ft, Oct 12-16, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 319,200 acre-ft, Jun 6-7 (elevation, 831.48 ft); minimum contents, 258,800 acre-ft, Sep 30 (elevation, 825.98 ft).

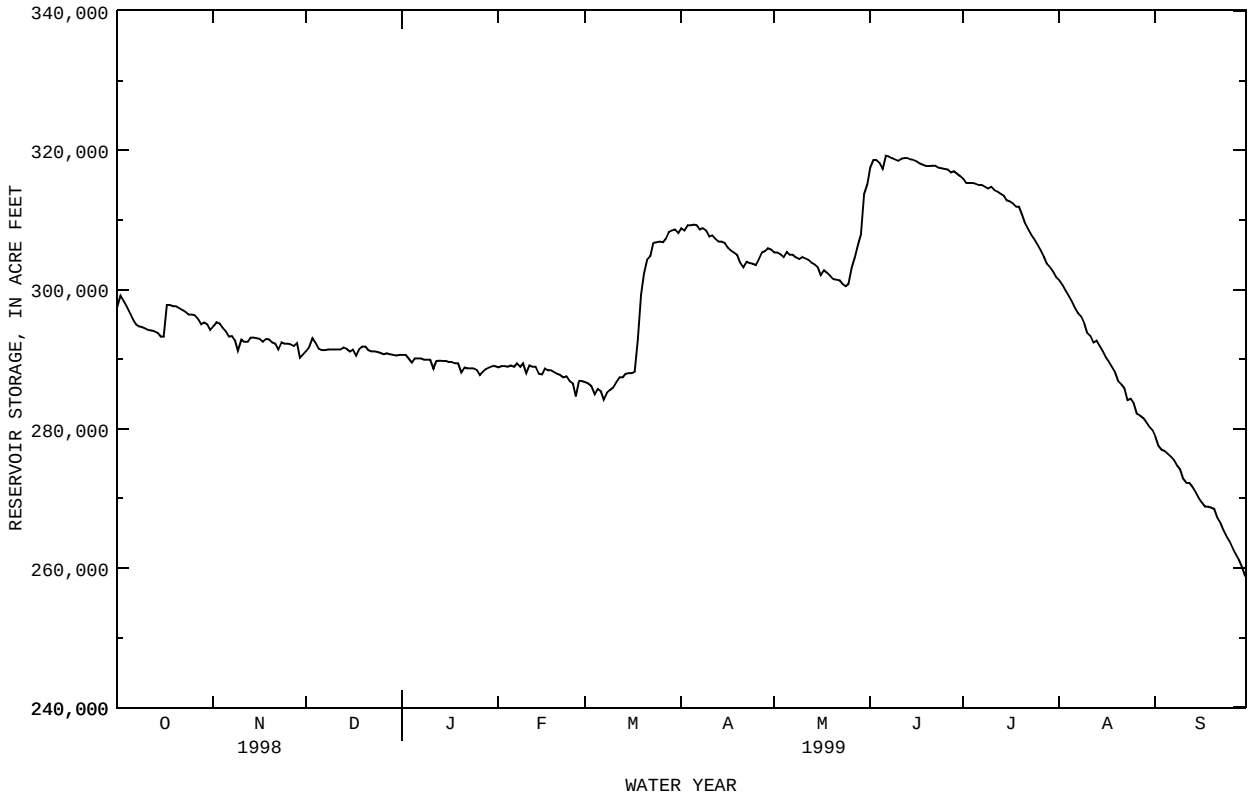
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297500	294700	291200	290600	288800	286700	308800	305300	317500	315900	301300	278900
2	299100	295300	291900	290600	289000	286500	308500	305300	318600	315300	300600	277500
3	298400	295100	293000	290100	289000	286200	309200	305100	318600	315300	299900	277000
4	297600	294500	292300	289500	288900	285000	309200	304700	318200	315300	299100	276800
5	296700	294000	291500	290100	289100	285700	309300	305400	317300	315200	298300	276400
6	295700	293200	291300	290100	288900	285400	309200	305000	319200	315000	297400	276000
7	295000	293300	291300	290100	289400	284200	308600	305000	319100	315000	296600	275500
8	294700	292700	291400	289900	288900	285200	308800	304600	318900	314800	296100	274700
9	294600	291200	291400	289900	289400	285600	308500	304400	318700	314500	295100	274100
10	294400	292800	291400	289900	288000	285900	307600	304700	318500	314800	293800	272800
11	294200	292500	291400	288600	289100	286700	307800	304500	318800	314300	293300	272200
12	294100	292500	291400	289700	288900	287400	307300	304300	318900	314100	292400	272200
13	294000	293100	291700	289800	288900	287400	306900	303900	318900	313800	292700	271600
14	293800	293100	291500	289700	287900	287900	306900	303600	318700	313500	291900	270900
15	293200	293000	291100	289700	287800	288000	306700	303200	318600	312800	291100	270000
16	293200	292900	291400	289600	288700	288000	306000	302100	318400	312700	290300	269400
17	297800	292500	290500	289600	288400	288200	305600	302800	318100	312400	289600	268800
18	297800	292900	291400	289400	288400	292900	305300	302400	317900	311900	288800	268800
19	297600	292800	291800	289400	288100	299300	305000	302000	317700	311900	288100	268700
20	297600	292400	291800	288100	287900	302300	303900	301500	317700	310700	286800	268500
21	297300	292200	291300	288800	287700	304300	303200	301400	317800	309500	286400	267200
22	297100	291400	291100	288700	287400	304800	304000	301300	317800	308600	285700	266400
23	296800	292400	291100	288700	287500	306700	303800	300800	317500	307800	284100	265400
24	296400	292200	291000	288700	286800	306800	303700	300500	317400	307200	284300	264500
25	296400	292200	290900	288500	286500	306900	303500	300800	317300	306400	283700	263800
26	296300	292100	290700	287700	284700	306800	304400	303100	317200	305600	282200	262800
27	295800	291900	290800	288200	286900	307300	305300	304600	316800	304700	281900	261900
28	295000	292300	290700	288600	286800	308300	305500	306300	317000	303700	281600	261100
29	295300	290200	290600	288800	---	308500	305900	307900	316700	303200	281000	260100
30	295000	290700	290500	289000	---	308600	305700	313700	316300	302600	280300	258800
31	294200	---	290600	289000	---	308100	---	315100	---	301800	279800	---
MAX	299100	295300	293000	290600	289400	308600	309300	315100	319200	315900	301300	278900
MIN	293200	290200	290500	287700	284700	284200	303200	300500	316300	301800	279800	258800
(+)	829.29	828.97	828.96	828.82	828.62	830.53	830.32	831.13	831.23	829.97	827.97	825.98
(@)	-4500	-3500	-100	-1600	-2200	+21300	-2400	+9400	+1200	-14500	-22000	-21000

CAL YR 1998 MAX 400100 MIN 290200 (@) -45600
WTR YR 1999 MAX 319200 MIN 258800 (@) -39900

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08043000 BRIDGEPORT RESERVOIR ABOVE BRIDGEPORT, TX--Continued



08043950 BIG SANDY CREEK NEAR CHICO, TX

LOCATION.--Lat 33°16'27", long 97°40'42", Wise County, Hydrologic Unit 12030101, at left downstream side of bridge on Farm Road 1810, 4.5 mi upstream from Greathouse Branch, 6.0 mi east of Chico, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--312 mi^2.

PERIOD OF RECORD.--Oct 1936 to current year. Prior to 1996 water year, published as "near Bridgeport" (station 08044000).
Water-quality records.--Chemical data: Apr 1993 to Sep 1995; biochemical data: Apr 1993 to Sep 1995; sediment data: Apr 1993 to Sep 1995.

REVISED RECORDS.--WSP 1148: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage has not been determined. Prior to May 24, 1996 at datum of 724.44 ft, prior to Oct 1, 1984, at datum 3.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for daily discharges below 1 ft^3/s, which are fair. Since May 1, 1956, runoff from 100 mi^2 above this station is affected at times by storage in Lake Amon G. Carter, 30 mi upstream, with a capacity of 15,240 acre-ft at elevation 920.0 ft (spillway crest). During the year, the city of Bowie diverted water from Lake Amon G. Carter for municipal use and discharged wastewater effluent into tributaries to Big Sandy Creek upstream from this station. Flow was also affected at times by discharge from the flood-detention pools of 19 floodwater-retarding structures with a combined capacity of 11,430 acre-ft. These structures control runoff from a 46.0 mi^2 area upstream from this station and below Lake Amon G. Carter. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1936-55), 85.6 ft^3/s (62,030 acre-ft/yr) at site and datum then in use.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1936-55).--Maximum discharge, 53,000 ft^3/s Jun 10, 1941 (gage height, 15.69 ft) at site and datum then in use; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1887 occurred in 1908 and 1915 and reached about the same stage as that of Jun 10, 1941, at site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.05	.11	4.4	1.7	.18	6.3	4.4	11	.15	.00	.00
2	.05	.02	.11	5.3	1.0	.26	5.6	4.9	6.1	.12	.00	.00
3	.06	.01	.13	10	1.0	.79	4.7	11	3.6	.00	.00	.01
4	.11	.02	.22	9.5	.86	.94	4.2	20	2.5	.00	.00	.01
5	.16	.06	.24	8.3	.59	.78	4.2	16	1.8	.00	.00	.05
6	.24	.10	.22	7.2	.97	.94	3.4	7.1	2.1	.00	.00	.02
7	.31	.15	.21	3.4	1.0	.95	3.2	3.7	2.9	.00	.00	.01
8	.45	.19	.21	6.3	.95	4.5	3.0	2.5	2.1	.00	.00	.01
9	.20	.19	.21	9.3	.89	13	2.7	2.0	1.4	.00	.00	.01
10	.12	.19	.22	7.3	.77	4.9	2.6	2.1	.96	.03	.00	.01
11	.14	.18	.29	6.0	.75	1.5	2.2	5.0	.80	.00	.00	.01
12	.14	.18	1.2	2.9	.69	1.3	1.9	5.0	.50	.00	.00	.01
13	.08	.43	2.6	5.0	.71	3.3	1.9	2.6	.42	.00	.00	.01
14	.09	.45	7.6	4.6	.64	2.0	5.5	1.6	.26	.00	.00	.01
15	.09	.25	8.6	3.4	.46	1.6	14	1.2	.41	.00	.00	.01
16	.07	.21	13	2.2	.80	1.2	7.0	.84	7.5	.00	.00	.00
17	.03	.22	15	1.0	.85	.99	3.6	.87	2.6	.00	.00	.01
18	.04	.23	23	1.6	.62	118	2.4	1.2	1.0	.00	.00	.01
19	.01	.24	20	1.6	.27	173	1.9	.97	.58	.00	.00	.00
20	.01	.23	17	.98	.74	47	1.8	.73	.44	.00	.00	.00
21	.01	.22	12	1.4	.91	16	1.5	.61	.44	.00	.00	.01
22	.01	.19	10	.96	.94	9.8	1.4	.54	.50	.00	.00	.01
23	.01	.18	9.8	1.3	1.0	7.0	1.2	.45	.55	.00	.00	.01
24	.01	.19	9.8	1.3	1.0	5.3	.98	.37	.36	.00	.00	.01
25	.01	.19	10	1.2	.91	4.7	1.0	.60	.28	.00	.00	.01
26	.00	.17	10	1.3	.53	4.2	32	119	.13	.00	.00	.02
27	.00	.13	10	1.3	.49	4.7	107	161	.11	.00	.00	.01
28	.01	.11	9.8	1.0	.30	14	26	40	.09	.00	.00	.01
29	.01	.08	9.5	1.2	---	16	11	16	.12	.00	.00	.01
30	.01	.11	9.5	2.7	---	9.1	6.7	65	.16	.00	.00	.01
31	.01	---	8.8	2.6	---	7.2	---	30	---	.00	.00	---
TOTAL	2.52	5.17	219.37	116.54	22.34	475.13	270.88	527.28	51.71	0.30	0.00	0.31
MEAN	.081	.17	7.08	3.76	.80	15.3	9.03	17.0	1.72	.010	.000	.010
MAX	.45	.45	23	10	1.7	173	107	161	11	.15	.00	.05
MIN	.00	.01	.11	.96	.27	.18	.98	.37	.09	.00	.00	.00
AC-FT	5.0	10	435	231	44	942	537	1050	103	.6	.00	.6

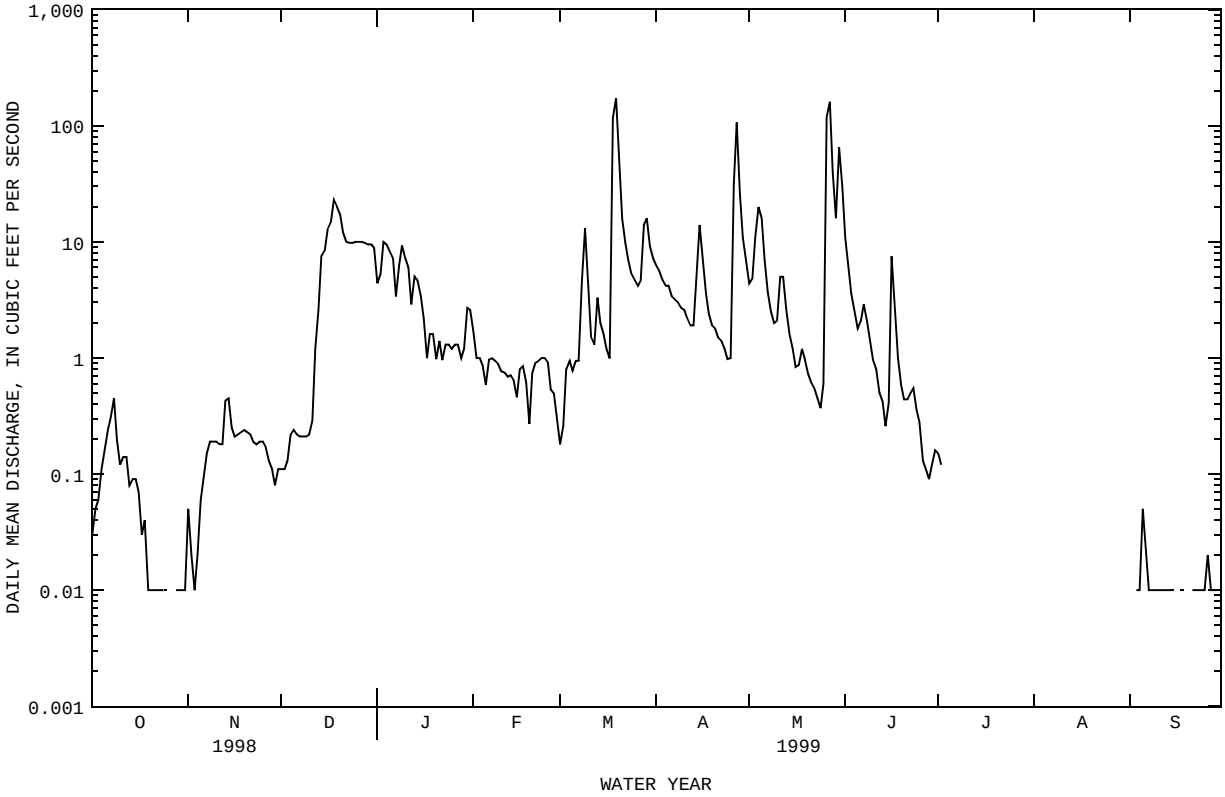
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999z, BY WATER YEAR (WY)

MEAN	104	41.1	41.1	29.5	45.8	87.7	104	224	136	19.6	11.1	28.4
MAX	1829	298	743	257	272	570	1175	1284	1250	181	230	491
(WY)	1982	1965	1992	1992	1997	1977	1957	1990	1989	1973	1973	1962
MIN	.000	.000	.000	.000	.72	.000	.000	.002	.000	.000	.000	.000
(WY)	1959	1956	1956	1956	1959	1956	1956	1980	1956	1964	1957	1956

08043950 BIG SANDY CREEK NEAR CHICO, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999z	
ANNUAL TOTAL	16703.59		1691.55			
ANNUAL MEAN	45.8		4.63		72.9	
HIGHEST ANNUAL MEAN					317	1982
LOWEST ANNUAL MEAN					2.12	1956
HIGHEST DAILY MEAN	1870	Mar 17	173	Mar 19	23800	Oct 13 1981
LOWEST DAILY MEAN	.00	Oct 26	.00	Oct 26	.00	Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.01	Oct 21	.00	Jul 3	.00	Oct 5 1955
INSTANTANEOUS PEAK FLOW			434	Mar 18	g45000	Oct 13 1981
INSTANTANEOUS PEAK STAGE			6.04	Mar 18	g14.78	Oct 13 1981
ANNUAL RUNOFF (AC-FT)	33130		3360		52790	
10 PERCENT EXCEEDS	88		9.8		93	
50 PERCENT EXCEEDS	4.8		.46		6.6	
90 PERCENT EXCEEDS	.04		.00		.00	

z Period of regulated streamflow.
g At site and datum then in use.



08044500 WEST FORK TRINITY RIVER NEAR BOYD, TX

LOCATION.--Lat 33°05'07", long 97°33'30", Wise County, Hydrologic Unit 12030101, on right bank on downstream side of highway embankment, 10 ft right of right abutment of bridge on Farm Road 730, 0.6 mi northeast of Boyd, 3.5 mi downstream from Boggy Creek and at mile 602.

DRAINAGE AREA.--1,725 mi^2.

PERIOD OF RECORD.--Jan 1947 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 660.57 ft above sea level. Prior to Dec 14, 1954, water-stage recorder at site 2.2 mi downstream at datum 5.48 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Jan 1947, at least 10% of contributing drainage area has been regulated by Bridgeport Reservoir (station 08043000, normal storage 386,539 acre-ft) 25 mi upstream and by Lake Carter. In addition, flow from 91.2 mi^2 above station is affected at times by discharge from the flood-detention pools of 36 floodwater-retarding structures with a total combined detention capacity of 24,450 acre-ft in the Big Sandy and Salt Creek drainage basins. No known diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, about 25 ft in May 1908, present site and datum, from information by local residents, who also reported a flood of about the same gage height between 1870-80. A flood in Apr 1942 reached a stage of 20.6 ft, present site and datum, from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

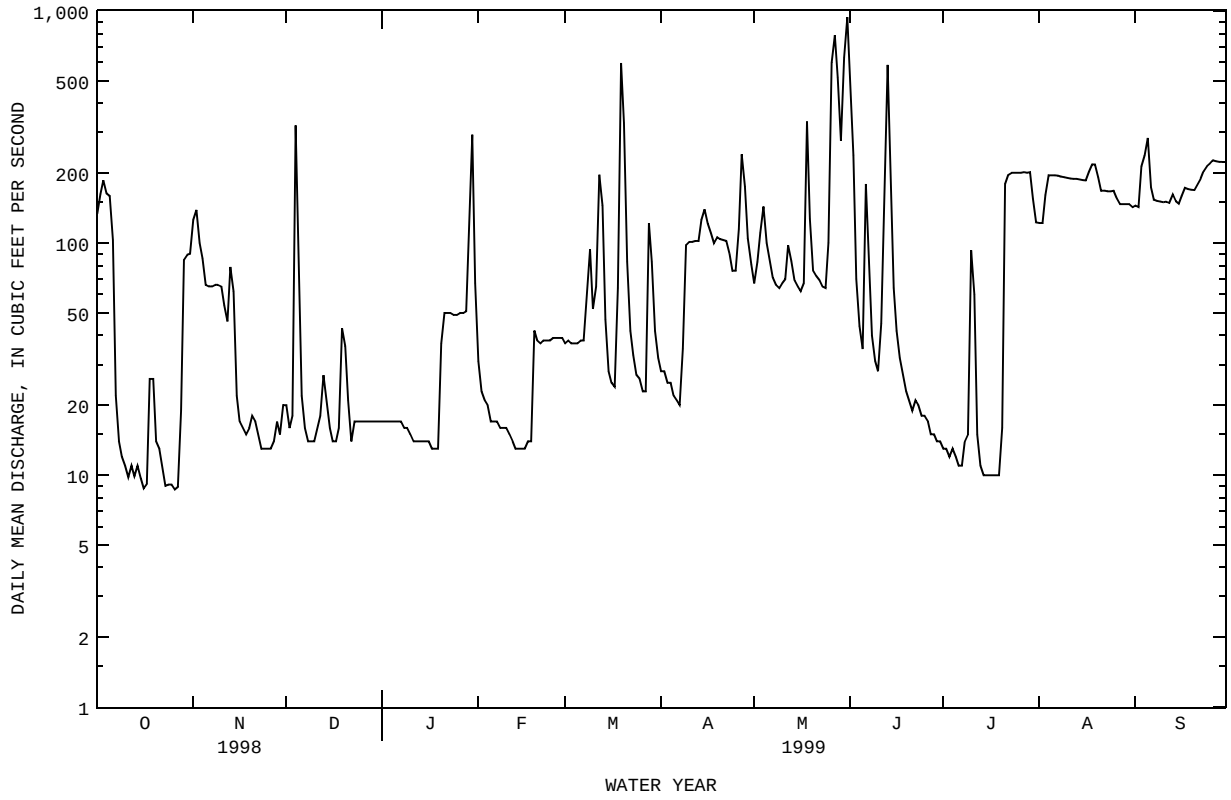
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	126	20	17	31	37	28	67	452	13	122	145
2	163	139	16	17	23	38	28	83	239	13	122	143
3	187	100	18	17	21	37	25	111	70	12	161	214
4	164	86	321	17	20	37	25	144	44	13	196	238
5	160	66	57	17	17	37	22	100	35	12	196	284
6	103	65	22	17	17	38	21	85	180	11	196	174
7	22	65	16	17	17	38	20	71	78	11	195	154
8	14	66	14	16	16	63	35	66	40	14	193	152
9	12	66	14	16	16	94	98	64	31	15	192	151
10	11	65	14	15	16	52	101	67	28	93	191	150
11	9.8	54	16	14	15	65	101	70	45	60	190	151
12	11	46	18	14	14	197	102	98	180	15	189	149
13	9.9	79	27	14	13	145	102	84	585	11	189	162
14	11	62	21	14	13	47	126	69	175	10	188	152
15	9.7	22	16	14	13	28	140	65	64	10	187	148
16	8.8	17	14	14	13	25	121	62	42	10	186	160
17	9.2	16	14	13	14	24	110	67	32	10	203	173
18	26	15	16	13	14	64	100	334	27	10	218	171
19	26	16	43	13	42	597	106	127	23	10	218	170
20	14	18	36	37	38	329	104	76	21	16	192	169
21	13	17	21	50	37	83	103	72	19	180	168	179
22	11	15	14	50	38	42	102	69	21	197	168	190
23	9.0	13	17	50	38	33	90	65	20	201	167	204
24	9.1	13	17	49	38	27	76	64	18	201	167	214
25	9.1	13	17	49	39	26	76	100	18	201	168	220
26	8.7	13	17	50	39	23	115	599	17	201	156	227
27	8.9	14	17	50	39	23	242	786	15	202	147	225
28	19	17	17	51	39	122	176	517	15	201	147	224
29	85	15	17	109	---	83	105	276	14	202	147	224
30	89	20	17	293	---	42	81	629	14	156	147	224
31	90	---	17	67	---	32	---	939	---	123	143	---
TOTAL	1457.2	1339	921	1194	690	2528	2681	6026	2562	2434	5449	5541
MEAN	47.0	44.6	29.7	38.5	24.6	81.5	89.4	194	85.4	78.5	176	185
MAX	187	139	321	293	42	597	242	939	585	202	218	284
MIN	8.7	13	14	13	13	23	20	62	14	10	122	143
AC-FT	2890	2660	1830	2370	1370	5010	5320	11950	5080	4830	10810	10990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)

MEAN	302	190	181	108	143	230	270	718	473	203	223	182
MAX	4063	1248	3073	929	2003	1728	4339	5908	5439	1330	1157	1643
(WY)	1982	1982	1992	1992	1997	1998	1990	1990	1989	1950	1950	1962
MIN	2.96	4.81	2.21	.75	.10	.26	.59	25.2	2.76	7.11	.025	.23
(WY)	1957	1984	1953	1956	1953	1955	1955	1959	1953	1979	1980	1956

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1947 - 1999	
ANNUAL TOTAL	89872.2		32822.2			
ANNUAL MEAN	246		89.9		270	
HIGHEST ANNUAL MEAN					1094	1982
LOWEST ANNUAL MEAN					58.6	1953
HIGHEST DAILY MEAN	5900	Mar 23	939	May 31	38800	Oct 14 1981
LOWEST DAILY MEAN	8.7	Oct 26	8.7	Oct 26	.00	Aug 6 1948
ANNUAL SEVEN-DAY MINIMUM	9.8	Oct 21	9.8	Oct 21	.00	Sep 25 1952
INSTANTANEOUS PEAK FLOW			1030	May 31	60400	Oct 14 1981
INSTANTANEOUS PEAK STAGE			13.86	May 31	25.87	Oct 14 1981
ANNUAL RUNOFF (AC-FT)	178300		65100		195300	
10 PERCENT EXCEEDS	306		199		493	
50 PERCENT EXCEEDS	65		49		68	
90 PERCENT EXCEEDS	16		13		4.1	

08044500 WEST FORK TRINITY RIVER NEAR BOYD, TX--Continued



08044800 WALNUT CREEK AT RENO, TX

LOCATION.--Lat 32°56'44", long 97°34'58", Parker County, Hydrologic Unit 12030101, on left bank at abandoned bridge abutment, 100 ft upstream from bridge on FM 1542, 3,500 ft upstream from Cottonwood Branch and 2.4 mi west of intersection of FM 1542 and FM 730 in Center Point.

DRAINAGE AREA.--75.6 mi^2.

PERIOD OF RECORD.--Apr 1992 to Sep 1995 (annual maximum), Oct 1995 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 681.11 ft above sea level. Satellite telemeter at station. No observations of water temperature were made during the year.

REMARKS.--No estimated daily discharges. Records good except those less than 1 ft^3/s, which are poor. No known regulation or diversions.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 11	0915	5,170	13.37	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

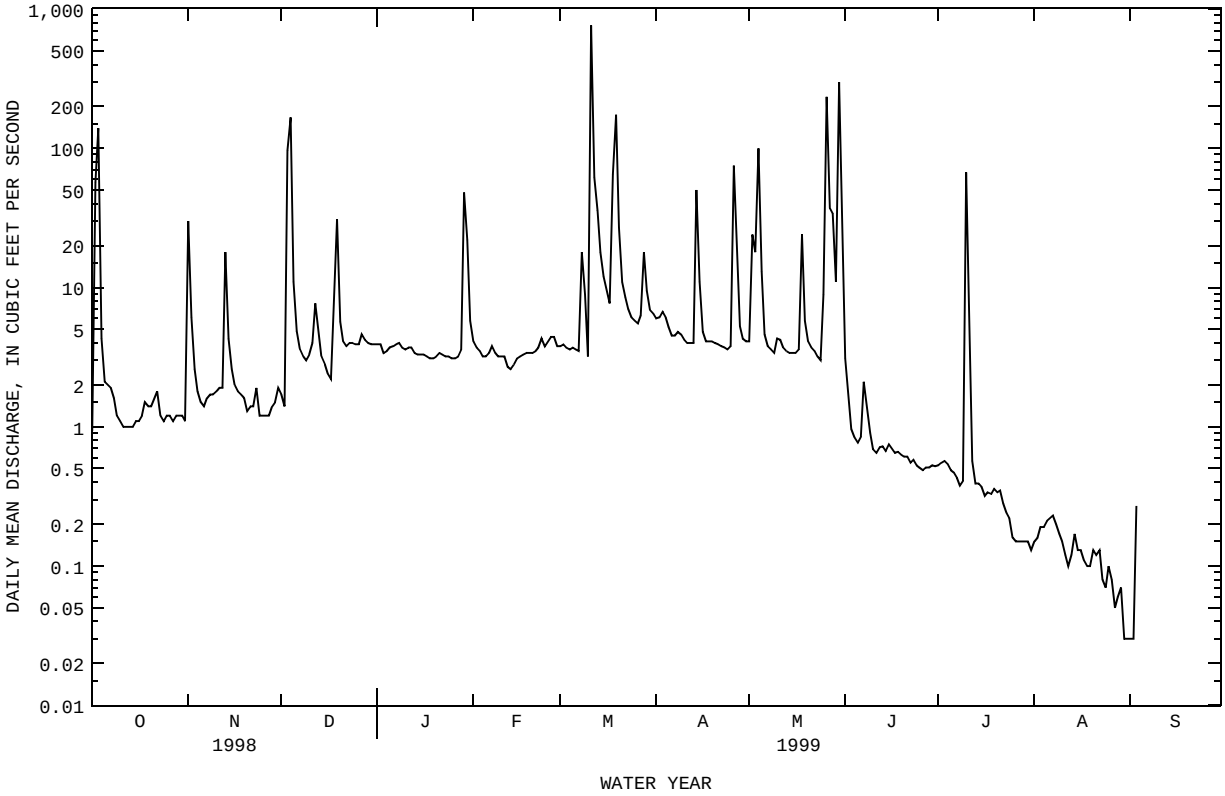
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	30	1.7	3.9	4.1	3.8	6.0	4.1	3.1	.53	.15	.03
2	57	6.1	1.4	3.9	3.7	3.9	6.1	24	1.6	.55	.16	.03
3	139	2.6	97	3.4	3.5	3.7	6.7	18	.96	.57	.19	.27
4	4.3	1.8	167	3.5	3.2	3.6	6.1	100	.84	.54	.19	.00
5	2.1	1.5	11	3.7	3.2	3.7	5.2	13	.77	.49	.21	.00
6	2.0	1.4	4.9	3.8	3.4	3.6	4.5	4.6	.85	.47	.22	.00
7	1.9	1.6	3.6	3.9	3.8	3.5	4.5	3.8	2.1	.43	.23	.00
8	1.6	1.7	3.2	4.0	3.4	18	4.8	3.6	1.4	.38	.20	.00
9	1.2	1.7	3.0	3.7	3.2	8.9	4.6	3.4	.91	.41	.17	.00
10	1.1	1.8	3.3	3.6	3.2	3.2	4.2	4.3	.69	67	.15	.00
11	1.0	1.9	4.0	3.7	3.2	761	4.0	4.2	.65	3.1	.12	.00
12	1.0	1.9	7.7	3.7	2.7	62	4.0	3.7	.71	.57	.10	.00
13	1.0	18	4.9	3.4	2.6	36	4.0	3.5	.72	.39	.12	.02
14	1.0	4.3	3.2	3.3	2.8	18	50	3.4	.67	.39	.17	.00
15	1.1	2.6	2.8	3.3	3.1	12	11	3.4	.75	.37	.13	.00
16	1.1	2.0	2.4	3.3	3.2	9.7	4.8	3.4	.70	.32	.13	.00
17	1.2	1.8	2.2	3.2	3.3	7.7	4.1	3.6	.65	.34	.11	.00
18	1.5	1.7	10	3.1	3.4	65	4.1	24	.66	.33	.10	.00
19	1.4	1.6	31	3.1	3.4	174	4.1	5.8	.63	.36	.10	.00
20	1.4	1.3	5.7	3.2	3.4	27	4.0	4.1	.61	.34	.13	.00
21	1.6	1.4	4.1	3.4	3.5	11	3.9	3.7	.61	.35	.12	.00
22	1.8	1.4	3.8	3.3	3.7	8.5	3.8	3.5	.55	.28	.13	.00
23	1.2	1.9	4.0	3.2	4.3	7.0	3.7	3.2	.58	.24	.08	.00
24	1.1	1.2	4.0	3.2	3.8	6.1	3.6	3.0	.53	.22	.07	.00
25	1.2	1.2	3.9	3.1	4.1	5.8	3.8	8.9	.51	.16	.10	.00
26	1.2	1.2	3.9	3.1	4.4	5.5	75	234	.49	.15	.08	.00
27	1.1	1.2	4.6	3.2	4.4	6.3	18	37	.51	.15	.05	.00
28	1.2	1.4	4.2	3.6	3.8	18	5.3	34	.51	.15	.06	.00
29	1.2	1.5	4.0	48	---	9.5	4.3	11	.53	.15	.07	.00
30	1.2	1.9	3.9	22	---	6.9	4.1	299	.52	.15	.03	.00
31	1.1	---	3.9	5.8	---	6.5	---	21	---	.13	.03	---
TOTAL	236.73	101.6	414.3	172.6	97.8	1319.4	272.3	896.2	25.31	80.01	3.90	0.35
MEAN	7.64	3.39	13.4	5.57	3.49	42.6	9.08	28.9	.84	2.58	.13	.012
MAX	139	30	167	48	4.4	761	75	299	3.1	67	.23	.27
MIN	.93	1.2	1.4	3.1	2.6	3.2	3.6	3.0	.49	.13	.03	.00
AC-FT	470	202	822	342	194	2620	540	1780	50	159	7.7	.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	5.20	32.2	11.3	8.64	52.4	57.3	28.1	32.4	12.9	5.91	6.69	2.35
MAX	7.64	120	17.9	17.0	178	104	82.1	92.2	45.4	19.1	14.6	4.52
(WY)	1999	1997	1998	1998	1997	1998	1997	1997	1997	1997	1997	1996
MIN	.36	.53	2.92	3.86	2.59	6.95	9.08	1.43	.84	.65	.13	.012
(WY)	1996	1996	1996	1996	1996	1996	1999	1996	1999	1996	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	6006.16		3620.50			
ANNUAL MEAN	16.5		9.92		21.1	
HIGHEST ANNUAL MEAN					53.7	1997
LOWEST ANNUAL MEAN					3.98	1996
HIGHEST DAILY MEAN	2350	Mar 16	761	Mar 11	2350	Mar 16 1998
LOWEST DAILY MEAN	.73	Sep 5	.00	Sep 4	.00	Sep 4 1999
ANNUAL SEVEN-DAY MINIMUM	.76	Sep 3	.00	Sep 4	.00	Sep 4 1999
INSTANTANEOUS PEAK FLOW			5170	Mar 11	7760	Oct 19 1993
INSTANTANEOUS PEAK STAGE			13.37	Mar 11	21.21	Oct 19 1993
ANNUAL RUNOFF (AC-FT)	11910		7180		15270	
10 PERCENT EXCEEDS	19		11		28	
50 PERCENT EXCEEDS	3.9		3.0		3.7	
90 PERCENT EXCEEDS	.96		.08		.45	

08044800 WALNUT CREEK AT RENO, TX--Continued



08045000 EAGLE MOUNTAIN RESERVOIR ABOVE FORT WORTH, TX

LOCATION.--Lat 32°52'39", long 97°28'29", Tarrant County, Hydrologic Unit 12030101, at right end of main section of Eagle Mountain Dam on West Fork Trinity River, 11.8 mi northwest of Fort Worth and at mile 583.3.

DRAINAGE AREA.--1,970 mi^2.

PERIOD OF RECORD.--Feb 1934 to current year. Prior to Oct 1950, end-of-month values only.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Oct 16, 1988, nonrecording gages at several sites within 1.0 mi of present site at present datum. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by two sections of rolled earthfill and a concrete spillway separated by high natural ground. Total length of the dam including spillway is 4,800 ft. The dam was completed Oct 24, 1932, and storage began Feb 24, 1934. The spillway is a 1,300-foot-wide cut through natural ground located between the two sections of earthfill that make up the dam. The original service spillway, located in the section to the right of the main dam, contains a concrete spillway with four 25-foot bays, three are equipped with vertical lift gates and the fourth is left open. In 1971, a side-channel spillway was constructed. The newest spillway is located 300 ft to the left of the original service spillway and has six 11.25 x 22-foot-wide roller lift gates. The main section of the dam contains the outlet works that consist of two concrete conduits with two 48-inch diameter valves in each conduit. The reservoir is used for flood control and for part of the municipal water supply for the city of Fort Worth. For statement regarding regulation by Natural Resource Conservation Service floodwater-retarding structures and other storage above the reservoir, see REMARKS for West Fork Trinity River near Boyd (station 08044500). Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	682.0
Crest of spillway	676.0
Top of gates (new side-channel spillway)	659.0
Crest of (old service) spillway (top of conservation pool)	649.1
Crest of spillway (new side-channel spillway)	637.0
Lowest gated outlet (invert)	599.9

COOPERATION.--Capacity table, No. 4-C, furnished by Tarrant Regional Water District, was put into use Oct 1, 1988.

EXTREMES FOR PERIOD OF RECORD.--Prior to Oct 16, 1987, once-daily reading of nonrecording gage at 0700 hours, maximum contents observed, 333,500 acre-ft, Apr 26, 1942 (elevation, 659.9 ft); minimum contents observed since first appreciable storage in 1935, 57,690 acre-ft, Nov 19, 20, 1956 (elevation, 629.3 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 165,200 acre-ft, Jun 14-17 (elevation, 647.59 ft); minimum contents, 138,500 acre-ft, Sep 30 (elevation, 644.23 ft).

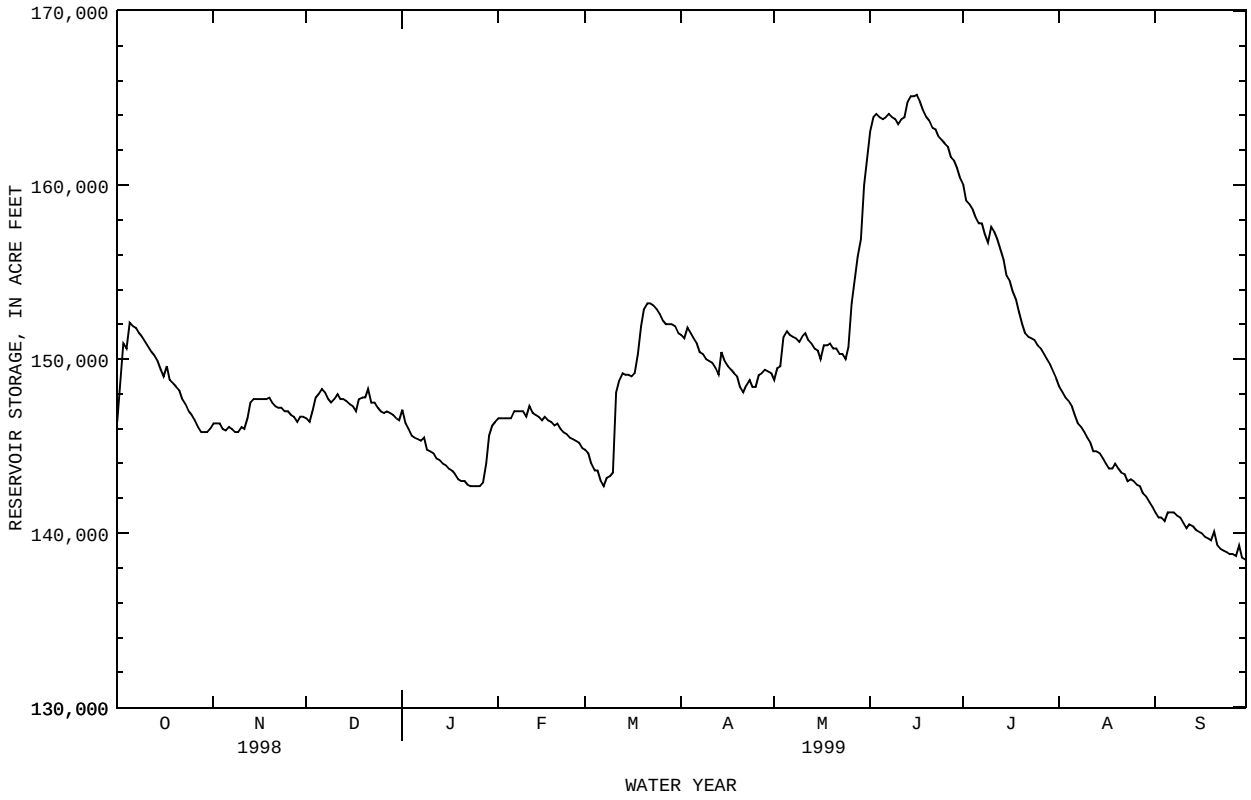
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146400	146300	146600	147100	146600	144800	151400	148800	163100	160000	148400	141200
2	148900	146300	146400	146300	146600	144600	151200	149500	163900	159100	148100	140900
3	150900	146300	147000	146000	146600	144000	151800	149600	164100	158900	147800	140900
4	150600	146000	147800	145600	146600	143600	151500	151300	163900	158600	147600	140700
5	152100	145900	148000	145500	146600	143600	151200	151600	163800	158100	147300	141200
6	151900	146100	148300	145400	147000	143000	150900	151400	163900	157800	146800	141200
7	151800	146000	148100	145300	147000	142700	150400	151300	164100	157800	146300	141200
8	151500	145800	147700	145500	147000	143200	150300	151200	163900	157200	146100	141000
9	151300	145800	147500	144800	147000	143300	150000	151000	163800	156700	145800	140900
10	151000	146100	147700	144700	146700	143500	149900	151300	163500	157600	145500	140600
11	150700	146000	148000	144600	147300	148100	149800	151500	163800	157300	145200	140300
12	150400	146600	147700	144300	146900	148800	149500	151100	163900	156900	144700	140500
13	150200	147500	147700	144200	146800	149200	149100	150900	164800	156300	144700	140400
14	149900	147700	147600	144000	146700	149100	150400	150600	165100	155700	144600	140200
15	149400	147700	147400	143900	146500	149100	149900	150500	165100	154800	144300	140100
16	149000	147700	147300	143700	146700	149000	149600	150000	165200	154500	144000	140000
17	149600	147700	147000	143600	146500	149200	149400	150800	164800	153900	143700	139800
18	148800	147700	147700	143400	146400	150300	149200	150800	164300	153400	143700	139700
19	148600	147800	147800	143100	146200	151900	149000	150900	163900	152700	144000	139600
20	148400	147500	147800	143000	146300	152900	148400	150600	163700	152000	143700	140100
21	148200	147300	148300	143000	146000	153200	148100	150600	163300	151500	143500	139300
22	147700	147200	147500	142800	145800	153200	148500	150300	163200	151300	143400	139100
23	147400	147200	147500	142700	145700	153100	148800	150300	162800	151200	143000	139000
24	147000	147000	147200	142700	145500	152900	148400	150000	162600	151100	143100	138900
25	146800	147000	147000	142700	145400	152600	148400	150700	162400	150800	143000	138800
26	146500	146800	146900	142700	145300	152200	149100	153200	162200	150600	142800	138800
27	146100	146700	147000	142900	145200	152000	149200	154700	161600	150300	142700	138700
28	145800	146400	146900	144000	144900	152000	149400	155900	161400	150000	142300	139300
29	145800	146700	146800	145600	---	152000	149300	156900	161000	149700	142100	138600
30	145800	146700	146600	146200	---	151900	149200	160000	160400	149300	141800	138500
31	146000	---	146500	146400	---	151500	---	161600	---	148900	141500	---
MAX	152100	147800	148300	147100	147300	153200	151800	161600	165200	160000	148400	141200
MIN	145800	145800	146400	142700	144900	142700	148100	148800	160400	148900	141500	138500
(+)	645.20	645.32	645.29	645.28	645.08	645.92	645.63	647.17	647.02	645.60	644.64	644.24
(@)	-600	+700	-200	-100	-1500	+6600	-2300	+12400	-1200	-11500	-7400	-3000

CAL YR 1998 MAX 188400 MIN 145800 (@) -23000
WTR YR 1999 MAX 165200 MIN 138500 (@) -8100

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08045000 EAGLE MOUNTAIN RESERVOIR ABOVE FORT WORTH, TX--Continued



08045400 LAKE WORTH ABOVE FORT WORTH, TX

LOCATION.--Lat 32°47'21", long 97°24'58", Tarrant County, Hydrologic Unit 12030102, on top of Lake Worth Dam on West Fork Trinity River, 240 ft to right of right end of uncontrolled concrete spillway, 2.9 mi upstream from Farmer's Branch, 3.3 mi upstream from bridge on State Highway 183 crossing West Fork Trinity River, 5.3 mi northwest of Tarrant County Courthouse in Fort Worth and at river mile 572.0.

DRAINAGE AREA.--2,064 mi^2.

PERIOD OF RECORD.--Oct 1981 to current year.
Water-quality records.--Chemical data: Jan 1970 to Sep 1984.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Record good. The lake is formed by a rolled earthfill dam 3,200 ft long, with an uncontrolled concrete spillway 700 ft long near the center of the dam. Deliberate impoundment began in Jun 1914 and the dam was completed in Oct 1914. There is a 48-inch diameter pipe controlled by a 36-inch valve, which may be used to make small releases through the dam. The dam is owned by the city of Fort Worth. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	606.3
Crest of concrete spillway	594.0
Lowest gated outlet (invert)	584.25

COOPERATION.--Capacity Table 1-C was provided by Tarrant Regional Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 56,040 acre-ft, May 3, 1990 (elevation, 598.70 ft); minimum contents, 24,730 acre-ft Sep 9-10, 1985 (elevation, 589.95 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 38,220 acre-ft, May 30 (elevation, 594.32 ft); minimum contents, 29,810 acre-ft, Feb 22 (elevation, 591.75 ft).

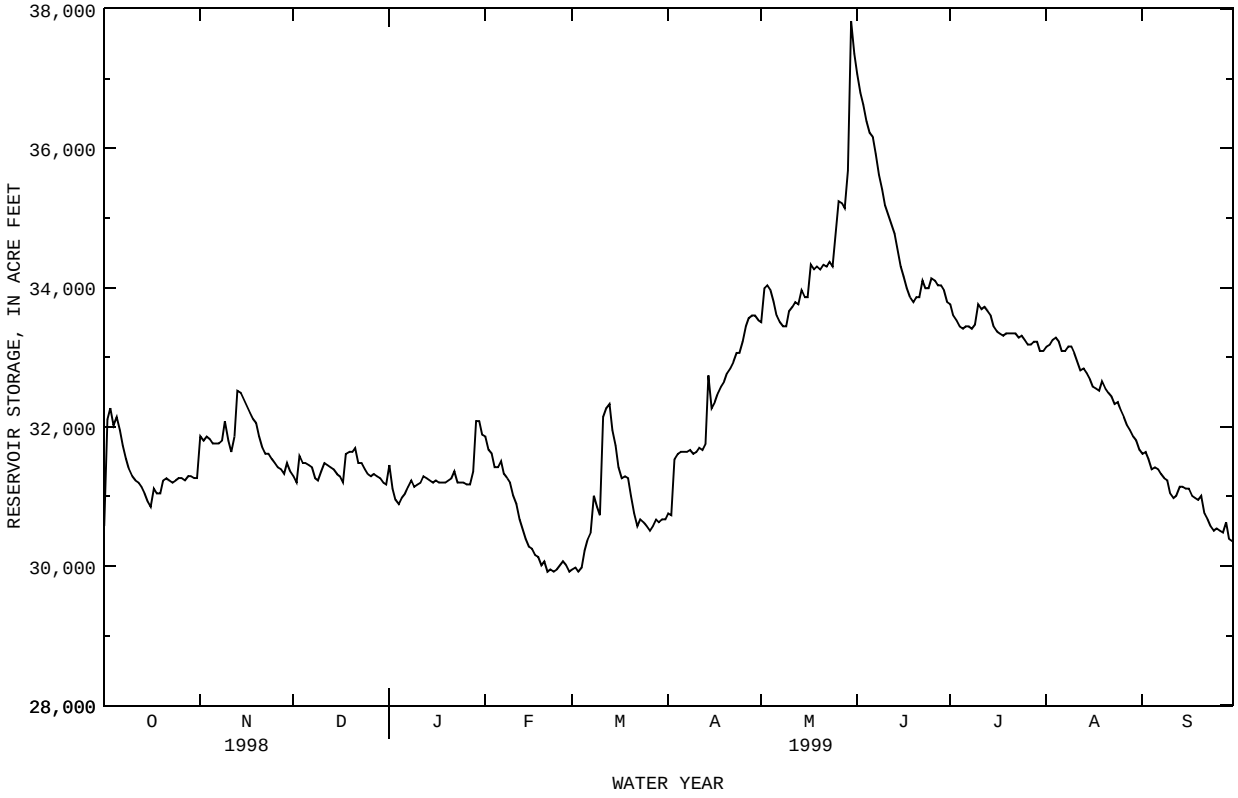
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30570	31860	31290	31450	31860	29950	30760	33500	37070	33760	33150	31610
2	32110	31800	31200	31110	31670	29980	30730	33990	36800	33600	33180	31640
3	32270	31860	31580	30950	31610	29920	31540	34030	36630	33530	33250	31540
4	32020	31830	31480	30890	31420	29980	31610	33960	36390	33440	33280	31390
5	32140	31760	31480	30980	31420	30220	31640	33790	36220	33410	33220	31420
6	31950	31760	31450	31040	31510	30390	31640	33600	36160	33440	33090	31390
7	31730	31760	31420	31140	31320	30480	31640	33500	35920	33440	33090	31320
8	31540	31800	31260	31230	31260	31010	31670	33440	35620	33410	33150	31260
9	31390	32080	31230	31140	31200	30850	31610	33440	35410	33470	33150	31230
10	31290	31800	31360	31170	31010	30730	31640	33660	35180	33760	33060	31040
11	31230	31640	31480	31200	30890	32140	31700	33720	35040	33690	32930	30980
12	31200	31860	31450	31290	30670	32270	31670	33790	34910	33720	32810	31010
13	31140	32520	31420	31260	30540	32330	31760	33760	34770	33660	32840	31140
14	31040	32490	31390	31230	30390	31950	32740	33960	34540	33600	32770	31140
15	30920	32390	31320	31200	30280	31730	32270	33860	34300	33440	32680	31110
16	30850	32300	31290	31230	30250	31420	32360	33860	34160	33370	32580	31110
17	31110	32200	31200	31200	30160	31260	32490	34330	33990	33340	32550	31010
18	31040	32110	31610	31200	30130	31290	32580	34260	33860	33310	32520	30980
19	31040	32050	31640	31200	30010	31260	32650	34300	33790	33340	32650	30950
20	31230	31860	31640	31230	30070	31010	32770	34260	33860	33340	32550	31010
21	31260	31700	31700	31260	29920	30760	32840	34330	33860	33340	32490	30760
22	31230	31610	31480	31360	29950	30570	32930	34300	34100	33340	32430	30670
23	31200	31610	31480	31200	29920	30670	33060	34370	33990	33280	32330	30570
24	31230	31540	31390	31200	29950	30630	33060	34300	33990	33310	32360	30510
25	31260	31480	31320	31200	30010	30570	33220	34740	34130	33250	32240	30540
26	31260	31420	31290	31170	30070	30510	33440	35240	34100	33180	32140	30510
27	31230	31390	31320	31170	30010	30570	33560	35210	34030	33180	32020	30480
28	31290	31320	31290	31360	29920	30670	33600	35140	34030	33220	31950	30630
29	31290	31480	31260	32080	---	30630	33600	35680	33960	33220	31860	30390
30	31260	31360	31200	32080	---	30670	33530	37830	33790	33090	31800	30360
31	31260	---	31170	31890	---	30670	---	37360	---	33090	31670	---
MAX	32270	32520	31700	32080	31860	32330	33600	37830	37070	33760	33280	31640
MIN	30570	31320	31170	30890	29920	29920	30730	33440	33790	33090	31670	30360
(+)	592.23	592.26	592.20	592.43	591.79	592.04	592.95	594.08	593.03	592.81	592.36	591.94
(@)	+590	+100	-190	+720	-1970	+750	+2860	+3830	-3570	-700	-1420	-1310

CAL YR 1998 MAX 44520 MIN 30360 (@) -4950
WTR YR 1999 MAX 37830 MIN 29920 (@) -310

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08045400 LAKE WORTH ABOVE FORT WORTH, TX--Continued



08045800 LAKE WEATHERFORD NEAR WEATHERFORD, TX

LOCATION.--Lat 32°46'21", long 97°40'28", Parker County, Hydrologic Unit 12030102, in pumphouse 168 ft upstream from right end of dam on Clear Fork Trinity River, 2.4 mi downstream from Hays Branch, 3.9 mi upstream from Squaw Creek, and 7.3 mi east of Weatherford.

DRAINAGE AREA.--109 mi^2.

PERIOD OF RECORD.--Jun 1976 to May 1980, Aug 1998 to current year.
Water-quality records.--Chemical data: October 1978 to September 1979.

GAGE.--Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfilled dam 4,055 ft long. The dam was completed and deliberate impoundment began in March 1957. The service spillway is a semi-circular drip inlet with a crest length of 162 ft located 550 ft to the right of the pumphouse. The drop inlet discharges into a 9x9 ft concrete conduit that extends 425 ft under the dam. The emergency spillway is an uncontrolled excavated split-level cut channel located at the right end of the dam. The low-flow outlet works consist of an 18 in diameter concrete pipe with a valve control assembly. At end of year, flow from 43.9 mi^2 above this station was partly affected at times by discharge from the flood-detention pools of 22 floodwater-retarding structures with a combined detention capacity of 11,000 acre-ft. Records furnished by the city of Weatherford show that 1,030 acre-ft was diverted from the lake for municipal use during the period October to April and 869 acre-ft of sewage effluent was returned to a tributary downstream from station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)
Top of dam	914.0
Crest of Spillway	903.0
Invert of drop inlet (spillway)	896.0
Invert of lowest gated outlet pipe	857.0

COOPERATION.--The capacity table was furnished by the Texas Water Development Board and designated Table 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 23,560 acre-ft Mar 27, 1977, elevation 899.65 ft, from high-water mark; minimum, 12,880 acre-ft Jan 9, 10, 1979, elevation, 889.99 ft.

EXTREMES FOR WATER YEAR 1998.--Maximum contents, 15,400 acre-ft, Aug 27 (elevation, 893.00 ft); minimum contents, 15,200 acre-ft, Sep 22, 29-30 (elevation, 892.86 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,200 acre-ft, May 30 (elevation, 896.41 ft); minimum contents, 14,800 acre-ft, Jan 19-28 (elevation, 892.51 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	15300
2	---	---	---	---	---	---	---	---	---	---	---	15300
3	---	---	---	---	---	---	---	---	---	---	---	15300
4	---	---	---	---	---	---	---	---	---	---	---	15300
5	---	---	---	---	---	---	---	---	---	---	---	15300
6	---	---	---	---	---	---	---	---	---	---	---	15300
7	---	---	---	---	---	---	---	---	---	---	---	15300
8	---	---	---	---	---	---	---	---	---	---	---	15300
9	---	---	---	---	---	---	---	---	---	---	---	15300
10	---	---	---	---	---	---	---	---	---	---	---	15300
11	---	---	---	---	---	---	---	---	---	---	---	15300
12	---	---	---	---	---	---	---	---	---	---	---	15300
13	---	---	---	---	---	---	---	---	---	---	---	15300
14	---	---	---	---	---	---	---	---	---	---	---	15300
15	---	---	---	---	---	---	---	---	---	---	---	15300
16	---	---	---	---	---	---	---	---	---	---	---	15200
17	---	---	---	---	---	---	---	---	---	---	---	15200
18	---	---	---	---	---	---	---	---	---	---	---	15200
19	---	---	---	---	---	---	---	---	---	---	---	15200
20	---	---	---	---	---	---	---	---	---	---	---	15200
21	---	---	---	---	---	---	---	---	---	---	---	15200
22	---	---	---	---	---	---	---	---	---	---	---	15200
23	---	---	---	---	---	---	---	---	---	---	---	15200
24	---	---	---	---	---	---	---	---	---	---	---	15200
25	---	---	---	---	---	---	---	---	---	---	---	15200
26	---	---	---	---	---	---	---	---	---	---	---	15200
27	---	---	---	---	---	---	---	---	---	---	---	15200
28	---	---	---	---	---	---	---	---	---	---	15400	15200
29	---	---	---	---	---	---	---	---	---	---	15300	15200
30	---	---	---	---	---	---	---	---	---	---	15300	15200
31	---	---	---	---	---	---	---	---	---	---	15300	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	457500
MEAN	---	---	---	---	---	---	---	---	---	---	---	15300
MAX	---	---	---	---	---	---	---	---	---	---	---	15300
MIN	---	---	---	---	---	---	---	---	---	---	---	15200

08045800 LAKE WEATHERFORD NEAR WEATHERFORD, TX--Continued

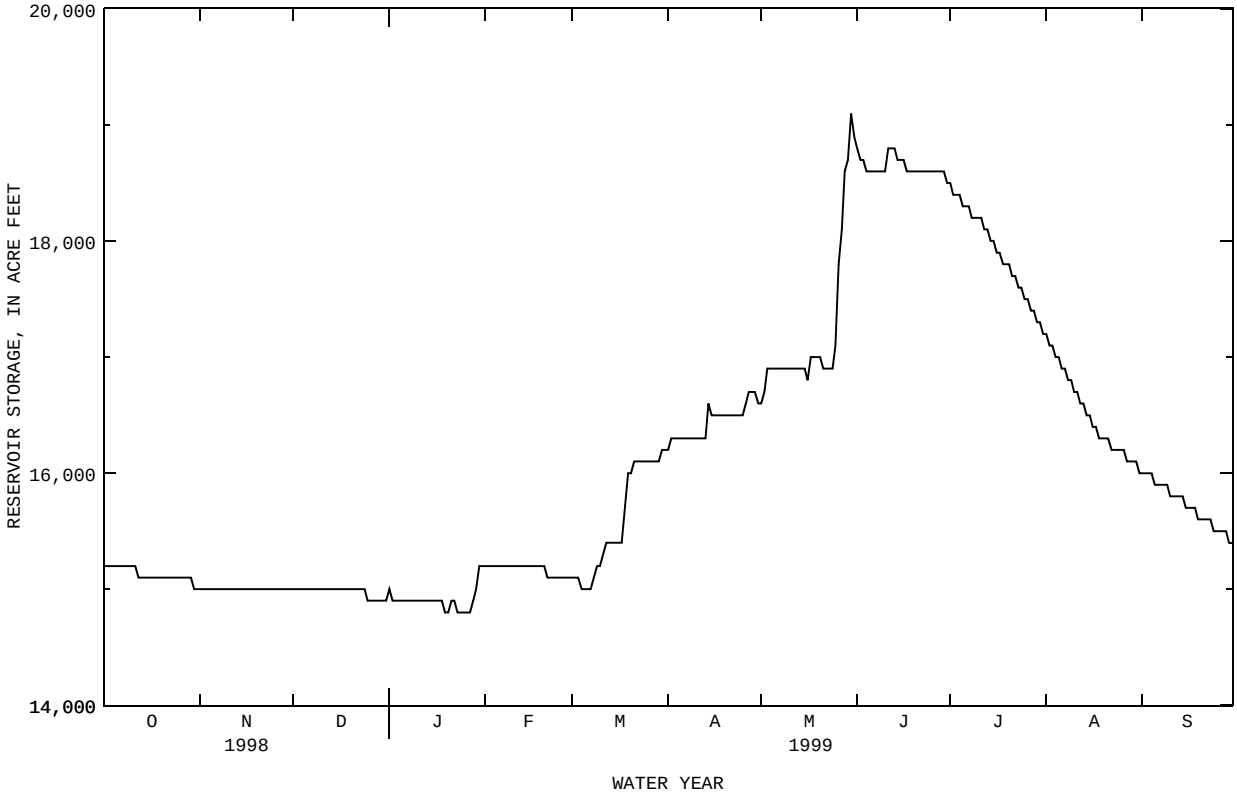
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15200	15000	15000	15000	15200	15100	16200	16600	18800	18500	17200	16000
2	15200	15000	15000	14900	15200	15100	16300	16700	18700	18400	17100	16000
3	15200	15000	15000	14900	15200	15100	16300	16900	18700	18400	17100	16000
4	15200	15000	15000	14900	15200	15000	16300	16900	18600	18400	17000	16000
5	15200	15000	15000	14900	15200	15000	16300	16900	18600	18300	17000	15900
6	15200	15000	15000	14900	15200	15000	16300	16900	18600	18300	16900	15900
7	15200	15000	15000	14900	15200	15000	16300	16900	18600	18300	16900	15900
8	15200	15000	15000	14900	15200	15100	16300	16900	18600	18200	16800	15900
9	15200	15000	15000	14900	15200	15200	16300	16900	18600	18200	16800	15900
10	15200	15000	15000	14900	15200	15200	16300	16900	18600	18200	16700	15800
11	15200	15000	15000	14900	15200	15300	16300	16900	18800	18200	16700	15800
12	15100	15000	15000	14900	15200	15400	16300	16900	18800	18100	16600	15800
13	15100	15000	15000	14900	15200	15400	16300	16900	18800	18100	16600	15800
14	15100	15000	15000	14900	15200	15400	16600	16900	18700	18000	16500	15800
15	15100	15000	15000	14900	15200	15400	16500	16900	18700	18000	16500	15700
16	15100	15000	15000	14900	15200	15400	16500	16800	18700	17900	16400	15700
17	15100	15000	15000	14900	15200	15400	16500	17000	18600	17900	16400	15700
18	15100	15000	15000	14900	15200	15700	16500	17000	18600	17800	16300	15700
19	15100	15000	15000	14800	15200	16000	16500	17000	18600	17800	16300	15600
20	15100	15000	15000	14800	15200	16000	16500	17000	18600	17800	16300	15600
21	15100	15000	15000	14900	15100	16100	16500	16900	18600	17700	16300	15600
22	15100	15000	15000	14900	15100	16100	16500	16900	18600	17700	16200	15600
23	15100	15000	15000	14800	15100	16100	16500	16900	18600	17600	16200	15600
24	15100	15000	15000	14800	15100	16100	16500	16900	18600	17600	16200	15500
25	15100	15000	14900	14800	15100	16100	16500	17100	18600	17500	16200	15500
26	15100	15000	14900	14800	15100	16100	16600	17800	18600	17500	16200	15500
27	15100	15000	14900	14800	15100	16100	16700	18100	18600	17400	16100	15500
28	15100	15000	14900	14900	15100	16100	16700	18600	18600	17400	16100	15500
29	15100	15000	14900	15000	---	16100	16700	18700	18600	17300	16100	15400
30	15000	15000	14900	15200	---	16200	16600	19100	18500	17300	16100	15400
31	15000	---	14900	15200	---	16200	---	18900	---	17200	16000	---
MAX	15200	15000	15000	15200	15200	16200	16700	19100	18800	18500	17200	16000
MIN	15000	15000	14900	14800	15100	15000	16200	16600	18500	17200	16000	15400
(+)	892.65	892.65	892.56	892.84	892.74	893.77	894.14	896.16	895.82	894.68	893.59	893.02
(@)	-200	0	-100	+300	-100	+1100	+400	+2300	-400	-1300	-1200	-600

WTR YR 1999 MAX 19100 MIN 14800 (@) +200

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08045800 LAKE WEATHERFORD NEAR WEATHERFORD, TX--Continued



This page intentionally left blank.

08045850 CLEAR FORK TRINITY RIVER NEAR WEATHERFORD, TX

LOCATION.--Lat 32°44'25", long 97°39'06", Parker County, Hydrologic Unit 12030102, near left end of bridge on weigh station exit road associated with Interstate Highway 20, 150 ft downstream from Squaw Creek, 2.8 mi downstream from Lake Weatherford Dam on the Clear Fork Trinity River, 3.8 mi upstream from South Fork Trinity River and 8.5 mi east of county courthouse in Weatherford.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--May 1980 to Sep 1985 (daily mean discharge), Oct 1985 to Sep 1998 (peaks above base discharge), Oct 1998 to Sep 1999.
Water-quality records.--Chemical data: Oct 1980 to Sep 1982; biochemical data: Oct 1980 to Sep 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 810.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those below 2.0 ft^3/s, which are fair. Since installation of gage in 1980 at least 10% the contributing drainage area has been regulated by Lake Weatherford (station 08045800, normal storage 19,866 acre-ft), 2.8 mi upstream. No known diversions.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 314 ft 3/s May 30 (gage height, 10.71 ft).

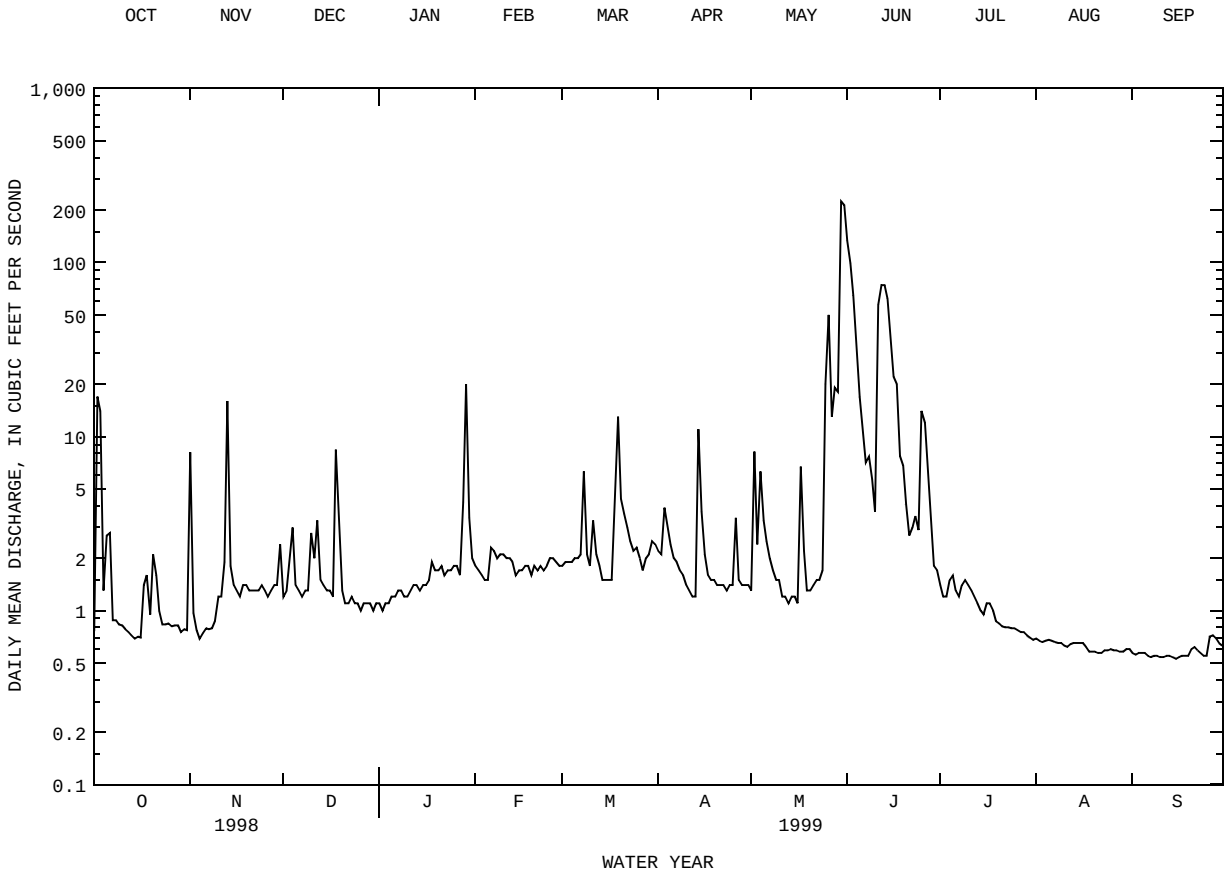
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 30	1100	314	10.71	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	8.1	1.2	1.1	1.8	1.8	2.2	1.3	134	1.4	.69	.57
2	17	.97	1.3	1.0	1.7	1.9	2.1	8.2	99	1.2	.67	.56
3	14	.77	1.9	1.1	1.6	1.9	3.9	2.4	65	1.2	.66	.57
4	1.3	.69	3.0	1.1	1.5	1.9	3.0	6.3	32	1.5	.67	.57
5	2.7	.74	1.4	1.2	1.5	2.0	2.4	3.3	17	1.6	.68	.57
6	2.8	.79	1.3	1.2	2.3	2.0	2.0	2.5	11	1.3	.67	.55
7	.88	.78	1.2	1.3	2.2	2.1	1.9	2.0	7.1	1.2	.66	.54
8	.88	.79	1.3	1.3	2.0	6.3	1.7	1.7	7.7	1.4	.65	.55
9	.83	.87	1.3	1.2	2.1	2.1	1.6	1.5	5.7	1.5	.65	.55
10	.82	1.2	2.8	1.2	2.1	1.8	1.4	1.5	3.7	1.4	.63	.54
11	.78	1.2	2.0	1.3	2.0	3.3	1.3	1.2	57	1.3	.62	.54
12	.75	1.9	3.3	1.4	2.0	2.1	1.2	1.2	74	1.2	.64	.55
13	.72	16	1.5	1.4	1.9	1.8	1.2	1.1	74	1.1	.65	.55
14	.69	1.8	1.4	1.3	1.6	1.5	11	1.2	62	1.0	.65	.54
15	.71	1.4	1.3	1.4	1.7	1.5	3.7	1.2	35	.95	.65	.53
16	.70	1.3	1.3	1.4	1.7	1.5	2.1	1.1	22	1.1	.65	.54
17	1.4	1.2	1.2	1.5	1.8	1.5	1.6	6.7	20	1.1	.62	.55
18	1.6	1.4	8.4	1.9	1.8	5.0	1.5	2.2	7.7	1.0	.58	.55
19	.95	1.4	3.2	1.7	1.6	13	1.5	1.3	6.8	.87	.58	.55
20	2.1	1.3	1.3	1.7	1.8	4.4	1.4	1.3	4.1	.84	.58	.60
21	1.6	1.3	1.1	1.8	1.7	3.6	1.4	1.4	2.7	.81	.57	.62
22	1.0	1.3	1.1	1.6	1.8	3.0	1.4	1.5	3.0	.80	.57	.59
23	.83	1.3	1.2	1.7	1.7	2.5	1.3	1.5	3.5	.80	.59	.57
24	.83	1.4	1.1	1.7	1.8	2.2	1.4	1.7	2.9	.79	.59	.55
25	.84	1.3	1.1	1.8	2.0	2.3	1.4	20	14	.79	.60	.55
26	.81	1.2	1.0	1.8	2.0	2.0	3.4	50	12	.77	.59	.71
27	.82	1.3	1.1	1.6	1.9	1.7	1.5	13	6.9	.75	.59	.72
28	.82	1.4	1.1	4.2	1.8	2.0	1.4	19	3.1	.75	.58	.69
29	.75	1.4	1.1	20	---	2.1	1.4	18	1.8	.72	.58	.65
30	.78	2.4	1.0	3.4	---	2.5	1.4	224	1.7	.70	.60	.63
31	.77	---	1.1	2.0	---	2.4	---	213	---	.68	.60	---
TOTAL	62.22	58.90	53.6	68.3	51.4	85.7	64.7	612.3	796.4	32.52	19.31	17.35
MEAN	2.01	1.96	1.73	2.20	1.84	2.76	2.16	19.8	26.5	1.05	.62	.58
MAX	17	16	8.4	20	2.3	13	11	224	134	1.6	.69	.72
MIN	.69	.69	1.0	1.0	1.5	1.5	1.2	1.1	1.7	.68	.57	.53
AC-FT	123	117	106	135	102	170	128	1210	1580	65	38	34

08045850 CLEAR FORK TRINITY RIVER NEAR WEATHERFORD, TX--Continued



08046500 BENBROOK LAKE NEAR BENBROOK, TX

LOCATION.--Lat 32°39'02", long 97°26'54", Tarrant County, Hydrologic Unit 12030102, in intake structure of Benbrook Dam on Clear Fork Trinity River, 2.5 mi south of Benbrook, 3.5 mi upstream from Marys Creek and 14.6 mi upstream from mouth.

DRAINAGE AREA.--429 mi^2.

PERIOD OF RECORD.--Sep 1952 to current year. Prior to Oct 1970, published as "Benbrook Reservoir".

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 9,130 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with a 100-foot notch in center of ogee weir section. The outlet works consist of a 13.0-foot-diameter concrete conduit controlled by two 6.5 x 13.0-foot broome-type gates and two 30-inch steel pipes controlled by slide gates. Deliberate impoundment began Sep 29, 1952. From Aug 1950 to Sep 28, 1952, the lake was operated as a detention basin only. The capacity table is based on a survey made in 1945. The lake was built for flood control, navigation and low-flow regulation. Inflow is affected at times by the discharge from flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 11,170 acre-ft. These structures control runoff from 37.6 mi^2. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	747.0
Crest of spillway	724.0
Crest of notch in spillway	710.0
Top of conservation storage	694.0
Crest of intake to wet wells (inverts)	656.0
Lowest gated outlet (invert)	622.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 212,200 acre-ft, May 3, 1990 (elevation, 717.54 ft); minimum since lake first filled in 1957, 57,990 acre-ft, Sep 30, 1999 (elevation, 685.03 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 93,040 acre-ft, May 31 (elevation, 695.25 ft); minimum contents, 59,170 acre-ft, Sep 28 (elevation, 685.41 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

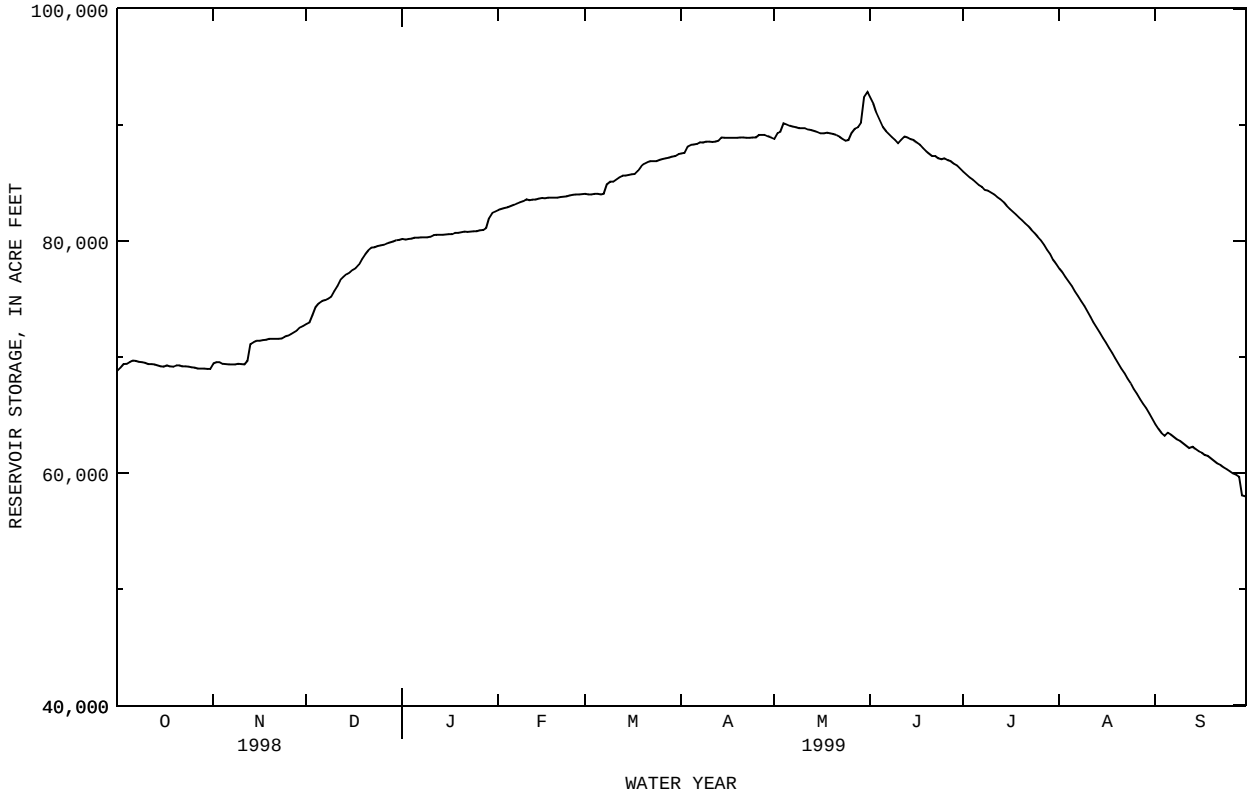
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68810	69470	72880	80170	82700	84080	87530	88810	92370	85970	77630	64210
2	69080	69570	73010	80140	82770	84010	87610	89310	91830	85740	77280	63810
3	69400	69570	73620	80170	82880	84010	88170	89420	91060	85520	76890	63460
4	69440	69440	74340	80210	82910	84080	88290	90140	90450	85300	76510	63210
5	69600	69400	74650	80280	83020	84080	88320	90070	89840	85080	76130	63490
6	69700	69370	74820	80280	83130	84010	88360	89950	89500	84860	75680	63330
7	69670	69370	74920	80320	83240	84080	88510	89880	89230	84670	75260	63120
8	69600	69370	75060	80320	83350	84890	88470	89800	88970	84410	74820	62930
9	69570	69440	75230	80320	83420	85110	88590	89720	88700	84340	74410	62770
10	69500	69400	75710	80390	83610	85110	88590	89720	88440	84190	73960	62590
11	69400	69370	76160	80500	83530	85300	88550	89720	88740	84010	73490	62370
12	69400	69700	76650	80530	83570	85520	88590	89610	89000	83790	73010	62180
13	69370	71130	76930	80530	83570	85630	88660	89570	88930	83610	72570	62270
14	69270	71300	77140	80530	83640	85630	88930	89500	88780	83350	72130	62090
15	69210	71400	77310	80570	83720	85710	88890	89380	88700	83060	71660	61900
16	69170	71400	77520	80600	83680	85740	88890	89270	88510	82770	71260	61780
17	69270	71460	77700	80600	83750	85780	88890	89270	88320	82550	70800	61560
18	69210	71500	77980	80710	83750	86040	88890	89340	88020	82300	70360	61470
19	69170	71560	78470	80710	83750	86450	88890	89270	87760	82040	69930	61290
20	69270	71560	78900	80750	83750	86670	88930	89230	87530	81790	69470	61070
21	69270	71560	79180	80820	83790	86780	88930	89160	87350	81540	69040	60860
22	69210	71560	79430	80780	83830	86900	88890	89000	87350	81290	68580	60700
23	69210	71600	79460	80820	83860	86900	88890	88810	87120	80960	68160	60520
24	69170	71760	79570	80850	83940	86900	88930	88660	87050	80710	67740	60340
25	69110	71870	79640	80850	83970	87010	88930	88700	87120	80390	67280	60190
26	69080	72000	79680	80930	84010	87080	89160	89340	86970	80070	66860	60000
27	69010	72170	79780	80960	84010	87120	89160	89690	86900	79680	e66390	59880
28	69010	72300	79890	81140	84050	87200	89160	89800	86670	79290	e66010	59700
29	69010	72570	79960	82010	---	87270	89040	90220	86520	78900	e65620	58070
30	68980	72710	80070	82440	---	87350	88930	92450	86260	78400	e65140	57990
31	68980	---	80100	82550	---	87500	---	92880	---	78010	64660	---
MAX	69700	72710	80100	82550	84050	87500	89160	92880	92370	85970	77630	64210
MIN	68810	69370	72880	80140	82700	84010	87530	88660	86260	78010	64660	57990
(+)	688.53	689.65	691.78	692.46	692.87	693.80	694.18	695.21	693.47	691.19	687.19	685.03
(@)	+70	+3730	+7390	+2450	+1500	+3450	+1430	+3950	-6620	-8250	-13350	-6670

CAL YR 1998 MAX 137400 MIN 68810 (@) -9320
WTR YR 1999 MAX 92880 MIN 57990 (@) -10920

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

e Estimated

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued



08047000 CLEAR FORK TRINITY RIVER NEAR BENBROOK, TX

LOCATION.--Lat 32°39'54", long 97°26'30", Tarrant County, Hydrologic Unit 12030102, on left bank 1.5 mi downstream from Benbrook Dam, 1.7 mi southeast of Benbrook, 2.9 mi upstream from Marys Creek and 13.1 mi upstream from mouth.

DRAINAGE AREA.--431 mi^2.

PERIOD OF RECORD.--Jul 1947 to current year.

REVISED RECORDS.--WDR TX-89-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 604.22 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1953, at least 10% of contributing drainage area has been regulated by Benbrook Lake (station 08046500, normal storage 88,250 acre-ft), 1.5 mi upstream. There is a diversion 1.0 mi upstream for Pecan Valley Golf Course.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1948-52) prior to regulation by Benbrook Lake, 105 ft^3/s (76,070 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1948-52).--Maximum discharge, 82,900 ft^3/s May 17, 1949 (gage height, 28.72 ft), from rating curve extended above 11,000 ft^3/s on basis of velocity-area studies and slope-area measurement of 82,900 ft^3/s; no flow at times most years. Maximum stage since at least 1922, that of May 17, 1949.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	17	1.1	1.5	1.1	.73	.72	.28	395	2.9	48	48
2	17	6.3	1.1	1.5	1.2	.83	.81	8.8	400	2.5	47	49
3	12	6.0	13	1.5	1.1	.49	6.6	.39	404	2.3	46	29
4	4.2	5.3	9.2	1.5	1.0	.58	.32	11	259	2.1	46	2.8
5	10	5.0	1.3	1.6	.85	.63	.28	.31	172	1.7	47	17
6	8.1	5.0	1.4	1.5	.98	.61	.31	.27	78	1.7	47	4.7
7	4.0	5.8	1.8	1.4	.94	.53	.32	.30	19	3.1	48	3.3
8	4.1	5.9	1.2	1.5	1.1	21	.26	.19	8.1	2.3	47	2.8
9	3.7	6.7	1.3	1.8	1.0	2.0	.38	.35	4.5	2.5	46	3.0
10	4.1	8.1	4.6	1.8	1.1	1.1	.42	.91	4.5	2.3	47	2.4
11	4.5	6.3	2.3	2.0	1.0	.53	.51	.60	6.1	2.3	47	2.9
12	4.0	14	2.7	2.1	1.2	.47	.46	.50	5.3	2.2	46	3.0
13	5.5	41	1.4	1.9	1.2	.36	.39	.16	4.5	2.1	47	6.1
14	5.7	7.6	1.3	2.0	1.0	.33	1.2	.23	4.4	1.6	47	3.7
15	5.9	8.8	1.3	2.0	1.1	.38	.30	.32	3.9	1.8	47	3.6
16	6.3	10	1.3	1.9	1.2	.58	.32	.26	4.3	1.4	47	2.5
17	7.9	12	1.3	2.0	1.1	.77	.26	.53	3.8	1.6	47	2.5
18	3.7	13	4.4	2.1	.98	1.7	.30	.16	3.5	2.2	47	2.0
19	6.2	13	1.4	2.4	.98	1.0	.28	.19	3.4	2.6	47	1.5
20	9.6	12	1.2	1.9	1.0	.32	.50	.24	3.7	2.1	47	1.2
21	6.7	10	1.2	2.0	.95	.31	.37	.26	4.3	2.6	48	1.1
22	5.1	9.6	1.1	2.0	.87	.37	.35	.16	7.2	3.7	50	1.0
23	5.0	9.7	1.2	1.7	.88	.31	.41	.17	4.0	2.6	50	.87
24	4.5	9.7	1.2	1.9	.80	.41	.41	.26	3.9	4.1	50	1.4
25	4.4	7.3	1.2	1.8	.78	.40	.60	1.6	4.6	3.6	50	1.3
26	3.6	1.7	1.3	1.7	.64	.24	1.1	22	3.6	19	50	1.3
27	3.8	1.6	1.3	1.8	.67	.45	.33	1.3	3.6	45	50	2.6
28	3.5	1.7	1.3	2.8	.85	.46	.31	.67	3.6	46	50	1.7
29	4.4	3.6	1.1	6.9	---	.43	.36	8.0	3.3	46	51	1.4
30	7.3	3.0	1.2	1.7	---	.39	.24	19	2.5	46	49	1.0
31	6.1	---	1.5	1.1	---	.42	---	198	---	46	49	---
TOTAL	185.6	266.7	68.2	61.3	27.57	39.13	19.42	277.41	1827.6	307.9	1485	204.67
MEAN	5.99	8.89	2.20	1.98	.98	1.26	.65	8.95	60.9	9.93	47.9	6.82
MAX	17	41	13	6.9	1.2	21	6.6	198	404	46	51	49
MIN	3.5	1.6	1.1	1.1	.64	.24	.24	.16	2.5	1.4	46	.87
AC-FT	368	529	135	122	55	78	39	550	3630	611	2950	406

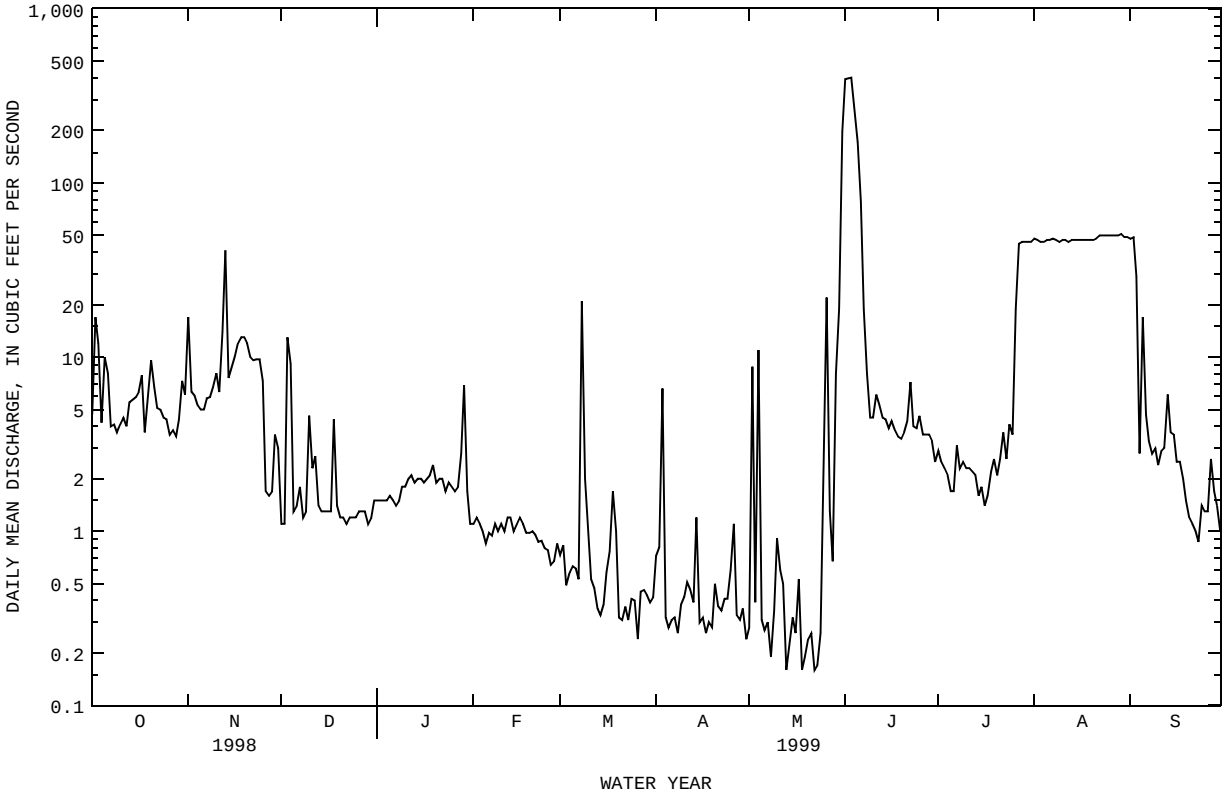
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1999z, BY WATER YEAR (WY)

MEAN	23.4	93.5	60.2	84.1	89.5	171	113	227	210	60.1	24.8	17.3
MAX	215	1479	680	1845	792	1734	881	2351	1804	1070	198	164
(WY)	1994	1992	1992	1992	1992	1997	1977	1990	1957	1989	1979	1962
MIN	.000	.053	.042	.000	.000	.13	.10	.000	.000	.029	.000	.000
(WY)	1953	1971	1954	1953	1953	1953	1959	1959	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1953 - 1999z	
ANNUAL TOTAL	66865.76		4770.50			
ANNUAL MEAN	183		13.1		97.8	
HIGHEST ANNUAL MEAN					514	1992
LOWEST ANNUAL MEAN					.27	1953
HIGHEST DAILY MEAN	3000	Mar 28	404	Jun 3	6320	May 3 1990
LOWEST DAILY MEAN	.44	Jun 25	.16	May 13	.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	.49	Jun 22	.21	May 18	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW					67400	May 3 1990
INSTANTANEOUS PEAK STAGE					14.71	May 3 1990
ANNUAL RUNOFF (AC-FT)	132600		9460		70860	
10 PERCENT EXCEEDS	702		46		200	
50 PERCENT EXCEEDS	14		2.0		6.7	
90 PERCENT EXCEEDS	1.4		.36		.10	

z Period of regulated streamflow.

08047000 CLEAR FORK TRINITY RIVER NEAR BENBROOK, TX--Continued



08047050 MARY'S CREEK AT BENBROOK, TX

LOCATION.--Lat 32°41'44", long 97°15'53", Tarrant County, Hydrologic Unit 12130102, near left end of upstream side of bridge, 0.75 mi north of IH-20 on Wiscott Road in Benbrook,and 0.25 mi upstream from confluence with Clear Fork Trinity River.

DRAINAGE AREA.--24 mi^2.

PERIOD OF RECORD.--May 1998 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 604.97 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Low flow is affected at times by diversions from small dams upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft^3/s, May 30, 1999 (gage height, 1.80 ft).

EXTREMES FOR WATER YEAR 1998.--Maximum discharge, 155 ft^3/s, May 27, 1998 (gage height, 11.91 ft).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft^3/s, May 30 (gage height, 11.91 ft).

PEAK DISCHARGES FOR WATER YEAR 1998.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 2	2215	1,090	4.14	May 30	0545	10,500	11.91
May 29	2100	5,020	8.27				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	1.1	.13	.02	.05
2	---	---	---	---	---	---	---	---	1.2	.09	.02	.04
3	---	---	---	---	---	---	---	---	1.1	.09	.02	.04
4	---	---	---	---	---	---	---	---	.89	.12	.02	.03
5	---	---	---	---	---	---	---	---	.93	.10	.02	.02
6	---	---	---	---	---	---	---	---	.85	.09	.02	.02
7	---	---	---	---	---	---	---	---	.59	.10	.02	.07
8	---	---	---	---	---	---	---	---	.72	.08	.02	.43
9	---	---	---	---	---	---	---	---	.69	.08	.02	.05
10	---	---	---	---	---	---	---	---	2.4	.21	.03	.03
11	---	---	---	---	---	---	---	---	15	.21	.09	.04
12	---	---	---	---	---	---	---	---	1.6	.07	.05	3.9
13	---	---	---	---	---	---	---	---	1.4	1.5	1.7	2.0
14	---	---	---	---	---	---	---	---	1.2	.12	1.5	.56
15	---	---	---	---	---	---	---	---	1.1	.11	.03	.48
16	---	---	---	---	---	---	---	---	1.1	.09	.03	13
17	---	---	---	---	---	---	---	---	.77	.08	.02	7.1
18	---	---	---	---	---	---	---	---	.79	.07	.01	.52
19	---	---	---	---	---	---	---	---	1.0	.07	.01	.35
20	---	---	---	---	---	---	---	---	1.1	.06	.01	.18
21	---	---	---	---	---	---	---	3.1	.77	.05	.00	.09
22	---	---	---	---	---	---	---	2.4	.69	.03	.00	.06
23	---	---	---	---	---	---	---	2.0	.55	2.4	.00	.43
24	---	---	---	---	---	---	---	2.6	.77	.16	.00	.94
25	---	---	---	---	---	---	---	2.9	.36	.09	.00	.06
26	---	---	---	---	---	---	---	4.1	.30	.08	.00	.05
27	---	---	---	---	---	---	---	37	.27	.07	.01	.04
28	---	---	---	---	---	---	---	3.7	.31	.06	.00	.04
29	---	---	---	---	---	---	---	2.6	.17	.04	5.0	.04
30	---	---	---	---	---	---	---	1.8	.12	.03	.98	.07
31	---	---	---	---	---	---	---	1.2	---	.02	.07	---
TOTAL	---	---	---	---	---	---	---	---	39.84	6.50	9.72	30.73
MEAN	---	---	---	---	---	---	---	---	1.33	.21	.31	1.02
MAX	---	---	---	---	---	---	---	---	15	2.4	5.0	13
MIN	---	---	---	---	---	---	---	---	.12	.02	.00	.02
AC-FT	---	---	---	---	---	---	---	---	79	13	19	61

08047050 MARY'S CREEK AT BENBROOK, TX--Continued

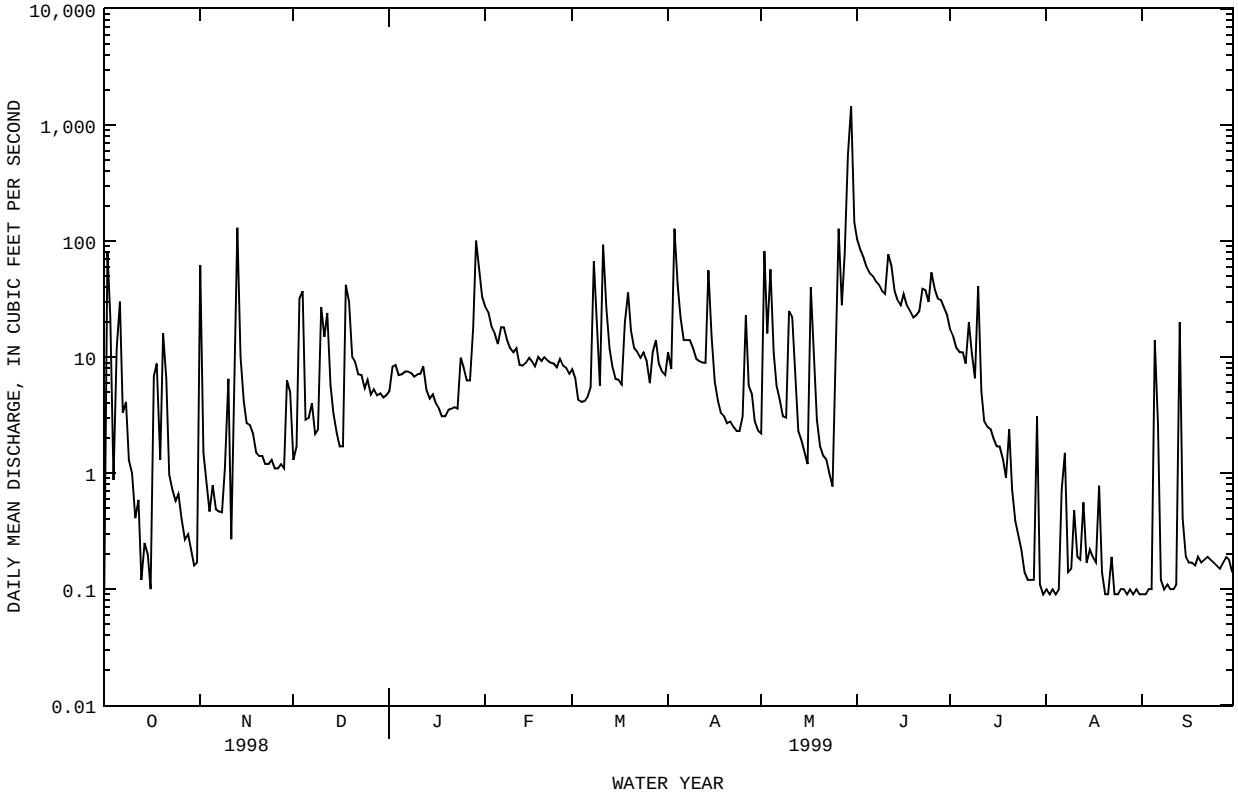
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	62	1.3	5.1	27	7.9	11	2.2	103	17	.10	.09
2	82	1.5	1.7	8.3	24	6.6	7.9	82	84	15	.09	.09
3	22	.80	32	8.6	18	4.3	128	16	73	12	.10	.10
4	.87	.47	37	7.0	16	4.1	42	57	60	11	.09	.10
5	12	.79	2.9	7.1	13	4.2	22	11	53	11	.10	14
6	30	.49	3.0	7.5	18	4.6	14	5.7	50	8.8	.72	2.6
7	3.3	.47	4.0	7.5	18	5.5	14	4.3	45	20	1.5	.12
8	4.1	.46	2.2	7.3	14	67	14	3.1	42	11	.14	.10
9	1.3	1.1	2.4	6.8	12	17	12	3.0	37	6.6	.15	.11
10	1.0	6.5	27	7.1	11	5.7	9.7	25	35	41	.48	.10
11	.41	.27	15	7.2	12	93	9.3	22	77	5.1	.19	.10
12	.59	17	24	8.3	8.6	27	9.0	7.4	61	2.8	.18	.11
13	.12	130	5.8	5.2	8.4	12	8.9	2.3	37	2.5	.56	20
14	.25	10	3.3	4.4	8.9	8.3	56	1.9	31	2.4	.17	.41
15	.20	4.2	2.2	4.8	9.9	6.5	15	1.5	28	2.0	.22	.19
16	.10	2.7	1.7	4.0	9.2	6.4	6.1	1.2	35	1.7	.19	.17
17	6.9	2.6	1.7	3.6	8.3	5.8	4.2	40	28	1.7	.17	.17
18	8.8	2.2	42	3.1	10	20	3.3	8.2	25	1.3	.78	.16
19	1.3	1.5	30	3.1	9.3	36	3.1	2.9	22	.91	.14	.19
20	16	1.4	10	3.5	10	17	2.7	1.7	23	2.4	.09	.17
21	6.5	1.4	9.1	3.6	9.4	12	2.8	1.4	25	.73	.09	.18
22	.98	1.2	7.1	3.7	9.0	11	2.5	1.3	39	.39	.19	.19
23	.72	1.2	7.0	3.6	8.8	9.9	2.3	1.0	38	.29	.09	.18
24	.58	1.3	5.4	9.9	8.2	11	2.3	.77	30	.22	.09	.17
25	.66	1.1	6.4	8.2	9.6	9.3	3.1	18	54	.14	.10	.16
26	.40	1.1	4.8	6.3	8.5	6.0	23	128	38	.12	.10	.15
27	.27	1.2	5.3	6.3	8.1	11	5.7	28	32	.12	.09	.17
28	.30	1.1	4.7	18	7.2	14	4.8	79	31	.12	.10	.19
29	.22	6.3	4.9	101	---	8.8	2.8	551	27	3.1	.09	.18
30	.16	5.0	4.5	57	---	7.5	2.3	1460	23	.11	.10	.14
31	.17	---	4.7	33	---	7.0	---	146	---	.09	.09	---
TOTAL	202.29	267.35	313.1	370.1	334.4	466.4	443.8	2712.87	1286	181.64	7.29	40.79
MEAN	6.53	8.91	10.1	11.9	11.9	15.0	14.8	87.5	42.9	5.86	.24	1.36
MAX	82	130	42	101	27	93	128	1460	103	41	1.5	20
MIN	.09	.27	1.3	3.1	7.2	4.1	2.3	.77	22	.09	.09	.09
AC-FT	401	530	621	734	663	925	880	5380	2550	360	14	81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

MEAN	6.53	8.91	10.1	11.9	11.9	15.0	14.8	87.5	22.1	3.03	.27	1.19
MAX	6.53	8.91	10.1	11.9	11.9	15.0	14.8	87.5	42.9	5.86	.31	1.36
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998	1999
MIN	6.53	8.91	10.1	11.9	11.9	15.0	14.8	87.5	1.33	.21	.24	1.02
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1998	1998	1999	1998

08047050 MARY'S CREEK AT BENBROOK, TX--Continued



This page intentionally left blank.

08047500 CLEAR FORK TRINITY RIVER AT FORT WORTH, TX

LOCATION.--Lat 32°43'56", long 97°21'31", Tarrant County, Hydrologic Unit 12030102, at Fort Worth pumping station on left bank, 240 ft upstream from the Texas and Pacific Railway Co. bridge in Fort Worth, 830 ft upstream from East West Expressway bridge, 2.5 mi upstream from mouth, 5 mi downstream from Marys Creek and 10 mi downstream from Benbrook Dam.

DRAINAGE AREA.--518 mi^2.

PERIOD OF RECORD.--Mar 1924 to current year.

REVISED RECORDS.--WSP 1392: 1924-25, 1927. WSP 1922: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Datum of gage is 532.91 ft above sea level. Prior to Apr 3, 1970, various nonrecording and recording gages were located within 650 ft of present site at different datums. Satellite telemeter at station.

REMARKS.--Records good. Since Sep 1952, at least 10% of contributing drainage area has been regulated by Benbrook Lake (station 08046500, normal storage 88,250 acre-ft) 10 mi upstream. The city of Fort Worth diverted water from pool at gage during the current year. The Benbrook Water and Sewage Authority diverted water from the river upstream from station during the current year for municipal use.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--28 years (water years 1925-52) prior to regulation by Benbrook Lake, 112 ft^3/s (81,140 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-52).--Maximum discharge, 107,000 ft^3/s May 17, 1949 (gage height, 28.20 ft, present datum), from rating curve extended above 16,000 ft^3/s on basis of contracted-opening measurement of 107,000 ft^3/s; no flow at times. Maximum stage since at least 1900, that of May 17, 1949, at present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr 25, 1922, reached a stage of 27.5 ft, present datum (discharge, 74,300 ft^3/s, by slope-area measurement of peak flow); data furnished by Fort Worth city engineer.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	258	19	20	28	12	21	14	363	9.5	6.2	8.3
2	387	25	15	20	25	11	20	374	344	7.6	4.9	8.5
3	250	17	306	18	25	12	347	34	330	7.3	8.2	7.8
4	20	14	363	18	22	13	43	338	234	7.2	11	8.2
5	92	12	33	17	21	11	33	37	146	4.9	8.7	37
6	112	12	28	16	24	9.4	27	26	98	4.1	8.2	37
7	19	15	27	16	30	11	26	22	37	7.1	8.3	13
8	14	14	24	17	24	508	25	18	34	18	8.4	7.9
9	12	14	20	16	20	34	20	17	25	15	8.3	7.0
10	11	54	123	15	20	29	20	55	22	149	8.8	5.3
11	11	16	51	17	20	409	19	42	47	25	9.6	2.9
12	9.0	68	91	17	17	46	19	53	30	14	8.1	2.1
13	9.5	784	33	16	16	33	18	25	27	11	9.0	51
14	11	35	31	13	16	28	90	22	24	8.3	11	15
15	12	27	29	13	16	25	28	29	22	5.5	8.7	9.1
16	12	22	28	13	17	23	20	24	34	4.6	9.3	7.6
17	27	17	25	11	16	23	17	54	20	4.6	8.2	5.9
18	56	19	114	11	15	47	17	33	18	5.4	8.4	3.6
19	14	17	50	12	12	65	18	22	16	5.2	13	2.1
20	48	16	31	12	15	31	15	19	15	4.6	17	2.4
21	37	14	28	14	15	27	16	20	19	4.1	10	1.7
22	16	13	26	13	16	26	16	16	63	3.5	8.9	1.9
23	12	12	27	13	15	22	13	13	41	4.5	9.6	2.0
24	12	14	27	13	14	22	11	12	21	2.8	9.5	2.3
25	11	14	27	12	17	26	14	52	45	1.1	9.4	1.8
26	11	14	26	12	16	20	58	463	24	1.9	9.2	1.7
27	12	14	25	13	15	21	23	35	18	19	8.8	1.9
28	13	13	25	37	14	32	16	67	15	9.6	10	1.4
29	12	28	23	276	---	23	15	760	13	8.2	10	1.4
30	11	69	21	61	---	21	12	2540	12	7.9	8.7	2.0
31	11	---	19	31	---	21	---	205	---	5.4	8.3	---
TOTAL	1290.5	1661	1715	803	521	1641.4	1037	5441	2157	385.9	285.7	259.8
MEAN	41.6	55.4	55.3	25.9	18.6	52.9	34.6	176	71.9	12.4	9.22	8.66
MAX	387	784	363	276	30	508	347	2540	363	149	17	51
MIN	6.0	12	15	11	12	9.4	11	12	12	1.1	4.9	1.4
AC-FT	2560	3290	3400	1590	1030	3260	2060	10790	4280	765	567	515

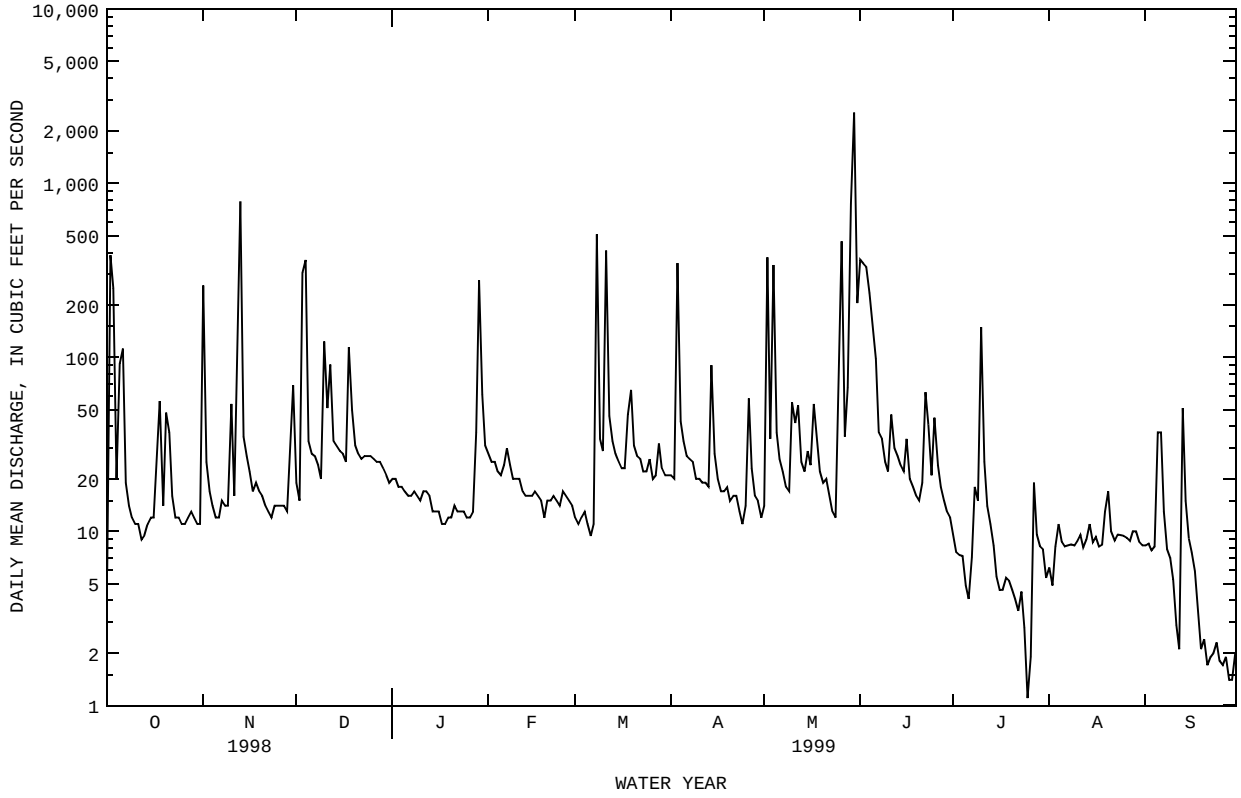
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1999z, BY WATER YEAR (WY)

MEAN	57.9	112	89.8	114	134	238	175	320	261	74.8	32.2	31.6
MAX	353	1555	1118	2198	1019	1838	1013	3020	2219	1300	247	245
(WY)	1994	1992	1992	1992	1992	1997	1977	1990	1989	1989	1979	1962
MIN	.000	.84	1.68	2.28	2.84	.91	3.12	3.41	.27	.75	.54	.28
(WY)	1953	1955	1979	1957	1953	1956	1954	1959	1953	1954	1954	1954

08047500 CLEAR FORK TRINITY RIVER AT FORT WORTH, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1953 - 1999z	
ANNUAL TOTAL	80743.96		17198.3			
ANNUAL MEAN	221		47.1		137	
HIGHEST ANNUAL MEAN					660	1992
LOWEST ANNUAL MEAN					4.55	1954
HIGHEST DAILY MEAN	5610	Mar 16	2540	May 30	11000	Mar 11 1990
LOWEST DAILY MEAN	.50	Sep 10	1.1	Jul 25	.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 4	1.8	Sep 23	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			10900	May 30	20900	May 2 1990
INSTANTANEOUS PEAK STAGE			13.95	May 30	16.80	May 2 1990
ANNUAL RUNOFF (AC-FT)	160200		34110		98940	
10 PERCENT EXCEEDS	670		57		300	
50 PERCENT EXCEEDS	29		17		16	
90 PERCENT EXCEEDS	3.8		7.1		1.0	

z Period of regulated streamflow.



08048000 WEST FORK TRINITY RIVER AT FORT WORTH, TX

LOCATION.--Lat 32°45'39", long 97°19'56", Tarrant County, Hydrologic Unit 12030102, on left bank 125 ft upstream from Texas Electric Service Co. concrete dam, 980 ft downstream from centerline of Paddock Viaduct (North Main Street) at Fort Worth, 2,600 ft downstream from Clear Fork Trinity River and at mile 556.8.

DRAINAGE AREA.--2,615 mi^2.

PERIOD OF RECORD.--Oct 1920 to current year. Gage-height records collected in this vicinity since 1910 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Oct 1967 to Sep 1976; biochemical data: Oct 1967 to Sep 1976.

REVISED RECORDS.--WSP 1392: 1925. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete dam control with angle-iron-crested notch for flow below 50 ft^3/s. Datum of gage is 519.24 ft above sea level. Prior to Aug 22, 1954, at site 1,200 ft upstream at same datum. Aug 22, 1954, to Oct 15, 1955, at site 2,000 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct 1920, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400) on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River, combined normal storage 126,400. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. The city of Fort Worth diverts water from river upstream from station and from Cedar Creek Reservoir (station 08063010) for municipal and industrial uses and returns wastewater effluent to river downstream from West Fork Trinity River at Beach Street (station 08048543). There are many small diversions upstream from station. Maximum stage since at least 1866, that of May 17, 1949. Maximum stages have been affected by levee construction, levee breaks and channel rectification. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

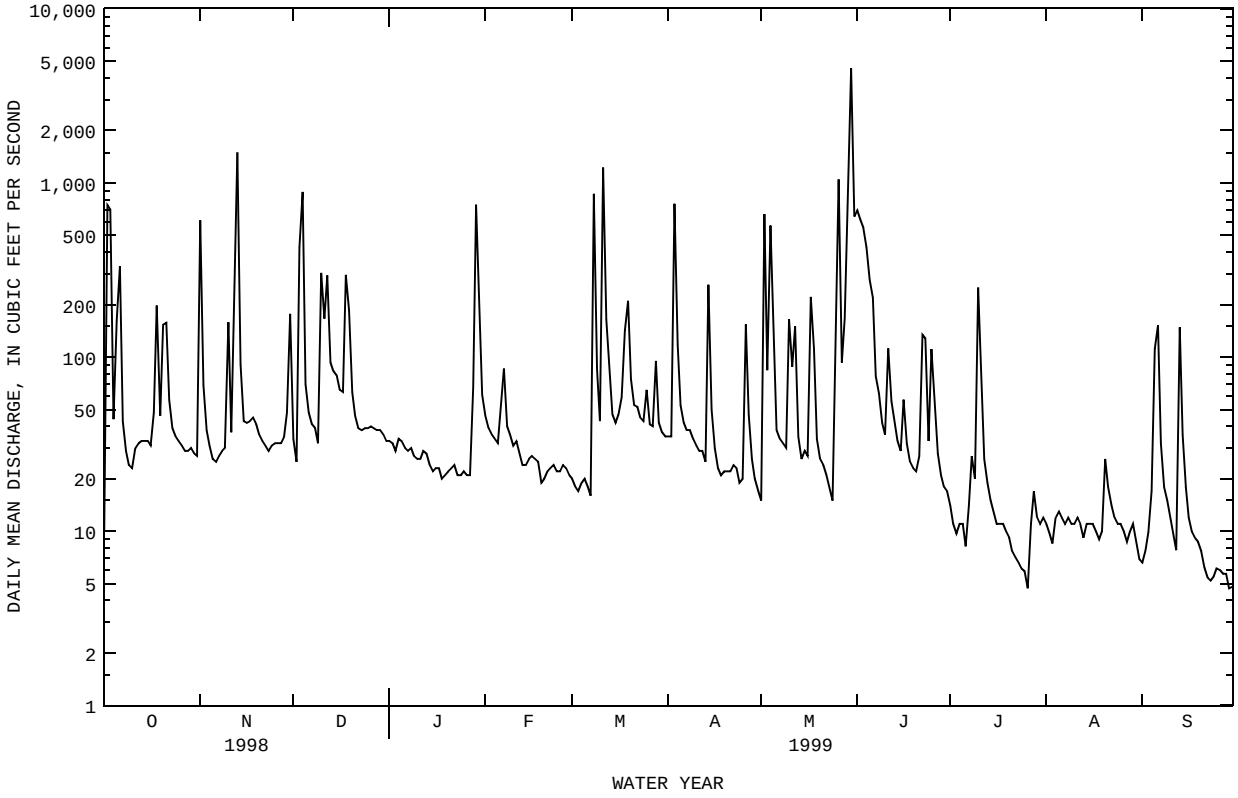
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	609	34	33	46	20	35	15	699	14	11	6.6
2	747	69	25	32	39	18	35	663	615	11	9.7	7.8
3	704	38	428	29	36	17	761	84	556	9.7	8.5	9.9
4	44	31	887	34	34	19	118	569	428	11	12	17
5	163	26	70	33	32	20	53	99	279	11	13	112
6	333	25	48	30	53	18	42	38	220	8.2	12	152
7	43	27	41	29	86	16	38	34	78	14	11	32
8	29	29	39	30	40	868	38	32	62	27	12	18
9	24	30	32	27	36	85	34	30	42	20	11	15
10	23	159	305	26	31	43	31	165	36	251	11	12
11	30	37	166	26	33	1230	29	88	112	70	12	9.5
12	32	141	294	29	28	164	29	150	56	26	11	7.8
13	33	1500	93	28	24	83	25	35	43	19	9.2	148
14	33	91	83	24	24	47	261	26	33	15	11	36
15	33	43	78	22	26	42	50	29	29	13	11	18
16	31	42	65	23	27	47	30	27	57	11	11	12
17	48	43	63	23	26	59	23	222	32	11	10	9.9
18	198	45	297	20	25	142	21	111	25	11	9.0	9.1
19	46	41	186	21	19	211	22	34	23	10	10	8.7
20	154	36	63	22	20	75	22	26	22	9.2	26	7.7
21	158	33	46	23	22	53	22	24	27	7.7	18	6.2
22	57	31	39	24	23	52	24	21	134	7.1	14	5.4
23	39	29	38	21	24	45	23	18	128	6.6	12	5.2
24	35	31	39	21	22	43	19	15	33	6.1	11	5.5
25	33	32	39	22	22	65	20	179	111	5.9	11	6.1
26	31	32	40	21	24	41	154	1050	49	4.7	10	6.0
27	29	32	39	21	23	40	47	93	28	11	8.7	5.7
28	29	35	38	67	21	95	26	167	21	17	9.9	5.7
29	30	48	38	750	---	42	20	975	18	12	11	4.7
30	28	177	36	214	---	37	17	4560	17	11	8.6	4.8
31	27	---	33	61	---	35	---	641	---	12	6.9	---
TOTAL	3254	3542	3722	1786	866	3772	2069	10220	4013	673.2	352.5	704.3
MEAN	105	118	120	57.6	30.9	122	69.0	330	134	21.7	11.4	23.5
MAX	747	1500	887	750	86	1230	761	4560	699	251	26	152
MIN	10	25	25	20	19	16	17	15	17	4.7	6.9	4.7
AC-FT	6450	7030	7380	3540	1720	7480	4100	20270	7960	1340	699	1400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1999, BY WATER YEAR (WY)

MEAN	293	289	273	249	386	519	610	1150	784	245	116	153
MAX	4548	3855	6071	3521	4130	3523	5595	12430	10240	3030	1447	2482
(WY)	1982	1982	1992	1992	1997	1998	1942	1990	1989	1941	1950	1962
MIN	.12	3.64	5.02	6.08	5.57	4.72	7.71	15.2	5.73	1.33	.000	.000
(WY)	1940	1956	1935	1930	1940	1940	1930	1959	1954	1956	1956	1930

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1921 - 1999	
ANNUAL TOTAL	188857.8		34974.0			
ANNUAL MEAN	517		95.8		422	
HIGHEST ANNUAL MEAN					1823	1990
LOWEST ANNUAL MEAN					15.6	1956
HIGHEST DAILY MEAN	11600	Mar 16	4560	May 30	47300	Apr 25 1922
LOWEST DAILY MEAN	2.1	Sep 11	4.7	Jul 26	.00	Aug 2 1924
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 5	5.5	Sep 24	.00	Jul 24 1925
INSTANTANEOUS PEAK FLOW			15900	May 30	85000	Apr 25 1922
INSTANTANEOUS PEAK STAGE			6.24	May 30	25.91	May 17 1949
ANNUAL RUNOFF (AC-FT)	374600		69370		305800	
10 PERCENT EXCEEDS	1280		166		1080	
50 PERCENT EXCEEDS	45		30		40	
90 PERCENT EXCEEDS	13		10		6.0	

08048000 WEST FORK TRINITY RIVER AT FORT WORTH, TX--Continued



08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX

LOCATION.--Lat 32°45'06", long 97°17'21", Tarrant County, Hydrologic Unit 12030102, on downstream side of bridge on Beach Street, 1,700 ft downstream from Sycamore Creek, 0.9 mi downstream from Riverside Drive bridge, 2.6 mi east of the Tarrant County Courthouse and at mile 549.6.

DRAINAGE AREA.--2,685 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 478.70 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Oct 1976, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400) on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River, combined normal storage 126,400 acre-ft. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. There are many diversions upstream from this station for municipal, industrial and other uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1866 probably occurred in May 1949 (stage and discharge unknown). Maximum stages have been affected by levee construction, levee breaks, and channel rectification.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

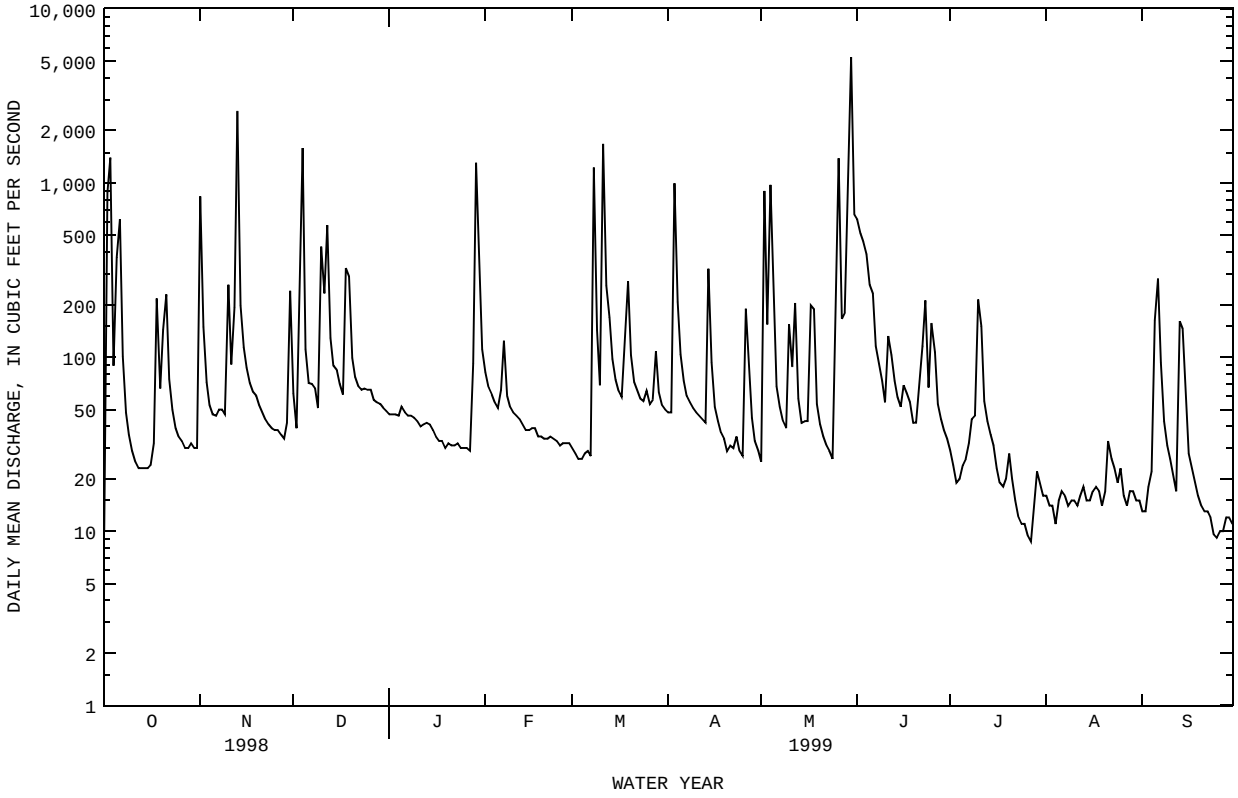
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	839	62	47	82	30	48	25	619	29	16	13
2	882	149	39	47	67	28	48	901	516	24	14	13
3	1400	72	337	47	61	26	997	154	461	19	14	18
4	89	53	1590	46	55	26	207	976	391	20	11	22
5	374	47	111	52	51	28	104	183	260	24	15	163
6	621	46	71	48	65	29	73	68	233	26	17	282
7	101	50	70	46	124	27	60	52	116	32	16	93
8	48	50	66	46	60	1230	55	43	92	44	14	43
9	36	47	51	45	52	143	51	39	73	46	15	31
10	29	260	430	43	48	69	48	155	55	214	15	26
11	25	91	233	40	46	1680	46	88	132	151	14	21
12	23	193	574	41	44	258	44	205	103	56	16	17
13	23	2590	129	42	41	169	42	58	73	43	18	161
14	23	198	89	41	38	98	322	42	59	36	15	146
15	23	114	84	38	38	74	93	43	52	31	15	69
16	24	87	70	35	39	64	52	43	69	23	17	28
17	32	71	61	33	39	59	43	198	62	19	18	23
18	217	63	325	33	35	118	37	188	55	18	17	19
19	66	60	291	30	35	273	34	54	42	20	14	16
20	144	53	99	32	34	103	29	41	42	28	17	14
21	229	48	77	31	34	72	31	35	72	20	33	13
22	75	44	68	31	35	64	30	31	116	15	26	13
23	50	41	65	32	34	58	35	29	212	12	23	12
24	39	39	66	30	33	56	29	26	67	11	19	9.6
25	35	38	65	30	31	64	27	220	157	11	23	9.2
26	33	38	65	30	32	54	190	1390	107	9.4	16	10
27	30	36	57	29	32	57	89	166	54	8.7	14	10
28	30	34	55	92	32	108	45	180	44	14	17	12
29	32	42	54	1310	---	63	33	623	38	22	17	12
30	30	240	51	361	---	53	29	5280	34	19	15	11
31	30	---	49	111	---	50	---	659	---	16	15	---
TOTAL	4803	5733	5454	2919	1317	5231	2971	12195	4406	1061.1	526	1329.8
MEAN	155	191	176	94.2	47.0	169	99.0	393	147	34.2	17.0	44.3
MAX	1400	2590	1590	1310	124	1680	997	5280	619	214	33	282
MIN	10	34	39	29	31	26	27	25	34	8.7	11	9.2
AC-FT	9530	11370	10820	5790	2610	10380	5890	24190	8740	2100	1040	2640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1999, BY WATER YEAR (WY)

MEAN	431	482	480	340	571	937	692	1718	1234	231	102	87.5
MAX	4881	3878	6459	4067	4288	3655	5668	12540	9448	1654	557	216
(WY)	1982	1982	1992	1992	1997	1998	1990	1990	1989	1982	1995	1980
MIN	9.82	23.8	13.7	30.2	33.5	43.9	35.3	20.2	22.4	5.67	9.21	9.27
(WY)	1978	1980	1978	1978	1996	1986	1983	1996	1978	1978	1985	1984

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1977 - 1999	
ANNUAL TOTAL	199610.10		47945.9			
ANNUAL MEAN	547		131		609	
HIGHEST ANNUAL MEAN					2071	1992
LOWEST ANNUAL MEAN					40.1	1978
HIGHEST DAILY MEAN	14300	Mar 16	5280	May 30	35200	May 3 1990
LOWEST DAILY MEAN	.72	Sep 7	8.7	Jul 27	.72	Sep 7 1998
ANNUAL SEVEN-DAY MINIMUM	.80	Sep 5	11	Sep 24	.80	Sep 5 1998
INSTANTANEOUS PEAK FLOW			11800	May 30	46600	May 2 1990
INSTANTANEOUS PEAK STAGE			23.18	May 30	38.02	May 2 1990
ANNUAL RUNOFF (AC-FT)	395900		95100		441100	
10 PERCENT EXCEEDS	1270		231		1610	
50 PERCENT EXCEEDS	62		46		52	
90 PERCENT EXCEEDS	7.2		16		15	

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued



08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1976 to current year.
BIOCHEMICAL DATA: Oct 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1976 to current year.
PH: Oct 1976 to current year.
WATER TEMPERATURE: Oct 1976 to current year.
DISSOLVED OXYGEN: Oct 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct 1976.

REMARKS.--Interruption in the record was caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years 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 U.S. Geological Survey Texas District Office upon request. Dissolved oxygen values bypassing saturation can be attributed to algae blooms in close proximity to the well intake.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,000 microsiemens, Nov 6, 1978; minimum, 90 microsiemens, Sep 10, 1992.
PH: Maximum, 9.8 units, Aug 8, Sep 2, 1980; minimum, 6.6 units, Aug 15, 1987.
WATER TEMPERATURE: Maximum, 38.5°C, Aug 21, 1993; minimum, 0.0°C, Jan 31, Feb 1, 2, 1985.
DISSOLVED OXYGEN: Maximum, 22.1 mg/L, Oct 4, 1983; minimum, 0.0 mg/L, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 651 microsiemens, Jan 19; minimum, 104 microsiemens, Oct 2.
PH: Maximum, 9.0 units, Mar 8; minimum, 7.0 units, Jul 11.
WATER TEMPERATURE: Maximum, 36.2°C, Aug 10; minimum, 2.1°C, Jan 4.
DISSOLVED OXYGEN: Maximum, 16.5 mg/L, Oct 12; minimum, 1.5 mg/L, Jul 8.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	548	517	530	446	182	339	492	463	480	610	592	600
2	558	104	401	355	332	340	505	491	495	610	598	605
3	290	187	246	376	349	362	513	159	452	623	608	615
4	291	269	279	394	376	384	301	130	253	631	620	626
5	308	118	266	415	392	401	382	301	349	634	601	617
6	268	195	243	424	411	416	405	375	393	617	606	612
7	298	268	284	447	421	434	452	397	422	609	595	603
8	326	297	311	432	417	425	453	414	431	642	599	617
9	353	326	338	436	402	428	464	412	429	645	625	636
10	361	348	355	409	216	329	450	245	379	640	628	635
11	368	338	356	394	356	379	446	341	407	637	628	633
12	359	314	344	396	251	364	379	141	338	633	605	622
13	370	340	351	254	150	210	442	379	409	616	602	608
14	388	348	370	326	254	290	487	437	460	629	613	622
15	406	387	398	362	317	340	506	467	485	638	627	632
16	408	386	400	391	355	368	505	486	494	644	631	637
17	458	393	414	398	376	388	511	490	500	647	636	642
18	413	309	346	411	390	402	528	250	466	650	639	643
19	422	370	404	415	401	407	491	423	453	651	640	647
20	426	296	387	428	404	413	537	491	515	650	637	646
21	400	285	379	447	420	433	545	537	541	650	634	644
22	397	388	393	451	435	443	546	531	538	649	636	645
23	417	387	401	464	441	448	555	537	543	645	628	637
24	417	394	403	463	446	456	564	541	550	636	621	629
25	419	405	412	467	453	459	564	540	550	630	618	625
26	430	410	419	463	435	451	561	542	550	627	616	623
27	430	399	418	461	440	452	551	532	540	630	618	624
28	435	419	426	470	453	462	562	538	550	629	274	570
29	439	424	434	476	387	466	575	558	565	524	184	343
30	444	427	437	463	321	422	589	562	572	422	372	394
31	449	432	442	---	---	---	594	578	586	475	421	452
MONTH	558	104	374	476	150	397	594	130	474	651	184	603

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	494	473	484	610	594	603	588	572	581	542	525	535
2	496	484	491	618	588	603	601	585	591	---	---	e325
3	517	495	502	617	606	611	---	---	e400	380	336	357
4	529	508	517	621	608	615	426	369	395	---	---	e290
5	552	527	539	627	611	621	443	422	432	349	263	308
6	558	474	550	625	602	614	463	429	446	395	349	374
7	515	411	465	619	598	609	470	452	459	425	391	409
8	563	514	541	623	105	440	478	454	469	429	411	422
9	572	554	562	403	362	377	483	450	470	428	403	420
10	572	554	562	447	403	428	483	462	474	459	343	378
11	574	552	563	456	114	312	494	476	485	409	328	384
12	561	548	555	362	286	320	508	494	502	412	229	355
13	567	558	563	366	316	338	523	507	518	430	409	421
14	576	562	570	399	364	383	---	---	e475	439	419	433
15	587	574	581	419	397	407	494	463	477	473	437	450
16	597	582	588	439	413	426	520	493	504	464	425	444
17	593	586	589	466	437	445	540	520	527	456	291	403
18	598	588	594	494	388	444	552	540	547	386	368	376
19	600	588	593	477	351	419	558	536	550	405	377	388
20	614	596	603	503	477	489	555	511	540	414	391	407
21	614	603	609	511	503	505	554	538	547	418	404	414
22	615	603	611	525	509	515	557	530	547	430	400	419
23	612	600	605	529	513	520	558	538	547	464	420	442
24	608	592	602	535	518	531	559	541	550	481	460	467
25	608	593	602	528	508	515	581	554	563	488	197	389
26	610	593	602	513	498	505	---	---	e490	---	---	e260
27	612	601	607	530	509	516	504	481	494	337	272	307
28	611	597	604	529	486	502	510	308	491	361	298	331
29	---	---	---	517	497	506	---	---	e500	343	161	305
30	---	---	---	563	517	535	542	524	535	---	---	e200
31	---	---	---	583	563	575	---	---	---	393	105	263
MONTH	615	411	566	627	105	491	---	---	504	---	---	377

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	e390	513	487	502	534	517	528	564	531	550
2	---	---	e400	516	495	505	545	526	535	567	535	555
3	423	243	401	521	506	515	568	541	550	584	501	562
4	417	365	406	521	508	517	570	544	559	614	566	580
5	428	408	418	532	517	522	570	549	562	594	121	485
6	433	408	423	546	504	526	566	549	559	517	106	434
7	463	433	454	538	460	515	561	544	554	448	384	402
8	456	444	451	533	469	490	556	535	546	449	429	438
9	468	447	457	524	484	501	549	532	542	467	449	460
10	480	463	471	---	---	e470	556	535	544	473	456	468
11	600	439	483	463	418	433	558	540	549	473	456	466
12	469	443	460	441	425	435	554	539	547	469	442	459
13	488	460	477	445	413	432	560	546	554	464	256	351
14	496	484	489	437	425	431	600	554	567	415	357	399
15	513	496	503	449	430	441	604	566	585	427	413	417
16	521	510	516	461	443	452	580	537	556	435	402	421
17	535	507	517	470	458	464	558	536	548	449	422	435
18	541	496	522	478	466	473	554	536	546	463	429	451
19	552	537	544	486	467	480	558	534	546	459	422	447
20	546	515	540	495	470	481	562	532	551	459	438	451
21	538	342	509	510	479	487	575	558	565	475	458	466
22	538	117	483	518	482	504	569	541	557	484	469	475
23	503	251	463	499	463	484	572	529	547	491	477	484
24	480	208	447	503	480	495	557	541	549	500	485	491
25	465	208	417	513	488	503	564	549	557	509	491	502
26	495	451	487	525	504	516	574	559	568	514	484	503
27	497	481	492	535	506	521	596	555	572	515	493	507
28	494	473	486	560	535	543	574	535	553	521	485	508
29	494	483	490	563	544	556	560	541	551	521	509	516
30	507	494	501	549	534	543	561	534	549	521	510	515
31	---	---	---	549	528	541	564	532	549	---	---	---
MONTH	---	---	470	---	---	493	604	517	553	614	106	473

e Estimated

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	7.6	7.8	8.6	7.7	7.9	8.0	7.8	7.9	8.5	8.3	8.4
2	8.5	7.5	7.8	7.9	7.8	7.8	8.1	7.8	7.9	8.6	8.5	8.5
3	8.0	7.6	7.8	7.9	7.7	7.8	8.2	7.6	7.8	8.6	8.5	8.5
4	7.8	7.7	7.7	8.0	7.7	7.8	8.0	7.7	7.9	8.6	8.4	8.5
5	8.1	7.7	7.8	8.1	7.8	7.9	8.0	7.8	7.9	8.8	8.5	8.6
6	7.8	7.6	7.7	8.1	7.8	8.0	8.1	7.9	8.0	8.8	8.4	8.6
7	7.8	7.6	7.7	8.0	7.8	7.9	8.0	7.9	8.0	8.5	8.3	8.4
8	7.8	7.6	7.7	8.0	7.8	7.9	8.1	7.9	8.0	8.6	8.2	8.3
9	8.0	7.6	7.8	8.2	7.8	8.0	8.0	7.9	7.9	8.9	8.6	8.7
10	8.4	7.6	8.0	8.1	7.8	7.9	8.1	7.6	7.9	8.8	8.5	8.7
11	8.6	7.7	8.1	7.9	7.7	7.8	7.9	7.6	7.8	8.6	8.2	8.4
12	8.6	7.8	8.1	8.4	7.7	7.9	7.9	7.8	7.8	8.2	8.0	8.1
13	8.5	7.6	8.0	8.5	7.8	7.9	7.9	7.7	7.8	8.2	8.0	8.1
14	8.3	7.6	7.9	7.8	7.7	7.8	7.9	7.8	7.8	8.3	7.7	8.1
15	8.3	7.6	7.9	7.8	7.7	7.8	7.8	7.7	7.8	7.8	7.7	7.7
16	8.3	7.7	8.0	7.9	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.7
17	8.1	7.6	7.8	7.8	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.7
18	7.7	7.5	7.6	7.9	7.7	7.9	8.1	7.7	7.9	7.7	7.7	7.7
19	7.7	7.5	7.6	7.9	7.8	7.9	7.9	7.7	7.8	7.8	7.6	7.7
20	7.7	7.6	7.6	8.0	7.8	7.9	8.0	7.8	7.9	7.7	7.6	7.7
21	7.9	7.6	7.7	8.1	7.9	8.0	8.0	7.9	8.0	7.8	7.7	7.7
22	7.9	7.6	7.8	8.1	7.9	8.0	8.0	7.9	7.9	7.8	7.6	7.7
23	7.9	7.7	7.8	8.2	7.9	8.0	8.0	7.9	7.9	7.9	7.8	7.9
24	8.1	7.7	7.9	8.5	7.9	8.1	8.0	7.9	7.9	7.9	7.8	7.8
25	8.3	7.8	8.0	8.5	8.0	8.2	8.0	7.9	8.0	7.9	7.8	7.9
26	8.4	7.9	8.1	8.7	8.1	8.4	8.1	7.9	8.0	7.9	7.8	7.8
27	8.4	7.9	8.1	8.6	8.2	8.4	8.2	8.1	8.1	7.9	7.8	7.8
28	8.4	7.8	8.1	8.6	8.0	8.3	8.2	8.1	8.2	7.9	7.7	7.8
29	8.4	7.8	8.1	8.4	8.0	8.2	8.3	8.1	8.2	8.2	7.6	7.9
30	8.4	7.9	8.1	8.1	7.8	8.0	8.4	8.3	8.3	7.9	7.8	7.8
31	8.2	7.8	8.0	---	---	---	8.4	8.3	8.4	7.9	7.8	7.9
MONTH	8.6	7.5	7.9	8.7	7.7	8.0	8.4	7.6	7.9	8.9	7.6	8.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.9	8.1	7.9	8.0	8.1	7.8	7.9	8.2	7.7	8.0
2	8.0	7.8	7.9	8.1	7.8	7.9	8.1	7.8	7.9	8.1	7.1	7.7
3	8.1	7.9	8.0	8.1	7.8	7.9	8.8	7.6	8.0	7.8	7.6	7.7
4	8.2	8.0	8.1	8.1	7.8	7.9	8.0	7.6	7.8	8.1	7.2	7.6
5	8.1	8.0	8.1	8.1	7.8	7.9	8.1	7.7	7.9	7.9	7.6	7.7
6	8.1	8.0	8.0	8.0	7.7	7.8	8.0	7.8	7.9	7.9	7.8	7.8
7	8.0	7.9	7.9	7.9	7.7	7.8	8.5	7.9	8.1	8.1	7.8	7.9
8	8.1	7.9	8.0	9.0	7.7	7.9	8.5	8.0	8.2	8.4	7.9	8.1
9	8.2	7.9	8.0	7.9	7.6	7.7	8.5	8.0	8.2	8.5	8.0	8.2
10	8.2	7.9	8.0	7.7	7.6	7.7	8.4	7.8	8.1	8.3	7.8	8.0
11	8.3	7.9	8.1	8.6	7.5	7.7	8.2	7.9	8.0	8.4	7.8	8.1
12	8.5	8.2	8.3	7.8	7.5	7.7	8.1	7.8	8.0	8.2	7.5	8.0
13	8.4	8.2	8.3	7.8	7.7	7.8	8.0	7.7	7.9	8.3	7.7	8.0
14	8.3	8.1	8.2	7.9	7.8	7.9	8.4	7.7	7.9	8.3	7.8	8.0
15	8.3	8.1	8.2	7.9	7.8	7.8	8.1	7.7	7.9	8.2	7.7	7.9
16	8.2	8.1	8.1	7.8	7.8	7.8	8.1	7.8	8.0	8.0	7.7	7.8
17	8.2	8.1	8.1	7.9	7.8	7.8	8.0	7.7	7.9	7.9	7.6	7.7
18	8.2	8.0	8.1	7.8	7.7	7.8	8.0	7.7	7.8	8.1	7.5	7.9
19	8.2	8.1	8.2	7.8	7.6	7.7	8.0	7.6	7.8	8.3	7.7	8.0
20	8.2	8.1	8.1	8.0	7.8	7.9	8.1	7.5	7.7	8.5	7.8	8.1
21	8.2	8.1	8.1	8.0	7.9	7.9	8.0	7.4	7.7	8.3	7.5	7.9
22	8.3	8.2	8.2	8.2	7.9	8.0	8.0	7.4	7.7	8.2	7.5	7.8
23	8.3	8.2	8.2	8.3	8.0	8.1	7.8	7.3	7.6	8.1	7.4	7.7
24	8.2	8.1	8.2	8.3	8.1	8.2	7.6	7.4	7.5	7.9	7.4	7.7
25	8.3	8.0	8.1	8.3	8.0	8.1	7.8	7.3	7.5	8.0	7.4	7.6
26	8.2	8.0	8.1	8.4	8.0	8.2	8.0	7.3	7.6	8.0	7.1	7.5
27	8.2	7.9	8.0	8.3	8.1	8.2	8.0	7.4	7.7	7.8	7.5	7.6
28	8.2	7.9	8.0	8.1	7.8	8.0	8.1	7.7	7.8	7.9	7.5	7.7
29	---	---	---	8.2	7.8	7.9	---	---	---	7.9	7.4	7.7
30	---	---	---	8.0	7.8	7.9	8.3	7.8	8.0	7.8	7.4	7.6
31	---	---	---	8.0	7.8	7.9	---	---	---	7.9	7.4	7.6
MONTH	8.5	7.8	8.1	9.0	7.5	7.9	---	---	---	8.5	7.1	7.8

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.7	7.8	8.0	7.6	7.8	8.3	7.8	8.0	8.6	8.0	8.3
2	8.0	7.8	7.9	7.9	7.6	7.7	8.1	7.8	7.9	8.4	7.9	8.2
3	8.1	7.8	7.9	7.9	7.6	7.7	8.3	7.9	8.0	8.3	7.7	8.0
4	8.2	7.8	8.0	7.8	7.6	7.7	8.2	7.9	8.0	8.3	7.5	7.8
5	8.3	7.9	8.1	8.0	7.6	7.8	8.2	7.9	8.0	8.0	7.3	7.8
6	8.3	8.0	8.1	7.8	7.6	7.7	8.4	8.1	8.2	7.6	7.3	7.5
7	8.1	7.7	7.9	7.8	7.6	7.6	8.4	8.1	8.2	7.7	7.4	7.5
8	8.1	7.7	7.9	7.8	7.6	7.7	8.5	8.1	8.2	7.9	7.4	7.6
9	8.0	7.6	7.8	7.9	7.6	7.8	8.5	8.2	8.3	8.3	7.6	7.9
10	7.9	7.6	7.7	8.0	7.2	7.7	8.7	8.3	8.4	8.3	7.7	7.9
11	8.1	7.5	7.8	8.1	7.0	7.7	8.8	8.3	8.5	8.0	7.6	7.8
12	7.9	7.6	7.8	8.4	7.8	8.0	8.9	8.4	8.6	8.1	7.6	7.8
13	7.7	7.5	7.5	8.3	7.6	7.9	8.6	7.7	8.2	7.8	7.6	7.7
14	7.5	7.4	7.4	8.2	7.5	7.8	8.1	7.6	7.8	8.6	7.7	8.1
15	7.4	7.2	7.4	8.1	7.6	7.8	8.0	7.6	7.8	8.4	7.7	8.0
16	7.4	7.2	7.3	8.1	7.6	7.8	8.1	7.6	7.9	8.4	7.7	8.0
17	7.4	7.3	7.3	7.9	7.6	7.7	8.2	7.7	7.9	8.5	7.6	8.0
18	7.3	7.2	7.2	7.9	7.6	7.7	8.2	7.7	7.9	8.3	7.6	7.9
19	7.5	7.3	7.4	7.9	7.5	7.7	8.1	7.7	7.8	8.3	7.6	7.9
20	7.7	7.3	7.5	8.2	7.6	7.9	8.3	7.7	7.9	8.2	7.6	7.8
21	7.6	7.4	7.5	8.3	7.8	7.9	8.3	7.7	8.0	8.2	7.7	7.9
22	7.9	7.3	7.5	8.2	7.8	8.0	8.2	7.8	8.0	8.2	7.7	7.9
23	7.8	7.4	7.6	8.2	7.7	8.0	8.1	7.7	7.9	8.3	7.8	8.0
24	7.8	7.5	7.6	8.2	7.5	7.8	8.1	7.7	7.8	8.1	7.7	7.9
25	7.8	7.5	7.6	8.1	7.6	7.8	8.0	7.7	7.8	8.2	7.7	7.9
26	8.1	7.6	7.8	8.0	7.6	7.7	8.1	7.9	8.0	8.3	7.7	7.9
27	8.2	7.6	7.9	7.9	7.5	7.7	8.3	7.7	7.9	8.2	7.7	7.9
28	8.2	7.7	7.9	8.1	7.6	7.8	8.2	7.6	7.9	8.1	7.6	7.9
29	8.1	7.6	7.8	8.1	7.7	7.8	8.3	7.7	8.0	8.1	7.8	7.9
30	8.0	7.6	7.8	8.1	7.7	7.8	8.3	7.8	8.0	8.2	7.8	7.9
31	---	---	---	8.2	7.8	8.0	8.5	7.9	8.2	---	---	---
MONTH	8.3	7.2	7.7	8.4	7.0	7.8	8.9	7.6	8.0	8.6	7.3	7.9

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	31.2	26.2	28.2	22.3	19.0	20.6	18.5	16.7	17.7	10.3	8.8	9.5
2	26.8	21.9	25.3	19.0	17.0	17.9	19.7	16.6	18.0	10.0	6.2	8.1
3	25.7	23.0	24.5	19.6	17.0	18.2	19.5	17.8	18.8	6.2	3.3	4.7
4	27.0	24.9	25.8	18.0	14.7	16.6	19.4	17.4	18.4	4.8	2.1	3.4
5	27.4	22.9	25.4	15.1	12.0	13.6	19.8	17.8	18.8	5.5	3.0	4.3
6	22.9	20.9	22.1	12.9	11.1	12.0	20.2	18.5	19.5	8.3	5.1	6.6
7	22.2	19.8	21.1	12.6	11.9	12.2	18.5	13.7	16.1	10.1	7.6	8.8
8	23.3	20.1	21.5	13.1	12.3	12.7	13.8	12.3	13.1	9.8	6.6	8.8
9	24.3	19.6	21.6	17.3	13.1	15.1	12.4	11.4	11.9	6.6	3.9	4.8
10	24.8	19.9	22.0	16.7	14.9	15.9	13.0	10.7	11.8	6.5	2.9	4.6
11	25.8	20.2	22.5	15.4	13.3	14.3	11.7	10.1	11.2	9.3	4.9	7.0
12	25.8	21.4	23.0	14.2	12.8	13.7	11.0	9.3	10.3	12.3	8.7	10.6
13	26.3	21.7	23.7	12.9	11.9	12.6	11.3	8.8	10.2	12.0	8.7	10.4
14	26.9	22.2	23.9	14.6	12.9	13.6	11.8	10.4	11.2	8.7	6.3	7.4
15	26.4	22.1	23.7	14.5	13.9	14.0	12.2	10.6	11.4	9.6	5.8	7.5
16	25.9	22.7	23.8	16.6	13.8	15.1	12.9	10.6	11.5	11.4	7.4	9.1
17	24.0	23.0	23.6	16.5	15.8	16.2	12.2	10.1	11.2	12.8	8.9	10.4
18	23.1	21.4	22.0	19.1	16.2	17.5	11.1	10.2	10.5	13.1	9.4	11.0
19	21.4	19.6	20.3	20.3	17.9	18.8	11.1	10.6	10.9	14.1	9.6	11.5
20	19.6	18.3	19.1	18.0	14.9	16.5	10.7	10.0	10.3	15.8	10.7	13.1
21	19.8	18.3	19.1	16.5	13.9	15.0	11.3	7.1	10.3	17.7	14.4	15.6
22	20.0	18.0	19.0	17.1	13.4	15.0	7.1	3.0	4.2	15.9	11.9	14.2
23	20.2	17.6	18.4	18.3	14.9	16.3	3.7	3.0	3.3	13.0	10.0	11.3
24	21.0	16.6	18.3	18.6	16.9	17.4	4.1	2.9	3.4	14.0	9.5	11.5
25	22.0	17.1	19.3	19.7	16.5	17.6	5.2	2.9	4.1	15.0	11.0	12.5
26	23.6	18.8	20.7	19.0	15.4	16.9	6.4	4.0	5.3	16.4	11.8	13.8
27	23.5	19.7	21.5	18.7	15.4	17.1	7.3	5.9	6.6	16.8	14.0	15.1
28	23.7	21.2	22.1	20.0	16.9	18.3	8.0	6.0	7.0	18.4	15.2	16.1
29	25.2	21.4	22.9	20.8	18.8	19.6	9.3	6.8	7.9	15.5	13.5	14.1
30	25.0	22.3	23.2	19.3	17.3	18.4	9.2	7.1	8.1	13.5	11.4	12.5
31	25.0	21.9	23.0	---	---	---	9.4	7.3	8.3	11.4	10.2	10.5
MONTH	31.2	16.6	22.3	22.3	11.1	16.0	20.2	2.9	11.0	18.4	2.1	10.0

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.8	9.7	11.2	19.3	14.2	16.5	19.5	16.4	17.9	24.5	20.7	22.1
2	14.0	11.8	12.8	19.5	15.2	16.8	21.3	19.0	20.0	21.2	16.2	19.5
3	14.4	11.5	12.9	17.7	13.5	15.3	20.7	17.5	19.3	22.8	19.2	20.8
4	14.4	12.0	13.1	17.3	12.5	14.7	20.5	16.6	18.4	23.1	17.8	21.8
5	15.4	12.6	14.0	18.8	15.1	16.7	22.0	19.4	20.6	23.9	20.9	22.4
6	16.9	15.4	16.3	18.6	14.9	16.3	21.9	18.3	20.2	23.8	20.2	22.0
7	16.5	13.9	15.3	15.3	13.0	14.1	22.2	19.3	20.9	25.0	19.9	22.3
8	17.0	14.5	15.9	15.8	12.8	14.2	25.3	20.8	22.8	27.0	21.5	23.9
9	19.9	16.6	18.2	15.9	12.9	14.5	26.2	22.2	24.0	26.3	22.8	24.4
10	19.7	17.6	18.5	16.0	15.2	15.7	24.6	21.9	23.4	24.8	22.4	23.6
11	18.6	13.9	17.2	16.1	12.5	14.5	22.9	19.6	21.2	23.8	21.9	22.8
12	13.9	11.0	12.1	13.7	11.8	12.8	23.9	19.8	21.7	25.0	21.9	23.3
13	14.0	9.8	11.9	11.8	8.9	10.3	24.1	21.5	22.5	26.5	22.8	24.6
14	15.3	10.9	12.9	10.9	7.4	9.3	23.7	20.0	21.9	28.0	23.7	25.6
15	15.7	11.6	13.4	13.3	9.8	11.6	20.8	15.7	17.4	28.8	24.6	26.4
16	16.2	13.2	14.5	15.6	12.2	13.9	18.8	15.1	16.7	28.5	25.4	26.6
17	16.3	12.3	14.1	16.3	14.3	15.4	18.7	14.4	16.4	26.2	23.9	25.0
18	16.0	12.5	13.8	16.7	16.0	16.3	20.5	14.6	17.5	26.7	22.5	24.5
19	15.1	11.4	12.9	16.4	14.2	15.4	24.4	17.6	20.7	27.1	24.0	25.5
20	13.7	11.2	12.5	15.8	13.3	14.8	26.6	20.2	22.9	27.8	24.2	25.8
21	14.1	10.1	11.8	17.9	14.4	16.3	23.3	20.9	22.0	27.8	24.7	26.2
22	13.5	9.8	11.4	20.0	16.7	18.3	26.3	20.7	23.1	31.2	25.6	28.0
23	14.8	10.0	12.2	18.6	16.1	17.5	27.1	23.0	24.6	30.2	25.8	27.5
24	16.0	10.9	13.4	17.1	14.9	16.0	24.0	20.6	22.2	29.9	25.1	27.3
25	19.3	13.9	16.3	19.1	15.8	17.3	23.0	20.1	21.4	28.3	21.3	25.7
26	18.9	16.9	17.8	19.2	15.8	17.4	23.7	18.7	21.2	26.6	19.5	23.3
27	20.1	16.7	18.1	17.3	15.1	16.2	25.3	20.4	22.9	24.6	22.0	23.2
28	18.9	14.4	16.5	15.4	14.4	14.9	27.8	23.0	25.2	25.3	23.2	24.2
29	---	---	---	15.3	14.0	14.7	---	---	---	26.4	23.1	24.3
30	---	---	---	14.7	13.8	14.2	26.1	21.6	23.4	23.8	20.6	22.0
31	---	---	---	17.8	14.5	15.8	---	---	---	27.4	22.5	24.6
MONTH	20.1	9.7	14.3	20.0	7.4	15.1	---	---	---	31.2	16.2	24.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.9	25.1	26.6	31.7	26.3	28.7	35.1	28.1	30.7	33.3	27.0	29.4
2	29.2	25.5	26.8	32.6	26.8	29.2	34.8	28.5	31.0	32.5	26.9	28.9
3	28.7	25.1	26.5	32.9	27.0	29.3	35.2	29.1	31.2	31.9	26.9	28.9
4	28.7	24.5	26.4	32.7	27.4	29.5	35.0	28.9	31.4	33.6	27.1	29.7
5	29.0	24.5	26.4	31.3	27.7	29.2	35.3	29.3	31.7	31.2	26.2	28.5
6	29.0	25.3	27.1	34.7	27.3	30.1	35.7	29.9	32.1	29.8	26.5	28.3
7	29.8	26.0	27.9	34.9	28.3	30.5	35.6	29.4	31.8	30.0	28.2	28.9
8	30.1	27.3	28.7	33.1	27.9	30.4	35.6	29.0	31.6	29.4	27.0	27.9
9	30.4	27.1	28.6	33.3	29.4	30.9	35.6	29.4	31.8	31.1	26.1	28.3
10	31.0	27.0	28.6	29.9	25.4	28.3	36.2	29.3	31.9	32.1	26.9	28.8
11	30.9	26.3	28.4	30.5	24.1	28.3	35.6	29.0	31.6	31.0	25.9	27.9
12	30.2	27.2	28.4	32.0	28.2	29.9	34.5	28.3	30.9	32.2	26.3	28.5
13	29.5	27.2	28.3	32.5	28.0	30.1	33.0	28.4	30.0	27.3	24.8	25.8
14	29.3	26.7	27.7	33.0	28.3	30.3	34.9	28.3	30.8	28.6	25.5	26.7
15	29.3	25.7	27.2	32.4	27.8	29.6	35.5	29.0	31.3	28.2	25.0	26.4
16	29.9	26.3	28.1	32.9	26.9	29.3	34.7	28.1	30.6	28.8	25.0	26.2
17	28.6	25.0	26.8	33.0	27.5	29.8	34.5	27.6	30.5	29.7	24.4	26.6
18	28.6	24.6	26.4	33.7	28.1	30.4	34.4	28.5	30.9	30.2	24.5	26.5
19	30.7	25.7	27.8	33.9	27.9	30.5	35.7	29.1	31.5	31.1	24.3	26.9
20	29.0	26.5	27.5	33.8	28.6	30.7	33.8	28.3	30.4	30.9	24.7	27.1
21	27.1	24.9	26.6	33.1	28.2	29.8	32.3	27.8	29.8	27.4	21.9	24.3
22	29.0	25.8	27.0	33.4	27.1	29.8	33.2	28.5	30.3	26.6	19.7	22.6
23	29.7	25.8	27.6	34.1	27.5	30.3	33.4	28.4	30.5	27.2	18.8	22.4
24	29.0	24.6	27.8	35.5	27.4	30.8	35.1	28.6	31.1	27.2	19.7	22.7
25	28.7	24.6	26.6	35.5	28.1	31.1	33.7	28.4	30.9	26.8	20.8	23.2
26	30.5	26.5	28.5	35.2	28.4	31.1	35.4	29.1	31.6	29.6	22.0	25.0
27	31.4	28.4	29.8	36.1	28.3	31.4	33.8	28.4	30.6	30.4	23.3	26.1
28	32.1	27.9	29.7	35.8	28.7	31.5	34.6	28.0	30.6	30.5	22.8	26.3
29	31.9	28.5	29.6	34.8	29.0	31.2	34.1	28.9	30.8	26.3	19.9	22.5
30	30.5	27.5	28.9	34.8	28.3	30.8	33.2	27.7	30.0	26.3	18.1	21.5
31	---	---	---	34.9	27.8	30.5	33.6	27.7	29.9	---	---	---
MONTH	32.1	24.5	27.7	36.1	24.1	30.1	36.2	27.6	31.0	33.6	18.1	26.4

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.5	3.9	6.2	7.5	5.6	6.9	6.7	4.8	6.1	11.0	9.1	10.4
2	8.9	3.3	5.5	7.3	5.7	6.6	---	---	---	11.4	6.9	9.7
3	7.7	6.1	7.1	7.5	5.4	6.7	---	---	---	12.1	3.9	9.6
4	6.1	4.7	5.2	7.2	4.2	6.2	8.1	6.5	7.3	12.8	4.0	9.6
5	7.6	4.3	5.4	9.1	3.7	6.8	6.9	5.7	6.1	13.2	4.3	11.2
6	9.1	6.4	7.9	9.3	3.8	7.3	6.4	5.4	6.0	12.8	9.5	11.7
7	8.9	7.9	8.5	8.6	5.6	7.8	7.3	5.3	6.3	12.3	10.8	11.7
8	8.8	7.7	8.4	8.4	6.3	7.7	7.8	4.2	6.9	11.7	9.7	10.9
9	9.8	7.6	8.7	9.8	7.0	8.3	7.7	4.2	6.9	12.8	7.0	10.7
10	12.4	8.3	10.3	9.1	5.4	7.7	8.8	6.3	7.8	13.1	7.4	11.9
11	14.4	8.8	11.4	8.0	3.3	7.0	9.5	5.1	7.7	13.2	9.1	11.8
12	16.5	10.0	12.6	8.8	5.3	7.1	9.9	6.6	8.6	11.9	10.0	10.9
13	14.7	10.3	12.5	10.9	8.4	9.1	8.9	6.3	8.1	10.5	7.8	9.5
14	13.0	9.7	11.5	9.0	7.3	8.1	8.6	6.0	7.8	11.3	7.1	9.9
15	12.0	8.5	10.2	7.9	6.5	7.4	8.4	4.3	7.3	12.1	8.3	10.9
16	11.4	8.0	9.6	7.7	6.8	7.3	10.2	4.6	8.1	12.2	10.1	11.5
17	9.8	7.5	8.5	7.2	6.3	6.8	10.3	7.2	9.3	12.4	10.3	11.6
18	8.7	6.6	8.0	7.3	6.3	6.8	10.1	8.0	9.4	12.5	10.8	11.7
19	8.5	6.5	7.5	6.8	6.2	6.5	9.8	8.1	9.1	12.5	10.7	11.6
20	8.5	7.0	7.8	7.5	5.0	6.9	9.9	8.3	9.2	12.3	10.4	11.4
21	9.1	7.6	8.4	8.5	7.0	7.8	9.9	7.2	9.1	11.0	8.6	9.8
22	8.7	7.0	8.2	8.9	5.3	8.0	11.0	3.7	8.2	9.5	7.0	8.5
23	8.8	6.9	8.3	9.5	7.2	8.2	11.2	6.4	9.5	10.8	5.7	8.8
24	9.8	6.8	8.6	10.2	7.1	8.3	11.5	4.1	9.0	11.9	7.6	10.3
25	11.3	7.6	9.5	10.3	6.8	8.6	11.5	3.4	9.6	11.7	8.1	10.5
26	11.2	7.5	9.2	11.9	6.4	9.7	11.4	4.5	9.7	11.8	9.3	10.6
27	11.3	6.4	9.1	11.4	8.0	9.7	11.3	8.1	10.2	10.9	8.3	9.9
28	10.7	7.3	8.7	10.1	7.3	8.7	11.3	8.1	10.4	12.1	7.4	9.4
29	10.0	6.4	8.3	8.7	6.3	7.4	11.2	8.6	10.4	12.8	6.1	11.4
30	10.1	6.9	8.3	7.4	4.9	6.3	11.1	7.5	10.2	12.2	8.5	10.5
31	9.8	6.4	7.8	---	---	---	11.2	7.7	10.4	12.4	9.3	11.0
MONTH	16.5	3.3	8.6	11.9	3.3	7.6	---	---	---	13.2	3.9	10.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.4	8.9	11.5	12.8	9.1	11.2	10.2	8.1	9.4	11.5	6.8	8.8
2	12.0	8.3	10.9	12.8	8.8	10.8	9.5	7.5	8.2	9.3	6.7	7.7
3	12.4	10.3	11.7	11.7	6.5	9.7	8.7	2.6	6.1	7.8	7.0	7.3
4	12.5	11.0	12.1	11.8	6.5	9.8	10.6	4.6	8.4	9.5	6.9	7.5
5	12.5	11.5	12.0	10.7	7.7	9.2	11.6	7.3	9.8	7.6	6.6	7.1
6	11.5	10.0	10.7	10.5	6.2	8.7	11.0	5.2	8.9	7.9	6.8	7.4
7	10.4	7.3	9.4	10.2	6.9	8.5	11.7	6.1	9.7	9.5	7.2	8.2
8	10.9	8.8	10.2	10.5	5.7	8.4	12.4	8.4	10.6	11.4	7.4	9.1
9	11.8	8.9	10.4	9.6	5.0	7.7	12.0	7.2	10.3	12.1	8.1	9.9
10	12.1	9.3	10.5	8.3	5.1	7.3	11.0	7.2	9.6	9.8	7.0	8.6
11	11.2	8.0	9.7	9.6	4.9	7.6	9.5	3.6	7.9	10.4	6.7	8.5
12	12.6	8.5	11.0	9.7	6.7	8.5	8.3	3.8	6.9	9.1	6.0	7.4
13	13.2	8.9	12.0	10.3	4.8	7.7	7.1	2.9	5.4	10.2	5.9	7.9
14	12.9	8.4	12.0	10.9	4.4	8.6	---	---	---	10.8	6.1	8.2
15	11.8	9.1	10.9	10.0	6.0	9.1	---	---	---	10.6	4.9	7.5
16	11.0	8.5	10.1	9.2	7.8	8.7	12.7	2.8	9.9	10.9	5.6	7.9
17	11.7	7.2	10.4	9.0	7.7	8.3	13.5	5.0	11.0	7.8	5.2	6.2
18	11.7	8.7	10.8	9.1	7.6	8.4	13.6	8.1	11.6	8.2	5.8	6.9
19	11.4	6.7	10.0	9.2	8.0	8.6	13.8	9.1	12.0	8.0	5.5	6.7
20	11.3	8.4	10.3	9.4	7.4	8.7	15.2	8.4	11.8	9.9	5.2	7.3
21	11.9	9.1	10.6	9.5	8.2	9.0	11.9	6.2	10.2	10.1	5.1	7.4
22	12.3	9.0	11.0	10.4	8.4	9.3	12.2	6.2	9.7	10.6	5.0	7.8
23	11.6	8.6	10.8	10.2	7.9	9.0	10.2	4.6	7.9	7.0	3.0	5.5
24	13.1	8.9	11.5	11.1	8.0	9.8	8.3	2.1	6.3	5.7	2.6	4.3
25	12.4	10.1	11.4	11.2	6.2	10.1	10.0	3.2	7.1	8.4	3.3	6.0
26	11.5	9.3	10.6	11.1	8.7	10.0	11.4	4.4	7.6	8.0	5.3	6.7
27	11.8	7.8	10.0	10.2	8.7	9.5	8.5	3.7	7.2	7.4	6.4	6.8
28	12.5	7.7	10.7	9.4	6.8	8.1	9.4	5.9	7.3	7.8	6.3	7.0
29	---	---	---	---	---	---	---	---	---	8.3	6.0	7.0
30	---	---	---	10.0	6.3	8.7	11.4	6.6	8.8	8.0	6.2	7.2
31	---	---	---	10.5	7.2	9.2	---	---	---	7.5	6.7	7.1
MONTH	13.2	6.7	10.8	---	---	---	---	---	---	12.1	2.6	7.4

08048543 WEST FORK TRINITY RIVER AT BEACH STREET, FORT WORTH, TX--Continued
(National Water-Quality Assessment Program)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	6.3	7.0	10.2	6.2	8.2	7.1	3.5	5.0	7.6	3.2	5.5
2	7.8	6.2	7.0	9.1	6.2	7.6	6.9	3.3	4.9	7.7	3.6	5.4
3	8.3	6.3	7.2	8.2	5.1	6.6	6.9	3.2	4.5	7.7	3.7	5.4
4	8.7	6.3	7.4	7.5	4.3	5.8	7.0	3.1	4.4	8.4	3.1	5.4
5	8.7	6.4	7.6	6.6	3.4	4.8	6.5	3.2	4.5	8.4	4.0	6.0
6	9.1	6.2	7.7	7.7	2.3	5.1	6.5	3.0	4.4	---	---	---
7	9.3	6.0	7.5	7.6	4.1	5.6	6.0	3.0	4.1	---	---	---
8	9.3	6.0	7.6	8.6	1.5	5.1	5.8	2.6	4.0	---	---	---
9	8.8	5.7	7.2	8.6	3.4	6.1	6.0	2.9	4.3	8.7	4.4	6.1
10	8.5	5.1	6.6	8.1	3.6	5.9	6.4	3.2	4.5	8.2	4.9	6.1
11	7.0	4.2	5.5	9.3	4.0	6.6	6.4	2.7	4.4	6.7	3.9	5.3
12	5.0	2.8	3.9	11.5	6.2	8.5	6.4	3.1	4.6	7.7	4.0	5.2
13	4.8	2.1	3.4	11.3	6.6	8.8	5.6	3.4	4.2	6.3	3.8	4.8
14	6.3	2.8	4.4	8.8	5.6	7.3	5.9	3.0	4.3	7.4	4.7	5.9
15	7.2	4.0	5.3	8.4	4.1	6.5	5.8	3.2	4.3	8.0	5.1	6.3
16	8.9	4.1	6.5	7.0	4.2	5.5	6.1	3.1	4.4	8.7	4.3	6.3
17	8.1	4.6	6.3	8.5	3.4	5.9	6.6	3.2	4.9	9.4	3.4	7.0
18	8.5	5.6	7.0	8.1	4.1	5.9	7.0	3.4	4.9	8.4	4.3	6.0
19	9.1	5.7	7.4	7.2	3.1	5.2	7.3	3.2	4.7	8.6	3.5	5.8
20	9.0	6.0	7.4	7.3	3.4	5.3	---	---	---	8.3	2.3	6.0
21	7.0	5.5	6.0	7.5	2.8	4.3	---	---	---	8.9	4.6	6.9
22	8.0	4.3	6.0	9.1	2.2	5.3	---	---	---	9.4	4.1	7.0
23	7.7	5.4	6.3	9.4	4.5	7.0	---	---	---	9.6	6.3	8.0
24	7.2	4.4	5.7	9.7	4.7	6.9	---	---	---	9.5	6.6	8.0
25	6.8	5.2	5.9	8.7	4.4	6.3	---	---	---	9.9	6.2	7.8
26	8.4	4.8	6.4	7.5	3.3	5.1	11.2	6.2	8.6	10.1	5.0	7.8
27	8.2	4.4	6.4	7.5	2.9	4.8	9.7	3.6	6.4	9.7	3.4	7.4
28	9.5	4.4	6.7	7.3	3.0	5.0	6.9	3.2	4.7	9.6	3.3	7.1
29	10.2	5.5	7.5	6.8	3.7	5.0	6.4	3.2	4.5	9.9	6.7	8.3
30	10.5	6.1	8.2	6.7	3.2	4.6	6.3	2.3	4.0	10.5	6.6	8.4
31	---	---	---	7.2	3.2	4.8	7.9	3.4	5.3	---	---	---
MONTH	10.5	2.1	6.5	11.5	1.5	6.0	---	---	---	---	---	---

This page intentionally left blank.

08048970 VILLAGE CREEK AT EVERMAN, TX

LOCATION.--Lat 32°36'12", long 97°15'53", Tarrant County, Hydrologic Unit 12030102, at center of channel on downstream side of bridge on Rendon Road (Tarrant County Road 1015), 1.4 mi downstream from Deer Creek and 1.8 mi southeast of Everman High School.

DRAINAGE AREA.--84.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 589.93 ft above sea level (Tarrant County Public Works Department reference mark). Rain gage at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those less than 10 ft^3/s, which are poor. Peak discharge from rating extended above 7,700 ft^3/s on basis of area-velocity study. No flow at times. No known regulation or diversions. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since about 1930, 27.37 ft, date uncertain, but may be same date, Mar 27, 1977, as date of maximum stage at discontinued downstream station, Village Creek at Kennedale (08048980). Flood of May 18, 1989, may have equalled, or slightly exceeded, the indicated known maximum stage.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 13	0615	2,240	10.05	Jul 10	1745	1,230	7.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

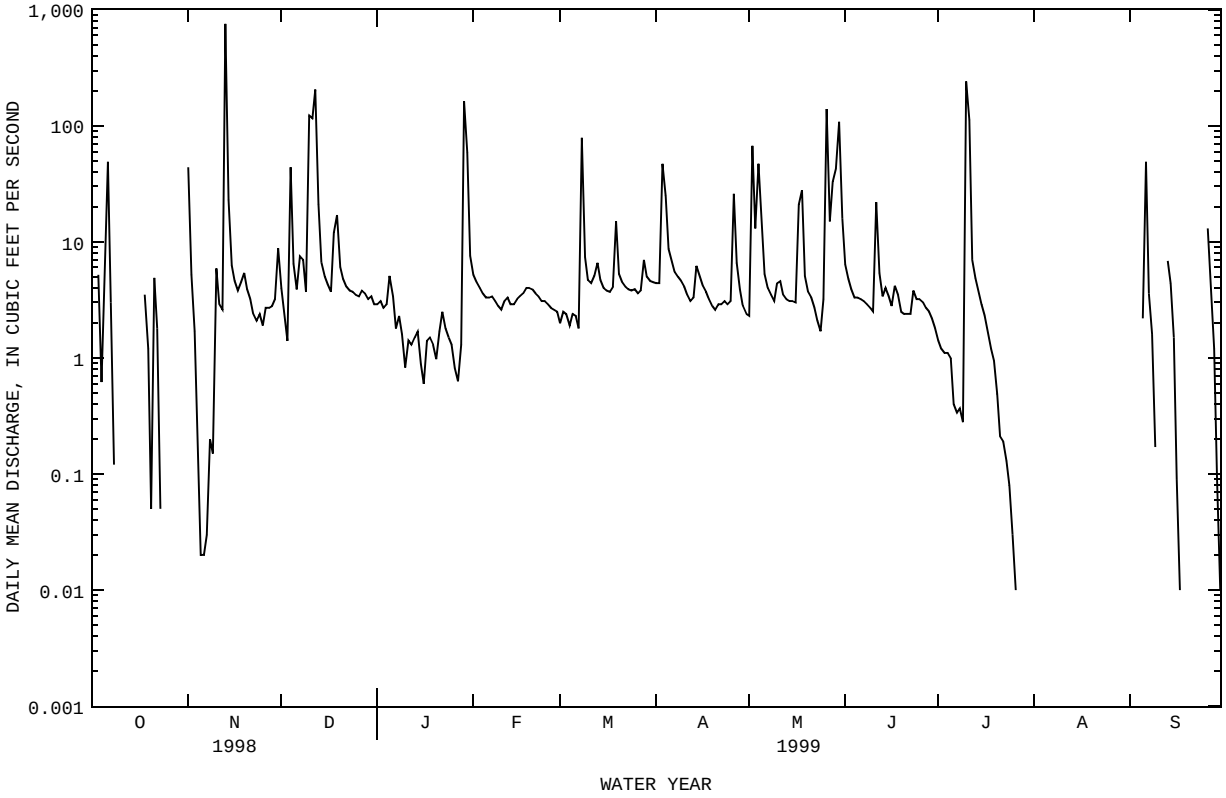
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	44	4.0	2.9	5.2	2.0	4.4	2.3	6.4	1.4	.00	.00
2	.00	5.2	2.3	3.1	4.5	2.5	4.4	67	4.8	1.2	.00	.00
3	5.2	1.7	1.4	2.7	4.0	2.4	47	13	3.9	1.1	.00	.00
4	.62	.14	44	2.9	3.6	1.9	25	47	3.3	1.1	.00	.00
5	8.8	.02	6.5	5.1	3.3	2.4	8.7	13	3.3	.99	.00	2.2
6	49	.02	3.9	3.4	3.3	2.3	6.9	5.3	3.2	.40	.00	49
7	3.0	.03	7.5	1.8	3.4	1.8	5.5	4.0	3.1	.34	.00	3.6
8	.12	.20	7.0	2.3	3.1	79	5.0	3.5	2.9	.37	.00	1.6
9	.00	.15	3.7	1.6	2.8	7.4	4.6	3.1	2.7	.28	.00	.17
10	.00	5.9	123	.83	2.6	4.7	4.1	4.4	2.5	241	.00	.00
11	.00	2.9	116	1.4	3.1	4.4	3.5	4.6	22	112	.00	.00
12	.00	2.6	206	1.3	3.3	5.1	3.1	3.5	5.4	7.0	.00	.00
13	.00	756	21	1.5	2.9	6.6	3.3	3.2	3.4	4.9	.00	6.9
14	.00	23	6.7	1.7	2.9	4.7	6.2	3.1	4.0	3.7	.00	4.4
15	.00	6.3	5.0	.89	3.2	4.0	5.1	3.1	3.4	2.9	.00	1.5
16	.00	4.6	4.3	.60	3.4	3.8	4.2	3.0	2.8	2.3	.00	.09
17	.00	3.8	3.7	1.4	3.6	3.7	3.7	21	4.2	1.7	.00	.01
18	3.5	4.5	12	1.5	4.0	4.1	3.2	28	3.5	1.2	.00	.00
19	1.2	5.4	17	1.3	4.0	15	2.8	5.1	2.5	.95	.00	.00
20	.05	3.9	6.1	.98	3.9	5.3	2.6	3.7	2.4	.49	.00	.00
21	4.9	3.2	4.8	1.7	3.6	4.5	2.9	3.3	2.4	.21	.00	.00
22	1.8	2.4	4.1	2.5	3.4	4.1	2.9	2.7	2.4	.19	.00	.00
23	.05	2.1	3.8	1.8	3.1	3.9	3.1	2.1	3.8	.13	.00	.00
24	.00	2.4	3.7	1.5	3.1	3.8	2.9	1.7	3.2	.08	.00	.00
25	.00	1.9	3.5	1.3	2.9	3.9	3.1	3.2	3.2	.03	.00	.00
26	.00	2.7	3.4	.82	2.7	3.6	26	140	3.0	.01	.00	13
27	.00	2.7	3.8	.63	2.6	3.8	6.6	15	2.7	.00	.00	3.3
28	.00	2.8	3.6	1.3	2.5	7.0	3.9	33	2.5	.00	.00	1.2
29	.00	3.2	3.2	163	---	5.0	2.8	43	2.2	.00	.00	.09
30	.00	8.8	3.4	59	---	4.6	2.4	108	1.8	.00	.00	.01
31	.00	---	2.9	7.6	---	4.5	---	16	---	.00	.00	---
TOTAL	78.24	902.56	641.3	280.35	94.0	211.8	209.9	608.9	116.9	385.97	0.00	87.07
MEAN	2.52	30.1	20.7	9.04	3.36	6.83	7.00	19.6	3.90	12.5	.000	2.90
MAX	49	756	206	163	5.2	79	47	140	22	241	.00	49
MIN	.00	.02	1.4	.60	2.5	1.8	2.4	1.7	1.8	.00	.00	.00
AC-FT	155	1790	1270	556	186	420	416	1210	232	766	.00	173

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

MEAN	36.8	18.6	50.7	25.9	63.7	57.2	59.9	76.5	27.6	5.31	4.00	4.14
MAX	240	52.1	367	117	165	161	233	339	141	14.3	21.7	14.3
(WY)	1992	1995	1992	1992	1997	1998	1990	1990	1993	1993	1991	1995
MIN	.68	.50	.72	.83	1.32	1.13	2.70	.59	.19	.000	.000	.006
(WY)	1990	1996	1991	1996	1996	1996	1996	1996	1998	1998	1998	1997

08048970 VILLAGE CREEK AT EVERMAN, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	11556.83		3616.99			
ANNUAL MEAN	31.7		9.91		35.7	
HIGHEST ANNUAL MEAN					92.6	1992
LOWEST ANNUAL MEAN					1.37	1996
HIGHEST DAILY MEAN	4020	Mar 16	756	Nov 13	5990	Dec 20 1991
LOWEST DAILY MEAN	.00	Jun 26	.00	Oct 1	.00	Aug 18 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 26	.00	Oct 9	.00	Aug 25 1990
INSTANTANEOUS PEAK FLOW			2240	Nov 13	11400	Dec 20 1991
INSTANTANEOUS PEAK STAGE			10.05	Nov 13	21.96	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	22920		7170		25880	
10 PERCENT EXCEEDS	27		8.8		46	
50 PERCENT EXCEEDS	3.2		2.9		3.7	
90 PERCENT EXCEEDS	.00		.00		.01	



08048970 VILLAGE CREEK AT EVERMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1989 to current year.
BIOCHEMICAL DATA: Oct 1989 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1989 to Sep 1990.
PH: Oct 1989 to Sep 1990.
WATER TEMPERATURE: Oct 1989 to Sep 1990.
DISSOLVED OXYGEN: Oct 1989 to Sep 1990.

INSTRUMENTATION.--Water-quality monitor Oct 1989 to Sep 1990.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,000 microsiemens, on several days during Jan and May 1990; minimum, 129 microsiemens, May 3, 1990.
PH: Maximum, 9.1 units, Jan 13, 1990; minimum, 7.0 units, Nov 22, 1989.
WATER TEMPERATURE: Maximum, 34.5°C, Jul 11, 1990; minimum, 0.5°C, Dec 22, 1989.
DISSOLVED OXYGEN: Maximum, 20.8 mg/L, Feb 25, 1990; minimum, 2.4 mg/L, Nov 8, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
05...	0925	3.2	580	8.3	11.0	--	10.2	93	1.4	210	31
MAR											
17...	1405	3.6	576	8.6	17.0	--	13.4	141	1.3	190	31
APR											
12...	1105	3.2	564	8.0	18.0	3.2	8.0	85	.2	190	22
JUN											
10...	1326	2.6	621	8.0	29.0	--	8.5	113	3.0	210	6
JUL											
06...	1154	.41	614	8.1	30.0	--	7.5	100	1.5	170	24
SEP											
08...	1014	1.9	327	8.0	29.0	14	4.0	53	3.1	110	12

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB											
05...	73	7.6	36	1	4.5	180	62	30	.31	2.3	--
MAR											
17...	62	8.3	49	2	3.8	160	68	49	.31	.77	--
APR											
12...	63	8.6	49	2	4.4	170	57	43	.32	.77	351
JUN											
10...	69	8.4	47	1	4.2	200	65	33	.32	8.1	--
JUL											
06...	56	8.1	44	1	3.8	150	69	34	.30	10	--
SEP											
08...	39	4.3	21	.8	4.8	100	37	13	.31	7.2	200

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB											
05...	330	--	1.05	.010	1.06	<.020	--	.50	<.050	.014	.04
MAR											
17...	338	--	--	<.010	.212	<.020	--	.35	E.030	.024	.07
APR											
12...	330	1	--	<.010	<.050	.067	.38	.45	<.050	.011	.03
JUN											
10...	355	--	--	<.010	.126	<.020	--	.24	<.050	.033	.10
JUL											
06...	314	--	--	<.010	<.050	<.020	--	.44	<.050	.017	.05
SEP											
08...	189	15	.280	.018	.298	<.020	--	.66	E.044	<.010	--

08048970 VILLAGE CREEK AT EVERMAN, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB										
05...	--	--	--	--	--	--	--	--	--	--
MAR										
17...	--	--	--	--	--	--	--	--	--	--
APR										
12...	12	2.0	<1.0	2	59	<1.0	<1.0	<1.0	<1.0	3.2
JUN										
10...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	--	--	--	--	--	--	--	--	--	--
SEP										
08...	9.3	3.1	<1.0	4	42	<1.0	<1.0	<1.0	<1.0	4.0

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB										
05...	--	--	--	--	--	--	--	--	--	--
MAR										
17...	--	--	--	--	--	--	--	--	--	--
APR										
12...	E5.1	<1.0	14	<.1	<1.0	2.7	<1	<1.0	4.4	<1.0
JUN										
10...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	--	--	--	--	--	--	--	--	--	--
SEP										
08...	E10	<1.0	29	<.1	1.3	5.7	1	<1.0	4.9	<1.0

08049200 LAKE ARLINGTON AT ARLINGTON, TX

LOCATION.--Lat 32°42'58", long 97°11'32", Tarrant County, Hydrologic Unit 12030102, in pumphouse at right end of Arlington Dam on Village Creek near western boundary of Arlington, 1.5 mi upstream from the Texas and Pacific Railway Co. bridge and 7 mi upstream from mouth.

DRAINAGE AREA.--143 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Mar 1957 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Sep 9, 1957, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 6,482 ft long. The service spillway is a 10-foot diameter uncontrolled circular drop inlet. The spillway is an 882-foot-wide cut through natural ground near the right end of dam. The dam was completed and storage began Mar 31, 1957. Capacities are based on a 1994 survey. The dam was built by the city of Arlington to impound water for municipal and industrial uses. Water is diverted from Cedar Creek Reservoir (station 08063010) into Lake Arlington. Water is pumped from the lake to a generating plant of Texas Electric Service Company. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	572.0
Crest of Spillway	559.7
Crest of drop inlet (top of conservation pool)	550.0
Lowest gated outlet (invert)	505.0

COOPERATION.--Capacity Table No. 2 provided by the city of Arlington. A capacity table, Table No. 3, was provided by the Texas Water Development Board and put into effect Oct 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 72,500 acre-ft, May 17, 1989 (elevation, 562.42 ft); minimum contents since lake first filled in Apr 1957, 16,210 acre-ft, Aug 5,11-12, 1998 (elevation, 536.51 ft); minimum elevation since lake first filled in Apr 1957, 534.27 ft, Oct 17, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 39,220 acre-ft, May 30 (elevation, 550.91 ft); minimum contents, 18,610 acre-ft, Oct 1 (elevation, 538.29 ft).

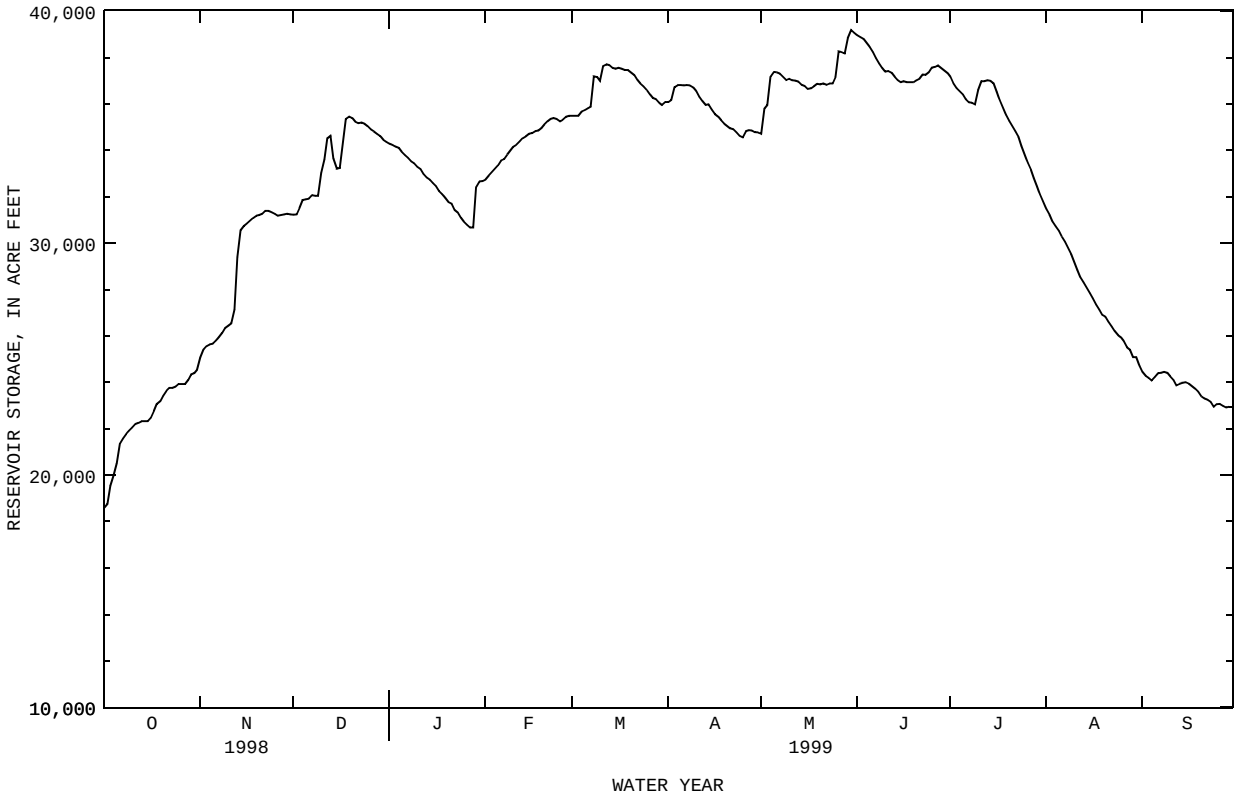
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18610	25070	31220	34290	32730	35490	36080	34710	38960	37170	31480	24450
2	18760	25410	31240	34230	32900	35480	36180	35800	38880	36900	31220	24280
3	19530	25570	31510	34160	33060	35480	36730	35950	38810	36690	30940	24200
4	19980	25640	31860	34100	33190	35670	36810	37180	38630	36540	30720	24080
5	20500	25670	31880	33940	33350	35740	36810	37380	38440	36410	30530	24230
6	21380	25810	31910	33790	33570	35820	36790	37360	38230	36200	30280	24400
7	21580	25950	32060	33680	33630	35890	36810	37300	37980	36060	30060	24410
8	21770	26130	32040	33520	33810	37190	36790	37170	37740	36040	29790	24450
9	21920	26340	32040	33440	33980	37150	36710	37030	37530	35990	29510	24410
10	22050	26440	33020	33300	34160	36990	36540	37090	37390	36610	29190	24250
11	22200	26540	33610	33190	34250	37640	36310	37010	37410	36980	28840	24100
12	22260	27140	34510	32990	34380	37700	36120	37000	37340	36980	28540	23870
13	22330	29400	34630	32840	34510	37660	35950	36960	37170	37010	28310	23940
14	22330	30560	33650	32730	34600	37560	35990	36820	37030	36990	28080	23990
15	22330	30740	33210	32590	34710	37510	35760	36770	36940	36900	27840	24000
16	22460	30830	33240	32460	34740	37560	35570	36650	36980	36520	27630	23950
17	22760	30960	34380	32240	34820	37510	35460	36670	36940	36160	27360	23840
18	23080	31080	35360	32110	34840	37450	35300	36770	36940	35820	27140	23740
19	23200	31190	35460	31950	34960	37450	35150	36860	36940	35530	26920	23610
20	23430	31210	35380	31770	35110	37360	35060	36840	37010	35270	26840	23410
21	23630	31260	35230	31710	35250	37240	34950	36880	37090	35060	26630	23300
22	23760	31390	35170	31440	35340	37030	34910	36820	37260	34820	26410	23250
23	23760	31390	35190	31330	35380	36880	34760	36880	37240	34580	26220	23170
24	23820	31330	35130	31100	35340	36750	34630	36880	37360	34180	26050	22950
25	23920	31260	35040	30940	35250	36610	34560	37150	37550	33810	25950	23050
26	23920	31190	34910	30790	35320	36410	34820	38250	37600	33460	25770	23070
27	23920	31210	34820	30670	35440	36250	34870	38230	37660	33150	25520	22990
28	24100	31240	34710	30670	35490	36200	34850	38170	37560	32790	25410	22920
29	24330	31260	34620	32420	---	36060	34780	38850	37450	32440	25090	22950
30	24400	31240	34450	32660	---	35950	34760	39180	37340	32100	25090	22950
31	24550	---	34360	32680	---	36080	---	39060	---	31790	24710	---
MAX	24550	31390	35460	34290	35490	37700	36810	39180	38960	37170	31480	24450
MIN	18610	25070	31220	30670	32730	35480	34560	34710	36940	31790	24710	22920
(+)	542.10	545.94	547.65	546.73	548.26	548.57	547.87	550.56	549.23	546.24	542.19	541.13
(@)	+5380	+6690	+3120	-1680	+2810	+590	-1320	+4300	-1720	-5550	-7080	-1760

CAL YR 1998 MAX 47580 MIN 16210 (@) -1840
WTR YR 1999 MAX 39180 MIN 18610 (@) +3780

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued



08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1964 to current year.
BIOCHEMICAL DATA: Jan 1964 to 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

324304097113601 - LAKE ARLINGTON SITE AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN											
25...	1505	31100	1.00	277	8.2	13.0	.85	11.5	112	100	8
25...	1508	--	10.0	276	8.1	12.0	--	11.0	104	--	--
25...	1511	--	20.0	278	7.8	12.0	--	10.0	95	--	--
25...	1515	--	30.0	278	7.8	12.0	--	10.1	96	--	--
25...	1520	--	42.0	278	7.8	12.0	--	10.1	96	100	10
APR											
27...	1447	35000	1.00	304	8.6	25.0	.98	10.4	129	120	12
27...	1453	--	10.0	309	8.3	23.5	--	8.3	100	--	--
27...	1459	--	20.0	311	7.9	22.5	--	6.1	72	--	--
27...	1504	--	30.0	315	7.7	22.0	--	4.1	48	--	--
27...	1509	--	42.0	320	7.4	22.0	--	2.3	27	120	9
AUG											
04...	1428	31200	1.00	255	8.8	35.0	1.01	8.8	129	89	4
04...	1432	--	10.0	255	8.6	34.0	--	7.4	107	--	--
04...	1435	--	20.0	266	7.6	30.5	--	.7	10	--	--
04...	1438	--	30.0	313	7.3	27.5	--	.2	3	--	--
04...	1441	--	40.0	337	7.2	27.0	--	.2	3	120	--

324304097113601 - LAKE ARLINGTON SITE AC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
JAN											
25...	36	3.8	14	.6	4.3	97	24	13	.22	2.8	157
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	36	3.8	15	.6	4.5	95	24	13	.23	2.9	157
APR											
27...	40	4.0	16	.6	4.3	110	26	14	.24	1.0	170
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	41	4.2	16	.6	4.2	110	26	14	.24	4.8	178
AUG											
04...	29	4.0	16	.7	4.4	85	24	13	.24	4.9	147
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	42	4.3	15	.6	4.4	150	.32	13	.23	10	187

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

324304097113601 - LAKE ARLINGTON SITE AC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
JAN											
25...	.208	.020	.228	.028	.34	.37	<.050	<.010	--	E6.1	<3.0
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	.220	.012	.232	.042	.35	.39	<.050	<.010	--	<10	11
APR											
27...	.177	.018	.195	<.020	--	.38	<.050	.017	.05	<10	17
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	.178	.025	.203	.372	.41	.78	<.050	.027	.08	12	322
AUG											
04...	--	<.010	<.050	<.020	--	.37	<.050	<.010	--	<10	8.9
04...	--	<.010	<.050	<.020	--	.40	<.050	<.010	--	E6.0	29
04...	--	<.010	<.050	.050	.31	.36	<.050	<.010	--	56	429
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	<.010	<.050	2.98	.84	3.8	.522	.482	1.5	380	2040

324320097121101 - LAKE ARLINGTON SITE AL

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
JAN							
25...	1528	1.00	277	8.0	12.0	10.6	101
25...	1530	10.0	278	7.9	12.0	10.1	96
25...	1533	20.0	278	7.9	12.0	10.1	96
25...	1536	30.0	278	7.8	12.0	9.8	93
APR							
27...	1525	1.00	304	8.8	24.5	10.9	134
27...	1527	10.0	307	8.5	23.5	8.8	106
27...	1530	20.0	311	8.1	22.5	6.5	77
27...	1533	30.0	314	7.8	22.0	4.8	56
AUG							
04...	1448	1.00	256	8.8	35.5	8.6	127
04...	1450	10.0	257	8.5	33.5	6.5	93
04...	1453	20.0	270	7.6	31.0	.3	4
04...	1456	30.0	313	7.3	28.0	.4	5

324253097121801 - LAKE ARLINGTON SITE BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
JAN								
25...	1628	1.00	277	8.3	12.0	.79	11.6	110
25...	1630	10.0	277	8.1	12.0	--	10.9	104
25...	1632	20.0	279	7.9	11.5	--	10.0	94
25...	1634	30.0	280	7.7	11.5	--	9.2	86
25...	1636	36.0	280	7.8	11.5	--	9.2	86
APR								
27...	1541	1.00	305	8.8	25.5	1.16	10.7	134
27...	1543	10.0	307	8.4	23.5	--	8.4	101
27...	1545	20.0	310	8.2	22.5	--	6.9	82
27...	1548	30.0	315	7.7	22.0	--	4.4	52
27...	1550	39.0	320	7.6	21.5	--	2.6	30
AUG								
04...	1506	1.00	257	8.8	36.5	.95	8.2	123
04...	1509	10.0	255	8.6	34.0	--	7.4	107
04...	1512	20.0	268	7.6	30.5	--	.5	7
04...	1515	34.0	319	7.2	28.0	--	.5	7

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

324301097123301 - LAKE ARLINGTON SITE BL

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
JAN							
25...	1641	1.00	277	8.3	12.0	11.6	110
25...	1643	10.0	278	8.1	12.0	10.8	103
25...	1645	20.0	278	8.0	12.0	10.1	96
25...	1648	28.0	279	7.9	12.0	10.0	95
APR							
27...	1559	1.00	306	8.8	25.0	10.9	135
27...	1602	10.0	306	8.6	23.5	9.2	111
27...	1604	20.0	309	8.2	22.5	6.8	80
27...	1606	30.0	317	7.8	22.0	3.8	45
AUG							
04...	1523	1.00	256	8.8	36.0	8.6	128
04...	1526	10.0	255	8.8	34.5	8.3	121
04...	1529	20.0	267	7.6	30.5	1.0	14
04...	1532	28.0	298	7.3	29.0	.3	4

324257097130301 - LAKE ARLINGTON SITE CC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
JAN								
25...	1654	1.00	278	8.1	12.5	.73	10.5	101
25...	1656	10.0	278	8.1	12.5	--	10.6	102
25...	1658	18.0	278	8.1	12.5	--	10.6	102
APR								
27...	1616	1.00	311	8.5	29.0	1.04	8.1	108
27...	1618	10.0	311	8.5	29.0	--	8.0	107
27...	1620	20.0	312	8.5	28.5	--	7.9	104
AUG								
04...	1547	1.00	256	8.5	43.0	.82	6.8	113
04...	1549	10.0	256	8.5	42.5	--	6.7	110
04...	1551	18.0	257	8.5	42.5	--	6.6	109

324228097130301 - LAKE ARLINGTON SITE DC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
JAN								
25...	1704	1.00	278	8.2	13.0	.85	11.3	110
25...	1706	10.0	278	8.1	12.5	--	11.1	107
25...	1708	17.0	278	8.1	12.0	--	10.9	104
APR								
27...	1628	1.00	309	8.6	26.5	1.19	9.0	115
27...	1631	10.0	308	8.5	23.5	--	8.2	99
27...	1634	18.0	310	8.3	23.5	--	7.1	86
AUG								
04...	1603	1.00	258	8.6	38.0	.73	7.2	111
04...	1605	10.0	255	8.7	34.0	--	8.0	115
04...	1607	16.0	263	7.9	32.5	--	3.0	42

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

324143097132201 - LAKE ARLINGTON SITE EC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JAN											
25...	1716	1.00	281	8.3	12.0	11.3	107	110	9	36	3.9
25...	1720	10.0	284	8.1	11.5	10.6	100	--	--	--	--
25...	1724	22.0	288	8.0	11.5	9.9	93	110	13	38	4.0
APR											
27...	1645	1.00	306	8.8	26.0	10.6	134	120	13	41	4.0
27...	1649	10.0	305	8.8	22.5	10.2	121	--	--	--	--
27...	1653	23.0	307	8.5	22.0	7.9	93	120	10	40	4.0
AUG											
04...	1617	1.00	255	8.9	35.0	9.3	137	91	11	30	4.1
04...	1622	10.0	256	8.8	33.5	7.9	114	--	--	--	--
04...	1627	21.0	255	8.6	33.0	7.0	100	91	11	30	4.0

324143097132201 - LAKE ARLINGTON SITE EC

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
JAN										
25...	15	.6	4.3	97	25	13	.20	2.6	159	--
25...	--	--	--	--	--	--	--	--	--	--
25...	15	.6	4.4	98	26	13	.22	2.6	163	.202
APR										
27...	16	.6	4.2	110	26	14	.25	1.2	171	.189
27...	--	--	--	--	--	--	--	--	--	--
27...	16	.6	4.2	110	26	13	.24	1.8	169	.174
AUG										
04...	17	.8	4.1	80	24	13	.24	5.1	145	--
04...	--	--	--	--	--	--	--	--	--	--
04...	16	.7	4.2	80	24	15	.24	4.9	146	--

324143097132201 - LAKE ARLINGTON SITE EC

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
JAN										
25...	<.010	.216	<.020	--	.34	<.050	.011	.03	<10	<3.0
25...	--	--	--	--	--	--	--	--	--	--
25...	.012	.214	.023	.35	.37	<.050	<.010	--	<10	4.3
APR										
27...	.018	.207	.025	.37	.40	<.050	.013	.04	<10	<3.0
27...	--	--	--	--	--	--	--	--	--	--
27...	.013	.187	.025	.33	.36	<.050	.012	.04	<10	<3.0
AUG										
04...	<.010	<.050	<.020	--	.38	<.050	<.010	--	<10	<3.0
04...	--	--	--	--	--	--	--	--	--	--
04...	<.010	<.050	<.020	--	.33	<.050	<.010	--	E5.2	3.7

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

324133097130601 - LAKE ARLINGTON SITE EL

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
JAN							
25...	1729	1.00	280	8.3	12.5	11.6	111
25...	1731	10.0	285	8.1	11.5	10.4	98
25...	1733	15.0	285	8.1	12.0	10.5	100
APR							
27...	1659	1.00	304	8.9	25.5	11.2	140
27...	1701	10.0	305	8.7	23.0	10.0	119
27...	1704	17.0	310	8.3	22.5	6.8	80
AUG							
04...	1635	1.00	254	8.9	35.5	9.3	137
04...	1637	13.0	256	8.4	33.0	6.0	86

324041097134601 - LAKE ARLINGTON SITE FC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JAN											
25...	1747	1.00	290	8.3	13.0	11.6	113	110	12	38	4.0
25...	1754	11.0	294	8.0	11.5	10.4	98	110	13	38	4.1
APR											
27...	1720	1.00	306	8.8	26.0	10.6	134	120	11	40	4.0
27...	1726	13.0	288	8.2	21.5	7.2	84	110	12	36	3.8
AUG											
04...	1654	1.00	256	8.8	35.5	8.4	125	90	9	29	4.0
04...	1658	10.0	323	8.8	31.0	9.2	127	86	9	28	3.7

324041097134601 - LAKE ARLINGTON SITE FC

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
JAN										
25...	16	.6	4.0	100	26	14	.21	2.9	165	.178
25...	16	.6	4.1	100	27	13	.21	2.5	166	--
APR										
27...	16	.6	4.3	110	26	14	.24	1.4	171	.177
27...	16	.7	4.1	94	25	13	.22	2.7	159	.266
AUG										
04...	16	.7	4.3	81	28	13	.24	5.1	149	--
04...	13	.6	4.0	77	20	12	.20	4.2	132	--

324041097134601 - LAKE ARLINGTON SITE FC

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
JAN										
25...	.012	.190	<.020	--	.34	<.050	<.010	--	E5.5	E2.4
25...	<.010	.209	<.020	--	.33	<.050	<.010	--	E8.6	E1.7
APR										
27...	.016	.193	<.020	--	.39	<.050	.012	.04	<10	<3.0
27...	.013	.279	.043	.52	.56	E.038	.022	.07	<10	5.1
AUG										
04...	<.010	<.050	<.020	--	.38	<.050	<.010	--	<10	E1.8
04...	<.010	<.050	<.020	--	.34	<.050	<.010	--	<10	3.7

This page intentionally left blank.

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX

LOCATION.--Lat 32°45'46", long 96°59'42", Dallas County, Hydrologic Unit 12030102, on left bank at upstream side of bridge on Belt Line Road, 1.3 mi northeast of Grand Prairie, 3.7 mi upstream from Mountain Creek, and at mile 514.6.

DRAINAGE AREA.--3,065 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr 1925 to current year.

REVISED RECORDS.--WSP 628: 1925. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 405.42 ft above sea level. Prior to Dec 6, 1933, nonrecording gage at bridge on old channel 2,500 ft southeast of present site at datum 7.56 ft higher. Dec 6, 1933, to May 24, 1956, water-stage recorder at site 440 ft downstream from site of nonrecording gage at datum 7.56 ft higher than present datum. May 25, 1956, to Apr 18, 1957, nonrecording gage at site 1.5 mi downstream at different datum. Apr 19 to Aug 13, 1957, nonrecording gage on bridge at present site and at datum 5.00 ft higher than present datum. Aug 14, 1957 to Sep 30, 1982, water-stage recorder at present site and at datum 5.00 ft higher than present datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharge which are poor. Since installation of gage in Apr 1925, at least 10% of contributing drainage area has been regulated by three upstream reservoirs with a combined capacity of 248,600 acre-ft, of which 76,550 acre-ft is for flood control. The city of Fort Worth discharges wastewater effluent into the river upstream from this station. There are many diversions upstream from station for municipal, industrial, and other uses. The river channel at this station was relocated and rectified in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 30.6 ft in May 1908 (former site and datum), from information by local resident. Flood in Apr 1922 reached a stage of 29.0 ft (former site and datum), from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	e1000	594	267	665	211	277	208	1500	211	169	166
2	1060	e1600	249	250	400	207	275	e1200	1220	207	169	164
3	5390	408	200	243	353	202	e1200	e1400	1000	191	171	166
4	775	239	e3000	248	336	192	e2000	e1900	909	175	181	159
5	e500	195	e1500	256	315	193	617	e1600	677	164	175	169
6	e2000	176	465	273	302	190	432	478	551	188	172	603
7	e756	168	511	261	575	195	358	350	475	487	172	410
8	278	182	653	246	403	e1700	326	341	350	725	178	307
9	145	175	330	230	314	e2800	325	300	315	262	182	226
10	126	472	e700	233	292	472	285	581	280	e800	177	193
11	129	559	e1500	232	277	e2500	267	543	285	e1150	172	172
12	132	258	e2000	232	259	e4000	273	631	389	349	174	173
13	149	e6000	e1200	242	248	979	261	431	330	251	174	867
14	148	e2000	537	236	242	545	919	284	282	222	169	589
15	149	587	405	242	239	419	758	252	256	208	170	339
16	148	358	361	239	246	367	333	244	323	200	174	234
17	197	303	564	247	237	348	262	490	439	189	166	189
18	477	254	484	232	237	391	241	1180	279	177	167	171
19	425	232	e1700	215	231	929	241	420	236	177	168	168
20	333	222	850	241	224	581	237	280	219	193	173	172
21	775	198	460	205	221	390	224	245	640	208	162	162
22	524	197	366	203	231	353	228	228	404	180	179	159
23	250	188	331	198	229	325	225	229	665	170	189	139
24	194	182	304	201	221	308	219	237	400	168	181	155
25	168	173	291	209	218	324	209	450	424	169	173	172
26	160	176	263	200	215	306	728	e2300	542	171	173	196
27	157	158	263	195	219	277	752	e1700	339	173	172	176
28	145	154	264	195	214	426	335	480	256	165	160	158
29	141	155	300	e1700	---	383	257	639	242	165	164	147
30	143	573	304	e2500	---	309	230	e8000	224	175	172	148
31	137	---	281	1050	---	292	---	e6000	---	170	170	---
TOTAL	16299	17542	21230	11721	8163	21114	13294	33621	14451	8440	5348	7249
MEAN	526	585	685	378	292	681	443	1085	482	272	173	242
MAX	5390	6000	3000	2500	665	4000	2000	8000	1500	1150	189	867
MIN	126	154	200	195	214	190	209	208	219	164	160	139
AC-FT	32330	34790	42110	23250	16190	41880	26370	66690	28660	16740	10610	14380

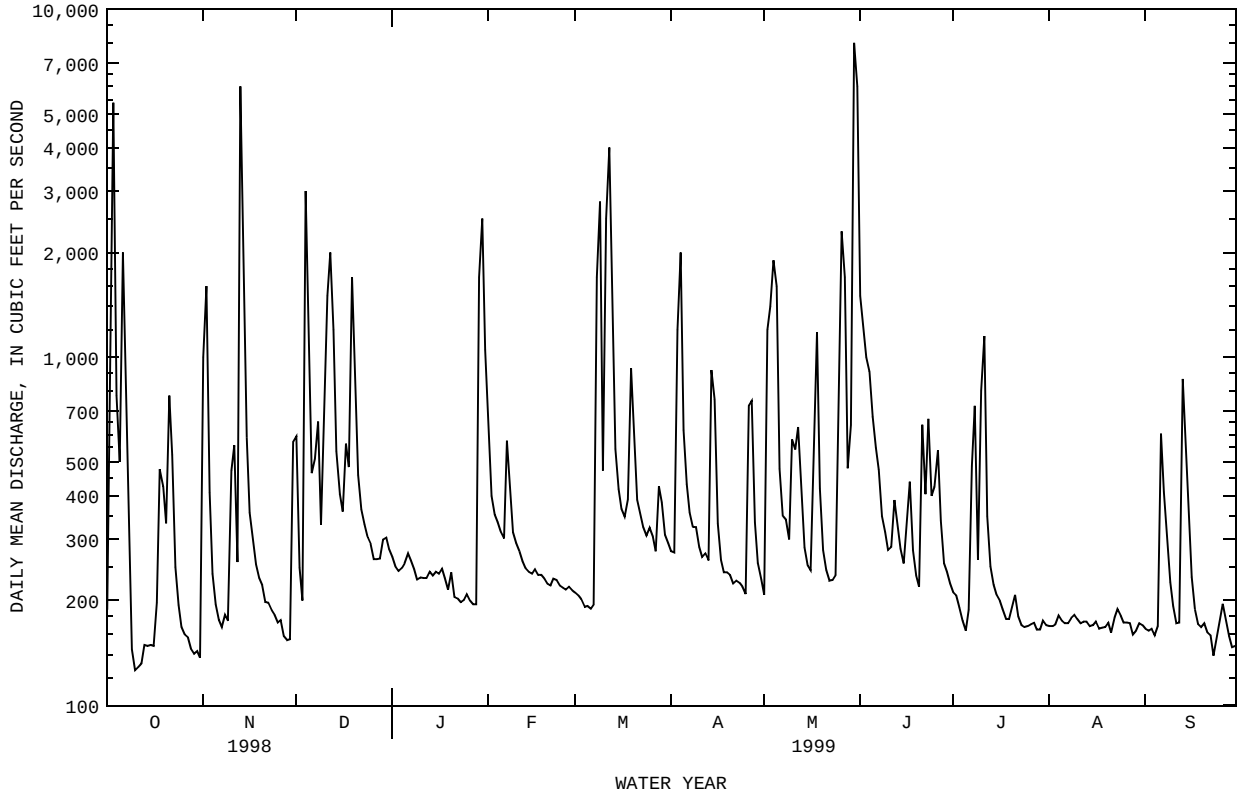
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1999, BY WATER YEAR (WY)

MEAN	506	457	489	453	665	811	848	1629	1085	393	246	326
MAX	5779	4472	8319	4504	4740	4521	7245	14030	11990	3475	1478	3094
(WY)	1982	1982	1992	1992	1997	1945	1942	1990	1989	1941	1950	1962
MIN	13.6	18.9	25.0	21.7	26.8	22.5	42.6	48.5	17.0	21.1	12.1	15.6
(WY)	1940	1940	1940	1930	1930	1940	1936	1937	1925	1939	1925	1931

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1925 - 1999	
ANNUAL TOTAL	358611		178472			
ANNUAL MEAN	982		489		662	
HIGHEST ANNUAL MEAN					2629	1992
LOWEST ANNUAL MEAN					79.3	1956
HIGHEST DAILY MEAN	16300	Mar 17	8000	May 30	48900	May 3 1990
LOWEST DAILY MEAN	106	Sep 11	126	Oct 10	4.5	Sep 7 1925
ANNUAL SEVEN-DAY MINIMUM	140	Oct 9	140	Oct 9	7.3	Jun 17 1925
INSTANTANEOUS PEAK FLOW			9020	May 30	64400	May 3 1990
INSTANTANEOUS PEAK STAGE			20.48	May 30	33.88	May 3 1990
ANNUAL RUNOFF (AC-FT)	711300		354000		479300	
10 PERCENT EXCEEDS	2440		949		1560	
50 PERCENT EXCEEDS	360		250		178	
90 PERCENT EXCEEDS	163		168		48	

e Estimated



08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan 1964 to current year.
BIOCHEMICAL DATA: Jan 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1966 to Sep 1992, Aug 1993 to current year.
PH: Oct 1976 to Sep 1992, Aug 1993 to current year.
WATER TEMPERATURE: Oct 1966 to Sep 1992, Aug 1993 to current year.
DISSOLVED OXYGEN: Oct 1976 to Sep 1992, Aug 1993 to current year.

INSTRUMENTATION.--Water-quality monitor since Nov 1976.

REMARKS.--Interruption in the record was caused by malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance with the exception of the 1993 water year. New regression equations were developed based on data from water years 1990 to 1999. The standard error of estimate for dissolved solids is 4%, chloride is 12%, sulfate is 13% and for hardness is 9%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,320 microsiemens, Dec 12, 1978; minimum, 108 microsiemens, May 1, 1986.
PH: Maximum, 8.6 units, on several days during period of record; minimum, 6.6 units, Jan 6, 1979.
WATER TEMPERATURE: Maximum, 35.0°C, Aug 8, 1982; minimum, 3.0°C, Jan 9, 1973.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L, Dec 14, 16, 1983; minimum, 0.0 mg/L, on several days during period of record.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 950 microsiemens, Aug 22; minimum, 173 microsiemens, Mar 11.
PH: Maximum, 8.4 units, Feb 2; minimum, 7.0 units, May 24.
WATER TEMPERATURE: Maximum, 33.5°C, Aug 9-10; minimum, 9.5°C, Jan 4.
DISSOLVED OXYGEN: Maximum, 11.7 mg/L, Feb 14; minimum, 1.0 mg/L, May 11-12, Jun 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB										
05...	1125	329	744	7.7	16.0	9.2	94	2.4	220	51
MAR										
17...	1055	358	734	7.8	17.0	7.8	82	.8	230	57
APR										
13...	0947	281	842	7.8	22.0	7.1	82	1.2	220	57
JUN										
10...	1018	298	812	7.8	27.0	7.4	94	2.5	200	32
JUL										
09...	0921	281	539	7.8	29.5	5.0	66	1.0	150	21
AUG										
19...	0941	193	850	7.7	30.5	6.8	92	7.6	180	33

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
FEB										
05...	75	8.9	68	2	8.8	170	84	71	.74	9.4
MAR										
17...	76	9.6	64	2	8.3	170	79	67	.69	9.6
APR										
13...	71	11	78	2	9.2	170	83	77	.79	7.2
JUN										
10...	63	9.5	77	2	9.0	160	68	79	.74	8.3
JUL										
09...	47	6.9	45	2	6.5	130	54	45	.54	7.2
AUG										
19...	53	13	94	3	14	150	70	100	1.1	<.10

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB										
05...	468	8.51	.017	8.53	.119	.90	1.0	.830	.758	2.3
MAR										
17...	458	8.09	.051	8.14	.146	1.0	1.1	1.31	1.10	3.4
APR										
13...	486	10.2	.015	10.2	.048	.96	1.0	1.24	.973	3.0
JUN										
10...	460	9.92	.090	10.0	.044	1.0	1.1	1.19	1.05	3.2
JUL										
09...	303	3.08	.030	3.11	.077	.63	.71	.450	.397	1.2
AUG										
19...	487	10.2	.043	10.2	.130	1.5	1.6	1.15	1.16	3.6

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1998	16299	461	261	11490	37	1640	43	1890	150
NOV.	1998	17542	467	264	12520	38	1790	43	2060	150
DEC.	1998	21230	484	274	15690	38	2180	45	2590	160
JAN.	1999	11721	621	356	11270	58	1850	58	1840	170
FEB.	1999	8163	737	426	9380	75	1650	69	1520	190
MAR.	1999	21114	563	322	18340	50	2860	53	3000	170
APR.	1999	13294	673	387	13890	66	2350	63	2260	180
MAY	1999	33621	510	289	26230	42	3790	47	4310	160
JUNE	1999	14451	611	349	13620	55	2130	57	2230	180
JULY	1999	8440	661	379	8650	63	1430	62	1410	180
AUG.	1999	5348	844	492	7110	95	1360	79	1140	190
SEPT	1999	7249	722	417	8160	73	1440	68	1320	190
TOTAL		178472	**	**	156300	**	24470	**	25560	**
WTD.AVG.		489	568	324	**	51	**	53	**	170

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	860	793	826	827	317	653	721	540	584	731	712	722
2	877	193	693	558	323	376	609	546	585	726	706	718
3	312	238	274	514	403	446	704	605	661	719	700	711
4	450	305	382	635	514	589	653	242	375	721	700	709
5	516	448	484	708	624	669	417	264	331	717	707	713
6	470	263	353	749	687	713	574	417	488	721	694	710
7	433	299	361	787	740	760	607	271	552	754	713	737
8	534	431	469	787	747	761	592	318	534	785	748	767
9	650	534	608	773	757	765	605	483	548	813	778	798
10	719	632	675	758	482	654	687	309	552	792	777	785
11	755	690	717	686	503	550	478	349	383	790	766	785
12	760	726	748	571	475	549	427	285	367	766	744	753
13	760	714	734	533	214	306	464	320	384	775	743	760
14	739	695	717	395	232	295	583	464	514	765	746	758
15	786	739	757	544	395	454	625	583	596	794	765	782
16	802	786	793	599	544	567	672	625	651	781	761	773
17	801	668	749	640	599	627	681	550	589	773	746	760
18	---	---	e715	680	618	656	626	538	611	770	748	761
19	---	---	e577	766	668	727	624	361	480	809	733	773
20	583	528	554	798	747	778	530	391	457	785	724	754
21	641	450	544	774	745	759	---	---	e546	835	735	796
22	496	463	480	791	755	771	---	---	e602	841	826	832
23	605	496	565	789	753	772	---	---	e638	833	815	823
24	720	601	670	768	726	755	---	---	e670	843	824	832
25	759	706	729	773	740	752	---	---	e691	842	809	827
26	800	759	779	807	765	779	692	672	683	816	794	804
27	796	756	778	827	793	805	690	672	681	830	791	803
28	782	748	760	837	806	820	695	674	690	865	829	842
29	831	762	793	806	741	759	708	695	703	846	337	512
30	846	799	822	765	457	658	710	687	701	407	345	370
31	838	809	822	---	---	---	735	710	724	548	407	490
MONTH	---	---	643	837	214	651	---	---	567	865	337	741

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	636	548	589	884	847	871	844	826	835	828	776	804
2	675	593	633	847	816	830	878	832	859	820	289	614
3	712	657	687	838	809	821	891	347	718	460	327	415
4	739	704	721	882	834	857	461	340	420	662	372	485
5	742	721	731	877	858	865	599	456	533	545	463	502
6	750	730	739	886	867	876	699	599	628	703	545	624
7	740	659	711	885	867	874	763	699	727	815	703	757
8	659	610	623	877	305	654	792	763	780	826	777	808
9	688	655	664	457	298	402	814	787	798	853	826	840
10	727	688	711	619	457	527	822	793	810	882	671	775
11	741	716	724	663	173	450	867	802	839	819	701	732
12	782	741	763	396	258	348	877	797	849	850	645	760
13	783	758	771	531	396	484	826	785	812	721	623	662
14	784	772	779	632	522	571	818	555	712	819	721	776
15	787	751	777	679	623	645	576	513	548	866	819	848
16	752	725	741	711	659	677	697	576	621	892	857	873
17	761	725	747	757	711	736	767	697	745	889	554	811
18	794	756	779	789	643	752	806	758	789	720	564	629
19	795	784	789	772	578	708	813	779	801	661	584	614
20	795	778	788	622	573	600	804	774	792	763	661	724
21	852	775	799	722	622	659	812	773	797	783	708	743
22	905	842	869	760	718	735	856	804	838	742	706	731
23	842	814	831	---	---	e761	840	829	834	718	678	702
24	823	807	814	---	---	e785	865	827	846	704	674	688
25	851	816	832	---	---	e805	851	829	836	690	599	664
26	886	848	867	---	---	e830	847	440	705	623	369	426
27	872	855	864	822	803	815	706	573	610	458	390	422
28	873	849	860	836	788	813	661	597	620	575	458	511
29	---	---	---	833	707	749	738	661	714	630	448	594
30	---	---	---	753	730	742	789	732	765	531	357	403
31	---	---	---	828	753	802	---	---	---	453	366	409
MONTH	905	548	757	---	---	711	891	340	739	892	289	656

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	514	453	489	708	659	690	870	846	856	833	796	812
2	552	514	537	721	700	711	870	817	836	851	832	841
3	604	546	580	723	708	716	837	798	815	905	841	877
4	621	565	604	732	722	727	798	767	776	905	858	876
5	643	575	617	733	718	726	834	781	799	891	858	875
6	682	643	663	733	699	712	847	824	836	892	654	841
7	673	647	663	699	372	631	838	820	826	654	485	543
8	712	670	679	661	453	548	860	825	840	642	553	611
9	761	712	736	---	---	e548	873	850	861	709	639	679
10	793	761	778	---	---	e547	861	810	822	779	699	741
11	787	767	776	---	---	e546	810	736	780	818	775	792
12	779	724	756	---	---	e545	853	764	809	840	817	825
13	734	665	692	620	584	611	885	853	864	840	432	637
14	709	686	697	665	620	649	890	860	872	523	432	481
15	703	662	694	707	663	690	875	849	859	627	523	573
16	733	633	661	729	699	711	894	858	870	661	614	641
17	658	510	607	746	724	735	893	832	855	746	633	685
18	665	628	648	746	735	739	835	817	824	814	746	777
19	672	632	659	764	745	751	875	835	853	822	787	806
20	692	668	681	764	754	759	911	866	882	830	815	824
21	684	544	615	757	731	745	931	868	892	818	779	803
22	583	500	540	784	745	761	950	901	921	813	775	787
23	655	498	591	809	778	787	924	902	913	827	790	815
24	567	486	529	813	801	806	902	833	848	855	827	841
25	616	549	573	825	813	816	833	804	813	870	628	833
26	640	582	610	845	824	831	873	827	853	865	789	840
27	612	567	580	852	795	826	873	849	860	865	788	835
28	632	611	623	795	755	770	863	831	841	805	767	793
29	647	613	636	823	761	791	843	805	829	806	766	787
30	662	632	651	870	823	836	848	813	835	822	793	805
31	---	---	---	870	842	852	851	827	835	---	---	---
MONTH	793	453	639	---	---	713	950	736	844	905	432	763

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.5	7.6	7.6	7.2	7.4	7.7	7.4	7.6	8.1	8.0	8.0
2	8.1	7.5	7.6	7.3	7.2	7.3	7.8	7.7	7.7	8.1	8.0	8.1
3	8.1	7.4	7.8	7.4	7.3	7.3	7.8	7.7	7.7	8.1	8.1	8.1
4	7.5	7.4	7.4	7.4	7.3	7.3	8.0	7.5	7.7	8.1	8.0	8.1
5	7.6	7.5	7.5	7.4	7.3	7.4	7.7	7.6	7.6	8.1	8.0	8.1
6	8.3	7.4	7.8	7.4	7.4	7.4	7.8	7.7	7.7	8.1	8.0	8.1
7	7.8	7.4	7.5	7.4	7.4	7.4	7.9	7.7	7.8	8.2	8.1	8.1
8	7.6	7.4	7.5	7.4	7.4	7.4	7.9	7.7	7.8	8.2	8.1	8.1
9	7.6	7.4	7.5	7.4	7.4	7.4	7.9	7.8	7.8	8.3	8.1	8.2
10	7.4	7.4	7.4	7.4	7.2	7.3	8.0	7.9	8.0	8.2	8.1	8.2
11	7.5	7.4	7.4	7.4	7.1	7.3	8.0	7.8	7.8	8.2	8.1	8.2
12	7.6	7.5	7.5	7.4	7.3	7.4	7.9	7.8	7.9	8.2	8.1	8.1
13	7.8	7.6	7.6	7.7	7.3	7.4	8.0	7.9	7.9	8.2	8.1	8.2
14	7.9	7.6	7.7	7.6	7.3	7.4	8.0	7.9	8.0	8.3	8.1	8.2
15	8.0	7.7	7.8	7.3	7.2	7.3	8.0	8.0	8.0	8.3	8.2	8.2
16	7.9	7.8	7.8	7.3	7.2	7.3	8.1	8.0	8.0	8.3	8.2	8.3
17	7.9	7.7	7.7	7.3	7.2	7.2	8.1	8.0	8.1	8.3	8.2	8.2
18	7.8	7.4	7.6	7.4	7.3	7.3	8.2	8.1	8.1	8.2	8.1	8.2
19	---	---	---	7.4	7.4	7.4	8.1	7.9	8.0	8.3	7.7	8.0
20	---	---	---	7.5	7.4	7.4	7.9	7.9	7.9	7.9	7.6	7.7
21	---	---	---	7.5	7.4	7.5	---	---	---	7.8	7.5	7.6
22	---	---	---	7.5	7.4	7.5	---	---	---	7.6	7.4	7.5
23	7.7	7.5	7.6	7.5	7.4	7.4	---	---	---	7.7	7.5	7.5
24	7.7	7.6	7.7	7.4	7.4	7.4	---	---	---	7.6	7.4	7.5
25	7.8	7.7	7.7	7.4	7.4	7.4	---	---	---	7.8	7.4	7.5
26	7.8	7.7	7.7	7.4	7.3	7.4	8.1	8.0	8.0	7.9	7.5	7.7
27	7.8	7.7	7.7	7.5	7.4	7.4	8.1	8.0	8.0	7.9	7.7	7.8
28	7.8	7.4	7.6	7.5	7.4	7.4	8.1	8.0	8.0	7.7	7.7	7.7
29	7.7	7.5	7.5	7.5	7.4	7.5	8.1	8.0	8.0	8.0	7.5	7.7
30	7.6	7.5	7.5	7.6	7.3	7.4	8.1	8.0	8.0	7.7	7.6	7.7
31	7.6	7.5	7.5	---	---	---	8.1	8.0	8.1	7.7	7.7	7.7
MONTH	---	---	---	7.7	7.1	7.4	---	---	---	8.3	7.4	7.9

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	7.7	7.8	7.9	7.8	7.8	7.6	7.5	7.5	8.1	7.8	7.9
2	8.4	7.7	7.8	7.9	7.7	7.8	7.6	7.5	7.6	7.9	7.5	7.7
3	7.8	7.7	7.7	7.9	7.8	7.8	7.7	7.4	7.6	7.8	7.6	7.6
4	7.8	7.7	7.8	7.9	7.8	7.9	---	---	---	7.7	7.6	7.6
5	7.9	7.7	7.8	7.9	7.8	7.9	7.6	7.6	7.6	7.9	7.7	7.8
6	7.9	7.8	7.8	7.9	7.8	7.8	7.7	7.6	7.6	7.8	7.7	7.7
7	7.8	7.7	7.7	7.9	7.8	7.8	7.7	7.5	7.6	7.8	7.7	7.7
8	7.9	7.7	7.9	8.0	7.6	7.8	7.9	7.6	7.7	7.9	7.7	7.8
9	8.0	7.7	7.9	8.0	7.7	7.8	7.9	7.6	7.8	7.9	7.8	7.8
10	7.9	7.7	7.8	7.7	7.7	7.7	7.9	7.6	7.8	7.9	7.7	7.8
11	7.9	7.8	7.8	8.3	7.5	7.9	8.0	7.7	7.8	7.9	7.7	7.8
12	8.0	7.8	7.9	8.0	7.7	7.8	8.1	7.8	7.9	7.9	7.6	7.8
13	7.9	7.8	7.9	7.7	7.7	7.7	8.0	7.7	7.8	8.0	7.7	7.8
14	8.0	7.8	7.9	7.8	7.7	7.7	7.8	7.4	7.6	8.0	7.7	7.9
15	8.0	7.9	8.0	7.8	7.7	7.7	7.6	7.5	7.5	8.1	7.8	7.9
16	8.0	7.9	7.9	7.8	7.7	7.7	7.8	7.5	7.6	8.3	7.9	8.0
17	8.0	7.8	7.9	7.8	7.6	7.7	7.9	7.7	7.8	8.1	7.8	7.9
18	8.0	7.8	7.9	7.7	7.6	7.7	7.9	7.7	7.8	7.8	7.6	7.7
19	8.0	7.8	7.9	7.8	7.6	7.7	8.0	7.7	7.9	7.8	7.7	7.7
20	8.0	7.9	7.9	7.8	7.7	7.7	8.1	7.7	7.9	8.1	7.8	7.9
21	8.0	7.9	7.9	7.8	7.7	7.7	8.0	7.8	7.9	8.1	7.7	7.9
22	7.9	7.8	7.9	7.8	7.7	7.8	8.0	7.8	7.9	8.1	7.4	7.8
23	7.9	7.8	7.8	---	---	---	8.0	7.7	7.8	8.1	7.2	7.7
24	7.9	7.7	7.8	---	---	---	7.9	7.7	7.8	8.0	7.0	7.6
25	8.0	7.8	7.9	---	---	---	7.9	7.7	7.8	8.0	7.6	7.8
26	7.9	7.7	7.8	---	---	---	7.8	7.4	7.6	7.9	7.6	7.8
27	7.9	7.7	7.8	8.0	7.8	7.9	7.5	7.3	7.4	7.8	7.7	7.7
28	7.9	7.8	7.8	7.9	7.7	7.8	7.7	7.5	7.6	7.8	7.7	7.8
29	---	---	---	7.8	7.6	7.7	7.9	7.6	7.7	7.9	7.7	7.8
30	---	---	---	7.7	7.6	7.6	8.1	7.7	7.9	8.0	7.7	7.9
31	---	---	---	7.6	7.5	7.6	---	---	---	8.0	7.5	7.7
MONTH	8.4	7.7	7.8	---	---	---	---	---	---	8.3	7.0	7.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.5	7.6	8.0	7.8	7.9	8.0	7.8	7.9	7.8	7.5	7.6
2	7.9	7.8	7.8	8.0	7.8	7.9	8.0	7.8	7.9	7.7	7.5	7.6
3	7.9	7.8	7.9	8.0	7.8	7.9	7.9	7.7	7.8	7.7	7.5	7.6
4	7.9	7.8	7.9	8.0	7.8	7.9	7.9	7.7	7.8	7.8	7.6	7.7
5	8.0	7.8	7.9	7.9	7.8	7.8	7.9	7.7	7.8	7.7	7.6	7.6
6	8.1	7.8	7.9	8.0	7.8	7.9	8.0	7.7	7.8	7.6	7.3	7.5
7	8.2	7.9	8.0	8.0	7.7	7.8	8.0	7.7	7.8	7.5	7.3	7.4
8	8.0	7.8	7.9	7.7	7.4	7.6	8.0	7.7	7.8	7.6	7.4	7.5
9	7.9	7.7	7.8	---	---	---	8.0	7.7	7.9	7.6	7.5	7.6
10	7.9	7.6	7.8	---	---	---	8.0	7.7	7.9	7.7	7.5	7.6
11	7.9	7.8	7.8	---	---	---	8.1	7.7	7.9	7.7	7.6	7.7
12	7.9	7.7	7.8	---	---	---	8.2	7.8	8.0	7.8	7.7	7.7
13	7.9	7.7	7.8	8.1	7.8	7.9	8.1	7.9	8.0	7.8	7.4	7.6
14	7.9	7.7	7.8	8.1	7.8	7.9	8.0	7.8	7.9	7.6	7.5	7.5
15	7.9	7.7	7.8	8.1	7.8	7.9	8.0	7.8	7.9	7.5	7.4	7.5
16	8.0	7.6	7.8	8.0	7.8	7.9	8.0	7.8	7.9	7.5	7.4	7.4
17	7.8	7.6	7.7	7.9	7.7	7.8	8.0	7.7	7.8	7.5	7.5	7.5
18	8.0	7.7	7.8	7.9	7.7	7.8	7.9	7.7	7.8	7.6	7.5	7.6
19	8.0	7.7	7.8	7.8	7.7	7.8	7.9	7.7	7.8	7.6	7.6	7.6
20	8.0	7.8	7.9	7.9	7.7	7.8	7.9	7.7	7.8	7.8	7.6	7.7
21	7.9	7.5	7.7	7.9	7.7	7.8	7.9	7.7	7.8	7.8	7.7	7.8
22	7.7	7.5	7.6	8.1	7.8	7.9	7.8	7.6	7.7	7.8	7.7	7.8
23	7.7	7.5	7.7	8.1	7.9	8.0	7.8	7.6	7.7	7.9	7.7	7.8
24	7.8	7.6	7.7	8.1	7.8	7.9	7.9	7.7	7.8	7.9	7.8	7.8
25	7.8	7.6	7.7	8.1	7.8	7.9	7.9	7.6	7.7	8.1	7.8	7.9
26	7.8	7.6	7.7	8.0	7.8	7.9	7.9	7.7	7.8	7.9	7.8	7.9
27	8.1	7.7	7.9	8.0	7.7	7.8	7.9	7.7	7.7	7.9	7.8	7.8
28	8.1	7.7	7.9	7.9	7.6	7.8	7.8	7.6	7.7	8.0	7.8	7.9
29	8.1	7.8	7.9	8.0	7.7	7.8	7.8	7.6	7.7	8.1	7.8	7.9
30	8.0	7.8	7.9	8.0	7.8	7.9	7.8	7.6	7.7	8.1	7.9	8.0
31	---	---	---	8.0	7.8	7.9	7.8	7.6	7.7	---	---	---
MONTH	8.2	7.5	7.8	---	---	---	8.2	7.6	7.8	8.1	7.3	7.7

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	30.1	28.5	29.2	24.7	20.5	23.0	21.5	18.1	19.1	14.1	13.0	13.7
2	28.7	22.2	26.8	22.0	19.4	19.9	19.7	18.4	19.0	14.0	11.7	13.2
3	23.9	22.9	23.5	20.2	18.5	19.3	20.6	19.6	20.0	11.7	9.6	10.9
4	26.4	23.9	25.1	20.2	19.0	19.6	20.5	18.2	19.0	10.6	9.5	9.9
5	26.8	24.4	26.0	19.0	18.0	18.5	19.8	18.1	18.6	11.0	9.6	10.3
6	24.4	21.5	23.0	18.4	17.0	17.5	20.9	19.6	20.0	12.4	10.7	11.5
7	22.7	21.1	21.8	17.8	17.3	17.4	20.7	14.2	19.1	13.7	12.0	13.0
8	23.4	21.5	22.3	18.2	17.4	17.7	17.5	15.8	17.0	14.0	12.1	13.5
9	23.9	22.0	22.9	19.7	17.9	18.5	16.2	14.7	15.2	12.1	10.6	11.5
10	24.6	22.7	23.4	19.9	17.1	19.0	15.6	11.3	14.3	11.5	10.2	10.8
11	25.1	23.3	23.9	20.2	15.7	17.1	13.5	11.2	11.8	12.9	10.7	11.8
12	25.5	23.8	24.4	16.8	15.6	16.6	12.1	10.1	11.1	14.6	12.4	13.6
13	25.9	24.4	25.0	16.1	12.4	13.5	12.4	10.1	10.9	14.3	13.0	13.9
14	26.0	25.0	25.6	14.8	12.5	13.3	14.3	12.0	12.7	13.2	12.0	12.7
15	26.0	24.6	25.2	16.7	14.8	15.5	14.9	13.2	14.0	12.9	11.4	12.1
16	26.0	24.7	25.2	18.3	16.7	17.1	15.3	13.6	14.4	13.7	11.9	12.7
17	25.9	24.9	25.2	18.8	18.3	18.5	15.4	12.9	13.9	14.7	12.9	13.8
18	25.3	23.8	24.4	20.1	18.8	19.3	14.3	13.2	13.7	14.9	13.6	14.1
19	25.1	22.0	23.2	21.1	19.9	20.3	14.9	11.5	12.6	15.6	13.4	14.4
20	22.3	20.9	21.8	20.9	19.3	20.0	13.2	11.9	12.4	16.3	15.0	15.6
21	21.8	20.1	21.0	19.6	18.2	18.8	---	---	---	18.0	15.9	17.0
22	21.1	19.6	20.2	18.8	17.6	18.1	---	---	---	17.5	15.6	17.0
23	20.9	19.7	20.3	19.6	18.2	18.7	---	---	---	15.9	14.8	15.3
24	21.5	19.8	20.5	20.6	19.3	19.8	---	---	---	16.0	14.2	14.9
25	22.3	20.6	21.1	20.9	19.7	20.2	---	---	---	16.3	15.0	15.6
26	23.6	21.5	22.3	20.8	19.0	19.8	10.7	10.0	10.4	19.8	15.0	16.0
27	24.0	22.6	23.1	20.3	19.1	19.6	11.3	10.5	10.9	17.1	15.9	16.5
28	24.5	23.3	23.8	21.0	19.8	20.2	12.2	11.3	11.7	17.7	16.7	17.2
29	25.2	23.7	24.3	21.5	20.5	20.9	13.0	12.0	12.5	17.4	13.7	15.0
30	25.5	24.6	24.9	21.5	18.3	20.4	13.0	11.9	12.3	13.7	12.7	13.3
31	25.3	24.4	24.7	---	---	---	13.0	12.1	12.6	12.7	12.5	12.6
MONTH	30.1	19.6	23.7	24.7	12.4	18.6	---	---	---	19.8	9.5	13.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.1	11.9	12.9	19.7	17.6	18.5	19.4	18.0	18.6	24.4	22.9	23.6
2	14.7	13.2	13.9	19.8	18.1	18.7	20.7	19.4	20.1	23.4	19.0	21.1
3	15.9	13.6	14.8	18.8	17.2	18.0	20.9	18.1	19.9	21.6	18.8	20.3
4	16.2	14.8	15.5	18.0	16.5	17.3	19.7	18.2	18.8	22.8	21.4	22.1
5	17.1	15.3	16.1	19.6	17.3	18.5	21.5	19.5	20.4	23.3	21.7	22.6
6	17.9	17.1	17.5	19.6	17.9	18.7	22.0	19.5	20.8	24.2	21.8	22.9
7	18.5	16.8	17.6	18.4	16.7	17.6	21.8	20.2	21.0	24.7	21.7	23.1
8	17.9	15.7	16.9	16.7	14.7	15.9	23.8	21.2	22.3	25.3	22.7	24.0
9	19.5	17.7	18.5	16.6	15.3	15.9	24.5	22.3	23.4	25.4	23.8	24.6
10	19.6	18.9	19.3	17.4	15.9	16.6	23.9	22.9	23.4	25.0	23.1	24.0
11	19.5	17.2	18.8	17.6	13.3	15.7	23.3	21.4	22.4	24.4	22.9	23.8
12	17.2	15.8	16.5	14.4	13.7	14.2	23.7	21.3	22.4	24.6	23.3	23.9
13	16.6	14.7	15.6	13.7	12.8	13.4	23.0	22.0	22.6	25.6	22.8	24.1
14	16.8	15.0	15.8	14.4	12.0	13.2	23.3	21.2	22.3	26.4	23.8	25.0
15	17.0	15.3	16.0	15.6	12.9	14.3	21.9	19.9	20.7	27.3	25.0	26.1
16	17.7	16.1	16.7	16.8	14.6	15.7	20.2	18.5	19.4	27.8	25.7	26.6
17	17.7	15.9	16.7	17.8	16.3	17.0	20.4	18.0	19.1	26.7	24.4	25.6
18	17.7	16.1	16.7	18.1	17.5	17.8	21.2	18.1	19.6	25.6	24.1	24.8
19	17.4	15.7	16.4	18.0	16.6	17.5	23.1	19.7	21.2	26.4	23.6	24.9
20	16.2	15.3	16.0	17.3	16.0	16.6	24.5	21.7	22.9	26.5	24.2	25.4
21	16.5	14.8	15.5	18.7	15.9	17.3	23.3	22.1	22.5	26.9	25.1	26.0
22	15.8	14.5	15.1	19.9	17.3	18.6	24.6	21.8	22.9	28.5	25.6	26.9
23	16.7	14.5	15.4	---	---	---	25.8	23.4	24.4	28.2	26.2	27.2
24	17.2	15.0	16.0	---	---	---	24.8	23.1	23.8	28.3	25.9	27.0
25	19.1	16.5	17.7	---	---	---	23.7	22.6	23.1	27.7	25.7	26.7
26	19.6	18.4	19.0	---	---	---	23.4	20.9	22.6	26.2	22.1	23.8
27	20.6	19.1	19.6	19.3	17.9	18.4	24.6	21.9	23.1	24.2	22.6	23.3
28	19.6	17.8	18.7	17.9	17.1	17.6	25.7	22.6	24.1	25.5	23.2	24.3
29	---	---	---	17.9	16.7	17.1	25.5	23.8	24.7	26.4	24.4	25.2
30	---	---	---	17.1	16.7	16.9	25.6	23.2	24.3	25.1	22.2	23.3
31	---	---	---	18.4	17.1	17.6	---	---	---	25.4	22.2	24.1
MONTH	20.6	11.9	16.6	---	---	---	25.8	18.0	21.9	28.5	18.8	24.4

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	25.3	26.3	30.4	28.0	29.1	32.8	30.2	31.4	31.2	29.2	30.1
2	28.8	26.7	27.6	31.0	28.6	29.6	32.7	30.5	31.6	30.5	29.2	29.8
3	28.5	27.0	27.8	30.9	28.9	29.7	32.9	30.9	31.7	30.8	28.9	29.8
4	28.5	27.1	27.8	31.4	29.3	30.1	32.7	30.3	31.5	31.7	29.3	30.3
5	28.6	27.0	27.7	30.4	29.3	29.8	32.8	30.5	31.6	31.0	29.7	30.3
6	29.1	26.8	27.9	31.9	29.0	30.2	32.9	30.8	31.8	30.4	28.9	29.5
7	29.3	27.5	28.4	32.1	27.8	30.1	33.1	30.8	31.9	29.3	27.8	28.6
8	29.9	27.8	28.7	30.7	28.7	29.6	33.4	30.9	32.0	28.8	28.0	28.3
9	29.1	27.2	28.3	31.4	29.5	30.5	33.5	31.1	32.2	29.9	27.6	28.6
10	29.4	27.3	28.3	30.8	25.4	28.6	33.5	31.1	32.2	30.3	28.3	29.1
11	29.8	27.0	28.4	29.6	26.8	28.4	33.3	30.9	32.0	29.9	28.2	29.0
12	29.0	27.8	28.5	30.4	28.0	29.2	32.9	30.6	31.7	30.2	28.2	29.1
13	29.8	27.5	28.6	31.1	28.4	29.7	32.0	30.5	31.3	29.5	26.0	27.5
14	29.6	27.7	28.6	31.5	29.2	30.3	32.9	30.2	31.4	27.6	25.9	26.6
15	28.8	27.5	28.2	31.3	29.1	30.1	32.7	30.3	31.4	27.9	25.7	26.8
16	29.3	26.9	28.0	31.1	28.8	29.8	32.5	30.1	31.3	27.6	26.0	26.8
17	28.5	26.7	27.3	31.3	29.4	30.3	32.1	29.5	30.8	28.4	26.3	27.2
18	28.0	26.1	27.1	32.0	29.4	30.6	32.3	29.9	31.1	28.7	26.8	27.6
19	29.0	26.5	27.7	31.9	29.8	30.8	32.8	30.4	31.5	29.2	26.9	27.9
20	28.9	27.7	28.2	31.9	29.7	30.7	32.5	30.1	31.2	29.4	27.4	28.3
21	28.1	26.9	27.3	31.0	29.6	30.2	31.7	29.3	30.4	28.2	26.0	27.0
22	28.2	26.5	27.3	31.5	29.3	30.2	31.7	29.9	30.8	26.4	24.4	25.4
23	29.2	26.9	28.0	32.1	29.6	30.7	31.9	30.3	31.1	25.8	23.4	24.6
24	28.5	27.7	28.1	32.7	30.0	31.3	32.8	30.5	31.5	25.9	23.9	24.9
25	28.6	26.9	27.7	32.6	30.3	31.4	32.4	30.2	31.3	25.8	23.6	25.0
26	29.8	27.2	28.5	32.7	30.5	31.5	32.6	30.1	31.3	27.5	25.0	26.1
27	30.4	28.6	29.4	32.9	30.5	31.6	32.5	30.5	31.5	28.3	26.3	27.1
28	31.0	28.6	29.7	32.8	30.5	31.5	32.8	30.4	31.5	28.2	26.5	27.3
29	30.5	29.3	29.9	33.1	30.4	31.6	32.6	30.6	31.5	26.7	24.7	25.5
30	30.0	28.7	29.4	32.7	30.3	31.4	31.7	29.8	30.8	25.4	23.0	24.2
31	---	---	---	32.5	30.1	31.1	31.0	29.3	30.2	---	---	---
MONTH	31.0	25.3	28.2	33.1	25.4	30.3	33.5	29.3	31.4	31.7	23.0	27.6

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.8	3.7	4.1	7.9	6.5	7.0	7.5	6.6	7.1	7.3	6.8	7.0
2	4.9	3.7	4.1	6.6	5.7	6.3	7.2	6.7	7.0	7.3	6.6	7.0
3	4.9	3.0	3.4	7.1	6.6	6.8	7.2	6.5	6.7	7.8	6.9	7.4
4	4.7	3.7	4.1	7.0	6.2	6.5	7.1	5.8	6.6	8.0	7.2	7.7
5	---	---	---	6.4	5.8	6.1	6.6	6.5	6.6	8.1	7.2	7.7
6	---	---	---	6.1	5.7	5.9	6.7	6.4	6.5	8.0	7.2	7.6
7	---	---	---	5.9	5.4	5.6	8.8	6.3	6.7	7.7	6.9	7.3
8	---	---	---	6.1	5.6	5.9	8.1	6.9	7.1	7.5	6.6	7.1
9	---	---	---	6.1	5.6	5.8	7.4	7.1	7.2	7.9	6.8	7.4
10	7.8	7.3	7.5	6.3	5.2	5.6	9.3	7.1	7.8	8.2	7.2	7.7
11	8.3	7.1	7.6	6.1	5.2	5.8	8.4	8.1	8.3	8.0	7.1	7.6
12	8.9	7.5	8.0	6.1	5.5	5.7	9.2	8.2	8.5	7.8	6.8	7.3
13	9.8	7.9	8.7	7.4	5.7	6.6	8.8	8.1	8.5	7.6	6.5	7.1
14	9.6	8.4	8.9	6.6	5.9	6.3	8.2	7.7	8.0	8.3	6.7	7.4
15	9.1	6.8	7.7	5.9	5.5	5.7	7.8	7.3	7.6	8.2	7.0	7.6
16	8.2	5.8	6.5	---	---	---	7.5	7.2	7.4	8.1	6.8	7.5
17	6.9	5.6	6.0	---	---	---	7.7	7.0	7.5	7.9	6.5	7.3
18	---	---	---	---	---	---	7.5	7.1	7.3	8.0	6.5	7.2
19	---	---	---	---	---	---	8.1	7.0	7.5	---	---	---
20	6.1	5.7	5.8	---	---	---	7.6	7.3	7.5	---	---	---
21	6.7	5.7	6.1	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	8.5	8.0	8.2	---	---	---	---	---	---	---	---	---
24	8.6	8.0	8.2	---	---	---	---	---	---	---	---	---
25	8.8	7.9	8.3	---	---	---	---	---	---	---	---	---
26	9.0	7.9	8.3	---	---	---	---	---	---	---	---	---
27	9.3	7.9	8.4	---	---	---	---	---	---	7.9	7.2	7.7
28	9.1	7.5	8.2	---	---	---	---	---	---	7.7	6.9	7.3
29	8.8	6.9	7.6	---	---	---	7.6	7.2	7.4	7.6	6.9	7.2
30	8.2	6.6	7.2	---	---	---	7.6	7.2	7.4	7.5	7.2	7.3
31	7.8	6.5	7.0	---	---	---	7.6	7.1	7.3	7.6	7.0	7.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	10.8	9.1	9.8	8.2	7.1	7.6	10.2	6.9	8.5
2	---	---	---	10.6	9.0	9.6	7.8	6.9	7.3	8.6	1.1	5.8
3	---	---	---	10.6	8.9	9.6	7.8	5.1	6.6	---	---	---
4	10.3	9.2	9.6	10.5	8.9	9.6	---	---	---	---	---	---
5	10.4	9.2	9.7	10.3	8.8	9.4	6.6	6.3	6.4	5.8	5.2	5.5
6	9.6	9.0	9.3	10.4	8.6	9.4	7.3	6.4	6.7	5.9	5.0	5.5
7	9.2	8.6	8.9	9.9	8.5	9.1	7.5	6.2	6.9	7.0	5.2	6.0
8	9.7	8.7	9.4	9.5	6.2	8.1	9.0	6.6	7.6	7.2	6.7	6.9
9	10.5	8.7	9.5	7.6	7.0	7.5	9.7	6.8	8.0	7.5	6.7	7.0
10	9.9	8.6	9.2	7.8	6.9	7.5	9.3	6.4	7.8	7.1	4.3	6.3
11	9.6	8.5	9.0	9.8	5.7	8.0	10.1	7.1	8.4	5.4	1.0	2.4
12	10.6	9.2	9.8	8.4	7.6	8.0	10.5	7.2	8.6	6.7	1.0	4.5
13	11.4	9.8	10.5	8.5	8.1	8.3	9.0	7.0	7.9	6.4	1.2	3.9
14	11.7	9.8	10.6	8.6	7.5	8.2	7.6	2.6	5.1	6.0	3.4	5.0
15	11.6	9.6	10.5	8.6	7.4	8.1	4.3	2.0	2.8	8.0	5.1	6.4
16	11.4	9.2	10.3	8.7	8.3	8.5	6.2	2.5	4.3	7.9	6.7	7.4
17	11.2	9.0	10.0	---	---	---	8.0	4.5	6.6	7.9	1.6	6.1
18	10.9	8.7	9.7	---	---	---	8.3	6.6	7.3	---	---	---
19	10.9	8.7	9.8	---	---	---	8.8	6.4	7.5	---	---	---
20	10.0	8.4	9.1	---	---	---	9.4	6.2	7.6	---	---	---
21	10.6	8.5	9.4	---	---	---	8.4	5.9	7.0	---	---	---
22	11.0	8.6	9.6	---	---	---	8.2	5.6	6.7	---	---	---
23	11.6	10.1	10.7	---	---	---	9.3	5.6	7.2	---	---	---
24	11.4	9.8	10.5	---	---	---	8.0	6.1	7.0	---	---	---
25	11.3	9.7	10.3	---	---	---	9.5	6.7	7.9	8.0	6.0	7.0
26	10.1	9.2	9.5	---	---	---	8.1	4.9	6.4	7.2	4.5	5.7
27	10.5	8.9	9.6	8.1	6.9	7.5	5.5	2.4	4.0	6.0	5.0	5.6
28	10.8	9.0	9.7	---	---	---	6.6	4.7	5.6	6.7	6.0	6.3
29	---	---	---	---	---	---	8.5	5.8	6.9	7.0	6.2	6.5
30	---	---	---	8.5	7.6	8.0	8.8	6.7	7.8	7.4	5.0	5.8
31	---	---	---	8.5	7.4	7.8	---	---	---	5.5	5.2	5.3
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.8	5.5	5.7	---	---	---	6.1	5.1	5.6	6.9	5.9	6.5
2	5.8	5.5	5.7	---	---	---	5.6	5.0	5.4	7.1	6.1	6.5
3	6.3	5.5	5.9	---	---	---	5.8	4.7	5.3	7.3	5.9	6.5
4	7.0	5.7	6.2	---	---	---	6.1	5.4	5.8	7.4	5.9	6.5
5	6.8	5.5	6.2	---	---	---	6.2	5.4	5.8	6.7	5.6	6.0
6	7.9	5.8	6.8	---	---	---	6.1	5.1	5.6	5.9	4.4	5.4
7	8.1	5.9	6.9	---	---	---	6.1	5.2	5.6	4.4	1.9	3.3
8	6.7	5.0	5.9	---	---	---	---	---	---	5.9	4.3	5.0
9	6.7	5.0	5.8	---	---	---	---	---	---	6.6	5.3	5.8
10	8.3	5.9	7.2	---	---	---	---	---	---	6.9	5.4	6.2
11	7.6	6.4	6.9	---	---	---	---	---	---	6.9	5.7	6.3
12	7.4	6.1	6.7	---	---	---	---	---	---	6.8	5.8	6.4
13	7.1	5.9	6.5	7.4	6.0	6.6	8.5	6.4	7.5	6.5	3.9	5.4
14	9.8	5.3	6.2	7.2	5.4	6.2	8.4	7.2	7.7	4.8	4.0	4.4
15	7.4	5.5	6.4	6.4	4.6	5.5	8.2	6.9	7.4	5.5	4.3	5.0
16	8.5	6.5	7.3	---	---	---	8.3	7.0	7.5	5.2	4.5	4.8
17	7.6	6.4	7.0	---	---	---	8.7	6.9	7.5	4.9	4.0	4.4
18	8.6	6.8	7.5	---	---	---	8.1	6.9	7.3	5.5	4.6	5.0
19	9.2	6.8	7.8	---	---	---	8.2	6.7	7.2	5.6	4.6	5.2
20	9.0	6.7	7.7	---	---	---	8.0	6.5	7.1	5.9	4.6	5.3
21	7.7	5.2	6.5	---	---	---	7.9	6.5	7.0	6.1	5.2	5.5
22	6.3	4.5	5.5	---	---	---	8.0	6.2	6.9	6.0	5.2	5.7
23	6.1	1.2	4.7	---	---	---	8.0	6.4	7.0	6.0	5.3	5.6
24	5.1	1.0	3.2	---	---	---	8.2	6.2	7.0	6.4	5.6	5.9
25	6.1	3.4	5.2	---	---	---	7.9	6.0	6.8	6.3	4.3	5.5
26	---	---	---	---	---	---	7.8	6.3	6.9	6.9	4.3	5.7
27	---	---	---	---	---	---	7.8	6.0	6.8	6.4	5.7	6.0
28	---	---	---	---	---	---	7.3	6.1	6.6	6.0	5.5	5.7
29	---	---	---	7.1	5.6	6.3	7.4	5.8	6.5	7.6	5.5	6.3
30	---	---	---	7.0	5.4	6.2	7.4	5.9	6.5	8.2	6.8	7.5
31	---	---	---	6.3	5.2	5.8	6.7	5.9	6.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	8.2	1.9	5.6

08049580 MOUNTAIN CREEK NEAR VENUS, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°29'27", long 97°07'22", Johnson County, Hydrologic Unit 12030102, on right bank on downstream side of highway embankment near right end of bridge on Farm Road 157, 3.0 mi upstream from Grassy Creek, 3.2 mi upstream from Reece Branch, and 3.9 mi north of Venus.

DRAINAGE AREA.--25.5 mi^2.

PERIOD OF RECORD.--Nov 1985 to Sep 1987, Oct 1987 to current year (peaks above base discharge).
Water-quality records.--Chemical data: Dec 1985 to Sep 1993.

GAGE.--Water-stage recorder. Datum of gage is 580.49 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except for two peaks within time period of Apr 14, 1999 to June 16, 1999, which are fair. Gage destroyed twice during water year by automobile accidents. Daily values and peak discharges less than 580 ft^3/s are not published. No known regulation or diversions.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 13	0630	2,750	10.87	Dec 12	0145	736	7.88
Dec 3	2345	1,730	9.54	May 17	2100	e1060	8.55
Dec 4	0900	2,380	10.44	Jun 12	1615	e624	7.52
Dec 10	2030	2,190	10.20				

e Estimated

This page intentionally left blank.

08049700 WALNUT CREEK NEAR MANSFIELD, TX

LOCATION.--Lat 32°34'51", long 97°06'06", Tarrant County, Hydrologic Unit 12030102, on right bank at downstream side of bridge on county road, 2.6 mi northeast of Mansfield, 3.3 mi downstream from Texas and New Orleans Railroad Co. bridge, and 10.2 mi upstream from mouth.

DRAINAGE AREA.--62.8 mi^2.

PERIOD OF RECORD.--Oct 1960 to current year.
Water-quality records.--Chemical data: Dec 1985 to Sep 1993. Biochemical data: Dec 1985 to Sep 1993.

GAGE.--Water-stage recorder. Datum of gage is 531.08 ft above sea level. Satellite telemeter at station.

REMARKS.--One estimated daily discharge. Records good. No known regulation or diversions. No flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 13	0545	1,380	16.38	Dec 10	2145	966	14.08
Dec 4	0215	1,020	14.40				

Minimum discharge, 0.01 ft^3/s, Aug 13, 18-31, Sep 1-2, 4-5, 20-26, 28, gage height, 4.94 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	43	2.8	.25	.98	.12	4.4	1.7	6.3	1.8	.02	.01
2	.43	.30	1.1	.24	.60	.14	4.5	59	4.5	1.6	.03	.02
3	16	.07	127	.19	.40	.09	37	21	3.3	1.6	.02	.02
4	.09	.07	490	.29	.27	.09	20	33	2.8	1.6	.02	.01
5	17	.07	10	1.2	.20	.09	7.9	14	2.4	1.6	.02	1.2
6	33	.06	1.9	.68	.21	.07	4.7	4.4	2.2	1.7	.02	.49
7	.13	.08	1.3	.22	.19	.07	3.7	2.8	2.1	1.5	.02	.06
8	.06	.08	1.0	.34	.17	34	3.6	2.2	2.1	1.5	.02	.05
9	.05	.10	.80	.15	.17	5.1	3.9	1.9	2.0	1.4	.02	.04
10	.05	3.9	429	.13	.18	1.6	3.5	9.1	2.0	106	.02	.02
11	.06	.12	274	.24	.21	21	2.9	3.0	2.0	3.6	.02	.02
12	.07	34	295	.20	.12	18	2.7	2.2	55	.28	.02	.01
13	.07	722	12	.16	.09	11	2.5	2.1	7.0	.15	.01	.30
14	.08	6.3	2.4	.17	.08	5.5	7.1	1.9	3.1	.11	.02	.07
15	.07	.48	1.2	.13	.11	4.3	3.9	2.1	2.6	.09	.02	.03
16	.26	.20	.86	.13	.11	3.9	3.4	2.0	4.0	.08	.02	.02
17	.19	.12	.50	.17	.13	3.7	2.9	98	32	.08	.03	.04
18	1.4	.12	36	.17	.12	9.5	2.8	38	3.3	.08	.02	.04
19	.09	.15	35	.16	.11	21	2.8	6.6	2.5	.08	.02	.04
20	.67	.25	2.4	.15	.11	14	3.0	4.2	8.2	.08	.01	.04
21	1.2	.20	1.1	.18	.11	9.3	2.9	3.4	19	.09	.01	.01
22	.10	.17	.54	.15	.12	7.1	3.0	2.7	3.6	.09	.01	.01
23	.05	.17	.33	.13	.16	6.2	2.5	2.3	2.7	.08	.02	.01
24	.05	.17	.27	.13	.13	4.6	2.2	2.3	2.2	.08	.01	.01
25	.06	.24	.24	.13	.12	4.3	2.5	2.6	45	.08	.01	.01
26	.08	.38	.26	.13	.14	3.4	29	61	4.9	.06	.01	.02
27	.10	.27	.24	.13	.15	3.6	6.4	14	2.6	.11	.01	.04
28	.13	.23	.22	1.6	.14	4.6	4.3	8.2	2.0	.07	.03	.02
29	.12	4.7	.20	136	---	4.6	2.3	13	1.9	.06	.02	.02
30	.09	e162	.25	52	---	4.6	1.8	106	1.8	.04	.01	.02
31	.11	---	.29	2.8	---	4.2	---	18	---	.03	.01	---
TOTAL	71.90	980.00	1728.20	198.75	5.63	209.77	184.1	542.7	235.1	125.72	0.55	2.70
MEAN	2.32	32.7	55.7	6.41	.20	6.77	6.14	17.5	7.84	4.06	.018	.090
MAX	33	722	490	136	.98	34	37	106	55	106	.03	1.2
MIN	.04	.06	.20	.13	.08	.07	1.8	1.7	1.8	.03	.01	.01
AC-FT	143	1940	3430	394	11	416	365	1080	466	249	1.1	5.4
CFSM	.04	.52	.89	.10	.00	.11	.10	.28	.12	.06	.00	.00
IN.	.04	.58	1.02	.12	.00	.12	.11	.32	.14	.07	.00	.00

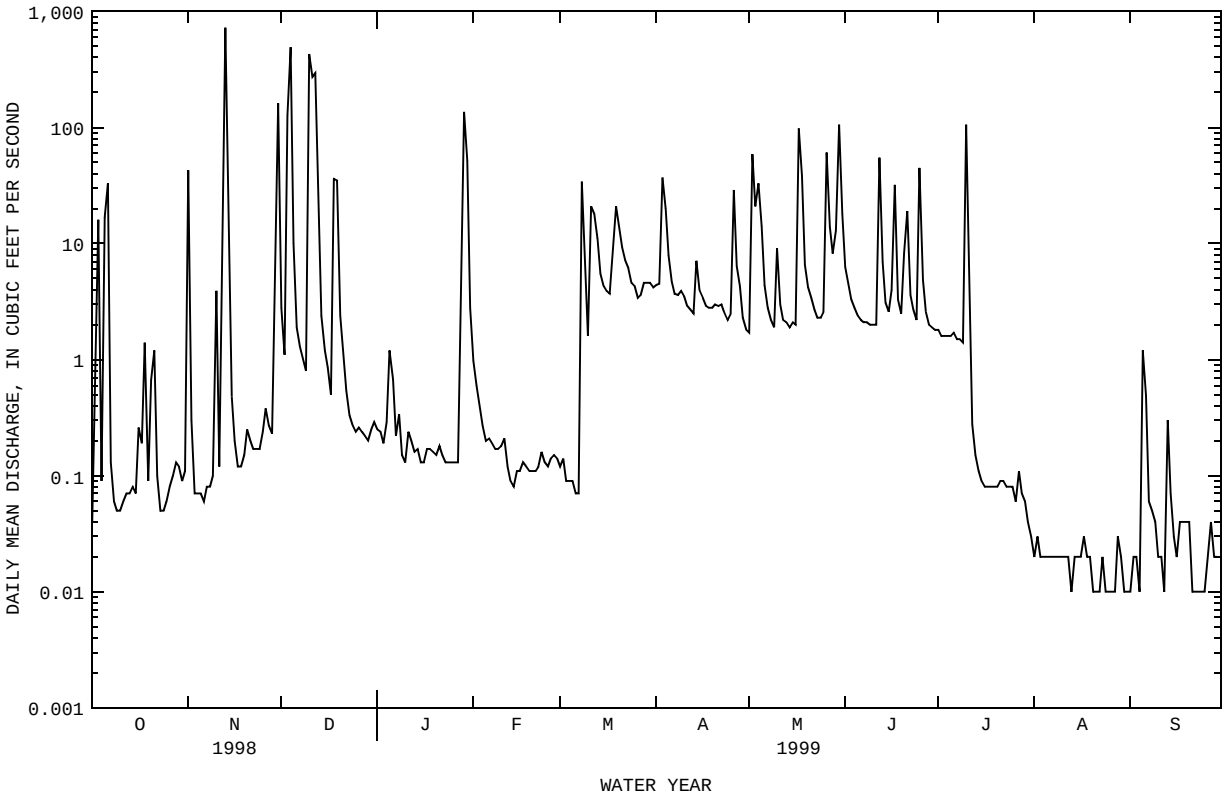
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999, BY WATER YEAR (WY)

MEAN	18.1	6.54	18.6	8.18	23.5	28.1	39.0	51.1	27.7	3.84	2.32	5.81
MAX	272	50.1	326	64.5	173	184	174	378	300	57.1	21.8	67.4
(WY)	1992	1995	1992	1992	1997	1977	1990	1989	1986	1975	1979	1973
MIN	.000	.000	.000	.000	.014	.13	.40	.074	.030	.000	.000	.000
(WY)	1964	1961	1964	1981	1981	1963	1978	1962	1963	1964	1961	1971

08049700 WALNUT CREEK NEAR MANSFIELD, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1961 - 1999	
ANNUAL TOTAL	9058.26		4285.12			
ANNUAL MEAN	24.8		11.7		19.4	
HIGHEST ANNUAL MEAN					82.2	1992
LOWEST ANNUAL MEAN					1.34	1978
HIGHEST DAILY MEAN	2070	Mar 16	722	Nov 13	7900	May 17 1989
LOWEST DAILY MEAN	.00	Jul 11	.01	Aug 13	.00	Oct 1 1960
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 30	.01	Aug 20	.00	Oct 15 1960
INSTANTANEOUS PEAK FLOW			1380	Nov 13	22800	May 17 1989
INSTANTANEOUS PEAK STAGE			16.38	Nov 13	33.77	May 17 1989
ANNUAL RUNOFF (AC-FT)	17970		8500		14030	
ANNUAL RUNOFF (CFSM)	.40		.19		.31	
ANNUAL RUNOFF (INCHES)	5.37		2.54		4.19	
10 PERCENT EXCEEDS	18		15		13	
50 PERCENT EXCEEDS	.37		.27		.26	
90 PERCENT EXCEEDS	.00		.02		.00	

e Estimated



08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX

LOCATION.--Lat 32°38'36", long 97°00'03", Dallas County, Hydrologic Unit 12030102, in control room of outlet works tower located 285 ft upstream from centerline of Joe Pool Dam on Mountain Creek, 0.7 mi downstream from Walnut Creek, 0.7 mi upstream from bridge over Mountain Creek on Camp Wisdom Road, 1.0 mi downstream from John Penn Branch, 5.5 mi west of water towers in downtown Duncanville, 7.1 mi upstream from Mountain Creek Dam on Mountain Creek, and 11.2 mi upstream from mouth.

DRAINAGE AREA.--232 mi^2.

PERIOD OF RECORD.--Jan 1986 to current year.
Water-quality records.--Chemical data: Jan 1986 to Sep 1993. Biochemical data: Jan 1986 to Sep 1993.

GAGE.--Water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers benchmark).

REMARKS.--The lake is formed by a rolled earthfill dam 22,360 ft long, including a 50-foot uncontrolled broad-crested concrete spillway. Impoundment of water began Jan 7, 1986, after closure of the dam was completed in Dec 1985. The flood-control outlet works consist of a 10.5-foot-diameter conduit that is controlled by two 4.75- by 10.5-foot slide gates. Above an elevation of 541 ft, water will flow over a 50-foot-long uncontrolled broad-crested concrete spillway located 0.5 mi to left of the outlet works tower. The low-flow outlet works consist of four 3- by 5-foot slide gates having invert elevations at 486.0, 495.0, 504.0, and 513.0 ft that open to a wet-well. Discharge from the wet-well to the 10.5-foot-diameter conduit is controlled by a 2- by 4-foot gate with invert at elevation 483.0 ft. A low-flow bypass system consisting of a turbine pump and 10-inch-diameter piping is also available for use if needed. The capacity table was provided by the U.S. Army Corps of Engineers. The lake was built for water supply, conservation, and flood control. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	564.5
Crest of spillway	541.0
Top of conservation pool	522.0
Lowest gated outlet	466.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 274,600 acre-ft, May 20, 1990 (elevation, 533.21 ft); minimum contents after initial filling, 75,910 acre-ft, Jan 24, 1989 (elevation, 507.84 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 192,500 acre-ft, Dec 12 (elevation, 524.04 ft); minimum contents, 152,100 acre-ft, Oct 31 (elevation, 518.49 ft).

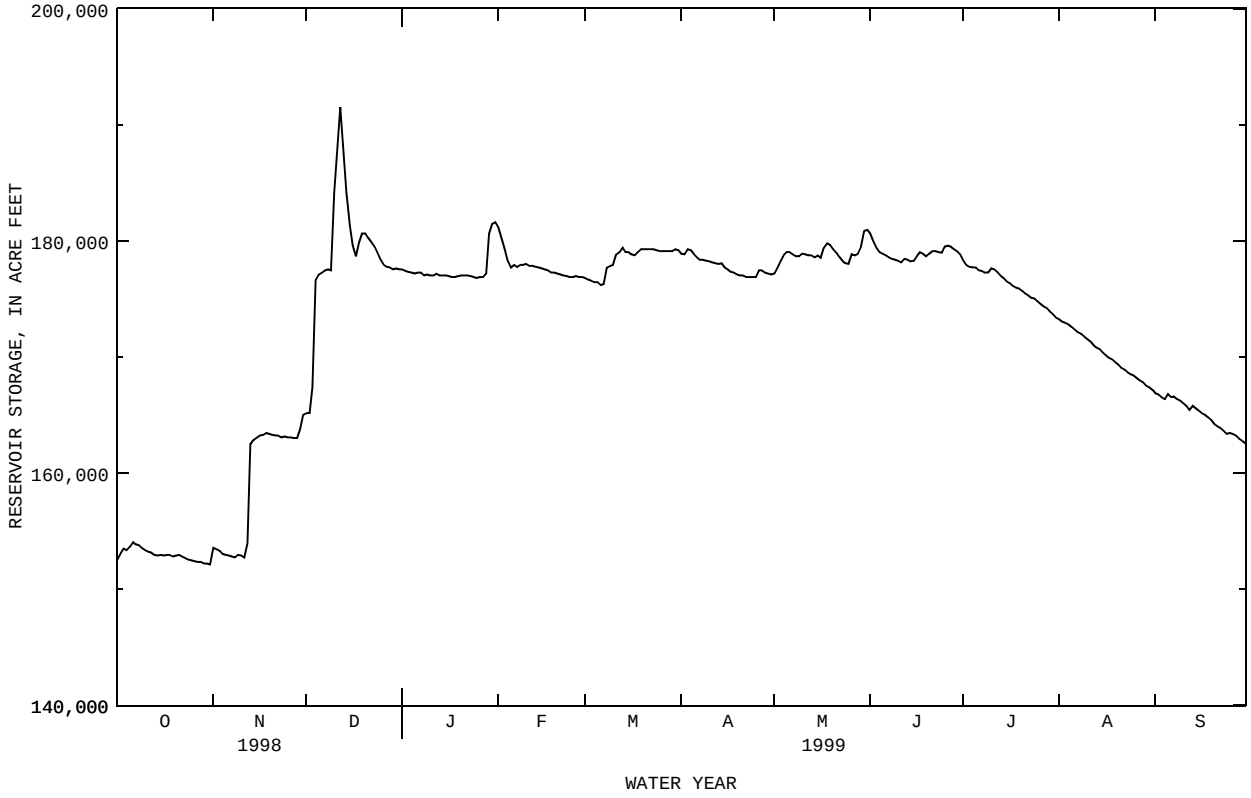
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152500	153600	165200	177600	181200	176800	178900	177200	180700	178300	173300	166900
2	153100	153400	165200	177400	180300	176700	178800	177700	180000	177900	173000	166800
3	153500	153300	167400	177300	179300	176600	179300	178200	179400	177800	173000	166500
4	153400	153000	176700	177300	178300	176400	179200	178800	179100	177700	172800	166400
5	153600	153000	177100	177200	177700	176400	178900	179100	178900	177700	172600	166800
6	154100	152900	177300	177300	177900	176200	178600	179100	178800	177500	172400	166500
7	153900	152800	177500	177300	177800	176300	178400	178800	178600	177400	172200	166600
8	153800	152800	177600	177000	177900	177700	178400	178700	178500	177300	172000	166400
9	153600	153000	177500	177100	177900	177900	178300	178700	178400	177300	171800	166300
10	153400	152900	184200	177000	178000	177900	178200	178900	178300	177600	171600	166000
11	153200	152800	188200	177000	177900	178800	178200	178800	178200	177600	171300	165800
12	153200	154000	191500	177200	177900	179100	178100	178800	178500	177300	171100	165500
13	153000	162500	187900	177000	177800	179400	178000	178800	178400	177000	170800	165800
14	152900	162900	184200	177000	177700	179100	178100	178600	178200	176800	170700	165600
15	153000	163100	181300	177000	177600	179100	177700	178800	178300	176500	170400	165400
16	152900	163200	179600	177000	177600	178800	177600	178500	178700	176400	170200	165200
17	153000	163300	178700	176900	177500	178800	177300	179400	179100	176100	170000	165000
18	153000	163500	179800	176900	177300	179100	177300	179800	178900	176000	169800	164800
19	152800	163400	180700	177000	177300	179300	177100	179700	178700	175900	169600	164600
20	152900	163300	180700	177000	177200	179300	177000	179300	178900	175700	169400	164200
21	153000	163200	180300	177000	177100	179300	177000	179000	179100	175500	169100	164000
22	152800	163200	179900	177000	177000	179300	176900	178600	179100	175300	168900	163900
23	152700	163100	179500	177000	177000	179300	176900	178300	179100	175100	168700	163700
24	152500	163200	178900	176900	176900	179200	176900	178100	179000	175000	168500	163400
25	152500	163100	178400	176800	176900	179100	176900	178000	179500	174800	168400	163500
26	152400	163100	177900	176900	177000	179100	177500	178800	179600	174600	168200	163400
27	152300	163000	177800	176900	176900	179100	177500	178800	179500	174400	168000	163200
28	152300	163000	177700	177200	176900	179100	177300	178900	179300	174200	167800	163000
29	152200	163700	177600	180700	---	179100	177200	179500	179100	173900	167600	162800
30	152200	165000	177600	181500	---	179300	177100	180900	178800	173700	167400	162600
31	152100	---	177600	181600	---	179200	---	181000	---	173400	167200	---
MAX	154100	165000	191500	181600	181200	179400	179300	181000	180700	178300	173300	166900
MIN	152100	152800	165200	176800	176900	176200	176900	177200	178200	173400	167200	162600
(+)	518.49	520.38	522.09	522.62	522.00	522.30	522.03	522.54	522.26	521.53	520.68	520.04
(@)	-700	+12900	+12600	+4000	-4700	+2300	-2100	+4000	-2200	-5400	-5200	-4600

CAL YR 1998 MAX 196900 MIN 152100 (@) -4500
WTR YR 1999 MAX 191500 MIN 152100 (@) +9800

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued



08050050 MOUNTAIN CREEK LAKE NEAR GRAND PRAIRIE, TX

LOCATION.--Lat 32°43'55", long 96°56'35", Dallas County, Hydrologic Unit 12030102, at right end of spillway in Mountain Creek Dam on Mountain Creek, 2.5 mi upstream from Texas and Pacific Railway Co. bridge, and 3.7 mi southeast of Grand Prairie.

DRAINAGE AREA.--295 mi^2.

PERIOD OF RECORD.--Oct 1960 to current year.
Water-quality records.--Chemical data: Oct 1969 to Sep 1985.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Oct 21, 1960, non-recording gage at powerplant at same datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 5,800 ft long, including a controlled spillway with six 34 by 27 ft tainter gates. The dam was completed in Dec 1936 and deliberate impoundment began on Mar 24, 1937. The lake was built and is operated by Dallas Power and Light Co. to supply cooling water for their generating plant. The capacity table is based on a survey made in 1963. For statement regarding regulation by Joe Pool Dam see station 08049800. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam	467.0
Top of gates	458.0
Top of dry weather conservation pool	457.0
Top of wet weather conservation pool	456.0
Crest of spillway (sill of tainter gates)	431.0

COOPERATION.--The capacity table was provided by the Dallas Power and Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 28,430 acre-ft, Mar 13, 1995 (elevation 458.82 ft); minimum contents, 14,120 acre-ft Oct 18, 1972 (elevation, 453.25 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,350 acre-ft, May 30 (elevation, 457.87 ft); minimum contents, 16,890 acre-ft, Oct 2 (elevation, 454.55 ft).

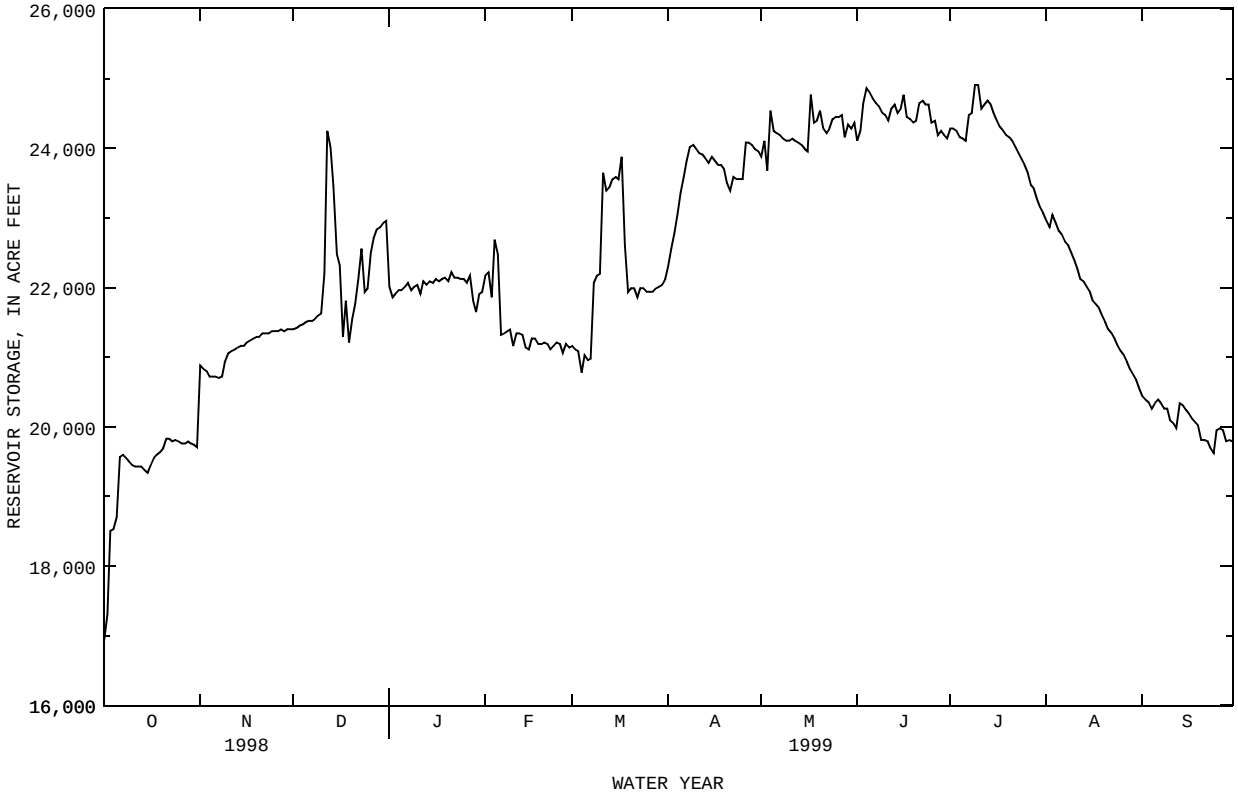
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16940	20880	21400	22010	22170	21160	22300	23880	24110	24280	22960	20440
2	17310	20830	21420	21860	22220	21110	22560	24110	24250	24280	22870	20390
3	18510	20800	21450	21910	21860	21090	22790	23680	24650	24250	23040	20360
4	18530	20720	21470	21960	22690	20780	23070	24540	24860	24160	22930	20260
5	18700	20720	21500	21960	22480	21030	23360	24250	24800	24140	22810	20340
6	19570	20720	21520	22010	21320	20960	23590	24220	24710	24110	22760	20390
7	19600	20700	21520	22070	21340	20980	23820	24190	24650	24480	22660	20340
8	19550	20720	21550	21960	21370	22070	24020	24140	24600	24510	22610	20260
9	19500	20930	21600	22010	21400	22170	24050	24110	24510	24910	22500	20260
10	19450	21060	21630	22040	21160	22200	23990	24110	24480	24910	22400	20090
11	19430	21090	22200	21910	21340	23650	23930	24140	24400	24570	22270	20050
12	19430	21110	24250	22090	21340	23390	23910	24110	24570	24630	22120	19980
13	19430	21140	24020	22040	21320	23440	23850	24080	24630	24680	22090	20340
14	19380	21160	23470	22090	21140	23560	23790	24050	24510	24630	22010	20310
15	19340	21160	22480	22070	21110	23590	23880	23990	24570	24510	21940	20240
16	19450	21210	22320	22120	21270	23560	23820	23960	24770	24400	21810	20190
17	19550	21240	21290	22090	21270	23880	23760	24770	24450	24310	21760	20120
18	19600	21270	21810	22120	21190	22610	23760	24370	24420	24250	21700	20070
19	19640	21290	21210	22140	21190	21940	23700	24400	24370	24190	21600	20020
20	19690	21290	21550	22090	21210	21990	23500	24540	24400	24160	21500	19810
21	19830	21340	21760	22220	21190	21990	23390	24280	24650	24110	21400	19810
22	19830	21340	22120	22140	21110	21860	23590	24220	24680	24020	21340	19790
23	19790	21340	22560	22140	21160	21990	23560	24280	24630	23930	21270	19690
24	19810	21370	21940	22120	21210	21990	23560	24420	24630	23850	21160	19620
25	19790	21370	21990	22120	21190	21940	23560	24450	24370	23760	21090	19950
26	19760	21370	22500	22070	21060	21940	24080	24450	24400	23650	21030	19980
27	19760	21400	22710	22170	21190	21940	24080	24480	24190	23470	20930	19950
28	19790	21370	22840	21810	21140	21990	24050	24160	24250	23420	20830	19790
29	19760	21400	22870	21650	---	22010	23990	24340	24190	23270	20750	19810
30	19740	21400	22930	21910	---	22040	23960	24280	24140	23160	20670	19790
31	19710	---	22960	21940	---	22120	---	24370	---	23070	20540	---
MAX	19830	21400	24250	22220	22690	23880	24080	24770	24860	24910	23040	20440
MIN	16940	20700	21210	21650	21060	20780	22300	23680	24110	23070	20540	19620
(+)	455.77	456.44	457.04	456.65	456.34	456.72	457.39	457.53	457.45	457.08	456.11	455.80
(@)	+2710	+1690	+1560	-1020	-800	+980	+1840	+410	-230	-1070	-2530	-750

CAL YR 1998 MAX 24880 MIN 16650 (@) +1540
WTR YR 1999 MAX 24910 MIN 16940 (@) +2790

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08050050 MOUNTAIN CREEK LAKE NEAR GRAND PRAIRIE, TX--Continued



08050100 MOUNTAIN CREEK AT GRAND PRAIRIE, TX

LOCATION.--Lat 32°44'51", long 96°55'32", Dallas County, Hydrologic Unit 12030102, on roadway embankment at upstream right end of downstream bridge on Jefferson Street, 1,000 ft upstream from bridge on U.S. Highway 80, 1.2 mi upstream from Texas and Pacific Railroad Co. bridge, 1.5 mi downstream from Mountain Creek Lake Dam, and 4.4 mi east of Grand Prairie.

DRAINAGE AREA.--298 mi^2.

PERIOD OF RECORD.--Oct 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 404.31 ft above sea level. Prior to Dec 19, 1984, at datum 3.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in Oct 1960, at least 10% of contributing drainage area has been regulated by Mountain Creek Lake (station 08050050, normal storage 20,260 acre-ft), 1.5 mi upstream. No known diversions. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

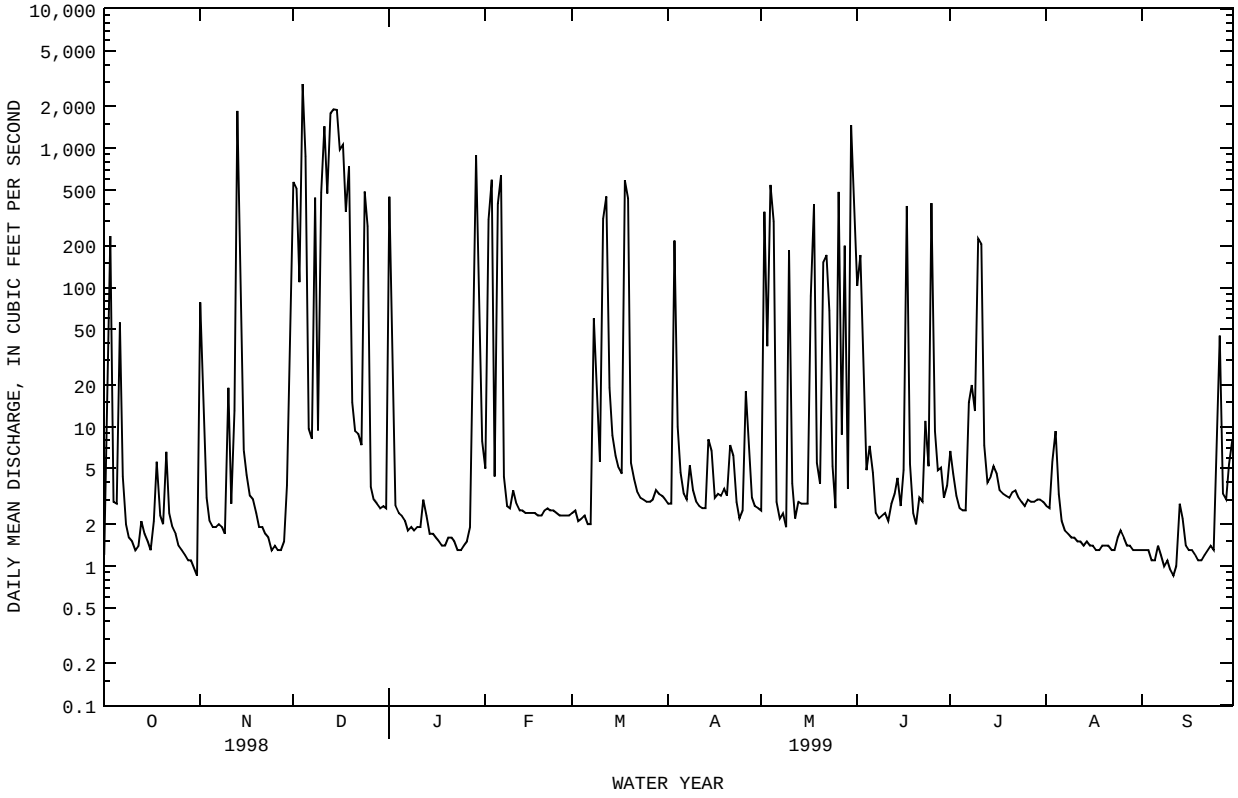
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	78	573	449	5.0	2.4	2.8	2.5	103	6.7	2.7	1.3
2	15	13	513	50	308	2.5	2.8	350	171	4.6	2.6	1.3
3	234	3.1	109	2.7	594	2.1	218	38	34	3.2	5.7	1.3
4	2.9	2.1	2900	2.4	4.4	2.2	10	546	4.9	2.6	9.3	1.1
5	2.8	1.9	874	2.3	399	2.3	4.7	299	7.3	2.5	3.3	1.1
6	56	1.9	9.7	2.1	640	2.0	3.3	2.9	4.7	2.5	2.1	1.4
7	4.4	2.0	8.2	1.8	4.4	2.0	3.0	2.2	2.4	15	1.8	1.2
8	2.0	1.9	441	1.9	2.7	60	5.3	2.4	2.2	20	1.7	1.0
9	1.6	1.7	9.4	1.8	2.6	17	3.5	1.9	2.3	13	1.6	1.1
10	1.5	19	482	1.9	3.5	5.6	2.9	186	2.4	224	1.6	.94
11	1.3	2.8	1440	1.9	2.8	311	2.7	3.9	2.1	205	1.5	.85
12	1.4	13	472	3.0	2.5	452	2.6	2.2	2.8	7.4	1.5	1.0
13	2.1	1850	1780	2.3	2.5	19	2.6	2.9	3.3	4.0	1.4	2.8
14	1.7	223	1900	1.7	2.4	8.7	8.1	2.8	4.3	4.4	1.5	2.2
15	1.5	6.8	1880	1.7	2.4	6.2	6.7	2.8	2.7	5.2	1.4	1.4
16	1.3	4.5	985	1.6	2.4	5.1	3.1	2.8	4.9	4.6	1.4	1.3
17	2.1	3.2	1070	1.5	2.4	4.6	3.3	87	384	3.5	1.3	1.3
18	5.6	3.0	350	1.4	2.3	586	3.2	394	5.4	3.3	1.3	1.2
19	2.3	2.4	741	1.4	2.3	438	3.6	5.5	2.4	3.2	1.4	1.1
20	2.0	1.9	15	1.6	2.5	5.5	3.2	3.9	2.0	3.1	1.4	1.1
21	6.6	1.9	9.3	1.6	2.6	4.2	7.4	153	3.1	3.4	1.4	1.2
22	2.4	1.7	8.9	1.5	2.5	3.4	6.2	171	2.9	3.5	1.3	1.3
23	1.9	1.6	7.4	1.3	2.5	3.1	2.9	68	11	3.1	1.3	1.4
24	1.7	1.3	489	1.3	2.4	3.0	2.2	5.2	5.2	2.9	1.6	1.3
25	1.4	1.4	275	1.4	2.3	2.9	2.5	2.6	404	2.7	1.8	11
26	1.3	1.3	3.7	1.5	2.3	2.9	18	486	9.3	3.0	1.6	45
27	1.2	1.3	3.0	1.9	2.3	3.0	7.6	8.8	4.9	2.9	1.4	3.3
28	1.1	1.5	2.8	137	2.3	3.5	3.1	200	5.1	2.9	1.4	3.0
29	1.1	3.8	2.6	892	---	3.3	2.7	3.6	3.1	3.0	1.3	5.4
30	.96	97	2.7	101	---	3.2	2.6	1470	3.8	3.0	1.3	8.0
31	.85	---	2.6	7.9	---	3.0	---	369	---	2.9	1.3	---
TOTAL	363.21	2348.0	17359.3	1682.4	2007.3	1969.7	350.6	4875.9	1200.5	571.1	62.2	106.89
MEAN	11.7	78.3	560	54.3	71.7	63.5	11.7	157	40.0	18.4	2.01	3.56
MAX	234	1850	2900	892	640	586	218	1470	404	224	9.3	45
MIN	.85	1.3	2.6	1.3	2.3	2.0	2.2	1.9	2.0	2.5	1.3	.85
AC-FT	720	4660	34430	3340	3980	3910	695	9670	2380	1130	123	212

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999, BY WATER YEAR (WY)

MEAN	72.5	69.3	105	103	150	211	215	297	136	32.2	9.10	19.2
MAX	785	1286	1102	1483	714	1104	1170	1941	1028	511	88.6	188
(WY)	1974	1992	1972	1992	1975	1977	1966	1969	1990	1989	1962	1973
MIN	.22	.30	.26	.11	.17	.30	.91	.68	.50	.21	.16	.36
(WY)	1989	1964	1976	1976	1964	1976	1987	1984	1971	1972	1972	1972

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1961 - 1999	
ANNUAL TOTAL	59817.05		32897.10			
ANNUAL MEAN	164		90.1		118	
HIGHEST ANNUAL MEAN					506	1992
LOWEST ANNUAL MEAN					4.39	1988
HIGHEST DAILY MEAN	2930	Mar 16	2900	Dec 4	24700	May 7 1969
LOWEST DAILY MEAN	.85	Oct 31	.85	Oct 31	.00	Jan 25 1964
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 23	1.1	Sep 6	.02	Dec 23 1983
INSTANTANEOUS PEAK FLOW			3480	Dec 4	38100	Apr 19 1976
INSTANTANEOUS PEAK STAGE			13.52	Dec 4	25.12	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	118600		65250		85520	
10 PERCENT EXCEEDS	639		285		75	
50 PERCENT EXCEEDS	3.0		2.9		1.3	
90 PERCENT EXCEEDS	1.2		1.3		.32	

08050100 MOUNTAIN CREEK AT GRAND PRAIRIE, TX--Continued



08050400 ELM FORK TRINITY RIVER AT GAINESVILLE, TX

LOCATION.--Lat 33°37'27", long 97°09'22", Cooke County, Hydrologic Unit 12030103, on downstream right bank at end of bridge on Farm Road 51, 31 ft downstream from centerline of road, 0.6 mi west of Cooke County courthouse in Gainesville, 1.0 mi upstream from Interstate Highway 35, and 1.2 mi downstream from Dozier Creek.

DRAINAGE AREA.--174 mi^2.

PERIOD OF RECORD.--Oct 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 700.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Oct 1981 reached a peak stage of 28.1 ft, from information furnished by an employee of the Gainesville Department of Public Works.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,100 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

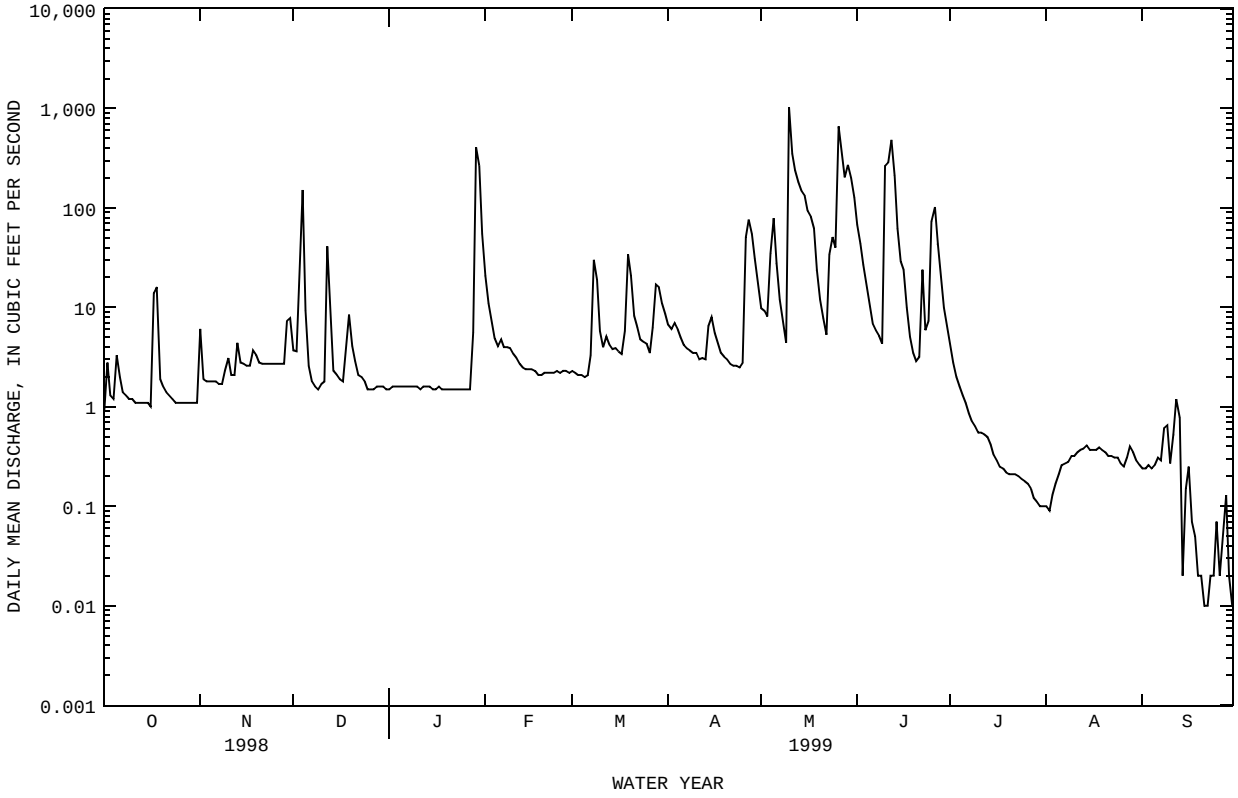
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	6.1	3.7	1.5	21	2.3	6.7	9.8	68	4.1	.10	.24
2	2.8	1.9	3.6	1.6	11	2.2	6.1	9.3	44	2.8	.09	.24
3	1.3	1.8	22	1.6	7.1	2.1	7.0	8.1	27	2.0	.13	.26
4	1.2	1.8	152	1.6	4.9	2.1	6.0	35	17	1.6	.17	.24
5	3.3	1.8	9.3	1.6	4.1	2.0	5.0	79	11	1.3	.21	.26
6	2.0	1.8	2.6	1.6	4.8	2.1	4.2	28	6.8	1.1	.26	.31
7	1.4	1.7	1.8	1.6	4.0	3.3	3.9	12	5.9	.86	.27	.29
8	1.3	1.7	1.6	1.6	4.0	30	3.7	7.3	5.2	.72	.28	.61
9	1.2	2.3	1.5	1.6	3.9	19	3.5	4.4	4.3	.64	.32	.65
10	1.2	3.1	1.7	1.6	3.4	5.8	3.5	1030	264	.55	.32	.27
11	1.1	2.1	1.8	1.5	3.1	4.0	3.0	353	286	.55	.35	.53
12	1.1	2.1	41	1.6	2.7	5.1	3.1	238	484	.53	.37	1.2
13	1.1	4.4	7.7	1.6	2.5	4.2	3.0	183	211	.50	.38	.78
14	1.1	2.8	2.3	1.6	2.4	3.8	6.5	148	62	.42	.41	.02
15	1.1	2.7	2.1	1.5	2.4	3.9	8.0	133	29	.33	.37	.15
16	1.0	2.6	1.9	1.5	2.4	3.6	5.5	94	24	.29	.37	.25
17	14	2.6	1.8	1.6	2.3	3.4	4.3	82	10	.25	.37	.07
18	16	3.7	3.8	1.5	2.1	5.8	3.5	62	5.1	.24	.39	.05
19	1.9	3.3	8.5	1.5	2.1	34	3.2	24	3.5	.22	.37	.02
20	1.6	2.8	4.1	1.5	2.2	21	3.0	12	2.9	.21	.35	.02
21	1.4	2.7	2.9	1.5	2.2	8.2	2.7	7.8	3.2	.21	.32	.01
22	1.3	2.7	2.1	1.5	2.2	6.3	2.6	5.3	24	.21	.32	.01
23	1.2	2.7	2.0	1.5	2.2	4.8	2.6	34	5.9	.20	.31	.02
24	1.1	2.7	1.8	1.5	2.3	4.5	2.5	51	7.3	.19	.31	.02
25	1.1	2.7	1.5	1.5	2.2	4.3	2.8	40	73	.18	.27	.07
26	1.1	2.7	1.5	1.5	2.3	3.5	51	661	102	.17	.25	.02
27	1.1	2.7	1.5	1.5	2.3	6.3	77	347	44	.15	.31	.05
28	1.1	2.7	1.6	5.6	2.2	17	55	204	21	.12	.40	.13
29	1.1	7.3	1.6	409	---	16	31	273	10	.11	.35	.02
30	1.1	7.8	1.6	267	---	11	17	201	6.4	.10	.29	.01
31	1.1	---	1.5	55	---	8.6	---	128	---	.10	.26	---
TOTAL	69.29	89.8	294.4	778.4	110.3	250.2	336.9	4504.0	1867.5	20.95	9.27	6.82
MEAN	2.24	2.99	9.50	25.1	3.94	8.07	11.2	145	62.3	.68	.30	.23
MAX	16	7.8	152	409	21	34	77	1030	484	4.1	.41	1.2
MIN	.89	1.7	1.5	1.5	2.1	2.0	2.5	4.4	2.9	.10	.09	.01
AC-FT	137	178	584	1540	219	496	668	8930	3700	42	18	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

MEAN	60.8	68.2	139	84.8	156	188	160	326	151	16.6	4.26	35.6
MAX	310	353	743	316	647	565	1063	1359	659	91.1	13.2	123
(WY)	1994	1995	1992	1992	1997	1990	1990	1990	1989	1987	1996	1996
MIN	.72	2.23	2.61	5.72	3.80	6.54	6.25	5.31	2.61	.61	.025	.23
(WY)	1989	1998	1991	1986	1996	1986	1991	1996	1996	1998	1988	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL TOTAL	27558.27		8337.83			
ANNUAL MEAN	75.5		22.8		116	
HIGHEST ANNUAL MEAN					277	1990
LOWEST ANNUAL MEAN					22.8	1999
HIGHEST DAILY MEAN	4750	Mar 16	1030	May 10	12500	May 2 1990
LOWEST DAILY MEAN	.03	Aug 22	.01	Sep 21	.00	Aug 2 1988
ANNUAL SEVEN-DAY MINIMUM	.04	Aug 21	.02	Sep 18	.00	Aug 2 1988
INSTANTANEOUS PEAK FLOW			2880	Jun 12	24000	May 16 1989
INSTANTANEOUS PEAK STAGE			10.40	Jun 12	25.33	May 16 1989
ANNUAL RUNOFF (AC-FT)	54660		16540		83760	
10 PERCENT EXCEEDS	157		37		225	
50 PERCENT EXCEEDS	3.1		2.2		12	
90 PERCENT EXCEEDS	.31		.24		1.1	

08050400 ELM FORK TRINITY RIVER AT GAINESVILLE, TX--Continued



08050800 TIMBER CREEK NEAR COLLINSVILLE, TX

LOCATION.--Lat 33°33'16", long 96°56'49", Cooke County, Hydrologic Unit 12030103, on left bank 13 ft to the left of bridge on Farm Road 902 and 19 ft downstream from the centerline of the road, 2.1 mi west of Collinsville, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--38.8 mi^2.

PERIOD OF RECORD.--Oct 1985 to current year.
Water-quality records.--Chemical data: Apr 1993 to Sep 1993. Biochemical data: Apr 1993 to Sep 1993.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 640.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. Several observations of water temperature were made during the year. No flow many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Oct 1981 reached a peak stage of 15.0 ft, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

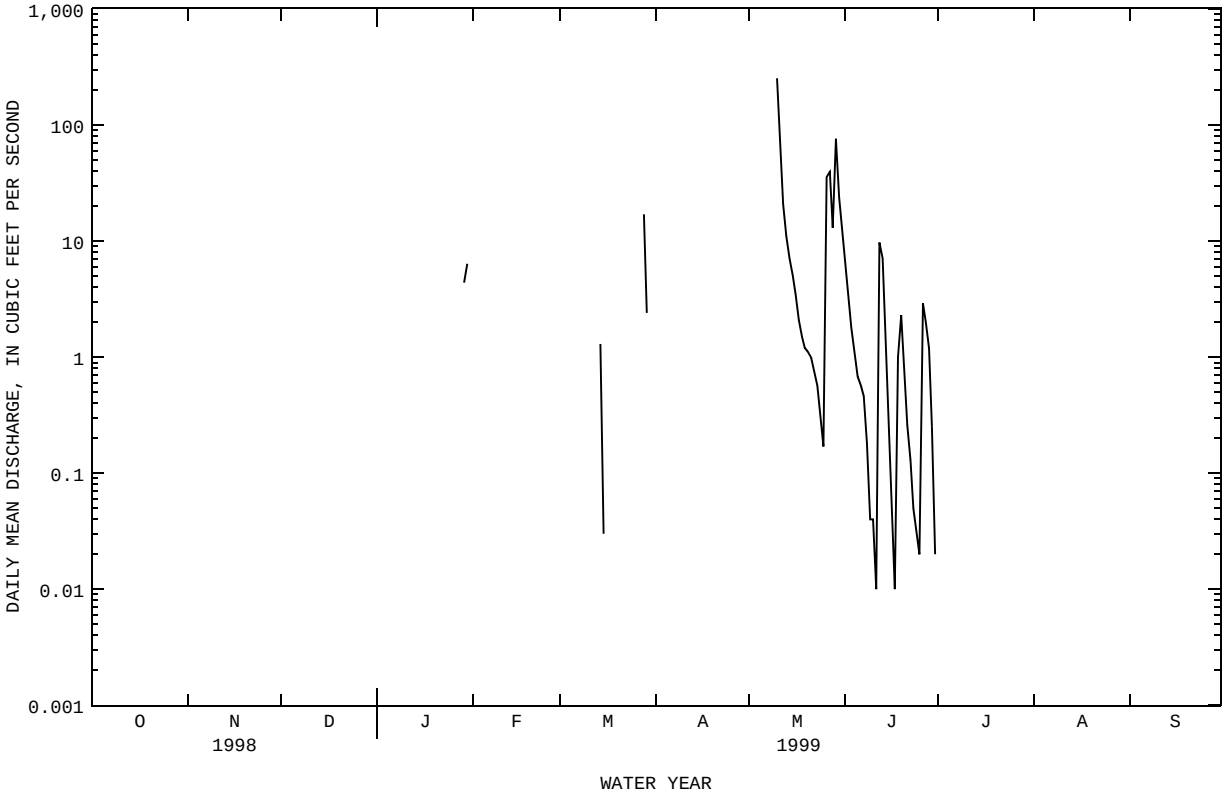
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	3.5	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.68	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.57	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.46	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.18	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	253	.04	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	58	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	21	9.7	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	11	7.1	.00	.00	.00
14	.00	.00	.00	.00	.00	1.3	.00	7.1	2.7	.00	.00	.00
15	.00	.00	.00	.00	.00	.03	.00	5.1	.69	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	3.5	.11	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	2.1	.01	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	1.5	1.0	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	1.2	2.3	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	1.1	.90	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.98	.26	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.74	.13	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.57	.05	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.30	.03	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.17	.02	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	36	2.9	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	40	2.0	.00	.00	.00
28	.00	.00	.00	.00	.00	17	.00	13	1.2	.00	.00	.00
29	.00	.00	.00	4.4	---	2.4	.00	76	.25	.00	.00	.00
30	.00	.00	.00	6.4	---	.00	.00	24	.02	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	12	---	.00	.00	---
TOTAL	0.00	0.00	0.00	10.80	0.00	20.73	0.00	568.36	46.25	0.00	0.00	0.00
MEAN	.000	.000	.000	.35	.000	.67	.000	18.3	1.54	.000	.000	.000
MAX	.00	.00	.00	6.4	.00	17	.00	253	9.7	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
AC-FT	.00	.00	.00	21	.00	41	.00	1130	92	.00	.00	.00
CFSM	.00	.00	.00	.01	.00	.02	.00	.47	.04	.00	.00	.00
IN.	.00	.00	.00	.01	.00	.02	.00	.54	.04	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

MEAN	24.6	16.2	43.1	20.3	31.9	38.0	44.7	63.7	31.8	25.2	1.17	6.80
MAX	135	66.3	326	73.1	95.3	107	259	168	193	293	6.76	32.0
(WY)	1992	1997	1992	1992	1993	1998	1990	1989	1989	1994	1996	1992
MIN	.000	.000	.000	.35	.000	.67	.000	.059	.000	.000	.000	.000
(WY)	1988	1990	1999	1999	1999	1999	1999	1996	1996	1988	1986	1995

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL TOTAL	5848.72		646.14			
ANNUAL MEAN	16.0		1.77		29.0	
HIGHEST ANNUAL MEAN					72.7	1992
LOWEST ANNUAL MEAN					1.77	1999
HIGHEST DAILY MEAN	1220	Mar 16	253	May 10	5410	Jul 11 1994
LOWEST DAILY MEAN	.00	May 23	.00	Oct 1	.00	Oct 1 1985
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 15	.00	Oct 1	.00	Oct 1 1985
INSTANTANEOUS PEAK FLOW			403	May 10	13300	Jul 10 1994
INSTANTANEOUS PEAK STAGE			11.82	May 10	14.94	Jul 10 1994
ANNUAL RUNOFF (AC-FT)	11600		1280		21000	
ANNUAL RUNOFF (CFSM)	.41		.046		.75	
ANNUAL RUNOFF (INCHES)	5.61		.62		10.15	
10 PERCENT EXCEEDS	14		.80		27	
50 PERCENT EXCEEDS	.00		.00		1.6	
90 PERCENT EXCEEDS	.00		.00		.00	

08050800 TIMBER CREEK NEAR COLLINSVILLE, TX--Continued



08050840 RANGE CREEK NEAR COLLINSVILLE, TX

LOCATION.--Lat 33°31'34", long 96°48'25", Grayson County, Hydrologic Unit 12030103, on downstream left bank at bridge on Farm Road 902, 1.8 mi upstream from Case Creek, 2.5 mi downstream from Little Elm Creek, 6.5 mi east southeast from Post Office in Collinsville.

DRAINAGE AREA.--29.2 mi^2.

PERIOD OF RECORD.--Oct 1992 to current year.
Water-quality records.--Chemical data: Oct 1992 to Sep 1995. Biochemical data: Oct 1992 to Sep 1995.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 621.8 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversion. No flow many days most years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

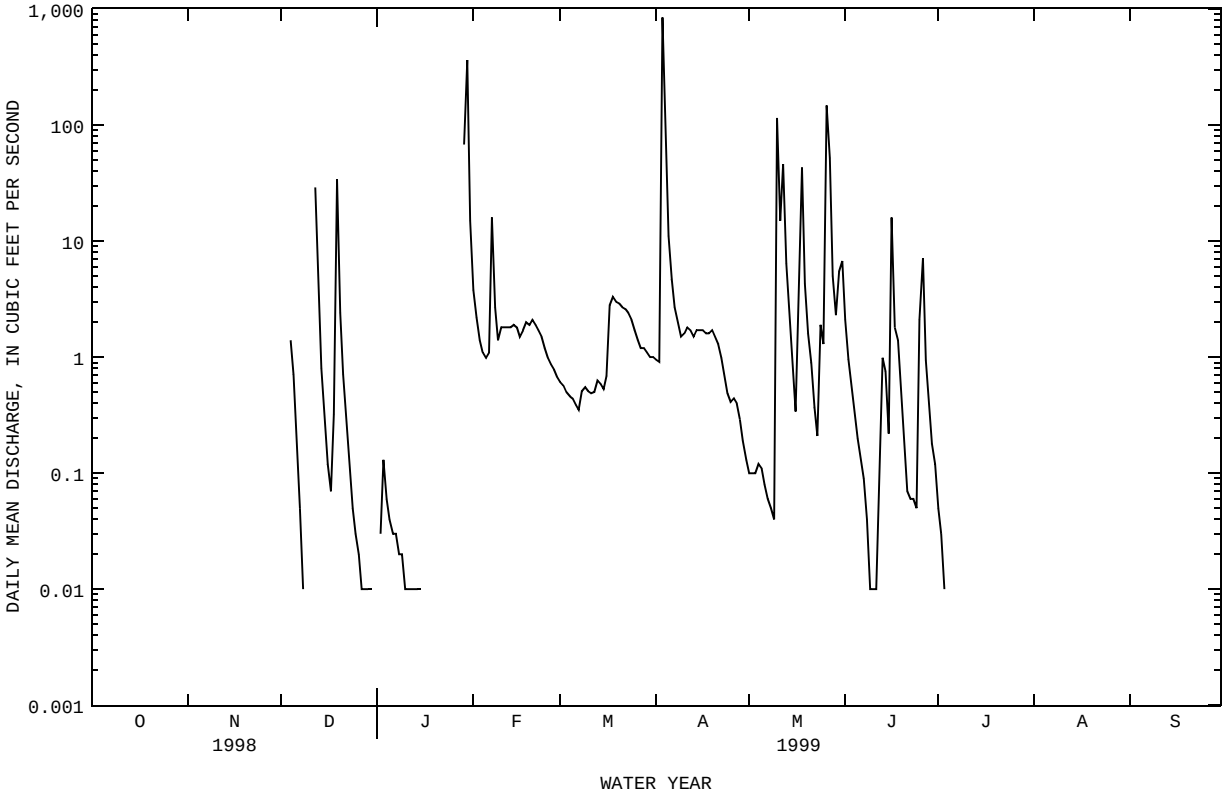
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	3.8	.61	.95	.10	2.1	.05	.00	.00
2	.00	.00	.00	.03	2.2	.57	.91	.10	.96	.03	.00	.00
3	.00	.00	.00	.13	1.4	.50	847	.10	.60	.01	.00	.00
4	.00	.00	1.4	.06	1.1	.46	101	.12	.36	.00	.00	.00
5	.00	.00	.71	.04	.99	.44	11	.11	.20	.00	.00	.00
6	.00	.00	.19	.03	1.1	.39	4.7	.08	.13	.00	.00	.00
7	.00	.00	.05	.03	16	.35	2.7	.06	.09	.00	.00	.00
8	.00	.00	.01	.02	2.7	.51	2.0	.05	.04	.00	.00	.00
9	.00	.00	.00	.02	1.4	.55	1.5	.04	.01	.00	.00	.00
10	.00	.00	.00	.01	1.8	.51	1.6	115	.01	.00	.00	.00
11	.00	.00	.00	.01	1.8	.49	1.8	15	.01	.00	.00	.00
12	.00	.00	29	.01	1.8	.50	1.7	46	.08	.00	.00	.00
13	.00	.00	4.3	.01	1.8	.63	1.5	6.4	.99	.00	.00	.00
14	.00	.00	.80	.01	1.9	.59	1.7	2.2	.76	.00	.00	.00
15	.00	.00	.26	.01	1.8	.53	1.7	.90	.22	.00	.00	.00
16	.00	.00	.12	.00	1.5	.69	1.7	.34	16	.00	.00	.00
17	.00	.00	.07	.00	1.7	2.8	1.6	1.9	1.8	.00	.00	.00
18	.00	.00	.32	.00	2.0	3.3	1.6	43	1.4	.00	.00	.00
19	.00	.00	34	.00	1.9	3.0	1.7	4.3	.56	.00	.00	.00
20	.00	.00	2.4	.00	2.1	2.9	1.5	1.6	.19	.00	.00	.00
21	.00	.00	.71	.00	1.9	2.7	1.3	.89	.07	.00	.00	.00
22	.00	.00	.31	.00	1.7	2.6	.99	.37	.06	.00	.00	.00
23	.00	.00	.13	.00	1.5	2.4	.68	.21	.06	.00	.00	.00
24	.00	.00	.05	.00	1.2	2.1	.49	1.9	.05	.00	.00	.00
25	.00	.00	.03	.00	.98	1.7	.41	1.3	2.1	.00	.00	.00
26	.00	.00	.02	.00	.87	1.4	.44	147	7.1	.00	.00	.00
27	.00	.00	.01	.00	.78	1.2	.40	52	.94	.00	.00	.00
28	.00	.00	.01	.00	.67	1.2	.29	5.0	.41	.00	.00	.00
29	.00	.00	.01	68	---	1.1	.19	2.3	.18	.00	.00	.00
30	.00	.00	.01	363	---	1.0	.13	5.5	.12	.00	.00	.00
31	.00	---	.00	15	---	1.0	---	6.7	---	.00	.00	---
TOTAL	0.00	0.00	74.92	446.42	60.39	38.72	995.18	460.57	37.60	0.09	0.00	0.00
MEAN	.000	.000	2.42	14.4	2.16	1.25	33.2	14.9	1.25	.003	.000	.000
MAX	.00	.00	34	363	16	3.3	847	147	16	.05	.00	.00
MIN	.00	.00	.00	.00	.67	.35	.13	.04	.01	.00	.00	.00
AC-FT	.00	.00	149	885	120	77	1970	914	75	.2	.00	.00
CFSM	.00	.00	.08	.49	.07	.04	1.14	.51	.04	.00	.00	.00
IN.	.00	.00	.10	.57	.08	.05	1.27	.59	.05	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

MEAN	22.4	46.6	26.4	20.4	28.2	31.5	24.8	26.6	6.67	5.25	.88	2.68
MAX	107	204	66.0	108	116	81.6	60.5	86.5	28.3	36.7	4.72	9.54
(WY)	1994	1997	1998	1998	1997	1998	1997	1995	1993	1994	1994	1994
MIN	.000	.000	2.42	.61	.000	1.25	.15	.000	.000	.000	.000	.000
(WY)	1993	1996	1999	1997	1996	1999	1998	1996	1996	1993	1993	1997

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1993 - 1999	
ANNUAL TOTAL	6665.75		2113.89			
ANNUAL MEAN	18.3		5.79		20.1	
HIGHEST ANNUAL MEAN					38.3	1997
LOWEST ANNUAL MEAN					1.88	1996
HIGHEST DAILY MEAN	1260	Mar 16	847	Apr 3	2580	Oct 19 1993
LOWEST DAILY MEAN	.00	Apr 15	.00	Oct 1	.00	Oct 1 1992
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 18	.00	Oct 1	.00	Oct 1 1992
INSTANTANEOUS PEAK FLOW			2310	Apr 3	7640	Oct 19 1993
INSTANTANEOUS PEAK STAGE			19.25	Apr 3	23.32	Oct 19 1993
ANNUAL RUNOFF (AC-FT)	13220		4190		14580	
ANNUAL RUNOFF (CFSM)	.63		.20		.69	
ANNUAL RUNOFF (INCHES)	8.49		2.69		9.37	
10 PERCENT EXCEEDS	3.6		2.2		9.8	
50 PERCENT EXCEEDS	.00		.01		.04	
90 PERCENT EXCEEDS	.00		.00		.00	

08050840 RANGE CREEK NEAR COLLINSVILLE, TX--Continued



08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX

LOCATION.--Lat 32°21'19", long 97°02'59", Denton County, Hydrologic Unit 12030103, in control room of outlet works tower located 336 ft upstream from centerline of Ray Roberts Dam (and Farm Road 455 which is located on top of dam) on Elm Fork Trinity River, 3.7 mi upstream from Bray Branch, 5.7 mi southwest of Pilot Point, and at river mile 60.0.

DRAINAGE AREA.--692 mi^2.

PERIOD OF RECORD.--Jul 1987 to current year.
Water-qualiy records.--Chemical data: Feb 1989 to Sep 1998.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Lake is formed by a rolled earthfill dam 15,250 ft long. There is an uncontrolled, broad-crested spillway excavated in natural ground about 5,000 ft right of right end of dam. A reinforced concrete tower houses the flood-control and low-flow gates and operating equipment. Construction started Sep 16, 1980, and closure was made in May 1986. The dam was built and is owned by the U.S. Army Corps of Engineers. Deliberate impoundment started Jun 30, 1987. The lake was built for water supply, flood control, and recreation purposes. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	665.0
Spillway crest (uncontrolled)	645.5
Top of flood-control pool	640.5
Top of conservation pool	632.5
Invert, lowest gated outlet	551.0

COOPERATION.--Record of contents provided by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,219,000 acre-ft, May 3, 1990 (elevation, 644.48 ft); minimum contents after initial filling, 498,400 acre-ft, Jun 1, 1989 (elevation, 620.35 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 730,100 acre-ft, Jun 13 (elevation, 630.04 ft); minimum contents, 654,100 acre-ft, Sep 30 (elevation, 627.15 ft).

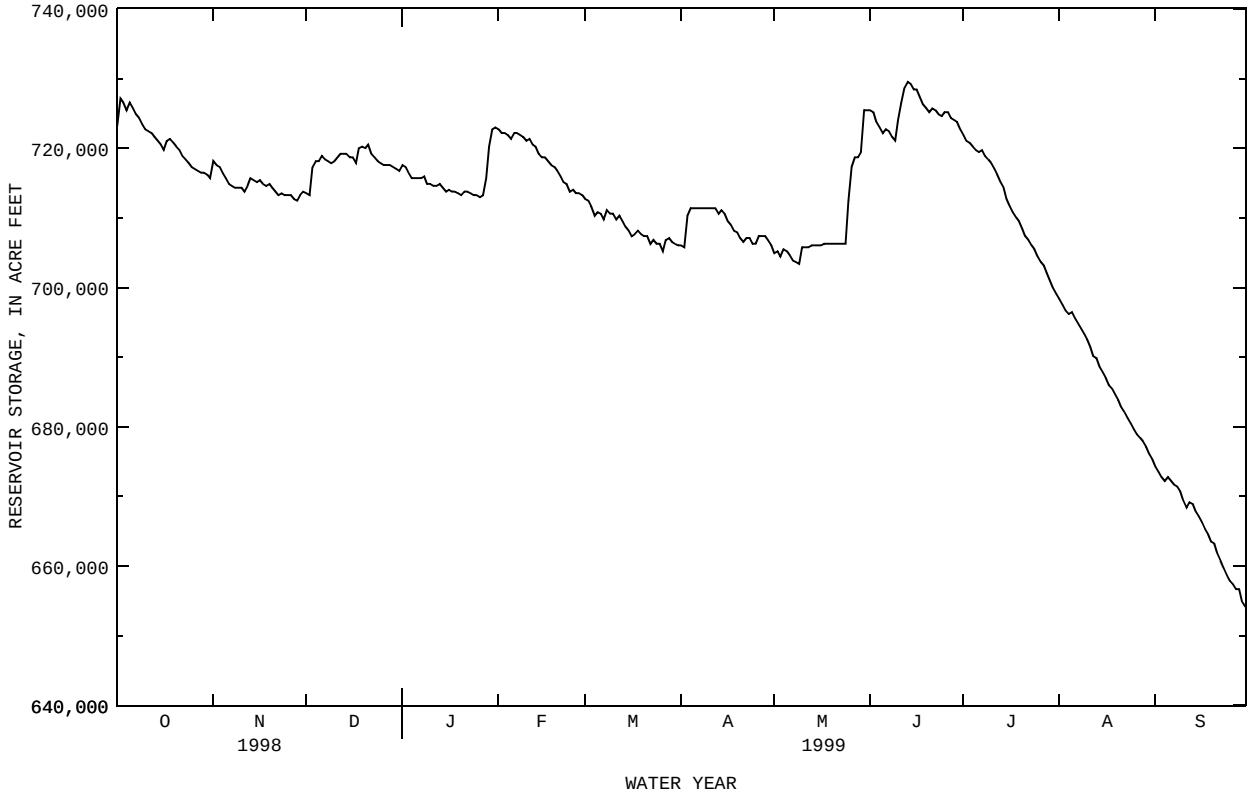
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	723300	718100	713500	717600	722700	712700	706000	705000	725400	721900	698300	674300
2	727100	717600	713300	717300	722200	712500	705800	705200	725200	721100	697500	673500
3	726500	717300	717300	716500	722200	711700	710300	704400	723800	720800	696700	672700
4	725400	716500	718100	715700	721900	710300	711400	705500	723000	720300	696200	672200
5	726500	715700	718100	715700	721400	710900	711400	705200	722200	719700	696500	672700
6	725700	714900	718900	715700	722200	710600	711400	704700	722700	719500	695700	672200
7	724900	714600	718400	715700	722200	709800	711400	703900	722500	719700	694900	671700
8	724400	714300	718100	716000	721900	711100	711400	703600	721600	718900	694100	671500
9	723500	714300	717900	714900	721600	710600	711400	703400	721100	718400	693300	670700
10	722700	714300	718100	714900	721100	710600	711400	705800	724100	717900	692500	669400
11	722500	713800	718700	714600	721400	709800	711400	705800	726500	717000	691500	668400
12	722200	714600	719200	714600	720600	710300	711400	705800	728700	716200	690100	669100
13	721600	715700	719200	714900	720300	709500	710600	706000	729500	715200	689900	668900
14	721100	715400	719200	714300	719200	708700	711100	706000	729300	714300	688600	667900
15	720600	715200	718700	713800	718700	708200	710600	706000	728400	712700	687800	667100
16	719700	715400	718700	714100	718700	707400	709500	706000	728400	711700	687000	666300
17	721100	714900	717900	713800	718100	707600	709000	706300	727300	710900	686000	665300
18	721400	714600	720000	713800	717600	708200	708200	706300	726300	710000	685400	664500
19	720800	714900	720300	713500	717300	707600	707900	706300	725700	709500	684700	663500
20	720300	714300	720000	713300	716800	707400	707100	706300	725200	708400	683900	663300
21	719700	713800	720600	713800	716000	707400	706600	706300	725700	707400	682800	661700
22	718900	713300	719200	713800	715200	706300	707100	706300	725400	706800	682100	660700
23	718400	713500	718700	713500	714900	706800	707100	706300	724900	706000	681300	659700
24	717900	713300	718100	713300	713800	706300	706300	706300	724600	705500	680500	658700
25	717300	713300	717900	713300	714100	706300	706300	712500	725200	704400	679700	657900
26	717000	713300	717600	713000	713500	705200	707400	717300	725200	703600	678900	657400
27	716800	712700	717600	713300	713500	706800	707400	718700	724400	703100	678400	656700
28	716500	712500	717600	715700	713300	707100	707400	718700	724100	702000	677900	656700
29	716500	713300	717300	720300	---	706600	706800	719500	723800	701000	677100	654900
30	716200	713800	717000	722700	---	706300	706000	725400	722700	699900	676100	654100
31	715700	---	716800	723000	---	706000	---	725400	---	699100	675300	---
MAX	727100	718100	720600	723000	722700	712700	711400	725400	729500	721900	698300	674300
MIN	715700	712500	713300	713000	713300	705200	705800	703400	721100	699100	675300	654100
(+)	629.51	629.44	629.55	629.78	629.42	629.15	629.15	629.87	629.77	628.89	627.98	627.15
(@)	-8400	-1900	+3000	+6200	-9700	-7300	0	+19400	-2700	-23600	-23800	-21200

CAL YR 1998 MAX 877600 MIN 712500 (@) -55700
WTR YR 1999 MAX 729500 MIN 654100 (@) -70000

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued



08051500 CLEAR CREEK NEAR SANGER, TX

LOCATION.--Lat 33°20'10", long 97°10'45", Denton County, Hydrologic Unit 12030103, at the downstream side near right end of bridge on county road, 1,350 ft downstream from Duck Creek, 1.1 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 1.8 mi south of Sanger.

DRAINAGE AREA.--295 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Mar 1949 to current year.

REVISED RECORDS.--WSP 1512: 1950, 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 582.23 ft above sea level. Prior to Apr 18, 1975, water-stage recorder at datum 5.00 ft higher. Apr 18, 1975, to Jun 9, 1988, at site 950 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since 1980, at least 10% of contributing drainage area has been affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 38,850 acre-ft. These structures control runoff from 149 mi^2 in the Clear Creek watershed. There are no known diversions above station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--31 years (water years 1950-80), 74.3 ft^3/s (53,830 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1950-80).--Maximum discharge, 18,200 ft^3/s Sep 13, 1950 (gage height, 29.80 ft) at site and datum then in use; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 36.5 ft in May 1908, from information by Gulf, Colorado, and Santa Fe Railway Co. Flood in May 1935 reached a stage of 34.0 ft, from information by Texas Department of Transportation. Both peaks now referenced to present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.1	4.8	3.5	18	4.9	22	5.3	339	4.7	.00	.00
2	.00	.16	4.8	5.8	12	4.7	19	5.6	179	3.2	.00	.00
3	.02	.07	6.1	4.9	9.5	4.7	20	6.4	75	1.8	.00	.00
4	.00	.09	17	3.7	7.8	4.3	17	11	41	1.1	.00	.00
5	.00	.01	19	2.7	7.0	4.3	14	17	28	.75	.00	.00
6	.00	.00	7.2	3.0	7.9	3.9	11	13	37	.56	.00	.00
7	.00	.00	4.3	5.4	8.4	4.0	8.9	7.1	112	.33	.00	.00
8	.00	.00	2.8	4.8	8.6	8.8	7.6	4.7	73	.65	.00	.00
9	.00	.00	2.0	4.2	8.1	27	7.0	3.8	28	.62	.00	.00
10	.00	.00	2.9	3.7	6.8	17	6.6	697	17	.54	.00	.00
11	.00	.00	3.2	3.3	6.3	8.7	5.9	623	124	.11	.00	.00
12	.00	.00	13	4.3	6.1	7.0	5.2	168	90	.03	.00	.00
13	.00	3.0	6.7	4.7	5.4	8.4	5.0	62	30	.00	.00	.00
14	.00	.13	6.3	4.2	5.0	8.4	7.3	35	18	.00	.00	.00
15	.00	.03	4.5	3.9	5.0	6.7	14	23	12	.00	.00	.00
16	.00	.02	3.4	3.9	5.5	5.8	14	18	18	.00	.00	.00
17	.00	.01	2.9	4.1	5.5	5.5	8.4	13	9.8	.00	.00	.00
18	.01	.01	8.2	4.1	5.2	7.7	6.6	9.5	6.5	.00	.00	.00
19	.01	.01	7.3	4.2	5.2	65	6.0	8.4	5.2	.00	.00	.00
20	.00	.00	10	4.2	5.0	39	5.9	6.7	4.3	.00	.00	.00
21	.00	.00	6.9	4.6	4.8	19	5.8	5.7	3.8	.00	.00	.00
22	.00	.00	4.3	4.8	4.9	13	5.5	5.2	5.2	.00	.00	.00
23	.00	.00	2.9	4.6	4.9	10	5.4	5.1	7.5	.00	.00	.00
24	.00	.00	e2.2	4.2	4.8	8.0	5.0	5.5	4.9	.00	.00	.00
25	.00	.00	e1.9	4.1	4.9	7.3	4.8	10	9.7	.00	.00	.00
26	.01	.00	e2.9	4.3	5.2	6.6	8.2	353	111	.00	.00	.00
27	.00	.00	e3.7	4.2	5.1	8.6	52	434	39	.00	.00	.00
28	.00	.16	e4.3	4.6	5.0	57	26	139	20	.00	.00	.00
29	.00	.91	e3.8	23	---	79	13	81	11	.00	.00	.00
30	.00	2.6	3.6	124	---	38	7.3	579	6.8	.00	.00	.00
31	.00	---	3.4	37	---	27	---	519	---	.00	.00	---
TOTAL	0.05	9.31	176.3	302.0	187.9	519.3	344.4	3874.0	1465.7	14.39	0.00	0.00
MEAN	.002	.31	5.69	9.74	6.71	16.8	11.5	125	48.9	.46	.000	.000
MAX	.02	3.0	19	124	18	79	52	697	339	4.7	.00	.00
MIN	.00	.00	1.9	2.7	4.8	3.9	4.8	3.8	3.8	.00	.00	.00
AC-FT	.1	18	350	599	373	1030	683	7680	2910	29	.00	.00

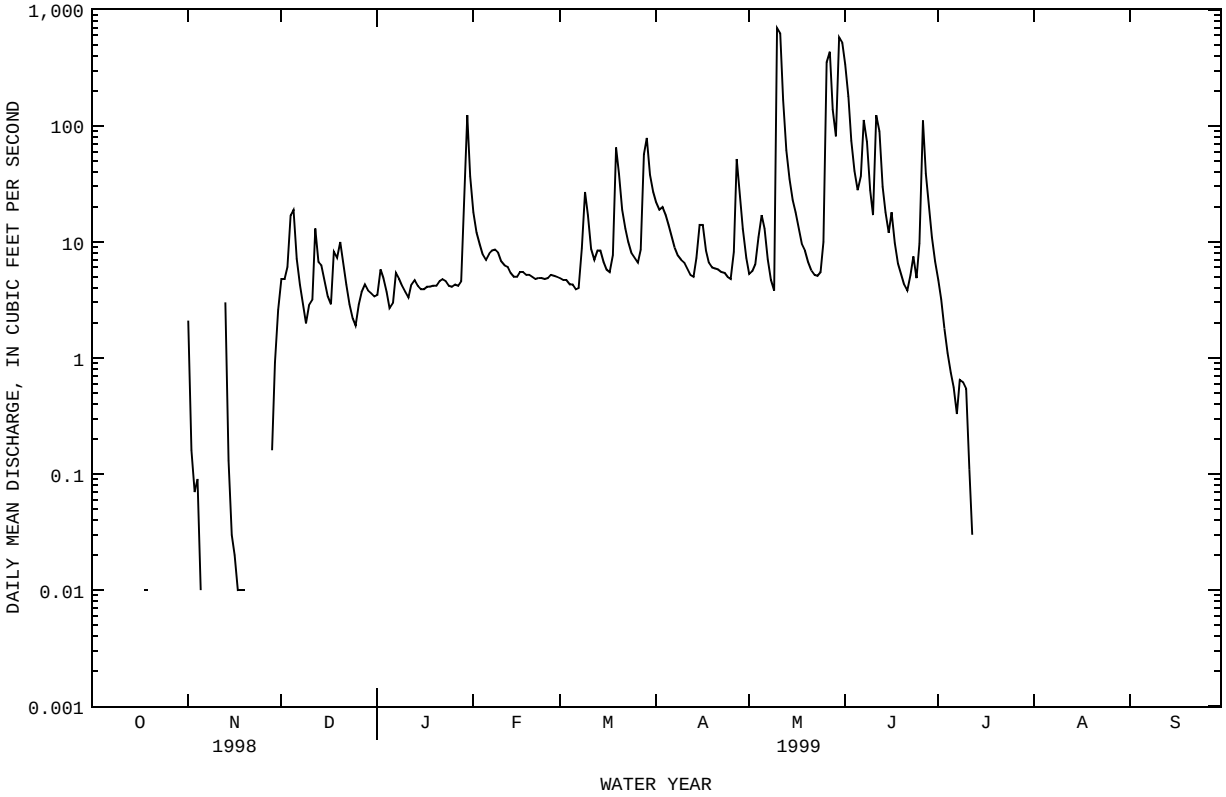
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999z, BY WATER YEAR (WY)

MEAN	207	91.7	136	82.8	177	218	199	381	242	32.1	9.27	29.2
MAX	2739	526	1157	421	893	719	1811	1764	1307	174	68.5	155
(WY)	1982	1995	1992	1992	1997	1990	1990	1990	1989	1982	1995	1986
MIN	.002	.31	5.69	6.62	6.71	16.8	11.5	8.51	3.12	.16	.000	.000
(WY)	1999	1999	1999	1981	1999	1999	1999	1996	1996	1984	1988	1983

08051500 CLEAR CREEK NEAR SANGER, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1981 - 1999z	
ANNUAL TOTAL	31885.70		6893.35			
ANNUAL MEAN	87.4		18.9		150	
HIGHEST ANNUAL MEAN					476	1982
LOWEST ANNUAL MEAN					12.4	1996
HIGHEST DAILY MEAN	4130	Mar 16	697	May 10	39700	Oct 13 1981
LOWEST DAILY MEAN	.00	Jul 17	.00	Oct 1	.00	Oct 12 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 17	.00	Oct 4	.00	Aug 2 1981
INSTANTANEOUS PEAK FLOW			1790	May 10	104000	Oct 13 1981
INSTANTANEOUS PEAK STAGE			12.51	May 10	35.70	Oct 13 1981
ANNUAL RUNOFF (AC-FT)	63250		13670		108900	
10 PERCENT EXCEEDS	177		24		262	
50 PERCENT EXCEEDS	6.7		4.2		25	
90 PERCENT EXCEEDS	.00		.00		.16	

e Estimated
z Period of regulated streamflow.



08051500 CLEAR CREEK NEAR SANGER, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Apr 1959, Jan 1966, Oct 1984 to Sep 1996, Oct 1997 to current year.
PESTICIDE DATA: May 1997 to current year.
SEDIMENT DATA: Feb 1966 to May 1977, Oct 1997 to Sep 1999(discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1969 to Aug 1977.
WATER TEMPERATURE: May 1968 to Aug 1977.
SUSPENDED SEDIMENT DISCHARGE: May 1968 to Aug 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,920 microsiemens, Oct 12, 1976; minimum daily, 182 microsiemens, Jul 29, 1973.
WATER TEMPERATURE: Maximum daily, 39.0°C, Jun 8, 1969; minimum daily, 0.0°C, Jan 9, 1970.
SEDIMENT CONCENTRATION: Maximum daily mean, 7,370 mg/L, May 12, 1972; minimum, no flow on many days.
SEDIMENT LOADS: Maximum daily, 79,000 tons May 7, 1969; minimum daily, 0 tons on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV											
17...	1030	.01	252	7.9	13.5	4.9	48	96	--	34	2.7
DEC											
15...	1045	4.6	621	8.2	6.5	10.3	85	230	28	67	16
JAN											
19...	1030	4.1	691	8.0	6.5	9.2	78	260	27	73	20
FEB											
09...	1020	8.2	605	8.1	15.2	7.6	79	230	36	69	14
MAR											
09...	1010	20	622	8.2	11.2	9.1	86	230	22	65	17
APR											
13...	1010	4.6	568	8.0	19.9	6.3	71	220	19	66	12
MAY											
18...	1040	9.4	513	8.3	21.2	6.8	79	210	23	66	10
JUN											
08...	1020	78	300	8.2	26.2	7.4	95	130	8	47	3.8
JUL											
13...	1030	.01	482	8.1	26.1	7.0	89	160	13	50	8.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
NOV											
17...	12	.5	3.1	98	16	8.4	.22	6.2	156	141	.240
DEC											
15...	40	1	2.6	210	59	38	.25	12	362	359	--
JAN											
19...	46	1	1.6	240	71	44	.24	9.2	424	407	--
FEB											
09...	35	1	2.5	200	58	34	.29	4.7	360	344	--
MAR											
09...	43	1	2.0	210	63	41	.21	7.7	379	364	--
APR											
13...	34	1	2.5	200	50	31	.24	7.3	335	321	--
MAY											
18...	26	.8	3.7	180	45	23	.26	10	309	294	--
JUN											
08...	10	.4	4.2	130	19	8.5	.22	9.3	210	178	--
JUL											
13...	31	1	3.9	150	42	34	.30	9.4	289	267	--

08051500 CLEAR CREEK NEAR SANGER, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
NOV											
17...	.012	.252	.020	.85	.57	.30	.32	.60	.059	<.050	.014
DEC											
15...	.015	<.050	.022	--	.14	.13	.16	.17	<.050	<.050	.011
JAN											
19...	<.010	<.050	<.020	--	--	--	.19	.33	.016	.006	<.010
FEB											
09...	<.010	<.050	<.020	--	--	--	.19	.38	.031	.006	<.010
MAR											
09...	.011	<.050	<.020	--	--	--	.22	.20	.032	.006	.024
APR											
13...	<.010	<.050	.123	--	.31	.07	.19	.43	.043	.006	<.010
MAY											
18...	<.010	.052	<.020	.56	--	--	.26	.51	.046	.009	.016
JUN											
08...	<.010	.207	.024	1.0	.77	.43	.45	.80	.180	.044	.034
JUL											
13...	<.010	<.050	<.020	--	--	--	.29	.32	.024	.007	<.010

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
NOV											
17...	.04	32	.00	94	E6.0	E2.0	--	--	--	--	--
DEC											
15...	.03	43	.53	88	<10	14	--	--	--	--	--
JAN											
19...	--	27	.30	79	<10	25	--	--	--	--	--
FEB											
09...	--	43	.95	95	<10	22	--	--	--	--	--
MAR											
09...	.07	81	4.4	71	E5.4	14	<.0070	<.0020	<.0050	<.0180	<.0020
APR											
13...	--	62	.77	77	<10	8.0	<.0070	<.0020	<.0050	<.0180	E.0049
MAY											
18...	.05	55	1.4	87	<10	E2.7	<.0070	<.0020	<.0050	<.0180	E.0149
JUN											
08...	.10	140	29	98	E6.5	<3.0	<.0070	<.0020	E.0041	<.0180	E.113
JUL											
13...	--	28	.00	97	<10	4.1	<.0070	<.0020	4.71	3.07	E2.29

DATE	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	LINDANE DIS-SOLVED (UG/L) (39341)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	MALA-THION, DIS-SOLVED (UG/L) (39532)	PARA-THION, DIS-SOLVED (UG/L) (39542)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
NOV											
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
15...	--	--	--	--	--	--	--	--	--	--	--
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	--	--	--	--	--	--	--	--	--	--	--
MAR											
09...	<.0040	<.0030	<.0020	E.0008	<.0040	<.004	<.001	.004	<.005	<.004	.013
APR											
13...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.005	<.005	<.004	<.002
MAY											
18...	<.0040	<.0030	<.0020	E.0010	<.0040	<.004	<.001	.086	<.005	<.004	<.002
JUN											
08...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.225	<.005	<.004	.007
JUL											
13...	4.06	<.0030	<.0020	<.0060	<.0040	<.004	<.001	3.56	<.005	<.004	<.002

08051500 CLEAR CREEK NEAR SANGER, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
NOV 17...	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 19...	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 09...	.010	<.005	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
APR 13...	.017	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
MAY 18...	.174	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JUN 08...	.935	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JUL 13...	5.05	3.57	.027	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
NOV 17...	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 19...	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.0020	<.0040	.0191	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
APR 13...	<.0020	<.0040	.0558	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
MAY 18...	<.0020	<.0040	E.177	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JUN 08...	<.0020	<.0040	.0153	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JUL 13...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	E5.82	<.0130	<.0030	<.0170

DATE	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
NOV 17...	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 19...	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
APR 13...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
MAY 18...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
JUN 08...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
JUL 13...	<.0010	<.0040	E5.18	<.0020	3.18	<.0040	<.0030	2.54	<.0010	<.0050

This page intentionally left blank.

08052700 LITTLE ELM CREEK NEAR AUBREY, TX

LOCATION.--Lat 33°17'00", long 96°53'33", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of bridge on Farm Road 1385, 1.5 mi upstream from Mustang Creek, 5.5 mi east of Aubrey, and 18 mi upstream from Lewisville Dam on the Elm Fork Trinity River.

DRAINAGE AREA.--75.5 mi^2.

PERIOD OF RECORD.--Jun 1956 to Sep 1976, Oct 1979 to current year.
Water-quality records.-- Chemical data: Feb 1966 to Sep 1975. Specific Conductance: Dec 1966 to Sep 1975. Water Temperature: Feb 1966 to Sep 1975. Sediment: Feb 1966 to Sep 1975.

REVISED RECORDS.--WRD TX-70-l: 1969.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 534.76 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There are several small diversions above station for irrigation. Since water year 1965, at least 10% of contributing drainage area has been affected at times by discharge from the flood-detention pools of 17 floodwater-retarding structures with a combined detention capacity of 10,460 acre-ft. These structures control runoff from 36.4 mi^2 above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--10 years (water years 1956-65), 40.6 ft^3/s (29,420 ac-ft/yr).

EXTREMES FOR PERIOD OF RECORD PRIOR TO REGULATION (WATER YEARS 1956-65).--Maximum discharge, 7,830 ft^3/s Apr 26, 1957 (gage height, 17.34 ft). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 18.2 ft in May 1941, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.2	2.0	.21	78	.12	1.5	.75	118	.08	.00	.00
2	.38	1.8	.53	.10	36	.15	2.6	1.9	66	.07	.00	.00
3	27	.45	16	3.4	14	4.1	185	2.5	26	.05	.00	.00
4	4.8	.03	622	1.4	5.8	4.8	156	48	13	.04	.00	.00
5	1.0	.00	e137	.48	2.8	4.1	48	8.7	7.8	.03	.00	.00
6	1.5	.00	e45	.43	1.6	2.0	20	1.3	4.5	.03	.00	.00
7	.44	.00	e15	.36	8.8	.09	6.4	.32	2.1	.21	.00	.00
8	.04	.00	6.9	.50	3.5	.44	1.8	.05	1.3	.69	.01	.03
9	.00	.00	3.7	.39	1.5	3.4	.57	.08	.79	1.8	.00	.05
10	.00	.02	29	.51	.78	1.6	.11	193	.70	.56	.00	.04
11	.00	.19	80	.53	.49	.45	.04	154	16	.23	.00	.02
12	.00	.07	582	.47	.19	.14	.00	154	50	.11	.00	.00
13	.00	130	174	.45	.00	1.4	.07	154	293	.06	.00	.25
14	.00	37	60	.44	.00	2.5	.24	40	45	.04	.00	.34
15	.00	8.4	21	.56	.01	1.6	.31	17	22	.02	.00	.31
16	.00	3.9	9.9	.82	.04	.55	.33	7.1	29	.01	.00	.13
17	.05	1.6	5.7	.64	.03	.24	.14	3.1	9.0	.00	.00	.06
18	34	.67	44	.58	.00	.14	.05	2.0	4.8	.00	.00	.04
19	4.6	.35	285	.66	.00	.22	.01	.69	2.2	.00	.00	.02
20	.92	.08	59	.63	.00	.57	.00	.00	1.2	.01	.00	.00
21	.27	.03	16	.66	.00	.89	.00	.00	.77	.01	.00	.00
22	.02	.01	5.4	.73	.00	.75	.04	.00	.74	.01	.00	.00
23	.00	.01	1.5	.66	.00	.69	.23	.00	2.4	.01	.00	.00
24	.00	.02	e.92	.70	.00	.47	.36	.00	1.5	.00	.00	.00
25	.00	.04	e.91	.96	.00	.50	.52	.00	.80	.00	.00	.00
26	.00	.01	e.72	1.2	.00	.45	.84	236	.58	.00	.00	.00
27	.00	.02	.59	1.3	.00	.52	1.2	370	.36	.00	.00	.00
28	.00	.23	.58	1.4	.00	1.2	.72	63	.26	.00	.00	.03
29	.00	.21	.52	140	---	1.4	.47	21	.18	.00	.00	.08
30	.00	1.5	.17	481	---	1.7	.63	542	.14	.00	.00	.03
31	.00	---	.10	191	---	1.6	---	451	---	.00	.00	---
TOTAL	75.02	187.84	2225.14	833.17	153.54	38.78	428.18	2471.49	720.12	4.07	0.01	1.43
MEAN	2.42	6.26	71.8	26.9	5.48	1.25	14.3	79.7	24.0	.13	.000	.048
MAX	34	130	622	481	78	4.8	185	542	293	1.8	.01	.34
MIN	.00	.00	.10	.10	.00	.09	.00	.00	.14	.00	.00	.00
AC-FT	149	373	4410	1650	305	77	849	4900	1430	8.1	.02	2.8

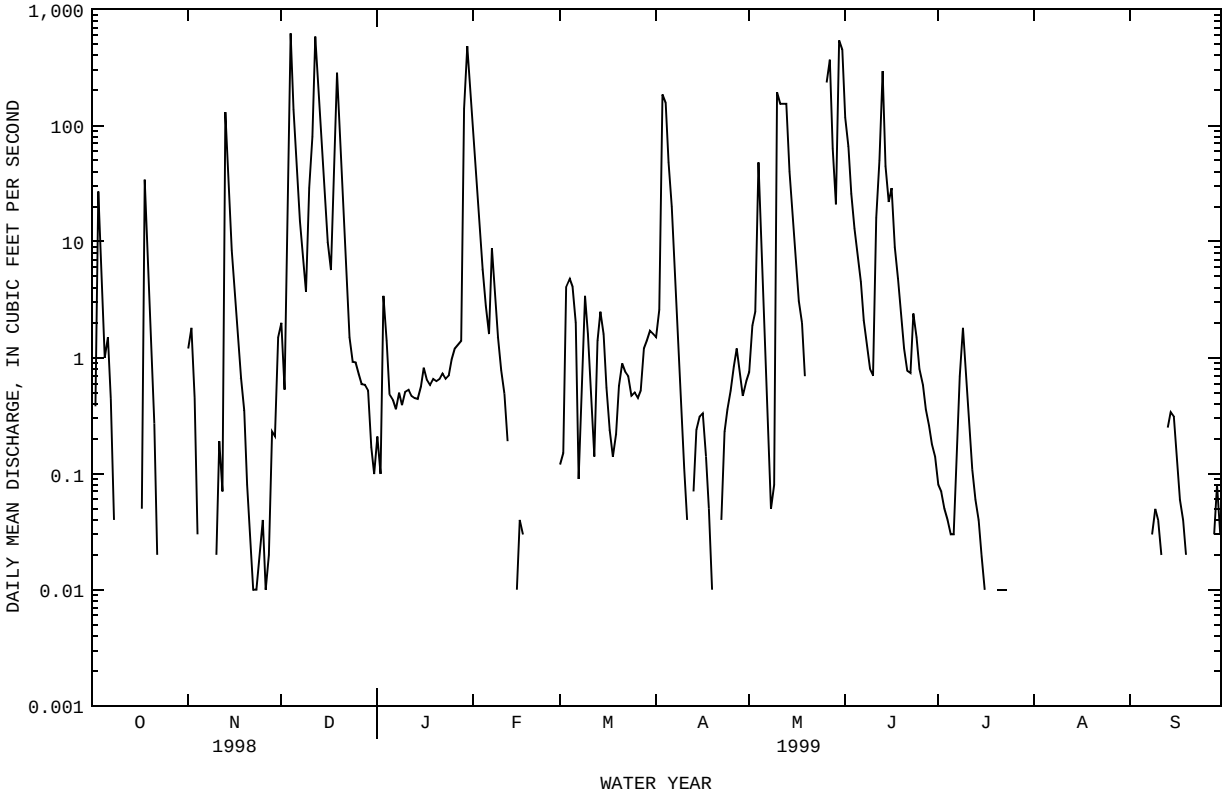
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999hz, BY WATER YEAR (WY)

MEAN	72.8	63.9	62.0	27.9	71.2	61.5	55.9	119	58.4	23.0	2.97	22.0
MAX	641	530	398	208	315	251	281	897	286	540	28.5	148
(WY)	1982	1997	1992	1998	1986	1990	1966	1982	1989	1994	1966	1973
MIN	.000	.000	.000	.009	.066	.052	.12	.000	.000	.000	.000	.000
(WY)	1976	1976	1976	1976	1976	1980	1971	1988	1972	1966	1967	1969

08052700 LITTLE ELM CREEK NEAR AUBREY, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999hz	
ANNUAL TOTAL	19302.97		7138.79			
ANNUAL MEAN	52.9		19.6		53.3	
HIGHEST ANNUAL MEAN					178	1982
LOWEST ANNUAL MEAN					3.89	1971
HIGHEST DAILY MEAN	1780	Mar 16	622	Dec 4	11600	Jul 11 1994
LOWEST DAILY MEAN	.00	Apr 2	.00	Oct 1	.00	Oct 13 1965
ANNUAL SEVEN-DAY MINIMUM	.00	May 1	.00	Oct 9	.00	Oct 13 1965
INSTANTANEOUS PEAK FLOW			1200	May 31	36200	Jul 11 1994
INSTANTANEOUS PEAK STAGE			14.72	May 31	18.27	Jul 11 1994
ANNUAL RUNOFF (AC-FT)	38290		14160		38600	
10 PERCENT EXCEEDS	129		35		101	
50 PERCENT EXCEEDS	.01		.33		.95	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX

LOCATION.--Lat 33°04'09", long 96°57'51", Denton County, Hydrologic Unit 12030103, in intake structure of Lewisville Dam on Elm Fork Trinity River, 2 mi upstream from bridge on State Highway 121, 2.4 mi northeast of Lewisville, 12 mi upstream from Denton Creek, and 30.0 mi upstream from mouth.

DRAINAGE AREA.--1,660 mi^2.

PERIOD OF RECORD.--Nov 1954 to current year. Prior to Oct 1970, published as Garza-Little Elm Reservoir near Lewisville.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to May 17, 1955, nonrecording gage at site 4,000 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 32,888 ft long, including a 560-ft uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov 1, l954, and the dam was completed in Aug 1955. The controlled low-flow outlet works consist of a 16.0-ft-diameter conduit that is controlled by three 6.5- by 13.0-ft broome-type gates and two 60-in steel pipes with service valves. The lake was built for flood control and water conservation. The city of Dallas obtains most of its municipal water supply from this lake. The capacity table is based on a survey made in 1965. Inflow is affected at times by discharge from the flood-detention pools of 118 floodwater-retarding structures with a combined detention capacity of 81,670 acre-ft. These structures control runoff from 298 mi in the Elm Fork Trinity River, Clear, Little Elm, and Hickory Creeks watersheds. An unknown amount of water was diverted for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	560.0
Crest of spillway	532.0
Top of conservation pool	522.0
Lowest intakes to wet wells (invert)	481.0
Invert of three broome-type gates	448.0

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,181,000 acre-ft, May 4, 1990 (elevation, 536.73 ft); minimum since initial filling in 1957, 184,700 acre-ft, Sep 28, 1980 (elevation, 498.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 482,000 acre-ft, Jun 2-3 (elevation, 516.03 ft); minimum contents, 356,000 acre-ft, Sep 30 (elevation, 510.22 ft).

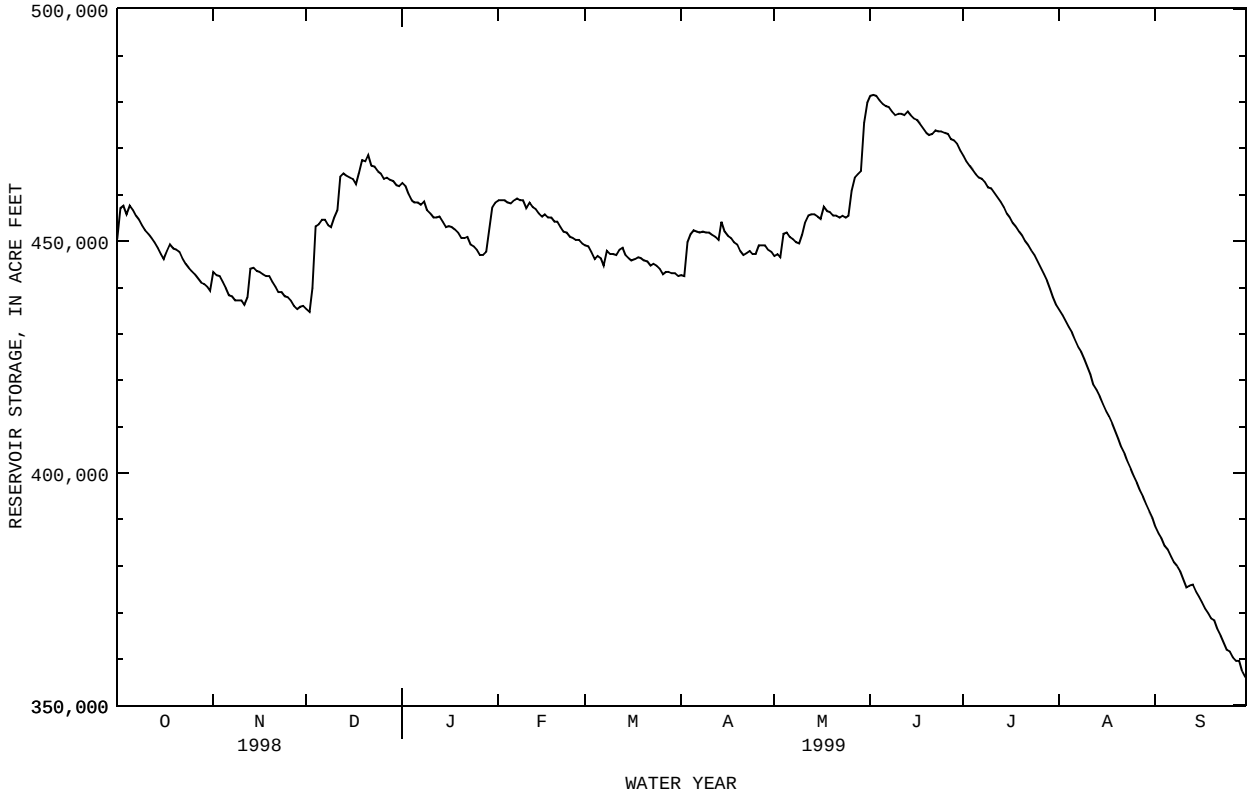
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450400	443300	435400	462500	458800	449100	442700	446800	481300	468400	435200	388400
2	457100	442700	434700	461800	458800	448800	442400	447200	481500	467200	434000	387000
3	457600	442400	439900	460200	458800	447700	449800	446500	481300	466300	432900	386000
4	455800	441300	453200	458800	458300	446100	451600	451600	480300	465300	431500	384300
5	457600	439900	453700	458300	458100	446800	452300	451800	479600	464400	430400	383500
6	456700	438300	454600	458300	458800	446300	452100	450900	479100	463700	428800	382000
7	455500	438100	454600	457800	459200	444700	451800	450400	478800	463400	427300	380800
8	454600	437200	453400	458500	458800	447900	452100	449800	477900	462700	426200	380000
9	453400	437200	453000	456700	458800	447200	451800	449500	477200	461600	424600	378800
10	452300	437200	455100	456000	457100	447200	451800	451400	477400	461300	423000	377200
11	451600	436300	456700	455100	458300	447000	451400	454100	477400	460400	421300	375400
12	450700	437900	463900	455100	457400	448100	450900	455500	477200	459500	419000	375800
13	449800	444000	464600	455300	456900	448600	450200	455800	477900	458500	417900	376000
14	448600	444300	464100	454100	456000	447000	454100	455800	477200	457400	416600	374600
15	447200	443600	463700	453000	455300	446300	452100	455300	476500	456000	414900	373400
16	446100	443300	463400	453200	455800	445900	451100	454800	476200	455100	413500	372200
17	447900	442900	462300	453000	455100	446100	450700	457400	475300	453900	412200	370800
18	449300	442400	464600	452500	455100	446500	449800	456500	474300	453000	410700	369900
19	448400	442400	467400	451800	454100	446300	449300	456200	473400	452100	409200	368700
20	448100	441300	467200	450700	454100	445900	447900	455500	472900	451100	407400	368300
21	447700	440100	468600	450700	453000	445600	447000	455500	473100	450000	405700	366400
22	446300	439000	466300	450900	452100	444700	447500	455100	473800	449100	404200	365000
23	445200	439000	466000	449300	451800	445200	447900	455500	473600	447900	402500	363500
24	444300	438100	465100	448800	450900	444700	447200	455100	473600	447000	400900	362000
25	443600	437900	464600	448100	450700	444000	447200	455500	473400	445600	399400	361600
26	442900	437200	463400	447000	450200	442900	449100	460900	473100	444300	398000	360300
27	442000	436100	463700	447000	450200	443300	449100	463700	471900	442900	396300	359600
28	441100	435400	463200	447700	449500	443300	449100	464400	471700	441500	395000	359600
29	440800	435800	463000	452500	---	443100	448100	465100	471000	439700	393300	357300
30	440100	436100	462000	457400	---	443100	447700	475500	469600	437900	391800	356000
31	439200	---	461800	458300	---	442400	---	479800	---	436300	390300	---
MAX	457600	444300	468600	462500	459200	449100	454100	479800	481500	468400	435200	388400
MIN	439200	435400	434700	447000	449500	442400	442400	446500	469600	436300	390300	356000
(+)	514.20	514.06	515.18	515.03	514.65	514.34	514.57	515.94	515.51	514.07	511.97	510.22
(@)	-12600	-3100	+25700	-3500	-8800	-7100	+5300	+2100	-10200	-33300	-46000	-34300

CAL YR 1998 MAX 750500 MIN 434700 (@) -142000
WTR YR 1999 MAX 481500 MIN 356000 (@) -95800

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued



08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX

LOCATION.--Lat 33°02'44", long 96°57'39", Denton County, Hydrologic Unit 12030103, on left bank at downstream edge of highway right-of-way, 90 ft to left of left end of bridge on State Highway 121, 1.8 mi east of Lewisville, 1.9 mi downstream from Lewisville Lake, 8.3 mi upstream from Denton Creek, and 28.2 mi upstream from mouth.

DRAINAGE AREA.--1,673 mi^2.

PERIOD OF RECORD.--Mar 1949 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 432.39 ft above sea level (U.S. Army Corps of Engineers benchmark). Prior to Jan 6, 1950, nonrecording gage 0.6 mi upstream at datum 3.26 ft lower. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since Nov 1954, at least 10% of contributing drainage area has been regulated by Lewisville Lake (station 08052800) 1.9 mi upstream since Nov 1954. Most of low flow is used by the city of Dallas for municipal supply (see station 08055500).

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1950-54) prior to regulation, 402 ft^3/s (291,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1950-54).--Maximum discharge, 21,700 ft^3/s Sep 15, 1950 (gage height, 30.75 ft); no flow Jun 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 33.8 ft in 1908, present site and datum, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	322	236	229	248	305	260	225	264	278	467	550
2	644	184	233	218	262	308	217	222	273	298	465	541
3	475	261	279	228	255	315	309	187	303	371	488	523
4	386	323	792	250	254	305	241	291	334	382	478	564
5	382	316	280	255	239	298	247	237	334	324	455	631
6	371	286	265	248	233	303	260	220	332	293	443	633
7	306	264	263	247	264	305	247	229	325	278	465	525
8	302	269	247	233	289	377	199	249	325	281	485	491
9	299	272	255	229	332	317	189	250	343	281	473	458
10	304	256	416	252	332	295	210	289	357	280	470	506
11	305	221	424	260	311	280	218	251	339	257	549	569
12	306	258	607	259	260	245	228	269	327	262	609	571
13	305	650	406	239	235	223	237	222	308	268	597	574
14	305	288	386	216	239	217	298	220	284	262	532	462
15	305	247	328	217	251	240	224	232	272	270	452	436
16	305	226	281	217	248	249	196	233	274	330	502	483
17	311	220	269	238	265	246	185	177	e265	374	502	444
18	335	227	290	259	293	238	207	220	e237	352	515	445
19	288	288	294	301	305	230	249	185	e235	316	617	459
20	312	311	270	335	277	228	288	168	e250	362	546	443
21	318	280	280	339	258	235	277	178	e278	358	481	432
22	296	293	286	303	272	246	242	194	e287	326	503	446
23	284	296	265	260	274	283	229	205	e286	378	587	479
24	264	287	232	248	280	341	229	205	286	422	614	509
25	266	277	218	276	313	367	236	210	242	385	533	520
26	287	291	219	298	341	367	281	411	217	428	506	489
27	305	303	242	299	332	313	218	229	226	459	578	452
28	284	306	263	301	310	278	232	206	237	488	582	453
29	261	284	263	332	---	270	249	211	243	500	558	454
30	261	273	251	235	---	242	235	256	261	485	530	440
31	243	---	240	220	---	254	---	227	---	487	530	---
TOTAL	9888	8579	9580	8041	7772	8720	7137	7108	8544	10835	16112	14982
MEAN	319	286	309	259	278	281	238	229	285	350	520	499
MAX	644	650	792	339	341	377	309	411	357	500	617	633
MIN	243	184	218	216	233	217	185	168	217	257	443	432
AC-FT	19610	17020	19000	15950	15420	17300	14160	14100	16950	21490	31960	29720

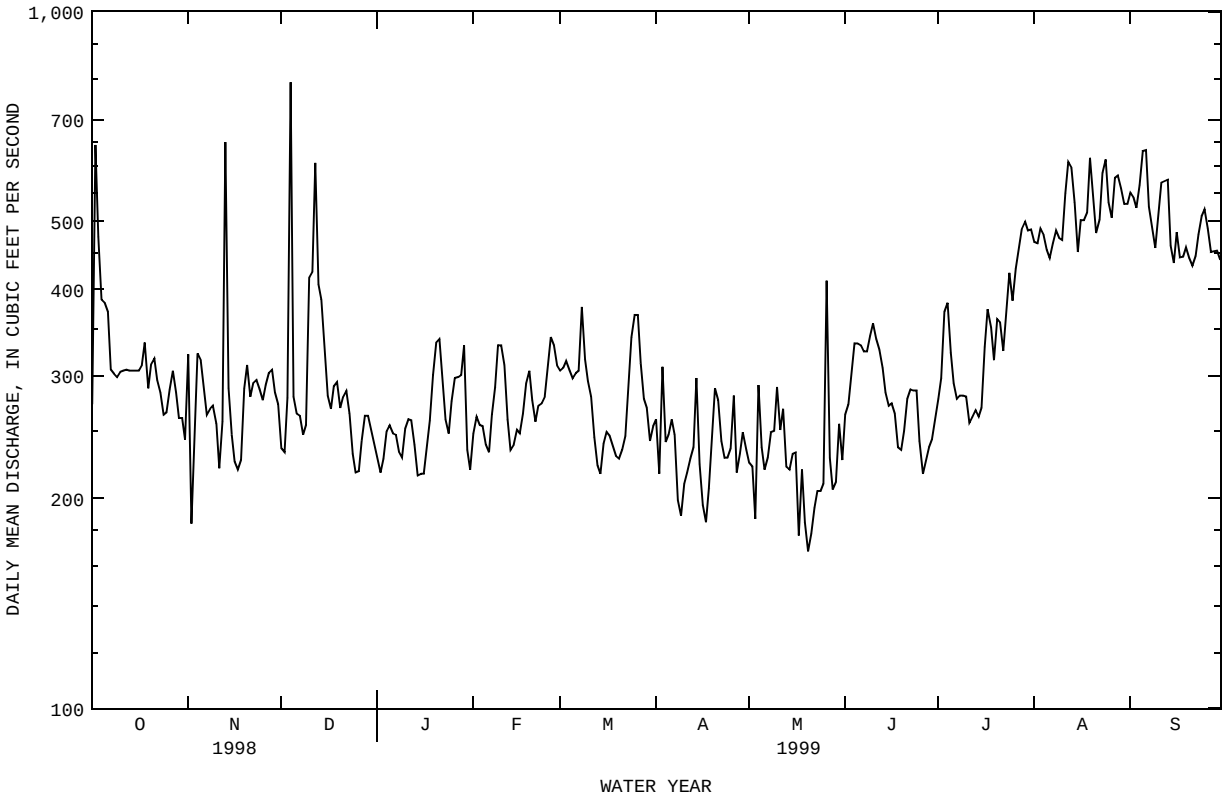
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1999z, BY WATER YEAR (WY)

MEAN	417	651	670	533	633	891	779	1334	1373	835	484	340
MAX	3628	6300	4681	5267	4611	4218	3555	8391	5222	4479	4101	2480
(WY)	1982	1982	1982	1992	1992	1997	1995	1990	1957	1989	1982	1962
MIN	23.1	37.3	35.0	15.2	23.6	37.7	14.0	84.4	109	157	54.7	65.0
(WY)	1959	1955	1955	1955	1955	1955	1989	1981	1955	1961	1963	1958

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1955 - 1999z	
ANNUAL TOTAL	312134		117298			
ANNUAL MEAN	855		321		745	
HIGHEST ANNUAL MEAN					3062	1982
LOWEST ANNUAL MEAN					94.2	1955
HIGHEST DAILY MEAN	3810	Mar 2	792	Dec 4	19000	May 4 1990
LOWEST DAILY MEAN	164	May 3	168	May 20	.00	Oct 20 1993
ANNUAL SEVEN-DAY MINIMUM	194	Apr 29	190	May 17	.29	Nov 3 1983
INSTANTANEOUS PEAK FLOW			1280	Dec 4	19600	May 4 1990
INSTANTANEOUS PEAK STAGE			11.34	Dec 4	30.15	May 4 1990
ANNUAL RUNOFF (AC-FT)	619100		232700		539900	
10 PERCENT EXCEEDS	3030		501		3110	
50 PERCENT EXCEEDS	392		284		220	
90 PERCENT EXCEEDS	247		222		78	

e Estimated
z Period of regulated streamflow.



08053500 DENTON CREEK NEAR JUSTIN, TX

LOCATION.--Lat 33°07'08", long 97°17'25", Denton County, Hydrologic Unit 12030104, on right bank at downstream side of bridge on Farm Road 156, 100 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.2 mi north of Justin, 3.0 mi upstream from Olivers Creek, 12.9 mi upstream from Harriet Creek, and 32.9 mi upstream from Grapevine Dam.

DRAINAGE AREA.--400 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1949 to current year.

REVISED RECORDS.--WSP 1732: 1950(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.66 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1965, at least 10% of contributing drainage has been regulated at times by discharge from the flood detention pools of 84 floodwater-retarding structures with a combined detention capacity of 52,750 acre-ft. These structures control runoff from 197 mi^2 in the Denton Creek Watershed. Several observations of water temperature were made during the year. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--15 years (water years 1950-64), 75.2 ft^3/s (54,440 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1950-64).--Maximum discharge, 29,800 ft^3/s May 24, 1957 (gage height, 17.64 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1935 was the highest since 1908 and reached a stage of 20.6 ft at site about 1,500 ft upstream, from information by local resident. Flood in May 1908 reached a stage about 1.0 ft higher than flood in May 1935, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	13	5.2	25	8.5	34	20	58	6.0	.00	.00
2	.00	.00	9.6	5.7	18	8.0	31	17	194	4.8	.00	.00
3	.00	.00	5.8	7.6	14	7.6	53	24	78	3.8	.00	.00
4	.00	.00	15	7.3	12	7.7	36	50	27	2.9	.00	.00
5	.00	.00	35	3.8	11	7.6	27	28	15	2.3	.00	.00
6	.00	.00	13	5.4	11	7.6	22	25	9.3	1.9	.00	.00
7	.00	.00	7.2	6.9	12	8.0	19	14	258	1.5	.00	.00
8	.00	.00	5.2	6.7	12	12	18	11	57	2.1	.00	.00
9	.00	.00	3.4	6.0	12	29	17	9.1	30	2.3	.00	.00
10	.00	.00	3.3	5.5	11	38	16	14	20	1.4	.00	.00
11	.00	.00	4.2	4.6	10	21	14	151	16	1.9	.00	.00
12	.00	.00	11	6.4	9.5	29	12	139	14	.97	.00	.00
13	.00	.00	12	6.4	8.6	25	12	48	14	.48	.00	.00
14	.00	5.5	9.2	6.1	8.1	31	15	20	14	.22	.00	.00
15	.00	6.7	6.6	5.6	8.3	22	29	11	11	.08	.00	.00
16	.00	3.5	5.2	5.4	8.5	18	30	6.7	10	.03	.00	.00
17	.00	2.3	4.7	5.7	8.4	16	19	5.7	9.9	.00	.00	.00
18	.00	1.9	6.8	6.5	8.1	16	14	10	9.2	.00	.00	.00
19	.00	2.1	18	5.9	7.7	207	13	10	8.6	.00	.00	.00
20	.00	1.2	19	5.8	7.8	124	12	4.2	8.0	.00	.00	.00
21	.00	1.0	14	5.9	7.6	60	11	2.4	8.2	.00	.00	.00
22	.00	.86	8.6	6.2	7.6	41	11	1.7	13	.00	.00	.00
23	.00	.76	6.5	6.0	7.6	31	10	1.1	16	.00	.00	.00
24	.00	.76	5.5	6.2	7.6	26	9.0	.66	14	.00	.00	.00
25	.00	.74	5.4	5.9	7.8	23	9.6	.60	11	.00	.00	.00
26	.00	1.1	4.7	5.8	8.2	20	14	46	10	.00	.00	.00
27	.00	2.1	5.4	6.2	8.3	18	140	357	18	.00	.00	.00
28	.00	2.5	6.4	6.8	8.5	69	121	155	12	.00	.00	.00
29	.00	3.2	5.9	89	---	93	59	74	8.9	.00	.00	.00
30	.00	5.6	5.3	97	---	50	32	357	6.9	.00	.00	.00
31	.00	---	5.2	50	---	39	---	176	---	.00	.00	---
TOTAL	0.00	41.82	280.1	403.5	286.2	1113.0	859.6	1789.16	979.0	32.68	0.00	0.00
MEAN	.000	1.39	9.04	13.0	10.2	35.9	28.7	57.7	32.6	1.05	.000	.000
MAX	.00	6.7	35	97	25	207	140	357	258	6.0	.00	.00
MIN	.00	.00	3.3	3.8	7.6	7.6	9.0	.60	6.9	.00	.00	.00
AC-FT	.00	83	556	800	568	2210	1710	3550	1940	65	.00	.00

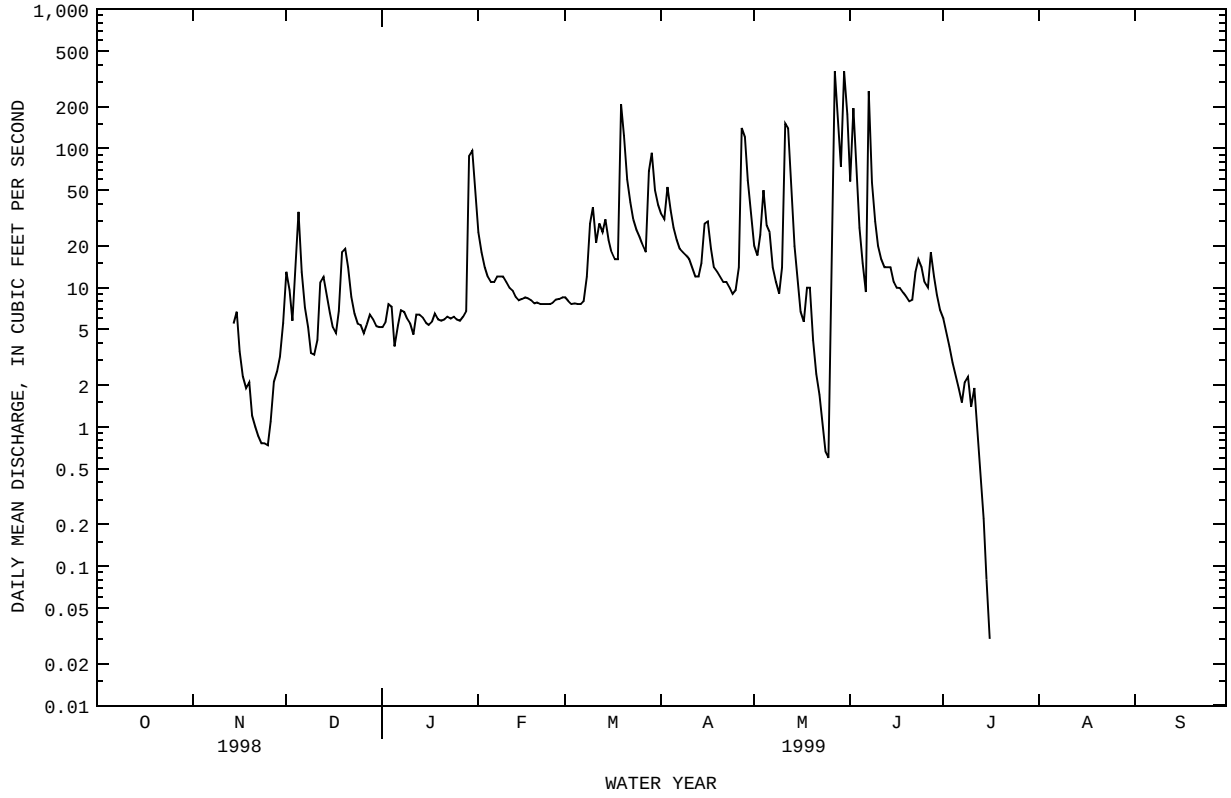
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999z, BY WATER YEAR (WY)

MEAN	151	110	99.7	58.4	134	179	178	331	188	34.3	10.9	29.7
MAX	2828	817	1321	437	1023	598	2095	2036	1815	260	91.5	242
(WY)	1982	1965	1992	1992	1997	1998	1990	1982	1989	1982	1973	1986
MIN	.000	.000	.000	1.62	5.61	5.55	3.99	3.45	.000	.000	.000	.000
(WY)	1978	1978	1978	1979	1979	1978	1980	1980	1980	1978	1967	1967

08053500 DENTON CREEK NEAR JUSTIN, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999z	
ANNUAL TOTAL	32118.68		5785.06			
ANNUAL MEAN	88.0		15.8		125	
HIGHEST ANNUAL MEAN					577	1982
LOWEST ANNUAL MEAN					4.93	1980
HIGHEST DAILY MEAN	4760	Mar 16	357	May 27	18600	Oct 14 1981
LOWEST DAILY MEAN	.00	Jul 8	.00	Oct 1	.00	Aug 6 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 8	.00	Oct 1	.00	Sep 6 1965
INSTANTANEOUS PEAK FLOW			646	May 30	34700	Oct 13 1981
INSTANTANEOUS PEAK STAGE			7.27	May 30	18.68	Oct 13 1981
ANNUAL RUNOFF (AC-FT)	63710		11470		90750	
10 PERCENT EXCEEDS	166		31		194	
50 PERCENT EXCEEDS	7.4		5.9		19	
90 PERCENT EXCEEDS	.00		.00		.00	

z Period of regulated streamflow.



08053500 DENTON CREEK NEAR JUSTIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1980 to Sep 1982, Oct 1997 to current year.
BIOCHEMICAL DATA: Oct 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
19...	0945	7.9	733	8.0	11.0	12	8.9	82	.7	280	63
MAY											
25...	1215	104	470	8.0	22.0	50	7.0	82	1.6	170	37
JUL											
15...	1515	.07	519	8.2	31.0	--	8.4	115	2.8	180	34

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB											
19...	84	18	42	1	2.5	220	96	43	.25	4.7	446
MAY											
25...	50	10	26	.9	5.0	130	46	33	.20	7.6	280
JUL											
15...	50	14	35	1	3.8	150	48	39	.30	12	312

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB											
19...	427	13	--	<.010	<.050	<.020	--	.20	<.050	<.010	--
MAY											
25...	256	97	.164	.013	.177	.055	.35	.41	.107	.104	.32
JUL											
15...	290	5	.115	.013	.128	.058	.50	.55	E.034	.031	.10

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB										
19...	3.3	<1.0	<1.0	1	91	<1.0	<1.0	10	<1.0	<1.0
MAY										
25...	30	1.5	<1.0	2	84	<1.0	<1.0	<1.0	<1.0	1.2
JUL										
15...	6.7	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB										
19...	E6.1	<1.0	15	<.1	2.3	2.6	<1	<1.0	2.0	4.7
MAY										
25...	E9.7	<1.0	2.2	<.1	1.9	1.3	<1	<1.0	1.4	2.2
JUL										
15...	<10	--	11	--	--	--	--	--	--	--

This page intentionally left blank.

08053800 ELIZABETH CREEK AT STATE HIGHWAY 114 NEAR ROANOKE, TX

LOCATION.--Lat 33°01'12", long 97°14'52", Denton County, Hydrologic Unit 12030104, over center of channel at downstream side of bridge on State Highway 114 1.9 mi northwest of courthouse in downtown Roanoke and 1.5 mi east of Interstate Highway 35W.

DRAINAGE AREA.--75 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1997 to current year.
BIOCHEMICAL DATA:Oct 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
18...	1215	3.6	538	7.8	12.0	12	8.4	79	.6	210	3
MAY											
26...	1615	226	261	7.9	23.0	85	7.5	89	3.1	92	--
JUL											
16...	1115	.11	382	8.1	28.5	--	7.6	100	2.1	130	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB											
18...	74	5.7	28	.9	2.6	210	45	16	.31	3.9	318
MAY											
26...	33	2.4	14	.7	3.7	97	15	8.9	.22	5.1	153
JUL											
16...	44	4.2	27	1	4.1	150	22	13	.40	8.2	232

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB											
18...	303	12	--	<.010	.461	<.020	--	.24	<.050	<.010	--
MAY											
26...	143	115	.378	.025	.403	.057	.34	.40	E.040	.040	.12
JUL											
16...	212	7	--	<.010	<.050	<.020	--	.30	<.050	<.010	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB										
18...	3.8	2.2	<1.0	<1	84	<1.0	<1.0	8.3	<1.0	1.0
MAY										
26...	28	2.8	<1.0	2	46	<1.0	<1.0	<1.0	<1.0	1.0
JUL										
16...	5.9	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB										
18...	E6.4	<1.0	13	<.1	<1.0	2.5	<1	<1.0	2.7	<1.0
MAY										
26...	E9.1	<1.0	2.0	<.1	1.1	1.1	--	<1.0	<1.0	<1.0
JUL										
16...	<10	--	66	--	--	--	--	--	--	--

This page intentionally left blank.

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX

LOCATION.--Lat 32°58'21", long 97°03'22", Tarrant County, Hydrologic Unit 12030104, in intake structure of Grapevine Dam on Denton Creek, 2.7 mi northeast of Grapevine, 4.3 mi upstream from bridge on State Highway 121, and 11.7 mi upstream from mouth.

DRAINAGE AREA.--695 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Jul 1952 to current year. Prior to Oct 1970, published as Grapevine Reservoir.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to May 16, 1953, nonrecording gage at site 1,000 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in Jun 1952, and deliberate impoundment began Jul 3, 1952. The controlled outlet works consist of a 13.0- ft-diameter concrete conduit that is controlled by two 6.5- by 13.0-ft broome-type gates and two 30-in steel pipes with service valves. The capacity table, used since Apr 1972, is based on a survey made in Oct 1966. The lake was built for flood control, navigation, and water conservation. The city of Dallas uses part of this water for their municipal supply. An unknown amount of water is diverted for industrial and municipal uses. Inflow is affected at times by discharge from the flood-detention pools of 87 floodwater-retarding structures with a combined detention capacity of 57,850 acre-ft. These structures control runoff from 217 mi^2 in the Denton Creek watershed. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	588.0
Crest of spillway	560.0
Top of conservation pool	535.0
Lowest intake to wet wells (invert)	500.5
Invert of two broome-type gates	475.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 471,200 acre-ft, Nov 1, 1981 (elevation, 563.29 ft); minimum since lake first filled in 1957, 94,480 acre-ft, Feb 26, 1979 (elevation, 520.67 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 168,700 acre-ft, Jun 4, 8 (elevation, 533.26 ft); minimum contents, 140,700 acre-ft, Sep 30 (elevation, 529.04 ft).

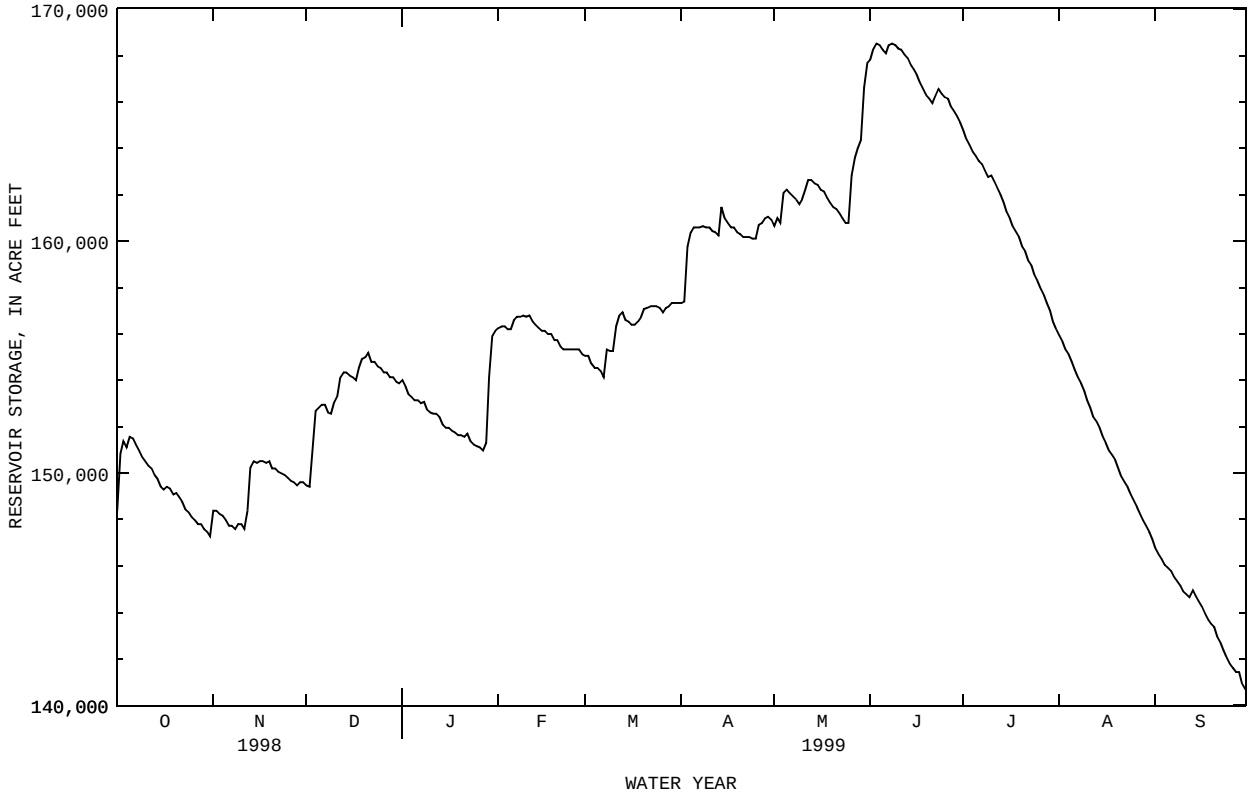
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148400	148400	149500	154000	156300	155100	157300	160600	167800	164800	155900	146800
2	150800	148400	149400	153700	156300	155100	157400	161000	168300	164400	155700	146500
3	151400	148200	150800	153400	156300	154700	159800	160800	168500	164100	155300	146300
4	151100	148200	152700	153300	156200	154500	160400	162100	168400	163900	155100	146100
5	151600	148000	152800	153100	156200	154500	160600	162200	168200	163700	154800	145900
6	151500	147700	152900	153100	156600	154400	160600	162100	168100	163500	154500	145800
7	151200	147700	152900	153000	156700	154100	160600	161900	168400	163300	154100	145500
8	151000	147600	152600	153100	156700	155300	160600	161800	168500	163000	153900	145300
9	150700	147800	152600	152700	156800	155300	160600	161600	168400	162800	153500	145200
10	150500	147800	153100	152600	156700	155300	160600	161800	168300	162800	153100	144900
11	150300	147600	153300	152600	156800	156300	160400	162200	168200	162600	152800	144800
12	150200	148400	154100	152600	156500	156800	160400	162600	168000	162300	152400	144600
13	149900	150300	154300	152400	156400	156900	160200	162600	167900	162000	152200	145000
14	149700	150500	154300	152100	156300	156600	161500	162500	167600	161700	152000	144700
15	149400	150500	154200	152000	156100	156500	161000	162400	167400	161300	151600	144500
16	149300	150500	154100	152000	156100	156400	160800	162200	167200	161000	151300	144300
17	149400	150500	154000	151800	156000	156400	160600	162100	166800	160600	151000	143900
18	149300	150500	154500	151800	156000	156500	160600	161900	166600	160400	150800	143700
19	149100	150500	154900	151600	155700	156700	160400	161700	166300	160200	150600	143500
20	149200	150200	155000	151600	155700	157100	160300	161500	166100	159800	150200	143400
21	149000	150200	155200	151600	155500	157100	160200	161400	165900	159600	149900	142900
22	148800	150100	154800	151700	155300	157200	160200	161200	166300	159200	149600	142700
23	148400	150000	154800	151400	155300	157200	160200	161000	166600	159000	149400	142400
24	148300	149900	154600	151200	155300	157200	160100	160800	166400	158500	149100	142100
25	148100	149800	154500	151200	155300	157100	160100	160800	166200	158300	148800	141800
26	148000	149700	154300	151100	155300	156900	160700	162800	166100	157900	148600	141600
27	147800	149600	154300	151000	155300	157100	160800	163600	165800	157700	148200	141400
28	147800	149500	154100	151300	155100	157200	161000	164000	165600	157300	148000	141400
29	147600	149600	154100	154100	---	157300	161100	164300	165400	157000	147700	140900
30	147500	149600	153900	155900	---	157300	160900	166600	165100	156500	147500	140700
31	147300	---	153900	156100	---	157300	---	167700	---	156200	147100	---
MAX	151600	150500	155200	156100	156800	157300	161500	167700	168500	164800	155900	146800
MIN	147300	147600	149400	151000	155100	154100	157300	160600	165100	156200	147100	140700
(+)	530.08	530.44	531.09	531.42	531.27	531.60	532.13	533.12	532.89	531.44	530.05	529.04
(@)	-1300	+2300	+4300	+2200	-1000	+2200	+3600	+6800	-2600	-8900	-9100	-6400

CAL YR 1998 MAX 239300 MIN 147300 (@) -20900
WTR YR 1999 MAX 168500 MIN 140700 (@) -7900

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued



08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1969 to Aug 1986, Oct 1997 to current year.
BIOCHEMICAL DATA: Oct 1969 to Aug 1986, Oct 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

325822097030401 - GRAPEVINE LAKE SITE AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
FEB										
19...	1128	156000	1.00	329	8.1	12.5	.43	9.6	92	K5
19...	1133	--	10.0	330	8.1	12.0	--	9.5	90	--
19...	1139	--	20.0	329	8.1	12.0	--	9.1	86	--
19...	1145	--	30.0	329	8.1	12.0	--	9.5	90	--
19...	1151	--	40.0	329	8.1	12.0	--	9.5	90	--
19...	1156	--	50.0	330	8.1	12.0	--	9.6	91	--
MAY										
26...	1304	162000	1.00	364	8.2	24.5	1.19	7.1	87	K10
26...	1308	--	10.0	368	8.0	24.0	--	6.9	83	--
26...	1312	--	20.0	370	8.0	23.5	--	6.5	78	--
26...	1316	--	30.0	370	7.9	23.5	--	6.2	74	--
26...	1319	--	40.0	371	7.8	23.5	--	5.8	69	--
26...	1322	--	50.0	374	7.7	23.5	--	4.4	53	--
SEP										
09...	1143	145000	1.00	341	7.7	28.0	1.01	5.1	66	K5
09...	1151	--	10.0	342	7.6	28.0	--	3.7	48	--
09...	1200	--	20.0	336	7.5	28.0	--	3.4	44	--
09...	1208	--	30.0	342	7.6	28.0	--	3.4	44	--
09...	1217	--	40.0	342	7.6	28.0	--	3.5	46	--
09...	1225	--	48.0	342	7.5	28.0	--	3.6	47	--

325822097030401 - GRAPEVINE LAKE SITE AC

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB										
19...	K3	110	9	35	5.8	20	.8	4.1	100	33
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	110	10	36	5.8	20	.8	4.0	100	33
MAY										
26...	K8	130	28	49	2.7	19	.7	3.7	110	30
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	130	15	40	6.2	23	.9	4.0	110	34
SEP										
09...	K2	110	7	32	6.4	23	1	4.7	98	32
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	110	8	32	6.4	23	1	4.5	97	32

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

325822097030401 - GRAPEVINE LAKE SITE AC

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
FEB									
19...	20	.25	3.8	186	--	<.010	.414	.055	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	20	.26	4.0	187	--	<.010	.419	.058	--
MAY									
26...	13	.28	1.4	183	.264	.011	.275	.038	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	22	.24	1.5	198	--	<.010	.383	.032	--
SEP									
09...	24	.25	5.2	186	--	--	<.050	.148	.44
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	23	.24	5.1	184	--	--	<.050	.191	.38

325822097030401 - GRAPEVINE LAKE SITE AC

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB									
19...	.28	.33	--	--	<.050	.010	.03	<10	<3.0
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	.27	.33	--	--	<.050	<.010	--	E5.8	E2.8
MAY									
26...	.28	.32	--	--	<.050	.011	.03	<10	E1.7
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	.29	.32	--	--	<.050	<.010	--	<10	16
SEP									
09...	.14	.29	.59	E.036	<.050	--	--	<10	<2.2
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	.19	.38	.57	E.043	<.050	--	--	<10	7.3

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

325751097033001 - GRAPEVINE LAKE SITE AR

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB							
19...	1209	1.00	329	8.1	12.5	9.5	91
19...	1213	10.0	328	8.1	12.0	9.5	90
19...	1217	20.0	328	8.1	12.0	9.4	89
19...	1221	30.0	327	8.1	12.0	9.5	90
19...	1225	40.0	330	8.1	12.0	9.5	90
MAY							
26...	1325	1.00	367	8.0	24.0	6.7	81
26...	1327	10.0	371	8.0	24.0	6.5	79
26...	1329	20.0	372	7.9	23.5	6.2	74
26...	1331	30.0	372	7.9	23.5	6.1	73
26...	1333	40.0	373	7.9	23.5	5.9	71
SEP							
09...	1243	1.00	342	7.6	28.0	4.3	56
09...	1245	10.0	342	7.6	28.0	4.1	53
09...	1247	20.0	341	7.6	28.0	4.0	52
09...	1249	30.0	342	7.6	28.0	3.7	48
09...	1252	40.0	342	7.6	28.0	3.7	48

325930097053801 - GRAPEVINE LAKE SITE BC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)
FEB											
19...	1241	1.00	329	8.2	13.0	.49	9.7	94	K2	K5	110
19...	1246	10.0	331	8.1	12.5	--	9.4	90	--	--	--
19...	1250	20.0	330	8.1	12.5	--	9.3	89	--	--	--
19...	1255	30.0	331	8.1	12.5	--	9.5	91	--	--	--
19...	1300	41.0	330	8.1	12.5	--	9.3	89	--	--	110
MAY											
26...	1353	1.00	366	8.3	24.5	.94	8.2	100	K2	K1	120
26...	1356	10.0	367	8.2	24.5	--	7.9	96	--	--	--
26...	1359	20.0	367	8.1	24.0	--	7.2	87	--	--	--
26...	1402	30.0	369	7.8	23.5	--	5.6	67	--	--	--
26...	1405	44.0	379	7.5	23.0	--	2.7	32	--	--	130
JUL											
26...	1445	--	--	--	--	--	--	--	--	--	--
SEP											
09...	1315	1.00	336	8.0	29.0	.64	6.0	79	K1	K1	100
09...	1318	10.0	334	7.9	28.5	--	5.0	66	--	--	--
09...	1322	20.0	335	7.8	28.0	--	4.6	60	--	--	--
09...	1326	30.0	342	7.5	28.0	--	1.9	25	--	--	--
09...	1340	41.0	346	7.5	28.0	--	1.8	23	--	--	100

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

325930097053801 - GRAPEVINE LAKE SITE BC

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB										
19...	11	36	5.8	20	.8	4.1	100	33	20	.25
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	11	36	5.8	20	.8	4.0	100	33	20	.25
MAY										
26...	14	36	6.9	24	.9	3.9	110	33	25	.24
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	18	41	6.5	24	.9	4.0	110	34	22	.25
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
09...	9	30	6.4	24	1	4.7	93	33	24	.24
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	7	31	6.3	23	1	4.6	97	32	23	.24

325930097053801 - GRAPEVINE LAKE SITE BC

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
FEB										
19...	4.0	185	--	<.010	.411	.057	--	.25	.30	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	4.0	187	--	<.010	.404	.056	--	.28	.34	--
MAY										
26...	1.6	195	.233	.013	.246	.032	--	.29	.32	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	2.1	204	.425	.011	.436	.049	--	.28	.33	--
JUL										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
09...	5.4	183	--	--	<.050	.116	.53	.19	.31	.65
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	5.4	185	--	--	<.050	.284	.52	.14	.42	.81

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

325930097053801 - GRAPEVINE LAKE SITE BC

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	BENZENE TOTAL (UG/L) (34030)	ETHYL-BENZENE TOTAL (UG/L) (34371)	TOLUENE TOTAL (UG/L) (34010)	XYLENE WATER UNFLTRD REC (UG/L) (81551)
FEB										
19...	--	<.050	<.010	--	<10	<3.0	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	<.050	<.010	--	<10	E2.8	--	--	--	--
MAY										
26...	--	<.050	.011	.03	<10	E2.1	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	<.050	.015	.05	<10	57	--	--	--	--
JUL										
26...	--	--	--	--	--	--	<.200	<.200	<.200	<.200
SEP										
09...	E.040	<.050	--	--	<10	4.2	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	.072	<.050	--	--	<10	172	--	--	--	--

325933097081401 - GRAPEVINE LAKE SITE CC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
FEB								
19...	1321	1.00	335	8.4	13.5	10.2	101	<.010
19...	1325	14.0	335	8.3	13.0	10.0	98	<.010
MAY								
26...	1425	1.00	363	8.4	25.5	8.5	106	--
26...	1430	13.0	364	8.3	25.0	8.2	101	--
SEP								
09...	1352	1.00	329	8.6	29.5	9.0	120	--
09...	1355	7.00	329	8.5	28.5	8.7	114	--

325933097081401 - GRAPEVINE LAKE SITE CC

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB							
19...	.396	<.020	.28	<.050	<.010	<10	<3.0
19...	.383	<.020	.28	<.050	<.010	<10	<3.0
MAY							
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
SEP							
09...	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

330106097094601 - GRAPEVINE LAKE SITE DC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
FEB								
19...	1351	1.00	353	8.5	13.5	10.6	105	<.010
19...	1355	8.00	351	8.3	12.5	9.4	91	<.010
MAY								
26...	1500	1.00	366	8.3	26.0	8.4	105	--
26...	1502	9.00	385	8.1	25.5	6.8	85	--
SEP								
09...	1413	1.00	325	8.7	29.0	9.8	130	--
09...	1416	6.00	331	8.2	27.5	5.5	71	--

330106097094601 - GRAPEVINE LAKE SITE DC

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB							
19...	.331	<.020	.29	<.050	<.010	<10	<3.0
19...	.350	<.020	.31	<.050	<.010	<10	<3.0
MAY							
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
SEP							
09...	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--

330207097103701 - GRAPEVINE LAKE SITE EC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVED FLD. AS CACO3 (MG/L) (00904)
FEB												
19...	1417	1.00	341	8.4	13.5	.29	10.4	103	21	K13	120	11
19...	1422	4.00	341	8.4	13.5	--	10.4	103	--	--	120	9
MAY												
26...	1516	1.00	362	8.5	26.5	.27	9.0	114	33	66	110	8
26...	1522	7.00	365	8.2	26.0	--	7.6	95	--	--	120	18
SEP												
09...	1434	1.00	327	8.8	30.0	.34	9.7	131	K7	37	97	10
09...	1439	4.00	328	8.7	29.5	--	9.2	123	--	--	97	9

330207097103701 - GRAPEVINE LAKE SITE EC

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
FEB												
19...	38	6.0	21	.8	4.2	110	34	20	.25	3.6	193	<.010
19...	37	5.9	21	.8	4.5	110	34	20	.25	3.6	193	<.010
MAY												
26...	40	2.5	20	.8	4.0	100	31	13	.29	2.5	176	<.010
26...	38	6.3	23	.9	3.9	100	34	22	.24	.61	190	<.010
SEP												
09...	29	6.3	24	1	4.7	87	34	24	.25	5.8	180	--
09...	28	6.3	24	1	4.6	88	35	24	.25	5.7	181	--

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

330207097103701 - GRAPEVINE LAKE SITE EC

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB												
19...	.370	<.020	--	--	.28	--	--	<.050	<.010	--	<10	<3.0
19...	.361	<.020	--	--	.27	--	--	<.050	<.010	--	<10	<3.0
MAY												
26...	<.050	.022	--	.29	.31	--	--	<.050	.010	.03	<10	<3.0
26...	<.050	.027	--	.29	.31	--	--	<.050	<.010	--	<10	E2.1
SEP												
09...	<.050	.066	.82	.22	.28	.88	.090	<.050	--	--	<10	E1.4
09...	<.050	.064	.92	.29	.35	.98	.097	<.050	--	--	<10	E2.1

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake Site AC (325822097030401)

Phytoplankton Analyses October 1998 to September 1999

Date	2/19/99
Time	1128
TOTAL CELLS/mL	5,367
NUMBER OF SPECIES	8
DEPTH COLLECTED (ft.)	0.70

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	37
Melosira varians	112
Order Pennales	
Meridion circulare	40
Navicula sp.	80
CHLOROPHYTA	
Ankistrodesmus falcatus	180
Chlamydomonas sp.	60
CYANOPHYTA	
Aphanocapsa delicatissima	4,798
EUGLENOPHYTA	
Trachelomonas sp.	60

Grapevine Lake Site EC (330207097103701)

Phytoplankton Analyses October 1998 to September 1999

Date	2/19/99
Time	1417
TOTAL CELLS/mL	9,447
NUMBER OF SPECIES	6
DEPTH COLLECTED (ft.)	0.47

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	120
Order Pennales	
Navicula sp.	240
CHLOROPHYTA	
Ankistrodesmus falcatus	240
CYANOPHYTA	
Anabaena spiroides	300
Aphanocapsa delicatissima	8,397
EUGLENOPHYTA	
Trachelomonas sp.	150

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake Site AC (325822097030401)

Phytoplankton Analyses October 1998 to September 1999

Date	5/26/99
Time	1304
TOTAL CELLS/mL	32,779
NUMBER OF SPECIES	7
DEPTH COLLECTED (ft.)	1.95

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	150
CHLOROPHYTA	
Chlamydomonas sp.	180
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanocapsa delicatissima	28,790
Merismopedia tenuissima	2,879
Oscillatoria sp.	600
EUGLENOPHYTA	
Trachelomonas sp.	150

Grapevine Lake Site EC (330207097103701)

Phytoplankton Analyses October 1998 to September 1999

Date	5/26/99
Time	1516
TOTAL CELLS/mL	32,750
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	0.45

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Amphora ovalis var. *ovalis*	36
Fragilaria crotonensis var. *crotonensis*	73
Navicula sp.	545
Pinnularia brevicostata var. *brevicostata*	36
CHLOROPHYTA	
Chlamydomonas sp.	210
Oocystis sp.	60
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanocapsa delicatissima	21,593
Merismopedia tenuissima	9,117
Oscillatoria sp.	900
EUGLENOPHYTA	
Trachelomonas sp.	150

08054500 GRAPEVINE LAKE NEAR GRAPEVINE, TX--Continued

Grapevine Lake Site AC (325822097030401)

Phytoplankton Analyses October 1998 to September 1999

Date	9/9/99
Time	1143
TOTAL CELLS/mL	59,981
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	1.64

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Naavicula sp.	30
Synedra ulna var. *ulna*	60
CHLOROPHYTA	
Ankistrodesmus falcatus	360
Chlamydomonas sp.	30
Cosmarium sp.	30
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanocapsa delicatissima	22,792
Aaphanocapsa elachista	4,199
Chroococcus limneticus	120
Merismopedia tenuissima	6,718
Oscillatoria sp.	25,192
EUGLENOPHYTA	
Phacus sp.	30
Trachelomonas sp.	390

Grapevine Lake Site EC (330207097103701)

Phytoplankton Analyses October 1998 to September 1999

Date	9/9/99
Time	1434
TOTAL CELLS/mL	39,526
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	0.55

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	273
Navicula sp.	161
Synedra ulna var. *ulna*	16
CHLOROPHYTA	
Ankistrodesmus falcatus	480
Chlamydomonas sp.	90
Cosmarium sp.	30
Pediastrum duplex	30
Scenedesmus opoliensis	90
Staurastrum sp.	90
CYANOPHYTA	
Aphanocapsa delicatissima	13,795
Aphanocapsa elachista	1,799
Chroococcus limneticus	480
Merismopedia tenuissima	4,798
Oscillatoria sp.	16,794
EUGLENOPHYTA	
Phacus sp.	150
Trachelomonas sp.	450

08055000 DENTON CREEK NEAR GRAPEVINE, TX

LOCATION.--Lat 32°59'13", long 97°00'45", Denton County, Hydrologic Unit 12030104, over center of channel at downstream side of bridge on State Highway 121, 1.3 mi downstream from Bakers Branch, 4.1 mi downstream from Grapevine Dam, 5.0 mi northeast of Grapevine and 6.1 mi upstream from mouth.

DRAINAGE AREA.--705 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1997 to current year.
BIOCHEMICAL DATA: Oct 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
18...	1530	38	345	8.0	12.0	15	10.0	94	--	110	14
MAY											
27...	1100	65	362	8.0	23.5	10	6.4	77	3.6	130	20
SEP											
09...	0930	44	339	7.9	28.0	1.1	4.9	63	1.9	110	18

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB											
18...	36	5.9	20	.8	3.9	100	33	20	.25	3.7	215
MAY											
27...	40	6.3	23	.9	3.9	110	35	23	.27	1.2	208
SEP											
09...	33	6.5	24	1	4.7	90	32	24	.26	4.9	193

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB										
18...	189	12	<.010	.422	.054	.28	.34	<.050	<.010	--
MAY										
27...	198	1	<.010	.336	.045	.34	.39	<.050	.020	.06
SEP										
09...	183	<1	.014	<.050	.115	.38	.49	<.050	<.010	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
FEB										
18...	4.5	1.3	<1.0	1	54	<1.0	<1.0	4.5	<1.0	<1.0
MAY										
27...	27	4.0	<1.0	2	58	<1.0	<1.0	<1.0	<1.0	<1.0
SEP										
09...	5.6	1.8	<1.0	3	40	<1.0	<1.0	<1.0	<1.0	1.7

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB										
18...	<10	<1.0	<1.0	<.1	1.6	1.9	<1	<1.0	<1.0	1.2
MAY										
27...	<10	<1.0	11	<.1	1.7	1.4	--	<1.0	<1.0	1.2
SEP										
09...	<10	<1.0	2.7	.2	1.8	3.2	--	<1.0	3.8	<1.0

This page intentionally left blank.

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX

LOCATION.--Lat 32°57'57", long 96°56'39", Dallas County, Hydrologic Unit 12030103, On Sandy Lake Road 350 ft upstream on right bank at TXU Electric Co pump station. Prior to July 7, 1999 located near left bank at downstream side of bridge on Sandy Lake Road, 40 ft upstream from Carrollton Dam, 0.3 mi downstream from Denton Creek, 1.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 2.3 mi northwest of Carrollton, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--2,459 mi^2

PERIOD OF RECORD.--Jan 1907 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to Nov 1923, published as "near Dallas".

REVISED RECORDS.--WSP 788: 1924. WSP 1148: Drainage area at former site. WSP 1632: 1908(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 431.40 ft above sea level. Prior to Nov 1923, nonrecording gage at site 15.5 mi downstream at different datum. Nov 1, 1923 to Nov 13, 1934, nonrecording gage, and Nov 14, 1934 to Jul 6, 1938, water-stage recorder at present site and datum. Jul 7, 1938 to Apr 14, 1939, nonrecording gage at site 9.3 mi downstream at datum 22.94 ft lower. Apr 15, 1939 to Sep 30, 1955, water-stage recorder at site 8.5 mi downstream at datum 22.94 ft lower. Oct 1, 1955 to Sep 30, 1987, water-stage recorder at present site and at datum 2.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good, except those for estimated daily discharges, which are poor. Since Nov 1954, at least 10% of contributing drainage area has been regulated by Lewisville Lake (station 08052800, capacity 464,500 acre-ft). Additional regulation by Grapevine Lake (station 08054500, capacity 181,100 acre-ft) since Jul 1952. The city of Dallas diverts water from the pool at gage and from the river 14 mi downstream for municipal use. A wastewater treatment plant returns water to the river below the station. TXU Electric Co. diverts water from the pool at gage into North Lake for cooling water at their electric generating plant. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--47 years (water years 1908-54), 818 ft^3/s (592,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1908-54).--Maximum gage height, about 19 ft May 25, 1908, present site and datum, from information by local resident; estimated discharge, 145,000 ft^3/s, at site 8.5 mi downstream, from information by U.S. Army Corps of Engineers; maximum gage height subsequent to 1908, 16.5 ft Apr 26, 1942, present site and datum, from observation by National Weather Service; discharge at site 8.5 mi downstream, 90,700 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1866 reached about the same stage as flood of May 25, 1908.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	977	80	138	158	e151	57	109	93	135	264	162
2	1240	79	58	133	157	e168	55	210	67	69	212	162
3	998	.20	206	79	139	e195	693	142	54	170	249	131
4	251	13	2520	84	83	e165	215	646	116	243	232	148
5	251	34	318	124	99	e159	104	147	117	181	226	173
6	584	25	167	116	137	e147	87	103	130	126	205	213
7	211	.07	160	120	325	e154	117	38	114	99	199	151
8	175	.00	132	132	163	e965	109	89	96	127	231	133
9	165	.45	101	106	172	e746	47	85	109	147	203	116
10	154	90	711	87	155	203	104	426	61	152	183	117
11	160	2.2	630	126	187	480	99	235	162	173	217	143
12	143	97	1470	140	197	252	70	349	206	130	259	148
13	122	2340	481	147	132	174	77	114	174	147	262	206
14	135	240	377	114	131	97	533	54	133	131	237	134
15	134	72	250	86	134	109	182	100	81	132	173	99
16	158	15	160	104	103	94	86	50	154	126	210	120
17	260	.07	142	136	117	104	50	76	134	164	205	103
18	617	.00	332	137	174	119	82	366	118	174	199	92
19	172	29	476	63	145	168	68	169	101	160	237	91
20	189	101	190	147	144	111	121	125	102	154	210	85
21	285	88	165	162	149	106	138	102	e1710	177	164	87
22	139	68	153	195	e165	71	88	64	e1100	166	161	89
23	162	69	130	179	e136	56	94	117	265	134	185	85
24	104	90	92	93	e146	154	97	87	97	192	210	94
25	116	97	61	76	e225	128	86	120	143	176	187	104
26	99	99	98	139	e275	136	554	1120	139	174	146	119
27	130	146	85	137	e232	128	176	305	92	216	182	91
28	135	160	114	181	e143	138	91	140	84	235	193	88
29	68	128	147	793	---	87	58	127	83	260	183	86
30	55	263	145	344	---	32	87	509	100	227	160	81
31	16	---	134	141	---	24	---	193	---	268	156	---
TOTAL	7524	5322.99	10285	4759	4523	5821	4425	6517	6135	5165	6340	3651
MEAN	243	177	332	154	162	188	148	210	205	167	205	122
MAX	1240	2340	2520	793	325	965	693	1120	1710	268	264	213
MIN	16	.00	58	63	83	24	47	38	54	69	146	81
AC-FT	14920	10560	20400	9440	8970	11550	8780	12930	12170	10240	12580	7240

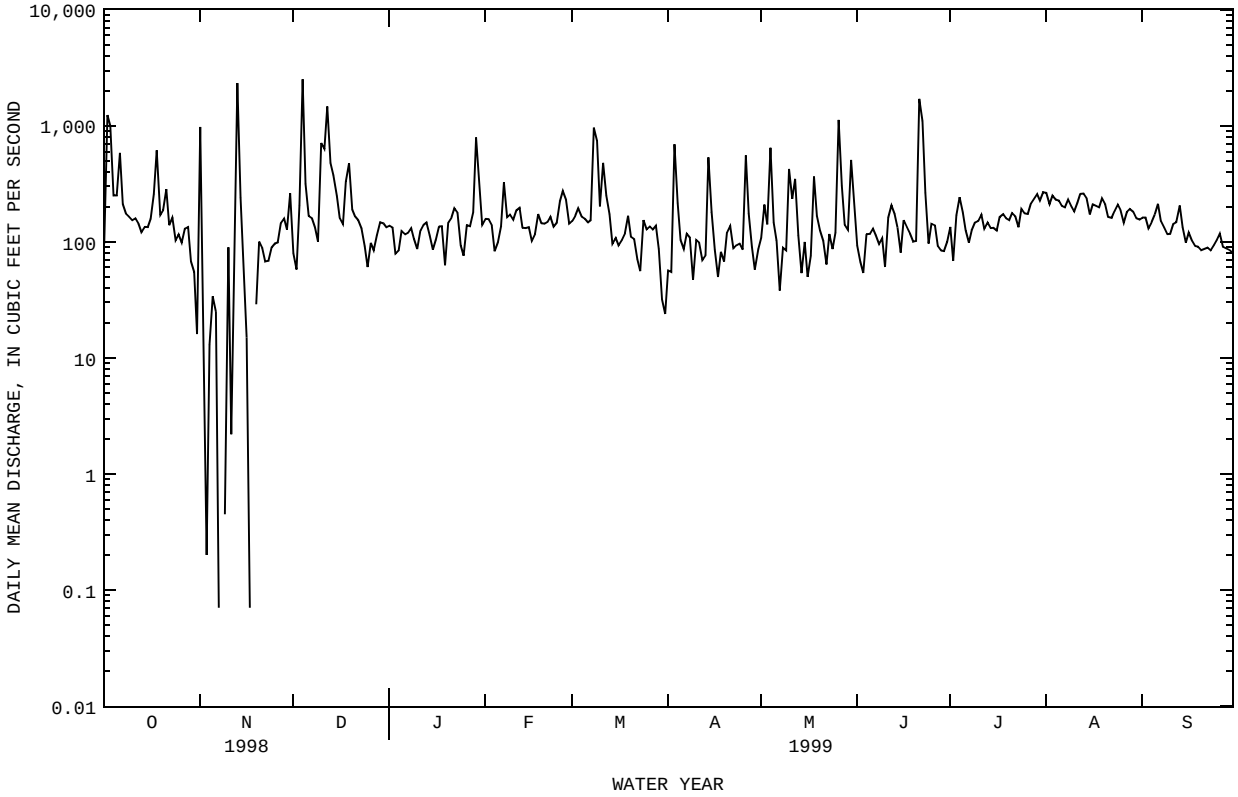
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1999z, BY WATER YEAR (WY)

MEAN	425	753	840	639	761	1079	1023	1578	1654	942	528	294
MAX	3554	8830	6785	6614	5868	5655	4782	10920	6757	6224	6003	3406
(WY)	1982	1982	1982	1992	1992	1997	1995	1990	1990	1989	1982	1962
MIN	27.8	4.21	.78	.80	2.06	3.30	43.5	38.4	80.0	94.9	58.2	14.8
(WY)	1981	1957	1978	1957	1957	1957	1955	1980	1959	1979	1979	1985

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1955 - 1999z	
ANNUAL TOTAL	385702.99		70467.99			
ANNUAL MEAN	1057		193		877	
HIGHEST ANNUAL MEAN					4289	1982
LOWEST ANNUAL MEAN					76.0	1978
HIGHEST DAILY MEAN	6540	Mar 16	2520	Dec 4	25300	May 5 1990
LOWEST DAILY MEAN	.00	Nov 8	.00	Nov 8	.00	Dec 2 1954
ANNUAL SEVEN-DAY MINIMUM	10	Nov 3	10	Nov 3	.00	Jan 7 1959
INSTANTANEOUS PEAK FLOW			4310	Dec 4	33000	Sep 21 1964
INSTANTANEOUS PEAK STAGE			6.73	Dec 4	13.48	May 5 1990
ANNUAL RUNOFF (AC-FT)	765000		139800		635000	
10 PERCENT EXCEEDS	4540		266		3880	
50 PERCENT EXCEEDS	206		138		148	
90 PERCENT EXCEEDS	89		69		37	

e Estimated
z Period of regulated streamflow.



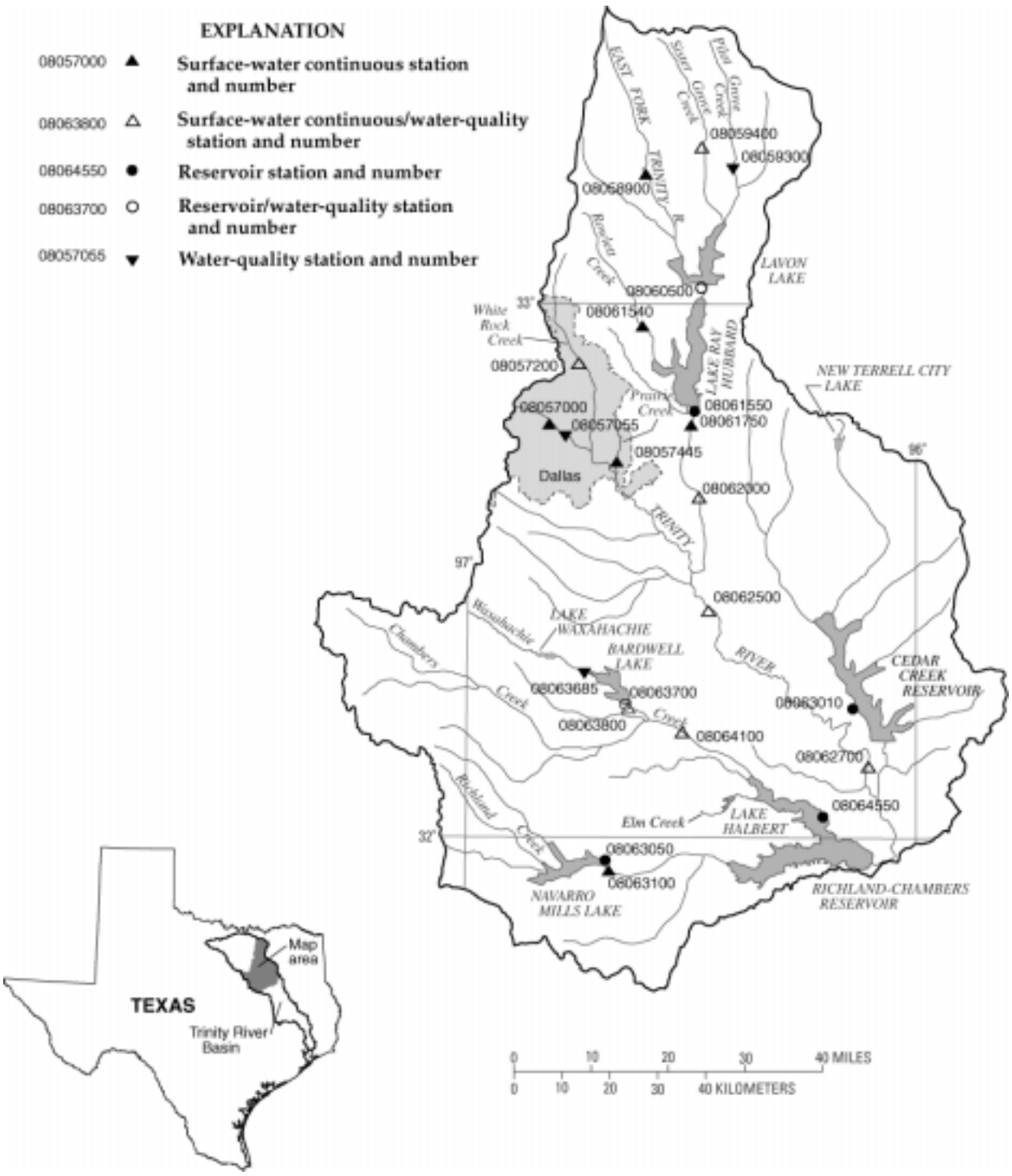


Figure 4.-- Map showing location of gaging stations in the second section of the Trinity River Basin

08057000 TRINITY RIVER AT DALLAS, TX

LOCATION.--Lat 32°46'29", long 96°49'18", Dallas County, Hydrologic Unit 12030105, on right bank (levee) 90 ft downstream from Commerce Street viaduct in Dallas, 5.2 mi downstream from confluence of West and Elm Forks, and at mile 500.3.

DRAINAGE AREA.--6,106 mi^2.

PERIOD OF RECORD.--Oct 1898 to Dec 1899 (gage heights only published in WSP 28 and 37), Jul 1903 to current year. Daily discharges are not available for all periods prior to 1931.

REVISED RECORDS.--WSP 850: 1903-06 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WRD TX-73-1: 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 368.02 ft above sea level. Oct 1, 1898, to Dec 31, 1899, nonrecording gage at site 2 mi upstream at different datum. Jul 1, 1903, to Jul 20, 1930, nonrecording gage at present site and datum. Jul 21, 1930, to Sep 30, 1932, nonrecording gage at site 6 mi downstream at datum 3.08 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1914, flow is regulated by storage in seven major upstream reservoirs, with a combined capacity of 1,703,000 acre-ft of which 846,200 acre-ft is for flood control. The city of Dallas diverts water for municipal use from the Elm Fork, Lake Ray Hubbard (on the East Fork), and from Lake Tawakoni (on the Sabine River), and purchases water from North Texas Municipal Water District (from the East Fork). Wastewater effluent from the City of Dallas is returned to the river downstream from this station. The Trinity River Authority and the city of Fort Worth discharge wastewater effluent into the river upstream from this station. There are many other diversions upstream from this station for municipal, industrial and other uses. Several observations of water temperature were made during the year.

AVERAGE DISHARGE FOR PERIOD PRIOR TO REGULATION.--10 years (water years 1904-13), 1,047 ft^3/s (758,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1903-13).--Maximum discharge, 184,000 ft^3/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft^3/s. Maximum stage since at least 1840, that of May 25, 1908.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1866 reached about the same stage as that of May 25, 1908.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	3140	1480	1040	1130	691	788	705	3450	459	494	449
2	1630	4170	1380	968	1090	672	807	707	1750	461	489	451
3	9050	1050	987	759	1820	653	1970	713	1360	448	467	467
4	4430	692	10800	748	930	657	4530	3140	1010	427	494	452
5	989	632	9860	772	926	672	1580	3740	864	436	483	453
6	3700	622	2690	795	1610	646	1030	1180	716	479	494	751
7	2290	625	1530	780	1520	652	888	849	678	932	463	958
8	818	621	1970	746	1140	2690	870	804	578	1900	455	621
9	671	629	1110	729	857	4920	844	895	556	700	464	546
10	618	1260	2950	719	791	1390	758	1760	529	2270	457	500
11	588	1010	6880	709	792	2700	758	1410	537	3150	454	483
12	575	896	6890	721	791	6070	772	1270	893	941	456	479
13	566	8960	5770	748	768	2540	746	1170	804	633	519	1520
14	551	9770	3730	727	727	1260	1410	784	573	564	518	1490
15	547	2480	3100	720	713	968	1920	720	640	523	479	774
16	557	968	2180	697	725	891	937	732	775	504	461	586
17	903	860	2230	707	694	851	775	1460	999	494	453	539
18	1440	736	1900	721	699	1240	719	3110	582	486	464	489
19	1110	696	4620	700	727	2110	711	1270	483	498	465	468
20	794	673	2130	692	706	1240	710	831	461	489	537	471
21	1340	645	1200	673	710	917	710	738	708	498	482	460
22	1020	644	1020	674	712	853	753	955	843	478	458	455
23	682	636	992	700	695	793	711	695	1110	475	464	446
24	611	617	1230	703	673	765	706	770	834	469	460	447
25	573	606	1310	669	668	836	723	810	950	469	482	441
26	565	612	840	655	668	807	1840	5400	871	465	473	627
27	556	601	850	669	698	811	2240	6010	601	472	461	536
28	553	635	844	741	724	953	1020	1780	507	473	459	468
29	544	677	848	4710	---	986	804	1240	479	475	477	455
30	536	2170	837	6200	---	866	726	6720	467	490	486	453
31	526	---	807	2360	---	804	---	9700	---	479	459	---
TOTAL	39688	48333	84965	33952	24704	42904	33756	62068	25608	22037	14727	17735
MEAN	1280	1611	2741	1095	882	1384	1125	2002	854	711	475	591
MAX	9050	9770	10800	6200	1820	6070	4530	9700	3450	3150	537	1520
MIN	355	601	807	655	668	646	706	695	461	427	453	441
AC-FT	78720	95870	168500	67340	49000	85100	66960	123100	50790	43710	29210	35180

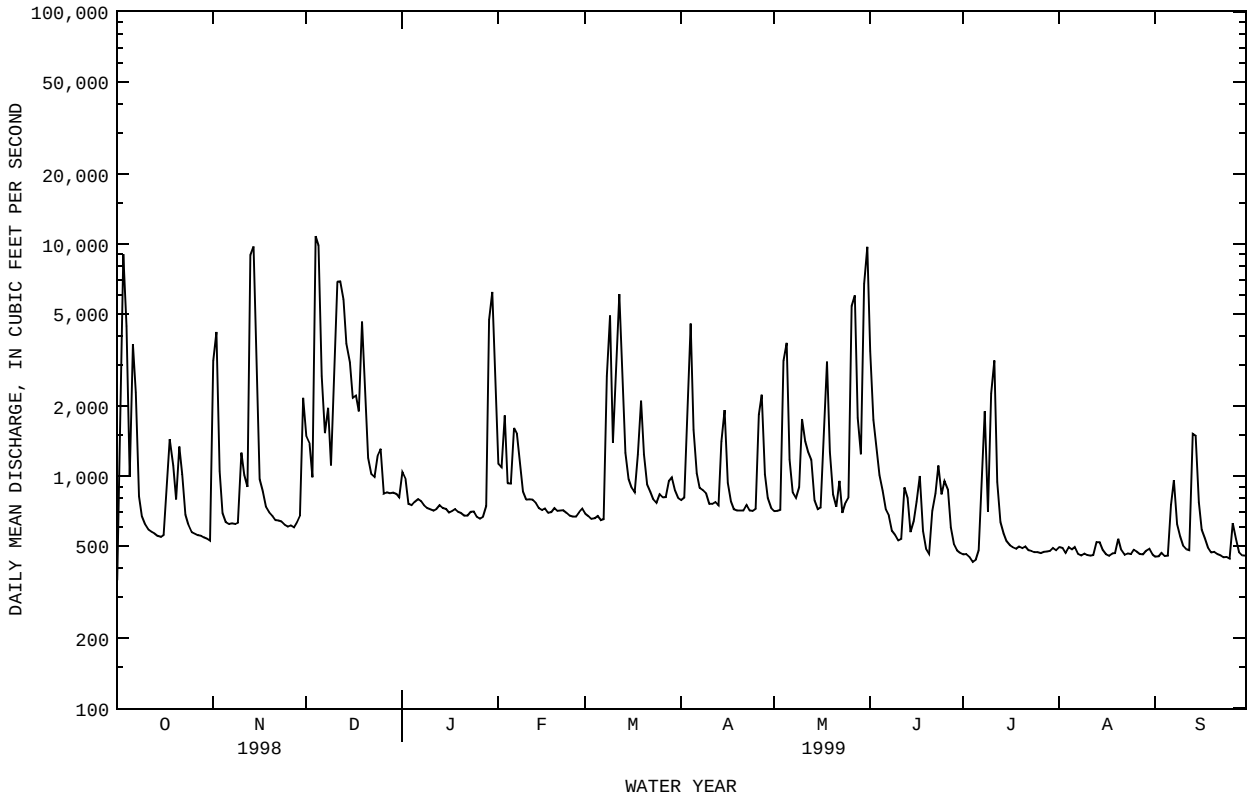
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999hz, BY WATER YEAR (WY)

MEAN	1197	1333	1491	1357	2017	2316	2533	3920	3032	1255	709	795
MAX	10050	14150	12860	13350	10410	14910	27050	28050	17390	8629	6075	7107
(WY)	1982	1982	1992	1992	1992	1945	1942	1990	1941	1989	1982	1962
MIN	68.2	58.2	53.0	62.4	76.9	68.2	91.5	213	68.0	51.9	50.2	52.4
(WY)	1935	1956	1939	1940	1940	1956	1955	1937	1953	1956	1956	1956

08057000 TRINITY RIVER AT DALLAS, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999hz	
ANNUAL TOTAL	893948		450477			
ANNUAL MEAN	2449		1234		1827	
HIGHEST ANNUAL MEAN					7154	1982
LOWEST ANNUAL MEAN					115	1956
HIGHEST DAILY MEAN	26900	Mar 17	10800	Dec 4	103000	Apr 26 1942
LOWEST DAILY MEAN	331	Jul 21	355	Oct 1	10	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	346	Sep 5	454	Jun 29	26	Apr 12 1935
INSTANTANEOUS PEAK FLOW			14800	Dec 4	111000	Apr 26 1942
INSTANTANEOUS PEAK STAGE			34.35	Dec 4	47.10	May 3 1990
ANNUAL RUNOFF (AC-FT)	1773000		893500		1324000	
10 PERCENT EXCEEDS	6890		2320		5240	
50 PERCENT EXCEEDS	708		727		418	
90 PERCENT EXCEEDS	374		467		110	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX

LOCATION.--Lat 32°45'04", long 96°47'07", Dallas County, Hydrologic Unit 12030105, on right bank at abandoned bridge abutment, 0.2 mi upstream from Cedar Crest Boulevard. Bridge, 1.8 mi southeast of Dallas City Hall, 2.1 mi downstream from Coombs Creek, and 2.7 mi downstream from Commerce Street Bridge (station 08057000).

PERIOD OF RECORD.--
CHEMICAL DATA: Feb 1984 to current year.
BIOCHEMICAL DATA: Feb 1984 to Sep 1993.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Feb 1984 to current year.
PH: Feb 1984 to current year.
WATER TEMPERATURES: Feb 1984 to current year.
DISSOLVED OXYGEN: Feb 1984 to current year.

INSTRUMENTATION.--Water-quality monitor since Feb 1984.

REMARKS.--Interruption in the record was caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years 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 U.S. Geological Survey Texas District Office upon request. Discharge records are available for gaging station 08057000, 2.7 mi upstream. There is no appreciable inflow between the two stations.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,030 microsiemens, Feb 12, 1988; minimum, 93 microsiemens, Oct 20, 1984.
PH: Maximum, 8.7 units, Mar 13, 1995; minimum, 6.8 units, Sep 6, 1988, Mar 17-18, 1998.
WATER TEMPERATURE: Maximum, 33.5°C, Aug 12, 1987; minimum, 5.0°C, Feb 7, 8, 1989.
DISSOLVED OXYGEN: Maximum, 13.7 mg/L, Feb 8, 1989; minimum, 0.0 mg/L, Jul 21, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 920 microsiemens, Sep 20; minimum, 202 microsiemens, Jul 10.
PH: Maximum, 8.3 units, Oct 4, Nov 1, Mar 26, May 1, Jun 7-8, Jul 7; minimum, 7.0 units, Sep 14-16.
WATER TEMPERATURE: Maximum, 33.0°C, Aug 10; minimum, 7.3°C, Dec 25.
DISSOLVED OXYGEN: Maximum, 11.0 mg/L, Mar 30-31; minimum, 1.0 mg/L, Jun 18.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	813	795	801	793	341	505	662	542	617	788	574	730
2	813	278	637	438	361	383	570	540	546	745	574	647
3	416	298	341	497	413	467	709	274	624	765	736	752
4	427	312	365	---	---	---	455	277	356	772	735	757
5	524	427	494	---	---	---	401	341	367	774	752	764
6	490	343	397	717	685	704	538	401	479	767	745	757
7	426	329	364	725	695	711	620	420	570	761	746	754
8	541	426	486	751	720	737	584	370	480	810	758	785
9	619	541	584	744	724	734	613	501	565	807	781	794
10	692	619	662	724	482	568	645	335	476	851	804	832
11	734	676	710	630	564	596	423	374	405	836	811	820
12	743	713	728	609	364	551	405	317	369	821	807	814
13	774	728	746	382	273	322	427	376	395	809	785	794
14	774	745	760	377	306	329	451	427	437	816	780	799
15	758	745	751	497	377	448	475	439	463	839	809	823
16	772	755	762	600	497	568	561	460	524	855	833	845
17	769	551	639	662	584	618	580	503	522	859	834	850
18	578	478	543	704	662	684	633	375	522	834	800	819
19	611	527	567	741	704	725	498	378	447	823	782	799
20	571	525	550	790	741	770	533	435	472	848	813	828
21	570	507	545	818	779	802	601	533	585	841	816	828
22	575	511	524	812	780	794	654	600	631	854	815	833
23	603	520	575	818	789	803	687	650	666	854	804	820
24	669	603	646	812	790	802	706	555	658	818	807	814
25	---	---	---	812	789	801	680	554	586	841	805	823
26	---	---	---	808	786	794	727	680	717	---	---	---
27	---	---	---	798	785	791	724	705	713	---	---	---
28	---	---	---	790	756	765	730	711	722	845	694	795
29	---	---	---	766	348	750	732	719	724	771	409	518
30	806	754	778	621	348	488	754	720	742	418	383	396
31	809	787	798	---	---	---	756	737	747	552	418	485
MONTH	---	---	---	---	---	---	756	274	552	---	---	---

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	632	552	611	842	789	813	757	721	743	782	755	769
2	692	628	662	862	830	843	758	746	753	782	429	656
3	692	560	577	876	832	852	756	555	672	559	387	460
4	762	612	717	872	849	862	569	433	485	498	397	461
5	791	568	771	864	831	845	562	485	531	440	399	417
6	593	568	573	866	851	859	659	562	617	562	421	497
7	713	593	644	883	861	874	735	659	692	674	562	622
8	682	623	653	872	206	638	758	734	744	744	674	710
9	709	623	662	495	357	422	797	752	778	757	739	748
10	747	703	720	565	451	514	825	795	813	749	538	630
11	767	744	754	617	250	499	849	807	828	623	562	594
12	744	734	739	466	321	368	834	797	813	628	590	612
13	770	739	756	499	396	443	833	810	822	648	565	600
14	811	756	786	570	499	553	862	619	754	685	573	625
15	810	788	799	662	569	633	653	542	580	740	685	720
16	821	789	804	700	660	680	646	563	611	764	731	748
17	807	788	798	728	698	711	726	646	682	780	282	631
18	829	790	808	755	556	711	804	726	774	566	373	498
19	811	792	800	693	555	587	822	786	808	554	493	518
20	812	789	801	709	604	642	830	803	817	654	554	606
21	809	793	801	666	611	649	835	810	823	716	654	692
22	812	788	798	723	662	689	817	768	785	748	590	662
23	840	810	822	752	722	731	864	788	826	796	731	781
24	846	810	828	768	752	760	861	830	843	790	698	741
25	849	823	836	780	761	769	830	803	819	769	675	737
26	862	836	847	785	755	770	828	320	633	738	306	420
27	890	855	870	781	720	761	561	525	547	390	310	345
28	855	791	812	749	713	727	638	560	601	515	390	457
29	---	---	---	716	696	708	707	638	669	604	308	533
30	---	---	---	696	669	680	770	707	745	480	268	336
31	---	---	---	721	693	709	---	---	---	346	249	290
MONTH	890	552	752	883	206	687	864	320	720	796	249	584

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	469	346	411	---	---	---	---	---	---	704	697	700
2	551	469	509	---	---	---	---	---	---	702	696	699
3	610	529	569	830	795	811	---	---	---	704	529	684
4	632	610	623	825	804	816	---	---	---	714	637	698
5	642	613	630	820	789	811	---	---	---	717	712	715
6	676	626	658	789	721	759	---	---	---	768	681	701
7	712	663	688	786	341	694	---	---	---	---	---	---
8	708	661	683	590	322	475	---	---	---	---	---	---
9	730	657	712	573	494	528	---	---	---	---	---	---
10	782	671	760	626	202	446	---	---	---	---	---	---
11	811	738	790	524	230	389	---	---	---	---	---	---
12	791	519	722	554	424	498	---	---	---	---	---	---
13	681	470	608	639	554	599	685	624	660	---	---	---
14	719	657	693	702	627	673	636	619	627	---	---	---
15	755	446	712	757	699	731	658	627	641	---	---	---
16	691	355	596	793	744	766	675	658	671	---	---	---
17	773	560	663	808	786	796	679	670	672	685	655	669
18	748	569	668	823	782	806	686	678	683	771	674	713
19	800	748	781	818	765	790	678	659	668	842	771	804
20	814	769	792	789	756	768	674	630	652	920	842	874
21	816	643	762	804	789	796	664	626	639	870	797	830
22	760	348	667	792	761	775	688	664	682	806	787	797
23	742	496	620	806	770	784	702	684	694	803	796	800
24	728	557	624	811	800	805	701	679	691	824	794	807
25	628	519	569	831	806	819	693	676	686	830	818	824
26	775	519	623	823	810	816	676	649	660	836	586	721
27	807	749	776	---	---	---	694	672	682	724	593	686
28	830	327	599	---	---	---	700	687	696	735	684	711
29	---	---	---	---	---	---	700	681	695	707	698	701
30	---	---	---	---	---	---	681	661	668	710	706	708
31	---	---	---	---	---	---	698	672	680	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.5	7.3	7.4	8.3	8.0	8.2	7.8	7.6	7.7	8.1	7.8	7.9
2	7.7	7.3	7.4	8.2	7.6	7.9	7.9	7.8	7.8	8.1	7.9	8.0
3	8.0	7.5	7.7	7.6	7.5	7.5	7.9	7.6	7.7	7.9	7.9	7.9
4	8.3	7.8	8.0	7.8	7.5	7.7	7.9	7.7	7.8	7.9	7.9	7.9
5	7.8	7.2	7.4	7.8	7.6	7.7	7.8	7.6	7.8	7.9	7.8	7.9
6	7.5	7.2	7.3	7.8	7.8	7.8	7.6	7.6	7.6	7.9	7.8	7.9
7	7.4	7.2	7.3	7.8	7.7	7.8	7.8	7.6	7.7	7.9	7.8	7.9
8	7.4	7.3	7.3	7.8	7.7	7.8	7.8	7.7	7.7	7.9	7.8	7.9
9	7.5	7.4	7.4	8.0	7.7	7.8	7.8	7.7	7.7	7.9	7.8	7.9
10	7.5	7.5	7.5	7.9	7.7	7.8	8.0	7.7	7.9	7.9	7.8	7.9
11	7.6	7.5	7.6	7.8	7.7	7.7	7.9	7.9	7.9	7.9	7.8	7.9
12	7.6	7.6	7.6	7.9	7.8	7.8	8.1	7.9	8.0	8.0	7.8	7.9
13	7.7	7.6	7.6	8.0	7.9	8.0	8.0	8.0	8.0	8.0	7.9	7.9
14	8.0	7.6	7.8	8.0	7.8	7.9	8.0	7.9	7.9	8.1	7.9	8.0
15	8.0	7.8	7.9	7.8	7.7	7.7	7.9	7.9	7.9	8.0	7.7	7.9
16	8.0	7.8	7.9	7.7	7.7	7.7	8.0	7.9	7.9	7.9	7.7	7.8
17	7.8	7.6	7.7	7.7	7.7	7.7	8.0	7.9	7.9	7.9	7.8	7.8
18	7.7	7.6	7.7	7.7	7.7	7.7	8.2	7.8	7.9	7.9	7.7	7.8
19	7.7	7.6	7.6	7.7	7.7	7.7	8.0	7.8	7.9	7.9	7.7	7.9
20	7.7	7.6	7.7	7.8	7.7	7.8	7.8	7.7	7.8	8.0	7.8	7.9
21	7.7	7.6	7.6	7.8	7.7	7.8	7.9	7.8	7.8	7.9	7.8	7.9
22	7.6	7.5	7.6	7.8	7.7	7.8	7.9	7.8	7.8	7.9	7.8	7.9
23	7.6	7.6	7.6	7.8	7.7	7.7	7.9	7.8	7.8	8.1	7.9	8.0
24	7.7	7.6	7.6	7.7	7.7	7.7	8.1	7.8	7.9	8.0	7.9	8.0
25	---	---	---	7.7	7.6	7.7	8.0	7.9	8.0	8.0	7.9	7.9
26	---	---	---	7.7	7.5	7.7	7.9	7.9	7.9	---	---	---
27	---	---	---	7.7	7.5	7.6	7.9	7.9	7.9	---	---	---
28	---	---	---	7.8	7.6	7.7	7.9	7.8	7.9	7.8	7.5	7.7
29	---	---	---	7.9	7.7	7.8	7.9	7.8	7.8	7.9	7.6	7.7
30	8.2	8.0	8.1	7.9	7.7	7.8	7.9	7.8	7.8	7.8	7.7	7.7
31	8.2	8.1	8.1	---	---	---	7.8	7.8	7.8	7.8	7.7	7.8
MONTH	---	---	---	8.3	7.5	7.8	8.2	7.6	7.8	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.8	8.0	7.9	7.9	7.9	7.8	7.9	8.3	8.0	8.1
2	7.9	7.9	7.9	8.0	7.9	7.9	7.9	7.8	7.8	8.1	7.6	7.8
3	8.2	7.9	8.1	8.0	7.9	7.9	7.9	7.6	7.8	7.8	7.6	7.7
4	8.0	7.8	7.9	8.0	7.9	7.9	7.7	7.5	7.7	7.8	7.6	7.7
5	8.0	7.8	7.8	8.0	7.9	7.9	7.7	7.6	7.7	7.8	7.7	7.7
6	8.1	8.0	8.0	8.0	7.9	7.9	7.8	7.6	7.7	7.7	7.6	7.7
7	8.0	7.8	7.9	8.0	7.9	7.9	7.8	7.7	7.7	7.8	7.7	7.7
8	7.8	7.8	7.8	8.1	7.7	7.9	7.9	7.6	7.8	7.9	7.8	7.8
9	7.9	7.8	7.8	7.8	7.7	7.7	8.0	7.8	7.8	7.8	7.7	7.8
10	7.9	7.8	7.8	7.7	7.7	7.7	7.9	7.7	7.8	7.7	7.6	7.6
11	7.9	7.8	7.8	8.0	7.6	7.7	7.9	7.7	7.8	7.7	7.6	7.6
12	7.9	7.8	7.9	7.9	7.7	7.8	8.0	7.7	7.9	7.9	7.7	7.7
13	7.9	7.8	7.9	7.7	7.7	7.7	8.0	7.8	7.9	7.8	7.7	7.7
14	7.9	7.9	7.9	7.8	7.7	7.7	7.9	7.7	7.8	8.0	7.8	7.8
15	8.0	7.9	7.9	7.8	7.7	7.7	7.7	7.6	7.7	8.0	7.8	7.9
16	8.0	7.9	8.0	7.8	7.7	7.8	7.8	7.7	7.7	8.0	7.9	7.9
17	8.0	7.9	7.9	7.8	7.7	7.7	8.0	7.8	7.9	8.0	7.6	7.9
18	8.0	7.9	7.9	8.0	7.7	7.8	8.0	7.8	7.9	7.8	7.6	7.7
19	8.0	7.9	7.9	7.9	7.7	7.9	8.1	7.9	8.0	7.7	7.6	7.6
20	7.9	7.9	7.9	7.8	7.7	7.8	8.1	7.8	8.0	7.7	7.6	7.7
21	7.9	7.8	7.9	7.8	7.7	7.7	8.2	7.9	8.0	7.8	7.6	7.7
22	7.9	7.9	7.9	7.8	7.7	7.8	8.2	7.9	8.1	7.9	7.6	7.7
23	8.0	7.8	7.9	7.9	7.8	7.8	8.2	7.9	8.1	7.8	7.7	7.7
24	8.0	7.9	7.9	8.0	7.8	7.9	8.2	8.0	8.1	7.9	7.7	7.8
25	7.9	7.8	7.9	8.0	7.8	7.9	8.2	7.9	8.0	8.0	7.4	7.8
26	7.9	7.8	7.9	8.3	7.9	8.0	8.0	7.7	7.8	7.9	7.5	7.7
27	7.9	7.8	7.8	8.1	7.9	8.0	7.8	7.7	7.7	7.6	7.6	7.6
28	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.7	7.7	7.8	7.5	7.6
29	---	---	---	7.9	7.8	7.8	7.9	7.7	7.8	7.8	7.6	7.7
30	---	---	---	7.9	7.8	7.9	8.1	7.8	7.9	7.7	7.6	7.6
31	---	---	---	7.9	7.8	7.9	---	---	---	7.7	7.6	7.6
MONTH	8.2	7.8	7.9	8.3	7.6	7.8	8.2	7.5	7.8	8.3	7.4	7.7

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.7	7.7	---	---	---	7.6	7.4	7.5	7.9	7.7	7.8
2	7.8	7.7	7.8	---	---	---	7.4	7.3	7.3	7.8	7.7	7.7
3	7.9	7.7	7.8	8.1	7.9	8.0	7.4	7.3	7.3	7.8	7.5	7.7
4	7.9	7.8	7.8	8.1	7.9	8.0	7.4	7.3	7.3	7.6	7.5	7.5
5	8.0	7.8	7.9	8.1	7.9	8.0	7.5	7.2	7.4	7.7	7.6	7.6
6	8.1	7.8	7.9	8.0	7.8	7.9	7.5	7.3	7.4	7.6	7.6	7.6
7	8.3	7.9	8.1	8.3	7.7	7.8	7.6	7.4	7.5	7.6	7.4	7.5
8	8.3	8.0	8.1	7.8	7.6	7.7	7.5	7.4	7.4	7.5	7.3	7.4
9	8.1	7.8	8.0	7.7	7.6	7.6	7.4	7.4	7.4	7.5	7.3	7.4
10	8.0	7.7	7.8	8.1	7.6	7.8	7.4	7.3	7.4	7.5	7.3	7.4
11	---	---	---	8.0	7.4	7.6	7.4	7.4	7.4	7.5	7.3	7.4
12	---	---	---	7.5	7.5	7.5	8.0	7.3	7.7	7.5	7.3	7.4
13	---	---	---	7.6	7.4	7.5	7.9	7.8	7.8	7.5	7.3	7.4
14	---	---	---	7.6	7.4	7.5	7.8	7.7	7.7	7.3	7.0	7.2
15	---	---	---	7.7	7.5	7.6	7.9	7.6	7.7	7.1	7.0	7.1
16	7.9	7.7	7.8	7.7	7.6	7.7	7.8	7.6	7.7	7.4	7.0	7.2
17	7.9	7.7	7.8	7.7	7.6	7.6	7.9	7.7	7.8	7.4	7.2	7.3
18	8.0	7.7	7.8	7.6	7.5	7.6	7.8	7.7	7.7	7.3	7.3	7.3
19	8.1	7.7	7.9	7.6	7.5	7.6	7.8	7.6	7.7	7.3	7.3	7.3
20	8.1	7.9	8.0	7.6	7.6	7.6	7.8	7.6	7.7	7.3	7.3	7.3
21	8.0	7.7	7.8	7.6	7.5	7.6	7.8	7.6	7.7	7.4	7.3	7.4
22	7.7	7.6	7.7	7.7	7.5	7.6	7.7	7.6	7.6	7.5	7.4	7.4
23	7.6	7.5	7.5	7.9	7.6	7.8	7.7	7.5	7.6	7.5	7.5	7.5
24	7.7	7.3	7.5	8.0	7.8	7.9	7.8	7.5	7.7	7.6	7.5	7.5
25	7.8	7.5	7.6	8.0	7.8	7.9	7.8	7.5	7.7	7.7	7.6	7.6
26	7.6	7.2	7.4	8.0	7.8	7.9	7.7	7.5	7.6	7.7	7.6	7.6
27	7.4	7.2	7.3	7.9	7.6	7.8	7.8	7.5	7.6	7.7	7.6	7.7
28	7.4	7.2	7.3	7.9	7.7	7.8	7.8	7.6	7.7	7.9	7.6	7.7
29	7.3	7.1	7.2	8.0	7.7	7.8	7.8	7.6	7.7	8.1	7.9	7.9
30	7.3	7.2	7.2	7.9	7.7	7.8	7.9	7.6	7.8	8.1	7.9	8.0
31	---	---	---	7.8	7.6	7.7	7.9	7.6	7.7	---	---	---
MONTH	---	---	---	---	---	---	8.0	7.2	7.6	8.1	7.0	7.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	30.0	28.8	29.3	24.7	20.7	22.2	19.1	18.2	18.8	14.5	10.7	13.1
2	29.0	24.3	27.1	20.7	19.3	19.6	19.0	18.2	18.6	12.0	10.0	11.0
3	25.6	23.4	24.0	20.0	19.0	19.5	20.4	18.8	19.6	11.4	9.8	10.9
4	25.6	23.7	24.4	---	---	---	19.3	18.1	18.5	11.5	9.6	10.4
5	26.9	25.6	26.1	---	---	---	18.8	18.0	18.3	11.7	10.1	10.8
6	25.6	22.2	23.3	---	---	---	19.6	18.8	19.3	12.6	10.6	11.7
7	22.9	21.6	22.2	17.5	17.1	17.3	19.5	15.2	18.1	13.6	12.3	13.0
8	23.4	22.0	22.7	18.1	17.1	17.6	16.4	14.6	15.6	14.2	12.5	13.7
9	23.8	22.8	23.2	20.1	17.5	18.7	15.8	14.8	15.1	12.5	10.8	11.6
10	24.4	23.1	23.6	19.5	17.2	17.8	15.2	11.1	13.0	12.7	10.7	11.6
11	25.2	23.5	24.1	17.8	16.7	17.3	12.4	11.0	11.8	13.8	11.3	12.5
12	25.7	24.0	24.7	17.1	14.1	16.3	11.0	9.7	10.3	15.0	12.9	14.1
13	26.2	24.5	25.2	14.1	12.6	13.1	11.1	9.8	10.3	14.7	13.3	14.1
14	26.0	24.8	25.4	13.9	12.6	13.1	11.8	10.9	11.4	13.3	12.3	12.8
15	26.0	24.8	25.3	15.5	13.9	14.7	12.4	11.5	12.0	13.6	12.2	12.9
16	26.1	25.0	25.5	17.6	15.5	16.7	13.8	12.2	12.9	14.4	12.9	13.6
17	25.9	24.3	24.9	18.3	17.2	17.7	13.8	12.7	13.0	15.5	13.9	14.6
18	24.3	23.0	23.6	19.7	18.3	19.1	13.5	12.4	13.0	15.7	14.2	14.8
19	23.1	22.2	22.7	20.6	19.6	20.1	12.7	11.6	12.0	16.0	14.1	15.0
20	22.2	21.2	21.9	20.0	18.7	19.4	13.0	11.8	12.3	17.1	15.2	16.1
21	21.4	20.4	20.9	19.0	18.2	18.6	14.1	12.3	13.4	18.5	16.8	17.6
22	21.4	20.4	20.8	19.0	17.6	18.2	12.3	10.5	11.1	17.9	16.1	17.4
23	21.3	20.3	20.7	19.8	18.2	19.0	10.8	10.3	10.5	16.1	14.8	15.3
24	21.5	20.4	20.8	20.8	19.5	20.1	10.6	7.6	9.5	16.1	14.4	15.1
25	---	---	---	21.1	19.9	20.3	9.3	7.3	7.8	17.0	15.0	15.9
26	---	---	---	20.5	19.3	19.9	11.1	9.3	10.4	---	---	---
27	---	---	---	20.3	19.1	19.7	11.8	10.6	11.3	---	---	---
28	---	---	---	20.8	19.4	20.0	12.6	11.7	12.1	18.2	17.4	17.7
29	---	---	---	20.9	18.0	20.4	13.1	12.1	12.5	17.9	14.5	15.5
30	25.3	24.5	24.9	19.1	17.5	18.3	12.8	12.3	12.5	14.5	13.2	13.6
31	25.1	24.5	24.8	---	---	---	13.3	12.6	12.9	13.2	12.6	12.8
MONTH	---	---	---	---	---	---	20.4	7.3	13.5	---	---	---

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.2	12.7	13.4	19.7	17.8	18.6	19.2	18.0	18.5	24.0	22.9	23.4
2	15.2	14.0	14.4	19.8	18.4	19.0	20.4	19.2	19.8	23.1	19.8	21.5
3	15.2	12.5	13.2	18.7	17.1	18.0	20.7	18.3	19.8	21.5	19.6	20.4
4	16.0	13.7	15.1	18.4	17.0	17.7	19.1	17.9	18.5	22.6	21.5	21.9
5	17.7	15.1	16.5	19.6	17.8	18.6	20.8	19.1	19.9	23.0	22.0	22.4
6	15.8	15.0	15.3	19.8	18.2	18.9	21.4	19.5	20.6	23.3	21.5	22.4
7	17.0	15.8	16.4	18.6	16.9	17.8	21.4	20.7	21.1	24.2	22.2	23.1
8	17.6	16.2	16.9	16.9	14.5	16.1	23.2	21.2	22.0	25.3	23.0	24.0
9	19.4	17.6	18.5	16.0	14.8	15.4	24.0	22.5	23.2	25.2	23.9	24.5
10	19.7	19.2	19.4	16.9	15.9	16.2	23.6	23.0	23.4	25.0	23.1	23.9
11	19.7	17.3	19.0	17.3	13.8	16.1	23.0	21.9	22.5	24.1	22.9	23.5
12	17.3	15.7	16.1	15.6	13.8	14.2	23.3	21.7	22.5	24.1	23.2	23.7
13	16.6	15.5	15.9	13.8	12.7	13.2	23.2	22.3	22.7	24.7	23.0	23.9
14	17.0	15.6	16.1	13.7	12.2	12.9	23.1	21.6	22.4	25.7	23.9	24.8
15	17.3	15.6	16.3	15.4	13.5	14.4	21.8	19.8	20.3	26.8	25.2	25.8
16	17.8	16.4	16.9	16.6	15.1	15.8	20.0	18.6	19.3	27.0	25.8	26.3
17	18.0	16.4	17.1	17.8	16.5	17.1	19.8	18.5	19.1	26.4	23.4	25.3
18	17.9	16.4	17.1	18.5	15.7	17.6	21.0	18.4	19.6	25.3	23.4	24.4
19	17.2	15.8	16.4	17.3	15.7	16.1	22.8	20.1	21.2	25.4	23.9	24.8
20	16.3	15.6	16.1	17.3	16.1	16.7	24.1	21.9	22.8	26.1	24.5	25.3
21	16.5	14.9	15.6	18.5	16.5	17.4	23.2	22.1	22.5	26.6	25.4	25.9
22	15.9	14.7	15.2	19.9	18.0	18.8	23.7	21.8	22.6	28.1	26.0	26.9
23	16.8	14.7	15.7	19.6	19.0	19.3	24.6	23.3	23.9	27.3	26.4	27.0
24	17.5	15.5	16.4	19.8	18.5	19.1	24.3	23.5	23.8	27.7	26.1	26.8
25	19.0	17.1	18.0	20.2	18.9	19.5	23.9	22.7	23.4	27.2	25.5	26.6
26	19.7	18.7	19.2	20.2	18.4	19.2	23.5	20.3	22.3	26.9	22.8	24.3
27	20.6	19.3	19.8	19.3	17.8	18.7	23.5	21.3	22.2	23.7	22.6	23.1
28	19.3	17.9	18.6	17.8	17.5	17.7	24.8	22.6	23.7	25.7	23.3	24.2
29	---	---	---	17.5	17.1	17.3	24.8	23.7	24.3	25.7	24.4	25.0
30	---	---	---	17.1	16.8	16.9	24.7	23.1	23.8	25.0	22.7	23.8
31	---	---	---	18.2	17.1	17.6	---	---	---	25.1	22.7	23.7
MONTH	20.6	12.5	16.6	20.2	12.2	17.2	24.8	17.9	21.7	28.1	19.6	24.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	25.0	25.8	---	---	---	31.9	30.3	31.0	30.5	29.2	29.7
2	28.1	26.7	27.3	30.2	28.7	29.3	32.3	30.6	31.3	29.8	29.0	29.4
3	28.5	27.5	28.0	30.5	28.8	29.6	32.4	30.8	31.4	30.2	28.7	29.3
4	28.4	27.1	27.8	30.8	29.2	29.9	32.2	30.5	31.2	31.2	29.3	30.1
5	28.3	26.9	27.6	30.6	29.2	29.8	32.3	30.8	31.4	30.8	29.4	30.1
6	28.6	27.1	27.9	30.7	29.3	29.9	32.3	30.7	31.4	30.2	28.9	29.4
7	29.2	27.6	28.4	31.0	27.3	29.6	32.6	30.8	31.6	29.9	29.0	29.5
8	29.4	27.8	28.5	30.2	27.5	28.9	32.7	30.9	31.7	29.3	28.1	28.6
9	29.4	27.7	28.4	30.8	28.9	29.9	32.9	31.2	31.9	29.5	27.8	28.5
10	28.8	27.4	28.1	29.8	25.7	28.1	33.0	31.4	32.0	29.9	28.4	29.0
11	29.5	27.2	28.2	28.9	26.4	27.7	32.7	31.0	31.8	29.3	28.0	28.7
12	28.6	27.2	28.2	29.4	27.8	28.7	32.4	30.9	31.5	29.9	28.2	28.9
13	28.9	27.0	27.9	30.4	28.6	29.4	31.5	30.7	31.0	29.0	25.9	27.1
14	28.8	27.7	28.2	30.9	29.5	30.1	32.1	30.5	31.1	27.3	26.3	26.8
15	28.3	26.3	27.6	30.5	29.1	29.8	31.9	30.6	31.2	27.4	26.0	26.8
16	28.4	26.0	27.1	30.6	29.0	29.7	31.8	30.1	30.8	27.3	26.4	26.8
17	27.9	26.9	27.3	30.8	29.4	30.0	31.7	29.8	30.6	28.1	26.5	27.1
18	27.7	25.9	26.8	31.3	29.3	30.2	31.7	30.2	30.9	28.4	26.9	27.5
19	28.4	26.6	27.4	31.3	30.1	30.6	32.4	30.6	31.3	28.8	26.9	27.7
20	28.6	27.5	27.9	31.5	29.8	30.5	31.5	30.3	30.9	29.1	27.5	28.1
21	27.9	27.2	27.5	30.6	29.7	30.1	31.1	29.8	30.4	28.2	25.9	26.9
22	27.6	26.8	27.1	31.0	29.4	30.1	31.3	29.9	30.5	26.3	24.7	25.5
23	28.5	26.9	27.7	31.5	29.7	30.5	31.7	30.2	30.8	26.3	24.4	25.3
24	28.5	27.6	28.0	32.0	30.2	31.0	32.2	30.4	31.2	26.1	24.6	25.4
25	28.1	26.7	27.3	32.0	30.5	31.2	32.0	30.2	31.1	25.6	24.8	25.2
26	29.1	27.4	28.2	32.1	30.6	31.2	32.3	30.3	31.1	25.9	24.7	25.3
27	30.0	28.7	29.3	32.3	30.5	31.3	31.9	30.7	31.1	27.1	25.3	26.2
28	---	---	---	32.1	30.8	31.3	32.2	30.2	31.1	27.9	26.4	27.1
29	---	---	---	32.4	30.8	31.5	31.9	30.6	31.1	26.4	24.5	25.4
30	---	---	---	32.1	30.5	31.2	31.3	30.1	30.6	25.2	23.3	24.2
31	---	---	---	31.8	30.1	30.9	30.9	29.6	30.2	---	---	---
MONTH	---	---	---	---	---	---	33.0	29.6	31.1	31.2	23.3	27.5

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	6.0	5.0	5.7	7.1	5.7	6.3	---	---	---
2	6.5	4.4	5.3	5.9	5.3	5.6	7.5	6.8	7.1	---	---	---
3	7.9	5.7	6.6	7.1	5.0	5.8	7.4	6.0	6.4	---	---	---
4	6.8	5.9	6.2	7.8	7.1	7.4	7.3	5.8	6.5	---	---	---
5	---	---	---	9.1	7.7	8.3	6.2	5.4	5.7	---	---	---
6	---	---	---	8.7	7.9	8.4	5.7	5.3	5.5	---	---	---
7	---	---	---	8.3	7.7	8.0	8.0	5.6	6.5	---	---	---
8	---	---	---	7.9	7.1	7.6	8.1	7.4	7.7	---	---	---
9	---	---	---	7.7	7.2	7.5	7.9	7.5	7.7	---	---	---
10	---	---	---	7.7	7.2	7.5	9.9	7.5	8.8	---	---	---
11	---	---	---	8.0	7.4	7.6	9.6	9.1	9.4	---	---	---
12	---	---	---	8.1	7.5	7.9	10.6	9.6	10.1	9.5	8.8	9.2
13	---	---	---	9.0	8.1	8.5	10.5	10.0	10.3	9.8	8.6	9.2
14	---	---	---	8.8	8.1	8.4	10.1	9.8	10.0	10.3	9.2	9.7
15	---	---	---	8.1	7.8	7.9	10.0	9.6	9.8	10.3	9.2	9.7
16	---	---	---	7.9	7.4	7.6	9.9	8.7	9.2	9.4	8.7	9.1
17	6.7	4.9	5.9	7.6	7.2	7.4	9.5	8.9	9.2	9.6	8.5	9.0
18	6.1	5.2	5.6	7.2	6.7	6.9	9.2	8.1	8.8	9.5	7.9	8.8
19	5.7	4.4	4.8	6.7	6.1	6.4	9.4	8.6	9.0	9.2	8.0	8.7
20	5.1	4.6	4.8	6.5	6.0	6.2	8.9	8.1	8.4	8.8	7.6	8.2
21	6.0	5.1	5.7	6.7	6.4	6.5	8.3	7.7	8.0	7.9	6.9	7.5
22	7.7	6.0	7.2	7.0	6.6	6.7	8.8	8.1	8.4	7.2	6.4	6.8
23	7.2	6.4	6.7	7.0	6.7	6.8	8.9	8.1	8.6	7.7	6.5	7.0
24	6.8	6.5	6.6	6.7	6.0	6.4	9.1	8.2	8.7	7.7	6.8	7.1
25	---	---	---	6.4	5.9	6.2	9.7	8.9	9.3	7.5	6.6	6.9
26	---	---	---	6.6	5.9	6.2	8.9	7.9	8.3	---	---	---
27	---	---	---	6.7	5.6	6.2	8.4	7.7	8.0	---	---	---
28	---	---	---	7.2	6.0	6.8	8.0	7.5	7.8	8.1	6.9	7.6
29	---	---	---	7.5	6.5	6.8	7.9	7.3	7.6	8.3	7.1	7.9
30	6.4	5.2	5.8	7.8	6.3	6.9	7.7	7.1	7.4	8.6	7.8	8.2
31	6.1	5.3	5.7	---	---	---	7.3	5.7	6.3	8.9	8.5	8.6
MONTH	---	---	---	9.1	5.0	7.1	10.6	5.3	8.1	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.8	8.4	8.6	---	---	---	10.6	9.8	10.2	9.6	7.3	8.3
2	9.1	8.2	8.6	---	---	---	10.0	9.4	9.7	8.8	6.2	7.1
3	10.0	9.0	9.7	---	---	---	9.6	5.6	8.4	6.8	4.9	5.7
4	9.4	8.8	9.1	---	---	---	8.3	7.2	7.7	6.4	5.5	5.9
5	9.9	8.8	9.1	9.6	8.4	8.9	7.9	4.1	6.1	6.1	5.2	5.6
6	9.9	9.1	9.7	9.9	8.4	9.1	7.1	4.5	6.2	5.3	4.5	5.1
7	9.2	8.4	8.9	9.9	8.8	9.3	6.6	5.4	5.9	5.8	4.3	5.4
8	8.9	8.6	8.8	---	---	---	7.8	5.2	6.9	5.9	4.8	5.4
9	9.0	8.5	8.8	---	---	---	7.8	6.6	7.2	6.3	5.0	5.6
10	9.2	8.4	8.7	8.4	8.2	8.3	7.8	6.1	6.9	5.6	3.5	4.6
11	9.1	8.3	8.7	9.5	8.2	8.5	7.8	6.5	7.1	5.0	2.2	3.7
12	9.8	8.8	9.3	8.8	7.8	8.5	7.0	6.4	6.7	5.6	1.4	3.6
13	9.9	9.1	9.5	9.7	8.3	9.1	7.1	5.9	6.5	5.6	2.7	4.5
14	10.0	9.3	9.6	10.0	9.7	9.9	6.8	5.9	6.2	5.9	1.9	4.4
15	10.2	9.0	9.5	9.9	9.3	9.6	5.9	4.1	5.3	6.6	4.7	5.6
16	10.1	8.8	9.4	9.3	9.1	9.3	7.7	4.8	6.8	---	---	---
17	9.9	8.5	9.2	9.1	8.7	8.9	8.2	6.4	7.2	---	---	---
18	9.8	8.3	9.0	10.0	8.3	9.0	8.9	7.1	7.9	6.2	5.0	5.9
19	9.7	8.3	8.9	9.8	8.5	9.4	8.1	7.3	7.7	5.5	4.5	4.9
20	8.7	8.0	8.3	8.7	8.3	8.5	7.7	7.0	7.3	4.7	3.6	4.2
21	8.9	7.6	8.2	9.0	8.3	8.7	7.9	7.0	7.6	8.6	1.5	4.8
22	8.4	7.4	8.0	9.1	8.4	8.8	8.7	6.9	7.7	7.7	1.6	4.3
23	8.0	7.2	7.6	9.0	8.1	8.6	8.6	7.0	7.7	9.3	2.4	4.8
24	7.8	7.1	7.4	10.3	8.2	9.1	9.0	6.2	7.4	8.0	1.4	5.0
25	7.5	6.9	7.2	9.5	7.9	8.8	8.0	6.1	6.9	8.0	2.7	6.2
26	---	---	---	8.9	7.1	8.1	6.8	3.9	5.4	7.0	4.8	5.9
27	---	---	---	---	---	---	6.0	5.6	5.8	5.4	4.6	5.0
28	---	---	---	---	---	---	6.4	5.5	5.8	6.4	5.4	5.9
29	---	---	---	---	---	---	7.4	5.9	6.5	6.2	5.7	6.0
30	---	---	---	11.0	10.6	10.8	8.9	6.0	7.3	6.8	4.8	5.7
31	---	---	---	11.0	10.3	10.6	---	---	---	4.9	4.4	4.6
MONTH	---	---	---	---	---	---	10.6	3.9	7.1	---	---	---

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.6	4.4	5.1	---	---	---	6.2	5.2	5.6	6.9	5.4	6.2
2	6.0	5.5	5.7	8.1	7.1	7.7	6.7	5.4	6.0	6.8	5.2	6.1
3	6.5	5.7	6.0	7.9	6.3	7.0	6.8	6.0	6.4	6.5	5.5	6.1
4	6.9	5.8	6.4	7.8	6.0	6.9	6.5	5.8	6.2	6.5	5.3	5.7
5	7.6	6.0	6.8	7.8	5.8	6.7	6.9	6.0	6.5	6.5	5.3	5.8
6	8.2	6.3	7.3	6.5	3.5	5.3	6.8	6.1	6.5	6.2	5.0	5.5
7	8.3	6.6	7.5	5.7	2.9	4.5	6.8	6.2	6.5	---	---	---
8	---	---	---	5.3	3.5	4.4	6.9	5.9	6.4	5.8	5.1	5.4
9	---	---	---	5.1	4.0	4.5	6.9	5.9	6.3	---	---	---
10	---	---	---	---	---	---	6.8	6.0	6.4	---	---	---
11	---	---	---	---	---	---	7.0	6.0	6.4	---	---	---
12	---	---	---	---	---	---	7.8	5.9	6.7	---	---	---
13	---	---	---	---	---	---	6.9	5.1	6.1	---	---	---
14	---	---	---	---	---	---	5.9	4.8	5.2	---	---	---
15	---	---	---	---	---	---	5.9	5.2	5.5	---	---	---
16	7.2	6.1	6.5	---	---	---	5.9	5.3	5.7	---	---	---
17	6.6	2.5	5.3	---	---	---	6.4	5.3	5.9	---	---	---
18	7.4	1.0	4.2	---	---	---	5.9	5.2	5.5	---	---	---
19	7.9	1.5	5.1	---	---	---	6.2	5.2	5.6	---	---	---
20	8.0	6.2	7.0	---	---	---	6.5	5.0	5.6	---	---	---
21	6.9	5.1	6.0	---	---	---	5.8	5.0	5.4	---	---	---
22	---	---	---	---	---	---	5.8	4.9	5.3	---	---	---
23	---	---	---	---	---	---	6.5	5.1	5.8	---	---	---
24	---	---	---	---	---	---	6.4	5.1	5.8	---	---	---
25	---	---	---	---	---	---	6.4	5.4	5.9	---	---	---
26	---	---	---	---	---	---	6.6	5.1	5.7	---	---	---
27	---	---	---	---	---	---	6.8	5.0	5.7	---	---	---
28	---	---	---	---	---	---	6.3	5.2	5.7	---	---	---
29	---	---	---	7.4	5.7	6.4	6.5	4.8	5.7	7.9	6.9	7.3
30	---	---	---	7.1	5.2	6.0	6.8	5.3	6.1	8.6	7.3	7.8
31	---	---	---	7.0	5.2	5.9	7.1	5.3	6.1	---	---	---
MONTH	---	---	---	---	---	---	7.8	4.8	5.9	---	---	---

This page intentionally left blank.

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX

LOCATION.--Lat 32°53'21", long 96°45'23", Dallas County, Hydrologic Unit 12030l05, on left bank 20 ft upstream from bridge on Greenville Avenue in Dallas, 1.1 mi downstream from Texas and New Orleans Railroad Co. bridge, 1.2 mi downstream from Cottonwood Creek, 2.9 mi upstream from White Rock Lake, and 8.2 mi northeast of Dallas County Courthouse.

DRAINAGE AREA.--66.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug 1961 to Sep 1980, Apr 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level. Prior to Oct 24, 1961, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Low flow is affected by diversions from small dams upstream from station. Several observations of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 2	1845	7,890	485.35	Apr 26	1045	3,000	482.32
Nov 1	0845	11,200	486.42	May 26	0930	4,390	483.61
Nov 13	0345	3,190	482.58	Jun 10	0815	7,320	485.13
Dec 3	2315	15,200	487.40	Jun 11	2400	9,830	486.01
Mar 8	1200	10,200	486.12				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	1780	61	41	74	33	48	32	88	16	6.8	12
2	1300	94	49	41	65	32	47	149	61	15	6.7	13
3	380	60	1090	36	59	34	413	42	48	14	8.4	16
4	82	46	2090	36	52	32	104	502	45	15	8.5	21
5	121	38	126	36	47	33	67	48	40	171	9.7	21
6	508	36	108	38	243	34	54	37	42	25	11	46
7	86	43	348	38	211	38	44	33	40	234	10	24
8	56	38	97	36	83	1220	42	33	37	121	9.4	21
9	48	39	73	35	72	98	40	32	38	38	7.9	24
10	41	284	879	34	69	66	38	576	1480	333	7.7	22
11	37	58	366	34	92	332	33	61	697	165	7.5	21
12	37	265	919	33	62	299	28	50	1130	36	6.5	20
13	35	1120	133	31	57	158	32	44	117	32	9.5	632
14	27	159	100	30	55	90	189	39	64	28	9.1	180
15	25	91	87	30	52	75	52	36	214	21	7.0	32
16	98	76	75	29	50	71	37	34	157	17	9.6	26
17	200	67	71	28	48	70	32	563	63	16	9.0	23
18	467	64	451	20	47	90	35	332	53	18	8.8	22
19	61	63	205	24	42	79	31	62	49	15	11	21
20	101	60	100	27	44	67	32	43	44	15	15	19
21	108	54	87	28	42	60	32	37	48	13	9.7	15
22	51	52	71	27	40	53	33	39	158	13	11	15
23	39	53	68	25	38	52	32	324	66	12	12	16
24	34	51	63	26	37	49	32	149	41	12	22	15
25	32	53	61	27	38	51	43	579	84	10	22	15
26	30	51	57	26	40	42	767	1770	38	10	14	18
27	29	50	53	28	38	43	53	244	29	9.1	11	18
28	26	50	49	194	35	49	38	67	24	7.2	13	16
29	25	54	49	906	---	61	36	49	22	6.7	8.7	16
30	24	412	44	334	---	43	33	985	19	6.1	6.3	13
31	25	---	41	94	---	49	---	174	---	5.8	8.0	---
MEAN	134	179	260	76.5	65.4	113	83.2	231	168	46.8	10.2	45.8
MAX	1300	1780	2090	906	243	1220	767	1770	1480	333	22	632
MIN	7.7	36	41	20	35	32	28	32	19	5.8	6.3	12

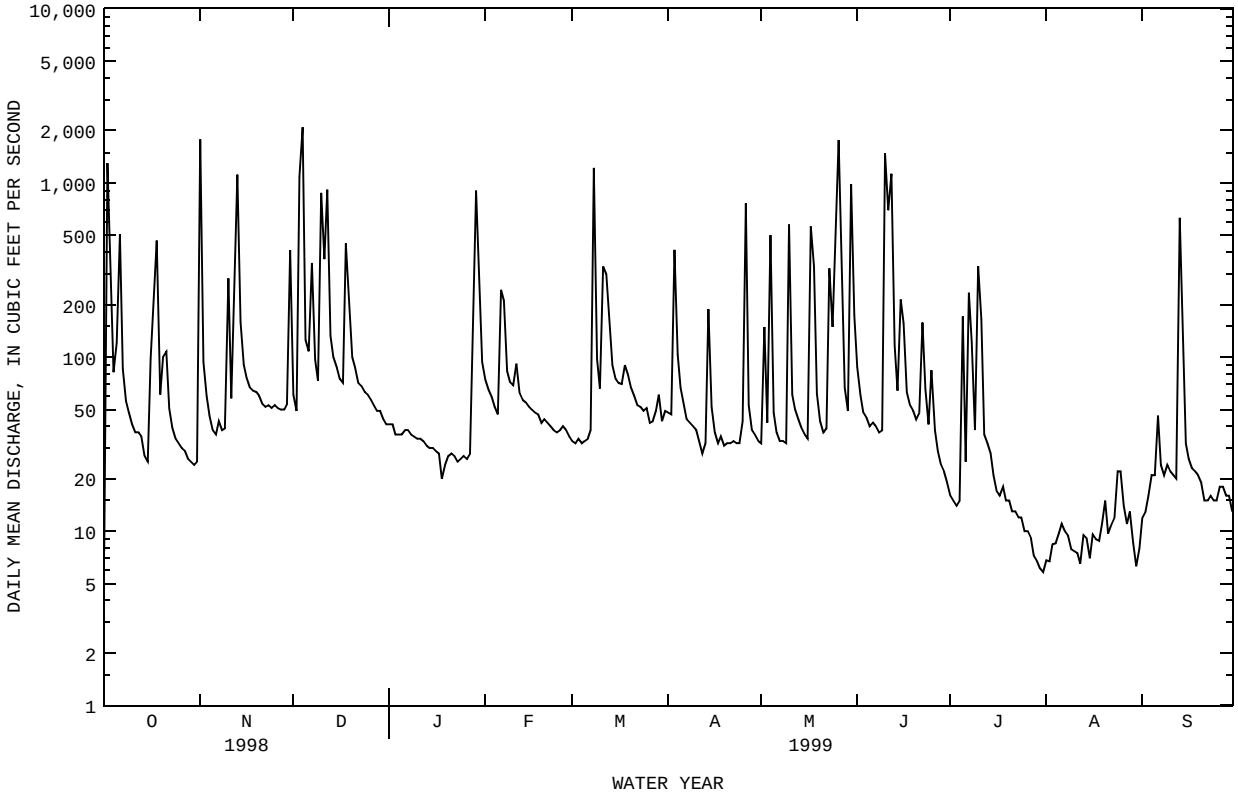
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999h, BY WATER YEAR (WY)

MEAN	87.6	62.6	90.1	54.7	86.3	108	123	155	88.0	37.9	25.2	58.7
MAX	450	362	627	394	330	480	690	460	800	252	108	624
(WY)	1995	1995	1992	1998	1990	1995	1966	1990	1989	1962	1994	1964
MIN	.83	2.96	4.35	5.85	6.19	12.0	16.6	15.8	7.25	.78	1.26	.92
(WY)	1964	1964	1964	1976	1967	1971	1971	1972	1980	1964	1963	1963

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1961 - 1999h	
ANNUAL MEAN	131		118		82.3	
HIGHEST ANNUAL MEAN					196	1995
LOWEST ANNUAL MEAN					20.8	1971
HIGHEST DAILY MEAN	5120	Jan 5	2090	Dec 4	14700	Sep 21 1964
LOWEST DAILY MEAN	3.2	Jul 25	5.8	Jul 31	.01	Jul 8 1970
ANNUAL SEVEN-DAY MINIMUM	4.0	Jul 24	6.8	Jul 28	.21	Aug 21 1961
INSTANTANEOUS PEAK FLOW			15200	Dec 3	39200	May 2 1990
INSTANTANEOUS PEAK STAGE			487.40	Dec 3	490.59	May 2 1990
10 PERCENT EXCEEDS	223		252		114	
50 PERCENT EXCEEDS	44		41		20	
90 PERCENT EXCEEDS	5.6		12		4.0	

h See PERIOD OF RECORD paragraph.

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued



08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT											
09...	0740	48	--	--	--	--	--	130	--	48	1.7
DEC											
10...	0730	123	490	8.1	9.5	10.2	90	210	42	80	2.3
JAN											
14...	0740	147	616	8.3	10.0	11.4	101	310	81	120	2.7
FEB											
11...	0710	47	543	8.0	10.0	11.2	100	230	49	89	2.3
MAR											
11...	0800	64	580	8.0	5.0	12.8	101	260	54	99	2.5
APR											
15...	0730	38	635	7.4	22.5	7.0	82	270	82	100	3.0
29...	0945	30	--	--	--	--	--	--	--	--	--
MAY											
13...	0700	20	485	7.9	25.5	7.0	87	200	49	74	2.5
28...	0930	59	--	--	--	--	--	--	--	--	--
JUN											
10...	0720	19	445	8.0	28.0	7.1	92	170	45	63	2.4
25...	1000	7.0	--	--	--	--	--	--	--	--	--
JUL											
15...	0710	6.8	510	7.9	29.5	5.5	74	190	24	69	3.2
29...	0830	5.8	--	--	--	--	--	--	--	--	--
AUG											
13...	0730	10	467	7.6	28.5	4.5	59	160	46	60	2.8
26...	0730	9.4	--	--	--	--	--	--	--	--	--
SEP											
09...	0730	7.4	533	7.8	27.5	5.6	72	180	55	66	3.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
09...	11	.4	3.8	--	31	15	.34	5.2	177	174	.635
DEC											
10...	18	.5	3.4	170	54	21	.36	7.6	316	304	--
JAN											
14...	21	.5	2.5	230	75	25	.44	9.8	412	409	2.98
FEB											
11...	19	.5	2.6	180	60	22	.39	4.8	332	321	1.56
MAR											
11...	20	.6	2.6	200	67	26	.41	6.7	386	359	2.83
APR											
15...	24	.6	3.2	190	76	32	.45	5.5	395	375	1.71
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	19	.6	4.0	150	55	25	.50	4.4	303	279	.965
28...	--	--	--	--	--	--	--	--	--	--	--
JUN											
10...	20	.7	4.0	120	54	25	.57	4.4	274	255	1.28
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
15...	30	1	5.5	160	59	37	.69	6.5	315	299	2.09
29...	--	--	--	--	--	--	--	--	--	--	--
AUG											
13...	25	.8	5.8	120	55	27	.55	6.3	291	262	1.95
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	30	1	5.7	120	66	39	.73	7.7	320	305	2.46

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT											
09...	.028	.663	.045	1.9	1.2	.31	.36	1.3	.327	.046	.042
DEC											
10...	<.010	2.22	<.020	2.7	--	--	.34	.52	.123	.124	.098
JAN											
14...	.028	3.01	.045	3.5	.43	.38	.42	.48	.119	.084	.093
FEB											
11...	.042	1.60	<.020	2.1	--	--	.34	.50	.097	.042	.047
MAR											
11...	.053	2.88	.151	3.6	.55	.70	.85	.70	.143	.149	.124
APR											
15...	.145	1.86	.117	2.5	.50	.34	.46	.62	.173	.139	.117
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	.045	1.01	.035	1.7	.64	.37	.40	.68	.165	.086	.087
28...	--	--	--	--	--	--	--	--	--	--	--
JUN											
10...	.045	1.32	.056	1.9	.54	.30	.35	.60	.207	.101	.135
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
15...	.064	2.16	.133	2.9	.65	.47	.61	.78	.476	.416	.381
29...	--	--	--	--	--	--	--	--	--	--	--
AUG											
13...	.234	2.18	.228	3.3	.90	.75	.98	1.1	.398	.335	.327
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	.040	2.50	.083	3.2	.62	.48	.56	.71	.606	.628	.572

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
OCT											
09...	.13	--	--	--	6.1	<1.0	<.0070	<.0020	2.07	.336	E.0473
DEC											
10...	.30	--	--	--	<10	11	<.0070	<.0020	2.20	.0215	E.0322
JAN											
14...	.29	--	--	--	<10	38	<.0070	<.0020	.193	.0213	E.0311
FEB											
11...	.14	--	--	--	<10	26	<.0070	<.0020	2.10	E.0178	E.0384
MAR											
11...	.38	--	--	--	<10	26	<.0070	<.0020	.744	E.0143	E.0393
APR											
15...	.36	--	--	--	18	25	<.0070	<.0020	.180	.0926	E.0562
29...	--	--	--	--	--	--	<.0070	<.0020	.188	.184	E.0384
MAY											
13...	.27	--	--	--	<10	<4.0	<.0070	<.0020	.168	.0986	E.0477
28...	--	--	--	--	--	--	<.0070	<.0020	.245	.103	E.0396
JUN											
10...	.41	--	--	--	<10	<4.0	<.0070	<.0020	.110	.0443	E.0512
25...	--	--	--	--	--	--	<.0070	<.0020	.0848	.0406	E.0662
JUL											
15...	1.2	--	--	--	<10	4.2	<.0070	<.0020	.0761	.0391	E.0809
29...	--	--	--	--	--	--	<.0070	<.0020	.0733	.0237	E.0927
AUG											
13...	1.0	--	--	--	<10	8.5	<.0070	<.0020	.0395	.0250	E.0392
26...	--	--	--	--	--	--	<.0070	<.0020	.0384	.0187	E.0527
SEP											
09...	1.8	17	.34	88	<10	<4.0	<.0070	<.0020	.0519	.0228	E.102

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DISSOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	LINDANE DISSOLVED (UG/L) (39341)	DIELDRIN DISSOLVED (UG/L) (39381)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	MALATHION, DISSOLVED (UG/L) (39532)	PARATHION, DISSOLVED (UG/L) (39542)	DIAZINON, DISSOLVED (UG/L) (39572)
OCT											
09...	<.0040	<.0030	<.0020	<.0060	.0170	<.004	<.001	.015	.020	<.004	.232
DEC											
10...	<.0040	<.0030	<.0020	<.0060	.0093	<.004	.004	.023	<.005	<.004	.105
JAN											
14...	<.0040	<.0030	<.0020	<.0060	.0068	<.004	<.001	.016	<.005	<.004	.017
FEB											
11...	<.0040	<.0030	<.0020	<.0060	.0278	<.004	<.001	.061	.159	<.004	.075
MAR											
11...	<.0040	<.0030	<.0020	<.0060	.0060	<.004	<.001	.019	.007	<.004	.072
APR											
15...	<.0040	<.0030	<.0020	E.0012	.0049	<.004	<.001	.023	<.005	<.004	.149
29...	<.0040	<.0030	<.0020	E.0029	.0108	.005	<.001	.036	.016	<.004	.210
MAY											
13...	<.0040	<.0030	<.0020	<.0060	.0077	<.004	<.001	.022	.005	<.004	.094
28...	<.0040	<.0030	<.0020	E.0009	.0154	<.004	<.001	.015	.015	<.004	.203
JUN											
10...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.020	<.005	<.004	.123
25...	<.0040	<.0030	<.0020	E.0046	E.0038	<.004	<.001	.016	<.005	<.004	.027
JUL											
15...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.011	<.005	<.004	.041
29...	<.0040	<.0030	<.0020	E.0032	.0055	<.004	<.001	.011	<.005	<.004	.013
AUG											
13...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.009	<.005	<.004	.051
26...	<.0040	<.0030	<.0020	E.0026	<.0040	<.004	<.001	.010	<.005	<.004	.040
SEP											
09...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.009	<.005	<.004	.012

DATE	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ETHALFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)
OCT										
09...	.179	<.002	<.004	<.0030	.0054	<.0040	<.0020	<.0070	<.0020	<.0060
DEC										
10...	.098	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0250	<.0020	<.0060
JAN										
14...	.086	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
FEB										
11...	.536	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
MAR										
11...	.343	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
APR										
15...	.393	.004	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
29...	.562	.013	<.004	<.0030	.0058	<.0040	<.0020	<.0070	<.0020	<.0060
MAY										
13...	.558	.006	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
28...	.443	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JUN										
10...	.357	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
25...	.360	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JUL										
15...	.377	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
29...	.433	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
AUG										
13...	.218	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
26...	.276	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
SEP										
09...	.358	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT										
09...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
DEC										
10...	<.0020	<.0040	E.0240	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JAN										
14...	<.0020	<.0040	.0158	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
FEB										
11...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
MAR										
11...	<.0020	<.0040	.0111	<.0040	<.0030	<.0020	<.0030	<.0130	.0076	<.0170
APR										
15...	<.0020	<.0040	.0124	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
29...	<.0020	<.0040	<.0100	.0073	<.0030	.0049	<.0030	<.0130	<.0030	<.0170
MAY										
13...	<.0020	<.0040	E.0096	.0045	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
28...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JUN										
10...	<.0020	<.0040	.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
25...	<.0020	<.0040	.0141	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JUL										
15...	<.0020	<.0040	.0103	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
29...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
AUG										
13...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
26...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
SEP										
09...	<.0020	<.0040	E.0092	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170

DATE	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
OCT										
09...	<.0010	<.0040	E.0901	<.0020	E.0007	.0703	<.0030	<.0130	<.0010	<.0050
DEC										
10...	<.0010	<.0040	E.0144	<.0020	<.0020	.0374	<.0030	<.0130	<.0010	<.0050
JAN										
14...	<.0010	<.0040	E.0199	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
FEB										
11...	<.0010	<.0040	E.0522	<.0020	<.0020	.0335	<.0030	<.0130	<.0010	<.0050
MAR										
11...	<.0010	<.0040	E.0299	<.0020	<.0020	.0543	<.0030	<.0130	<.0010	<.0050
APR										
15...	<.0010	<.0040	E.0227	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
29...	<.0010	<.0040	E.0690	E.0037	E.0012	.0255	<.0030	<.0130	<.0010	<.0050
MAY										
13...	<.0010	<.0040	E.0241	<.0020	<.0020	.0157	<.0030	<.0130	<.0010	<.0050
28...	<.0010	.0041	E.107	<.0020	<.0020	.0257	<.0030	<.0130	<.0010	<.0050
JUN										
10...	<.0010	<.0040	<.0030	<.0020	<.0020	.0088	<.0030	<.0130	<.0010	<.0050
25...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
JUL										
15...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
29...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
AUG										
13...	<.0010	<.0040	E.215	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
26...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
SEP										
09...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT											
15...	0800	25	565	8.0	22.0	8.0	93	210	65	81	2.8
NOV											
18...	0730	64	637	8.2	20.5	8.7	98	270	78	100	2.8
DEC											
16...	1000	77	665	8.2	13.5	13.3	127	290	73	110	2.8
JAN											
20...	0920	27	646	8.1	13.0	9.2	88	280	74	110	3.3
FEB											
10...	0715	70	620	7.9	17.4	9.1	97	280	76	110	2.9
MAR											
17...	0715	72	623	8.0	13.8	9.1	89	260	95	100	2.8
31...	0730	49	--	--	--	--	--	--	--	--	--
APR											
15...	0710	56	396	7.7	12.0	7.5	70	170	45	65	2.0
29...	0715	37	--	--	--	--	--	--	--	--	--
MAY											
19...	0700	72	447	7.9	20.5	7.0	79	190	42	71	2.2
JUN											
09...	0730	35	549	8.0	27.8	6.0	78	220	72	84	2.9
30...	0700	21	--	--	--	--	--	--	--	--	--
JUL											
15...	0730	25	426	8.0	28.2	7.7	100	170	45	65	2.3
29...	0710	8.9	--	--	--	--	--	--	--	--	--
AUG											
12...	0720	9.2	518	7.8	29.4	6.0	80	180	57	68	3.4
26...	0830	15	--	--	--	--	--	--	--	--	--
SEP											
09...	0730	24	519	8.0	25.7	6.6	82	190	62	71	3.3

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
15...	26	.8	4.0	150	66	33	.56	7.3	336	331	2.35
NOV											
18...	23	.6	3.1	200	67	30	.47	9.4	391	377	2.91
DEC											
16...	21	.5	2.5	220	73	27	.46	9.7	399	398	3.13
JAN											
20...	28	.7	3.1	200	84	39	.51	5.4	424	404	2.59
FEB											
10...	22	.6	2.9	200	72	29	.49	7.3	387	376	2.57
MAR											
17...	22	.6	3.1	170	71	29	.44	7.3	390	350	2.54
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	14	.5	4.1	130	41	18	.34	3.8	247	229	1.00
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	16	.5	3.9	140	46	20	.35	6.5	280	260	1.75
JUN											
09...	24	.7	3.7	150	67	32	.47	6.6	353	319	1.78
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
15...	18	.6	3.7	130	47	22	.49	6.8	262	246	1.27
29...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	32	1	5.3	130	66	39	.65	7.1	324	309	2.32
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	28	.9	5.1	130	68	36	.60	7.2	320	300	1.13

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT											
15...	.024	2.37	.030	3.8	1.4	.44	.47	1.4	.230	.043	.139
NOV											
18...	.017	2.93	.022	3.5	.52	.37	.39	.54	.197	.142	.138
DEC											
16...	.032	3.16	.074	3.5	.30	.28	.36	.38	.126	.100	.090
JAN											
20...	.075	2.66	.054	3.2	.49	.38	.43	.54	.267	.228	.195
FEB											
10...	.022	2.59	.026	3.0	.40	.27	.30	.43	.165	.116	.108
MAR											
17...	.036	2.57	.073	3.1	.44	.34	.42	.51	.173	.152	.127
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	.036	1.04	.030	1.9	.83	.48	.51	.87	.144	.070	.057
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	.053	1.81	.108	2.5	.62	.41	.52	.73	.235	.172	.138
JUN											
09...	.025	1.80	.046	2.3	.46	.41	.46	.50	.185	.150	.114
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
15...	.023	1.29	<.020	1.9	--	--	.37	.56	.146	.094	.071
29...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	.063	2.39	.068	2.8	.38	.43	.50	.44	.383	.434	.488
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	.025	1.15	.031	1.7	.54	.41	.44	.57	.190	.169	.116

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
OCT											
15...	.43	21	1.4	98	<10	<3.0	<.0070	<.0020	.699	.0205	E.0549
NOV											
18...	.42	54	9.3	99	<10	12	<.0070	<.0020	1.18	E.0161	E.0260
DEC											
16...	.28	63	13	79	<10	29	<.0070	<.0020	.511	E.0089	E.0254
JAN											
20...	.60	11	.80	100	14	14	<.0070	<.0020	.185	E.0133	E.0305
FEB											
10...	.33	58	11	97	<10	16	<.0070	<.0020	.724	E.0137	E.0264
MAR											
17...	.39	39	7.6	57	<10	15	<.0070	<.0020	.970	.0188	E.0562
31...	--	--	--	--	--	--	<.0070	<.0020	.314	.0398	E.0328
APR											
15...	.17	22	3.3	100	E6.4	4.9	<.0070	<.0020	.576	.0726	E.0790
29...	--	--	--	--	--	--	<.0070	<.0020	.571	E.0164	E.103
MAY											
19...	.42	47	9.1	99	19	6.0	<.0070	<.0020	.421	.0338	E.0531
JUN											
09...	.35	9	.85	96	E8.9	E2.3	<.0070	<.0020	.0971	.0199	E.0486
30...	--	--	--	--	--	--	<.0070	<.0020	.0808	.0298	E.0638
JUL											
15...	.22	20	1.4	99	<10	E2.0	<.0070	<.0020	.0603	.0189	E.0560
29...	--	--	--	--	--	--	<.0070	<.0020	.0894	.0245	E.0884
AUG											
12...	1.5	13	.32	100	E8.9	E1.5	<.0070	<.0020	.0721	E.0175	E.0945
26...	--	--	--	--	--	--	<.0070	<.0020	.0787	.0452	E.0704
SEP											
09...	.36	--	--	--	E5.5	3.8	<.0070	<.0020	.0781	.0189	E.0653

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DISSOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	LINDANE DISSOLVED (UG/L) (39341)	DIELDRIN DISSOLVED (UG/L) (39381)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	MALATHION, DISSOLVED (UG/L) (39532)	PARATHION, DISSOLVED (UG/L) (39542)	DIAZINON, DISSOLVED (UG/L) (39572)
OCT											
15...	<.0040	<.0030	<.0020	E.0018	.0094	<.004	<.001	.006	<.005	<.004	.083
NOV											
18...	<.0040	<.0030	<.0020	<.0060	.0055	<.004	<.001	.006	<.005	<.004	.075
DEC											
16...	<.0040	<.0030	<.0020	<.0060	E.0036	<.004	<.001	.007	<.005	<.004	.037
JAN											
20...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.011	<.005	<.004	.025
FEB											
10...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.122	<.005	<.004	.054
MAR											
17...	<.0040	<.0030	<.0020	<.0060	.0054	<.004	<.001	.032	<.010	<.004	.149
31...	<.0040	<.0030	<.0020	E.0012	<.0100	<.004	<.001	.021	<.005	<.004	.116
APR											
15...	<.0040	<.0030	<.0020	<.0060	.0171	<.004	<.001	.073	.033	<.004	.473
29...	<.0040	<.0030	<.0020	E.0019	.0087	<.004	<.001	.022	.010	<.004	.271
MAY											
19...	<.0040	<.0030	<.0020	<.0060	.0098	<.004	<.001	.018	.027	<.004	.324
JUN											
09...	<.0040	<.0030	<.0020	<.0060	.0043	<.004	<.001	.019	<.005	<.004	.082
30...	<.0040	<.0030	<.0020	<.0060	<.0050	<.004	<.001	.021	<.005	<.004	.119
JUL											
15...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.010	<.005	<.004	.321
29...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.015	<.005	<.004	.035
AUG											
12...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.013	<.005	<.004	.119
26...	<.0040	<.0030	<.0020	<.0060	<.0040	<.004	<.001	.013	<.005	<.004	.047
SEP											
09...	<.0040	<.0030	<.0020	<.0060	E.0032	<.004	<.001	.007	<.005	<.004	.080

DATE	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ETHALFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)
OCT										
15...	.200	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
NOV										
18...	.100	<.002	.024	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
DEC										
16...	.063	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JAN										
20...	.138	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
FEB										
10...	.480	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
MAR										
17...	.904	.309	<.004	<.0030	E.0036	<.0040	<.0020	<.0070	<.0020	<.0060
31...	.406	.042	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
APR										
15...	.986	.037	<.004	<.0030	E.0027	<.0040	<.0020	<.0070	<.0020	<.0060
29...	.749	.006	<.004	<.0030	E.0016	<.0040	<.0020	<.0070	<.0020	<.0060
MAY										
19...	.355	<.002	<.004	<.0030	E.0019	<.0040	<.0020	<.0070	<.0020	<.0060
JUN										
09...	.261	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
30...	.252	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
JUL										
15...	.224	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
29...	.286	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
AUG										
12...	.290	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
26...	.369	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060
SEP										
09...	.215	<.002	<.004	<.0030	<.0020	<.0040	<.0020	<.0070	<.0020	<.0060

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT										
15...	<.0020	<.0040	.0148	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
NOV										
18...	<.0020	<.0040	.0101	<.0040	.0498	<.0020	<.0030	<.0130	<.0030	<.0170
DEC										
16...	<.0020	<.0040	.0118	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JAN										
20...	<.0020	<.0040	.0108	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
FEB										
10...	<.0020	<.0040	.0102	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
MAR										
17...	<.0020	<.0040	.0127	<.0040	<.0030	E.0039	<.0030	<.0130	<.0030	<.0170
31...	<.0020	<.0040	E.0090	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
APR										
15...	<.0020	<.0040	<.0100	<.0250	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
29...	<.0020	<.0040	<.0100	<.0040	<.0030	E.0017	<.0030	<.0130	<.0030	<.0170
MAY										
19...	<.0020	<.0040	<.0100	<.0040	<.0030	E.0025	<.0030	<.0130	<.0030	<.0170
JUN										
09...	<.0020	<.0040	.0120	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
30...	<.0020	<.0040	.0159	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
JUL										
15...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
29...	<.0020	<.0040	E.0177	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
AUG										
12...	<.0020	<.0040	<.0100	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
26...	<.0020	<.0040	<.0200	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170
SEP										
09...	<.0020	<.0040	E.0053	<.0040	<.0030	<.0020	<.0030	<.0130	<.0030	<.0170

DATE	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
OCT										
15...	<.0010	<.0040	E.0416	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
NOV										
18...	<.0010	<.0040	E.0407	<.0020	<.0020	.0115	<.0030	<.0130	<.0010	<.0050
DEC										
16...	<.0010	<.0040	E.0116	<.0020	<.0020	.0095	<.0030	<.0130	<.0010	<.0050
JAN										
20...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
FEB										
10...	<.0010	<.0040	E.0060	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
MAR										
17...	<.0010	<.0040	E.0122	<.0020	<.0020	.152	<.0030	<.0130	<.0010	<.0050
31...	<.0010	<.0040	E.0134	<.0020	<.0020	E.0500	<.0030	<.0130	<.0010	<.0050
APR										
15...	<.0010	<.0040	E.0903	<.0150	<.0020	.0940	<.0030	<.0130	<.0010	<.0050
29...	<.0010	<.0040	E.0153	<.0020	<.0020	.0347	<.0030	<.0130	<.0010	<.0050
MAY										
19...	<.0010	<.0040	E.0822	<.0020	<.0020	.0581	<.0030	<.0130	<.0010	<.0050
JUN										
09...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
30...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
JUL										
15...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
29...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
AUG										
12...	<.0010	<.0040	<.0030	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
26...	<.0010	<.0040	E.0143	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050
SEP										
09...	<.0010	<.0040	E.0157	<.0020	<.0020	<.0040	<.0030	<.0130	<.0010	<.0050

08057445 PRAIRIE CREEK AT U.S. HIGHWAY 175, DALLAS, TX

LOCATION.--Lat 32°42'17", long 96°40'11", Dallas County, Hydrologic Unit 12030105, on left bank at downstream side of the downstream access road bridge on U.S. Highway 175, 3.4 mi upstream from mouth, and 9.0 mi southeast of Dallas City Hall.

DRAINAGE AREA.--9.03 mi^2.

PERIOD OF RECORD.--Oct 1975 to Sep 1980, Apr 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 390.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow at times. Several observations of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 13	0330	1,070	18.79	Mar 8	1230	918	17.93
Dec 4	0200	2,940	24.54	May 17	1915	1,190	19.36
Dec 7	1530	903	17.84				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	172	4.3	2.9	2.6	.77	1.9	.24	6.1	.39	.03	.00
2	50	7.1	2.4	2.9	2.4	.79	3.4	17	2.6	.28	.02	.00
3	41	2.7	34	2.8	2.5	.66	44	19	2.3	.23	.02	.00
4	2.5	1.4	645	2.8	2.7	.55	7.4	59	1.6	.21	.05	.00
5	5.2	.91	10	7.4	2.6	.69	2.2	11	.90	.24	.04	.14
6	107	.86	6.2	3.1	2.5	.66	1.6	2.5	.55	.42	.03	.06
7	4.8	3.8	81	2.9	3.0	.59	1.2	1.7	.40	35	.02	.03
8	1.7	3.4	6.0	2.8	2.6	147	1.1	.94	.33	15	.02	.04
9	.89	1.8	3.3	2.7	2.0	9.0	1.3	.56	.51	2.5	.01	.06
10	.61	30	285	2.7	1.8	3.3	1.3	22	1.6	146	.03	.07
11	.51	3.0	27	2.6	4.8	18	.95	4.2	7.1	18	.03	.05
12	.47	30	19	2.5	4.0	51	.74	1.7	1.8	3.1	.02	.04
13	.41	360	8.7	2.4	1.7	22	.54	.90	.90	1.4	.02	2.7
14	.37	8.6	6.1	2.3	1.3	5.2	5.4	.54	.53	.75	.01	2.4
15	.39	4.4	4.9	2.2	1.3	2.6	3.4	.48	24	.47	.00	.22
16	.38	3.2	4.1	2.1	1.3	2.0	1.1	.51	36	.35	.00	.05
17	5.6	3.0	3.5	2.1	1.3	1.9	.53	180	8.1	.34	.00	.00
18	18	2.4	25	2.0	1.2	2.5	1.6	24	2.3	.33	.00	.00
19	3.9	2.2	25	1.9	1.0	15	4.6	3.0	.86	.33	.00	.00
20	7.8	1.9	7.6	1.8	.94	4.1	4.9	1.3	.44	.22	.00	.00
21	13	1.9	5.3	1.7	1.0	2.3	2.5	.82	.32	.17	.00	.00
22	2.4	1.8	4.4	1.6	1.0	1.7	.97	.86	80	.12	.00	.00
23	.92	2.5	3.8	1.6	1.0	1.6	.57	.92	26	.10	.00	.00
24	.63	2.7	3.4	1.5	1.0	1.3	.44	1.1	4.9	.12	.00	.01
25	.63	2.3	3.1	1.5	3.5	2.8	.53	.48	51	.12	.00	.01
26	.85	2.5	3.0	1.3	1.5	2.3	45	180	6.4	.08	.00	.02
27	.81	2.2	2.9	.71	1.4	1.9	7.9	7.2	2.2	.07	.00	.02
28	.70	2.2	2.9	58	1.1	1.9	2.9	4.5	1.1	.07	.00	.02
29	.49	2.7	2.9	266	---	1.4	1.0	4.3	.67	.06	.00	.00
30	.40	80	2.9	41	---	1.7	.44	232	.50	.04	.00	.00
31	.33	---	2.9	4.1	---	1.8	---	12	---	.02	.00	---
MEAN	8.81	24.8	40.2	14.0	1.97	9.97	5.05	25.6	9.07	7.31	.011	.20
MAX	107	360	645	266	4.8	147	45	232	80	146	.05	2.7
MIN	.33	.86	2.4	.71	.94	.55	.44	.24	.32	.02	.00	.00

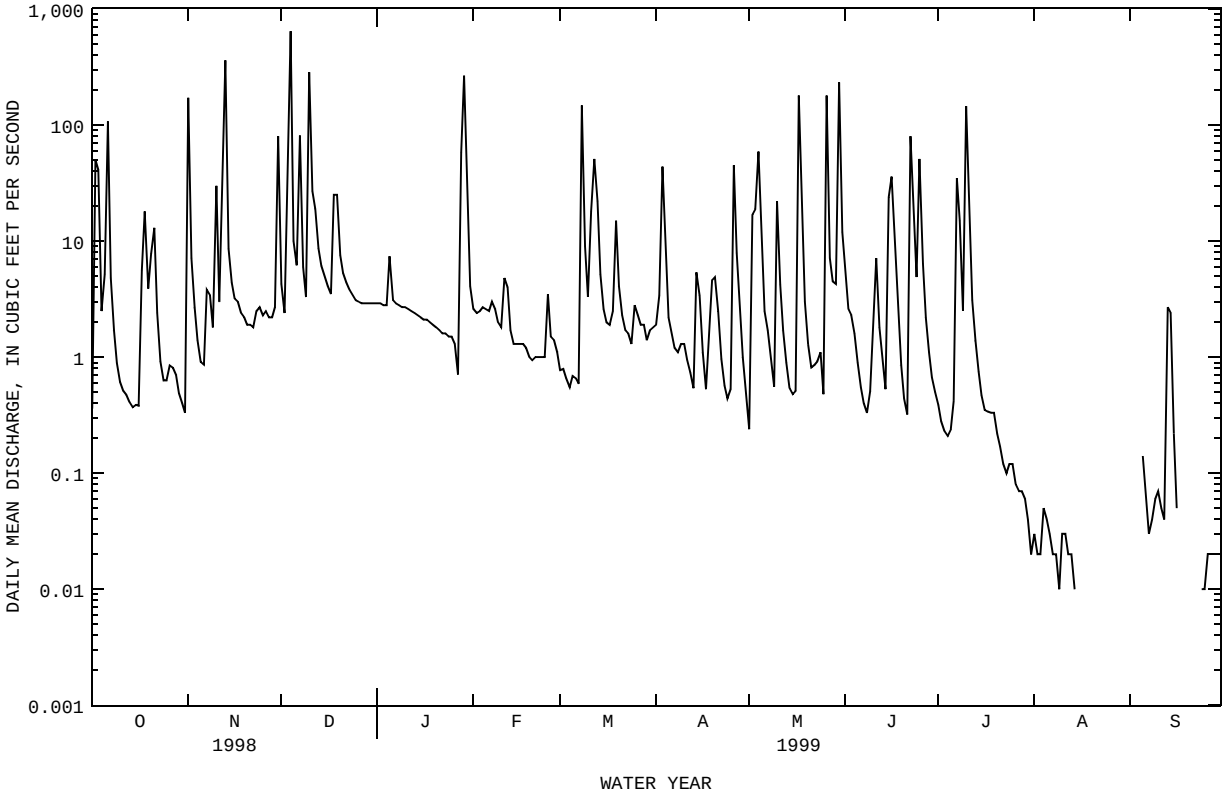
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999h, BY WATER YEAR (WY)

MEAN	12.1	9.30	12.1	7.11	11.7	10.9	12.4	17.2	7.72	3.55	1.72	3.07
MAX	46.3	43.1	40.2	19.8	41.6	26.6	42.2	72.4	35.5	24.9	11.0	8.30
(WY)	1995	1995	1999	1990	1997	1977	1990	1989	1989	1994	1996	1980
MIN	.000	.33	.42	.12	.34	1.28	.66	.64	.32	.000	.000	.005
(WY)	1976	1990	1978	1976	1976	1996	1978	1977	1978	1980	1980	1984

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999h	
ANNUAL MEAN	10.3		12.4		9.21	
HIGHEST ANNUAL MEAN					17.4	1995
LOWEST ANNUAL MEAN					1.61	1978
HIGHEST DAILY MEAN	645	Dec 4	645	Dec 4	1150	May 17 1989
LOWEST DAILY MEAN	.00	Jun 15	.00	Aug 15	.00	Oct 1 1975
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 15	.00	Aug 15	.00	Oct 1 1975
INSTANTANEOUS PEAK FLOW			2940	Dec 4	5660	May 17 1989
INSTANTANEOUS PEAK STAGE			24.54	Dec 4	29.21	May 17 1989
10 PERCENT EXCEEDS	11		20		11	
50 PERCENT EXCEEDS	.81		1.7		.94	
90 PERCENT EXCEEDS	.00		.02		.01	

h See PERIOD OF RECORD paragraph.

08057445 PRAIRIE CREEK AT U.S. HIGHWAY 175, DALLAS, TX--Continued



08058900 EAST FORK TRINITY RIVER AT MCKINNEY, TX

LOCATION.--Lat 33°14'38", long 96°36'31", Collin County, Hydrologic Unit 12030106, at downstream side of highway embankment near left end of main channel bridge on State Highways 5 and 121, 750 ft downstream from Honey Creek, 1.2 mi upstream from Southern Pacific Railway Co. bridge, 1.7 mi upstream from Clemons Creek, 3.3 mi north of McKinney, 26.1 mi upstream from Lavon Dam, and 86.5 mi upstream from mouth.

DRAINAGE AREA.--164 mi^2.

PERIOD OF RECORD.--Oct 1975 to current year.
Water-quality records.--Chemical data: Oct 1980 to Sep 1982, Oct 1985 to Jul 1987, Apr 1993 to Sep 1995. Biochemical data: Oct 1980 to Sep 1982, Oct 1985 to Jul 1987, Apr 1993 to Sep 1995.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 528.74 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct 1975, at least 10% of contributing drainage area has been regulated by 49 floodwater-retarding structures with a combined detention capacity of 26,000 acre-ft. Small diversions for irrigation above the station are made at times. Several observations of water temperature were made during the year. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, about 28 ft in Apr 1942 (discharge not determined), from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	242	35	40	324	55	35	24	222	16	.04	.00
2	114	107	24	48	238	53	34	24	126	15	.03	.00
3	593	38	23	42	178	54	331	26	75	14	.02	.00
4	54	21	1040	36	150	54	428	470	58	13	.02	.00
5	37	14	374	36	126	52	165	176	46	12	.02	.00
6	29	11	206	37	121	51	92	77	41	11	.05	.00
7	19	10	127	36	169	48	68	51	38	12	.05	.00
8	14	10	85	36	134	125	59	39	36	12	.03	.00
9	9.4	10	57	33	115	129	52	32	33	11	.01	.00
10	6.6	22	199	31	104	79	46	1270	30	143	.01	.00
11	5.1	20	304	30	96	72	40	900	86	21	.01	.00
12	3.6	14	1400	31	82	123	37	1350	44	13	.00	.00
13	2.4	410	576	28	77	247	34	618	72	11	.00	.00
14	1.4	145	332	25	76	104	45	336	48	9.6	.00	.00
15	.77	62	202	26	75	75	44	218	37	8.3	.00	.00
16	.89	42	157	25	74	61	35	153	33	7.1	.00	.00
17	10	33	124	25	72	51	31	108	30	6.0	.00	.00
18	139	27	208	23	71	45	29	98	28	4.9	.00	.00
19	40	25	548	22	67	41	29	72	25	3.9	.00	.00
20	19	31	200	22	65	39	28	60	23	3.2	.00	.00
21	14	21	141	22	62	37	27	53	24	2.8	.00	.00
22	10	18	99	23	59	35	27	47	24	2.2	.00	.00
23	6.9	17	77	21	58	35	25	52	25	1.7	.00	.00
24	5.1	17	65	19	57	33	24	61	24	1.5	.00	.00
25	3.4	16	57	18	57	34	25	44	22	1.1	.00	.00
26	2.5	15	56	18	58	32	51	471	22	.70	.00	.00
27	1.6	15	54	20	61	32	58	380	20	.42	.00	.00
28	1.0	14	50	29	57	35	40	169	19	.23	.00	.00
29	.85	14	47	632	---	35	31	111	18	.15	.00	.00
30	.54	97	42	1060	---	34	27	599	17	.08	.00	.00
31	.36	---	40	481	---	36	---	418	---	.05	.00	---
TOTAL	1144.41	1538	6949	2975	2883	1936	1997	8507	1346	357.93	0.29	0.00
MEAN	36.9	51.3	224	96.0	103	62.5	66.6	274	44.9	11.5	.009	.000
MAX	593	410	1400	1060	324	247	428	1350	222	143	.05	.00
MIN	.00	10	23	18	57	32	24	24	17	.05	.00	.00
AC-FT	2270	3050	13780	5900	5720	3840	3960	16870	2670	710	.6	.00

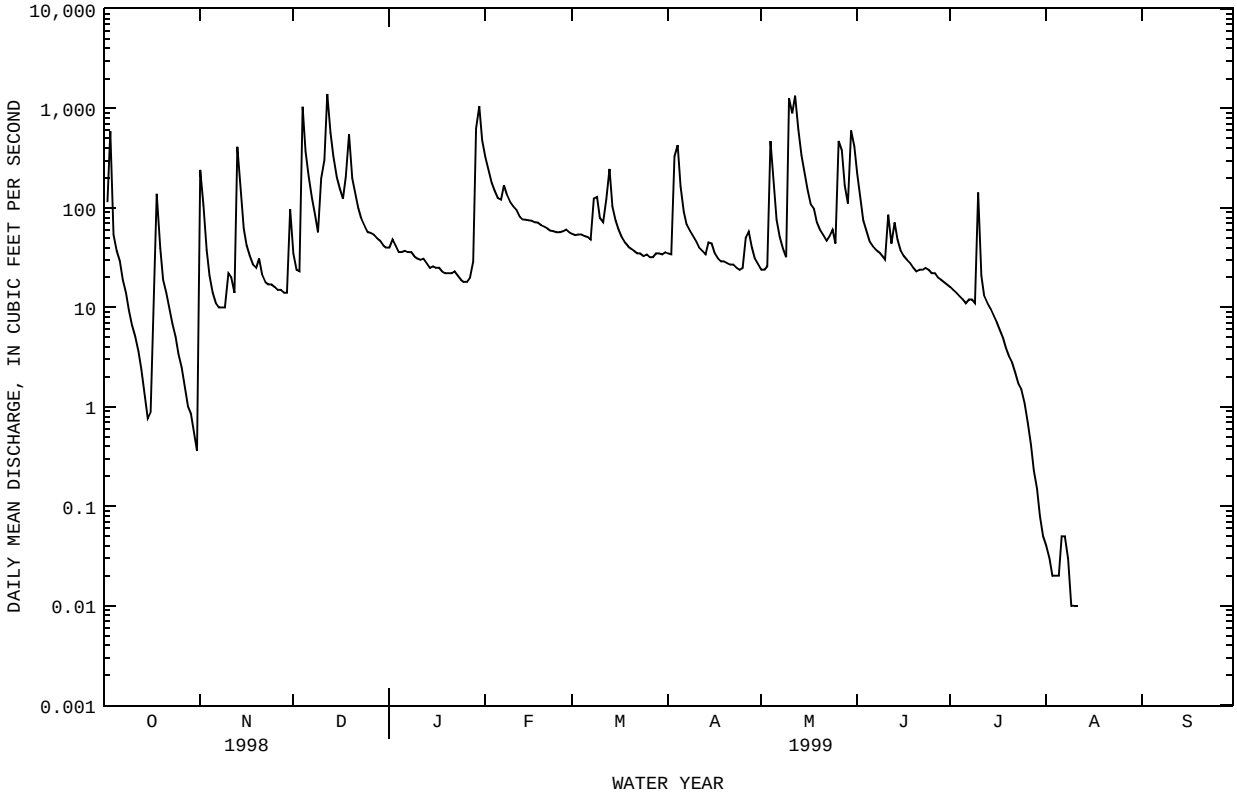
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999z, BY WATER YEAR (WY)

MEAN	92.1	141	153	101	193	223	148	272	133	23.0	3.58	7.47
MAX	1022	1120	1160	805	926	644	804	1704	737	213	19.0	64.0
(WY)	1982	1995	1992	1998	1997	1995	1990	1982	1989	1994	1990	1994
MIN	.000	.000	.000	.000	1.37	2.30	4.08	2.52	.81	.000	.000	.000
(WY)	1978	1978	1978	1978	1976	1976	1980	1996	1996	1984	1980	1977

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999z	
ANNUAL TOTAL	65701.89		29633.63			
ANNUAL MEAN	180		81.2		124	
HIGHEST ANNUAL MEAN					373	1982
LOWEST ANNUAL MEAN					4.65	1980
HIGHEST DAILY MEAN	6900	Jan 5	1400	Dec 12	26800	May 13 1982
LOWEST DAILY MEAN	.00	Jul 3	.00	Oct 1	.00	Aug 18 1976
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 8	.00	Aug 12	.00	Aug 18 1976
INSTANTANEOUS PEAK FLOW			2160	Dec 12	61800	May 13 1982
INSTANTANEOUS PEAK STAGE			17.67	Dec 12	22.17	May 13 1982
ANNUAL RUNOFF (AC-FT)	130300		58780		89760	
10 PERCENT EXCEEDS	381		177		246	
50 PERCENT EXCEEDS	21		31		14	
90 PERCENT EXCEEDS	.00		.00		.00	

z Period of regulated streamflow.

08058900 EAST FORK TRINITY RIVER AT MCKINNEY, TX--Continued



08059300 PILOT GROVE CREEK NEAR BLUE RIDGE, TX

LOCATION.--Lat 33°15'13", long 96°24'44", Collin County, Hydrologic Unit 12030106, on county road bridge, over center of channel at downstream side of bridge, 3.1 mi downstream from Desert Creek, and 3.2 mi south of Blue Ridge.

DRAINAGE AREA.--80.2 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Nov 1985 to Jun 1987, Oct 1995 to current year.
BIOCHEMICAL DATA: Nov 1985 to Jun 1987, Oct 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR											
03...	1345	13	518	8.0	13.5	4.4	11.7	113	.2	240	5
JUN											
02...	1415	50	459	7.9	24.5	80	6.7	82	.8	210	1
JUL											
19...	1245	.03	362	7.9	31.5	--	13.6	188	2.6	150	1

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR											
03...	91	2.6	17	.5	1.5	230	27	9.1	.39	3.8	294
JUN											
02...	82	2.3	11	.3	2.9	210	15	7.3	.29	10	291
JUL											
19...	56	2.4	16	.6	2.3	150	8.6	8.9	.33	9.6	215

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
MAR										
03...	294	36	.170	.010	.180	<.020	--	.16	<.050	<.010
JUN										
02...	262	57	.543	.012	.555	.049	.25	.29	<.050	.024
JUL										
19...	194	13	--	<.010	<.050	<.020	--	.32	<.050	<.010

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
MAR										
03...	--	2.6	1.6	<1.0	1	76	<1.0	<1.0	19	<1.0
JUN										
02...	.07	7.0	1.2	<1.0	1	75	<1.0	<1.0	<1.0	<1.0
JUL										
19...	--	5.7	--	--	--	--	--	--	--	--

DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR										
03...	1.5	12	<1.0	35	<.1	<1.0	3.5	<1.0	1.7	1.3
JUN										
02...	1.0	<10	<1.0	5.7	<.1	<1.0	2.6	<1.0	<1.0	<1.0
JUL										
19...	--	<10	--	22	--	--	--	--	--	--

This page intentionally left blank.

08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX

LOCATION.--Lat 33°17'40", long 96°28'58", Collin County, Hydrologic Unit 12030106, on left bank at upstream side of highway embankment of bridge on Farm Road 545, 3.5 mi upstream from Hatler Branch, 4.8 mi west of Blue Ridge, 7.4 mi upstream from Stiff Creek, 14.7 mi upstream from mouth, and 24.7 mi upstream from Lavon Dam.

DRAINAGE AREA.--83.1 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 526.29 ft above sea level. Prior to Jun 29, 1988, at datum 10.00 ft higher at same site. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Jul 1975, at least 10% of contributing drainage area has been affected at times by discharge from the flood-detention pools of 34 floodwater-retarding structures with a combined detention capacity of 12,710 acre-ft. These structures control runoff from 47.4 mi^2. Discharge may contain flow released from Lake Texoma and placed into channel 40 miles upstream from site. Several observations of water temperature were made during the year. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 30.7 ft, present datum, probably occurred in Jul 1913, from information by the Texas Department of Transportation. The probable date is from published records for discontinued station 08059500, located 9.7 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

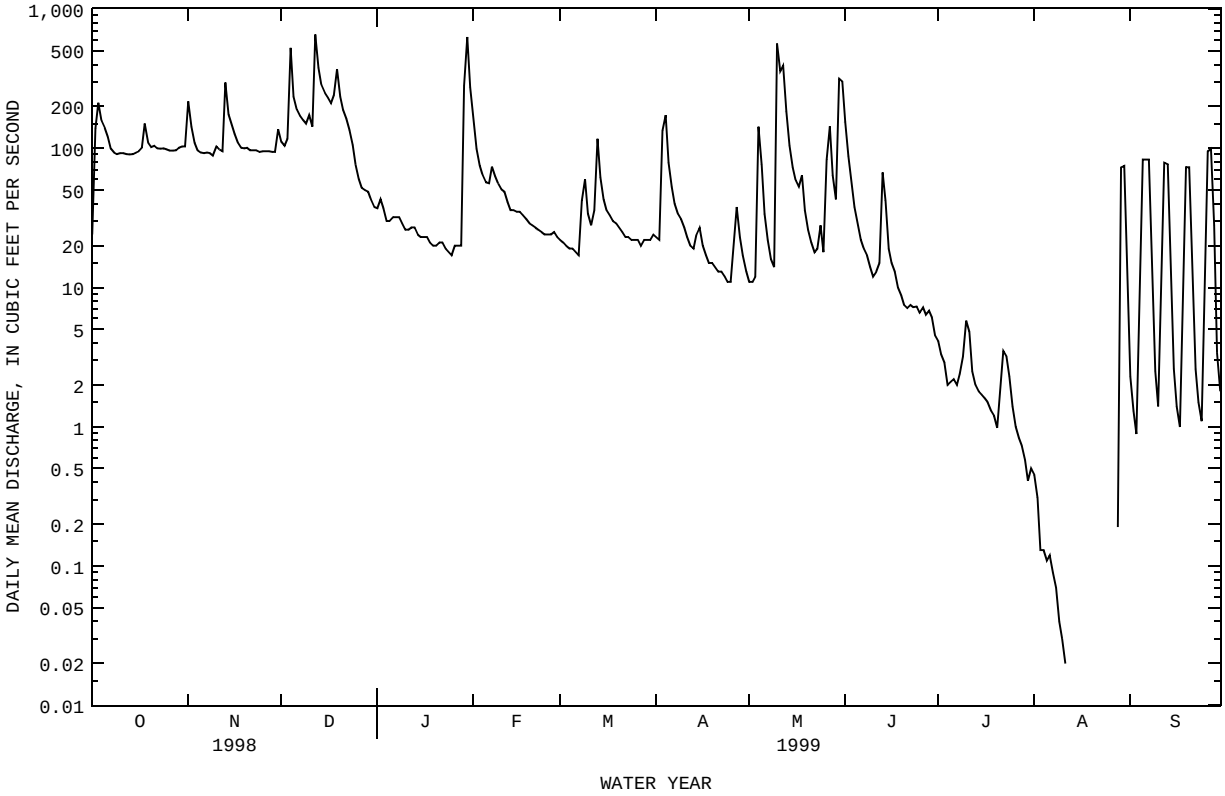
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	218	111	37	170	22	23	11	156	4.1	.45	2.3
2	139	143	104	43	99	21	22	11	88	3.3	.31	1.3
3	212	109	117	37	75	20	134	12	59	2.9	.13	.89
4	157	97	524	30	64	19	173	143	38	2.0	.13	18
5	140	93	235	30	57	19	79	76	29	2.1	.11	83
6	120	92	190	32	56	18	53	34	22	2.2	.12	83
7	99	93	171	32	74	17	40	22	19	2.0	.09	83
8	93	92	159	32	63	42	34	16	17	2.4	.07	20
9	91	89	150	29	56	60	31	14	14	3.2	.04	2.5
10	92	103	173	26	51	34	27	566	12	5.8	.03	1.4
11	92	98	143	26	49	28	23	360	13	4.8	.02	16
12	91	95	656	27	41	36	20	395	15	2.5	.00	79
13	90	297	379	27	36	117	19	185	67	2.0	.00	77
14	91	175	285	24	36	62	24	105	42	1.8	.00	22
15	93	147	249	23	35	43	27	73	19	1.7	.00	2.6
16	95	127	232	23	35	36	20	59	15	1.6	.00	1.4
17	101	110	211	23	33	33	17	53	13	1.5	.00	1.0
18	151	101	240	21	31	30	15	64	10	1.3	.00	9.6
19	109	100	371	20	29	29	15	36	8.8	1.2	.00	73
20	102	101	235	20	28	27	14	26	7.5	.98	.00	73
21	104	97	189	21	27	25	13	21	7.1	1.9	.00	20
22	100	97	163	21	26	23	13	18	7.5	3.5	.00	2.6
23	99	97	135	19	25	23	12	19	7.2	3.2	.00	1.5
24	100	94	106	18	24	22	11	28	7.3	2.3	.00	1.1
25	98	95	76	17	24	22	11	18	6.6	1.4	.00	13
26	96	95	60	20	24	22	20	83	7.2	1.0	.00	95
27	96	95	52	20	25	20	38	144	6.4	.83	.00	99
28	97	94	50	20	23	22	23	64	6.8	.73	.19	28
29	101	94	49	282	---	22	17	43	6.1	.58	73	3.4
30	103	137	42	629	---	22	13	317	4.5	.41	75	1.8
31	103	---	38	275	---	24	---	301	---	.50	19	---
TOTAL	3279	3475	5895	1904	1316	960	981	3317	731.0	65.73	168.69	915.39
MEAN	106	116	190	61.4	47.0	31.0	32.7	107	24.4	2.12	5.44	30.5
MAX	212	297	656	629	170	117	173	566	156	5.8	75	99
MIN	24	89	38	17	23	17	11	11	4.5	.41	.00	.89
AC-FT	6500	6890	11690	3780	2610	1900	1950	6580	1450	130	335	1820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1999, BY WATER YEAR (WY)

MEAN	50.2	57.1	80.1	55.1	100	123	90.4	127	72.2	12.5	6.42	8.75
MAX	451	316	493	193	268	368	477	714	348	54.4	43.3	61.9
(WY)	1982	1995	1992	1998	1997	1995	1990	1982	1989	1982	1998	1996
MIN	.000	.000	.000	1.55	1.81	2.92	3.46	6.99	1.22	.000	.000	.000
(WY)	1978	1978	1978	1976	1976	1976	1980	1988	1980	1978	1978	1978

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1975 - 1999	
ANNUAL TOTAL	30792.00		23007.81			
ANNUAL MEAN	84.4		63.0		65.1	
HIGHEST ANNUAL MEAN					169	1982
LOWEST ANNUAL MEAN					4.22	1980
HIGHEST DAILY MEAN	656	Dec 12	656	Dec 12	8560	May 13 1982
LOWEST DAILY MEAN	.00	Jul 11	.00	Aug 12	.00	Oct 14 1975
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 11	.00	Aug 12	.00	Oct 14 1975
INSTANTANEOUS PEAK FLOW			1070	May 10	13300	May 13 1982
INSTANTANEOUS PEAK STAGE			22.16	May 10	32.50	May 13 1982
ANNUAL RUNOFF (AC-FT)	61080		45640		47170	
10 PERCENT EXCEEDS	222		148		151	
50 PERCENT EXCEEDS	70		27		14	
90 PERCENT EXCEEDS	2.6		1.0		.00	

08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX--Continued



08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Nov 1985 to Jun 1987, Oct 1995 to current year.
BIOCHEMICAL DATA: Nov 1985 to Jun 1987, Oct 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR											
03...	1115	20	526	8.0	12.3	2.9	9.4	89	1.0	240	10
JUN											
02...	1230	87	368	7.9	25.0	100	6.8	84	2.1	170	--
JUL											
19...	1615	1.2	485	7.7	27.0	--	6.0	77	1.6	200	--
AUG											
09...	1630	.05	552	7.8	30.0	2.0	5.5	75	2.9	200	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR											
03...	88	4.0	18	.5	1.6	230	28	13	.40	3.4	303
JUN											
02...	64	2.0	8.7	.3	2.9	170	11	5.4	.26	8.5	273
JUL											
19...	73	3.7	22	.7	2.4	210	13	12	.26	8.8	283
AUG											
09...	72	4.1	46	1	2.4	250	23	18	.50	10	332

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR											
03...	294	8	.409	.011	.420	<.020	--	.18	<.050	<.010	--
JUN											
02...	209	40	1.23	.037	1.27	.061	.35	.41	<.050	.020	.06
JUL											
19...	263	2	--	<.010	.133	.033	.24	.27	<.050	.022	.07
AUG											
09...	325	15	--	<.010	<.050	<.020	--	.30	<.050	<.010	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAR										
03...	3.7	<1.0	<1.0	1	73	<1.0	<1.0	18	<1.0	<1.0
JUN										
02...	5.1	1.1	<1.0	2	56	<1.0	<1.0	--	<1.0	1.1
JUL										
19...	3.4	--	--	--	--	--	--	--	--	--
AUG										
09...	5.9	1.3	<1.0	2	79	<1.0	<1.0	<1.0	<1.0	<1.0

08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR										
03...	10	<1.0	37	<.1	<1.0	3.5	--	<1.0	1.0	1.3
JUN										
02...	E5.6	<1.0	5.8	<.1	<1.0	2.2	1	<1.0	<1.0	<1.0
JUL										
19...	<10	--	51	--	--	--	--	--	--	--
AUG										
09...	<10	<1.0	27	<.1	<1.0	4.3	<1	<1.0	1.0	<1.0

08060500 LAVON LAKE NEAR LAVON, TX

LOCATION.--Lat 33°01'54", long 96°28'56", Collin County, Hydrologic Unit 12030106, in right abutment of spillway in dam on East Fork Trinity River, 3,850 ft upstream from St. Louis Southwestern Railway Lines bridge, 4,000 ft upstream from bridge on State Highway 78, 2.9 mi west of Lavon, and 55.9 mi upstream from mouth.

DRAINAGE AREA.--770 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Sep 1953 to current year. Prior to Oct 1970, published as Lavon Reservoir.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Jan 20, 1954, non-recording gage in the approach channel at same datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 18,860 ft long, including a 568-foot gated spillway with twelve 40.0- by 28.0-foot tainter gates. The original dam was 9,499 ft long, but conservation capacity was increased to present size in Dec 1975. Deliberate impoundment began Sep 14, 1953, and the dam was completed in Oct 1953. Low-flow outlets consist of five 36-inch-diameter controlled sluice gates. Capacity Table No. 9, is based on a sedimentation survey completed in 1970. Lake was designed for flood control and water conservation. Water for municipal supply can be released down to elevation 453.0 ft. Flow is affected at times by discharge from the flood-detention pools of 149 floodwater-retarding structures with a combined detention capacity of 69,170 acre-ft. These structures control runoff from 242 mi^2 in the East Fork Trinity River, Pilot Grove, and Sister Grove Creek drainage basins. Figures given herein represent total contents. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam	514.0
Design flood	509.0
Top of tainter gates	503.5
Top of conservation pool	492.0
Crest of spillway (sill of tainter gates)	475.5
Lowest gated outlet (invert)	453.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 791,000 acre-ft, May 3, 1990 (elevation, 504.93 ft); minimum since lake first filled in 1957, 80,150 acre-ft, Apr 17, l976 (elevation, 465.96 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 484,900 acre-ft, Jun 1-2 (elevation, 493.30 ft); minimum contents, 292,100 acre-ft, Oct 2 (elevation, 483.27 ft).

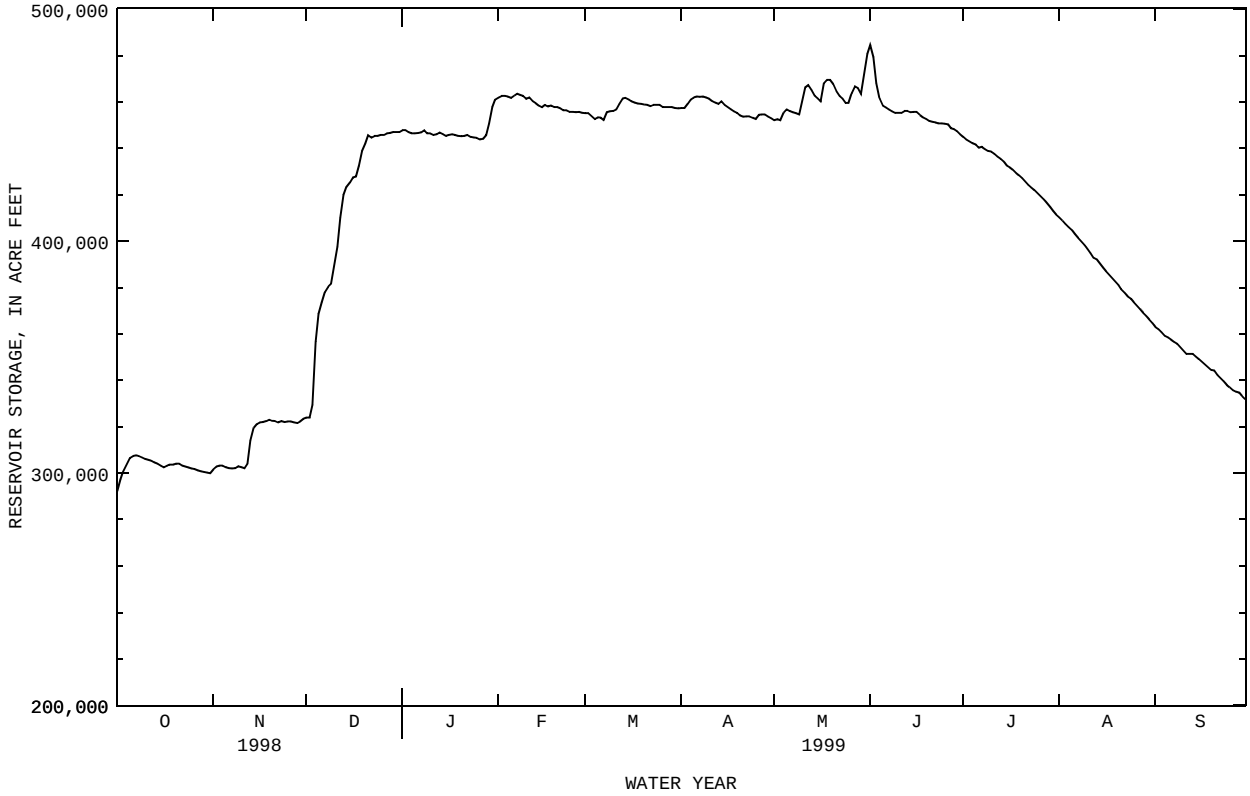
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292200	301600	323900	447800	461900	455000	457400	452100	484400	444900	410200	363000
2	297400	302700	323900	447800	462500	455000	457400	452500	479300	443800	408800	361900
3	301100	303300	329400	447000	462500	454000	459100	452100	468200	443000	407400	360800
4	303800	303300	356500	446400	462300	452700	461000	455200	461500	442200	406100	359300
5	306500	302600	368700	446400	461700	453300	461900	456700	458500	441500	404900	358600
6	307300	302200	373600	446600	462700	453100	462300	456100	457600	440300	403100	357700
7	307700	302100	378100	446800	463600	452300	462100	455500	456700	440700	401500	356500
8	307300	302200	380400	447800	463000	455500	462300	455000	455900	439700	399900	355800
9	306800	302900	381500	446400	462500	455900	461900	454600	455200	438800	398400	354300
10	306100	302600	389800	446400	461200	456100	461200	460400	455200	438600	396800	352900
11	305800	302200	397600	445700	461900	456700	460400	466200	455200	437600	394900	351400
12	305300	304300	410200	445900	460400	459300	459700	467300	456100	436500	392900	351400
13	304600	314200	420000	446800	459500	461500	459100	465100	456100	435500	392100	351400
14	304100	319600	423400	446100	458500	461700	460200	462700	455500	434300	390400	350300
15	303300	321100	425300	445300	457800	461000	458700	461500	455700	432600	388700	349200
16	302600	321800	427300	445700	458700	460200	457800	460200	455700	431800	387100	348100
17	303300	322000	427700	445900	458000	459700	456700	467900	454400	430800	385600	346800
18	303600	322400	432400	445700	458500	459300	455900	469500	453300	429300	384000	345600
19	303600	323100	438800	445300	457800	459100	455200	469500	452700	428300	382700	344500
20	304100	322500	442000	445100	457800	458900	454200	467700	451800	427100	381200	344300
21	304100	322400	445500	445300	457200	458700	453500	464700	451400	425700	379300	342300
22	303300	321800	444700	445700	456300	458200	453800	462500	451200	424300	377700	340900
23	302700	322400	445300	444900	456300	458700	453800	461500	450800	423000	376200	339600
24	302400	322000	445300	444700	455700	458700	453100	459500	450800	422000	375300	338000
25	302100	322200	445700	444500	455700	458700	452700	459500	450600	420600	373700	337100
26	301700	322200	445700	443800	455500	457800	454400	463800	450400	419200	372200	335800
27	301200	321800	446400	444000	455700	457800	454600	466600	448700	417800	370700	335100
28	300700	321700	446600	445700	455200	457800	454600	466000	448300	416400	369200	334700
29	300600	322200	447000	450800	---	457800	453800	463400	447400	414800	367700	333100
30	300200	323400	447000	457800	---	457400	452900	471600	445900	413000	366200	331700
31	299900	---	447000	461000	---	457200	---	480700	---	411400	364700	---
MAX	307700	323400	447000	461000	463600	461700	462300	480700	484400	444900	410200	363000
MIN	292200	301600	323900	443800	455200	452300	452700	452100	445900	411400	364700	331700
(+)	483.74	485.11	491.55	492.21	491.94	492.03	491.83	493.11	491.49	489.81	487.39	485.58
(@)	+6700	+23500	+123600	+14000	-5800	+2000	-4300	+27800	-34800	-34500	-46700	-33000

CAL YR 1998 MAX 613400 MIN 292200 (@) -30300
WTR YR 1999 MAX 484400 MIN 292200 (@) +38500

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08060500 LAVON LAKE NEAR LAVON, TX--Continued



08060500 LAVON LAKE NEAR LAVON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1969 to Sep 1974, Oct 1975 to Sep 1982, Oct 1995 to current year.
BIOCHEMICAL DATA: Oct 1969 to Sep 1974, Oct 1975 to Sep 1982, Oct 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

330203096284901 - LAVON LAKE SITE AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
MAR												
04...	1307	454000	1.00	354	8.1	13.0	.61	9.6	93	K16	22	130
04...	1311	--	10.0	354	8.0	13.0	--	9.5	92	--	--	--
04...	1314	--	20.0	354	8.0	13.0	--	9.4	91	--	--	--
04...	1318	--	30.0	354	8.0	13.0	--	9.3	90	--	--	--
04...	1321	--	39.0	354	7.9	13.0	--	9.2	89	--	--	130
JUN												
02...	1310	485000	1.00	367	8.2	25.0	1.16	7.6	94	K1	K1	140
02...	1315	--	10.0	368	8.0	24.5	--	6.7	82	--	--	--
02...	1320	--	20.0	372	7.9	24.0	--	5.9	71	--	--	--
02...	1325	--	30.0	370	7.8	24.0	--	5.2	63	--	--	--
02...	1330	--	41.0	376	7.5	23.5	--	2.2	26	--	--	140
AUG												
09...	1542	400000	1.00	316	8.4	31.0	.98	7.9	109	K60	K1	110
09...	1546	--	10.0	315	8.3	30.0	--	7.6	103	--	--	--
09...	1551	--	20.0	318	7.6	29.5	--	4.4	59	--	--	--
09...	1556	--	30.0	334	7.4	29.0	--	.4	5	--	--	--
09...	1602	--	37.0	345	7.4	28.5	--	.1	1	--	--	120

330203096284901 - LAVON LAKE SITE AC

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR												
04...	24	46	3.7	19	.7	4.0	110	36	20	.32	6.7	202
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	26	47	3.9	19	.7	3.9	110	36	20	.31	6.7	203
JUN												
02...	21	50	3.9	20	.7	3.7	120	35	21	.31	3.8	211
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	21	49	3.8	19	.7	3.6	120	36	21	.30	6.7	213
AUG												
09...	26	38	3.7	19	.8	3.9	85	29	19	.31	4.9	169
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	23	43	3.7	19	.7	3.9	100	27	20	.31	6.3	184

08060500 LAVON LAKE NEAR LAVON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

330203096284901 - LAVON LAKE SITE AC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR											
04...	.464	.022	.486	.034	.25	.29	<.050	.016	.05	<10	<3.0
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	.466	.027	.493	.052	.23	.28	<.050	.016	.05	<10	6.9
JUN											
02...	--	<.010	.353	.034	.26	.30	<.050	<.010	--	<10	<3.0
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	.459	.011	.470	.037	.29	.33	<.050	.023	.07	<10	43
AUG											
09...	--	<.010	<.050	<.020	--	.20	<.050	<.010	--	<10	E1.7
09...	--	<.010	<.050	<.020	--	.21	<.050	<.010	--	<10	E2.6
09...	--	<.010	<.050	<.020	--	.29	<.050	<.010	--	E6.4	14
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.010	<.050	.147	.18	.32	E.039	.034	.10	120	457

330205096280001 - LAVON LAKE SITE AL

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
MAR							
04...	1327	1.00	354	8.1	13.0	9.5	92
04...	1329	10.0	354	8.0	13.0	9.3	90
04...	1331	20.0	352	8.0	13.0	9.4	91
04...	1333	30.0	354	8.0	13.0	9.3	90
JUN							
02...	1340	1.00	364	8.1	24.5	7.1	87
02...	1342	10.0	366	8.0	24.5	6.8	83
02...	1344	20.0	370	8.0	24.5	6.6	81
02...	1346	32.0	370	7.9	24.5	5.7	70
AUG							
09...	1612	1.00	310	8.5	30.5	9.2	126
09...	1615	10.0	313	8.2	30.0	7.6	103
09...	1617	20.0	319	7.7	29.5	4.9	66
09...	1619	27.0	336	7.4	29.5	.7	9

330654096273201 - LAVON LAKE SITE BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR												
04...	1358	1.00	364	8.2	13.5	.37	9.7	95	K7	K12	140	25
04...	1401	10.0	364	8.2	13.5	--	9.7	95	--	--	--	--
04...	1405	20.0	364	8.2	13.5	--	9.7	95	--	--	--	--
04...	1409	26.0	364	8.2	14.0	--	9.6	95	--	--	140	26
JUN												
02...	1402	1.00	361	8.3	26.0	.79	8.1	102	K1	K1	140	24
02...	1406	10.0	362	8.3	26.0	--	8.0	100	--	--	--	--
02...	1410	20.0	362	8.2	26.0	--	7.6	95	--	--	--	--
02...	1414	28.0	365	8.0	25.5	--	6.3	78	--	--	140	17
AUG												
09...	1640	1.00	308	8.6	32.5	.64	9.1	129	K60	K3	110	26
09...	1645	10.0	309	8.4	31.0	--	8.3	115	--	--	--	--
09...	1650	24.0	311	8.1	30.5	--	6.6	90	--	--	110	26

08060500 LAVON LAKE NEAR LAVON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

330654096273201 - LAVON LAKE SITE BC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR											
04...	47	4.2	20	.7	3.9	110	37	21	.31	6.1	208
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	48	4.2	20	.7	3.9	110	37	21	.31	6.2	208
JUN											
02...	48	3.9	19	.7	3.6	110	34	20	.31	3.4	200
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	49	3.9	18	.7	3.6	120	32	19	.31	3.6	203
AUG											
09...	36	3.8	19	.8	3.9	80	32	20	.31	5.2	168
09...	--	--	--	--	--	--	--	--	--	--	--
09...	36	3.8	19	.8	4.0	81	29	19	.30	5.2	165

330654096273201 - LAVON LAKE SITE BC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR											
04...	.370	.015	.385	.022	.25	.27	<.050	<.010	--	<10	<3.0
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	.349	.011	.360	<.020	--	.26	<.050	<.010	--	<10	<3.0
JUN											
02...	.280	.022	.302	.042	.30	.35	<.050	.012	.04	<10	<3.0
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	.296	.029	.325	.072	.31	.38	<.050	.010	.03	<10	<3.0
AUG											
09...	--	<.010	<.050	<.020	--	.20	<.050	<.010	--	<10	<3.0
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.010	<.050	<.020	--	.21	<.050	<.010	--	<10	<3.0

331023096250101 - LAVON LAKE SITE DC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR												
04...	1718	1.00	405	8.3	14.0	.30	9.8	97	K8	K21	160	26
04...	1723	8.00	405	8.3	14.5	--	9.7	97	--	--	160	22
JUN												
02...	1726	1.00	275	8.1	27.5	.24	7.9	102	20	44	120	--
02...	1730	10.0	281	7.7	27.0	--	5.5	70	--	--	120	--
AUG												
09...	1915	1.00	317	8.5	33.5	.18	9.5	137	K1	60	120	21
09...	1920	6.00	343	7.9	33.5	--	9.5	137	--	--	130	45

08060500 LAVON LAKE NEAR LAVON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

331023096250101 - LAVON LAKE SITE DC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR											
04...	58	4.8	20	.7	3.7	140	38	19	.30	5.1	233
04...	57	4.7	20	.7	3.7	140	38	19	.31	5.1	232
JUN											
02...	41	2.8	8.5	.3	4.6	120	18	5.3	.24	8.3	163
02...	44	2.6	6.9	.3	4.5	120	14	3.8	.23	10	161
AUG											
09...	40	3.8	18	.7	4.0	95	--	--	--	--	--
09...	44	3.8	19	.7	4.1	81	24	19	.34	7.9	172

331023096250101 - LAVON LAKE SITE DC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR											
04...	--	<.010	.210	<.020	--	.27	<.050	<.010	--	14	<3.0
04...	--	<.010	.191	<.020	--	.27	<.050	<.010	--	<10	<3.0
JUN											
02...	.447	.025	.472	.055	.44	.49	.064	.061	.19	17	E1.6
02...	.385	.029	.414	.158	.49	.65	.083	.074	.23	16	4.5
AUG											
09...	--	<.010	<.050	<.020	--	.39	<.050	<.010	--	--	--
09...	--	<.010	<.050	<.020	--	.30	<.050	<.010	--	<10	5.9

330448096315601 - LAVON LAKE SITE EC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
MAR										
04...	1514	1.00	379	8.2	13.5	.30	9.5	93	.641	.018
04...	1518	10.0	378	8.2	13.5	--	9.6	94	--	--
04...	1522	19.0	379	8.2	13.5	--	9.5	93	.655	.021
JUN										
02...	1441	1.00	350	8.5	27.0	.55	9.2	118	.480	.041
02...	1444	10.0	350	8.4	26.5	--	9.0	114	--	--
02...	1447	19.0	352	8.1	26.0	--	6.7	84	.483	.040
AUG										
09...	1716	1.00	291	8.6	32.0	.43	9.5	133	--	<.010
09...	1719	10.0	301	7.7	31.0	--	4.4	61	--	--
09...	1723	16.0	308	7.5	31.0	--	2.3	32	--	<.010

330448096315601 - LAVON LAKE SITE EC

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR									
04...	.659	.027	.25	.28	<.050	.012	.04	<10	E1.5
04...	--	--	--	--	--	--	--	--	--
04...	.676	.032	.28	.31	<.050	<.010	--	<10	<3.0
JUN									
02...	.521	.036	.33	.37	<.050	.012	.04	<10	<3.0
02...	--	--	--	--	--	--	--	--	--
02...	.523	.073	.32	.40	<.050	.010	.03	<10	<3.0
AUG									
09...	<.050	<.020	--	.27	<.050	<.010	--	E5.1	<3.0
09...	--	--	--	--	--	--	--	--	--
09...	<.050	.166	.20	.36	<.050	<.010	--	<10	12

08060500 LAVON LAKE NEAR LAVON, TX--Continued

Lavon Lake Site AC (330203096284901)

Phytoplankton Analyses October 1998 to September 1999

Date	3/4/99
Time	1307
TOTAL CELLS/mL	4,019
NUMBER OF SPECIES	5
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Stephanodiscus astraea	240
CHLOROPHYTA	
Chlamydomonas sp.	60
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanocapsa delicatissima	3,599
EUGLENOPHYTA	
Trachelomonas sp.	90

Lavon Lake Site EC (330448096315601)

Phytoplankton Analyses October 1998 to September 1999

Date	3/4/99
Time	1514
TOTAL CELLS/mL	6,808
NUMBER OF SPECIES	5
DEPTH COLLECTED (ft.)	0.5

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Stephanodiscus astraea	570
Order Pennales	
Navicula sp.	30
CHLOROPHYTA	
Chlamydomonas sp.	30
CYANOPHYTA	
Aphanocapsa delicatissima	5,998
EUGLENOPHYTA	
Trachelomonas sp.	180

Lavon Lake Site AC (330203096284901)

Phytoplankton Analyses October 1998 to September 1999

Date	6/2/99
Time	1310
TOTAL CELLS/mL	11,787
NUMBER OF SPECIES	10
DEPTH COLLECTED (ft.)	1.9

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	64
Melosira varians	26
Order Pennales	
Navicula sp.	90
CHLOROPHYTA	
Chlamydomonas sp.	60
Pediastrum duplex	30
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanizomenon flos-aquae	600
Aphanocapsa delicatissima	10,197
Merismopedia tenuissima	480
EUGLENOPHYTA	
Trachelomonas sp.	210

Lavon Lake Site EC (330448096315601)

Phytoplankton Analyses October 1998 to September 1999

Date	6/2/99
Time	1441
TOTAL CELLS/mL	10,497
NUMBER OF SPECIES	9
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	270
Order Pennales	
Synedra ulna var.*ulna*	30
CHLOROPHYTA	
Cosmarium sp.	60
Crucigenia tetrapedia	30
Scenedesmus opoliensis	120
CYANOPHYTA	
Anabaena sp.	2,099
Aphanocapsa delicatissima	7,198
Merismopedia tenuissima	480
EUGLENOPHYTA	
Trachelomonas sp.	210

08060500 LAVON LAKE NEAR LAVON, TX--Continued

Lavon lake AC (330203096284901)

Phytoplankton Analyses October 1998 to September 1999

Date	8/9/99
Time	1542
TOTAL CELLS/mL	62,319
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	1.6

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	298
Navicula sp.	31
CHLOROPHYTA	
Chlamydomonas sp.	90
Cosmarium sp.	90
Crucigenia tetrapedia	60
Oocystis sp.	30
CYANOPHYTA	
Anabaena spiroides	780
Aphanizomenon flos-aquae	2,999
Aphanocapsa delicatissima	29,990
Aphanocapsa elaachista	600
Chroococcus limneticus	480
Merismopedia tennuissima	16,974
Oscillatoria sp.	9,597
EUGLENOPHYTA	
Phacus sp.	30
Trachelomonas sp.	270

Lavon Lake Site EC (330448096315601)

Phytoplankton Analyses October 1998 to September 1999

Date	8/9/99
Time	1716
TOTAL CELLS/mL	58,962
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	0.3

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	133
Navicula sp.	17
CHLOROPHYTA	
Chlamydomonas sp.	150
Cosmarium sp.	30
Scenedesmus acuminatus	30
Scenedesmus opoliensis	150
Staurastrum sp.	30
CYANOPHYTA	
Anabaena spiroides	900
Aphanizomeneon flos-aquae	600
Aphanocapsa delicatissima	19,793
Aphanocapsa elachista	1,200
Chroococcus limneticus	360
Merismopedia tenuissima	13,436
Oscillatoria sp.	21,893
EUGLENOPHYTA	
Phacus sp.	30
Trachelomonas sp.	210

This page intentionally left blank.

08061540 ROWLETT CREEK NEAR SACHSE, TX

LOCATION.--Lat 32°57'35", long 96°36'51", Dallas County, Hydrologic Unit 12030106, on right bank at downstream side of railroad embankment of Gulf, Colorado, and Santa Fe Railway Co., 100 ft downstream from Spring Creek, 150 ft upstream from State Highway 78, and 1.5 mi southwest of Sachse.

DRAINAGE AREA.--120 mi^2.

PERIOD OF RECORD.--Mar 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.00 ft above sea level. Mar 1968 to Aug 25, 1993, at site on left bank 150 ft downstream. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. The North Texas Municipal Water District returns wastewater effluent into a tributary above this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1942, 35.4 ft in 1942, from information by Texas Department of Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 2	1600	6,000	20.91	May 30	1000	5,670	21.74
Nov 1	1115	4,980	20.55	Jun 11	0145	8,980	24.77
Nov 13	0715	5,630	21.69	Jun 12	2030	5,740	21.83
Dec 4	0200	6,230	22.62				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

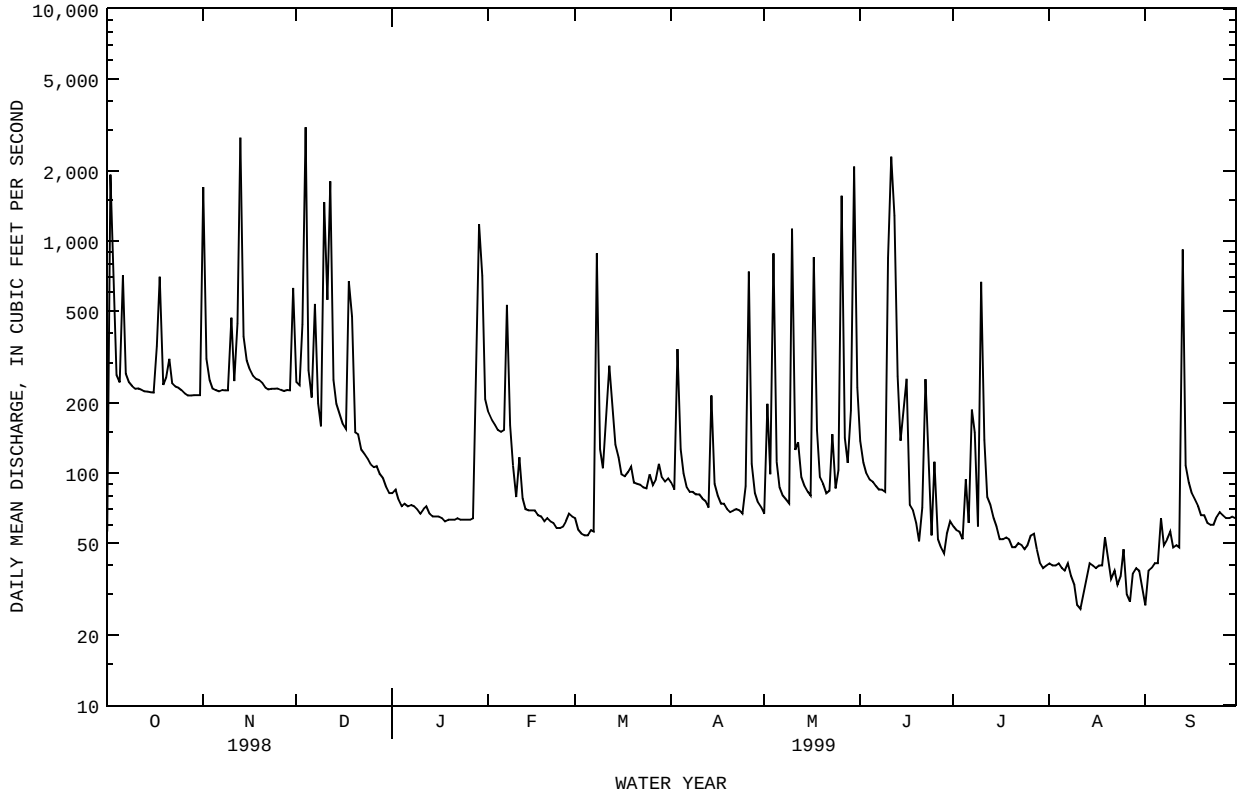
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	1710	247	82	183	64	91	67	138	59	41	27
2	1930	311	239	85	170	57	85	199	111	57	40	38
3	805	252	438	77	162	55	343	99	100	56	40	39
4	265	232	3100	72	154	54	127	886	94	52	41	41
5	246	228	278	74	151	54	100	112	92	94	39	41
6	710	225	212	72	154	57	87	87	88	61	38	64
7	268	228	537	73	531	56	83	80	85	188	41	49
8	246	227	200	72	161	885	83	77	85	150	36	52
9	238	227	159	70	108	127	81	74	83	59	33	56
10	231	467	1470	67	79	105	81	1130	847	667	27	48
11	232	249	558	70	117	176	78	126	2310	139	26	49
12	229	442	1810	72	78	290	76	136	1290	79	30	48
13	225	2790	253	67	70	185	71	96	261	73	35	918
14	224	389	199	65	69	133	216	88	138	64	41	108
15	223	306	178	65	69	117	90	83	191	59	40	91
16	222	280	163	65	69	99	80	80	255	52	39	82
17	352	263	155	64	66	97	74	853	73	52	40	77
18	702	255	670	62	65	101	74	153	69	53	40	72
19	240	252	473	63	62	107	70	96	61	52	53	66
20	258	245	150	63	64	91	68	90	51	48	43	66
21	311	234	147	63	62	90	69	82	71	48	35	61
22	244	230	126	64	61	89	70	84	254	50	38	60
23	236	231	121	63	58	87	69	147	107	49	33	60
24	233	231	115	63	58	86	67	86	54	47	36	65
25	228	232	109	63	59	99	88	103	112	49	47	68
26	221	229	106	63	62	89	739	1570	52	54	30	66
27	216	226	107	64	67	94	110	142	48	55	28	64
28	216	228	99	294	65	110	82	111	45	47	37	64
29	217	227	95	1180	---	96	75	186	55	41	39	65
30	217	629	87	709	---	92	71	2090	62	39	38	64
31	217	---	82	209	---	95	---	234	---	40	32	---
TOTAL	10458	12275	12683	4235	3074	3937	3498	9447	7282	2633	1156	2669
MEAN	337	409	409	137	110	127	117	305	243	84.9	37.3	89.0
MAX	1930	2790	3100	1180	531	885	739	2090	2310	667	53	918
MIN	56	225	82	62	58	54	67	67	45	39	26	27
AC-FT	20740	24350	25160	8400	6100	7810	6940	18740	14440	5220	2290	5290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1999, BY WATER YEAR (WY)

MEAN	133	121	158	107	154	180	161	226	141	49.1	33.7	54.1
MAX	610	586	898	617	588	476	573	1039	566	241	105	180
(WY)	1982	1995	1992	1998	1997	1995	1990	1982	1981	1994	1997	1974
MIN	4.88	7.63	7.52	6.72	7.83	11.9	23.8	18.8	4.60	1.91	1.78	3.75
(WY)	1979	1976	1978	1976	1976	1971	1972	1972	1971	1972	1972	1969

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1968 - 1999	
ANNUAL TOTAL	83102.1		73347			
ANNUAL MEAN	228		201		126	
HIGHEST ANNUAL MEAN					265	1992
LOWEST ANNUAL MEAN					22.2	1971
HIGHEST DAILY MEAN	9480	Jan 5	3100	Dec 4	14900	May 13 1982
LOWEST DAILY MEAN	6.4	Aug 2	26	Aug 11	.00	Aug 24 1969
ANNUAL SEVEN-DAY MINIMUM	8.3	Jul 27	33	Aug 7	.00	Aug 24 1969
INSTANTANEOUS PEAK FLOW			8980	Jun 11	32200	Jan 5 1998
INSTANTANEOUS PEAK STAGE			24.77	Jun 11	29.62	May 17 1989
ANNUAL RUNOFF (AC-FT)	164800		145500		91450	
10 PERCENT EXCEEDS	384		311		203	
50 PERCENT EXCEEDS	104		87		46	
90 PERCENT EXCEEDS	24		42		8.0	

08061540 ROWLETT CREEK NEAR SACHSE, TX--Continued



08061550 LAKE RAY HUBBARD NEAR FORNEY, TX

LOCATION.--Lat 32°48'00", long 96°29'45", Kaufman County, Hydrologic Unit 12030106, near right end of spillway on Forney Dam on East Fork Trinity River, 0.5 mi upstream from Duck Creek, 1.8 mi upstream from bridge on U.S. Highway 80, 3.8 mi northwest of Forney, 24 mi downstream from Lavon Dam, and 31.8 mi upstream from mouth.

DRAINAGE AREA.--1,071 mi^2

PERIOD OF RECORD.--Jan 1968 to Dec 1993. Oct 1996 to current year.
Water-quality records.--Chemical data: Oct 1969 to Sep 1979.

GAGE.--Water-stage recorder. Datum of gage is above mean sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 12,500 ft long, including a 664-foot gated spillway with fourteen 40- by 28-foot tainter gates. Impoundment began in Sep 1967, but all gates were not closed until Mar 22, 1978. Low-flow releases are made through three 4.5- by 6.75-ft sluiceways. The lake was built by the city of Dallas for municipal water supply. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 12,530 acre-ft. These structures control runoff from 44.5 mi^2 above this station and below Lavon Lake (station 08060500). Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	450.0
Design flood	440.5
Top of tainter gates	437.5
Top of conservation pool	435.5
Crest of spillway (sill of tainter gates)	409.5
Lowest gated outlet (invert)	388.0

COOPERATION.--The capacity table was provided by Forrest and Cotton, Consulting Engineers, for the city of Dallas.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 544,100 acre-ft, May 4, 1990 (elevation, 437.81 ft); minimum contents since first appreciable filling following closure of gates on Mar 22, 1970, 326,400 acre-ft, Sep 29, 30, 1978 (elevation, 427.48 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 431,600 acre-ft, May 17 (elevation, 436.32 ft); minimum contents, 333,900 acre-ft, Oct 2 (elevation, 431.51 ft).

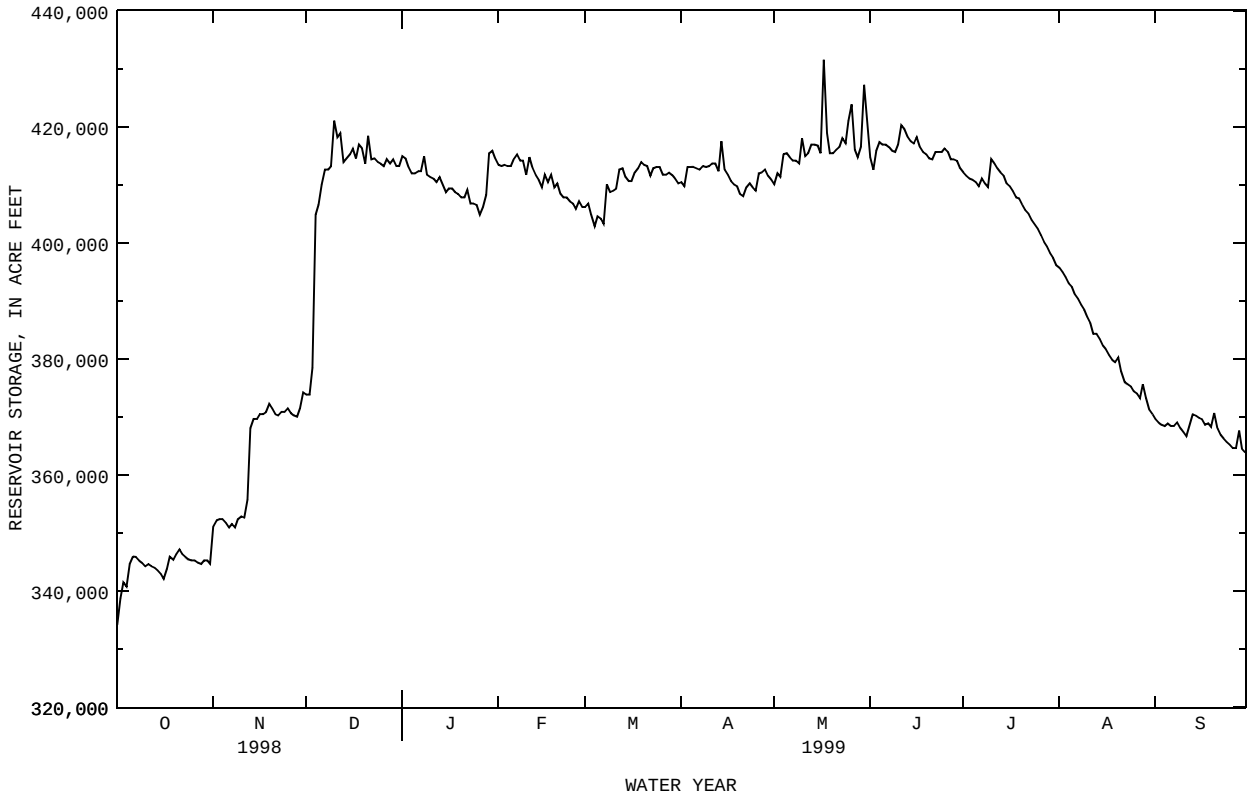
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334200	351200	373900	415000	413500	406200	410500	410100	414800	412200	395800	369700
2	338800	352200	373900	414600	413300	406800	409800	412000	412700	411600	395000	369100
3	341500	352400	378500	413100	413500	404900	413100	411400	415900	411100	394200	368700
4	340800	352400	404900	412000	413300	402900	413100	415300	417400	410900	393100	368500
5	344700	351800	406600	412000	413300	404600	413100	415500	417000	410500	392500	368900
6	346000	351000	410100	412400	414600	404200	412900	414800	417000	409800	391200	368500
7	345900	351600	412700	412400	415300	403300	412700	414200	416600	411100	390400	368500
8	345300	351000	412700	415000	414200	410100	413300	414200	415900	410300	389400	369100
9	344900	352400	413300	411800	414200	408800	413100	413700	415700	409600	388500	368100
10	344300	352900	421100	411400	411800	409000	413300	418100	417000	414400	387300	367500
11	344700	352700	418300	411100	414800	409400	413700	415000	420300	413700	386200	366700
12	344300	355800	419000	410500	412900	412700	413700	415500	419600	412900	384400	368500
13	344100	368100	414000	411400	411800	412900	412400	417000	418300	412200	384400	370500
14	343600	369700	414600	410100	410900	411400	417600	417000	417600	411600	383500	370300
15	343000	369700	415300	408800	409600	410700	412700	416800	417200	410300	382300	369900
16	342100	370500	416300	409400	411800	410700	411800	415500	418300	409800	381700	369700
17	343800	370500	414600	409400	410500	412200	410700	431600	416600	409000	380700	368700
18	346000	370900	417000	408800	411800	412900	410100	419000	415700	407900	379900	368900
19	345500	372300	416300	408500	409600	414000	409800	415500	415300	407700	379500	368300
20	346400	371500	413700	407900	410300	413500	408500	415500	414600	406600	380300	370700
21	347200	370500	418500	407900	408500	413300	408100	416100	414400	405700	377900	368100
22	346400	370300	414400	409200	407900	411600	409600	416600	415700	405100	376100	366900
23	345900	370900	414600	406800	407900	412900	410300	418100	415700	404000	375700	366300
24	345500	370900	414000	406800	407200	413100	409600	417200	415700	403300	375300	365700
25	345300	371500	413700	406600	406800	413100	409000	421100	416300	402500	374500	365300
26	345300	370700	413300	404900	405900	411800	412000	423900	415700	401400	374100	364700
27	344900	370300	414400	406200	407200	411800	412200	416100	414400	400200	373300	364700
28	344700	370100	413700	408300	406200	412200	412700	414800	414400	399400	375700	367700
29	345300	371500	414400	415500	---	411800	411600	416600	414200	398300	373300	364500
30	345300	374300	413300	415900	---	411100	410900	427300	412900	397500	371300	363900
31	344700	---	413300	414600	---	410300	---	421100	---	396200	370500	---
MAX	347200	374300	421100	415900	415300	414000	417600	431600	420300	414400	395800	370700
MIN	334200	351000	373900	404900	405900	402900	408100	410100	412700	396200	370500	363900
(+)	432.10	433.62	435.49	435.55	435.16	435.35	435.38	435.85	435.47	434.69	433.43	433.10
(@)	+10100	+29600	+39000	+1300	-8400	+4100	+600	+10200	-8200	-16700	-25700	-6600

CAL YR 1998 MAX 425700 MIN 327900 (@) -700
WTR YR 1999 MAX 431600 MIN 334200 (@) +29300

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08061550 LAKE RAY HUBBARD NEAR FORNEY, TX--Continued



08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX

LOCATION.--Lat 32°46'27", long 96°30'12", Kaufman County, Hydrologic Unit 12030106, on right bank 25 ft downstream from bridge on U.S. Highway 80, 0.2 mi downstream from Duck Creek, 1.9 mi downstream from Lake Ray Hubbard Dam, 2.5 mi upstream from Texas and Pacific Railroad Co. bridge, 2.6 mi northwest of Forney, and 30.8 mi upstream from mouth.

DRAINAGE AREA.--1,118 mi^2, of which 1,071 mi^2 is above Lake Ray Hubbard.

PERIOD OF RECORD.--Jan 1973 to current year.
Water-quality records.--Chemical data: Nov 1981 to Jan 1993. Biochemical data: Nov 1981 to Jan 1993. Specific conductance: Oct 1981 to Jan 1993. pH: Aug 1986 to Jan 1993. Water temperature: Oct 1981 to Jan 1993. Dissolved oxygen: Aug 1986 to Jan 1993.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 374.86 ft above sea level. Prior to Aug 26, 1975, recording gage at 3 ft higher datum located at site 126 ft upstream. From Aug 26, 1975, to May 12, 1977, recording gage at 3 ft higher datum located at site 105 ft downstream. From May 13, 1977, to Sep 30, 1984, recording gage at 3 ft higher datum at current site. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Jan 1973, at least 10% of contributing drainage area has been regulated by Lavon Lake (station 08060500) and Lake Ray Hubbard (station 08061550) (combined normal storage 946,400 acre-ft), 1.9 mi upstream. Low flow is sustained by wastewater effluent discharge from the city of Garland into Duck Creek, which enters the East Fork Trinity River 0.2 mi upstream from this station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

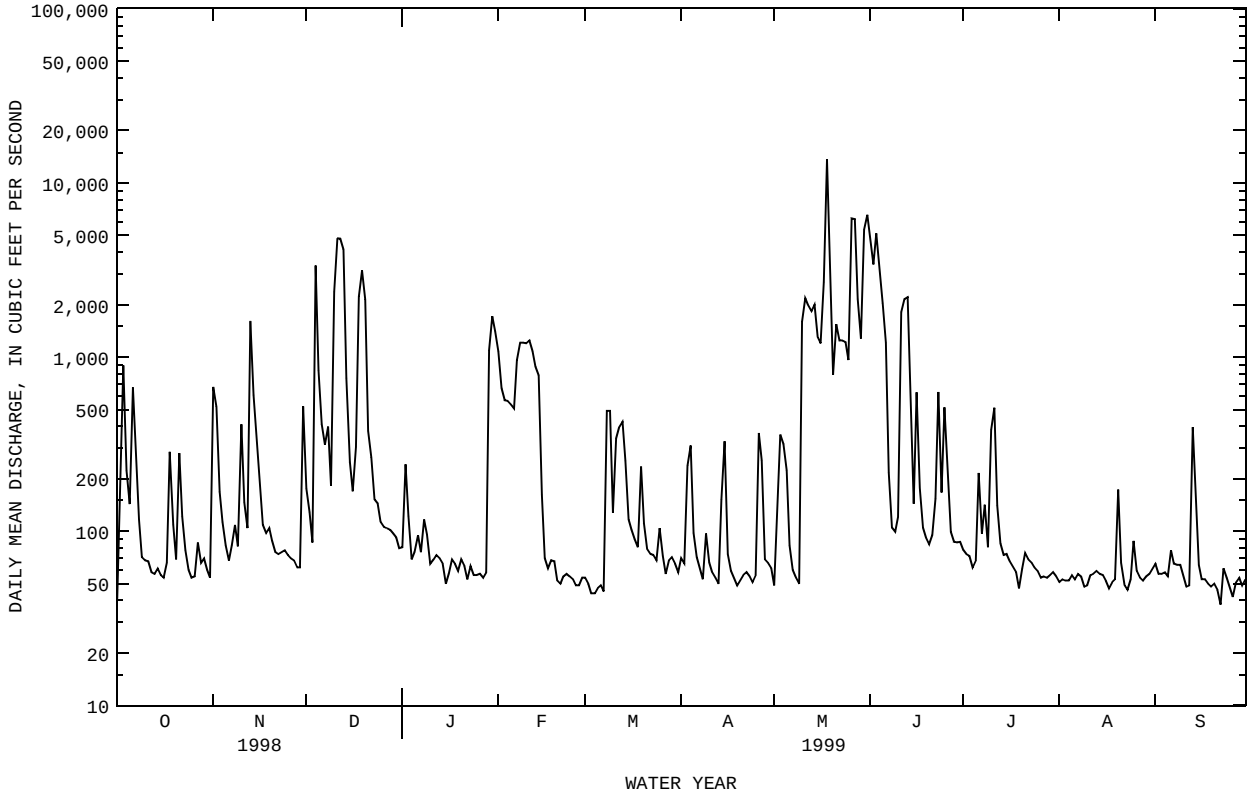
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	675	176	81	1080	54	70	49	4870	78	51	65
2	300	520	129	242	664	50	65	157	3420	74	53	57
3	895	169	86	122	566	44	238	360	5150	72	52	57
4	223	113	3360	69	560	44	311	317	3130	62	52	58
5	143	83	838	76	534	47	98	224	2050	68	56	55
6	668	68	413	95	505	49	71	83	1210	216	53	78
7	264	83	314	76	963	45	62	60	217	97	57	65
8	117	109	399	117	1210	492	53	54	105	142	55	64
9	71	82	182	96	1210	490	97	50	99	81	48	64
10	68	411	2370	65	1200	128	66	1600	121	382	49	56
11	67	147	4810	69	1250	342	58	2180	1820	512	56	48
12	58	104	4790	73	1080	399	54	1990	2160	141	57	49
13	57	1610	4140	70	882	426	50	1840	2220	85	59	395
14	61	606	755	65	784	254	152	2010	719	73	57	188
15	56	303	250	50	162	117	328	1300	144	74	56	64
16	54	183	170	57	70	102	74	1200	627	67	52	53
17	66	109	305	69	61	90	59	2700	177	63	47	53
18	286	98	2230	65	68	81	54	13700	105	58	51	50
19	109	105	3150	59	67	235	49	3610	91	47	53	48
20	69	88	2140	69	52	111	52	793	84	61	173	50
21	281	76	377	63	50	79	56	1550	95	75	66	46
22	122	74	266	53	55	74	58	1250	154	69	49	38
23	78	76	152	63	57	73	55	1250	630	66	46	61
24	60	78	144	56	55	68	51	1220	167	62	53	54
25	54	73	113	56	53	104	56	965	514	59	88	48
26	55	70	106	57	49	72	367	6250	185	54	59	42
27	86	68	104	54	49	57	256	6210	99	55	54	51
28	66	62	102	58	54	68	69	2150	87	54	52	54
29	70	62	97	1100	---	71	66	1280	86	56	55	49
30	60	521	92	1720	---	65	61	5420	87	58	57	53
31	54	---	80	1410	---	58	---	6580	---	55	61	---
TOTAL	4659	6826	32640	6375	13390	4389	3156	68402	30623	3116	1827	2113
MEAN	150	228	1053	206	478	142	105	2207	1021	101	58.9	70.4
MAX	895	1610	4810	1720	1250	492	367	13700	5150	512	173	395
MIN	41	62	80	50	49	44	49	49	84	47	46	38
AC-FT	9240	13540	64740	12640	26560	8710	6260	135700	60740	6180	3620	4190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

MEAN	396	555	668	627	832	1076	1017	1622	1108	419	131	195
MAX	3975	3076	3276	4826	2843	3038	3335	8008	5436	2207	1246	1583
(WY)	1974	1995	1992	1998	1997	1998	1997	1990	1989	1982	1989	1974
MIN	15.8	26.4	22.3	24.7	33.2	34.5	35.7	42.5	28.2	19.7	23.1	22.6
(WY)	1978	1977	1978	1981	1981	1980	1978	1988	1978	1978	1980	1977

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1973 - 1999	
ANNUAL TOTAL	342326		177516			
ANNUAL MEAN	938		486		709	
HIGHEST ANNUAL MEAN					1941	1995
LOWEST ANNUAL MEAN					37.6	1978
HIGHEST DAILY MEAN	8980	Jan 6	13700	May 18	50700	May 4 1990
LOWEST DAILY MEAN	37	Jun 2	38	Sep 22	8.0	Jun 23 1979
ANNUAL SEVEN-DAY MINIMUM	41	Jul 27	48	Mar 1	15	Sep 30 1977
INSTANTANEOUS PEAK FLOW			17900	May 18	53000	May 3 1990
INSTANTANEOUS PEAK STAGE			17.60	May 18	22.01	May 3 1990
ANNUAL RUNOFF (AC-FT)	679000		352100		513300	
10 PERCENT EXCEEDS	3950		1250		2310	
50 PERCENT EXCEEDS	75		78		60	
90 PERCENT EXCEEDS	43		52		26	

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued



08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX

LOCATION.--Lat 32°38'19", long 96°29'06", Kaufman County, Hydrologic Unit 12030106, on right bank 15 ft downstream from downstream eastbound bridge on U.S. Highway 175, 0.7 mi downstream from Mustang Creek, 1.8 mi northwest of Crandall, 4.0 mi upstream from Buffalo Creek, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--1,256 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jun 1949 to current year.

REVISED RECORDS.--WSP 1922: Drainage area. WDR TX-75-1: 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 338.69 ft above sea level. Prior to Feb 21, 1983, at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since Sep 1953, at least 10% of contributing drainage area has been regulated by Lavon Lake (station 08060500, normal storage 456,500 acre-ft). Additional regulation by Lake Ray Hubbard (station 08061550, normal storage 490,000 acre-ft) since Mar 22, 1970. The city of Forney discharges wastewater effluent into a tributary below Lake Ray Hubbard and above this station. The North Texas Municipal Water District discharges wastewater effluent into tributaries above this station from their Mesquite and Changler's Landing wastewater treatment plants. Flow is also affected at times by discharge from the flood-detention pools of 20 floodwater-retarding structures with a combined detention capacity of 11,760 acre-ft. These structures control runoff from a 39.2 mi^2 area above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--4 years (water years 1950-53) prior to regulation by Lavon Lake, 652 ft^3/s (472,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1950-53).--Maximum discharge, 16,400 ft^3/s May 2, 1953 (gage height, 19.87 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	839	421	138	1410	89	102	64	6720	108	79	83
2	172	1320	190	160	717	87	110	107	5580	102	78	85
3	1290	440	166	177	473	82	571	361	4070	99	78	86
4	411	266	4270	126	430	78	857	284	5150	95	77	84
5	365	232	5630	113	413	80	306	484	3890	88	77	84
6	1880	204	1460	112	364	77	186	245	2360	128	81	92
7	997	204	768	118	549	74	158	165	745	117	77	97
8	356	227	806	108	1110	753	157	139	236	363	79	86
9	233	207	460	125	1110	1280	154	127	169	136	78	86
10	192	509	1410	99	1100	299	134	547	162	360	74	85
11	172	507	4570	98	1130	672	113	1920	1150	1680	77	79
12	152	327	6320	99	1150	1030	102	1980	2180	321	80	76
13	129	2600	5590	96	771	1180	91	1730	2460	159	86	151
14	122	1670	4120	96	707	483	97	1590	1720	135	90	296
15	115	887	691	90	347	246	188	1520	303	120	80	110
16	105	589	319	81	116	178	125	1000	658	115	79	86
17	120	487	270	91	104	160	80	1050	462	107	76	81
18	287	417	1440	93	100	143	71	4770	141	100	76	81
19	223	388	3660	89	110	288	63	9240	124	92	77	78
20	132	350	3750	90	97	237	60	5190	120	87	93	79
21	285	328	1660	90	90	156	61	3020	119	104	114	77
22	221	314	363	89	94	135	64	3190	170	107	81	74
23	149	310	241	82	98	126	66	2820	804	98	76	73
24	127	311	220	85	93	119	62	2830	201	97	74	83
25	115	298	196	83	91	136	57	2480	423	102	81	77
26	113	294	176	83	89	133	478	3060	377	89	93	74
27	115	269	173	81	87	112	558	6420	143	84	79	73
28	129	238	163	88	86	109	95	6620	121	82	78	77
29	124	216	158	2100	---	117	76	3450	116	82	78	75
30	124	696	151	2930	---	111	66	2770	114	82	79	76
31	123	---	141	2000	---	111	---	5970	---	84	80	---
TOTAL	9160	15944	49953	9910	13036	8881	5308	75143	40988	5523	2505	2744
MEAN	295	531	1611	320	466	286	177	2424	1366	178	80.8	91.5
MAX	1880	2600	6320	2930	1410	1280	857	9240	6720	1680	114	296
MIN	82	204	141	81	86	74	57	64	114	82	74	73
AC-FT	18170	31620	99080	19660	25860	17620	10530	149000	81300	10950	4970	5440

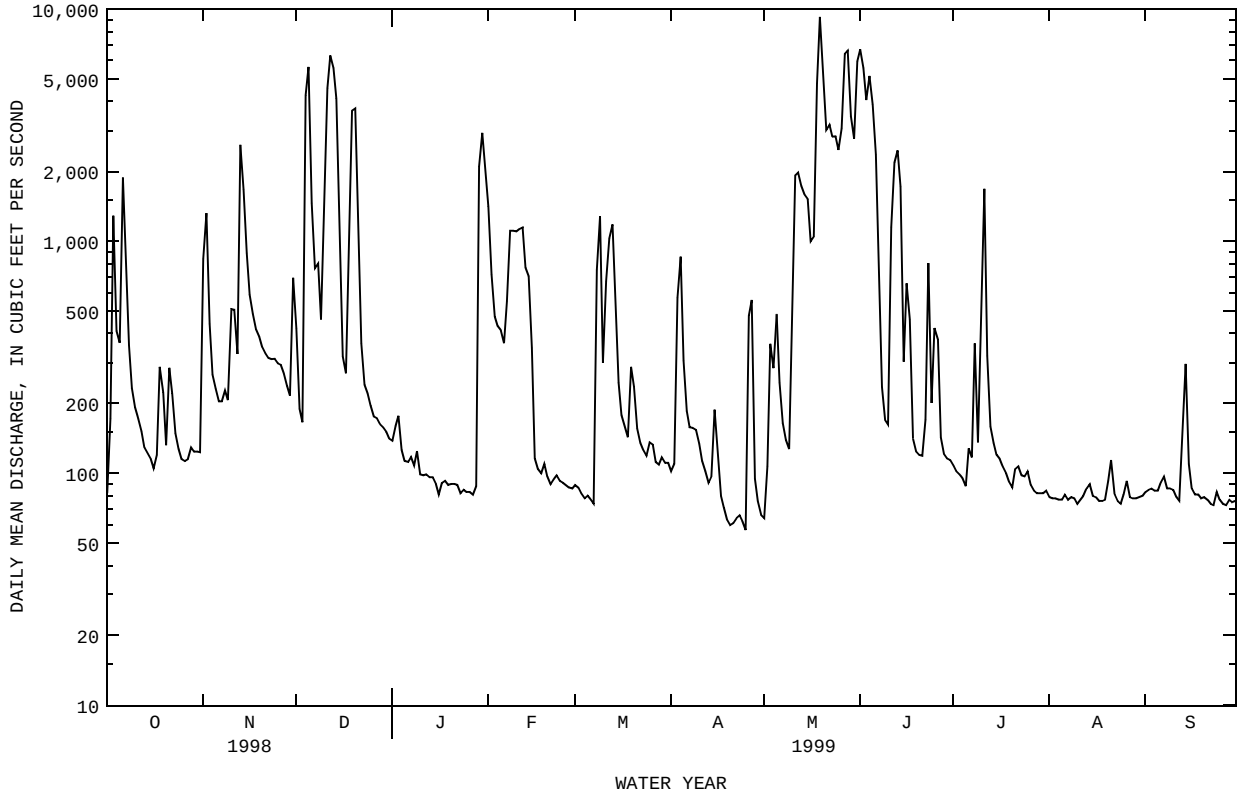
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999z, BY WATER YEAR (WY)

MEAN	387	490	706	614	805	921	1031	1750	1048	431	159	203
MAX	4116	3293	4401	5039	3539	3245	3755	9586	5718	2026	1459	1560
(WY)	1974	1995	1972	1998	1997	1998	1997	1957	1989	1982	1989	1974
MIN	1.58	3.78	3.57	7.77	23.1	10.6	7.47	42.1	17.8	3.84	.000	.000
(WY)	1957	1956	1955	1957	1957	1956	1956	1959	1954	1956	1956	1954

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1954 - 1999z	
ANNUAL TOTAL	396785		239095			
ANNUAL MEAN	1087		655		712	
HIGHEST ANNUAL MEAN					2209	1995
LOWEST ANNUAL MEAN					38.4	1955
HIGHEST DAILY MEAN	11500	Jan 7	9240	May 19	48800	May 5 1990
LOWEST DAILY MEAN	64	Jul 21	57	Apr 25	.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	66	Jul 28	62	Apr 19	.00	Oct 1 1953
INSTANTANEOUS PEAK FLOW			10700	May 19	59900	May 5 1990
INSTANTANEOUS PEAK STAGE			14.54	May 19	27.17	May 5 1990
ANNUAL RUNOFF (AC-FT)	787000		474200		515500	
10 PERCENT EXCEEDS	4260		1900		2150	
50 PERCENT EXCEEDS	151		136		94	
90 PERCENT EXCEEDS	71		78		19	

z Period of regulated streamflow.



08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan to Apr 1964, May 1966 to Sep 1981, Jun 1986 to current year.
BIOCHEMICAL DATA: Jan to Apr 1964, May 1966 to Sep 1981, Jun 1986 to current year.
PESTICIDE DATA: Mar 1977 to Jul 1981.
SEDIMENT DATA: Apr to Sep 1964.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1967 to Sep 1981, May 1986 to current year.
PH: Mar to Sep 1977, May 1986 to current year.
WATER TEMPERATURE: Oct 1967 to Sep 1981, May 1986 to current year.
DISSOLVED OXYGEN: Mar to Sep 1977, May 1986 to current year.

INSTRUMENTATION.--Water-quality monitor Mar to Nov 1977, May 1986 to current year..

REMARKS.--Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1990 to 1999. The standard error of estimate for dissolved solids is 6%, chloride is 32%, sulfate is 16%, and hardness is 14%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,010 microsiemens, Nov 23, 1968; minimum, 100 microsiemens, May 17, 1989.
PH: Maximum, 9.5 units, Oct 30, 1989; minimum, 6.7 units, on several days during 1988 and 1991.
WATER TEMPERATURE: Maximum, 34.0°C, Jun 26, Jul 1, Aug 16, 17, 1980; minimum, 1.0°C, Jan 3, 1979.
DISSOLVED OXYGEN: Maximum, 16.4 mg/L, Mar 13, 1996; minimum, 0.0 mg/L, on many days during 1977 and 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 775 microsiemens, Jan 26; minimum, 167 microsiemens, Jun 23.
PH: Maximum, 8.5 units, Feb 27, Aug 7, 13-14, 16; minimum, 7.0 units, Sep 28-29.
WATER TEMPERATURE: Maximum, 32.9°C, Aug 10; minimum, 5.7°C, Jan 5.
DISSOLVED OXYGEN: Maximum, 12.1 mg/L, Jan 24; minimum, 1.1 mg/L, Mar 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN										
21...	1010	87	738	7.9	15.4	8.4	86	1.2	190	54
FEB										
24...	0910	92	672	7.7	13.0	7.5	71	4.2	190	51
MAR										
25...	0850	135	679	7.8	17.7	6.2	65	.9	230	60
APR										
22...	0850	63	682	7.8	21.3	6.2	72	2.2	190	61
MAY										
26...	0940	2940	242	7.8	23.4	6.5	77	6.4	78	12
JUL										
08...	0830	419	194	8.0	26.0	4.7	59	7.4	70	13

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
JAN										
21...	66	4.9	65	2	9.3	130	78	69	.78	8.4
FEB										
24...	69	4.7	60	2	8.9	140	74	67	.74	9.4
MAR										
25...	81	6.1	53	2	7.4	170	86	51	.83	8.2
APR										
22...	68	5.2	63	2	9.3	130	73	63	.81	6.9
MAY										
26...	28	2.0	14	.7	3.8	66	21	12	.30	4.8
JUL										
08...	25	1.9	13	.7	1.0	57	21	10	.37	4.6

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
JAN										
21...	426	8.83	.187	9.02	.327	.91	1.2	2.01	1.76	5.4
FEB										
24...	418	7.75	.459	8.21	.768	.96	1.7	1.28	1.19	3.7
MAR										
25...	427	7.17	.081	7.25	.088	.77	.86	1.22	.996	3.1
APR										
22...	403	7.22	.157	7.38	.066	.94	1.0	1.58	1.51	4.6
MAY										
26...	132	1.11	.032	1.14	.142	.45	.60	.255	.196	.60
JUL										
08...	118	1.32	.037	1.35	.031	.45	.48	.196	.173	.53

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1998	9160	388	222	5490	26	632	34	841	130
NOV.	1998	15944	416	238	10260	29	1260	37	1610	130
DEC.	1998	49953	346	197	26530	20	2710	29	3910	120
JAN.	1999	9910	432	248	6650	32	850	39	1060	130
FEB.	1999	13036	396	226	7960	25	891	34	1210	130
MAR.	1999	8881	461	265	6360	35	839	43	1020	140
APR.	1999	5308	593	346	4950	54	774	59	849	160
MAY	1999	75143	300	169	34330	15	2980	24	4830	110
JUNE	1999	40988	345	195	21590	19	2080	28	3130	120
JULY	1999	5523	458	264	3930	35	527	43	635	140
AUG.	1999	2505	708	416	2810	73	492	75	505	170
SEPT	1999	2744	649	380	2810	63	467	67	494	160
TOTAL		239095	**	**	133700	**	14510	**	20100	**
WTD.AVG.		655	364	207	**	22	**	31	**	120

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	664	654	657	635	182	473	450	333	394	603	593	598
2	695	465	674	369	248	291	504	450	478	634	594	617
3	465	199	270	404	339	373	606	504	559	649	508	591
4	402	272	341	487	404	453	---	---	e520	581	501	544
5	492	180	418	572	475	519	---	---	e490	615	556	583
6	321	197	257	604	564	576	---	---	e440	636	605	620
7	319	256	280	615	604	611	---	---	e400	654	628	644
8	370	319	345	627	609	622	---	---	e370	668	634	651
9	418	370	398	643	627	636	363	336	345	682	649	668
10	444	410	418	627	291	494	384	199	310	667	612	643
11	470	444	452	509	330	380	254	230	246	690	609	634
12	501	470	485	477	403	448	270	251	261	700	689	697
13	512	501	508	405	191	237	280	267	271	697	679	684
14	527	510	520	297	213	244	322	280	292	697	672	683
15	585	526	551	364	297	332	414	322	369	716	694	704
16	616	585	602	406	364	380	455	414	438	716	702	708
17	632	612	620	430	406	422	492	455	475	715	704	711
18	630	421	516	462	430	447	536	272	382	736	699	722
19	548	389	470	511	462	483	289	225	258	736	715	723
20	477	390	439	577	511	554	291	268	280	722	714	719
21	499	408	449	600	577	589	406	291	338	729	709	720
22	527	387	457	622	600	615	471	406	440	737	694	706
23	500	393	466	644	609	627	489	436	468	766	737	757
24	549	500	522	649	644	646	516	489	508	769	762	765
25	613	549	592	649	642	645	539	516	530	764	758	761
26	637	605	622	674	643	658	527	513	521	775	758	769
27	635	620	629	708	674	690	541	516	531	760	755	758
28	620	611	616	712	704	709	547	535	540	756	747	750
29	645	619	637	709	689	700	562	536	549	755	217	386
30	675	635	658	691	210	503	562	545	553	319	275	301
31	672	635	654	---	---	---	601	562	586	342	318	327
MONTH	695	180	501	712	182	512	---	---	424	775	217	650

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	360	341	348	727	713	719	713	684	703	733	702	724
2	404	360	388	736	716	727	737	705	718	731	720	727
3	440	404	425	717	708	712	738	303	571	720	386	503
4	440	420	431	739	704	717	436	318	377	502	390	445
5	437	420	431	766	738	756	450	412	431	519	357	410
6	466	431	441	748	740	745	505	450	486	535	445	488
7	600	373	466	765	741	756	567	496	534	599	534	566
8	373	329	337	759	196	576	624	567	594	653	598	621
9	346	331	338	359	218	301	674	620	644	684	653	670
10	350	344	345	438	351	396	691	650	672	685	323	592
11	398	342	354	477	226	393	683	648	656	335	296	318
12	366	337	350	435	281	329	699	642	661	339	232	329
13	360	338	348	349	283	320	699	679	688	339	325	331
14	366	346	354	426	349	377	695	675	684	328	323	326
15	398	366	379	450	426	438	756	540	699	349	324	336
16	556	398	479	541	450	509	606	494	551	346	339	341
17	651	556	607	593	539	568	599	488	539	352	210	332
18	681	651	668	632	590	611	671	599	640	271	170	222
19	712	681	700	633	558	607	723	669	698	279	268	272
20	701	672	682	624	505	560	735	716	727	296	279	286
21	707	677	693	564	513	546	716	693	705	327	291	299
22	714	682	706	622	557	591	728	680	699	313	301	306
23	684	670	678	651	615	626	761	728	745	314	307	310
24	721	665	671	667	643	652	765	752	759	361	294	312
25	701	668	678	710	645	682	763	752	758	306	293	298
26	718	701	712	718	680	699	---	---	e740	395	211	257
27	731	718	724	704	643	662	---	---	e700	289	237	265
28	734	726	731	698	651	669	---	---	e650	323	289	309
29	---	---	---	719	698	707	560	508	544	344	323	338
30	---	---	---	717	695	703	702	420	593	379	240	308
31	---	---	---	703	665	682	---	---	---	298	256	281
MONTH	734	329	517	766	196	591	---	---	639	733	170	391

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	322	298	314	630	608	615	716	710	712	715	695	705
2	343	322	331	639	627	632	731	691	723	700	689	693
3	342	328	331	639	622	630	731	712	724	726	700	717
4	337	329	334	633	624	626	712	688	699	723	711	717
5	345	336	342	633	612	622	688	677	682	734	714	725
6	362	338	347	627	612	622	719	687	708	722	686	706
7	405	362	388	613	481	574	729	712	722	---	---	e690
8	497	405	455	506	213	375	733	721	727	688	671	677
9	563	497	534	578	498	556	743	723	734	672	631	649
10	586	544	565	612	174	528	761	734	744	675	628	643
11	605	310	456	297	175	246	772	711	752	699	675	693
12	324	316	320	376	297	337	711	678	694	707	699	702
13	338	275	306	447	376	419	706	680	691	714	427	688
14	340	306	323	496	434	465	715	684	704	611	336	403
15	424	339	381	537	495	518	727	700	717	500	350	456
16	554	180	392	580	537	558	730	714	723	562	500	524
17	422	327	362	597	575	584	728	710	720	636	562	600
18	481	386	436	602	578	589	721	697	709	707	636	671
19	581	481	530	623	602	610	699	683	691	729	707	721
20	603	581	594	644	623	635	716	689	707	721	698	712
21	616	602	606	633	615	625	739	713	724	715	704	708
22	616	598	607	675	620	630	739	666	695	709	695	699
23	625	167	331	659	636	650	666	632	646	697	684	688
24	433	275	356	660	639	648	691	650	669	716	686	704
25	504	322	412	666	652	660	691	676	683	727	714	723
26	537	356	395	665	616	642	696	679	684	726	715	719
27	499	398	448	634	617	629	704	696	701	727	715	720
28	567	499	531	659	633	645	708	680	695	724	718	720
29	599	567	580	690	659	671	717	681	703	720	709	713
30	610	599	606	712	686	699	733	717	726	728	691	699
31	---	---	---	717	699	712	734	715	726	---	---	---
MONTH	625	167	430	717	174	579	772	632	708	---	---	673

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	7.7	7.8	8.1	7.6	7.8	7.6	7.5	7.6	7.8	7.7	7.7
2	7.9	7.8	7.8	7.9	7.7	7.8	7.7	7.6	7.7	7.8	7.7	7.7
3	8.4	7.8	8.0	7.8	7.7	7.8	7.7	7.7	7.7	7.8	7.7	7.7
4	8.0	7.7	7.8	7.8	7.8	7.8	---	---	---	7.8	7.7	7.7
5	8.3	7.7	7.8	7.8	7.8	7.8	---	---	---	7.8	7.7	7.7
6	8.2	7.9	8.0	7.8	7.7	7.8	---	---	---	7.8	7.8	7.8
7	7.9	7.8	7.9	7.7	7.7	7.7	---	---	---	7.8	7.7	7.8
8	8.0	7.8	7.9	7.8	7.7	7.7	---	---	---	7.8	7.7	7.8
9	8.0	7.9	8.0	7.7	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.8
10	8.1	7.9	8.0	7.9	7.7	7.8	7.8	7.7	7.7	7.9	7.8	7.8
11	8.0	7.9	8.0	7.8	7.7	7.8	7.8	7.6	7.7	7.9	7.8	7.9
12	8.0	7.9	8.0	7.9	7.8	7.8	7.8	7.6	7.7	7.9	7.8	7.8
13	8.1	8.0	8.0	8.0	7.6	7.8	7.8	7.6	7.7	7.9	7.8	7.8
14	8.2	8.1	8.1	8.0	7.6	7.9	7.7	7.6	7.7	7.9	7.8	7.9
15	8.2	8.1	8.1	7.7	7.6	7.7	7.7	7.6	7.6	7.9	7.9	7.9
16	8.2	8.1	8.1	7.8	7.7	7.8	7.7	7.6	7.7	7.9	7.8	7.9
17	8.2	8.1	8.1	7.8	7.7	7.8	7.8	7.7	7.7	7.9	7.8	7.9
18	---	---	---	7.7	7.6	7.6	8.1	7.7	7.8	7.9	7.8	7.9
19	---	---	---	7.6	7.5	7.6	7.8	7.7	7.7	7.9	7.8	7.9
20	---	---	---	7.5	7.5	7.5	7.8	7.7	7.7	7.9	7.8	7.9
21	---	---	---	7.5	7.5	7.5	7.8	7.3	7.6	7.9	7.7	7.8
22	7.8	7.7	7.7	7.5	7.5	7.5	7.7	7.6	7.6	7.9	7.7	7.8
23	7.8	7.7	7.8	7.8	7.4	7.6	7.7	7.6	7.7	7.9	7.8	7.8
24	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.7	7.7	7.9	7.7	7.8
25	7.8	7.7	7.8	7.7	7.7	7.7	7.8	7.7	7.7	8.1	7.8	7.9
26	7.8	7.7	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.9	7.8	7.9
27	7.7	7.7	7.7	7.7	7.7	7.7	7.8	7.7	7.7	8.0	7.8	7.9
28	7.7	7.6	7.7	7.7	7.7	7.7	7.8	7.7	7.7	7.8	7.7	7.7
29	7.8	7.6	7.7	7.8	7.7	7.7	7.8	7.7	7.7	7.8	7.5	7.7
30	7.8	7.6	7.6	8.0	7.4	7.7	7.8	7.7	7.7	7.8	7.5	7.6
31	7.7	7.6	7.6	---	---	---	7.8	7.7	7.7	7.9	7.7	7.8
MONTH	---	---	---	8.1	7.4	7.7	---	---	---	8.1	7.5	7.8

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.8	8.4	8.3	8.3	7.6	7.6	7.6	7.7	7.6	7.7
2	7.8	7.8	7.8	8.4	8.2	8.3	7.6	7.6	7.6	7.7	7.6	7.6
3	7.8	7.5	7.7	8.3	8.2	8.3	7.8	7.6	7.6	7.6	7.5	7.6
4	7.8	7.6	7.7	8.3	8.1	8.2	7.7	7.6	7.7	7.6	7.5	7.6
5	7.9	7.7	7.8	8.1	8.0	8.1	7.8	7.7	7.7	7.7	7.5	7.6
6	7.8	7.8	7.8	8.3	8.1	8.2	7.8	7.8	7.8	7.6	7.6	7.6
7	7.9	7.7	7.8	8.3	8.2	8.2	7.9	7.8	7.8	7.7	7.6	7.6
8	8.0	7.8	7.9	---	---	---	7.9	7.8	7.8	7.7	7.6	7.7
9	8.0	7.9	8.0	---	---	---	7.9	7.7	7.8	7.7	7.6	7.7
10	8.1	7.9	8.0	---	---	---	7.8	7.8	7.8	7.9	7.6	7.6
11	8.1	8.0	8.0	---	---	---	7.8	7.8	7.8	7.9	7.6	7.8
12	8.2	8.0	8.1	---	---	---	7.9	7.8	7.8	8.1	7.8	7.9
13	8.2	8.1	8.1	---	---	---	7.9	7.8	7.8	8.0	7.9	7.9
14	8.2	8.1	8.1	---	---	---	7.9	7.8	7.8	8.1	8.0	8.0
15	8.1	8.0	8.1	---	---	---	7.9	7.7	7.8	8.0	7.8	7.8
16	8.0	7.9	7.9	---	---	---	8.0	7.7	7.9	7.8	7.8	7.8
17	7.9	7.8	7.8	---	---	---	7.9	7.9	7.9	7.9	7.7	7.8
18	7.8	7.8	7.8	---	---	---	7.9	7.7	7.8	8.1	7.4	7.8
19	7.9	7.7	7.8	---	---	---	7.8	7.8	7.8	8.0	7.6	7.7
20	7.9	7.8	7.8	---	---	---	7.8	7.8	7.8	7.9	7.4	7.6
21	7.9	7.8	7.8	---	---	---	7.9	7.8	7.8	7.8	7.7	7.8
22	7.9	7.8	7.9	---	---	---	7.9	7.7	7.8	7.9	7.8	7.8
23	8.0	7.9	7.9	---	---	---	7.8	7.7	7.7	7.9	7.8	7.9
24	8.2	7.7	8.0	---	---	---	7.7	7.7	7.7	8.0	7.8	7.9
25	8.2	8.0	8.1	---	---	---	7.7	7.6	7.6	8.0	7.9	8.0
26	8.3	8.1	8.2	7.8	7.6	7.7	---	---	---	---	---	---
27	8.5	8.2	8.3	7.7	7.6	7.7	---	---	---	---	---	---
28	8.4	8.3	8.4	7.7	7.6	7.7	---	---	---	---	---	---
29	---	---	---	7.7	7.6	7.6	7.6	7.5	7.5	---	---	---
30	---	---	---	7.6	7.6	7.6	7.8	7.4	7.6	---	---	---
31	---	---	---	7.7	7.6	7.6	---	---	---	---	---	---
MONTH	8.5	7.5	7.9	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.1	7.9	8.0	8.0	7.7	7.8	7.7	7.5	7.6
2	---	---	---	8.1	8.0	8.0	7.8	7.4	7.7	7.7	7.6	7.6
3	---	---	---	8.0	7.9	8.0	7.7	7.6	7.7	7.7	7.5	7.6
4	---	---	---	8.0	7.9	7.9	7.8	7.6	7.7	7.6	7.5	7.6
5	---	---	---	8.0	7.8	7.9	8.2	7.7	7.9	7.6	7.5	7.5
6	---	---	---	8.1	7.9	8.0	8.4	7.8	8.1	7.5	7.5	7.5
7	---	---	---	8.0	7.8	7.9	8.5	8.0	8.1	7.6	7.4	7.5
8	---	---	---	8.3	7.8	8.0	8.4	7.9	8.1	7.5	7.5	7.5
9	---	---	---	7.8	7.7	7.7	8.1	7.9	7.9	7.7	7.5	7.5
10	---	---	---	7.9	7.5	7.6	8.1	7.8	7.9	7.7	7.5	7.6
11	---	---	---	7.8	7.5	7.5	8.3	7.9	8.0	7.8	7.6	7.7
12	---	---	---	7.7	7.5	7.6	8.4	8.0	8.2	7.9	7.6	7.7
13	---	---	---	7.6	7.5	7.6	8.5	8.0	8.2	7.6	7.5	7.5
14	---	---	---	7.7	7.5	7.6	8.5	7.9	8.2	7.7	7.5	7.6
15	---	---	---	7.7	7.5	7.6	8.4	7.9	8.1	7.6	7.5	7.5
16	---	---	---	7.7	7.5	7.6	8.5	8.0	8.2	7.6	7.5	7.5
17	---	---	---	7.6	7.4	7.5	8.3	7.9	8.1	7.6	7.5	7.6
18	---	---	---	7.5	7.4	7.5	8.1	7.8	7.9	7.7	7.5	7.6
19	---	---	---	7.5	7.4	7.5	8.1	7.8	7.9	7.7	7.5	7.6
20	---	---	---	7.5	7.4	7.4	7.9	7.8	7.9	7.6	7.4	7.5
21	---	---	---	7.4	7.4	7.4	7.9	7.8	7.9	7.6	7.5	7.5
22	---	---	---	7.8	7.3	7.4	8.2	7.8	7.9	7.5	7.4	7.5
23	---	---	---	7.6	7.4	7.5	8.4	7.9	8.0	7.6	7.5	7.5
24	---	---	---	7.6	7.5	7.5	8.2	7.9	8.1	7.6	7.4	7.5
25	7.8	7.6	7.7	7.6	7.4	7.5	8.0	7.6	7.9	7.4	7.3	7.3
26	8.0	7.7	7.9	7.6	7.3	7.4	8.0	7.6	7.8	7.3	7.2	7.2
27	8.0	7.8	7.9	7.8	7.5	7.6	8.0	7.7	7.8	7.2	7.1	7.2
28	8.0	7.8	7.9	7.8	7.6	7.7	8.2	7.7	7.9	7.1	7.0	7.0
29	8.0	7.8	7.9	7.8	7.5	7.7	7.8	7.6	7.7	7.3	7.0	7.2
30	8.1	7.9	8.0	7.9	7.6	7.7	7.8	7.6	7.7	7.5	7.3	7.4
31	---	---	---	7.8	7.7	7.8	7.7	7.6	7.6	---	---	---
MONTH	---	---	---	8.3	7.3	7.7	8.5	7.4	7.9	7.9	7.0	7.5

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	28.8	27.7	28.3	23.7	19.6	22.1	18.4	17.2	17.8	12.0	10.7	11.4
2	28.3	25.2	27.5	20.0	18.3	18.9	18.6	17.4	18.0	11.9	10.3	11.5
3	25.2	23.2	23.8	18.8	17.7	18.2	20.0	18.2	19.2	10.3	7.4	9.2
4	26.0	24.0	25.0	18.1	16.8	17.6	---	---	---	7.4	6.6	6.9
5	26.8	21.8	25.4	16.8	16.0	16.3	---	---	---	7.5	5.7	6.6
6	22.1	19.9	20.7	16.0	14.9	15.2	---	---	---	9.7	7.0	8.3
7	21.1	19.4	20.2	15.3	14.6	14.9	---	---	---	11.5	9.5	10.5
8	21.5	19.6	20.6	15.4	14.6	15.1	---	---	---	12.2	11.3	11.8
9	21.5	19.9	20.6	17.9	15.2	16.3	14.3	13.4	13.7	11.3	9.7	10.3
10	21.6	19.9	20.7	18.2	16.3	17.2	13.6	9.9	12.0	9.7	8.5	9.1
11	22.2	20.4	21.2	17.0	15.0	15.6	10.7	10.0	10.4	10.0	7.7	8.9
12	23.2	21.2	22.1	15.3	13.6	15.0	10.9	10.6	10.7	12.7	9.7	11.1
13	23.6	22.0	22.8	13.6	11.7	12.1	11.8	10.1	10.9	12.8	12.3	12.6
14	23.7	22.2	23.0	13.4	12.0	12.5	12.1	11.3	11.8	12.3	11.3	11.7
15	23.9	22.4	23.2	14.8	13.4	14.1	11.5	10.6	11.1	11.4	10.3	11.0
16	24.7	23.1	23.9	15.6	14.7	15.1	12.1	10.8	11.5	11.9	10.2	11.1
17	24.7	24.0	24.4	16.2	15.4	15.8	12.4	11.2	11.8	13.8	11.9	12.8
18	24.0	22.1	23.1	17.6	16.1	16.8	12.6	11.2	12.1	13.9	12.3	13.3
19	22.1	20.9	21.6	18.6	17.3	17.9	11.9	11.3	11.7	14.2	12.6	13.5
20	20.9	20.0	20.5	18.2	17.2	17.8	12.1	11.4	11.7	14.8	13.5	14.2
21	20.0	14.0	19.2	17.2	16.3	16.7	12.5	11.1	12.1	16.7	14.8	15.8
22	19.9	18.9	19.4	16.3	15.3	15.9	11.1	8.3	9.7	16.9	15.9	16.5
23	18.9	18.1	18.5	17.6	15.7	16.7	8.3	6.9	7.5	15.9	14.5	15.0
24	18.8	17.5	18.2	18.6	17.5	18.1	7.1	6.5	6.9	14.5	13.2	14.0
25	19.9	17.9	18.9	19.6	18.2	18.9	7.4	6.5	6.9	14.7	13.1	14.0
26	21.0	19.1	20.1	19.3	18.3	18.9	7.6	6.4	6.9	15.4	13.7	14.6
27	21.7	20.2	21.0	19.1	18.0	18.6	8.8	7.0	8.0	16.1	14.8	15.5
28	22.4	21.3	21.8	20.0	18.7	19.3	10.1	8.7	9.4	16.9	16.0	16.5
29	23.7	22.3	22.9	20.8	19.8	20.3	10.8	9.5	10.0	16.9	14.9	15.6
30	24.3	23.4	23.9	20.7	17.0	19.0	10.5	9.6	10.0	15.1	11.9	13.7
31	24.1	23.6	23.9	---	---	---	11.2	9.8	10.5	11.9	10.6	10.9
MONTH	28.8	14.0	22.1	23.7	11.7	16.9	---	---	---	16.9	5.7	12.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.5	10.1	10.7	18.5	16.8	17.7	17.7	16.4	17.0	24.0	22.7	23.4
2	12.1	11.4	11.7	18.9	17.5	18.1	19.6	17.7	18.6	23.1	21.0	21.9
3	12.9	11.3	12.1	17.9	16.8	17.4	19.8	17.5	19.0	21.1	19.5	20.4
4	13.2	11.9	12.5	16.9	15.6	16.4	19.0	17.4	18.1	22.7	21.0	21.8
5	13.5	12.3	12.9	17.9	16.3	17.0	21.5	19.0	20.0	23.5	21.4	22.4
6	14.7	13.5	14.0	18.3	16.8	17.6	21.8	19.3	20.5	23.4	21.4	22.5
7	16.3	13.9	14.7	17.7	16.5	17.1	21.3	20.1	20.7	23.3	21.6	22.5
8	14.3	12.6	13.0	16.9	15.4	16.0	23.0	20.9	21.8	24.0	21.9	23.0
9	14.0	12.9	13.5	15.7	14.5	15.2	24.5	22.4	23.3	24.3	22.9	23.6
10	14.5	13.4	13.9	16.1	15.0	15.5	23.9	22.7	23.3	24.0	19.2	23.1
11	14.2	12.3	13.6	16.4	13.7	15.4	22.7	21.3	22.0	21.7	18.6	20.9
12	12.5	11.4	12.0	14.6	11.4	13.4	23.0	21.1	22.0	21.7	18.3	21.0
13	12.6	11.5	12.1	11.4	10.2	10.7	22.7	21.7	22.2	22.3	20.9	21.6
14	12.8	11.9	12.4	11.5	9.6	10.5	23.4	21.7	22.4	22.8	21.5	22.2
15	13.8	12.4	13.1	12.9	10.5	11.7	22.2	19.4	20.4	22.7	21.4	22.2
16	15.0	13.4	14.2	14.4	11.9	13.1	19.4	17.9	18.6	22.6	21.8	22.3
17	15.3	14.0	14.7	16.2	14.1	15.2	18.2	16.6	17.5	22.5	21.3	22.1
18	15.6	14.2	14.9	17.2	16.0	16.7	19.0	16.3	17.7	22.1	20.2	21.1
19	15.2	14.1	14.8	17.1	16.4	16.8	21.2	17.7	19.3	22.9	21.7	22.3
20	14.9	13.6	14.2	16.4	15.4	15.9	23.1	20.2	21.6	23.5	21.9	22.6
21	14.1	12.6	13.5	17.6	14.9	16.1	22.7	21.5	22.0	23.4	22.1	22.7
22	13.7	12.4	13.2	18.5	16.2	17.2	23.4	21.3	22.3	24.0	22.6	23.2
23	14.3	12.3	13.3	18.2	17.5	17.9	24.6	22.9	23.7	23.7	22.8	23.3
24	15.0	12.9	14.1	18.5	17.4	18.0	25.0	23.8	24.4	24.3	23.0	23.6
25	16.7	14.4	15.5	19.1	17.7	18.3	24.6	23.7	24.2	24.3	23.3	23.8
26	18.2	16.7	17.5	19.1	17.3	18.2	---	---	---	24.1	21.9	22.8
27	19.5	18.1	18.7	18.1	16.8	17.3	---	---	---	23.0	22.1	22.5
28	18.9	17.6	18.2	16.8	16.3	16.5	---	---	---	23.5	22.7	23.1
29	---	---	---	16.3	15.9	16.1	25.0	23.9	24.5	24.9	23.3	24.0
30	---	---	---	16.1	15.6	15.8	24.6	23.2	24.0	24.8	22.9	23.7
31	---	---	---	16.8	15.8	16.2	---	---	---	24.3	23.3	23.7
MONTH	19.5	10.1	13.9	19.1	9.6	16.0	---	---	---	24.9	18.3	22.6

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.4	24.1	24.7	29.5	27.8	28.7	32.3	30.0	31.1	30.0	28.2	29.1
2	26.0	25.0	25.5	30.0	28.1	29.0	32.3	30.1	31.2	29.0	28.0	28.6
3	25.9	24.8	25.3	30.5	28.6	29.6	31.8	30.3	31.1	29.3	27.7	28.4
4	25.8	25.0	25.4	30.6	29.0	29.8	31.9	29.8	30.9	30.1	28.2	29.1
5	26.1	25.4	25.7	30.3	29.0	29.7	32.3	30.1	31.1	30.0	28.9	29.3
6	26.5	24.9	25.7	30.8	28.6	29.7	32.2	30.3	31.3	29.7	28.0	28.8
7	28.3	26.4	27.2	30.2	29.3	29.7	32.5	30.4	31.4	---	---	---
8	29.1	27.1	28.0	29.7	26.1	28.2	32.6	30.5	31.5	29.0	28.0	28.4
9	28.8	27.3	28.1	29.9	28.5	29.3	32.8	30.6	31.7	28.8	26.9	27.9
10	28.8	27.3	27.9	29.8	25.5	28.8	32.9	30.8	31.8	28.9	27.4	28.2
11	27.9	25.7	26.9	27.0	25.4	26.1	32.6	30.9	31.8	28.5	27.1	27.9
12	26.6	25.8	26.2	28.8	26.8	27.7	32.3	30.5	31.5	29.3	27.2	28.2
13	27.0	25.7	26.3	29.2	27.3	28.3	32.0	30.4	31.2	28.7	25.7	27.7
14	28.0	26.6	27.2	29.8	28.1	29.0	32.2	30.4	31.3	26.2	24.6	25.6
15	28.5	27.0	27.7	29.8	28.3	29.1	32.0	30.2	31.1	26.2	24.7	25.4
16	27.7	25.2	26.8	30.1	28.5	29.3	31.5	29.5	30.5	25.9	24.6	25.3
17	27.3	26.6	27.0	30.4	28.9	29.7	31.0	28.9	30.0	26.6	24.7	25.6
18	27.4	25.9	26.7	31.4	29.2	30.2	31.3	29.1	30.2	26.9	25.2	26.0
19	27.6	25.9	26.8	30.9	29.3	30.2	31.7	29.7	30.6	27.4	25.1	26.2
20	28.0	26.6	27.3	31.0	29.3	30.2	31.0	29.4	30.3	27.6	25.6	26.6
21	27.7	26.9	27.3	30.4	29.2	29.8	30.1	28.9	29.6	26.7	25.0	25.6
22	27.5	26.9	27.2	30.5	28.5	29.5	31.0	29.1	29.9	25.0	23.3	24.1
23	27.6	25.8	26.7	31.2	29.0	30.0	31.3	29.5	30.4	23.8	22.3	23.2
24	27.9	26.9	27.3	31.8	29.5	30.6	31.8	29.9	30.8	23.5	21.8	22.8
25	27.5	25.6	26.4	31.8	30.0	30.9	31.6	29.7	30.7	23.7	22.4	23.1
26	28.8	26.3	27.4	32.1	30.3	31.2	31.3	29.3	30.3	25.2	23.3	24.2
27	29.9	27.8	28.7	32.4	30.2	31.3	31.3	29.7	30.4	26.1	24.5	25.3
28	30.7	28.8	29.7	32.7	30.4	31.5	31.8	29.6	30.6	27.3	25.5	26.3
29	30.3	29.4	29.7	32.4	30.4	31.4	31.2	29.7	30.5	26.3	24.0	24.8
30	29.6	28.5	29.1	32.0	30.1	31.1	30.5	29.1	29.9	24.0	22.2	23.0
31	---	---	---	31.8	29.9	30.9	30.3	28.5	29.4	---	---	---
MONTH	30.7	24.1	27.1	32.7	25.4	29.7	32.9	28.5	30.8	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.6	2.6	3.0	5.8	4.2	5.1	6.6	5.0	5.9	9.7	9.3	9.6
2	3.6	3.0	3.2	5.6	5.1	5.3	6.9	6.1	6.5	9.4	9.0	9.2
3	3.7	3.1	3.5	5.8	3.7	5.6	6.4	5.0	5.8	10.2	8.0	9.2
4	3.3	3.0	3.2	5.9	5.2	5.7	7.0	5.2	5.8	10.1	8.4	9.2
5	4.5	2.9	3.2	6.2	5.6	5.9	6.7	5.4	6.0	10.6	8.6	9.5
6	4.7	4.1	4.4	6.3	5.7	6.1	7.2	6.1	6.7	10.5	10.0	10.2
7	4.4	4.1	4.3	6.3	6.0	6.2	7.6	6.7	7.2	10.2	9.3	9.8
8	4.5	4.2	4.4	6.4	6.0	6.2	7.8	7.0	7.2	9.4	8.4	8.9
9	4.4	4.2	4.3	6.1	5.5	5.9	7.6	6.8	7.3	9.1	8.2	8.7
10	4.4	4.2	4.3	5.8	5.2	5.4	9.6	7.3	8.4	9.9	8.1	9.1
11	4.3	4.0	4.2	5.9	5.2	5.6	9.3	8.5	8.7	11.1	8.8	9.8
12	4.2	3.9	4.1	6.4	5.2	5.8	8.8	8.6	8.7	9.9	9.2	9.5
13	8.4	4.1	5.8	7.4	6.4	7.1	8.9	8.5	8.7	9.2	8.2	8.7
14	8.4	7.9	8.2	6.7	6.1	6.3	8.6	7.9	8.3	9.0	7.9	8.4
15	8.1	7.8	8.0	6.3	6.0	6.2	8.6	8.0	8.4	9.6	8.3	9.1
16	8.2	7.8	8.0	6.4	6.1	6.2	8.7	8.2	8.5	10.3	8.9	9.7
17	8.3	7.9	8.1	6.7	6.2	6.4	8.8	8.3	8.6	10.3	10.0	10.1
18	8.4	7.9	8.1	6.9	6.4	6.6	9.7	8.2	9.0	10.1	9.6	9.9
19	8.3	7.9	8.1	7.0	6.4	6.7	9.5	8.5	8.8	9.6	9.1	9.3
20	8.3	8.0	8.1	7.2	6.6	6.9	9.1	8.5	8.8	9.1	8.6	8.8
21	8.4	7.6	8.0	7.4	6.9	7.2	9.9	7.5	8.4	9.0	8.4	8.7
22	7.7	7.4	7.6	7.6	7.1	7.4	9.6	7.3	8.7	9.2	8.0	8.6
23	8.0	7.5	7.8	8.0	7.2	7.5	10.0	7.9	9.1	10.0	8.3	9.2
24	8.1	7.6	7.8	7.5	6.8	7.1	10.3	8.8	9.6	12.1	8.8	10.2
25	7.9	7.4	7.6	7.1	6.5	6.8	10.7	7.9	9.6	---	---	---
26	7.6	7.0	7.2	6.9	5.7	6.5	10.7	8.1	10.0	---	---	---
27	7.2	6.6	6.9	6.8	6.0	6.4	10.5	9.6	10.1	---	---	---
28	7.2	6.5	6.8	6.8	5.9	6.4	10.1	9.6	9.9	---	---	---
29	6.7	6.0	6.4	7.0	6.0	6.5	9.9	9.4	9.7	---	---	---
30	6.1	4.6	5.2	7.6	5.2	6.5	9.8	9.1	9.6	---	---	---
31	4.8	3.7	4.2	---	---	---	9.8	9.3	9.6	---	---	---
MONTH	8.4	2.6	5.9	8.0	3.7	6.3	10.7	5.0	8.3	---	---	---

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	6.1	4.2	5.3	5.5	4.1	4.7	7.0	5.6	6.2
2	---	---	---	5.6	4.3	5.0	4.9	3.9	4.3	7.4	5.9	6.5
3	---	---	---	5.7	5.1	5.4	6.5	3.3	4.9	---	---	---
4	8.4	7.6	8.2	5.9	5.3	5.5	6.2	5.5	5.9	---	---	---
5	8.4	7.6	8.1	6.0	5.3	5.6	6.1	5.5	5.7	---	---	---
6	8.1	7.5	7.8	6.1	3.7	5.6	6.0	5.3	5.7	---	---	---
7	7.7	6.3	7.3	5.9	2.7	4.2	6.1	5.5	5.8	---	---	---
8	8.4	7.5	8.3	7.4	3.5	5.3	6.1	5.0	5.6	---	---	---
9	8.4	8.1	8.3	7.2	6.2	6.5	5.9	4.5	5.2	---	---	---
10	8.2	7.9	8.0	6.4	5.6	6.2	5.7	4.9	5.4	---	---	---
11	8.0	7.7	7.8	7.7	5.1	6.2	6.1	4.6	5.4	---	---	---
12	8.2	7.2	7.9	7.9	6.2	6.9	6.0	4.8	5.4	---	---	---
13	8.1	6.8	7.7	8.0	7.4	7.6	6.0	4.9	5.5	---	---	---
14	8.0	6.6	7.6	7.4	6.3	6.9	6.8	4.9	5.6	---	---	---
15	7.7	6.8	7.4	6.4	5.4	6.0	6.7	5.4	6.1	---	---	---
16	7.4	7.1	7.2	5.9	3.8	4.8	7.9	5.4	6.6	---	---	---
17	7.4	7.1	7.2	3.8	2.5	3.1	7.5	6.4	6.9	---	---	---
18	7.6	7.1	7.3	2.6	1.1	2.1	6.8	5.9	6.3	---	---	---
19	7.6	7.2	7.4	3.4	1.6	2.5	6.7	5.9	6.2	---	---	---
20	7.7	7.3	7.5	3.2	1.5	2.3	6.4	5.5	5.9	---	---	---
21	7.8	7.4	7.6	3.5	2.3	2.9	6.8	5.6	6.2	---	---	---
22	7.9	7.4	7.6	5.6	2.7	4.3	7.3	5.9	6.2	---	---	---
23	8.0	7.4	7.7	6.1	4.1	5.3	6.1	5.9	6.0	---	---	---
24	8.1	6.3	7.4	6.2	6.0	6.1	6.2	5.8	6.0	---	---	---
25	7.2	5.7	6.6	7.0	5.6	6.4	6.2	5.8	6.0	---	---	---
26	6.6	5.3	6.0	7.4	5.4	6.3	6.1	5.8	6.0	---	---	---
27	6.6	4.7	5.7	7.1	4.9	6.0	6.1	5.6	5.9	6.1	5.8	5.9
28	6.3	3.7	5.2	7.0	5.0	6.1	9.4	5.8	6.1	6.6	5.9	6.2
29	---	---	---	6.2	4.9	5.6	7.3	5.4	6.2	7.1	5.7	6.3
30	---	---	---	5.9	5.0	5.4	7.0	5.9	6.5	7.1	6.3	6.9
31	---	---	---	6.0	4.8	5.4	---	---	---	6.3	5.6	5.9
MONTH	---	---	---	8.0	1.1	5.3	9.4	3.3	5.8	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.3	5.6	5.9	5.3	4.2	4.7	4.3	2.8	3.5	5.7	4.1	4.8
2	6.1	5.5	5.8	5.2	4.1	4.7	4.6	3.6	4.2	5.3	4.6	4.9
3	6.5	5.8	6.1	5.6	4.3	4.9	4.2	3.2	3.6	5.2	4.2	4.7
4	6.3	5.6	5.9	5.2	4.1	4.7	4.3	3.1	3.7	4.7	3.8	4.2
5	6.5	5.4	5.9	4.9	3.8	4.3	5.4	3.3	4.2	4.3	3.3	3.7
6	6.5	6.0	6.2	5.4	3.8	4.5	5.5	3.5	4.3	3.9	3.1	3.5
7	6.1	4.8	5.6	4.7	3.8	4.4	5.4	3.3	4.1	3.7	3.0	3.2
8	5.2	4.3	4.7	4.8	4.2	4.5	5.0	3.3	4.0	3.3	2.8	3.0
9	4.9	4.1	4.5	4.8	4.0	4.4	3.9	2.8	3.3	4.0	2.8	3.2
10	5.2	3.8	4.5	5.2	4.0	4.5	4.2	2.4	2.9	3.4	2.7	3.0
11	6.3	3.8	4.7	4.9	4.3	4.6	6.5	2.4	3.8	3.6	2.5	3.0
12	6.9	6.2	6.6	4.6	4.1	4.3	7.4	3.2	5.0	4.0	2.4	3.0
13	6.8	5.9	6.3	4.5	3.8	4.2	5.7	3.0	4.3	4.6	2.4	3.3
14	6.3	5.6	5.9	4.2	3.6	3.9	4.8	2.2	3.4	3.8	2.6	3.0
15	5.6	4.5	5.1	4.2	3.5	3.8	3.9	2.0	2.9	3.0	2.2	2.6
16	4.7	3.7	4.2	4.1	3.4	3.8	4.4	2.1	3.2	3.7	2.8	3.1
17	5.2	4.1	4.7	4.1	3.2	3.6	4.7	3.1	3.7	4.0	3.1	3.4
18	4.5	3.9	4.3	4.6	3.3	3.8	4.1	2.6	3.2	4.4	3.0	3.6
19	4.3	3.6	4.0	4.4	3.5	3.8	3.9	2.6	3.1	4.6	3.0	3.8
20	5.5	3.3	4.4	4.2	3.6	3.9	3.0	2.2	2.5	4.3	3.2	3.8
21	5.9	3.8	4.8	4.6	3.7	4.1	---	---	---	4.5	3.3	3.8
22	5.9	4.3	5.0	5.1	3.7	4.3	---	---	---	5.3	3.6	4.4
23	6.0	4.6	5.2	4.9	3.6	4.3	---	---	---	5.5	3.7	4.7
24	5.4	3.6	4.5	4.5	3.5	4.0	---	---	---	---	---	---
25	5.3	4.4	4.7	4.2	2.9	3.4	---	---	---	---	---	---
26	6.1	4.5	5.5	3.2	2.1	2.7	6.6	4.1	5.1	---	---	---
27	5.3	4.5	4.8	3.6	2.4	3.1	6.3	4.2	5.0	---	---	---
28	4.9	3.8	4.3	3.6	2.5	2.9	6.6	4.0	4.9	---	---	---
29	5.0	3.7	4.3	3.3	2.3	2.7	4.1	3.0	3.6	---	---	---
30	5.2	4.0	4.6	3.9	2.8	3.2	5.1	2.9	3.8	---	---	---
31	---	---	---	3.8	2.9	3.3	5.1	4.0	4.4	---	---	---
MONTH	6.9	3.3	5.1	5.6	2.1	4.0	---	---	---	---	---	---

08062500 TRINITY RIVER NEAR ROSSER, TX

LOCATION.--Lat 32°25′35", long 96°27′46", Ellis County, Hydrologic Unit 12030105, on right bank at downstream side of right pier of bridge on State Highway 34, 2.5 mi south of Rosser, 8.5 mi downstream from East Fork Trinity River, and at mile 451.4.

DRAINAGE AREA.--8,147 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jul 1924 to Sep 1925, Oct 1938 to current year. Monthly discharge, only for some periods, is published in WSP 1312.

REVISED RECORDS.--WRD TX-77-1: 1942(M), drainage area. WDR TX-89-1: 1988. WDR TX-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 297.65 ft above sea level. Oct 1938 to Sep 1994 at present site and datum 5.00 ft higher. Jul 25, 1924, to Sep 30, 1925, nonrecording gage at abandoned lock and dam No. 7, 1.7 mi upstream from present site at datum 11.94 ft higher. Satellite telemeter at station.

REMARKS.--Records good except for the estimated daily discharge, which is fair. Since installation of gage in Jul 1924, at least 10% of contributing drainage area has been regulated by 15 upstream reservoirs having a combined capacity of 3,572,000 acre-ft, of which 1,138,000 acre-ft is for flood control. A levee system, constructed in 1916, extends several miles upstream and downstream from the station. The cities of Fort Worth, Dallas, and several smaller cities divert considerable water for their municipal use, of which about 60 percent is returned as wastewater effluent that sustains low flows at this site. Flow may also be affected at times by discharge from the flood-detention pools of 38 floodwater-retarding structures with a combined detention capacity of 22,600 acre-ft in the drainage basin above this station. These structures control runoff from 76.7 mi^2 above this station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 reached a stage of about 38 ft (present site and datum), from information by U.S. Army Corps of Engineers (discharge believed to have been about the same as that of Apr 23, 1942).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	825	2270	3670	1600	6180	1180	1390	1110	17700	1070	865	791
2	831	8360	2720	1900	3280	1140	1370	1110	12500	1040	872	800
3	5060	5770	2060	1720	2790	1110	2180	3970	6390	1000	856	802
4	8770	2150	12700	1460	2820	1090	6890	3960	6300	932	838	844
5	5410	1510	22400	1400	2050	1060	5640	5640	5260	881	880	801
6	9260	1300	16500	1430	2280	1080	2550	3500	3450	1090	853	1150
7	8510	1210	7420	1450	2680	1040	1840	2000	2190	1130	875	1290
8	3720	1240	5190	1420	3300	1580	1580	1360	1520	2270	819	1250
9	1930	1220	3860	1360	2860	7980	1580	1240	1310	2400	803	1020
10	1450	1810	4460	1350	2480	6170	1480	1470	1330	1490	836	929
11	1280	2690	16000	1280	2420	3200	1300	3970	1700	6960	796	834
12	1160	2050	19400	1280	2520	8560	1280	3750	3180	4220	812	832
13	1100	13100	18000	1270	2160	12500	1270	3520	4040	1810	805	1040
14	1060	17900	14200	1260	1960	5680	1240	2910	3680	1330	921	2730
15	1010	13700	7830	1260	1720	2780	2520	2610	1800	1200	890	1860
16	994	6150	4930	1220	1390	2160	2300	2050	2020	1060	829	1170
17	1190	2630	3650	1180	1330	1940	1330	1950	2460	1010	797	982
18	2470	2100	3970	1200	1260	1810	1230	10200	2100	957	792	943
19	2870	1820	10800	1220	1250	3230	1160	14600	1340	939	806	879
20	2030	1640	11000	1180	1270	3310	1140	9120	1130	938	811	844
21	2270	1480	6090	1180	1230	2190	1090	2940	1080	938	952	791
22	2590	1360	2890	1130	1230	1800	1080	2660	1440	967	848	858
23	1760	1310	2380	1160	1210	1620	1100	2350	2880	904	803	821
24	1300	1260	e2300	1170	1180	1490	1090	2160	2660	878	825	789
25	1130	1190	2280	1140	1150	1460	1060	2140	2150	863	812	790
26	1050	1130	2240	1090	1140	1510	1270	4030	2590	868	855	833
27	1020	1090	1840	1080	1140	1410	3780	13400	1840	855	827	1030
28	1010	1050	1840	1100	1170	1450	2880	15200	1350	865	793	925
29	978	1070	1780	7440	---	1630	1540	7550	1210	853	795	817
30	956	2630	1740	16700	---	1620	1280	4940	1110	865	821	830
31	932	---	1650	12700	---	1420	---	13600	---	901	831	---
TOTAL	75926	104190	217790	73330	57450	86200	57440	151010	99710	43484	25918	30275
MEAN	2449	3473	7025	2365	2052	2781	1915	4871	3324	1403	836	1009
MAX	9260	17900	22400	16700	6180	12500	6890	15200	17700	6960	952	2730
MIN	825	1050	1650	1080	1140	1040	1060	1110	1080	853	792	789
AC-FT	150600	206700	432000	145500	114000	171000	113900	299500	197800	86250	51410	60050

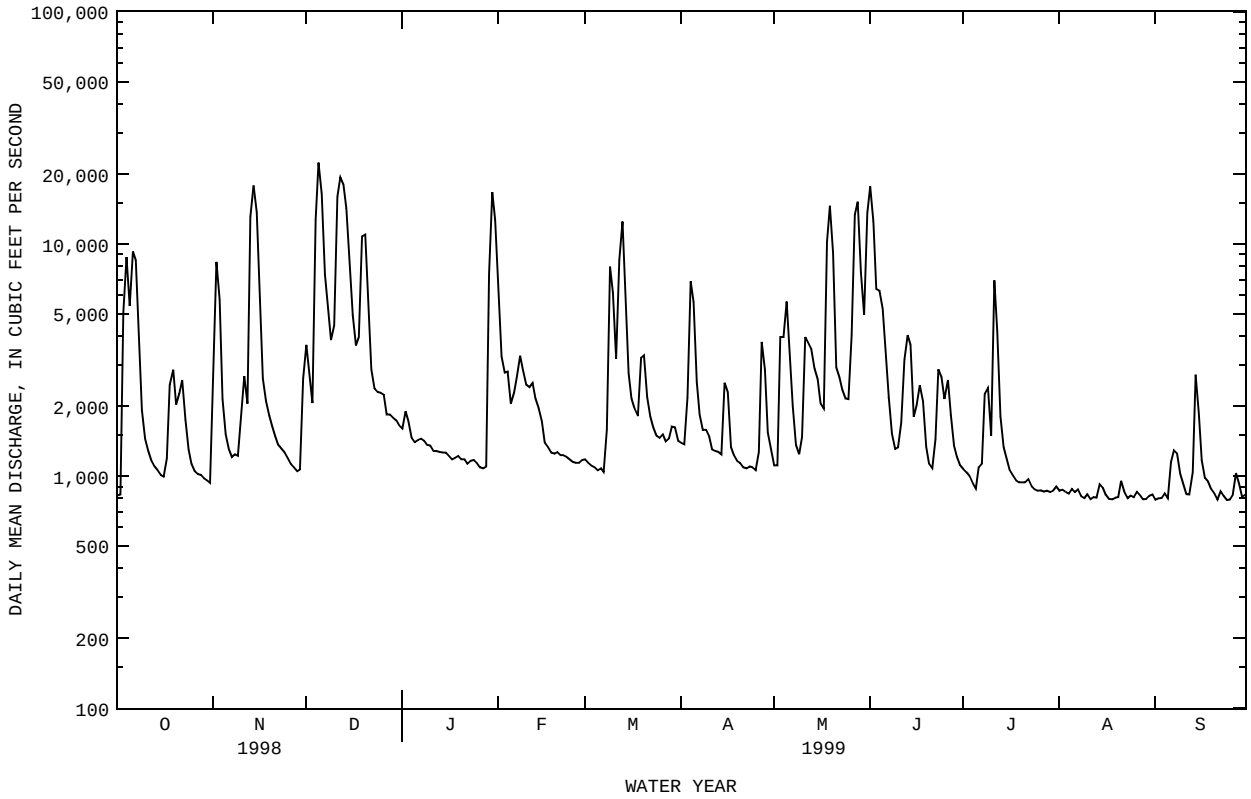
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1999h, BY WATER YEAR (WY)

MEAN	1870	2356	2828	2244	3335	3840	4482	6607	5198	2026	1105	1177
MAX	11140	16860	22340	17140	14680	20120	38610	40400	24600	10650	6912	8322
(WY)	1982	1982	1992	1992	1992	1945	1942	1990	1941	1989	1982	1962
MIN	32.8	49.5	50.4	61.0	72.7	54.6	213	614	154	62.6	37.1	89.1
(WY)	1925	1925	1925	1925	1925	1925	1956	1964	1925	1925	1925	1925

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1925 - 1999h	
ANNUAL TOTAL	1580600		1022723			
ANNUAL MEAN	4330		2802		3087	
HIGHEST ANNUAL MEAN					9702	1992
LOWEST ANNUAL MEAN					280	1956
HIGHEST DAILY MEAN	29100	Jan 7	22400	Dec 5	133000	Apr 23 1942
LOWEST DAILY MEAN	739	Sep 11	789	Sep 24	32	Oct 4 1924
ANNUAL SEVEN-DAY MINIMUM	767	Sep 5	805	Aug 28	32	Oct 14 1924
INSTANTANEOUS PEAK FLOW			25200	Dec 5	150000	Apr 23 1942
INSTANTANEOUS PEAK STAGE			31.47	Dec 5	41.55	Apr 22 1942
ANNUAL RUNOFF (AC-FT)	3135000		2029000		2237000	
10 PERCENT EXCEEDS	12400		6340		8660	
50 PERCENT EXCEEDS	1700		1400		915	
90 PERCENT EXCEEDS	842		844		217	

e Estimated
h See PERIOD OF RECORD paragraph.



08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1954 to current year.
BIOCHEMICAL DATA: Jan 1968 to current year.
PESTICIDE DATA: Jan 1968 to Jul 1981.
SEDIMENT DATA: Oct 1963 to Sep 1964, Apr 1972 to Apr 1975.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1954 to current year.
PH: Mar 1977 to current year.
WATER TEMPERATURE: Oct 1954 to current year.
DISSOLVED OXYGEN: Mar 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since Mar 1977.

REMARKS.--Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1990 to 1999. The standard error of estimate for dissolved solids is 5%, chloride is 17%, sulfate is 9% and for hardness is 10%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,990 microsiemens, Oct 13, 1956; minimum, 122 microsiemens, Sep 30, 1981.
PH: Maximum, 9.9 units, Jul 12, 1982; minimum, 6.7 units, May 19, 20, 1999.
WATER TEMPERATURE: Maximum, 36.0°C, Jul 1, 1955; minimum, 1.0°C, on many days during winter months.
DISSOLVED OXYGEN: Maximum, 13.6 mg/L, Feb 18, 1996; minimum, 0.0 mg/L, on several days during 1979-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 878 microsiemens, Sep 9; minimum, 200 microsiemens, Oct 6.
PH: Maximum, 8.8 units, Jan 28; minimum, 6.7 units, May 19-20.
WATER TEMPERATURE: Maximum, 33.1°C, Aug 10; minimum, 7.5°C, Dec 26.
DISSOLVED OXYGEN: Maximum, 11.0 mg/L, Dec 26; minimum, 2.6 mg/L, Oct 3-4.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN										
21...	0850	1200	754	8.0	15.6	9.1	93	.3	200	63
FEB										
24...	0750	1200	672	8.0	14.4	9.2	90	1.6	200	60
MAR										
25...	0730	1440	696	7.9	18.7	8.5	92	5.6	210	47
APR										
22...	0720	1060	741	8.0	21.8	8.1	95	2.6	200	66
MAY										
26...	0630	1970	532	7.9	26.0	6.9	86	2.3	160	48
JUL										
08...	0720	1250	645	7.8	29.1	6.6	87	3.3	170	60

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
JAN										
21...	71	6.3	66	2	8.9	140	97	62	.99	6.7
FEB										
24...	70	6.1	64	2	9.0	140	97	63	1.0	7.5
MAR										
25...	75	4.7	53	2	8.2	160	69	53	.66	8.7
APR										
22...	71	6.3	66	2	9.2	140	91	63	1.1	6.4
MAY										
26...	55	4.5	40	1	6.5	110	58	39	.70	5.6
JUL										
08...	58	5.8	66	2	6.4	110	77	62	1.1	7.6

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
JAN										
21...	455	10.6	.101	10.7	.192	.93	1.1	1.63	1.77	5.4
FEB										
24...	449	9.28	.137	9.41	.203	.84	1.0	1.52	1.47	4.5
MAR										
25...	395	4.96	.439	5.40	1.24	.88	2.1	.954	.835	2.6
APR										
22...	440	8.68	.106	8.78	.066	.87	.93	1.50	1.63	5.0
MAY										
26...	296	4.67	.024	4.69	.024	.59	.62	.858	.783	2.4
JUL										
08...	398	9.55	.093	9.65	.110	.67	.78	1.59	1.56	4.8

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1998	75926	429	243	49780	29	5910	44	9090	140
NOV.	1998	104190	413	233	65650	27	7710	42	11950	130
DEC.	1998	217790	389	219	128600	24	14210	39	22900	130
JAN.	1999	73330	514	294	58140	39	7730	56	11090	150
FEB.	1999	57450	557	319	49410	43	6720	61	9510	160
MAR.	1999	86200	484	275	64040	35	8130	52	12000	150
APR.	1999	57440	578	331	51350	46	7160	64	9990	170
MAY	1999	151010	408	230	93790	26	10570	41	16810	140
JUNE	1999	99710	430	243	65350	29	7680	44	11890	140
JULY	1999	43484	566	325	38200	47	5460	64	7500	160
AUG.	1999	25918	748	436	30540	73	5080	92	6400	180
SEPT	1999	30275	678	393	32150	61	5030	80	6560	170
TOTAL		1022723.00	**	**	727000	**	91390	**	135700	**
WTD.AVG.		2800	463	263	**	33	**	49	**	140

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	634	629	630	664	458	609	512	408	448	707	683	698
2	646	631	639	493	315	381	557	446	514	824	669	759
3	658	350	527	389	364	371	557	515	528	792	672	726
4	373	307	324	420	384	403	520	212	368	678	652	671
5	372	317	347	485	420	453	313	226	285	665	649	655
6	376	200	263	544	485	508	356	313	336	674	650	662
7	354	296	327	581	544	561	428	356	392	689	653	666
8	346	317	328	619	581	604	487	400	444	669	648	660
9	404	346	367	631	619	626	486	395	436	659	637	649
10	469	404	434	628	593	617	486	346	431	653	626	647
11	510	469	488	615	466	531	346	265	302	639	622	630
12	546	510	529	519	406	493	337	300	318	641	622	630
13	576	546	569	406	225	281	340	302	324	638	618	629
14	601	576	595	307	227	281	371	340	353	642	626	633
15	609	596	601	343	303	319	444	371	414	638	600	622
16	629	606	613	401	343	373	482	444	469	612	588	603
17	636	583	627	472	401	435	546	474	496	603	583	593
18	594	530	562	510	472	499	547	416	514	605	587	596
19	574	475	498	543	508	521	416	320	355	612	587	601
20	494	449	473	576	543	560	391	346	373	596	582	591
21	500	463	477	604	574	590	432	371	388	605	580	593
22	502	468	490	618	604	608	520	432	480	585	574	580
23	509	485	497	658	618	636	542	520	537	595	574	585
24	507	481	491	670	658	663	---	---	e600	600	575	588
25	541	500	515	681	660	674	---	---	e650	600	573	586
26	578	541	561	687	675	683	782	622	689	589	570	580
27	607	578	599	695	684	691	755	737	747	586	567	578
28	639	607	629	701	692	697	753	734	746	597	572	585
29	648	635	640	699	696	697	746	721	736	693	311	508
30	667	648	657	696	512	664	734	711	726	404	311	361
31	667	656	662	---	---	---	717	692	709	384	358	373
MONTH	667	200	515	701	225	534	---	---	487	824	311	608

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	424	384	403	612	588	602	634	615	629	664	604	635
2	502	424	458	601	575	592	631	608	621	703	664	679
3	595	498	539	590	572	582	704	513	625	712	470	638
4	609	538	580	589	567	579	531	480	508	546	425	473
5	550	536	541	583	559	571	498	422	451	485	408	453
6	677	550	604	582	559	575	515	471	492	438	424	430
7	705	580	649	575	555	564	563	514	541	488	438	454
8	598	540	576	604	553	578	622	561	594	571	488	527
9	540	520	526	604	336	445	691	622	660	646	571	607
10	530	517	524	446	377	406	693	637	670	689	646	665
11	534	516	525	477	419	452	637	593	626	696	466	561
12	564	533	552	440	290	352	636	590	617	480	445	455
13	599	530	571	351	314	324	627	604	618	492	450	474
14	594	574	585	426	344	394	616	602	608	492	465	476
15	634	583	599	490	426	455	760	616	729	471	451	463
16	666	634	653	524	490	508	737	633	662	510	452	487
17	652	622	643	584	521	560	684	596	633	545	509	526
18	634	615	628	611	584	595	616	589	606	546	273	378
19	631	614	623	621	592	610	600	571	590	360	333	351
20	637	614	628	614	531	548	599	568	584	380	351	364
21	625	610	618	612	537	577	581	565	573	448	380	422
22	631	604	618	610	575	586	581	558	569	505	433	454
23	625	603	615	625	581	603	586	559	573	532	505	523
24	617	594	608	654	621	630	582	557	572	536	483	514
25	607	590	598	673	639	658	571	551	562	534	497	519
26	604	588	596	684	648	674	636	562	590	533	489	515
27	603	580	593	656	627	647	655	636	646	495	296	326
28	618	578	600	670	625	651	640	508	529	331	297	315
29	---	---	---	701	660	688	560	512	541	382	331	351
30	---	---	---	757	647	687	604	560	580	480	351	423
31	---	---	---	647	628	638	---	---	---	351	272	293
MONTH	705	384	580	757	290	559	760	422	593	712	272	476

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	314	272	290	677	635	655	762	753	757	---	---	e750
2	358	314	334	691	677	686	753	729	737	---	---	e750
3	391	358	380	711	686	701	743	732	738	755	742	748
4	390	375	380	724	711	716	753	743	750	782	755	772
5	420	382	399	742	724	730	749	728	733	776	752	767
6	438	420	429	747	732	740	756	734	742	769	611	737
7	520	438	477	747	612	713	762	736	754	744	569	659
8	583	520	558	729	612	672	736	720	728	819	662	760
9	612	583	592	666	406	463	735	722	729	878	689	815
10	613	600	608	574	432	525	748	730	736	689	622	647
11	620	575	604	513	260	348	758	748	755	666	620	640
12	587	425	452	451	298	371	761	751	757	698	666	684
13	425	401	413	436	314	400	754	748	752	731	694	710
14	409	388	395	520	436	484	760	748	755	726	500	636
15	511	409	462	580	520	552	767	751	760	594	496	524
16	603	511	552	618	580	599	766	724	747	526	496	509
17	600	416	520	648	618	636	727	720	722	561	506	532
18	589	414	511	679	648	666	730	726	728	621	561	591
19	642	553	601	697	675	685	754	727	744	651	621	642
20	605	551	566	708	696	702	760	754	756	666	649	658
21	674	605	649	711	699	705	773	756	766	688	661	672
22	706	674	694	711	692	701	767	750	757	715	688	701
23	735	397	615	702	684	689	764	725	751	735	715	722
24	507	388	449	711	702	708	725	710	717	724	710	715
25	553	480	527	708	699	703	752	723	742	729	711	722
26	549	462	508	706	697	700	768	751	759	741	724	733
27	557	510	529	715	706	712	---	---	e760	748	736	741
28	615	521	563	720	712	715	---	---	e760	757	745	753
29	637	615	626	720	712	715	---	---	e760	757	632	681
30	640	631	635	726	716	722	---	---	e760	688	644	676
31	---	---	---	759	724	744	---	---	e760	---	---	---
MONTH	735	272	511	759	260	641	---	---	747	---	---	688

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	7.7	7.8	7.6	7.5	7.6	8.0	7.8	8.0	8.3	8.3	8.3
2	7.8	7.7	7.8	7.7	7.5	7.6	8.1	8.0	8.0	8.3	8.2	8.3
3	7.9	7.3	7.6	7.6	7.5	7.5	8.2	8.0	8.1	8.4	8.2	8.3
4	7.3	7.2	7.3	7.5	7.4	7.5	---	---	---	8.4	8.4	8.4
5	---	---	---	7.5	7.5	7.5	---	---	---	8.4	8.3	8.3
6	---	---	---	7.5	7.4	7.4	---	---	---	8.3	8.3	8.3
7	---	---	---	7.5	7.4	7.4	---	---	---	8.3	8.3	8.3
8	---	---	---	7.5	7.4	7.4	---	---	---	8.3	8.2	8.2
9	---	---	---	7.5	7.5	7.5	---	---	---	8.3	8.2	8.2
10	---	---	---	7.5	7.4	7.5	---	---	---	8.3	8.2	8.2
11	---	---	---	7.5	7.4	7.4	---	---	---	8.3	8.2	8.3
12	---	---	---	7.6	7.4	7.5	---	---	---	8.3	8.3	8.3
13	---	---	---	8.2	7.5	7.7	---	---	---	8.3	8.2	8.3
14	---	---	---	8.2	7.6	7.8	---	---	---	8.3	8.2	8.3
15	---	---	---	7.7	7.5	7.6	---	---	---	8.3	8.0	8.3
16	---	---	---	7.9	7.5	7.7	---	---	---	8.4	8.3	8.3
17	---	---	---	8.1	7.8	7.9	---	---	---	8.4	8.3	8.3
18	---	---	---	8.0	7.8	7.9	---	---	---	8.4	8.3	8.3
19	---	---	---	8.0	7.9	8.0	---	---	---	8.3	8.3	8.3
20	---	---	---	8.0	7.9	7.9	---	---	---	8.3	8.2	8.2
21	---	---	---	8.0	7.9	7.9	---	---	---	8.2	7.9	8.1
22	7.4	7.3	7.3	7.9	7.9	7.9	8.2	8.1	8.1	8.2	8.1	8.2
23	7.4	7.3	7.4	7.9	7.8	7.9	---	---	---	8.2	8.0	8.1
24	7.4	7.4	7.4	7.9	7.8	7.8	---	---	---	8.3	8.1	8.2
25	7.5	7.4	7.4	7.8	7.8	7.8	---	---	---	8.2	8.1	8.1
26	7.5	7.4	7.5	7.8	7.8	7.8	8.3	8.2	8.3	8.3	8.1	8.2
27	7.5	7.3	7.4	7.8	7.8	7.8	8.4	8.3	8.4	8.2	8.1	8.1
28	7.5	7.4	7.4	7.8	7.8	7.8	8.4	8.3	8.3	8.8	7.9	8.0
29	7.5	7.5	7.5	7.9	7.8	7.8	8.3	8.3	8.3	7.9	7.7	7.8
30	7.5	7.4	7.5	8.0	7.8	7.9	8.3	8.3	8.3	8.0	7.9	7.9
31	7.8	7.5	7.5	---	---	---	8.3	8.3	8.3	8.0	7.9	7.9
MONTH	---	---	---	8.2	7.4	7.7	---	---	---	8.8	7.7	8.2

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.1	8.0	8.1	7.9	7.8	7.8	8.1	7.9	8.0	7.5	7.4	7.4
2	8.2	8.1	8.2	7.9	7.8	7.8	8.0	7.9	7.9	7.4	7.3	7.4
3	8.2	7.5	7.9	8.0	7.9	7.9	8.0	7.2	7.8	7.3	7.2	7.3
4	7.8	7.5	7.6	8.1	7.9	8.0	---	---	---	7.3	7.1	7.1
5	7.9	7.8	7.8	8.1	7.9	8.0	7.6	7.1	7.3	7.1	7.0	7.1
6	7.9	7.8	7.8	8.1	7.9	8.0	8.0	7.6	7.9	7.2	7.1	7.1
7	7.9	7.7	7.8	7.9	7.8	7.9	8.1	7.8	8.0	7.2	7.2	7.2
8	7.9	7.8	7.9	8.0	7.8	7.9	8.1	8.1	8.1	7.3	7.2	7.2
9	8.0	7.9	7.9	8.0	7.8	7.9	8.2	8.1	8.1	7.3	7.2	7.3
10	8.0	7.9	7.9	8.0	7.8	7.9	8.1	7.9	8.0	7.5	7.3	7.4
11	8.1	7.9	8.1	7.9	7.8	7.9	7.9	7.8	7.9	7.8	7.4	7.5
12	8.1	8.0	8.1	8.1	7.6	7.8	7.9	7.8	7.8	7.5	7.4	7.5
13	8.1	8.0	8.1	8.1	8.1	8.1	7.9	7.8	7.9	7.6	7.4	7.5
14	8.1	8.0	8.1	8.1	7.9	8.0	7.9	7.6	7.8	7.6	7.5	7.5
15	8.1	8.1	8.1	8.1	8.0	8.0	7.6	7.2	7.5	7.6	7.6	7.6
16	8.2	8.1	8.2	8.1	8.0	8.0	7.3	7.2	7.2	7.6	7.6	7.6
17	8.2	8.1	8.2	8.1	8.0	8.0	7.3	7.2	7.3	7.7	7.6	7.6
18	8.3	8.2	8.2	8.0	8.0	8.0	7.5	7.3	7.4	7.7	6.9	7.1
19	8.3	8.2	8.2	8.1	8.0	8.0	7.5	7.4	7.4	6.9	6.7	6.8
20	8.2	8.1	8.2	8.1	8.0	8.1	7.7	7.4	7.5	7.0	6.7	6.8
21	---	---	---	8.1	8.0	8.1	8.0	7.6	7.7	7.5	7.0	7.3
22	---	---	---	8.0	8.0	8.0	7.9	7.6	7.8	7.3	7.3	7.3
23	---	---	---	8.1	8.0	8.0	7.9	7.7	7.8	7.6	7.3	7.4
24	---	---	---	8.1	8.0	8.0	8.1	7.5	7.7	7.6	7.5	7.6
25	8.0	7.9	8.0	8.1	7.8	7.9	8.2	8.0	8.1	7.7	7.5	7.6
26	8.0	7.9	7.9	8.0	7.9	7.9	8.1	7.7	8.0	7.9	7.0	7.5
27	8.0	7.8	7.9	8.0	7.9	8.0	7.7	6.9	7.1	7.9	6.9	7.4
28	7.9	7.8	7.8	8.0	7.9	8.0	7.1	6.9	7.0	8.0	7.9	8.0
29	---	---	---	8.0	8.0	8.0	7.3	7.1	7.2	8.1	7.5	7.9
30	---	---	---	8.0	8.0	8.0	7.4	7.3	7.4	8.2	7.8	8.0
31	---	---	---	8.0	8.0	8.0	---	---	---	8.3	7.9	8.2
MONTH	---	---	---	8.1	7.6	8.0	---	---	---	8.3	6.7	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	7.6	7.8	8.1	8.0	8.0	8.1	7.8	8.0	---	---	---
2	7.7	7.6	7.6	8.1	7.9	8.0	8.0	7.7	7.9	---	---	---
3	7.9	7.5	7.8	8.1	8.0	8.0	7.9	7.7	7.8	7.4	7.3	7.3
4	8.1	7.9	7.9	8.1	8.0	8.0	7.7	7.6	7.7	7.4	7.3	7.3
5	8.3	8.0	8.2	8.1	8.0	8.0	7.8	7.6	7.7	7.4	7.3	7.3
6	8.2	8.0	8.1	8.0	8.0	8.0	7.8	7.6	7.7	7.3	7.1	7.2
7	8.2	8.0	8.1	8.1	7.9	8.0	7.8	7.6	7.7	7.2	7.1	7.2
8	8.3	8.1	8.2	7.9	7.5	7.8	7.8	7.5	7.7	7.2	7.1	7.2
9	8.4	8.2	8.3	7.9	7.6	7.8	7.9	7.6	7.7	7.3	7.2	7.3
10	8.4	8.3	8.4	7.9	7.8	7.9	7.9	7.6	7.8	7.4	7.3	7.3
11	8.3	8.1	8.3	7.8	7.6	7.7	7.9	7.6	7.8	7.4	7.3	7.3
12	---	---	---	7.9	7.5	7.7	7.8	7.6	7.7	7.4	7.3	7.3
13	---	---	---	8.0	7.7	7.9	7.9	7.7	7.8	7.5	7.4	7.5
14	---	---	---	8.0	7.8	7.9	8.0	7.6	7.8	7.5	7.0	7.1
15	7.8	7.7	7.7	8.0	7.9	8.0	8.1	7.6	7.8	7.1	7.0	7.1
16	7.9	7.8	7.8	8.0	8.0	8.0	8.0	7.6	7.8	7.1	7.0	7.1
17	7.9	7.7	7.8	8.1	7.9	8.0	8.1	7.6	7.8	7.1	7.0	7.1
18	7.9	7.8	7.8	8.1	8.0	8.0	7.9	7.7	7.8	7.3	7.1	7.2
19	7.9	7.8	7.8	8.1	7.9	8.0	7.9	7.7	7.8	7.3	7.3	7.3
20	7.9	7.8	7.9	8.1	7.9	8.0	7.9	7.7	7.8	7.4	7.3	7.3
21	8.1	7.8	8.0	8.1	8.0	8.0	7.8	7.6	7.7	7.5	7.4	7.4
22	8.0	7.9	8.0	8.1	7.9	8.0	7.8	7.6	7.7	7.6	7.4	7.5
23	7.9	7.7	7.8	8.1	8.0	8.0	7.8	7.6	7.7	7.7	7.5	7.6
24	7.8	7.7	7.7	8.1	7.9	8.0	8.0	7.7	7.8	7.6	7.4	7.5
25	7.9	7.7	7.8	8.2	7.9	8.0	8.0	7.8	7.9	7.5	7.4	7.5
26	7.8	7.7	7.8	8.2	7.9	8.1	7.9	7.7	7.8	7.6	7.4	7.5
27	7.9	7.8	7.9	8.1	7.9	8.0	---	---	---	7.5	7.3	7.4
28	8.0	7.9	7.9	8.0	7.9	8.0	---	---	---	7.5	7.3	7.4
29	8.0	7.9	8.0	8.0	7.9	8.0	---	---	---	7.6	7.5	7.5
30	8.1	8.0	8.0	8.1	7.9	8.0	---	---	---	7.7	7.5	7.6
31	---	---	---	8.0	7.8	7.9	---	---	---	---	---	---
MONTH	---	---	---	8.2	7.5	8.0	---	---	---	---	---	---

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	30.0	28.9	29.5	25.4	21.6	23.4	19.8	18.2	18.6	12.7	12.0	12.2
2	29.4	27.9	28.8	21.6	19.8	20.4	19.2	18.2	18.6	12.7	12.1	12.4
3	27.9	25.4	26.6	19.8	18.9	19.2	19.5	18.8	19.2	12.1	9.0	10.7
4	25.5	24.3	24.7	19.2	17.8	18.5	19.6	19.1	19.4	9.0	8.0	8.3
5	26.1	24.9	25.4	17.8	17.1	17.4	19.4	19.1	19.3	8.5	8.2	8.3
6	25.5	20.2	21.5	17.1	16.6	16.8	19.5	19.3	19.4	10.1	8.5	9.2
7	22.6	21.2	21.8	16.7	16.0	16.4	19.4	18.1	18.9	11.6	10.1	10.9
8	22.4	21.3	21.7	16.3	16.0	16.2	18.1	15.8	16.4	12.4	11.6	12.1
9	22.2	21.1	21.7	17.8	16.3	17.0	16.1	14.4	14.9	11.8	10.5	11.0
10	22.6	21.9	22.2	18.4	17.8	18.1	14.9	11.3	13.5	10.6	10.2	10.4
11	22.9	22.4	22.6	18.3	17.1	17.4	11.4	10.3	10.8	10.8	10.3	10.5
12	23.6	22.9	23.2	17.3	14.5	16.5	11.4	10.4	10.9	12.2	10.5	11.4
13	24.2	23.1	23.6	14.5	12.3	12.7	10.9	10.3	10.6	13.1	12.2	12.6
14	24.6	23.7	24.0	13.4	12.3	13.1	11.7	10.9	11.2	12.3	11.9	12.1
15	24.8	23.9	24.3	14.2	13.4	13.8	12.2	11.4	11.8	12.3	11.7	11.9
16	25.2	24.2	24.6	15.6	14.2	14.8	12.8	11.7	12.2	12.1	11.5	11.8
17	25.0	24.3	24.8	16.8	15.5	16.0	13.3	12.1	12.6	13.4	12.0	12.8
18	24.3	23.7	23.9	18.1	16.8	17.5	13.3	12.3	12.7	13.8	13.2	13.4
19	23.7	22.5	22.9	18.9	18.0	18.3	12.4	11.7	12.0	14.2	13.3	13.7
20	22.5	21.0	21.7	18.8	18.0	18.4	12.3	11.9	12.0	15.0	14.1	14.5
21	21.0	19.8	20.3	18.0	17.5	17.7	12.5	11.7	12.2	16.5	14.7	15.7
22	20.8	20.3	20.6	17.6	17.0	17.2	11.7	10.0	10.5	16.9	16.0	16.4
23	20.7	19.8	20.2	17.9	17.2	17.6	10.0	8.5	9.4	16.0	15.2	15.5
24	20.1	19.6	19.9	18.5	17.9	18.3	8.8	8.1	8.4	15.4	14.8	15.1
25	20.5	19.8	20.1	19.4	18.3	18.9	9.1	7.8	8.4	15.6	14.9	15.2
26	21.5	20.4	20.9	19.6	19.1	19.3	9.1	7.5	8.1	15.7	14.7	15.2
27	22.3	21.2	21.7	19.6	19.1	19.3	8.9	7.6	8.1	16.3	15.3	15.8
28	23.0	21.9	22.5	19.9	19.3	19.6	10.6	8.9	9.8	17.0	16.0	16.5
29	23.7	22.7	23.2	20.4	19.7	20.1	11.3	10.5	10.8	16.9	15.8	16.3
30	24.6	23.7	24.1	20.5	19.8	20.3	11.3	10.8	11.1	15.8	14.1	15.0
31	24.6	23.9	24.2	---	---	---	12.0	11.2	11.5	14.1	12.3	13.0
MONTH	30.0	19.6	23.1	25.4	12.3	17.7	19.8	7.5	13.0	17.0	8.0	12.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.6	11.6	12.0	18.8	17.8	18.2	17.3	17.0	17.1	24.7	23.9	24.2
2	13.5	12.2	12.7	19.4	18.5	18.8	19.2	17.3	18.2	23.9	22.3	23.2
3	14.3	12.7	13.4	18.5	17.3	17.8	19.9	18.8	19.6	22.3	21.0	21.6
4	14.4	13.6	13.8	17.6	16.7	17.1	19.4	18.5	18.8	22.1	21.0	21.4
5	14.5	13.4	13.8	18.0	17.0	17.4	20.1	18.8	19.3	23.1	22.0	22.4
6	16.5	14.5	15.4	18.2	17.3	17.7	21.0	19.4	20.1	23.0	22.4	22.7
7	16.7	16.1	16.4	17.6	16.9	17.3	21.3	20.6	20.9	23.2	22.4	22.7
8	16.2	15.4	15.8	17.7	16.5	16.9	22.4	21.3	21.6	24.0	22.9	23.4
9	16.7	15.6	16.1	17.7	15.3	15.9	23.6	22.4	22.8	24.4	23.8	24.1
10	17.3	16.4	16.8	16.0	15.1	15.5	23.7	22.9	23.4	24.6	24.2	24.3
11	17.2	15.7	16.9	16.1	15.5	16.0	22.9	22.1	22.5	24.3	22.7	23.3
12	15.7	14.2	14.5	15.8	13.5	14.3	22.9	22.2	22.5	23.2	22.5	22.7
13	14.4	13.5	14.0	13.9	10.8	11.7	23.3	22.6	22.9	24.0	22.2	23.1
14	14.3	13.2	13.7	12.0	10.9	11.3	23.2	22.5	22.7	24.6	22.9	23.7
15	14.6	13.2	13.8	12.9	11.1	11.9	22.7	20.7	21.5	24.7	23.7	24.3
16	15.4	14.6	15.1	14.3	12.7	13.3	21.1	19.5	20.1	25.5	24.3	24.8
17	15.6	15.2	15.4	16.0	14.3	15.0	19.5	18.6	18.9	25.5	24.5	24.9
18	16.0	15.4	15.6	17.0	16.0	16.5	19.1	18.2	18.7	24.5	21.6	22.7
19	15.6	15.2	15.3	17.1	16.9	17.0	20.6	18.9	19.6	23.9	22.9	23.3
20	15.4	14.6	15.2	17.1	15.4	16.0	22.3	20.6	21.3	24.3	23.3	23.7
21	14.6	14.0	14.3	17.2	15.3	16.1	22.4	21.7	22.0	25.3	24.3	24.7
22	14.3	13.7	14.0	17.9	16.7	17.3	23.0	21.7	22.2	26.4	24.3	25.1
23	14.5	13.4	14.0	18.3	17.9	18.1	24.1	22.9	23.4	26.4	25.2	25.8
24	15.2	14.1	14.6	18.7	17.8	18.2	24.7	23.8	24.1	26.6	25.1	25.8
25	16.2	14.9	15.6	19.2	18.7	18.9	24.8	24.0	24.3	26.6	25.4	26.1
26	17.6	16.0	16.9	19.1	18.5	18.8	24.2	23.7	24.0	26.5	24.8	25.7
27	18.9	17.6	18.3	19.1	18.0	18.7	23.7	22.5	23.1	24.8	22.9	23.4
28	18.5	17.9	18.2	18.0	17.5	17.7	23.9	22.4	23.1	23.8	23.0	23.3
29	---	---	---	17.6	17.0	17.3	24.5	23.9	24.2	25.0	23.5	24.0
30	---	---	---	17.0	16.6	16.8	24.4	24.0	24.2	25.7	24.7	25.1
31	---	---	---	17.0	16.7	16.8	---	---	---	24.9	23.3	24.0
MONTH	18.9	11.6	15.1	19.4	10.8	16.5	24.8	17.0	21.6	26.6	21.0	23.9

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	23.8	24.5	29.7	28.9	29.3	32.1	30.6	31.3	---	---	---
2	26.6	25.3	25.8	29.9	28.9	29.3	32.5	30.8	31.6	---	---	---
3	27.0	26.2	26.5	30.4	29.1	29.6	32.5	31.2	31.8	29.5	28.6	29.0
4	26.8	26.0	26.4	30.8	29.5	30.0	32.3	30.8	31.6	30.1	28.8	29.4
5	27.2	26.2	26.6	30.8	29.7	30.2	32.8	31.2	31.9	30.1	29.2	29.6
6	27.6	26.4	27.0	30.7	29.3	30.0	32.7	31.3	32.0	29.7	28.9	29.3
7	28.9	27.0	27.8	31.1	29.4	30.5	32.6	31.3	32.0	29.8	28.5	29.1
8	29.3	28.7	28.9	30.3	29.0	29.6	32.8	31.3	32.0	29.4	28.9	29.2
9	29.3	28.7	28.9	30.2	28.4	29.1	33.0	31.5	32.2	29.2	28.3	28.8
10	29.1	28.6	28.8	29.8	28.8	29.5	33.1	31.6	32.3	29.4	28.4	28.8
11	29.0	28.4	28.7	28.8	26.2	27.1	32.9	31.6	32.2	28.8	27.8	28.3
12	---	---	---	28.4	26.9	27.5	32.5	31.2	31.9	29.0	27.6	28.3
13	---	---	---	29.0	28.1	28.6	32.3	31.0	31.7	28.6	27.8	28.2
14	---	---	---	29.5	29.0	29.2	32.9	31.3	32.1	27.8	26.8	27.3
15	28.5	27.7	28.1	29.8	29.2	29.5	32.5	31.3	31.9	27.3	25.9	26.5
16	28.8	28.1	28.3	30.4	29.3	29.7	32.0	30.6	31.3	26.4	25.8	26.1
17	28.4	26.6	27.5	30.9	29.7	30.1	31.7	30.1	30.9	26.9	25.8	26.2
18	27.7	26.4	27.0	30.9	29.7	30.2	31.9	30.4	31.2	27.2	26.1	26.6
19	27.9	27.3	27.6	31.2	29.7	30.4	32.3	30.6	31.5	27.6	26.2	26.8
20	28.4	27.8	28.1	31.4	30.1	30.6	31.9	30.5	31.2	28.1	26.6	27.2
21	28.7	27.9	28.2	30.8	29.8	30.2	31.4	30.1	30.8	27.3	25.7	26.5
22	28.5	28.1	28.2	30.5	29.3	29.9	31.7	30.5	31.0	25.7	24.2	25.0
23	28.4	27.4	27.8	31.1	29.8	30.4	31.7	30.5	31.0	25.4	24.0	24.6
24	28.2	27.4	27.8	31.7	30.1	30.9	31.9	30.4	31.2	24.9	23.7	24.4
25	28.1	27.2	27.8	32.2	30.6	31.3	32.1	30.7	31.4	24.4	23.7	24.1
26	28.4	26.8	27.6	32.2	30.9	31.5	32.2	30.5	31.4	25.0	23.8	24.3
27	29.5	28.3	28.8	32.3	30.8	31.5	---	---	---	25.9	24.8	25.3
28	30.1	29.2	29.6	32.4	31.0	31.7	---	---	---	26.6	25.5	25.9
29	30.3	29.8	30.0	32.4	31.0	31.7	---	---	---	25.9	24.1	25.1
30	29.9	29.4	29.7	32.1	30.8	31.5	---	---	---	24.4	23.1	23.8
31	---	---	---	31.8	30.5	31.1	---	---	---	---	---	---
MONTH	---	---	---	32.4	26.2	30.1	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.6	4.9	5.3	6.7	5.7	6.4	5.5	4.1	4.9	9.3	8.7	9.1
2	5.1	4.6	4.8	5.8	4.9	5.5	5.7	5.5	5.6	9.0	8.5	8.8
3	5.1	2.6	3.9	6.2	5.7	5.9	5.7	5.5	5.6	9.9	8.5	9.0
4	4.6	2.6	3.6	6.9	6.2	6.6	5.8	4.5	5.1	10.3	9.9	10.1
5	5.3	4.6	5.0	7.5	6.9	7.2	4.5	3.9	4.1	10.2	10.0	10.1
6	5.9	5.2	5.6	7.7	7.4	7.5	4.0	3.8	3.9	10.1	9.7	9.9
7	6.3	5.9	6.2	7.7	7.5	7.6	4.8	3.9	4.4	9.7	9.0	9.4
8	6.5	6.1	6.3	7.8	7.4	7.7	5.5	4.8	5.4	9.1	8.6	8.8
9	6.5	5.8	6.1	7.8	7.3	7.6	5.7	5.5	5.6	9.0	8.6	8.8
10	6.7	5.8	6.2	7.4	7.1	7.3	6.5	5.5	5.9	9.2	9.0	9.1
11	6.9	5.6	6.2	7.1	6.6	6.9	6.6	6.3	6.5	9.4	9.1	9.3
12	6.9	5.6	6.1	7.9	6.8	7.2	6.5	6.2	6.4	9.4	8.9	9.1
13	7.1	5.7	6.4	8.2	7.7	8.0	6.5	6.2	6.4	8.9	8.4	8.6
14	6.7	4.4	5.7	7.9	7.1	7.5	6.4	6.2	6.3	8.7	8.4	8.6
15	6.2	4.5	5.5	7.3	6.9	7.1	6.3	6.2	6.2	9.2	8.5	8.8
16	6.8	5.6	6.1	7.4	7.0	7.2	8.0	6.2	7.1	9.5	8.7	9.0
17	7.3	6.0	6.7	7.6	7.3	7.5	9.0	7.5	8.3	9.3	8.7	8.9
18	7.2	5.0	6.2	7.6	7.3	7.4	9.2	8.5	8.9	9.2	8.4	8.7
19	7.5	6.7	7.1	---	---	---	9.6	8.8	9.2	8.9	8.3	8.6
20	7.4	6.6	7.0	---	---	---	9.5	8.9	9.2	8.7	8.0	8.3
21	7.6	6.8	7.3	---	---	---	9.4	8.9	9.2	---	---	---
22	7.6	7.2	7.4	---	---	---	10.1	9.4	9.8	---	---	---
23	7.7	7.4	7.6	---	---	---	---	---	---	---	---	---
24	8.1	7.7	7.9	7.4	7.3	7.3	---	---	---	---	---	---
25	8.0	7.9	8.0	7.3	7.1	7.2	---	---	---	---	---	---
26	8.0	7.8	7.9	7.1	7.0	7.0	11.0	10.3	10.7	---	---	---
27	8.0	7.7	7.8	7.0	6.8	6.9	10.9	10.6	10.8	---	---	---
28	7.8	7.5	7.6	6.9	6.7	6.8	10.6	9.9	10.2	---	---	---
29	7.6	7.2	7.5	6.7	6.5	6.6	9.9	9.6	9.8	---	---	---
30	7.4	6.9	7.2	6.6	4.7	6.2	9.6	9.5	9.6	---	---	---
31	7.2	6.7	6.9	---	---	---	9.5	9.3	9.4	---	---	---
MONTH	8.1	2.6	6.4	---	---	---	---	---	---	---	---	---

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.8	7.1	7.4	9.5	9.4	9.5	6.4	5.3	5.8
2	---	---	---	7.4	6.9	7.2	---	---	---	5.9	5.5	5.7
3	9.6	9.3	9.6	7.8	6.9	7.3	---	---	---	5.7	3.9	4.8
4	9.6	9.1	9.3	7.9	7.1	7.4	---	---	---	4.5	4.0	4.2
5	9.6	9.5	9.6	7.3	6.8	7.1	---	---	---	4.6	4.3	4.4
6	9.5	8.7	9.2	7.6	6.5	6.9	---	---	---	4.6	4.4	4.5
7	8.7	8.1	8.4	7.2	6.4	6.7	---	---	---	4.6	4.4	4.4
8	8.6	8.2	8.5	7.1	6.1	6.4	---	---	---	4.9	4.5	4.7
9	8.8	8.6	8.7	7.1	5.0	5.6	---	---	---	5.2	4.8	5.0
10	8.8	8.5	8.6	6.4	5.7	6.0	7.8	7.4	7.5	5.1	4.8	4.9
11	8.7	8.4	8.5	7.1	6.3	6.6	8.1	7.4	7.8	4.9	3.9	4.4
12	9.3	8.7	9.0	7.3	6.6	6.9	8.7	7.7	8.1	5.0	4.6	4.8
13	9.4	9.1	9.3	8.1	6.8	7.8	8.7	7.8	8.3	5.2	5.0	5.1
14	9.5	9.3	9.4	8.1	7.8	8.0	8.5	7.6	8.0	5.4	5.1	5.3
15	9.4	9.2	9.3	8.0	7.7	8.0	7.9	6.4	7.4	5.4	5.3	5.4
16	9.2	8.8	9.0	7.9	7.3	7.5	7.3	6.5	6.9	5.4	5.2	5.3
17	9.3	8.8	9.0	7.3	6.5	6.9	8.5	7.3	8.0	5.5	4.2	5.2
18	9.5	8.9	9.2	6.6	6.2	6.4	9.0	8.3	8.6	5.5	3.6	4.3
19	9.4	8.9	9.1	6.7	6.3	6.5	9.2	8.4	8.7	5.5	4.0	4.6
20	9.1	8.7	9.0	6.7	6.4	6.6	9.8	8.2	8.9	7.0	5.5	6.1
21	9.9	9.0	9.4	7.6	6.6	7.1	9.7	8.1	8.8	---	---	---
22	9.9	9.3	9.6	8.0	7.2	7.6	9.4	7.8	8.6	---	---	---
23	9.8	9.3	9.6	8.1	7.5	7.8	8.9	7.4	8.2	---	---	---
24	9.8	8.1	8.9	8.3	7.6	7.9	8.9	7.2	8.0	---	---	---
25	8.2	7.7	8.0	8.7	7.7	8.3	8.4	7.0	7.7	---	---	---
26	8.1	7.4	7.7	9.3	8.5	8.9	7.6	6.8	7.2	---	---	---
27	7.9	7.1	7.5	9.3	8.8	9.1	7.0	4.0	5.3	5.8	5.1	5.3
28	7.9	7.1	7.4	9.2	8.9	9.1	5.3	4.8	5.1	5.9	5.2	5.5
29	---	---	---	9.6	9.2	9.4	5.6	4.8	5.1	6.3	5.9	6.0
30	---	---	---	9.6	9.4	9.5	5.9	5.5	5.7	6.5	5.2	6.2
31	---	---	---	9.6	9.4	9.5	---	---	---	5.8	5.1	5.4
MONTH	---	---	---	9.6	5.0	7.5	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.3	5.0	5.1	5.7	4.9	5.4	---	---	---	---	---	---
2	5.8	5.2	5.5	6.0	4.7	5.4	---	---	---	---	---	---
3	6.1	5.7	5.9	6.1	5.2	5.5	6.8	5.8	6.3	6.1	5.4	5.8
4	6.2	5.7	5.9	5.9	4.9	5.4	6.8	5.6	6.1	6.0	5.5	5.7
5	6.5	5.9	6.1	5.8	5.2	5.5	6.9	5.6	6.2	5.8	5.1	5.4
6	6.7	6.3	6.5	5.9	5.2	5.5	6.7	5.7	6.2	5.3	4.0	4.8
7	6.7	6.1	6.4	5.9	5.1	5.5	6.6	5.5	6.0	5.0	3.8	4.4
8	7.2	6.0	6.5	5.8	3.8	5.3	6.5	5.4	5.9	5.1	4.5	4.8
9	7.1	6.1	6.7	4.3	3.3	3.8	6.5	5.4	5.8	5.3	4.8	5.1
10	7.3	6.3	6.8	5.2	4.3	4.8	6.4	5.2	5.9	5.3	4.8	5.1
11	6.5	5.4	6.1	4.7	3.8	4.1	6.2	5.1	5.7	5.8	4.6	5.1
12	---	---	---	4.7	4.1	4.5	5.7	4.8	5.2	5.5	5.1	5.3
13	---	---	---	4.9	4.5	4.6	5.7	4.6	5.1	5.6	5.0	5.3
14	---	---	---	5.3	4.9	5.1	6.1	4.8	5.2	---	---	---
15	6.3	6.0	6.1	5.4	4.9	5.1	6.1	4.3	5.2	4.3	4.0	4.2
16	6.4	5.6	6.2	5.6	5.1	5.3	5.7	4.3	5.0	4.5	3.9	4.2
17	5.7	4.6	5.4	5.5	5.0	5.3	6.0	4.0	5.1	4.9	4.1	4.6
18	5.6	4.7	5.3	5.5	4.8	5.2	5.7	4.7	5.2	6.1	4.9	5.7
19	6.0	5.2	5.5	5.7	4.9	5.2	---	---	---	6.2	5.8	5.9
20	6.2	5.6	5.9	5.6	4.8	5.2	5.3	4.7	5.0	6.2	5.8	6.0
21	6.4	5.5	5.8	5.4	4.8	5.1	---	---	---	6.5	5.6	6.2
22	6.4	5.7	6.1	5.6	4.7	5.1	---	---	---	6.9	6.1	6.5
23	6.2	4.5	5.5	5.5	4.9	5.2	---	---	---	7.1	6.4	6.7
24	5.1	4.4	4.8	5.6	4.8	5.1	---	---	---	6.8	6.0	6.4
25	5.5	5.0	5.3	5.6	4.9	5.2	---	---	---	6.6	6.0	6.3
26	5.4	5.0	5.2	5.6	4.7	5.2	---	---	---	6.9	6.0	6.5
27	5.6	4.8	5.1	5.5	4.9	5.2	---	---	---	6.4	5.6	6.0
28	5.6	5.3	5.4	5.3	4.8	5.1	---	---	---	---	---	---
29	5.7	5.2	5.5	5.4	4.8	5.1	---	---	---	---	---	---
30	6.1	5.3	5.6	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08062700 TRINITY RIVER AT TRINIDAD, TX

LOCATION.--Lat 32°08'05", long 96°06'20", Henderson County, Hydrologic Unit 12030105, on left bank at pumping station of Texas Power and Light Co., near southwest boundary of Trinidad, 0.5 mi downstream from St. Louis Southwestern Railway Lines bridge, 0.9 mi downstream from bridge on State Highway 31, 8 mi upstream from Cedar Creek, and at mile 391.2.

DRAINAGE AREA.--8,538 mi^2, not including 1,007 mi^2 upstream from Cedar Creek Reservoir.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1964 to current year. Records of gage height collected in this vicinity for period Oct 1913 to Sep 1915 are contained in reports of U.S. Army Corps of Engineers, and records collected since Oct 1915 are contained in reports of the National Weather Service.

REVISED RECORDS.-- WDR TX-89-1: 1988. WDR TX-90-1: 1989.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 239.21 ft above sea level. Prior to May 3, 1967, at site 0.9 mi upstream at datum 1.28 ft higher. Satellite telemeter at station.

REMARKS.--Records good, except those for estimated daily discharges, which are fair. Since installation of gage in Oct 1964, at least 10% of contributing drainage area has been regulated by 15 upstream reservoirs having a combined capacity of 3,572,000 acre-ft, of which 1,138,000 acre-ft is for flood control. The cities of Fort Worth, Dallas, and several smaller cities divert considerable water for their municipal use, of which about 60 percent is returned as wastewater effluent that sustains low flows at this site. There are 62 floodwater-retarding structures with a combined detention capacity of 38,690 acre-ft in the drainage basin above this station. These structures control runoff from 126 mi^2 above this station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1908, 49.8 ft Apr 25, 1942 and 48.3 ft date unknown, 1908 (present site and datum), from records of the National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	1700	3950	1790	27700	1360	2490	1450	14200	1260	842	750
2	870	10100	4660	3530	27300	1370	2000	1300	16300	1200	820	722
3	993	14200	3770	3500	19500	1320	1580	1450	17000	1180	821	722
4	4960	12600	3090	1850	11100	1280	4240	3920	e10000	1140	815	728
5	7600	8140	12400	1540	7120	1260	8730	4050	e7500	1080	e825	757
6	8040	4330	18100	1460	5030	1240	7630	5250	e6000	1030	e915	768
7	12000	2070	22600	1480	3420	1240	4820	3980	e4100	1230	e895	1040
8	10300	1510	23700	1490	3390	1220	3810	2010	2320	1280	e840	1210
9	5150	1970	18800	1450	3780	2500	3180	1530	e2000	2470	e800	1180
10	2420	1470	12200	1400	3410	6990	1860	1410	e1880	2440	759	936
11	1730	2410	15100	1380	2960	5730	1700	1860	e2600	2130	779	841
12	1490	3890	19400	1320	2790	4250	1510	3860	e3000	5770	754	755
13	1330	18800	22200	1300	2780	9450	1470	3740	e3800	4200	760	770
14	1230	29200	25700	1290	2440	12800	1480	3550	4630	2060	760	1050
15	1160	32000	26200	1300	2230	9740	1470	3000	3970	1480	848	2580
16	1100	31700	24400	1280	1990	5450	2660	2650	2030	1310	832	2090
17	1130	27200	18400	1250	1680	4260	2400	2200	2680	1160	780	1400
18	4930	17800	10400	1200	1600	3970	1550	2720	2620	1090	752	1170
19	5810	9790	9250	1220	1530	2720	1390	8380	2190	1030	744	1120
20	4330	6340	13800	1240	1500	3520	1330	11500	1540	994	752	1050
21	4810	3310	15000	1220	1500	3440	1300	10300	1310	981	756	996
22	5370	2050	11800	1230	1450	2430	1250	4970	1270	972	862	939
23	4970	1770	7420	1160	1440	2010	1240	3720	1630	987	793	1010
24	3360	1650	5490	1170	1420	1830	1260	3360	2980	914	745	972
25	1670	1580	4740	1180	1390	1700	1250	3020	2820	882	761	934
26	1380	1490	3540	1160	1360	1670	1250	2660	3190	854	750	928
27	1250	1420	2430	1120	1350	1700	1670	5880	3510	847	777	983
28	1190	1370	1980	1160	1330	1610	3660	11800	2780	828	755	1190
29	1160	1320	1920	7370	---	1650	2900	14200	1560	820	723	1100
30	1110	1640	1880	18400	---	2080	1750	13300	1330	807	722	970
31	1070	---	1810	22300	---	2610	---	10800	---	811	739	---
TOTAL	104802	254820	366130	89740	144490	104400	74830	153820	132740	45237	24476	31661
MEAN	3381	8494	11810	2895	5160	3368	2494	4962	4425	1459	790	1055
MAX	12000	32000	26200	22300	27700	12800	8730	14200	17000	5770	915	2580
MIN	870	1320	1810	1120	1330	1220	1240	1300	1270	807	722	722
AC-FT	207900	505400	726200	178000	286600	207100	148400	305100	263300	89730	48550	62800

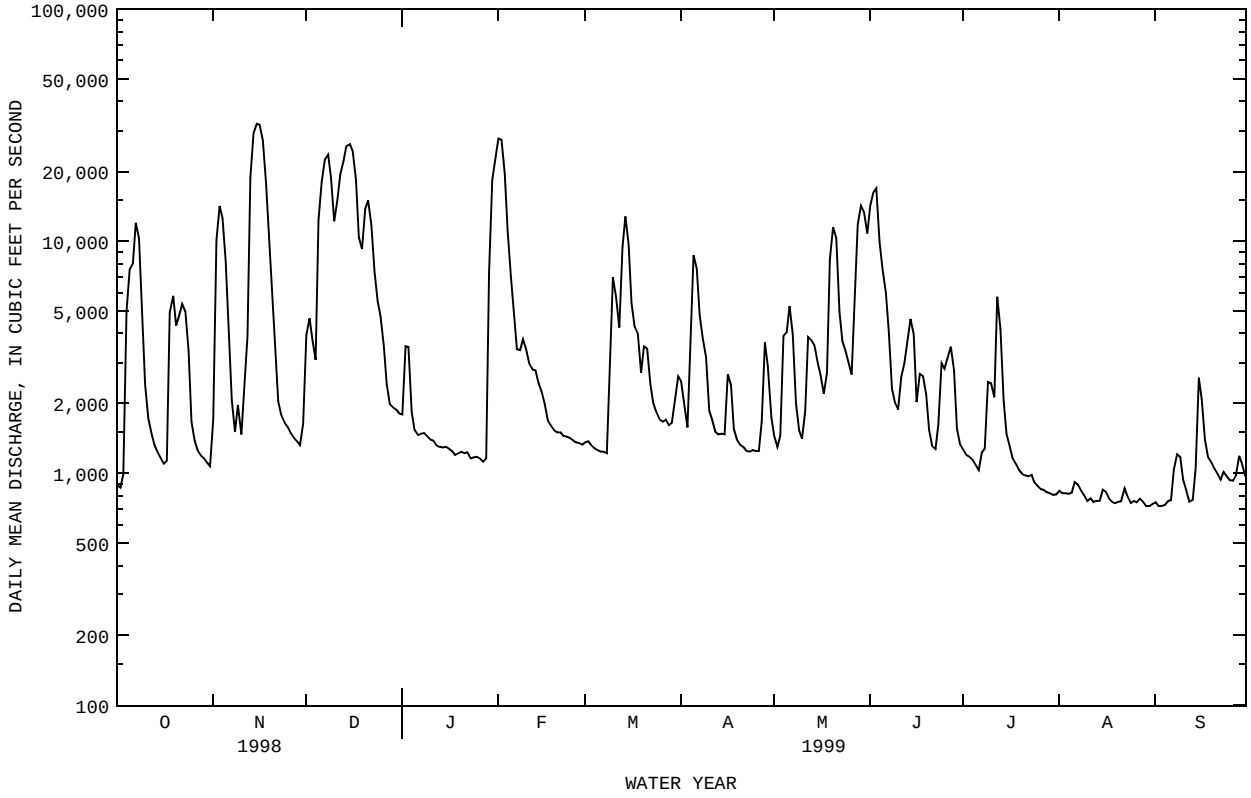
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999, BY WATER YEAR (WY)

MEAN	2663	3981	4820	3714	5150	6424	5852	9333	6437	2503	1369	1218
MAX	11390	20160	24320	20490	20550	21210	20550	47120	26790	11800	6886	3347
(WY)	1974	1975	1992	1992	1992	1997	1997	1990	1989	1982	1982	1974
MIN	417	403	460	415	424	542	798	693	526	394	394	448
(WY)	1976	1967	1967	1967	1967	1967	1978	1971	1972	1972	1967	1972

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999	
ANNUAL TOTAL	2313904		1527146			
ANNUAL MEAN	6339		4184		4451	
HIGHEST ANNUAL MEAN					11400	1992
LOWEST ANNUAL MEAN					854	1978
HIGHEST DAILY MEAN	38600	Jan 9	32000	Nov 15	94100	May 7 1990
LOWEST DAILY MEAN	740	Sep 9	722	Aug 30	312	Aug 9 1972
ANNUAL SEVEN-DAY MINIMUM	761	Sep 6	729	Aug 29	326	Jul 7 1972
INSTANTANEOUS PEAK FLOW			32800	Nov 15	94500	May 7 1990
INSTANTANEOUS PEAK STAGE			35.33	Nov 15	48.11	May 7 1990
ANNUAL RUNOFF (AC-FT)	4590000		3029000		3225000	
10 PERCENT EXCEEDS	18000		11800		12300	
50 PERCENT EXCEEDS	2050		1700		1290	
90 PERCENT EXCEEDS	843		830		510	

e Estimated



08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1966 to current year.
BIOCHEMICAL DATA: May 1966 to Jun 1994.
PESTICIDE DATA: Nov 1977 to Jun 1982.
SEDIMENT DATA: Nov 1977 to Jun 1994.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Sep 1967 to Sep 1981, May 1986 to current year.
PH: Sep 1967 to Oct 1969, May 1986 to current year.
WATER TEMPERATURE: Sep 1967 to Sep 1981, May 1986 to current year.
DISSOLVED OXYGEN: Sep 1967 to Oct 1969, May 1986 to current year.

INSTRUMENTATION.--Water-quality monitor Apr 1967 to Oct 1969, May 1986 to current year.

REMARKS.--Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years 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 U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromsiemens Dec 28, 1977; minimum daily, 170 micromsiemens May 4, 1990.
PH: Maximum, 8.9 units, Mar 17, Apr 20 and 21, 1996, Aug 19, 20, 1999; minimum, 5.7 units, Aug 13, 1988.
WATER TEMPERATURE: Maximum daily, 34.0°C, Jul 17, 1979, Jul 9, 13, 1980; minimum daily, 2.5°C, Dec 24, 1989.
DISSOLVED OXYGEN: Maximum, 16.8 mg/L, Mar 11, 1986; minimum, 0.0 mg/L, May 3, 1987.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 876 microsiemens, Sep 12; minimum, 179 microsiemens, Nov 13.
PH: Maximum, 8.9 units, Aug 19-20; minimum, 7.1 units, May 13, 19, 26-29, Jun 1-2, 5-8.
WATER TEMPERATURE: Maximum, 33.6°C, Aug 14; minimum, 7.1°C, Dec 26.
DISSOLVED OXYGEN: Maximum, 10.9 mg/L, Feb 5; minimum, 2.0 mg/L, Oct 4, Aug 1.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	704	664	689	634	439	599	567	423	501	625	562	618
2	664	625	641	439	226	309	549	366	445	584	358	405
3	636	625	629	360	281	314	427	368	378	611	374	411
4	651	378	565	313	270	291	550	421	503	659	611	649
5	381	316	341	270	249	258	470	223	312	677	658	666
6	322	279	309	287	269	282	258	232	248	675	587	611
7	312	203	245	433	280	367	301	258	278	645	590	610
8	328	278	299	479	433	458	305	301	303	671	645	663
9	323	305	311	529	369	423	354	304	331	684	665	676
10	342	314	327	583	529	558	376	270	336	696	684	691
11	373	342	355	590	454	551	324	269	288	703	692	698
12	426	373	403	477	370	448	276	244	256	702	699	700
13	477	426	453	370	179	203	263	251	258	718	702	708
14	518	477	495	208	199	205	289	263	271	718	702	707
15	559	518	536	220	201	207	305	289	298	---	---	e712
16	585	559	574	263	220	239	312	305	307	---	---	e720
17	600	585	594	270	263	267	383	312	334	---	---	e720
18	588	230	386	283	263	272	447	365	382	---	---	e720
19	382	252	306	304	283	294	463	368	418	---	---	e720
20	454	382	418	316	304	312	368	303	319	---	---	e730
21	401	297	363	467	314	408	342	320	332	---	---	e730
22	337	293	307	507	467	487	321	309	312	---	---	e730
23	357	337	346	535	507	520	337	309	319	---	---	e730
24	451	343	372	554	535	547	361	337	348	---	---	e730
25	468	447	456	581	554	567	366	361	362	747	728	739
26	476	468	472	612	581	597	578	366	497	754	747	751
27	502	469	485	620	608	611	607	578	596	754	749	752
28	544	502	518	630	620	626	609	542	572	769	712	756
29	581	544	561	636	630	634	564	543	552	713	310	427
30	610	581	599	638	429	608	618	564	597	310	294	300
31	639	610	629	---	---	---	621	615	617	294	291	292
MONTH	704	203	451	638	179	415	621	223	383	---	---	647

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	291	286	289	742	738	740	521	495	499	565	533	552
2	286	265	274	749	738	746	697	492	556	590	562	574
3	288	271	283	752	743	749	697	682	693	645	590	608
4	368	288	337	764	752	759	682	421	584	721	627	679
5	405	368	388	769	736	759	455	372	404	631	464	540
6	460	405	432	737	732	735	456	336	379	491	424	462
7	578	460	552	745	731	738	337	325	331	472	439	452
8	569	548	555	746	735	743	326	323	325	461	454	457
9	548	540	543	759	731	743	504	323	346	479	460	470
10	540	525	531	750	374	495	611	504	577	538	479	508
11	525	520	522	447	388	414	645	611	631	641	538	582
12	530	520	526	474	420	439	690	645	671	696	510	637
13	538	530	535	468	278	359	695	690	694	510	460	483
14	562	538	552	336	287	296	709	694	704	493	457	466
15	584	562	574	324	296	314	724	709	719	504	493	500
16	594	584	589	325	317	320	743	719	733	494	478	482
17	606	594	600	330	318	323	751	703	736	484	460	474
18	637	601	614	336	330	334	703	641	656	529	467	499
19	674	637	658	586	336	468	653	591	621	547	304	407
20	689	673	680	624	586	606	594	589	591	363	337	356
21	710	689	699	616	542	581	635	594	610	351	342	346
22	719	710	712	554	544	551	689	635	660	372	350	355
23	732	713	721	624	554	591	726	689	706	386	372	381
24	732	722	726	624	594	606	745	726	741	421	386	403
25	734	726	729	632	595	609	754	744	751	526	421	435
26	737	726	733	648	632	642	756	744	751	530	403	482
27	726	723	724	680	648	667	767	742	757	492	403	455
28	739	724	731	700	680	687	771	641	735	486	309	339
29	---	---	---	714	700	707	641	578	596	324	307	312
30	---	---	---	716	530	674	597	532	561	307	300	303
31	---	---	---	531	521	528	---	---	---	407	301	340
MONTH	739	265	565	769	278	578	771	323	611	721	300	463

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	368	271	290	638	560	604	755	749	752	770	744	760
2	296	271	282	654	636	642	757	750	754	758	741	749
3	312	296	306	660	649	652	779	752	766	776	758	767
4	330	312	319	702	660	681	783	775	779	774	768	771
5	388	330	359	716	702	712	775	768	771	772	732	760
6	428	388	414	738	714	727	768	760	764	736	726	732
7	436	428	432	752	737	742	760	754	757	758	725	744
8	474	436	461	772	752	763	754	748	751	754	739	747
9	484	474	479	780	625	716	754	748	751	745	592	663
10	494	484	488	687	469	608	757	748	754	751	661	704
11	502	494	497	486	410	445	754	730	739	843	751	785
12	510	502	506	555	284	421	733	726	728	876	747	838
13	515	510	512	358	267	303	738	733	736	747	639	675
14	---	---	e480	447	358	417	758	737	750	672	617	634
15	471	374	432	431	404	411	758	755	757	754	672	722
16	443	407	417	489	424	459	755	745	752	747	517	592
17	466	350	408	546	489	517	758	745	754	597	515	545
18	597	402	558	591	546	570	769	752	761	530	509	517
19	590	440	515	628	591	610	762	732	754	531	510	518
20	538	440	503	657	628	645	732	706	717	565	518	540
21	647	538	593	689	657	673	718	709	714	620	565	592
22	648	570	604	707	687	694	755	713	731	657	620	642
23	661	570	604	723	707	715	765	755	758	671	657	662
24	728	661	698	724	715	720	770	757	764	687	671	676
25	690	414	520	727	714	720	768	754	762	711	687	700
26	415	355	380	715	707	710	765	751	760	737	711	724
27	460	402	442	736	715	730	751	717	729	738	719	729
28	406	390	398	736	730	734	756	718	736	735	718	727
29	564	394	531	732	729	730	767	756	760	745	733	741
30	560	533	540	748	732	743	775	767	772	751	743	748
31	---	---	---	753	747	749	770	759	765	---	---	---
MONTH	---	---	466	780	267	631	783	706	752	876	509	690

e Estimated

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	7.9	8.0	8.2	7.9	8.0	---	---	---	8.2	8.1	8.1
2	8.2	8.0	8.1	8.0	7.8	7.9	---	---	---	8.1	8.1	8.1
3	8.2	7.8	8.0	7.9	7.8	7.8	---	---	---	8.2	8.1	8.1
4	8.2	7.5	7.7	7.9	7.8	7.8	7.8	7.8	7.8	8.2	8.2	8.2
5	7.7	7.6	7.6	8.0	7.9	7.9	7.9	7.7	7.8	8.2	8.2	8.2
6	7.7	7.6	7.6	8.0	7.9	7.9	7.9	7.8	7.9	8.2	8.2	8.2
7	7.9	7.6	7.8	8.0	7.9	7.9	7.8	7.7	7.8	8.2	8.2	8.2
8	7.7	7.6	7.7	8.0	7.9	8.0	7.8	7.8	7.8	8.2	8.2	8.2
9	7.7	7.6	7.6	8.1	7.9	8.0	7.9	7.8	7.8	8.2	8.2	8.2
10	7.7	7.6	7.7	8.0	8.0	8.0	7.9	7.9	7.9	8.2	8.2	8.2
11	7.7	7.7	7.7	8.1	8.0	8.0	8.0	7.9	7.9	8.2	8.2	8.2
12	7.7	7.7	7.7	8.0	8.0	8.0	8.0	8.0	8.0	8.2	8.1	8.1
13	7.7	7.7	7.7	8.3	8.0	8.2	8.0	8.0	8.0	8.1	8.1	8.1
14	7.8	7.7	7.7	8.2	8.1	8.2	8.0	7.9	7.9	---	---	---
15	7.7	7.7	7.7	8.2	8.1	8.1	7.9	7.9	7.9	---	---	---
16	7.7	7.7	7.7	8.1	7.9	8.0	7.9	7.8	7.9	---	---	---
17	7.7	7.7	7.7	8.0	7.9	7.9	7.9	7.8	7.9	---	---	---
18	7.8	7.7	7.8	7.9	7.9	7.9	8.0	7.9	7.9	---	---	---
19	7.8	7.6	7.7	8.0	7.9	8.0	8.0	7.9	8.0	---	---	---
20	7.6	7.5	7.6	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
21	7.8	7.6	7.6	8.1	8.0	8.0	7.9	7.9	7.9	---	---	---
22	7.8	7.7	7.7	8.1	8.1	8.1	8.0	7.9	7.9	---	---	---
23	7.7	7.6	7.7	8.1	8.1	8.1	8.0	8.0	8.0	---	---	---
24	7.6	7.6	7.6	8.1	8.0	8.1	8.1	8.0	8.0	---	---	---
25	7.6	7.6	7.6	8.1	8.1	8.1	8.1	8.1	8.1	---	---	---
26	7.6	7.6	7.6	8.1	8.1	8.1	8.1	8.1	8.1	8.4	8.2	8.3
27	7.6	7.6	7.6	8.1	8.1	8.1	8.1	8.1	8.1	8.4	8.3	8.3
28	7.9	7.6	7.8	8.2	8.1	8.1	8.2	8.1	8.1	8.3	8.2	8.2
29	8.0	7.9	8.0	8.2	8.2	8.2	8.2	8.2	8.2	---	---	---
30	8.0	8.0	8.0	---	---	---	8.2	8.2	8.2	---	---	---
31	8.0	8.0	8.0	---	---	---	8.2	8.2	8.2	---	---	---
MONTH	8.2	7.5	7.7	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.4	8.2	8.3	8.0	8.0	8.0	7.9	7.7	7.8
2	---	---	---	8.3	8.2	8.2	8.0	7.9	8.0	8.0	7.8	7.9
3	7.9	7.9	7.9	8.3	8.1	8.2	7.9	7.9	7.9	8.0	7.9	7.9
4	8.3	7.9	8.0	8.3	8.2	8.2	7.9	7.7	7.8	8.0	7.5	7.7
5	8.4	8.1	8.3	8.3	8.1	8.2	7.7	7.6	7.7	7.5	7.4	7.4
6	8.2	7.9	8.1	8.4	8.1	8.2	7.7	7.6	7.7	7.4	7.2	7.3
7	8.3	7.9	8.2	8.3	8.2	8.3	7.8	7.7	7.7	7.3	7.2	7.3
8	8.2	7.9	8.1	8.3	8.2	8.2	7.8	7.8	7.8	7.4	7.3	7.4
9	8.0	7.7	7.8	8.3	7.7	8.1	8.0	7.8	7.8	7.5	7.4	7.4
10	7.9	7.7	7.7	7.7	7.6	7.7	8.0	7.8	7.9	7.5	7.4	7.4
11	---	---	---	7.7	7.7	7.7	8.1	7.9	8.0	7.5	7.5	7.5
12	---	---	---	7.8	7.7	7.8	8.2	8.0	8.1	7.5	7.2	7.3
13	---	---	---	7.9	7.7	7.8	8.2	8.1	8.1	7.2	7.1	7.2
14	---	---	---	7.9	7.8	7.9	8.2	8.1	8.2	7.3	7.2	7.2
15	---	---	---	7.9	7.9	7.9	8.4	8.1	8.2	7.4	7.3	7.3
16	---	---	---	7.9	7.9	7.9	8.3	7.9	8.1	7.4	7.3	7.4
17	---	---	---	8.0	7.9	7.9	7.9	7.8	7.8	7.4	7.3	7.3
18	---	---	---	8.0	7.9	7.9	7.8	7.8	7.8	7.4	7.3	7.3
19	8.1	8.0	8.0	8.0	7.9	7.9	8.0	7.8	7.9	7.4	7.1	7.2
20	8.1	8.0	8.1	7.9	7.9	7.9	8.3	8.0	8.1	7.3	7.2	7.2
21	8.2	8.1	8.1	7.9	7.9	7.9	8.3	8.1	8.2	7.3	7.3	7.3
22	8.2	8.1	8.1	7.9	7.9	7.9	8.3	8.1	8.2	7.4	7.3	7.3
23	8.2	8.1	8.2	7.9	7.9	7.9	8.4	8.2	8.3	7.4	7.3	7.4
24	8.3	8.1	8.2	7.9	7.9	7.9	8.6	8.2	8.4	7.4	7.3	7.4
25	8.2	8.1	8.2	8.0	7.9	7.9	8.5	8.1	8.2	7.4	7.2	7.3
26	8.3	8.1	8.2	8.0	8.0	8.0	8.2	8.0	8.1	7.4	7.1	7.3
27	8.3	8.1	8.2	8.1	8.0	8.0	8.1	7.9	8.0	7.3	7.1	7.2
28	8.3	8.1	8.2	8.1	8.0	8.0	7.9	7.5	7.7	7.2	7.1	7.1
29	---	---	---	8.1	8.0	8.1	7.5	7.5	7.5	7.2	7.1	7.1
30	---	---	---	8.2	8.0	8.1	7.7	7.5	7.6	7.3	7.2	7.2
31	---	---	---	8.1	8.0	8.0	---	---	---	7.3	7.2	7.2
MONTH	---	---	---	8.4	7.6	8.0	8.6	7.5	8.0	8.0	7.1	7.4

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	7.1	7.2	8.0	7.9	7.9	8.2	8.0	8.1	8.1	8.1	8.1
2	7.2	7.1	7.2	8.1	8.0	8.0	8.1	8.0	8.0	8.2	8.1	8.1
3	7.2	7.2	7.2	8.1	8.0	8.0	8.1	8.0	8.0	8.2	8.1	8.2
4	7.2	7.2	7.2	8.0	7.9	8.0	8.1	8.0	8.0	8.2	8.1	8.2
5	7.2	7.1	7.1	8.0	7.8	7.9	8.1	8.0	8.1	8.3	8.2	8.2
6	7.1	7.1	7.1	7.9	7.9	7.9	8.1	8.0	8.0	8.2	8.2	8.2
7	7.2	7.1	7.1	7.9	7.8	7.9	8.1	8.0	8.0	8.2	8.1	8.1
8	7.2	7.1	7.1	7.9	7.8	7.9	8.1	8.0	8.1	8.1	8.1	8.1
9	7.2	7.2	7.2	8.0	7.8	7.9	8.1	8.0	8.0	8.1	8.0	8.0
10	7.2	7.2	7.2	7.8	7.7	7.7	8.1	8.0	8.0	8.0	7.9	7.9
11	7.3	7.2	7.3	7.7	7.7	7.7	8.1	8.0	8.0	8.0	7.9	8.0
12	7.4	7.3	7.4	7.7	7.4	7.6	8.0	7.9	8.0	8.1	8.0	8.0
13	7.5	7.4	7.5	7.7	7.6	7.7	8.1	7.9	8.0	8.2	8.1	8.1
14	7.9	7.4	7.6	7.7	7.6	7.6	8.1	7.9	8.0	8.1	8.0	8.0
15	7.9	7.8	7.8	7.8	7.7	7.7	8.1	7.9	8.0	8.0	7.8	7.8
16	7.9	7.8	7.8	7.8	7.8	7.8	8.1	8.0	8.0	7.8	7.7	7.7
17	8.3	7.9	8.0	7.9	7.8	7.8	8.1	7.9	8.0	7.9	7.8	7.8
18	8.2	7.9	8.0	7.9	7.8	7.8	8.4	8.0	8.2	8.0	7.8	7.9
19	7.9	7.8	7.8	8.0	7.9	7.9	8.9	8.4	8.6	8.0	7.9	7.9
20	7.8	7.8	7.8	8.0	7.9	7.9	8.9	8.6	8.7	8.0	7.9	8.0
21	8.0	7.8	7.9	8.0	7.9	8.0	8.8	8.5	8.7	8.2	8.0	8.1
22	8.0	7.9	8.0	8.0	7.9	7.9	8.7	8.2	8.4	8.3	8.1	8.2
23	8.1	8.0	8.0	8.0	7.9	7.9	8.2	8.0	8.1	8.4	8.2	8.3
24	8.1	7.9	8.0	8.0	7.9	7.9	8.2	8.0	8.1	8.4	8.2	8.3
25	7.9	7.8	7.8	8.2	7.9	8.0	8.2	8.0	8.1	8.3	8.2	8.3
26	8.2	7.8	7.9	8.1	8.0	8.1	8.2	8.0	8.1	8.3	8.2	8.3
27	8.0	7.9	7.9	8.1	8.0	8.0	8.2	8.0	8.1	8.4	8.2	8.3
28	8.0	7.8	7.9	8.1	7.9	8.0	8.2	8.1	8.1	8.3	8.2	8.3
29	8.0	7.8	7.9	8.1	7.9	8.0	8.2	8.1	8.1	8.3	8.2	8.2
30	8.0	7.9	7.9	8.1	7.9	8.0	8.2	8.1	8.1	8.3	8.1	8.2
31	---	---	---	8.1	7.9	8.0	8.2	8.1	8.1	---	---	---
MONTH	8.3	7.1	7.6	8.2	7.4	7.9	8.9	7.9	8.1	8.4	7.7	8.1

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	30.1	29.0	29.5	23.4	21.7	22.8	19.5	17.9	18.7	12.1	10.6	11.3
2	29.3	27.6	28.7	21.7	20.1	20.6	19.1	18.3	18.6	12.2	9.9	10.6
3	28.7	27.5	28.1	20.3	19.8	20.1	18.5	17.8	18.1	9.9	8.9	9.3
4	28.3	25.9	27.3	20.0	19.1	19.5	19.8	18.5	19.2	9.4	8.7	9.1
5	25.9	24.9	25.3	19.1	18.0	18.6	19.4	18.7	19.0	8.9	8.1	8.6
6	25.0	22.9	23.9	18.0	17.1	17.4	18.9	18.7	18.8	8.8	8.2	8.5
7	22.9	19.8	20.7	17.3	15.2	16.0	18.7	17.3	18.1	9.8	8.4	9.1
8	21.7	20.9	21.2	15.4	15.1	15.3	17.3	15.9	16.5	10.8	9.7	10.3
9	21.9	21.5	21.7	17.5	15.2	16.5	15.9	14.8	15.3	10.2	9.2	9.7
10	21.9	20.9	21.5	17.5	16.7	17.1	14.8	13.8	14.4	9.8	8.8	9.4
11	22.4	21.3	21.8	17.2	16.0	16.6	13.8	12.0	13.0	10.4	9.0	9.7
12	23.3	21.7	22.4	17.2	15.6	16.6	12.0	11.3	11.5	11.6	10.0	10.7
13	23.6	22.0	22.8	16.7	15.4	16.3	11.7	11.1	11.4	11.6	11.3	11.5
14	23.6	22.1	22.9	15.8	14.4	14.8	11.4	10.8	11.1	11.4	10.3	10.6
15	23.7	22.8	23.3	14.4	14.2	14.3	11.3	10.6	10.9	---	---	---
16	24.6	23.5	24.0	14.5	14.1	14.3	11.6	10.9	11.2	---	---	---
17	24.5	24.0	24.3	15.2	14.3	14.7	12.0	11.4	11.6	---	---	---
18	24.1	22.2	23.1	16.4	15.2	15.7	12.0	11.7	12.0	---	---	---
19	22.2	21.8	22.0	17.2	16.3	16.7	12.4	11.6	12.1	---	---	---
20	21.8	21.0	21.5	17.2	16.8	17.0	12.2	11.8	11.9	---	---	---
21	21.0	19.9	20.4	16.9	16.4	16.7	12.4	11.8	12.1	---	---	---
22	20.5	19.9	20.2	16.9	16.1	16.5	11.8	10.4	11.0	---	---	---
23	20.6	19.8	20.2	17.2	16.3	16.7	10.4	9.4	9.9	---	---	---
24	20.5	19.4	20.0	17.6	16.8	17.2	9.4	8.8	9.0	---	---	---
25	20.2	19.0	19.5	18.2	17.1	17.6	8.8	8.3	8.5	15.2	13.8	14.5
26	21.0	19.2	20.0	18.4	17.3	17.9	8.4	7.1	7.7	15.6	14.6	15.1
27	21.4	19.9	20.6	18.5	17.9	18.1	8.7	7.6	8.1	16.2	15.5	15.8
28	22.2	21.1	21.5	19.0	18.1	18.5	8.8	8.2	8.5	16.2	16.0	16.1
29	23.0	22.1	22.5	19.4	18.9	19.1	8.8	8.1	8.4	16.0	12.9	14.2
30	23.5	23.0	23.2	19.6	18.5	19.3	9.7	8.8	9.2	13.3	12.6	12.9
31	23.7	22.9	23.3	---	---	---	10.6	9.7	10.1	13.2	12.2	12.7
MONTH	30.1	19.0	22.8	23.4	14.1	17.3	19.8	7.1	12.8	---	---	---

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.6	11.4	12.1	18.3	16.9	17.6	16.5	15.9	16.2	25.1	23.2	24.1
2	12.9	11.0	12.1	19.0	18.0	18.4	18.2	16.5	17.2	24.4	23.2	23.6
3	13.0	12.4	12.6	18.4	17.2	17.7	19.0	18.2	18.5	23.9	22.6	23.2
4	13.6	12.4	13.1	17.5	16.6	17.2	18.8	18.0	18.3	23.8	22.4	22.9
5	21.5	11.2	15.6	18.0	17.4	17.6	19.0	18.1	18.5	22.9	21.7	22.3
6	23.0	15.9	19.2	18.1	17.1	17.6	19.3	18.3	18.8	23.1	21.9	22.5
7	28.5	12.4	18.3	17.6	16.6	17.1	19.3	18.5	18.9	23.6	22.2	22.9
8	24.2	12.4	18.6	16.9	16.3	16.5	20.1	18.7	19.3	24.3	22.6	23.5
9	30.2	18.1	21.9	17.0	15.9	16.6	22.4	19.4	20.2	24.9	23.6	24.2
10	28.3	18.1	22.2	17.2	15.9	16.3	23.6	22.4	23.1	24.4	23.8	24.2
11	---	---	---	16.2	15.6	15.8	23.7	22.2	22.9	24.8	23.0	23.9
12	---	---	---	15.7	15.0	15.4	23.8	22.1	22.9	24.3	23.5	24.0
13	---	---	---	15.0	13.4	13.9	23.6	22.5	23.1	23.9	22.8	23.4
14	---	---	---	13.4	11.3	11.7	23.9	22.6	23.2	24.4	23.0	23.7
15	---	---	---	12.5	11.1	11.7	23.2	21.1	21.8	25.3	24.2	24.7
16	---	---	---	13.3	12.0	12.6	21.2	20.1	20.6	26.0	24.7	25.3
17	---	---	---	14.0	12.8	13.3	20.5	19.4	20.0	25.9	25.2	25.5
18	---	---	---	14.9	13.9	14.3	20.4	18.8	19.6	25.3	24.7	25.0
19	15.7	14.3	15.0	16.2	14.7	15.5	21.3	19.0	20.1	24.8	22.7	23.4
20	15.4	14.4	14.7	17.0	16.1	16.5	22.2	20.3	21.2	24.2	23.2	23.7
21	14.6	13.5	14.1	17.0	16.1	16.6	22.4	21.3	21.9	24.7	23.9	24.3
22	14.2	13.2	13.8	17.3	15.8	16.6	23.1	21.9	22.4	26.1	24.3	25.1
23	14.6	13.4	14.0	18.0	17.1	17.5	24.0	23.0	23.4	26.2	25.2	25.8
24	14.8	13.4	14.1	18.2	17.7	17.9	24.9	23.7	24.3	27.0	25.4	26.2
25	15.5	14.4	14.8	18.8	17.7	18.2	24.8	24.3	24.6	26.8	25.7	26.2
26	16.8	15.5	16.0	19.0	17.4	18.2	24.6	23.7	24.1	26.4	25.5	26.0
27	17.7	16.8	17.1	18.5	17.6	18.1	25.2	23.2	24.2	26.0	25.2	25.7
28	17.6	16.5	17.1	17.9	17.3	17.6	24.8	23.8	24.4	25.2	23.7	24.0
29	---	---	---	17.4	17.0	17.3	24.7	23.5	24.1	24.4	23.6	23.9
30	---	---	---	17.0	16.0	16.6	24.7	23.5	24.1	25.1	24.3	24.6
31	---	---	---	16.3	16.0	16.1	---	---	---	26.0	24.9	25.4
MONTH	---	---	---	19.0	11.1	16.3	25.2	15.9	21.4	27.0	21.7	24.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.6	24.4	24.9	30.4	28.9	29.7	32.8	31.1	31.9	30.5	29.7	30.1
2	26.0	24.7	25.3	30.6	29.3	30.0	32.7	31.3	31.9	30.0	29.4	29.6
3	26.7	25.9	26.3	30.9	29.6	30.2	32.9	31.6	32.2	30.0	29.0	29.5
4	28.0	26.6	27.2	31.1	29.8	30.4	32.8	31.0	31.7	30.3	28.8	29.6
5	28.0	26.0	26.9	31.3	29.9	30.5	33.2	31.2	32.1	30.6	29.0	29.8
6	28.2	26.2	27.1	31.7	30.1	30.7	33.2	31.2	32.1	30.3	29.2	29.7
7	28.6	26.2	27.3	31.1	30.2	30.6	33.4	31.4	32.4	30.2	29.0	29.6
8	29.0	26.6	28.1	31.5	29.6	30.4	33.2	31.4	32.4	30.3	29.3	29.8
9	28.8	27.8	28.4	31.2	29.9	30.6	33.4	31.6	32.4	30.0	28.5	29.3
10	28.6	27.2	27.9	30.6	29.9	30.2	33.4	31.7	32.5	29.7	28.4	29.1
11	28.8	26.8	27.8	30.1	29.0	29.6	33.2	31.6	32.4	29.3	28.2	28.8
12	28.8	27.0	27.9	29.7	27.2	28.3	33.0	31.4	32.2	29.5	28.2	28.8
13	28.6	27.3	27.9	28.5	27.1	27.8	33.1	31.2	32.1	28.9	27.9	28.2
14	28.5	27.5	27.9	29.7	27.8	28.7	33.6	31.7	32.5	28.2	27.0	27.6
15	28.3	27.6	27.9	30.7	29.1	29.8	32.9	31.7	32.3	27.8	27.0	27.4
16	28.9	27.4	28.1	31.0	29.1	30.0	32.3	30.8	31.5	27.5	25.9	26.7
17	28.9	28.0	28.5	31.1	29.4	30.3	32.2	30.3	31.2	27.3	26.0	26.7
18	28.8	27.7	28.3	31.3	29.7	30.5	32.6	30.7	31.5	27.1	25.7	26.4
19	28.3	27.2	27.8	31.6	30.1	30.9	32.5	30.9	31.6	27.2	25.7	26.5
20	28.9	27.4	28.1	31.8	30.4	31.0	32.3	30.8	31.6	27.6	26.1	26.9
21	29.3	27.9	28.5	31.0	30.0	30.5	32.0	30.5	31.2	27.0	25.3	26.1
22	29.1	28.2	28.7	31.3	29.6	30.3	32.2	30.8	31.4	25.6	24.2	24.9
23	29.7	28.0	28.8	31.8	30.1	30.8	31.8	30.7	31.3	25.0	23.6	24.3
24	29.5	28.5	29.0	32.3	30.1	31.2	32.4	30.8	31.5	25.0	23.5	24.2
25	28.8	27.7	28.0	32.6	31.0	31.7	32.6	30.9	31.7	24.5	23.9	24.2
26	28.8	27.7	28.2	32.7	31.2	31.9	32.7	30.9	31.8	25.4	23.8	24.5
27	29.4	28.0	28.7	32.9	31.4	32.1	32.5	31.2	31.8	26.1	24.6	25.3
28	29.6	28.2	29.0	33.1	31.4	32.2	32.5	31.0	31.7	26.3	25.3	25.7
29	30.4	29.5	29.8	33.1	31.5	32.2	32.0	30.8	31.4	25.8	23.8	24.6
30	30.3	29.1	29.7	32.8	31.4	32.1	31.6	30.2	30.9	24.5	23.1	23.8
31	---	---	---	32.8	31.2	31.9	31.3	29.9	30.5	---	---	---
MONTH	30.4	24.4	27.9	33.1	27.1	30.6	33.6	29.9	31.8	30.6	23.1	27.3

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	6.1	6.6	6.6	5.6	6.1	---	---	---	9.3	8.8	9.1
2	6.6	5.8	6.2	6.7	5.6	6.1	---	---	---	9.9	8.8	9.6
3	6.8	5.6	6.2	5.6	4.9	5.2	---	---	---	10.2	9.6	10.0
4	6.8	2.0	4.2	6.1	5.3	5.7	7.5	7.0	7.2	9.7	9.5	9.6
5	3.4	2.3	2.8	6.7	6.1	6.4	7.1	5.3	6.1	9.9	9.6	9.7
6	4.8	3.4	4.3	7.0	6.4	6.7	6.3	6.0	6.2	10.2	9.8	10.0
7	5.3	4.6	5.1	7.1	6.8	6.9	6.2	5.9	6.1	10.3	9.9	10.1
8	5.1	4.9	5.0	7.0	6.8	6.9	6.5	6.1	6.3	10.0	9.5	9.7
9	5.4	5.0	5.2	7.2	6.3	6.9	7.4	6.3	6.8	9.7	9.5	9.7
10	5.8	5.4	5.7	6.5	6.2	6.4	8.4	7.3	7.8	9.9	9.5	9.7
11	6.0	5.8	5.9	6.9	6.4	6.7	8.9	8.4	8.6	9.9	9.7	9.9
12	6.0	5.9	6.0	7.0	6.6	6.7	8.9	8.8	8.8	9.8	9.5	9.6
13	6.1	5.8	6.0	7.7	7.0	7.5	8.8	8.8	8.8	9.6	9.0	9.4
14	6.0	5.8	5.9	7.3	6.9	7.1	8.9	8.7	8.8	10.6	9.4	9.7
15	6.1	5.8	5.9	6.9	6.6	6.8	8.7	8.6	8.6	---	---	---
16	5.9	5.6	5.8	6.6	6.0	6.3	8.6	8.4	8.5	---	---	---
17	5.8	5.4	5.6	6.0	5.7	5.9	8.6	8.4	8.5	---	---	---
18	6.0	4.7	5.2	5.9	5.5	5.7	8.7	8.4	8.6	---	---	---
19	5.3	4.7	5.0	6.1	5.9	6.0	8.7	8.4	8.6	---	---	---
20	5.7	5.3	5.5	6.2	6.0	6.1	8.8	8.3	8.6	---	---	---
21	6.4	5.6	5.9	---	---	---	8.7	8.3	8.6	---	---	---
22	6.6	6.3	6.5	---	---	---	9.2	8.6	8.8	10.2	9.5	9.8
23	6.8	6.6	6.6	---	---	---	9.6	9.2	9.4	10.6	9.4	9.8
24	7.2	6.5	6.9	---	---	---	9.9	9.6	9.8	10.6	9.7	10.1
25	8.0	7.2	7.7	---	---	---	10.2	9.9	10.1	10.8	9.6	10.1
26	8.0	7.6	7.9	---	---	---	10.3	10.0	10.2	10.7	9.5	10.1
27	7.9	7.4	7.7	---	---	---	10.0	9.8	9.9	10.4	9.5	9.9
28	7.5	7.1	7.4	---	---	---	10.2	9.7	10.0	9.8	9.2	9.4
29	7.1	6.4	6.7	---	---	---	10.2	9.9	10.1	9.5	9.0	9.3
30	6.6	6.3	6.4	---	---	---	9.9	9.6	9.7	9.8	9.2	9.5
31	6.8	6.0	6.3	---	---	---	9.6	9.3	9.4	9.8	9.2	9.5
MONTH	8.0	2.0	5.9	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.7	9.2	9.4	9.8	8.4	9.1	7.7	7.3	7.5	4.8	4.2	4.4
2	9.4	9.1	9.2	9.4	8.3	8.8	7.5	6.6	7.2	5.1	4.2	4.5
3	9.5	8.9	9.1	9.6	8.1	8.8	8.0	6.1	6.9	6.7	4.2	4.9
4	10.6	9.3	9.6	9.7	7.9	8.9	8.4	7.8	8.0	6.7	3.4	5.0
5	10.9	8.6	9.8	8.8	7.9	8.4	8.5	7.4	8.0	4.4	3.4	3.9
6	9.9	8.3	9.1	9.4	7.7	8.5	8.0	7.0	7.6	4.6	3.6	4.2
7	10.6	7.8	9.4	9.4	8.2	8.7	7.9	6.8	7.3	4.5	3.8	4.2
8	10.6	8.1	9.2	9.0	8.2	8.6	7.3	6.5	6.9	4.6	3.7	4.2
9	9.3	7.5	8.6	9.3	6.9	8.2	7.6	6.2	7.0	4.3	3.7	4.0
10	9.3	7.7	8.6	6.9	4.7	5.4	6.2	5.3	5.8	4.2	3.6	3.8
11	9.2	8.5	8.8	6.3	5.7	6.0	6.2	5.7	5.9	5.6	3.6	4.6
12	9.3	8.4	8.8	6.9	6.2	6.6	6.6	5.6	6.0	5.3	3.7	4.3
13	9.4	8.3	8.7	7.3	6.7	7.0	6.7	5.7	6.1	4.6	3.7	4.3
14	9.2	8.3	8.6	8.1	6.9	7.8	6.5	5.4	5.9	5.0	4.4	4.7
15	9.4	8.2	8.8	8.1	8.0	8.0	7.4	5.3	6.3	4.9	4.2	4.5
16	9.4	8.4	8.8	8.5	8.1	8.4	7.5	5.9	6.8	5.3	4.3	4.7
17	9.4	8.4	8.9	8.5	8.4	8.5	6.5	5.0	5.8	5.5	4.7	5.2
18	9.0	8.4	8.7	8.4	8.1	8.3	5.1	4.4	4.6	5.4	4.7	5.1
19	9.1	8.6	8.8	8.1	7.2	7.6	5.3	4.4	4.8	5.2	3.0	3.5
20	8.9	8.6	8.7	7.2	6.9	7.0	5.3	4.4	4.9	4.2	3.3	3.8
21	9.4	8.6	8.9	6.9	6.7	6.8	5.5	3.9	4.6	4.4	3.9	4.2
22	9.6	8.8	9.2	7.0	6.7	6.9	5.6	3.8	4.7	5.0	4.3	4.6
23	10.0	8.9	9.4	6.8	6.5	6.7	7.5	3.7	5.2	5.3	4.4	5.0
24	10.4	9.1	9.7	6.6	6.3	6.5	7.8	4.8	6.4	5.4	4.4	4.9
25	9.7	9.1	9.4	6.5	6.2	6.4	6.5	4.7	5.4	5.7	4.8	5.3
26	9.8	8.9	9.3	6.6	6.1	6.3	5.4	4.5	5.0	5.5	4.7	5.2
27	9.7	8.6	9.1	6.6	6.1	6.3	7.0	4.6	5.4	5.5	4.0	4.9
28	9.6	8.5	9.0	6.5	5.8	6.1	5.8	3.2	4.5	4.4	3.7	4.1
29	---	---	---	6.6	6.0	6.4	4.8	3.1	4.0	4.9	4.3	4.6
30	---	---	---	7.2	6.4	6.8	5.1	3.7	4.4	5.4	4.7	5.0
31	---	---	---	7.6	7.0	7.3	---	---	---	5.5	4.7	5.2
MONTH	10.9	7.5	9.1	9.8	4.7	7.5	8.5	3.1	6.0	6.7	3.0	4.5

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.7	4.3	4.5	---	---	---	2.8	2.0	2.5	5.4	4.8	5.1
2	4.5	4.2	4.4	---	---	---	---	---	---	5.3	4.8	5.0
3	4.5	4.0	4.2	---	---	---	---	---	---	5.6	4.7	5.1
4	---	---	---	---	---	---	---	---	---	5.6	5.0	5.3
5	---	---	---	---	---	---	---	---	---	5.5	5.0	5.2
6	---	---	---	---	---	---	---	---	---	5.4	4.9	5.1
7	---	---	---	---	---	---	---	---	---	5.5	4.7	5.1
8	---	---	---	---	---	---	---	---	---	5.7	5.0	5.3
9	---	---	---	---	---	---	---	---	---	5.8	5.0	5.4
10	---	---	---	5.2	3.2	4.4	2.9	2.4	2.7	5.9	5.1	5.4
11	---	---	---	4.9	3.2	4.1	2.9	2.3	2.5	6.0	5.2	5.6
12	---	---	---	4.9	2.6	3.4	2.8	2.2	2.5	6.1	5.3	5.8
13	---	---	---	3.9	3.1	3.5	2.7	2.1	2.4	6.4	5.6	6.0
14	---	---	---	4.2	3.7	4.0	3.1	2.4	2.5	6.2	5.3	5.7
15	5.4	4.6	5.0	4.1	3.3	3.6	3.5	2.3	2.9	5.3	4.5	4.9
16	5.0	4.0	4.7	3.7	3.2	3.5	3.2	2.7	2.9	5.0	4.0	4.4
17	5.7	4.1	5.1	3.5	3.0	3.1	3.2	2.7	2.9	5.4	4.6	5.0
18	5.5	4.8	5.2	3.3	2.7	3.0	3.6	2.5	2.9	5.9	5.2	5.6
19	4.9	3.4	4.5	3.6	2.7	3.3	4.4	2.7	3.4	6.0	5.4	5.7
20	3.7	3.1	3.3	3.2	2.8	3.0	4.2	2.4	3.3	6.3	5.6	5.8
21	3.3	2.9	3.2	3.1	2.5	2.8	---	---	---	6.8	5.5	6.3
22	3.6	2.7	2.9	3.2	2.7	3.0	---	---	---	7.3	6.2	6.7
23	5.0	3.4	4.0	3.1	2.4	2.8	---	---	---	7.7	6.5	7.1
24	5.3	4.0	4.7	3.2	2.6	2.9	6.2	5.1	5.6	7.5	6.6	7.0
25	4.4	3.6	3.9	3.4	2.5	3.0	6.1	5.1	5.5	7.0	6.3	6.6
26	4.9	3.8	4.4	3.4	2.8	3.1	5.6	4.8	5.3	7.1	6.2	6.7
27	4.7	4.2	4.5	3.2	2.3	2.8	6.0	4.5	5.3	7.1	6.2	6.5
28	4.7	3.8	4.3	3.5	2.5	2.9	5.9	5.0	5.4	6.6	5.7	6.1
29	---	---	---	3.0	2.5	2.8	6.2	5.0	5.4	7.1	5.7	6.3
30	---	---	---	3.2	2.5	2.9	5.9	5.1	5.5	6.6	5.7	6.2
31	---	---	---	3.1	2.5	2.8	5.9	4.8	5.4	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	7.7	4.0	5.7

This page intentionally left blank.

08063010 CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX

LOCATION.--Lat 32°14'35", long 96°08'26", Henderson County, Hydrologic Unit 12030107, inside pumphouse on lower level, 1,000 ft north of spillway, 5.5 mi upstream from Joe B. Hogsett Dam on Cedar Creek, and 8.0 mi northwest of Trinidad.

DRAINAGE AREA.--1,007 mi^2.

PERIOD OF RECORD.--Jan 1965 to current year.
Water-quality records.--Chemical data: Oct 1969 to Sep 1985. Biochemical data: Oct 1969 to Sep 1985.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to May 15, 1972, at unfinished pumphouse at same site and datum. May 16, 1972 to Sep 8, 1975, at site 0.25 mi north and upstream from pumphouse at same datum. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 17,539 ft long. The spillway is located on the right bank 5.5 mi upstream from the dam and discharges into the Trinity River through a cut channel 2 mi long. Deliberate impoundment began Jul 2, 1965, and the dam was completed in Feb 1966. The spillway is 474 ft long and has eight 40- by 24-ft radial gates and two automatically operated 40- by 8.5-ft hinged gates. Low-flow releases may be made downstream through a 5.0 foot diameter conduit through the dam. The dam is the property of Tarrant Regional Water District and was built for municipal and industrial supply and for recreational purposes. Water is diverted from the reservoir for municipal and industrial uses by lakeside developments and by the cities of Arlington, Fort Worth, Mansfield, Kemp, Trinidad, and Mabank. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	340.0
Top of radial gates	325.0
Top of automatic gates	322.5
Top of conservation pool	322.0
Crest of spillway (automatic gates)	314.0
Crest of spillway (radial gates)	302.0
Lowest gated outlet (invert)	263.5

COOPERATION.--Records of diversions maintained by the Tarrant Regional Water District. Capacity Table 1-C was provided by Freese and Nichols, Consulting Engineers for the Tarrant Regional Water District. A new capacity table, Table 2-C, provided by the Texas Water Development Board was put into effect Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 722,000 acre-ft, Jun 4, 1973 (elevation, 323.24 ft); minimum contents since first appreciable storage in 1966, 332,900 acre-ft, Mar 19, 1967 (elevation, 309.42 ft) using Table 1-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 670,700 acre-ft, Jan 30-31 (elevation, 323.02 ft); minimum contents, 545,300 acre-ft, Oct 2 (elevation, 318.98 ft).

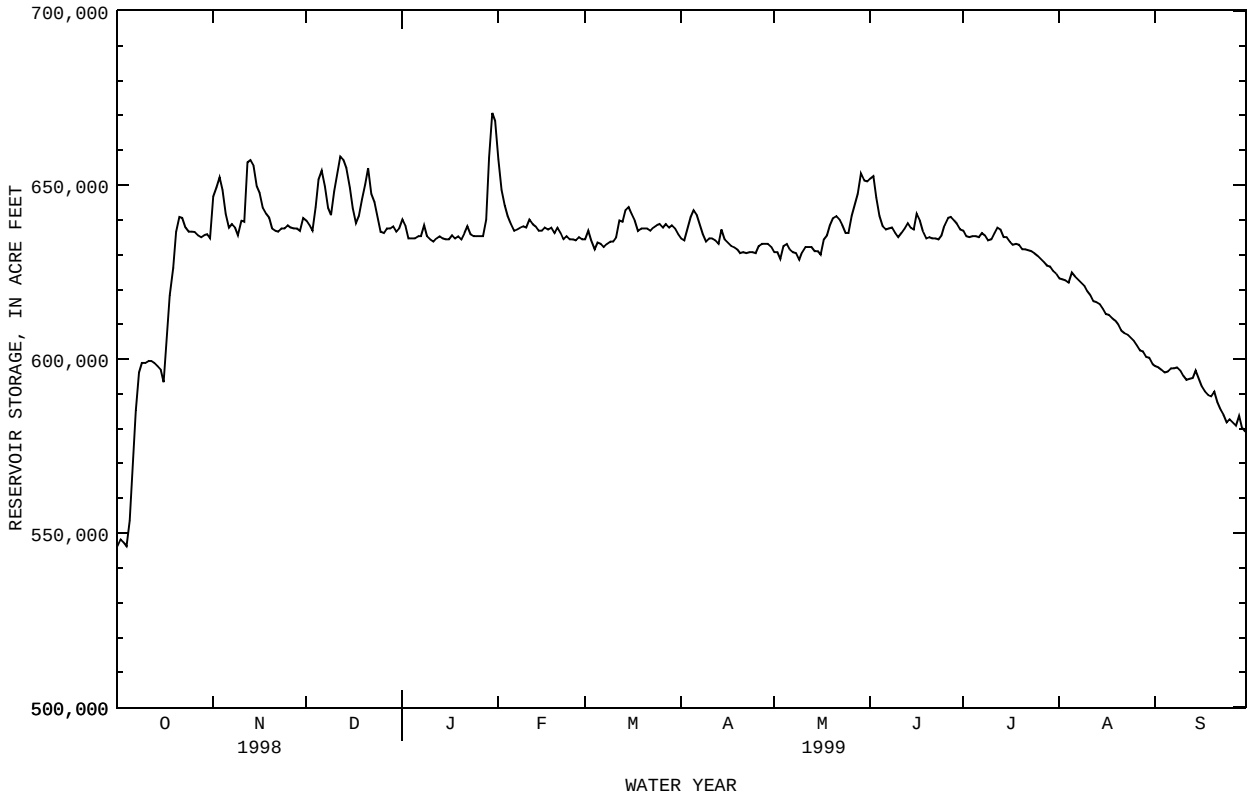
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	546200	646700	639800	640100	657500	634400	634700	630700	651900	636900	623200	598000
2	548300	649300	638500	638200	648700	636900	634100	630700	652600	635300	622900	597600
3	547400	652300	636900	634700	644100	634100	637500	628800	646400	635000	622600	597000
4	546200	648700	643700	634700	641100	631600	640800	632500	641100	635300	622000	596100
5	553700	641800	651600	634700	638800	633500	642800	633100	638200	635300	624800	596400
6	570400	637800	654200	635300	636900	633100	641400	631600	637200	635000	623800	597300
7	585200	638800	649700	635300	637200	632200	638800	630700	637500	636200	622900	597300
8	596100	637800	643400	638500	637800	633100	635900	630400	637800	635600	622000	597600
9	598900	635600	641400	635300	638200	633800	633800	628500	636200	634100	621100	596700
10	598900	639800	648300	634400	637800	633800	634700	630700	635000	634400	619500	595200
11	599500	639500	653300	633800	640100	635000	634700	632200	636200	636200	618300	594000
12	599500	656500	658200	634700	638800	639800	634100	632200	637500	637800	616700	594300
13	598900	657200	657200	635300	638200	639500	633100	632200	639100	637200	616400	594600
14	598000	655600	654900	634700	636900	642800	637200	631000	637800	635000	615800	596700
15	597000	649700	649300	634400	636900	643700	634400	631000	637200	635000	614500	594300
16	593400	647700	643400	634400	637800	641800	633500	630000	641800	633800	613000	592200
17	606800	643400	639100	635600	637200	639800	632500	634400	639800	632800	612700	590700
18	618300	641800	641100	634700	637800	636900	632200	635600	636600	633100	611800	589700
19	626300	640500	646000	635300	636200	637500	631600	638500	634700	632800	611100	589400
20	636600	637500	650300	634400	637800	637500	630400	640500	635000	631600	609900	590700
21	640800	636900	654900	636200	636200	637500	630700	641100	634700	631600	608300	587600
22	640500	636600	647400	638200	634400	636900	630400	640100	634700	631300	607400	585500
23	637800	637500	645100	635900	635300	637800	630700	638500	634400	631000	607100	584000
24	636600	637500	640500	635300	634400	638500	630700	636200	635600	630400	606200	581800
25	636600	638500	636600	635300	634400	638800	630400	636200	638500	629700	605300	582700
26	636500	637800	636200	635300	634100	637800	632500	641100	640500	628800	604000	581800
27	635600	637500	637500	635300	635000	638800	633100	644400	640800	627900	602500	580900
28	635000	637500	637500	640100	634400	637800	633100	647400	639800	626900	602200	583700
29	635600	636900	638200	657900	---	638500	633100	653300	638800	626600	600700	580300
30	635900	640500	636600	670700	---	637500	632200	651300	637200	625400	600400	579100
31	634700	---	637500	668400	---	635900	---	651000	---	624500	598600	---
MAX	640800	657200	658200	670700	657500	643700	642800	653300	652600	637800	624800	598000
MIN	546200	635600	636200	633800	634100	631600	630400	628500	634400	624500	598600	579100
(+)	321.92	322.10	322.01	322.95	321.91	321.96	321.84	322.42	322.00	321.59	320.75	320.11
(@)	+87000	+5800	-3000	+30900	-34000	+1500	-3700	+18800	-13800	-12700	-25900	-19500

CAL YR 1998 MAX 660500 MIN 527800 (@) +1600
WTR YR 1999 MAX 670700 MIN 546200 (@) +31400

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08063010 CEDAR CREEK RESERVOIR NEAR TRINIDAD, TX--Continued



08063050 NAVARRO MILLS LAKE NEAR DAWSON, TX

LOCATION.--Lat 31°57'27", long 96°41'21", Navarro County, Hydrologic Unit 12030108, in left abutment of spillway of Navarro Mills Dam on Richland Creek, 1.7 mi upstream from bridge on State Highway 31, 3.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 4.2 mi upstream from Post Oak Creek, 4.6 mi north of Dawson, and 63.9 mi upstream from mouth.

DRAINAGE AREA.--320 mi^2.

PERIOD OF RECORD.--Aug 1962 to current year. Prior to Oct 1970, published as Navarro Mills Reservoir.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to Oct 8, 1962, nonrecording gage in low-water channel at same datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 7,570 ft long, including a 240-foot off-channel gated spillway with six 40.0- by 29.0-foot tainter gates. From Aug 27, 1962, to Mar 14, 1963, lake was operated as a detention basin only. Deliberate impoundment began Mar 15, 1963, and dam was completed in Sep 1963. Low-flow outlet works consist of two 36-inch-diameter gate-controlled conduits. Lake was built for flood control and water conservation. Capacity table prior to Sep 1976 is based on survey made in Feb 1956 by U.S. Army Corps of Engineers. Capacity table after Aug 31, 1976, is based on a sedimentation survey made in Sep 1972. Flow is affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 26,160 acre-ft. These structures control runoff from 86.9 mi^2 in the Richland Creek drainage basin. An unknown amount of water is diverted for municipal and industrial uses. Figures given herein represent total contents. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam	457.0
Design flood	451.9
Top of gates (top of flood-control storage pool)	443.0
Top of conservation pool	424.5
Crest of spillway	414.0
Lowest gated outlet (invert)	400.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 183,300 acre-ft, May 18, 1968 (elevation, 440.36 ft); minimum since initial filling in May 1965, 32,490 acre-ft, Dec 28, 1978 (elevation, 418.89 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 102,100 acre-ft, Nov 19 (elevation, 431.77 ft); minimum contents, 44,020 acre-ft, Oct 4 (elevation, 421.27 ft).

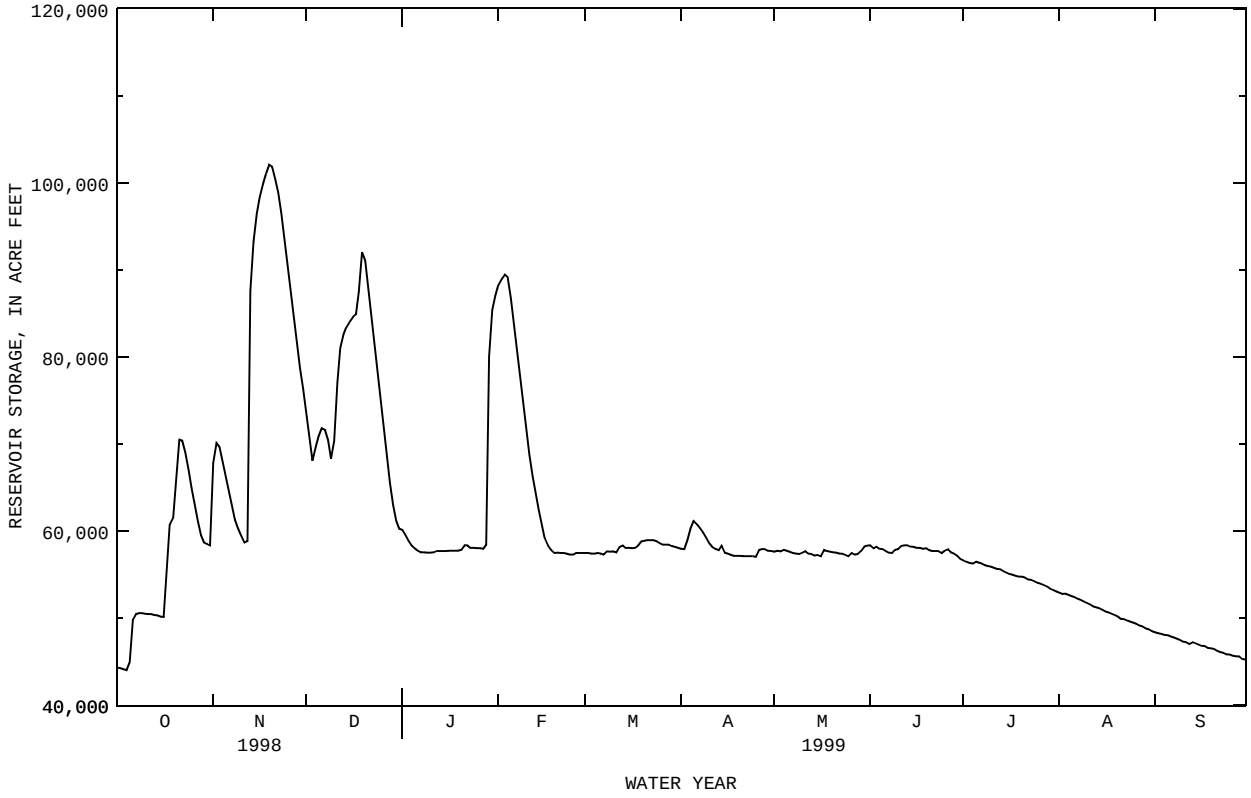
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44330	67840	73530	60140	88310	57470	57980	57620	58390	56660	52930	48370
2	44240	70100	70790	59520	88990	57470	57930	57780	58030	56510	52780	48270
3	44150	69650	68120	58900	89480	57420	59000	57670	58240	56360	52830	48180
4	44020	68010	69650	58340	89200	57420	60350	57880	57980	56260	52690	48090
5	44940	66230	70900	58030	86810	57470	61190	57780	57930	56510	52540	48040
6	49880	64490	71830	57780	83800	57420	60820	57620	57720	56410	52390	47900
7	50460	62930	71650	57570	80620	57320	60400	57470	57520	56260	52250	47760
8	50600	61290	70440	57570	77600	57670	59880	57420	57470	56110	52100	47630
9	50600	60350	68350	57520	74610	57620	59260	57370	57880	56010	51910	47490
10	50500	59420	70390	57520	71650	57670	58590	57520	57930	55910	51760	47300
11	50460	58700	77110	57570	68800	57570	58180	57720	58290	55750	51570	47210
12	50460	58900	81070	57720	66340	58180	57980	57420	58390	55650	51370	47030
13	50360	87620	82630	57720	64440	58390	57830	57370	58390	55600	51230	47260
14	50310	93330	83480	57720	62510	58080	58340	57220	58240	55400	51130	47120
15	50170	96480	84130	57720	60710	58080	57520	57270	58180	55250	50940	46980
16	50120	98370	84600	57780	59160	58030	57420	57120	58080	55050	50740	46850
17	55350	99830	84930	57780	58340	58080	57270	57830	58080	55010	50650	46800
18	60820	101100	87550	57780	57830	58340	57170	57720	57980	54860	50500	46580
19	61610	102100	92060	57780	57470	58800	57170	57620	58030	54760	50360	46530
20	66120	101900	91070	57880	57520	58900	57170	57570	57830	54760	50170	46440
21	70500	100400	88170	58390	57470	58950	57120	57520	57720	54660	49930	46220
22	70390	98950	84660	58390	57470	58950	57120	57420	57720	54460	49880	46080
23	69020	96480	81330	58080	57420	58950	57120	57420	57720	54410	49740	45990
24	67060	93470	78100	58080	57320	58850	57120	57270	57470	54260	49590	45820
25	65030	90450	74910	58030	57320	58640	57060	57120	57780	54060	49500	45820
26	63150	87350	71770	58030	57470	58440	57830	57470	57930	53960	49310	45680
27	61190	84330	68740	57980	57470	58440	57930	57320	57570	53820	49170	45640
28	59520	81390	65630	58440	57470	58440	57930	57370	57420	53670	49020	45640
29	58700	78790	63040	80050	---	58290	57780	57720	57220	53420	48840	45330
30	58540	76370	61190	85460	---	58180	57720	58240	56810	53270	48690	45240
31	58390	---	60300	87010	---	58080	---	58340	---	53080	48510	---
MAX	70500	102100	92060	87010	89480	58950	61190	58340	58390	56660	52930	48370
MIN	44020	58700	60300	57520	57320	57320	57060	57120	56810	53080	48510	45240
(+)	424.78	428.01	425.15	429.65	424.59	424.72	424.64	424.77	424.47	423.72	422.76	422.05
(@)	+13980	+17980	-16070	+26710	-29540	+610	-360	+620	-1530	-3730	-4570	-3270

CAL YR 1998 MAX 152300 MIN 42470 (@) -53500
WTR YR 1999 MAX 102100 MIN 44020 (@) +830

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08063050 NAVARRO MILLS LAKE NEAR DAWSON, TX--Continued



08063100 RICHLAND CREEK NEAR DAWSON, TX

LOCATION.--Lat 31°56'18", long 96°40'52", Navarro County, Hydrologic Unit 12030108, at downstream side of bridge on State Highway 31, 1.3 mi upstream from St. Louis Southwestern Railway Lines bridge, 1.7 mi downstream from Navarro Mills Dam, 2.5 mi upstream from Post Oak Creek, and 3.6 mi northeast of Dawson.

DRAINAGE AREA.--333 mi^2.

PERIOD OF RECORD.--Oct 1960 to current year.
Water-quality records.--Chemical data: Oct 1980 to Sep 1982. Biochemical data: Oct 1980 to Sep 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 367.52 ft above sea level. Nov 21, 1960, to Sep 30, 1982, water-stage recorder at same site and at 3.00 ft higher datum. Prior to Nov 21, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since Mar 15, 1963, at least 10% of contributing drainage area has been regulated by Navarro Mills Lake (station 08063050, capacity 63,300 acre-ft), 1.7 mi upstream. Flow may be slightly affected at times by discharge from the flood-detention pool of one floodwater-retarding structure with a conservation capacity of 297 acre-ft. This structure controls runoff from a 1.28 mi^2 area below Navarro Mills Lake and above this station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1961-63).--Maximum discharge, 25,500 ft^3/s Jul 3, 1961 (gage height, 25.50 ft), from rating curve extended above 14,000 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, about 31 ft Jun 19, 1929, from information by local residents. Floods in 1946 and 1957 reached a stage of about 26 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	554	1390	406	61	4.6	60	2.9	1.8	1.6	.34	.41
2	.14	91	1370	410	52	4.3	47	3.4	1.8	1.7	.34	.32
3	.17	570	1350	410	40	3.9	22	3.9	2.0	1.7	.43	.33
4	.11	1010	742	407	310	4.0	22	4.0	2.0	1.8	.67	.31
5	.42	984	38	326	1160	3.9	157	4.0	1.9	2.6	.37	.33
6	179	969	38	256	1500	3.7	399	3.9	2.0	1.9	.45	.35
7	5.1	954	426	256	1480	3.7	397	3.9	2.5	1.6	.41	.31
8	2.0	940	823	137	1460	5.1	394	3.7	2.7	1.4	.36	.27
9	.57	797	1110	39	1430	4.5	390	3.8	3.3	.53	.33	.26
10	.28	551	1440	38	1410	3.8	389	4.3	3.4	.28	.40	.25
11	.24	550	796	38	1400	3.6	240	4.4	2.3	.25	.38	.27
12	.26	394	84	39	1230	4.0	95	5.7	2.6	.25	.33	.25
13	.48	1120	50	39	978	20	56	5.6	2.6	.24	.34	.51
14	.31	127	43	39	964	7.2	56	5.7	2.9	.22	.36	.47
15	.33	84	41	39	949	4.9	46	5.5	2.6	.20	.46	.35
16	.39	72	40	38	865	4.3	18	5.5	2.1	.19	.36	.29
17	392	69	40	38	530	4.0	5.2	6.2	2.4	.18	.35	.31
18	103	63	71	38	365	3.7	4.5	6.9	2.1	.18	.31	.29
19	10	46	128	38	175	10	4.5	4.7	2.0	.20	.37	.38
20	274	359	811	37	30	6.5	4.4	2.8	1.9	.23	.34	.35
21	63	1010	1640	38	30	4.5	4.5	2.7	2.1	.34	.32	.27
22	443	1000	1630	43	29	3.9	4.5	2.5	1.9	.28	.36	.27
23	984	1260	1600	37	28	25	4.6	2.3	2.0	.22	.46	.32
24	1230	1500	1580	37	28	44	4.4	2.3	1.8	.21	.30	.35
25	1190	1480	1550	36	28	52	4.4	2.3	2.9	.21	.27	.35
26	1170	1460	1520	36	16	61	6.2	2.3	2.7	.23	.34	.34
27	1150	1450	1490	35	5.4	61	5.5	1.9	2.1	.23	.35	.33
28	1010	1430	1470	36	4.8	61	4.6	1.8	1.9	.28	.32	.31
29	592	1420	1320	871	---	60	4.4	1.6	1.8	.26	.34	.17
30	197	1410	1050	309	---	60	4.2	2.7	1.7	.28	.39	.20
31	31	---	636	72	---	60	---	2.0	---	.41	.40	---
TOTAL	9028.92	23724	26317	4618	16558.2	602.1	2853.9	115.2	67.8	20.20	11.55	9.52
MEAN	291	791	849	149	591	19.4	95.1	3.72	2.26	.65	.37	.32
MAX	1230	1500	1640	871	1500	61	399	6.9	3.4	2.6	.67	.51
MIN	.11	46	38	35	4.8	3.6	4.2	1.6	1.7	.18	.27	.17
AC-FT	17910	47060	52200	9160	32840	1190	5660	228	134	40	23	19

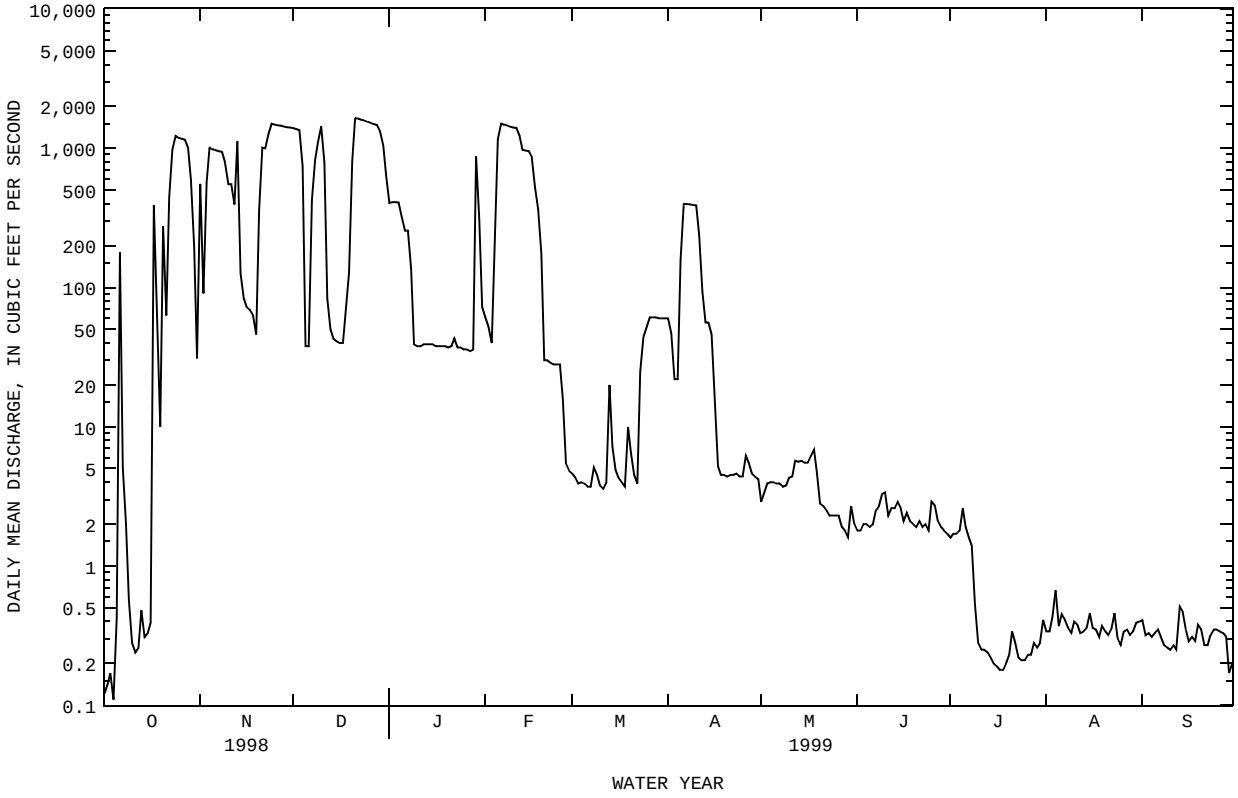
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999z, BY WATER YEAR (WY)

MEAN	49.3	152	160	185	205	210	222	282	328	101	27.9	20.9
MAX	400	1366	1050	1288	1090	971	992	980	1356	773	541	269
(WY)	1974	1968	1975	1998	1992	1970	1992	1980	1975	1968	1995	1974
MIN	.000	.000	.000	.058	.066	.22	.023	.019	.000	.000	.068	.005
(WY)	1964	1964	1964	1964	1964	1971	1964	1964	1964	1970	1981	1997

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999z	
ANNUAL TOTAL	143366.77		83926.39			
ANNUAL MEAN	393		230		161	
HIGHEST ANNUAL MEAN					561	1968
LOWEST ANNUAL MEAN					.20	1964
HIGHEST DAILY MEAN	2270	Jan 21	1640	Dec 21	2620	Aug 4 1995
LOWEST DAILY MEAN	.00	Jan 15	.11	Oct 4	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 1	.20	Jul 14	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW			1950	Nov 13	3850	Nov 24 1974
INSTANTANEOUS PEAK STAGE			18.73	Nov 13	22.85	Nov 24 1974
ANNUAL RUNOFF (AC-FT)	284400		166500		116900	
10 PERCENT EXCEEDS	1480		1030		682	
50 PERCENT EXCEEDS	7.4		4.5		2.0	
90 PERCENT EXCEEDS	.04		.28		.03	

z Period of regulated streamflow.

08063100 RICHLAND CREEK NEAR DAWSON, TX--Continued



08063685 WAXAHACHIE CREEK NEAR WAXAHACHIE, TX

LOCATION.--Lat 32°18'27", long 96°44'19", Ellis County, Hydrologic Unit 12030109, on county road bridge, over center of channel at downstream side of bridge, 1.0 mi upstream from normal pool of Bardwell Lake, and 8.4 mi southeast of Waxahachie.

DRAINAGE AREA.-- 111 mi^2

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1980 to Aug 1982, Oct 1985 to Jun 1987, and Oct 1998 to Sep 1999.
BIOCHEMICAL DATA: Oct 1980 to Aug 1982, Oct 1985 to Jun 1987, and Oct 1998 to Sep 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR											
09...	1230	69	517	7.9	15.0	16	9.0	90	.6	210	15
MAY											
24...	1230	25	651	7.8	23.0	80	7.0	83	1.3	210	9
JUL											
23...	1500	16	665	7.9	27.0	--	6.2	79	1.3	180	19
AUG											
12...	1150	6.1	953	7.9	28.5	15	5.1	67	1.2	190	40

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR											
09...	80	2.1	24	.7	3.4	190	42	16	.28	3.6	311
MAY											
24...	80	2.3	42	1	8.1	200	77	24	.48	8.6	406
JUL											
23...	69	2.6	56	2	8.5	160	73	44	.52	7.6	402
AUG											
12...	71	2.6	110	3	21	150	180	73	.53	6.1	610

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR											
09...	294	20	1.61	.019	1.63	.041	.27	.31	<.050	.038	.12
MAY											
24...	376	66	3.23	.012	3.24	.065	.34	.40	E.048	.048	.15
JUL											
23...	393	8	7.53	.019	7.55	.037	.45	.49	.083	.076	.23
AUG											
12...	586	10	7.36	.033	7.39	.056	.63	.69	.067	.063	.19

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAR										
09...	5.4	<1.0	<1.0	<1	62	<1.0	<1.0	6.5	<1.0	1.0
MAY										
24...	4.6	12	<1.0	2	82	<1.0	<1.0	<1.0	<1.0	1.3
JUL										
23...	4.9	--	--	--	--	--	--	--	--	--
AUG										
12...	5.8	1.4	<1.0	2	96	<1.0	<1.0	<1.0	1.5	2.4

08063685 WAXAHACHIE CREEK NEAR WAXAHACHIE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR										
09...	<10	<1.0	21	<.1	1.5	2.9	--	<1.0	1.7	1.5
MAY										
24...	<10	<1.0	18	<.1	5.6	3.6	--	<1.0	4.0	1.1
JUL										
23...	<10	--	16	--	--	--	--	--	--	--
AUG										
12...	<10	<1.0	12	<.1	32	6.5	<1	<1.0	5.1	<1.0

08063700 BARDWELL LAKE NEAR ENNIS, TX

LOCATION.--Lat 32°15'00", long 96°38'49", Ellis County, Hydrologic Unit 12030109, in intake structure of Bardwell Dam on Waxahachie Creek, 5 mi south of Ennis, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--178 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Nov 1965 to current year. Prior to Oct 1970, published as Bardwell Reservoir.

GAGE.--Water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers benchmark). Prior to Apr 25, 1966, nonrecording gage on intake structure at same datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 15,400 ft long, including a 350-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov 20, 1965, and dam was completed Mar 27, 1966. Controlled low-flow outlet works consists of a 10.0-foot-diameter concrete conduit with two 5.0- by 10.0-foot sluice gates. Lake was built for flood control and water conservation. Capacity table beginning Oct 1976 is based on a survey completed in 1972. Runoff from 81.4 mi above Bardwell Lake is modified by Lake Waxahachie, with a capacity of 13,500 acre-ft at spillway elevation. The city of Waxahachie diverts water from Lake Waxahachie and returns an unknown amount of effluent to Waxahachie Creek. Inflow is affected at times by discharge from flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 15,370 acre-ft. These structures control runoff from 52.4 mi^2 in the Chambers Creek watershed. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	460.0
Design flood	455.9
Crest of spillway (top of flood-control pool)	439.0
Top of conservation pool	421.0
Lowest gated outlet (invert)	391.0

COOPERATION.--Records of elevation and contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 112,100 acre-ft, May 22, 1990 (elevation, 434.54 ft); minimum since initial filling, 39,720 acre-ft, Nov 10, 1978 (elevation, 417.21 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 81,550 acre-ft, Dec 20 (elevation, 428.28 ft); minimum contents, 40,150 acre-ft, Sep 30 (elevation, 417.35 ft).

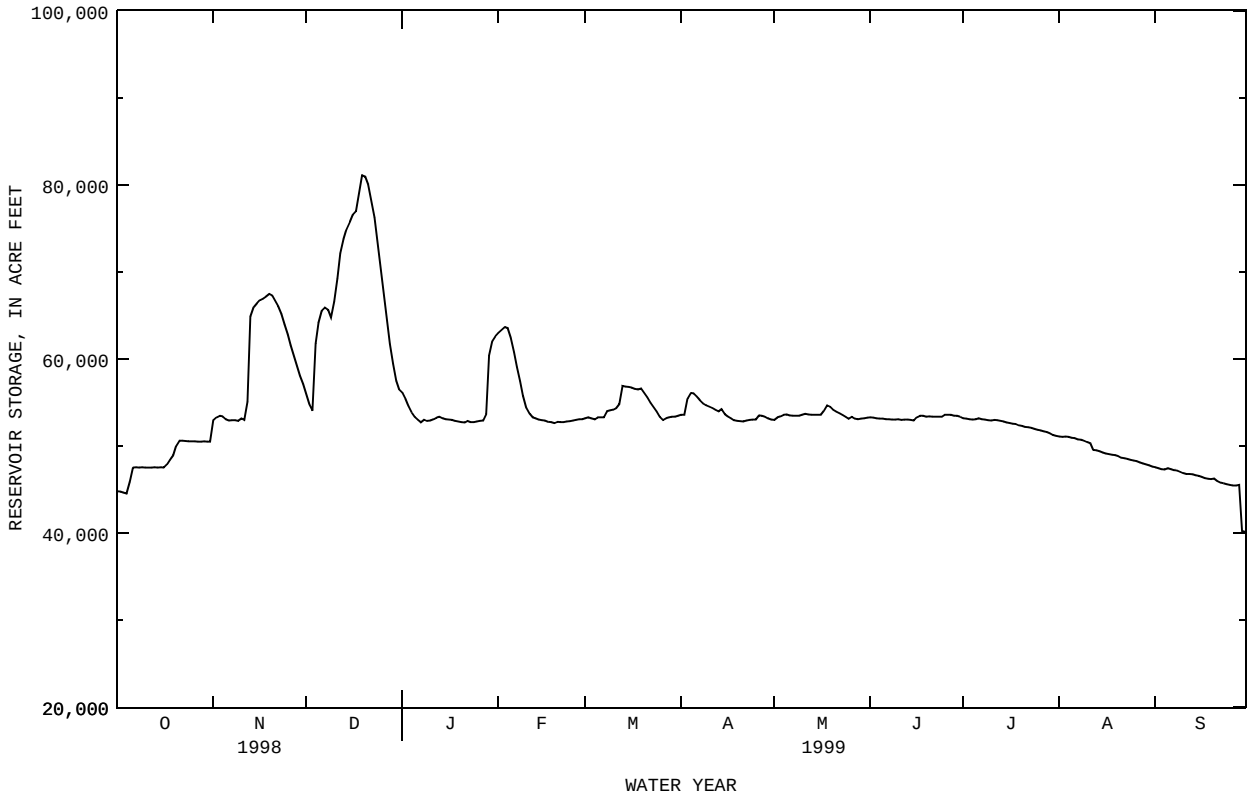
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44830	52970	55920	56150	63040	53190	53620	53010	53290	53220	51090	47580
2	44770	53330	54750	55410	63350	53330	53580	53290	53260	53150	51050	47470
3	44670	53470	54090	54600	63700	53190	55480	53440	53220	53080	51090	47370
4	44570	53440	61790	53870	63590	53110	56110	53580	53150	53040	51050	47300
5	45890	53110	64220	53370	62410	53290	56070	53650	53150	53110	50950	47470
6	47540	52930	65560	53010	60830	53330	55700	53550	53080	53190	50910	47340
7	47580	52970	65920	52760	59110	53290	55300	53470	53080	53110	50770	47240
8	47540	52970	65680	53040	57450	54020	54930	53470	53040	53040	50730	47200
9	47580	52900	64770	52900	55780	54130	54710	53470	53040	52970	50630	47070
10	47540	53190	66640	52930	54420	54200	54560	53620	53080	52930	50490	46930
11	47540	53010	69270	53080	53760	54380	54420	53690	53010	53010	50350	46800
12	47540	55110	72170	53260	53330	54850	54200	53650	53040	52970	49540	46800
13	47580	64890	73780	53370	53220	56890	54020	53620	53040	52900	49510	46760
14	47540	65960	74900	53220	53040	56850	54270	53580	53010	52830	49400	46660
15	47580	66400	75770	53080	52970	56820	53690	53620	52930	52720	49270	46560
16	47540	66760	76600	53040	52930	56740	53440	53580	53330	52650	49160	46490
17	47920	66960	77000	53010	52790	56590	53190	54090	53510	52580	49090	46330
18	48430	67200	79020	52900	52760	56520	52970	54710	53470	52540	49020	46260
19	48950	67490	81140	52830	52650	56630	52900	54560	53400	52400	48990	46190
20	50030	67320	80960	52760	52790	56150	52860	54200	53440	52330	48850	46290
21	50630	66680	80080	52720	52760	55630	52830	53980	53400	52220	48680	45990
22	50630	66080	78270	52900	52760	55000	52930	53800	53400	52150	48610	45820
23	50590	65170	76290	52760	52830	54530	53010	53620	53370	52080	48540	45720
24	50560	63980	73060	52760	52860	54020	53040	53370	53370	52010	48430	45620
25	50560	62840	70300	52830	52930	53400	53040	53150	53620	51900	48330	45560
26	50560	61600	67400	52900	53010	53010	53550	53370	53580	51790	48260	45460
27	50520	60370	64770	52930	53110	53190	53510	53150	53580	51690	48120	45460
28	50520	59150	61750	53730	53110	53330	53370	53080	53510	51620	48020	45530
29	50560	58090	59490	60440	---	53370	53190	53150	53470	51480	47920	40270
30	50520	57150	57490	62100	---	53400	53040	53220	53370	51300	47820	40150
31	50520	---	56520	62610	---	53470	---	53260	---	51190	47640	---
MAX	50630	67490	81140	62610	63700	56890	56110	54710	53620	53220	51090	47580
MIN	44570	52900	54090	52720	52650	53010	52830	53010	52930	51190	47640	40150
(+)	420.50	422.33	422.16	423.76	421.23	421.32	421.21	421.27	421.30	420.69	419.66	417.35
(@)	+5690	+6630	-630	+6090	-9500	+360	-430	+220	+110	-2180	-3550	-7490

CAL YR 1998 MAX 111700 MIN 43180 (@) -35060
WTR YR 1999 MAX 81140 MIN 40150 (@) -4680

(+) Elevation, in feet, at end of month.
(@) Change in Contents, in acre-feet.

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued



08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1998 to Sep 1999.
BIOCHEMICAL DATA: Oct 1998 to Sep 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

321506096382601 - BARDWELL LAKE SITE AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
MAR												
09...	1354	54100	1.00	333	8.3	15.5	.40	9.6	98	20	K2	140
09...	1359	--	10.0	332	8.2	15.5	--	9.5	97	--	--	--
09...	1404	--	20.0	333	8.2	15.0	--	9.3	94	--	--	--
09...	1409	--	30.0	334	8.2	15.0	--	9.0	91	--	--	140
MAY												
24...	1449	53600	1.00	342	8.1	27.5	.64	8.6	111	K1	K1	110
24...	1454	--	10.0	344	8.0	25.5	--	7.9	98	--	--	--
24...	1500	--	20.0	348	7.8	25.0	--	6.9	85	--	--	--
24...	1506	--	30.0	347	7.4	24.0	--	4.3	52	--	--	--
24...	1514	--	35.0	352	7.3	24.0	--	3.0	36	--	--	140
AUG												
12...	1138	50400	1.00	284	7.7	29.5	.67	4.7	63	K1	K2	86
12...	1148	--	10.0	284	7.6	29.5	--	4.5	60	--	--	--
12...	1158	--	20.0	286	7.4	29.0	--	3.3	44	--	--	--
12...	1207	--	34.0	302	7.2	29.5	--	.1	1	--	--	94

321506096382601 - BARDWELL LAKE SITE AC

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR												
09...	10	52	2.4	16	.6	3.6	130	27	9.6	.28	5.3	197
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	11	52	2.4	16	.6	3.7	130	27	9.6	.28	5.4	198
MAY												
24...	--	41	2.6	20	.8	4.0	120	32	13	.29	2.6	193
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	9	50	2.7	19	.7	3.9	130	29	12	.27	2.8	201
AUG												
12...	--	31	2.4	21	1	4.0	89	31	13	.30	6.6	162
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	34	2.4	20	.9	4.0	110	27	13	.30	8.1	173

321506096382601 - BARDWELL LAKE SITE AC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR											
09...	1.01	.027	1.04	.036	.33	.37	<.050	.021	.06	<10	<3.0
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	1.03	.029	1.05	.054	.31	.37	<.050	.020	.06	<10	E2.5
MAY											
24...	.888	.029	.917	.023	.26	.29	<.050	<.010	--	<10	<3.0
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	1.05	.036	1.08	.043	.29	.33	<.050	.019	.06	<10	3.4
AUG											
12...	--	<.010	<.050	<.020	--	.30	<.050	<.010	--	<10	3.3
12...	--	<.010	<.050	<.020	--	.28	<.050	<.010	--	<10	7.3
12...	--	<.010	<.050	<.020	--	.26	<.050	<.010	--	E8.8	51
12...	--	<.010	<.050	.452	.13	.59	.075	.074	.23	430	774

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

321704096393501 - BARDWELL LAKE SITE BC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVED FLD. AS CACO3 (MG/L) (00904)
MAR												
09...	1423	1.00	333	8.3	15.5	.37	9.4	96	K13	K4	140	8
09...	1427	10.0	333	8.2	14.5	--	9.0	90	--	--	--	--
09...	1431	20.0	334	8.2	14.5	--	9.0	90	--	--	140	11
MAY												
24...	1535	1.00	340	8.1	26.5	.55	9.1	115	K1	K1	130	10
24...	1540	10.0	349	7.8	25.0	--	7.1	87	--	--	--	--
24...	1545	20.0	358	7.3	24.0	--	3.4	41	--	--	120	--
AUG												
12...	1233	1.00	271	8.3	30.5	.55	5.8	79	K1	K1	78	--
12...	1236	10.0	271	8.3	30.5	--	5.6	76	--	--	--	--
12...	1239	21.0	273	8.0	30.0	--	5.3	71	--	--	79	--

321704096393501 - BARDWELL LAKE SITE BC

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)
MAR											
09...	51	2.4	16	.6	3.7	130	27	9.7	.28	5.4	199
09...	--	--	--	--	--	--	--	--	--	--	--
09...	52	2.4	16	.6	3.6	130	27	10	.28	5.3	198
MAY											
24...	47	2.6	19	.7	3.8	120	30	13	.28	1.7	192
24...	--	--	--	--	--	--	--	--	--	--	--
24...	37	6.8	24	.9	4.0	130	33	24	.24	1.7	212
AUG											
12...	27	2.4	21	1	4.0	79	33	13	.30	6.8	155
12...	--	--	--	--	--	--	--	--	--	--	--
12...	28	2.3	21	1	4.0	80	32	13	.31	6.5	155

321704096393501 - BARDWELL LAKE SITE BC

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR											
09...	1.01	.025	1.04	.035	.33	.37	<.050	.020	.06	<10	<3.0
09...	--	--	--	--	--	--	--	--	--	--	--
09...	1.01	.026	1.03	.049	.30	.35	<.050	.018	.06	<10	<3.0
MAY											
24...	.852	.028	.880	.021	.26	.29	<.050	<.010	--	<10	<3.0
24...	--	--	--	--	--	--	--	--	--	--	--
24...	1.03	.026	1.06	.045	.24	.28	<.050	<.010	--	<10	3.4
AUG											
12...	--	<.010	<.050	<.020	--	.26	<.050	<.010	--	<10	<3.0
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	<.050	<.020	--	.24	<.050	<.010	--	<10	<3.0

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

321758096412901 - BARDWELL LAKE SITE DC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVED FLD. AS CACO3 (MG/L) (00904)
MAR												
09...	1510	1.00	346	8.6	16.0	.29	11.1	114	30	K20	140	10
09...	1515	5.00	346	8.5	16.0	--	11.0	113	--	--	140	8
MAY												
24...	1624	1.00	328	8.1	29.0	.24	10.6	140	K2	K1	120	18
24...	1631	5.00	327	8.1	28.5	--	10.5	138	--	--	140	31
AUG												
12...	1317	1.00	276	8.4	31.0	.15	5.7	78	K1	33	75	1
12...	1322	5.00	275	8.3	31.0	--	5.6	77	--	--	75	0

321758096412901 - BARDWELL LAKE SITE DC

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)
MAR											
09...	53	2.4	18	.7	3.8	130	30	11	.29	4.5	207
09...	53	2.4	17	.6	3.7	140	31	11	.28	4.4	208
MAY											
24...	39	6.4	23	.9	3.9	110	34	22	.24	.71	195
24...	50	2.7	18	.7	3.7	110	29	12	.28	3.0	186
AUG											
12...	26	2.3	23	1	4.3	74	35	14	.32	7.1	158
12...	26	2.3	23	1	4.1	75	35	15	.33	7.1	158

321758096412901 - BARDWELL LAKE SITE DC

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR											
09...	.974	.014	.988	<.020	--	.34	<.050	.020	.06	<10	<3.0
09...	.990	.013	1.00	<.020	--	.32	<.050	.022	.07	<10	<3.0
MAY											
24...	.711	.019	.730	<.020	--	.30	<.050	.011	.03	<10	<3.0
24...	.720	.020	.740	.027	.26	.29	<.050	<.010	--	<10	48
AUG											
12...	--	<.010	<.050	<.020	--	.29	<.050	<.010	--	<10	<3.0
12...	--	<.010	<.050	<.020	--	.27	<.050	<.010	--	<10	<3.0

321830096404001 - BARDWELL LAKE SITE CC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
MAR										
09...	1454	1.00	330	8.5	16.0	.18	10.6	109	.896	.015
09...	1458	3.00	330	8.4	15.5	--	10.4	106	--	--
MAY										
24...	1601	1.00	329	8.1	27.5	.37	9.4	121	.754	.023
24...	1605	3.00	326	8.2	28.0	--	9.8	128	--	--
AUG										
12...	1257	1.00	287	8.2	30.0	.09	5.7	77	--	<.010

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

321830096404001 - BARDWELL LAKE SITE CC

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR									
09...	.911	.021	.34	.36	<.050	.020	.06	<10	<3.0
09...	--	--	--	--	--	--	--	--	--
MAY									
24...	.777	.021	.26	.28	<.050	<.010	--	<10	<3.0
24...	--	--	--	--	--	--	--	--	--
AUG									
12...	<.050	<.020	--	.28	<.050	<.010	--	--	--

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

Bardwell Lake Site AC (321506096382601)

Phytoplankton Analyses October 1998 to September 1999

Date	3/9/99
Time	1354
TOTAL CELLS/mL	6,478
NUMBER OF SPECIES	6
DEPTH COLLECTED (ft.)	0.65

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Stephanodiscus astraea	390
CHLOROPHYTA	
Ankistrodesmus falcatus	90
Chlamydomonas sp.	180
CYANOPHYTA	
Aphanocapsa delicatissima	5,398
Chroococcus limneticus	240
EUGLENOPHYTA	
Trachelomonas sp.	180

Bardwell Lake Site DC (321758096412901)

Phytoplankton Analyses October 1998 to September 1999

Date	3/9/99
Time	1510
TOTAL CELLS/mL	8,518
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	0.47

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Melosira varians	75
Stephanodiscus astraea	75
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	70
Nitzschia palea var. *palea*	70
Synedra ulna var. *ulna*	70
CHLOROPHYTA	
Chlamydomonas sp.	60
Pediastrum duplex	90
Tetrastrum punctatum	60
CYANOPHYTA	
Anabaena sprioides	1,140
Aphanocapsa delicatissima	5,998
Chroococcus limneticus	600
EUGLENOPHYTA	
Trachelomonas sp.	180
CRYPTOPHYTA	
Cryptomonas erosa	30

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

Bardwell Lake Site AC (321506096382601)

Phytoplankton Analyses October 1998 to September 1999

Date	5/24/99
Time	1449
TOTAL CELLS/mL	11,485
NUMBER OF SPECIES	9
DEPTH COLLECTED (ft.)	1.05

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	42
Melosira varians	11
Stephanodiscus astraea	37
Order Pennales	
Amphora ovalis	37
Fragilaria crotonensis var. *crotonensis*	112
CHLOROPHYTA	
Scenedesmus opoliensis	30
CYANOPHYTA	
Aphanocapsa delicatissima	5,398
Merismopedia tenuissima	5,758
EUGLENOPHYTA	
Trachelomonas sp.	60

Bardwell Lake Site DC (321758096412901)

Phytoplankton Analyses October 1998 to September 1999

Date	5/24/99
Time	1624
TOTAL CELLS/mL	2,789
NUMBER OF SPECIES	4
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	18
Stephanodiscus astraea	12
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	60
CYANOPHYTA	
Aphanocapsa delicatissima	2,699

08063700 BARDWELL LAKE NEAR ENNIS, TX--Continued

Bardwell Lake Site AC (321506096382601)

Phytoplankton Analyses October 1998 to September 1999

Date	8/12/99
Time	1138
TOTAL CELLS/mL	65,199
NUMBER OF SPECIES	10
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	120
CHLOROPHYTA	
Chlamydomonas sp.	180
Scenedesmus acuminatus	30
Scenedesmus opoliensis	30
Staurastrum sp.	90
CYANOPHYTA	
Aphanocapsa delicatissima	11,396
Aphanocapsa elachista	1,200
Merismopedia tenuissima	34,069
Oscillatoria sp.	17,994
EUGLENOPHYTA	
Trachelomonas sp.	90

Bardwell Lake Site DC (321758096412901)

Phytoplankton Analyses October 1998 to September 1999

Date	8/12/99
Time	1317
TOTAL CELLS/mL	34,608
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	0.25

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
Fragilaria crotonensis var. *crotonensis*	157
Navicula sp.	52
CHLOROPHYTA	
Ankistrodesmus falcatus	780
Chlamydomonas sp.	450
Crucigenia tetrapedia	30
Scenedesmus opoliensis	30
Staurastrum sp.	30
CYANOPHYTA	
Aphanocapsa delicatissima	4,199
Aphanocapsa elachista	2,399
Merismopedia tenuissima	10,556
Oscillatoria sp.	14,995
EUGLENOPHYTA	
Phacus sp.	30
Trachelomonas sp.	600
CRYPTOPHYTA	
Cryptomonas erosa	300

This page intentionally left blank.

08063800 WAXAHACHIE CREEK NEAR BARDWELL, TX

LOCATION.--Lat 32°14'36", long 96°38'24", Ellis County, Hydrologic Unit 12030109, on left bank at downstream side of highway embankment near left end of bridge on county road, 0.8 mi downstream from Bardwell Dam, 3.6 mi southeast of Bardwell, 3.8 mi downstream from bridge on State Highway 34, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--178 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 360.18 ft above sea level (revised) (U.S. Army Corps of Engineers benchmark). Satellite telemeter at station. Prior to Oct. 2, 1998, datum was 370.18 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since Nov 1965, at least 10% of contributing drainage area has been regulated by Bardwell Lake (station 08063700, normal storage 54,900 acre-ft) 0.8 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--2 years (water years 1964-65), 32.8 ft^3/s (23,720 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1964-65).--Maximum discharge 2,960 ft^3/s Feb 9, 1965 (gage height, 17.55 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1944, about 23 ft in 1944 and 1945, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.01	10	600	386	8.8	.11	4.1	.01	.24	.04	.02	.01
2	.01	5.0	598	386	6.0	.10	87	.06	.22	.05	.01	.02
3	.02	2.4	449	383	5.2	.09	139	.03	.21	.05	.02	.03
4	.01	46	243	382	155	.09	139	e.02	.20	.05	.03	.03
5	.36	119	206	311	661	.11	210	e.02	.19	.05	.02	.03
6	78	77	16	261	904	.09	312	e.01	.18	.07	.01	.04
7	4.5	1.2	327	222	890	.05	311	e.01	.17	.07	.01	.02
8	1.4	.76	622	82	875	.10	312	e.01	.16	.07	.02	.01
9	.74	.73	752	1.8	867	.08	216	e.01	.17	.05	.02	.01
10	.52	49	879	19	721	.09	144	e.01	.18	.05	.02	.01
11	.40	116	552	31	482	.05	143	e.02	.16	.05	.02	.01
12	.32	137	129	29	240	64	143	e.01	.15	.05	.02	.01
13	.28	426	47	78	117	104	145	e.02	.14	.04	.02	.02
14	.26	340	2.9	153	118	106	145	e.03	.15	.04	.02	.03
15	.25	70	2.3	136	118	107	146	.04	.12	.04	.02	.02
16	.25	1.2	2.0	147	118	103	146	.06	.11	.03	.02	.01
17	4.8	.88	1.8	130	118	175	146	.10	.20	.02	.01	.01
18	6.0	.78	4.4	128	116	219	145	.21	.15	.02	.01	.01
19	2.3	.74	5.0	141	44	273	71	138	.11	.03	.01	.01
20	4.3	140	431	137	.49	357	6.5	236	.09	.03	.01	.01
21	4.3	363	904	145	.37	360	5.9	168	.11	.03	.01	.01
22	1.7	355	899	143	.31	364	5.3	122	.10	.03	.01	.01
23	.96	524	1160	13	.25	367	4.1	114	.08	.03	.01	.01
24	.71	625	1480	4.0	.21	367	4.0	103	.06	.02	.01	.01
25	.58	623	1450	2.4	.19	368	3.8	113	.12	.02	.01	.01
26	.48	616	1430	2.2	.18	226	4.8	121	.11	.02	.01	e.01
27	.42	614	1410	1.7	.16	5.0	84	124	.08	.01	.01	.02
28	.41	611	1390	3.4	.12	4.6	122	76	.06	.01	.01	.05
29	.36	607	1210	199	---	4.2	106	.51	.05	.01	.01	.03
30	.31	605	928	175	---	4.2	41	.36	.05	.01	.01	.03
31	.29	---	575	12	---	4.2	---	.28	---	.02	.01	---
TOTAL	115.25	7086.69	18705.4	4244.5	6566.28	3583.16	3491.5	1316.83	4.12	1.11	0.45	0.54
MEAN	3.72	236	603	137	235	116	116	42.5	.14	.036	.015	.018
MAX	78	625	1480	386	904	368	312	236	.24	.07	.03	.05
MIN	.01	.73	1.8	1.7	.12	.05	3.8	.01	.05	.01	.01	.01
AC-FT	229	14060	37100	8420	13020	7110	6930	2610	8.2	2.2	.9	1.1

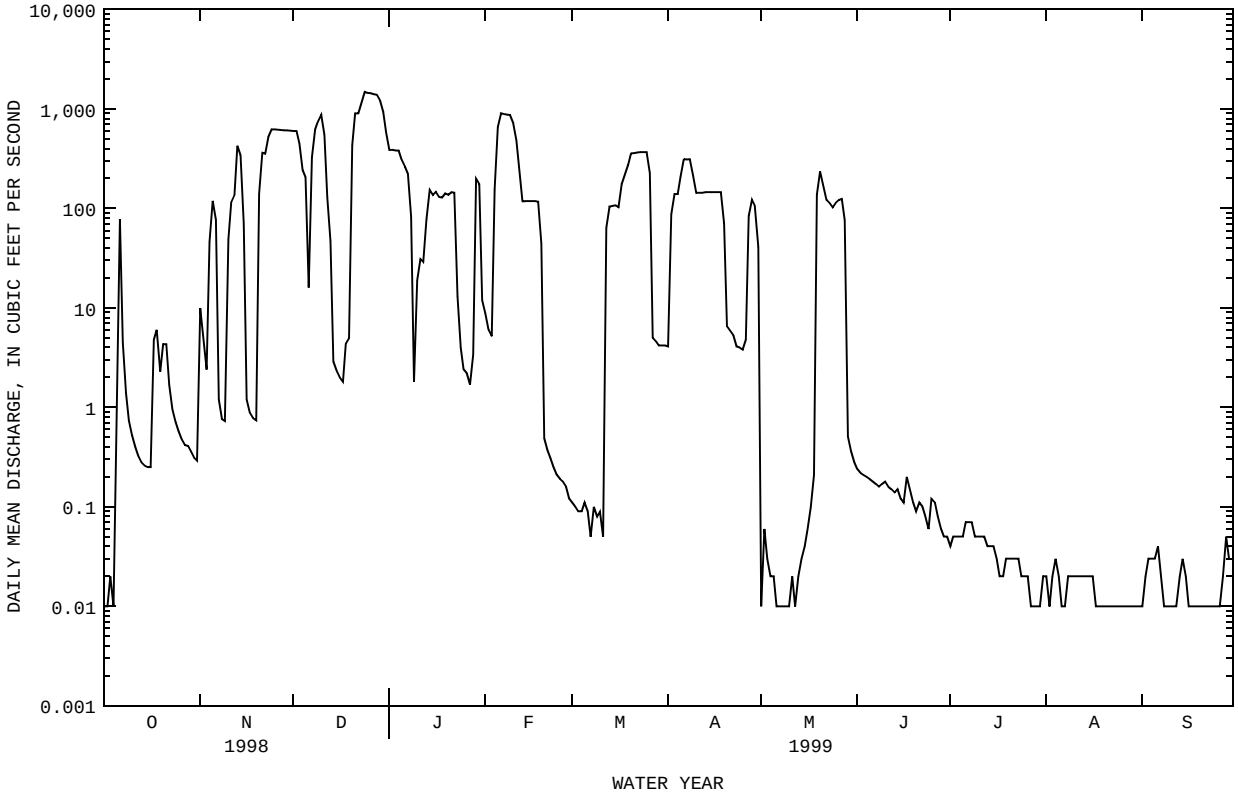
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999z, BY WATER YEAR (WY)

MEAN	21.7	84.0	96.2	130	117	165	126	171	182	26.7	4.92	6.48
MAX	299	723	603	921	605	710	590	827	773	370	71.8	178
(WY)	1974	1992	1999	1998	1992	1997	1977	1973	1989	1981	1973	1976
MIN	.000	.014	.018	.022	.022	.024	.11	.11	.001	.000	.000	.000
(WY)	1967	1970	1990	1967	1967	1967	1996	1996	1996	1966	1966	1966

08063800 WAXAHACHIE CREEK NEAR BARDWELL, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999z	
ANNUAL TOTAL	72627.99		45115.83			
ANNUAL MEAN	199		124		94.1	
HIGHEST ANNUAL MEAN					318	1992
LOWEST ANNUAL MEAN					.063	1967
HIGHEST DAILY MEAN	1760	Jan 18	1480	Dec 24	g1880	Jun 25 1981
LOWEST DAILY MEAN	.00	Aug 15	.01	Oct 1	.00	Oct 4 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 15	.01	Aug 17	.00	Oct 7 1965
INSTANTANEOUS PEAK FLOW			1490	Dec 24	g1960	Jun 25 1981
INSTANTANEOUS PEAK STAGE			23.90	Dec 24	23.90	Dec 24 1998
ANNUAL RUNOFF (AC-FT)	144100		89490		68210	
10 PERCENT EXCEEDS	615		386		322	
50 PERCENT EXCEEDS	1.2		.71		1.2	
90 PERCENT EXCEEDS	.01		.01		.00	

e Estimated
g At datum then in use.
z Period of regulated streamflow.



08063800 WAXAHACHIE CREEK NEAR BARDWELL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1980 to Sep 1982, Oct 1998 to Sep 1999.
BIOCHEMICAL DATA: Oct 1980 to Sep 1982, Oct 1998 to Sep 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR											
09...	1515	.07	624	8.0	19.5	21	11.0	121	.8	220	50
MAY											
24...	1530	99	345	8.2	26.0	--	8.6	108	1.6	120	3
AUG											
12...	1445	.02	553	7.9	30.0	7.2	6.1	82	1.1	160	15

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR											
09...	78	6.0	43	1	3.8	170	94	37	.29	3.3	385
MAY											
24...	46	2.5	18	.7	3.7	120	29	11	.32	1.5	201
AUG											
12...	58	4.3	49	2	3.8	150	78	32	.45	10	--

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR											
09...	367	3	.237	.013	.250	.048	.48	.52	<.050	.029	.09
MAY											
24...	190	19	.898	.028	.926	.028	.25	.28	<.050	.018	.06
AUG											
12...	325	<1	--	<.010	.058	<.020	--	.44	<.050	.015	.05

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAR										
09...	5.5	1.7	<1.0	3	81	<1.0	<1.0	2.4	<1.0	1.4
MAY										
24...	28	--	--	--	--	--	--	--	--	--
AUG										
12...	5.9	1.4	<1.0	7	76	<1.0	<1.0	<1.0	<1.0	1.1

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR										
09...	<10	<1.0	15	<.1	<1.0	2.9	<1	<1.0	<1.0	2.0
MAY										
24...	<10	--	<3.0	--	--	--	--	--	--	--
AUG										
12...	19	<1.0	16	<.1	1.6	3.3	--	<1.0	<1.0	<1.0

This page intentionally left blank.

08064100 CHAMBERS CREEK NEAR RICE, TX

LOCATION.--Lat 32°11'54", long 96°31'12", Navarro County, Hydrologic Unit 12030109, on downstream side of highway embankment 20 ft to left of left end of bridge on Farm Road 1126, 3.6 mi downstream from Oak Branch, 3.9 mi upstream from Cummins Creek, 4.2 mi upstream from bridge on Interstate Highway 45, 5.0 miles downstream from Waxahachie Creek, and 3.4 mi southwest of Rice.

DRAINAGE AREA.--807 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 340.00 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair, except those daily discharges less than 5 ft^3/s, which are poor. Since installation of gage in Oct 1984, at least 10% of contributing drainage area has been regulated by Bardwell Lake (station 08063700, capacity 54,900 acre-ft) on Waxahachie Creek. Flood releases from Bardwell Lake will sustain flows at this site from time to time. In addition, flow is affected at times by discharge from the flood-detention pools of numerous floodwater-retarding structures in the drainage basin above this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood information for the next downstream station, Chambers Creek near Corsicana, (08064500, discontinued) indicates that the maximum stage since at least 1870 occurred in Aug 1887, and that other significant floods occurred in Dec 1913, May 1944, and May 1958. Stages for these floods are unknown, but over the years a levee system has been developed along the main channel to limit cropland flooding.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

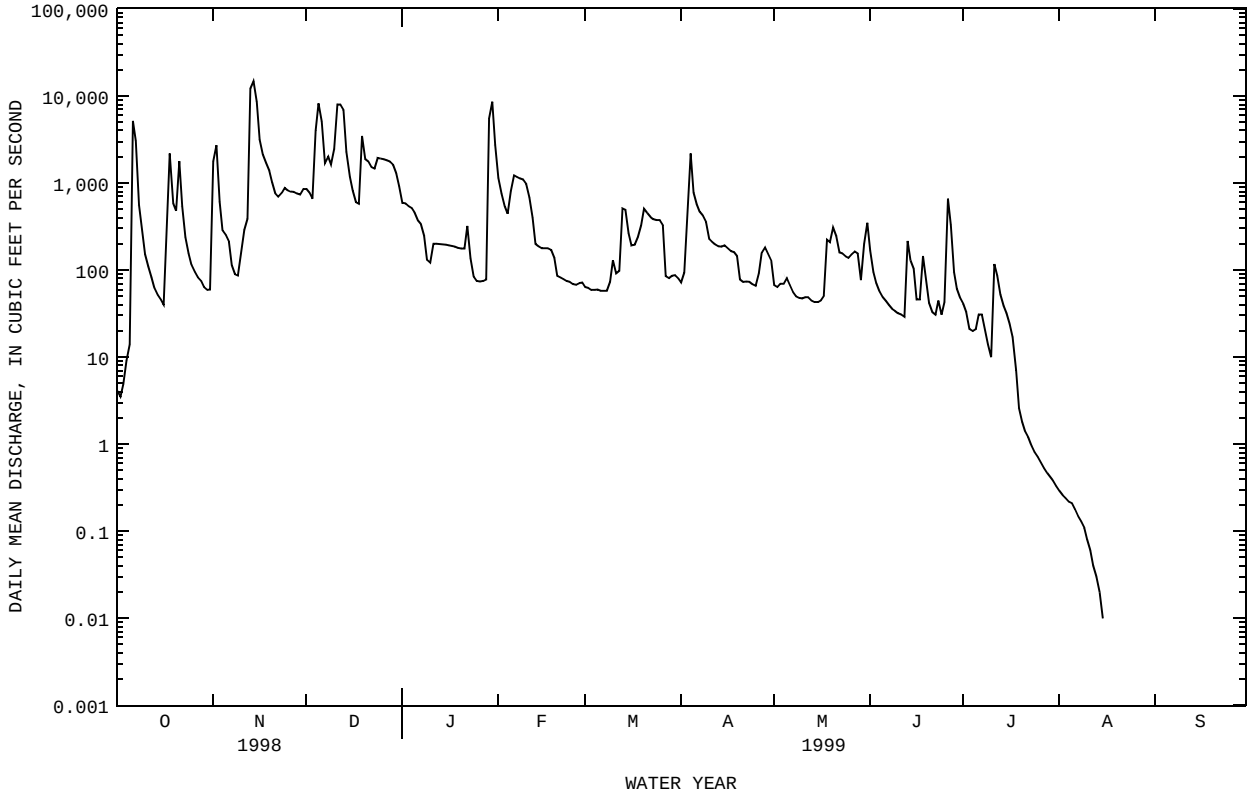
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	1780	856	592	1150	64	72	67	167	41	.29	.00
2	3.5	2720	774	584	759	62	94	64	95	33	.26	.00
3	4.9	616	661	547	542	59	462	70	71	21	.24	.00
4	9.2	286	4030	520	445	59	2180	70	57	20	.22	.00
5	14	255	8290	461	809	60	780	81	49	21	.21	.00
6	5170	212	5150	369	1230	58	570	68	44	31	.18	.00
7	3080	114	1720	336	1180	58	469	56	40	31	.15	.00
8	565	90	2020	247	1130	58	425	50	36	21	.13	.00
9	300	87	1640	132	1100	73	357	48	34	14	.11	.00
10	152	174	2480	122	978	130	228	47	32	10	.08	.00
11	110	290	7960	201	689	92	210	49	31	118	.06	.00
12	82	387	8000	201	404	98	197	49	29	87	.04	.00
13	62	12200	6920	199	200	513	187	45	217	52	.03	.00
14	52	14900	2290	197	188	496	185	43	129	39	.02	.00
15	46	8640	1190	195	179	266	192	43	104	32	.01	.00
16	40	3170	819	192	179	192	179	45	46	24	.00	.00
17	225	2130	606	189	178	195	166	51	46	17	.00	.00
18	2180	1720	578	185	171	239	161	225	145	7.1	.00	.00
19	584	1390	3480	180	139	325	144	209	76	2.6	.00	.00
20	479	1020	1890	177	86	508	78	310	42	1.8	.00	.00
21	1790	761	1780	177	82	452	73	246	33	1.4	.00	.00
22	546	695	1530	323	79	408	74	160	31	1.2	.00	.00
23	240	763	1470	137	75	386	73	156	45	.96	.00	.00
24	155	888	1940	84	73	376	69	144	31	.82	.00	.00
25	115	827	1910	75	69	375	66	139	43	.72	.00	.00
26	96	795	1870	74	68	328	92	151	663	.62	.00	.00
27	82	792	1820	75	71	85	160	164	331	.53	.00	.00
28	75	762	1770	78	72	81	183	156	95	.47	.00	.00
29	64	737	1630	5550	---	86	155	77	61	.42	.00	.00
30	59	852	1300	8620	---	88	127	201	48	.38	.00	.00
31	60	---	919	2770	---	80	---	349	---	.33	.00	---
TOTAL	16444.7	60053	79293	23789	12325	6350	8408	3633	2871	631.35	2.03	0.00
MEAN	530	2002	2558	767	440	205	280	117	95.7	20.4	.065	.000
MAX	5170	14900	8290	8620	1230	513	2180	349	663	118	.29	.00
MIN	3.5	87	578	74	68	58	66	43	29	.33	.00	.00
AC-FT	32620	119100	157300	47190	24450	12600	16680	7210	5690	1250	4.0	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

MEAN	357	411	968	613	850	802	561	800	612	45.2	37.9	26.9
MAX	1499	2002	3579	2393	2450	1819	2218	2932	2560	194	185	149
(WY)	1986	1999	1992	1998	1997	1992	1995	1989	1986	1989	1995	1991
MIN	.000	1.72	1.45	4.66	5.16	6.35	12.2	1.34	.051	.081	.000	.000
(WY)	1989	1989	1989	1996	1996	1996	1996	1996	1996	1988	1988	1985

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	302033.08		213800.08			
ANNUAL MEAN	827		586		506	
HIGHEST ANNUAL MEAN					1263	1992
LOWEST ANNUAL MEAN					12.9	1996
HIGHEST DAILY MEAN	14900	Nov 14	14900	Nov 14	22700	Dec 21 1991
LOWEST DAILY MEAN	.03	Sep 8	.00	Aug 16	.00	Aug 6 1985
ANNUAL SEVEN-DAY MINIMUM	.05	Sep 5	.00	Aug 16	.00	Aug 6 1985
INSTANTANEOUS PEAK FLOW			20900	Nov 13	43400	Jun 6 1986
INSTANTANEOUS PEAK STAGE			30.21	Nov 13	32.57	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	599100		424100		366300	
10 PERCENT EXCEEDS	2110		1570		1230	
50 PERCENT EXCEEDS	151		92		50	
90 PERCENT EXCEEDS	.22		.00		.13	

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued



08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1983 to current year.
BIOCHEMICAL DATA: Oct 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1983 to current year.
WATER TEMPERATURE: Oct 1983 to current year.

INSTRUMENTATION.--Water-quality monitor since Jan 1994.

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 a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1990 to 1999. The standard error of estimate for dissolved solids is 4%, chloride is 37%, sulfate is 26% and for hardness is 13%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request. National water-quality assessment program data are included in this record. Prior to Jan 1994, period of daily record consists of daily observer measurements.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,510 microsiemens, Nov 21, 1988; minimum, 100 microsiemens, Nov 11, 13, 14, 1998.
WATER TEMPERATURE: Maximum daily, 38.0°C, Aug 16, 1987; minimum daily, 0.0°C, Feb 7, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 940 microsiemens, May 28; minimum, 100 microsiemens, Nov 11, 13-14.
WATER TEMPERATURE: Maximum, 31.0°C, Aug 15; minimum, 7.1°C, Nov 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN												
20...	1445	177	508	8.1	11.0	20	20	12.6	115	.6	190	27
MAR												
02...	1200	62	737	8.0	17.0	10	19	9.1	96	2.2	260	72
APR												
08...	1217	420	450	7.8	20.0	--	59	8.9	99	1.1	180	23
JUN												
09...	1126	34	618	7.7	29.0	--	100	6.3	82	4.5	200	43
JUL												
08...	1001	22	739	7.7	27.0	--	44	5.4	69	2.7	230	85

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
JAN											
20...	71	3.2	26	.8	2.7	160	56	18	.34	6.0	--
MAR											
02...	95	5.3	48	1	2.9	190	110	38	.41	4.2	--
APR											
08...	66	3.2	22	.7	3.7	150	49	15	.35	5.4	278
JUN											
09...	71	4.5	46	1	4.1	150	86	41	.41	8.1	374
JUL											
08...	83	5.1	57	2	5.3	140	130	56	.48	9.5	466

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
JAN											
20...	287	34	6	28	1.30	.010	1.31	.030	.32	.35	.032
MAR											
02...	424	27	8	19	.938	.012	.950	.064	.75	.81	<.050
APR											
08...	267	121	--	--	2.12	.076	2.19	.051	.59	.64	<.050
JUN											
09...	354	71	--	--	--	<.010	.197	.050	.77	.82	<.050
JUL											
08...	436	80	--	--	--	<.010	.071	.044	.33	.38	<.050

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
JAN											
20...	.024	.07	5.1	--	--	--	--	--	--	--	--
MAR											
02...	.014	.04	4.6	--	--	--	--	--	--	--	--
APR											
08...	.011	.03	14	1.9	<1.0	4	58	<1.0	<1.0	<1.0	<1.0
JUN											
09...	.019	.06	7.6	2.2	<1.0	2	66	<1.0	<1.0	<1.0	<1.0
JUL											
08...	.022	.07	5.7	1.8	<1.0	2	78	<1.0	<1.0	<1.0	<1.0

DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
JAN											
20...	--	--	--	--	--	--	--	--	--	--	--
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
APR											
08...	5.6	<10	<1.0	3.0	<.1	1.7	3.6	--	<1.0	7.6	1.5
JUN											
09...	5.3	<10	<1.0	10	<.1	3.5	4.6	<1	<1.0	28	1.4
JUL											
08...	2.3	<10	<1.0	22	<.1	7.9	4.8	<1	<1.0	3.7	1.8

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1998	16444.7	270	158	7030	11	468	34	1520	99
NOV.	1998	60053	258	152	24570	10	1700	33	5350	94
DEC.	1998	79293	495	294	62840	26	5570	69	14720	170
JAN.	1999	23789	458	271	17430	23	1470	63	4020	160
FEB.	1999	12325	506	301	10010	27	913	71	2370	180
MAR.	1999	6350	460	272	4670	23	401	63	1080	160
APR.	1999	8408	482	286	6490	25	566	67	1510	170
MAY	1999	3633	605	361	3540	36	351	88	861	210
JUNE	1999	2871	517	307	2380	28	220	73	566	180
JULY	1999	631.35	694	415	708	45	76.3	100	177	230
AUG.	1999	2.03	482	285	1.6	25	0.14	66	0.36	170
SEPT	1999	0	--	--	--	--	--	--	--	--
TOTAL		213800.08	**	**	139700	**	11730	**	32180	**
WTD.AVG.		586	409	242	**	20	**	56	**	140

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	690	669	680	528	378	465	420	394	406	523	510	516
2	678	672	675	384	301	342	416	391	404	528	510	520
3	683	671	677	529	379	473	401	268	335	533	519	526
4	708	683	697	541	501	520	367	250	302	535	524	530
5	721	592	703	543	510	526	451	367	421	537	522	530
6	760	148	234	537	500	519	474	449	462	540	524	533
7	252	203	224	534	500	516	474	452	463	546	529	539
8	252	243	246	528	505	517	475	453	465	540	518	527
9	263	244	251	531	498	514	495	468	482	521	500	509
10	293	263	280	515	163	409	908	483	516	511	496	503
11	313	293	301	209	100	118	536	495	515	515	497	506
12	341	313	332	145	101	116	566	528	548	507	497	503
13	370	341	351	153	100	112	581	559	572	509	493	501
14	401	370	392	258	100	157	601	579	591	523	495	509
15	420	401	411	345	256	315	611	595	604	536	511	524
16	441	420	432	361	317	338	625	605	616	538	520	528
17	447	218	394	369	330	349	625	571	608	538	519	529
18	353	223	252	381	343	360	571	553	561	536	518	528
19	298	273	291	395	362	378	561	545	553	538	520	531
20	301	262	292	405	368	387	561	541	552	539	496	522
21	312	260	285	417	379	397	553	539	546	507	499	502
22	367	299	328	401	379	389	539	355	519	507	502	505
23	515	367	443	379	336	353	509	481	499	649	506	599
24	564	515	538	352	321	336	481	458	468	656	649	655
25	543	513	527	374	338	358	461	448	456	664	656	661
26	549	508	526	377	368	373	468	450	459	672	663	669
27	543	503	522	387	368	377	478	458	469	675	669	672
28	548	508	527	395	371	384	493	472	483	677	648	671
29	550	520	533	408	385	396	506	483	494	648	263	395
30	543	518	530	416	389	403	517	498	507	463	366	441
31	547	521	535	---	---	---	521	504	513	487	420	460
MONTH	760	148	433	543	100	373	908	250	496	677	263	537

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	430	417	423	736	721	729	587	563	573	442	421	431
2	452	430	439	734	713	723	575	500	536	434	411	418
3	479	452	463	731	710	720	500	420	454	461	433	448
4	498	476	490	718	695	706	445	403	426	500	460	481
5	476	423	440	700	675	690	470	440	456	526	493	508
6	430	424	427	675	658	667	489	464	475	671	525	571
7	433	427	429	662	642	653	476	463	468	629	580	606
8	444	429	436	655	638	647	467	453	460	674	621	643
9	475	443	454	640	625	633	521	454	467	705	674	690
10	550	475	506	625	590	611	522	515	518	729	700	716
11	631	550	599	590	520	554	515	506	511	738	721	731
12	648	608	627	526	470	497	507	499	504	738	728	734
13	675	630	652	475	450	464	504	499	501	735	645	696
14	702	658	681	450	395	420	507	498	500	656	636	646
15	721	687	706	413	388	400	507	500	505	655	647	651
16	748	701	725	445	408	427	500	495	497	653	643	648
17	778	733	756	454	430	441	496	489	492	648	639	643
18	792	765	778	440	350	392	492	488	490	640	600	622
19	799	760	780	370	344	358	504	492	495	600	578	588
20	806	779	792	376	350	364	698	504	614	592	574	582
21	806	778	793	401	367	385	708	698	703	610	590	601
22	801	778	791	426	394	411	711	705	708	620	609	615
23	787	765	777	441	415	429	720	711	715	620	585	603
24	773	752	764	460	433	447	724	718	721	586	560	571
25	766	746	757	490	459	474	726	719	724	585	560	572
26	760	743	752	515	486	500	732	641	718	615	583	598
27	756	733	744	531	507	520	704	476	555	630	613	621
28	745	728	738	548	520	534	632	501	536	940	628	651
29	---	---	---	572	453	553	501	460	480	655	640	647
30	---	---	---	571	554	562	460	441	450	660	641	649
31	---	---	---	571	549	561	---	---	---	660	625	642
MONTH	806	417	633	736	344	531	732	403	542	940	411	607

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	625	614	619	621	598	610	---	---	e521	---	---	---
2	630	610	619	643	612	627	510	490	497	---	---	---
3	647	630	640	679	638	661	491	475	485	---	---	---
4	650	636	643	711	671	691	475	455	464	---	---	---
5	654	643	649	745	708	726	455	435	445	---	---	---
6	658	648	652	751	733	741	463	431	449	---	---	---
7	656	643	650	740	698	717	486	460	476	---	---	---
8	657	648	653	752	700	734	502	482	493	---	---	---
9	656	620	638	763	748	755	526	500	512	---	---	---
10	643	627	635	755	724	740	525	495	510	---	---	---
11	670	641	653	725	690	705	495	460	478	---	---	---
12	687	666	677	690	660	673	460	435	449	---	---	---
13	703	684	693	689	660	674	435	405	422	---	---	---
14	825	469	584	720	671	695	430	400	413	---	---	---
15	548	517	532	738	716	728	475	430	454	---	---	---
16	605	537	565	741	730	735	---	---	---	---	---	---
17	605	492	565	741	727	734	---	---	---	---	---	---
18	509	425	477	743	724	734	---	---	---	---	---	---
19	628	448	545	743	724	734	---	---	---	---	---	---
20	459	428	438	743	725	733	---	---	---	---	---	---
21	526	459	492	747	729	738	---	---	---	---	---	---
22	566	526	548	740	700	721	---	---	---	---	---	---
23	595	566	583	700	665	682	---	---	---	---	---	---
24	616	595	609	665	640	655	---	---	---	---	---	---
25	639	562	622	640	595	618	---	---	---	---	---	---
26	562	308	372	595	563	580	---	---	---	---	---	---
27	438	328	393	563	535	548	---	---	---	---	---	---
28	505	438	469	535	505	522	---	---	---	---	---	---
29	558	503	533	535	505	522	---	---	---	---	---	---
30	603	556	574	560	534	547	---	---	---	---	---	---
31	---	---	---	---	---	e545	---	---	---	---	---	---
MONTH	825	308	577	---	---	672	---	---	---	---	---	---

e Estimated

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.1	26.6	26.8	21.0	20.4	20.7	---	---	---	---	---	---
2	26.6	26.3	26.5	20.4	10.7	16.1	23.3	22.2	22.8	20.6	19.7	20.1
3	26.3	25.3	25.8	11.2	8.9	9.9	24.1	23.3	23.7	19.7	18.8	19.3
4	25.3	24.2	24.8	17.2	11.2	14.1	24.1	15.9	19.7	18.8	18.1	18.4
5	24.2	23.0	23.6	20.8	17.2	19.2	15.9	9.7	12.5	18.1	17.3	17.7
6	23.0	17.8	20.3	22.2	20.8	21.6	13.7	9.1	10.7	17.3	16.4	16.9
7	18.2	17.8	18.0	23.6	22.2	22.9	18.9	13.7	16.5	16.4	15.1	15.8
8	18.6	18.2	18.4	24.3	23.6	24.0	19.2	18.1	18.5	15.1	13.9	14.5
9	18.9	18.6	18.8	24.4	23.8	24.1	20.8	18.5	19.9	13.9	13.3	13.6
10	19.3	18.9	19.1	23.8	22.5	23.1	20.8	18.3	19.9	13.3	12.8	13.0
11	19.7	19.3	19.5	22.5	21.1	21.8	18.3	12.6	15.4	12.8	12.5	12.6
12	20.3	19.7	20.0	21.1	18.9	20.2	12.6	9.4	10.5	12.5	12.4	12.5
13	20.8	20.3	20.6	18.9	12.4	15.2	11.7	9.4	10.0	12.4	12.3	12.3
14	21.4	20.8	21.1	12.4	8.1	10.0	17.7	11.7	14.9	12.3	12.1	12.2
15	22.0	21.4	21.6	8.1	7.1	7.5	19.7	17.7	18.9	12.1	11.8	11.9
16	22.6	22.0	22.3	8.8	7.2	7.8	20.3	19.7	20.1	11.8	11.5	11.7
17	22.8	22.6	22.7	11.4	8.8	10.1	20.6	20.3	20.4	11.5	11.2	11.4
18	22.6	21.4	22.0	14.0	11.4	12.7	20.9	20.6	20.8	11.2	10.9	11.1
19	21.4	19.9	20.6	16.7	14.0	15.3	20.9	12.6	16.4	10.9	10.7	10.8
20	19.9	18.3	19.2	19.0	16.7	17.9	13.8	12.1	12.6	13.0	10.5	11.4
21	18.3	17.5	17.9	20.4	19.0	19.8	16.5	13.8	15.2	13.4	13.0	13.3
22	17.8	17.5	17.6	21.2	20.4	20.8	17.6	16.5	17.1	13.3	12.6	13.1
23	18.3	17.8	18.0	21.3	21.0	21.2	18.4	17.6	18.0	12.6	11.6	11.9
24	19.4	18.3	18.7	21.0	20.6	20.8	19.6	18.4	19.0	12.4	11.7	12.0
25	20.3	19.4	19.9	20.6	20.5	20.6	20.3	19.6	20.0	13.6	12.4	13.0
26	21.1	20.3	20.7	21.0	20.6	20.8	20.7	20.3	20.5	14.9	13.6	14.2
27	21.5	21.1	21.3	21.3	21.0	21.2	21.1	20.7	20.9	15.7	14.9	15.3
28	22.0	21.5	21.7	21.4	21.3	21.4	21.5	21.1	21.3	15.9	15.3	15.7
29	22.0	21.5	21.7	21.4	20.9	21.2	21.8	21.5	21.7	15.3	13.3	14.3
30	21.5	21.1	21.3	---	---	---	22.0	21.8	21.9	13.3	11.8	12.6
31	21.1	21.0	21.0	---	---	---	---	---	---	11.8	10.8	11.2
MONTH	27.1	17.5	21.0	---	---	---	---	---	---	---	---	---

08064100 CHAMBERS CREEK NEAR RICE, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.8	11.4	11.6	17.0	15.9	16.4	17.4	17.0	17.3	19.8	19.7	19.8
2	12.2	11.8	12.0	17.4	17.0	17.3	17.8	17.4	17.6	20.0	19.8	19.9
3	12.5	12.2	12.4	17.6	17.4	17.5	18.0	17.8	17.9	20.2	20.0	20.1
4	12.9	12.5	12.7	17.6	17.6	17.6	18.1	15.8	17.5	20.4	20.2	20.3
5	13.3	12.9	13.1	17.6	17.6	17.6	15.8	12.2	13.3	20.7	20.4	20.5
6	13.7	13.3	13.5	17.6	17.6	17.6	15.8	12.3	13.8	20.7	20.0	20.5
7	14.2	13.7	14.0	17.6	17.5	17.6	17.8	15.8	16.8	20.0	19.6	19.7
8	15.1	14.2	14.6	17.5	17.4	17.5	20.1	17.8	18.7	19.8	19.6	19.7
9	15.1	14.7	15.0	17.4	17.4	17.4	22.2	18.8	20.2	20.1	19.8	20.0
10	14.7	13.9	14.3	17.4	17.4	17.4	22.3	20.4	21.5	20.3	20.1	20.2
11	14.7	13.8	14.2	17.5	16.0	17.0	20.4	19.8	20.0	20.5	20.3	20.4
12	13.8	13.1	13.4	17.0	15.9	16.2	19.8	19.7	19.7	20.8	20.5	20.6
13	13.1	12.6	12.9	18.0	17.0	17.7	19.7	19.5	19.6	21.0	20.8	20.9
14	12.6	12.1	12.4	18.0	16.3	17.2	19.5	19.3	19.4	21.1	21.0	21.1
15	12.1	11.5	11.8	16.3	14.4	15.3	19.3	18.4	18.9	21.1	21.1	21.1
16	11.5	11.2	11.4	14.4	13.6	14.0	18.4	17.4	17.9	21.2	21.1	21.1
17	11.2	10.9	11.1	13.8	13.6	13.6	17.4	17.1	17.2	21.2	21.2	21.2
18	10.9	10.6	10.7	15.6	13.8	14.7	17.9	17.2	17.4	21.2	19.6	20.9
19	10.6	10.3	10.4	16.9	15.6	16.4	19.4	17.9	18.6	19.6	18.4	18.7
20	10.9	10.3	10.5	16.9	14.8	15.9	20.9	19.4	20.1	19.3	18.6	19.0
21	11.6	10.9	11.2	14.8	13.9	14.2	22.4	20.9	21.8	18.6	16.9	17.6
22	12.1	11.6	11.9	13.9	13.8	13.8	22.9	22.4	22.6	17.0	16.8	16.9
23	12.5	12.1	12.3	14.4	13.9	14.2	23.5	22.9	23.2	17.6	17.0	17.3
24	12.9	12.5	12.7	14.8	14.4	14.6	24.1	23.5	23.8	18.2	17.6	17.9
25	13.9	12.9	13.5	15.3	14.8	15.1	24.2	24.1	24.2	18.9	18.2	18.6
26	14.6	13.9	14.2	15.7	15.3	15.5	24.1	23.2	23.7	19.5	18.9	19.2
27	15.2	14.6	14.9	16.1	15.7	15.9	23.2	22.0	22.6	19.9	19.5	19.7
28	15.9	15.2	15.5	16.3	16.1	16.2	22.0	21.0	21.4	20.0	19.8	19.9
29	---	---	---	16.5	16.3	16.4	22.6	21.5	22.1	20.1	19.8	19.9
30	---	---	---	16.8	16.5	16.7	21.9	19.7	20.5	20.5	19.2	20.1
31	---	---	---	17.1	16.8	17.0	---	---	---	19.2	17.0	18.0
MONTH	15.9	10.3	12.8	18.0	13.6	16.2	24.2	12.2	19.6	21.2	16.8	19.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	16.3	16.4	29.5	29.2	29.3	29.3	29.0	29.2	---	---	---
2	17.3	16.3	16.6	29.8	29.5	29.6	29.6	29.3	29.4	---	---	---
3	19.0	17.3	18.1	29.9	29.8	29.9	29.6	29.6	29.6	---	---	---
4	20.8	19.0	20.0	30.0	29.9	30.0	29.6	29.5	29.6	---	---	---
5	22.4	20.8	21.7	30.0	29.7	29.9	30.0	29.6	29.8	---	---	---
6	23.6	22.4	22.9	29.7	28.8	29.3	30.0	30.0	30.0	---	---	---
7	25.2	23.6	24.3	28.8	26.9	27.7	30.1	30.0	30.0	---	---	---
8	27.1	25.2	26.2	27.5	26.9	27.1	30.3	30.1	30.2	---	---	---
9	28.3	27.1	27.8	28.8	27.5	28.1	30.6	30.3	30.5	---	---	---
10	28.5	28.3	28.4	29.8	28.8	29.4	30.6	30.5	30.6	---	---	---
11	28.5	28.4	28.4	30.1	29.8	30.1	30.5	30.5	30.5	---	---	---
12	28.4	27.8	28.1	30.1	22.5	26.7	30.5	30.5	30.5	---	---	---
13	27.8	27.3	27.6	22.5	19.6	20.7	30.5	30.4	30.4	---	---	---
14	27.3	25.5	26.6	19.6	19.3	19.4	30.6	30.5	30.5	---	---	---
15	26.3	25.1	25.8	20.9	19.6	20.2	31.0	30.6	30.8	---	---	---
16	26.3	26.3	26.3	23.1	20.9	22.1	---	---	---	---	---	---
17	26.3	26.2	26.3	24.6	23.1	23.9	---	---	---	---	---	---
18	26.2	25.1	25.9	25.7	24.6	25.2	---	---	---	---	---	---
19	26.4	24.9	25.5	26.4	25.7	26.1	---	---	---	---	---	---
20	26.6	26.4	26.5	26.7	26.4	26.6	---	---	---	---	---	---
21	26.8	26.6	26.7	26.9	26.7	26.8	---	---	---	---	---	---
22	26.7	26.7	26.7	27.0	26.9	26.9	---	---	---	---	---	---
23	27.2	26.7	26.9	27.1	27.0	27.0	---	---	---	---	---	---
24	27.9	27.2	27.6	27.3	27.1	27.2	---	---	---	---	---	---
25	27.9	27.3	27.7	27.6	27.3	27.4	---	---	---	---	---	---
26	27.3	25.9	26.6	27.9	27.6	27.7	---	---	---	---	---	---
27	27.5	26.1	26.8	28.3	27.9	28.1	---	---	---	---	---	---
28	28.5	27.5	28.1	28.6	28.3	28.5	---	---	---	---	---	---
29	29.0	28.5	28.8	28.8	28.6	28.7	---	---	---	---	---	---
30	29.2	29.0	29.1	29.0	28.8	28.9	---	---	---	---	---	---
31	---	---	---	29.0	29.0	29.0	---	---	---	---	---	---
MONTH	29.2	16.3	25.5	30.1	19.3	27.0	---	---	---	---	---	---

This page intentionally left blank.

08064550 RICHLAND-CHAMBERS RESERVOIR NEAR KERENS, TX

LOCATION.--Lat 32°02'25", long 96°12'23", Navarro County, Hydrologic Units 12030108 and 12030109, on upper floor of pumphouse, on left bank of Chambers Creek arm of Richland-Chambers Reservoir, 7.0 mi south of intersection of State Highway 31 and Farm Road 309 in Kerens, and 14.4 mi upstream from dam on Richland Creek.

DRAINAGE AREA.--1,957 mi^2.

PERIOD OF RECORD.--Dec 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 31,000 ft long. Deliberate impoundment of water began Jul 14, 1987, and the dam was completed in Dec 1988. A gated concrete spillway is located near the left end of dam. The spillway is 1,155 ft long and contains twenty-four 40- x 29.4-ft radial gates. The low flow outlet works consist of two 3- x 5-ft outlets at elevation 266.0 ft, one 1.5 x 2.5 ft outlet, and one 1 x 1 ft outlet at elevation 285.0 ft. Each of the low flow outlets is controlled by sluice gates. The dam is owned by Tarrant Regional Water District, and was built for municipal and industrial water supply and for recreation. Flow from 464 mi^2 above the dam is controlled by Bardwell and Navarro Mills Lakes. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	330.0
Top of gates	317.34
Top of conservation pool	315.0
Crest of spillway	290.0
Lowest gated outlet	266.0

COOPERATION.--Capacity table No. 1-C was prepared by Freese and Nichols, consulting engineers for Tarrant Regional Water District. A new capacity table, No. 2-C, was prepared by the Texas Water Development Board and put into use Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,267,000 acre-ft, Dec 22, 1991 (elevation 316.85 ft); minimum contents after initial filling, 862,000 acre-ft, Nov 23, 1996 (elevation, 308.05 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,212,000 acre-ft, Nov 14 (elevation, 316.80 ft); minimum contents, 1,023,000 acre-ft, Sep 30 (elevation, 312.21 ft).

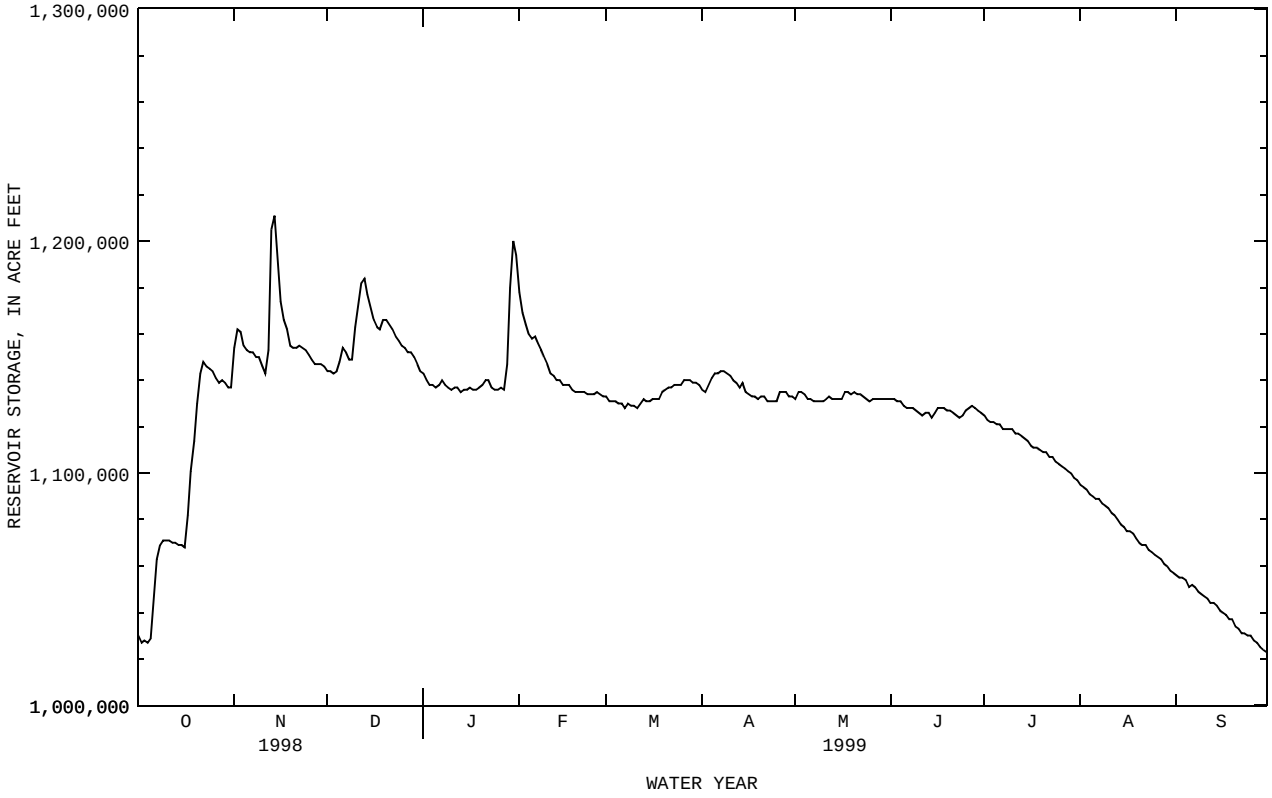
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030000	1154000	1144000	1143000	1178000	1133000	1136000	1132000	1132000	1125000	1095000	1056000
2	1027000	1162000	1144000	1140000	1169000	1131000	1135000	1135000	1132000	1123000	1094000	1055000
3	1028000	1161000	1143000	1138000	1164000	1131000	1138000	1135000	1131000	1122000	1093000	1055000
4	1027000	1155000	1144000	1138000	1160000	1131000	1141000	1134000	1131000	1122000	1091000	1054000
5	1029000	1153000	1148000	1137000	1158000	1130000	1143000	1132000	1129000	1121000	1090000	1051000
6	1047000	1152000	1154000	1138000	1159000	1130000	1143000	1132000	1128000	1121000	1089000	1052000
7	1063000	1152000	1152000	1140000	1156000	1128000	1144000	1131000	1128000	1119000	1089000	1051000
8	1069000	1150000	1149000	1138000	1153000	1130000	1144000	1131000	1128000	1119000	1087000	1049000
9	1071000	1150000	1149000	1137000	1150000	1129000	1143000	1131000	1127000	1119000	1086000	1048000
10	1071000	1146000	1163000	1136000	1147000	1129000	1142000	1131000	1126000	1119000	1085000	1047000
11	1071000	1143000	1173000	1137000	1143000	1128000	1140000	1132000	1125000	1117000	1083000	1046000
12	1070000	1153000	1182000	1137000	1142000	1130000	1139000	1133000	1126000	1117000	1082000	1044000
13	1070000	1205000	1184000	1135000	1140000	1132000	1137000	1132000	1126000	1116000	1080000	1044000
14	1069000	1211000	1177000	1136000	1140000	1131000	1139000	1132000	1124000	1115000	1078000	1043000
15	1069000	1191000	1171000	1136000	1138000	1131000	1135000	1132000	1126000	1114000	1077000	1041000
16	1068000	1174000	1166000	1137000	1138000	1132000	1134000	1132000	1128000	1112000	1075000	1040000
17	1082000	1166000	1163000	1136000	1138000	1132000	1133000	1135000	1128000	1111000	1075000	1039000
18	1101000	1162000	1162000	1136000	1136000	1132000	1133000	1135000	1128000	1111000	1074000	1037000
19	1114000	1155000	1166000	1137000	1135000	1135000	1132000	1134000	1127000	1110000	1072000	1037000
20	1130000	1154000	1166000	1138000	1135000	1136000	1133000	1135000	1127000	1109000	1070000	1034000
21	1143000	1154000	1164000	1140000	1135000	1137000	1133000	1134000	1126000	1109000	1069000	1033000
22	1148000	1155000	1162000	1140000	1135000	1137000	1131000	1134000	1125000	1107000	1069000	1031000
23	1146000	1154000	1159000	1137000	1134000	1138000	1131000	1133000	1124000	1107000	1067000	1031000
24	1145000	1153000	1157000	1136000	1134000	1138000	1131000	1132000	1125000	1105000	1066000	1030000
25	1144000	1151000	1155000	1136000	1134000	1138000	1131000	1131000	1127000	1104000	1065000	1030000
26	1141000	1149000	1154000	1137000	1135000	1140000	1135000	1132000	1128000	1103000	1064000	1028000
27	1139000	1147000	1152000	1136000	1134000	1140000	1135000	1132000	1129000	1102000	1063000	1027000
28	1140000	1147000	1152000	1147000	1133000	1140000	1135000	1132000	1128000	1101000	1061000	1025000
29	1139000	1147000	1150000	1180000	---	1139000	1133000	1132000	1127000	1100000	1060000	1024000
30	1137000	1146000	1147000	1200000	---	1139000	1133000	1132000	1126000	1098000	1058000	1023000
31	1137000	---	1144000	1194000	---	1138000	---	1132000	---	1097000	1057000	---
MAX	1148000	1211000	1184000	1200000	1178000	1140000	1144000	1135000	1132000	1125000	1095000	1056000
MIN	1027000	1143000	1143000	1135000	1133000	1128000	1131000	1131000	1124000	1097000	1057000	1023000
(+)	315.00	315.22	315.18	316.38	314.92	315.03	314.92	314.89	314.75	314.03	313.06	312.21
(@)	+106000	+9000	-2000	+50000	-61000	+5000	-5000	-1000	-6000	-29000	-40000	-34000

CAL YR 1998 MAX 1213000 MIN 985900 (@) -13000
WTR YR 1999 MAX 1211000 MIN 1023000 (@) -8000

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08064550 RICHLAND-CHAMBERS RESERVOIR NEAR KERENS, TX--Continued



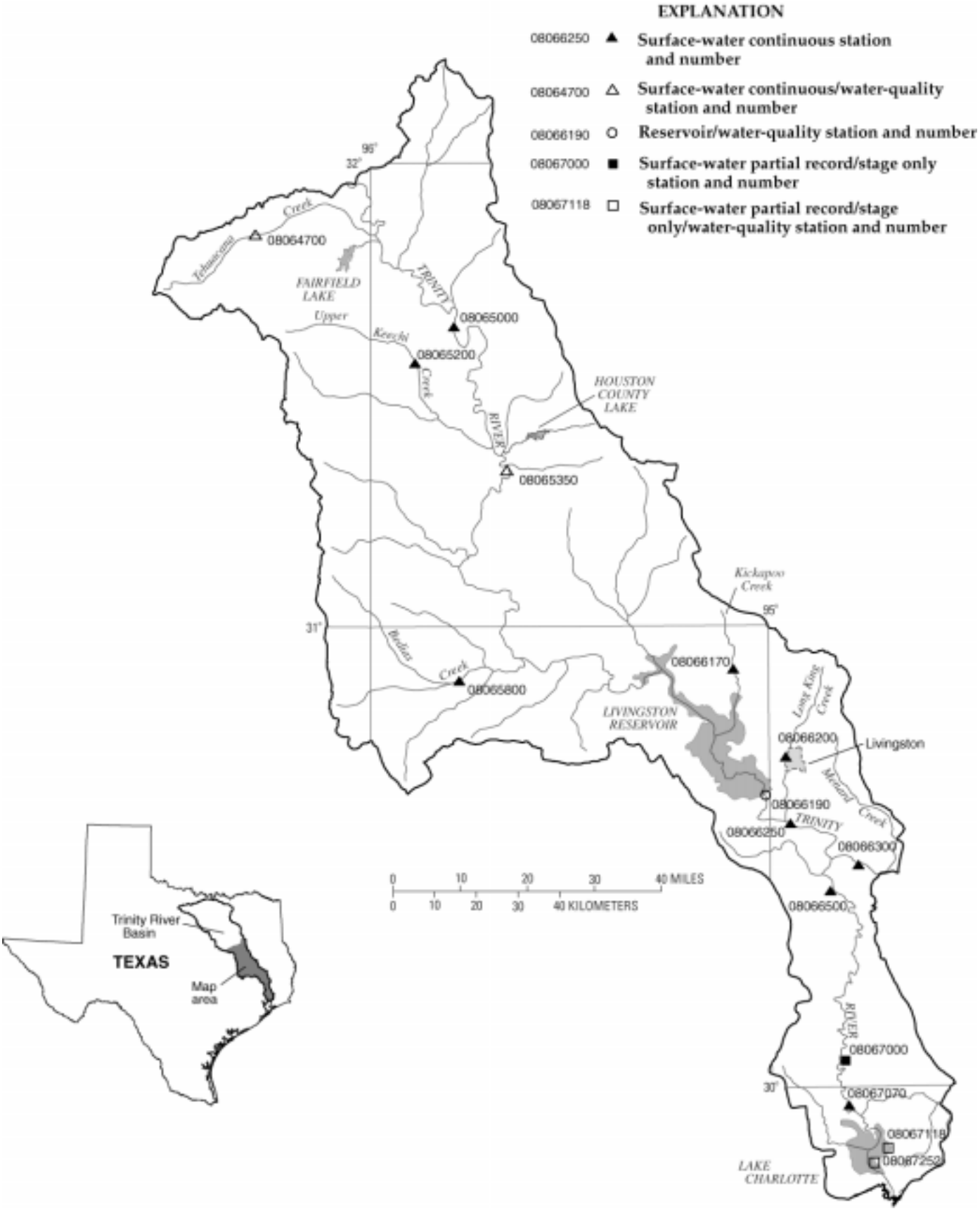


Figure 5.-- Map showing location of gaging stations in the third section of the Trinity River Basin

08064700 TEHUACANA CREEK NEAR STREETMAN, TX

LOCATION.--Lat 31°50'46", long 96°17'37", Freestone County, Hydrologic Unit 12030201, at left end of upstream bridge on Interstate Highway 45, 2.8 mi southeast of Streetman, 2.9 mi downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 4.0 mi upstream from Caney Creek, and 24.8 mi upstream from mouth.

DRAINAGE AREA.--142 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 280.13 ft above sea level. Prior to Dec 14, 1993, at site 0.2 mi downstream at datum 7.45 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Sep 1932 reached a stage of about 24 ft at site and datum 0.2 mi downstream from information by Texas Department of Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 18	0330	2,880	30.55	Dec 10	2130	3,560	31.55
Oct 21	0015	3,080	30.92	Jan 29	1615	8,790	32.96
Nov 13	1945	14,900	33.93				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	426	93	20	60	12	12	1170	62	2.5	.60	.30
2	1.7	441	35	515	30	13	13	1520	36	2.3	.56	.30
3	1.5	52	23	94	15	11	14	1900	22	2.1	.55	.31
4	1.5	17	20	39	8.9	8.9	94	1730	11	1.7	.52	.32
5	1.6	8.1	17	26	6.3	8.8	116	1180	5.5	8.5	.49	.33
6	465	5.2	15	21	5.3	8.4	54	522	2.5	14	.48	.34
7	335	4.7	14	18	4.8	8.1	17	128	1.2	12	.46	.34
8	30	5.0	12	17	4.1	9.5	5.6	571	.58	3.7	.44	.34
9	9.2	4.6	11	15	3.8	36	3.3	999	.41	2.2	.43	.33
10	5.2	4.3	1360	14	3.8	30	3.1	1010	.30	2.0	.39	.33
11	3.8	4.1	2100	14	3.6	21	3.2	862	.18	2.6	.39	.35
12	3.2	4.0	986	14	3.0	17	3.3	741	.15	2.4	.37	.34
13	2.8	6250	248	13	2.9	17	3.1	726	.13	2.3	.34	.34
14	2.5	3360	94	12	2.9	27	2.6	793	.14	1.6	.34	.34
15	2.5	714	56	12	3.0	23	2.2	946	.15	1.3	.32	.33
16	2.6	214	42	12	3.1	18	2.4	1110	.13	1.0	.31	.33
17	265	97	30	12	4.1	14	2.7	1260	.14	1.0	.28	.35
18	2610	59	28	12	4.3	12	2.6	1360	.16	1.0	.28	.35
19	569	42	564	12	4.4	13	2.7	1210	.17	1.0	.28	.35
20	817	32	145	11	4.9	25	3.1	1010	.19	.91	.28	.35
21	1690	25	71	13	5.6	17	3.1	852	.44	.89	.28	.35
22	160	22	46	171	6.2	13	3.4	712	.94	.87	.28	.35
23	39	19	31	77	6.6	10	7.0	598	2.8	.83	.29	.35
24	16	17	26	33	7.1	11	23	505	12	.81	.32	.35
25	8.8	16	26	25	7.7	11	78	422	69	.77	.31	.35
26	6.4	15	25	22	9.0	8.6	205	348	200	.72	.31	.35
27	5.3	14	22	22	10	8.4	526	286	15	.74	.31	.35
28	4.9	13	20	219	11	9.5	759	227	3.2	.67	.31	.35
29	4.9	14	18	5480	---	9.4	482	178	2.9	.65	.30	.36
30	4.8	73	17	1880	---	10	740	137	2.7	.63	.30	.37
31	4.4	---	16	186	---	11	---	97	---	.61	.31	---
TOTAL	7076.0	11972.0	6211	9031	241.4	451.6	3186.4	25110	452.01	74.30	11.43	10.20
MEAN	228	399	200	291	8.62	14.6	106	810	15.1	2.40	.37	.34
MAX	2610	6250	2100	5480	60	36	759	1900	200	14	.60	.37
MIN	1.5	4.0	11	11	2.9	8.1	2.2	97	.13	.61	.28	.30
AC-FT	14040	23750	12320	17910	479	896	6320	49810	897	147	23	20
CFSM	1.61	2.81	1.41	2.05	.06	.10	.75	5.70	.11	.02	.00	.00
IN.	1.85	3.14	1.63	2.37	.06	.12	.83	6.58	.12	.02	.00	.00

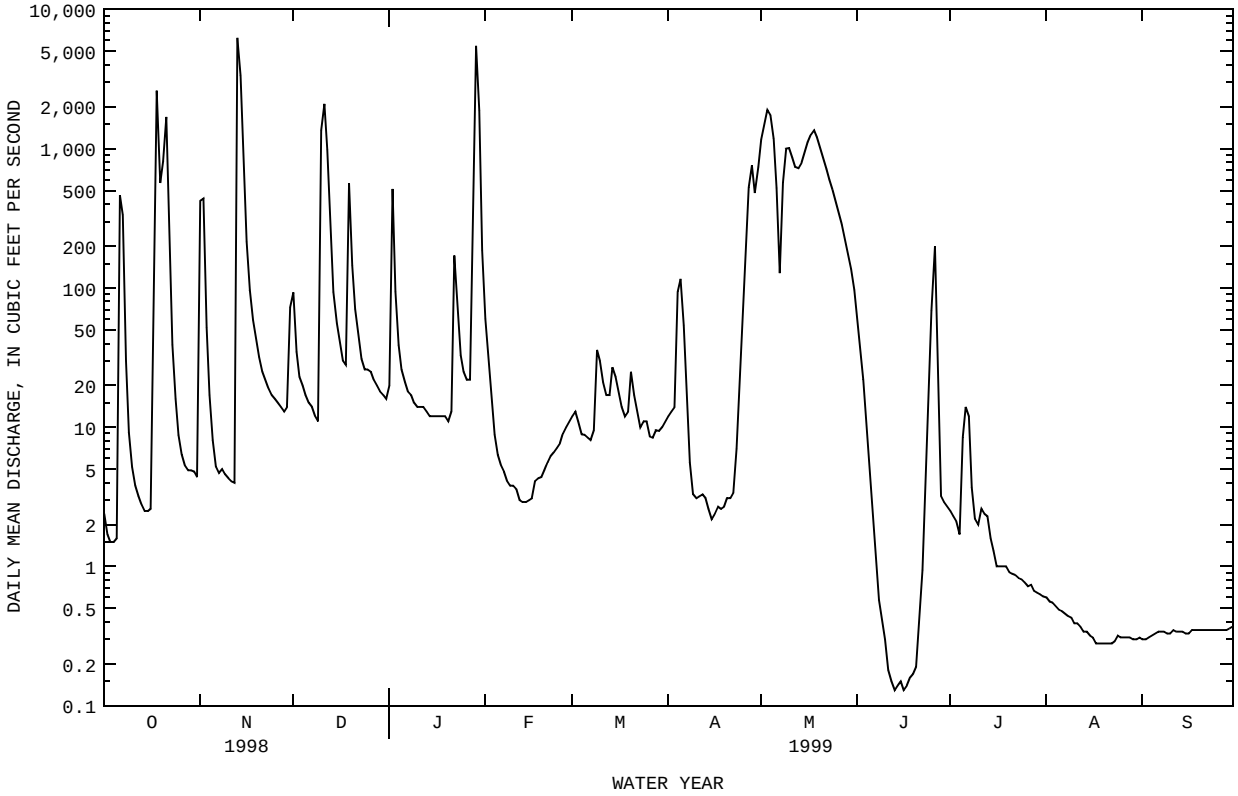
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1999, BY WATER YEAR (WY)

MEAN	59.1	57.8	136	78.7	159	124	104	230	70.7	3.84	15.6	29.4
MAX	379	399	1013	381	930	1048	762	2927	388	35.1	234	547
(WY)	1974	1999	1992	1998	1986	1990	1997	1989	1981	1976	1983	1974
MIN	.000	.000	.077	.12	.45	.25	.000	.020	.040	.000	.000	.000
(WY)	1981	1981	1990	1971	1996	1996	1971	1971	1996	1978	1969	1980

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1968 - 1999	
ANNUAL TOTAL	46602.24		63827.34			
ANNUAL MEAN	128		175		87.3	
HIGHEST ANNUAL MEAN					274	1989
LOWEST ANNUAL MEAN					3.52	1996
HIGHEST DAILY MEAN	6250	Nov 13	6250	Nov 13	42000	May 4 1989
LOWEST DAILY MEAN	.00	Jul 8	.13	Jun 13	.00	Sep 30 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 8	.14	Jun 12	.00	Sep 30 1968
INSTANTANEOUS PEAK FLOW			14900	Nov 13	g85700	May 17 1989
INSTANTANEOUS PEAK STAGE			33.93	Nov 13	33.93	Nov 13 1998
ANNUAL RUNOFF (AC-FT)	92440		126600		63220	
ANNUAL RUNOFF (CFSM)	.90		1.23		.61	
ANNUAL RUNOFF (INCHES)	12.21		16.72		8.35	
10 PERCENT EXCEEDS	151		541		57	
50 PERCENT EXCEEDS	4.8		8.9		1.8	
90 PERCENT EXCEEDS	.00		.33		.00	

g At site and datum then in use.



08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 31°50'54", long 96°17'23", Freestone County, Hydrologic Unit 12030201, at downstream side of bridge on U.S. Highway 75, 2.8 mi southeast of Streetman, 3.1 mi downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 3.8 mi upstream from Caney Creek, and 25 mi upstream from mouth.

PERIOD OF RECORD.--
CHEMICAL DATA: Feb 1968 to Sep 1985, Oct 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JAN												
21...	1045	13	822	7.4	15.0	40	10	10.4	105	.6	250	99
MAR												
03...	1115	12	1270	7.8	15.0	25	3.7	9.0	89	.6	390	120
APR												
07...	1151	17	809	7.8	20.0	--	35	9.0	100	.9	250	120
JUN												
08...	1246	.56	1720	7.7	30.0	--	3.0	8.2	109	7.0	410	150
JUL												
07...	1420	9.9	556	7.9	30.0	--	17	8.1	108	4.6	170	34
AUG												
17...	1028	.29	1700	7.6	28.0	--	3.5	5.0	65	6.1	410	150

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
JAN											
21...	63	23	87	2	4.1	150	140	98	.30	14	--
MAR											
03...	97	35	123	3	4.9	270	200	140	.38	15	--
APR											
07...	63	21	66	2	5.4	130	150	79	.29	7.5	497
JUN											
08...	100	38	167	4	5.8	260	210	240	.44	10	1010
JUL											
07...	42	15	49	2	6.3	130	77	53	.32	7.0	352
AUG											
17...	91	45	194	4	6.9	260	180	280	.50	13	1030

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
JAN											
21...	516	14	4	10	--	<.010	<.050	.023	.43	.45	<.050
MAR											
03...	778	7	4	3	--	<.010	<.050	<.020	--	.29	<.050
APR											
07...	466	67	--	--	.095	.010	.105	.117	.56	.68	<.050
JUN											
08...	934	24	--	--	--	<.010	<.050	.107	1.2	1.3	E.034
JUL											
07...	328	47	--	--	--	<.010	<.050	.039	.42	.46	<.050
AUG											
17...	974	19	--	--	--	<.010	.073	.092	.99	1.1	E.032

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
JAN											
21...	.014	.04	8.9	--	--	--	--	--	--	--	--
MAR											
03...	.026	.08	8.5	--	--	--	--	--	--	--	--
APR											
07...	.014	.04	15	3.3	<1.0	<1	97	<1.0	<1.0	<1.0	1.1
JUN											
08...	.032	.10	9.7	4.4	<1.0	2	109	<1.0	<1.0	<1.0	<1.0
JUL											
07...	.023	.07	10	3.5	<1.0	1	70	<1.0	<1.0	<1.0	<1.0
AUG											
17...	.010	.03	9.9	2.8	<1.0	3	130	<1.0	<1.0	<1.0	<1.0

DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
JAN											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	4.8	32	<1.0	303	<.1	<1.0	4.5	<1	<1.0	8.6	3.2
JUN											
08...	9.8	14	<1.0	675	<.1	<1.0	7.9	--	<1.0	32	3.2
JUL											
07...	3.3	E6.7	1.1	66	<.1	1.1	3.6	--	<1.0	4.0	1.5
AUG											
17...	5.8	<10	<1.0	759	<.1	1.5	7.0	<1	<1.0	16	3.6

08065000 TRINITY RIVER NEAR OAKWOOD, TX

LOCATION.--Lat 31°38'54", long 95°47'21", Anderson County, Hydrologic Unit 12030201, on left bank at downstream side of bridge on U.S. Highways 79 and 84, 1.5 mi upstream from Missouri Pacific Railroad Co. bridge, 6 mi northeast of Oakwood, and at mile 313.4.

DRAINAGE AREA.--12,833 mi^2.

PERIOD OF RECORD.--Oct 1923 to Sep 1924 (monthly discharge only), Oct 1924 to current year. Records of Jan 1905 to Sep 1923, published in WSP 850 and 878, have been found unreliable and should not be used. Gage-height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.
Water-quality records.--Sediment data: Dec 1976 to Sep 1981. Specific conductance: Dec 1976 to Sep 1981. Water temperature: Dec 1976 to Sep 1981. Suspended sediment data: Dec 1976 to Sep 1981.

REVISED RECORDS.--WSP 1442: 1934. See also PERIOD OF RECORD. WSP 1922: Drainage area. WDR TX-81-1: 1980 (M,m).

GAGE.--Water-stage recorder. Datum of gage is 175.06 ft above sea level. Prior to Jul 1932, nonrecording gage at site 1.5 mi downstream at datum 1.06 ft lower. Jul 15, 1932, to Oct 7, 1934, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 1924, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400, normal storage 38,130 acre-ft) and twenty additional upstream reservoirs with a combined capacity of 4,200,000 acre-ft, of which 1,362,000 acre-ft is for flood control. Streamflow is affected at times by discharge from the flood-detention pools of 252 floodwater-retarding structures with a combined detention capacity of 183,300 acre-ft. These structures control runoff from 614 mi^2 in the Richland, Chambers, and Tehuacana Creeks drainage basins. The Industrial Generating Co. at Fairfield makes a minor diversion from the river at a site about 34 mi upstream. The diversion to Big Brown Lake is used to maintain the normal pool elevation for that lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1890 reached a stage of 53 ft (discharge about 180,000 ft^3/s) and was the highest since that date, from information in local newspapers. Flood of Jun 4, 1908, reached a stage of 52.2 ft, present site and datum, from information by the National Weather Service (discharge, about 164,000 ft^3/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

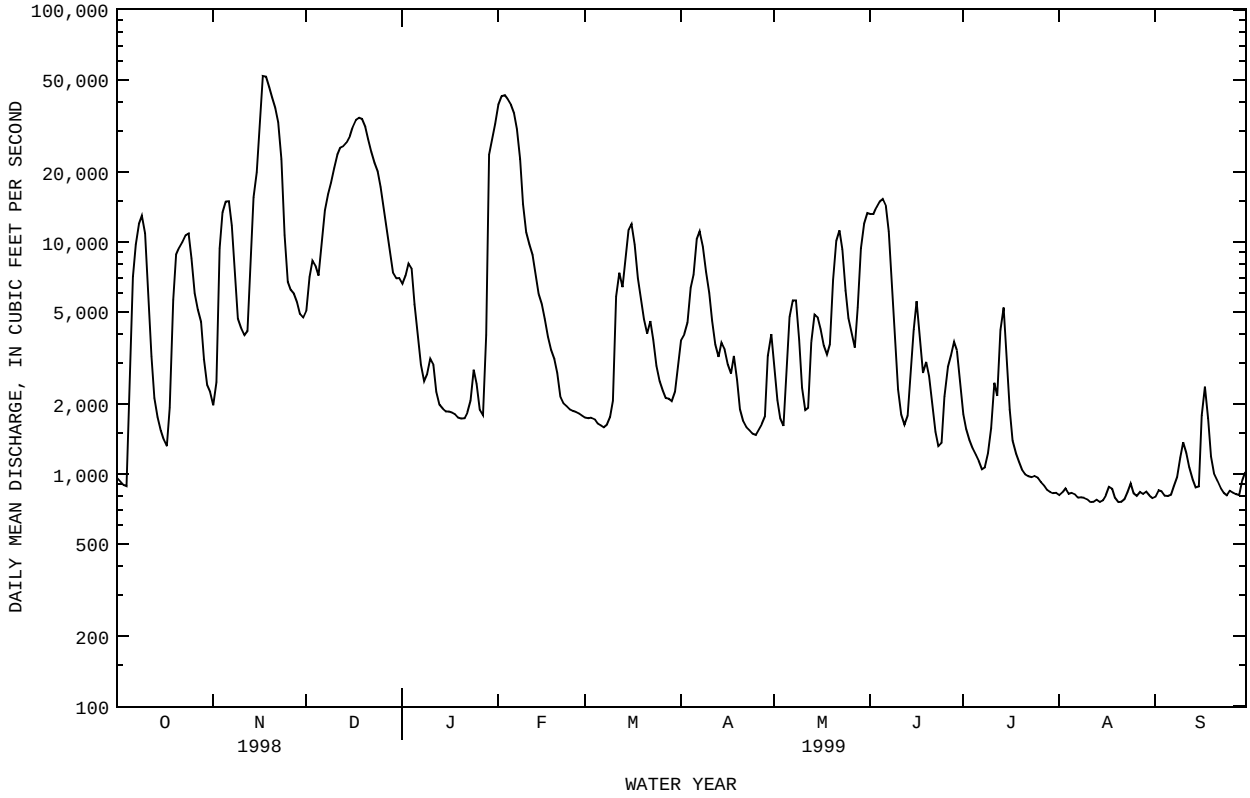
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	961	1980	5070	6600	39100	1750	3780	2950	13200	1810	811	798
2	928	2490	7080	7150	42400	1740	4000	2080	13200	1560	835	852
3	897	9380	8280	8060	42800	1750	4490	1730	14100	1400	867	844
4	887	13400	7850	7650	41200	1720	6350	1610	14900	1290	822	805
5	2850	14900	7170	5410	39000	1650	7240	3050	15300	1210	829	803
6	7080	15000	10200	3960	35900	1620	10300	4760	14300	1140	819	813
7	9740	11800	13700	2960	30700	1590	11100	5580	11100	1050	791	886
8	12000	7300	16100	2510	22800	1630	9570	5580	6740	1070	794	967
9	13000	4660	18000	2680	14600	1760	7450	3780	3800	1230	788	1180
10	10900	4220	20800	3140	11000	2070	6040	2360	2320	1580	779	1370
11	6210	3960	23800	2950	9760	5840	4580	1890	1800	2470	756	1230
12	3210	4130	25500	2260	8780	7380	3610	1930	1630	2170	758	1070
13	2130	8440	25900	1990	7250	6380	3200	3710	1780	4170	775	943
14	1760	15600	26800	1910	5960	8480	3680	4860	2810	5210	759	877
15	1540	20000	28600	1860	5390	11300	3440	4730	4190	3300	771	884
16	1410	32400	31400	1860	4670	12000	2960	4210	5550	1900	808	1790
17	1320	51800	33600	1840	3910	9770	2710	3570	3840	1390	882	2380
18	1930	51400	34300	1810	3420	6980	3230	3270	2730	1220	864	1730
19	5630	46400	33800	1750	3130	5640	2540	3620	3040	1130	787	1190
20	8840	41900	31400	1730	2730	4650	1900	6850	2640	1040	756	996
21	9500	37800	27700	1740	2140	4030	1690	10100	2020	998	759	934
22	10000	32800	24400	1840	2020	4560	1590	11200	1520	977	781	869
23	10700	22800	21900	2070	1960	3800	1540	9290	1320	970	836	830
24	10900	10700	20100	2820	1900	2920	1490	6190	1360	982	911	811
25	8510	6720	17300	2450	1870	2510	1470	4700	2160	966	826	849
26	6020	6210	13600	1890	1850	2280	1560	4040	2900	922	805	832
27	5100	5980	11100	1790	1820	2120	1640	3510	3230	892	837	818
28	4520	5490	8960	3970	1780	2110	1770	5210	3710	856	822	812
29	3130	4900	7350	23800	---	2060	3230	9400	3400	837	838	931
30	2420	4720	6970	28100	---	2260	4010	12000	2500	827	809	1020
31	2260	---	7000	32300	---	3020	---	13300	---	829	789	---
TOTAL	166283	499280	575730	172850	389840	127370	122160	161060	163090	47396	25064	31114
MEAN	5364	16640	18570	5576	13920	4109	4072	5195	5436	1529	809	1037
MAX	13000	51800	34300	32300	42800	12000	11100	13300	15300	5210	911	2380
MIN	887	1980	5070	1730	1780	1590	1470	1610	1320	827	756	798
AC-FT	329800	990300	1142000	342800	773200	252600	242300	319500	323500	94010	49710	61710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1999, BY WATER YEAR (WY)

MEAN	2474	3673	5142	5213	6340	7530	7647	11610	7885	2742	1263	1444
MAX	14250	25900	33280	31870	35060	40450	45710	56050	33550	15240	7050	7361
(WY)	1974	1975	1992	1998	1932	1945	1945	1990	1957	1941	1982	1962
MIN	85.0	100	146	166	222	242	278	812	151	74.2	62.7	62.8
(WY)	1925	1925	1926	1940	1925	1925	1925	1971	1925	1925	1925	1930

08065000 TRINITY RIVER NEAR OAKWOOD, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1925 - 1999	
ANNUAL TOTAL	3629325		2481237			
ANNUAL MEAN	9943		6798		5239	
HIGHEST ANNUAL MEAN					15240	1992
LOWEST ANNUAL MEAN					657	1925
HIGHEST DAILY MEAN	73700	Jan 10	51800	Nov 17	153000	Apr 29 1942
LOWEST DAILY MEAN	670	Aug 2	756	Aug 11	28	Nov 1 1924
ANNUAL SEVEN-DAY MINIMUM	699	Jul 28	769	Aug 9	38	Aug 19 1925
INSTANTANEOUS PEAK FLOW			54300	Nov 17	153000	Apr 29 1942
INSTANTANEOUS PEAK STAGE			45.02	Nov 17	51.64	Apr 29 1942
ANNUAL RUNOFF (AC-FT)	7199000		4922000		3796000	
10 PERCENT EXCEEDS	26400		17600		14900	
50 PERCENT EXCEEDS	4520		2960		1490	
90 PERCENT EXCEEDS	801		837		298	



08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX

LOCATION.--Lat 31°34'11", long 95°53'17", Leon County, Hydrologic Unit 12030201, at right bank at downstream side of bridge on U.S. Highway 79, 1.9 mi upstream from Missouri Pacific Railroad Co. bridge, 2 mi southwest of Oakwood, 11 mi upstream from Buffalo Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--150 mi^2.

PERIOD OF RECORD.--Apr 1962 to current year.
Water-quality records.--Chemical data: Jun 1962 to Apr 1964, Nov 1967 to Sep 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.11 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, about 21 ft in 1932, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 14	1015	2,080	13.29	Jan 29	1045	15,600	15.69
Dec 11	1200	3,670	13.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

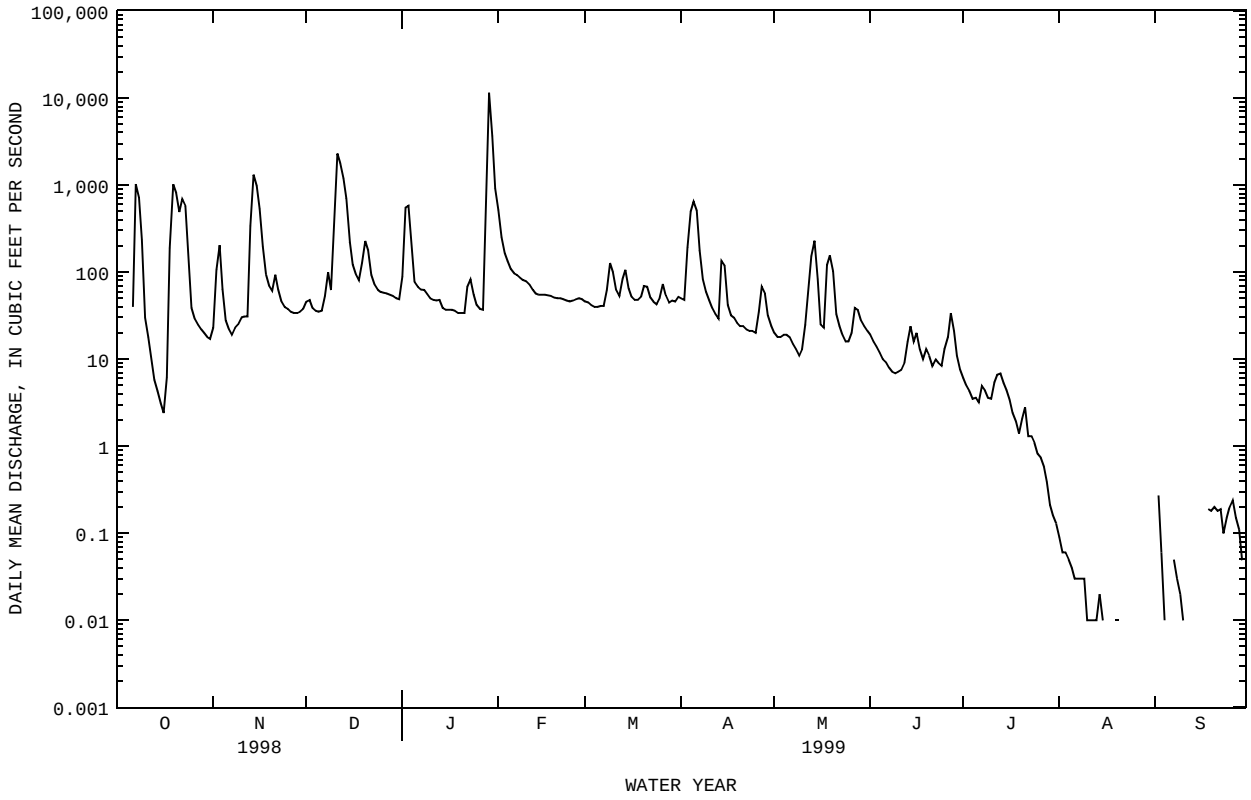
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	23	46	89	519	46	50	20	19	6.0	.09	.00
2	.00	106	48	554	251	45	48	18	16	5.0	.06	.27
3	.00	204	39	582	166	42	192	18	14	4.3	.06	.06
4	.00	64	36	181	133	40	496	19	12	3.5	.05	.01
5	.00	28	35	77	108	40	644	19	10	3.6	.04	.00
6	40	22	36	67	97	41	510	18	9.2	3.2	.03	.00
7	1030	19	53	63	93	41	178	15	8.0	4.9	.03	.05
8	719	23	100	62	86	62	83	13	7.2	4.4	.03	.03
9	235	25	62	56	81	127	59	11	6.9	3.6	.03	.02
10	30	30	298	50	78	100	47	13	7.2	3.5	.01	.01
11	18	31	2290	48	72	62	39	25	7.6	5.4	.01	.00
12	10	31	1780	47	63	53	33	62	9.1	6.6	.01	.00
13	5.8	340	1200	48	57	83	29	153	16	6.8	.01	.00
14	4.3	1320	705	39	55	106	135	231	24	5.3	.02	.01
15	3.1	979	222	37	55	65	119	83	16	4.4	.01	.00
16	2.4	535	122	37	55	52	42	25	20	3.4	.00	.00
17	6.2	197	94	37	54	48	32	23	13	2.4	.00	.00
18	189	94	80	36	53	48	30	120	10	1.9	.00	.19
19	1020	69	128	34	51	52	26	155	13	1.4	.01	.18
20	820	61	227	34	50	69	24	103	11	2.1	.01	.20
21	493	94	178	34	50	68	24	33	8.4	2.8	.00	.18
22	690	63	93	68	49	51	22	24	9.9	1.3	.00	.19
23	572	46	72	82	47	46	21	19	9.0	1.3	.00	.10
24	119	40	63	55	46	43	21	16	8.4	1.1	.00	.15
25	39	38	59	42	47	51	20	16	13	.82	.00	.20
26	29	35	58	38	49	73	35	20	18	.74	.00	.24
27	25	34	57	37	50	54	68	39	34	.58	.00	.15
28	22	34	55	426	49	45	57	37	21	.39	.00	.11
29	20	35	53	11500	---	47	32	28	11	.21	.00	.05
30	18	38	50	3660	---	46	24	24	7.6	.16	.00	.05
31	17	---	49	921	---	52	---	21	---	.13	.00	---
TOTAL	6176.80	4658	8388	19041	2564	1798	3140	1421	389.5	91.23	0.51	2.45
MEAN	199	155	271	614	91.6	58.0	105	45.8	13.0	2.94	.016	.082
MAX	1030	1320	2290	11500	519	127	644	231	34	6.8	.09	.27
MIN	.00	19	35	34	46	40	20	11	6.9	.13	.00	.00
AC-FT	12250	9240	16640	37770	5090	3570	6230	2820	773	181	1.0	4.9
CFSM	1.33	1.04	1.80	4.09	.61	.39	.70	.31	.09	.02	.00	.00
IN.	1.53	1.16	2.08	4.72	.64	.45	.78	.35	.10	.02	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

MEAN	46.2	50.4	108	110	126	125	119	133	67.6	12.8	5.77	14.5
MAX	371	513	878	614	425	461	574	1413	517	128	54.5	246
(WY)	1974	1975	1992	1999	1997	1973	1966	1965	1976	1981	1979	1974
MIN	.000	.000	.36	4.03	8.28	8.79	8.41	1.82	.48	.000	.000	.000
(WY)	1964	1964	1964	1964	1964	1996	1971	1972	1963	1964	1963	1963

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1962 - 1999	
ANNUAL TOTAL	36253.23		47670.49			
ANNUAL MEAN	99.3		131		76.7	
HIGHEST ANNUAL MEAN					168	1965
LOWEST ANNUAL MEAN					4.52	1963
HIGHEST DAILY MEAN	2290	Dec 11	11500	Jan 29	11500	Jan 29 1999
LOWEST DAILY MEAN	.00	Jul 2	.00	Oct 1	.00	Aug 5 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 2	.00	Aug 21	.00	Aug 5 1962
INSTANTANEOUS PEAK FLOW			15600	Jan 29	24000	May 16 1965
INSTANTANEOUS PEAK STAGE			15.69	Jan 29	15.69	Jan 29 1999
ANNUAL RUNOFF (AC-FT)	71910		94550		55590	
ANNUAL RUNOFF (CFSM)	.66		.87		.51	
ANNUAL RUNOFF (INCHES)	8.99		11.82		6.95	
10 PERCENT EXCEEDS	210		179		129	
50 PERCENT EXCEEDS	18		33		11	
90 PERCENT EXCEEDS	.00		.01		.07	

08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX--Continued



08065350 TRINITY RIVER NEAR CROCKETT, TX

LOCATION.--Lat 31°20'18", long 95°39'22", Houston-Leon County line, Hydrologic Unit 12030201, on left bank at an abandoned bridge abutment near left end of an abandoned lock and dam, 1,000 ft upstream from State Highway 7, 6.9 mi downstream from Upper Keechi Creek, 11.9 mi west of Crockett, and at mile 265.4.

DRAINAGE AREA.--13,911 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 141.15 ft above sea level. Prior to Oct 13, 1983, water-stage recorder at site 1,000 ft downstream at datum 4.56 ft lower. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in water year 1964, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400, normal storage 38,130 acre-ft) and other major reservoirs. Flow from 44 mi^2 in the Elkhart Creek basin is affected by storage in Houston County Lake near Crockett (station 08065330, normal storage 19,500 acre-ft). There are many diversions above station for irrigation, municipal, and industrial uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 56.1 ft Apr 30 or May 1, 1942, at former site and datum, from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	2760	4720	7510	40800	1960	3110	4300	13500	2520	934	766
2	1390	2490	5530	11200	37700	1940	3720	3700	13300	2010	911	824
3	1350	4160	7800	11700	37000	1910	3840	3110	13600	1810	948	872
4	1310	10600	8560	10600	37400	1890	5510	2900	14400	1670	973	866
5	1380	13800	7860	10000	37500	1850	9560	3020	15100	1600	924	833
6	3910	14900	8080	6990	36700	1820	10800	4760	15200	1540	926	842
7	7380	14200	12100	4860	34500	1790	12300	5740	13900	1500	901	861
8	10200	10600	15500	3510	30400	1790	12400	6660	10400	1420	868	940
9	12400	6150	17200	3020	25300	2020	10300	6370	6070	1450	858	1050
10	13000	4350	20200	3200	18000	2080	7550	3230	3480	1570	845	1240
11	10300	4110	24900	3420	13100	2910	5460	2260	2380	2220	824	1350
12	5510	3900	26700	3120	10900	6570	4160	2030	2070	2620	793	1250
13	3020	10100	27900	2680	9350	7770	3370	2260	1980	2630	799	1120
14	2290	17500	28000	2480	7400	7870	3710	3850	2180	4610	810	1000
15	2020	20000	27200	2390	6060	10100	5070	4610	3210	4560	800	935
16	1850	22900	26800	2330	5380	12300	3670	4430	4560	2850	800	991
17	1760	26400	27000	2310	4470	12200	2830	3790	5950	1890	843	1690
18	2840	31200	27400	2280	3670	9550	2790	3240	3720	1570	919	1810
19	3560	36400	27800	2240	3180	6690	2690	3100	2920	1450	885	1470
20	7360	39000	27800	2190	2920	5340	2200	4060	2930	1390	799	1190
21	11100	39100	27200	2160	2510	4170	1780	7900	2480	1300	758	1060
22	12100	37000	25700	3240	2170	4030	1740	10800	2000	1250	760	985
23	11800	32500	23700	3690	2100	4220	1730	11100	1700	1210	774	910
24	12100	25200	21700	3160	2050	3390	1640	8450	1580	1190	836	861
25	11300	13900	20000	3320	2030	2970	1650	5390	4200	1180	896	858
26	e7600	7760	17300	2780	2020	2760	1640	4160	7110	1140	813	891
27	e5000	6620	14200	2320	2020	2380	1810	3750	5060	1080	794	862
28	e4200	6090	11600	3600	2000	2300	1810	3710	4330	1040	820	846
29	e3600	5310	9360	21700	---	2240	2340	6510	4190	989	799	881
30	e3000	4790	7830	44100	---	2230	4020	10400	3470	957	804	999
31	2550	---	7590	48200	---	2510	---	12600	---	938	785	---
TOTAL	178630	473790	565230	236300	418630	133550	135200	162190	186970	55154	26199	31053
MEAN	5762	15790	18230	7623	14950	4308	4507	5232	6232	1779	845	1035
MAX	13000	39100	28000	48200	40800	12300	12400	12600	15200	4610	973	1810
MIN	1310	2490	4720	2160	2000	1790	1640	2030	1580	938	758	766
AC-FT	354300	939800	1121000	468700	830400	264900	268200	321700	370900	109400	51970	61590

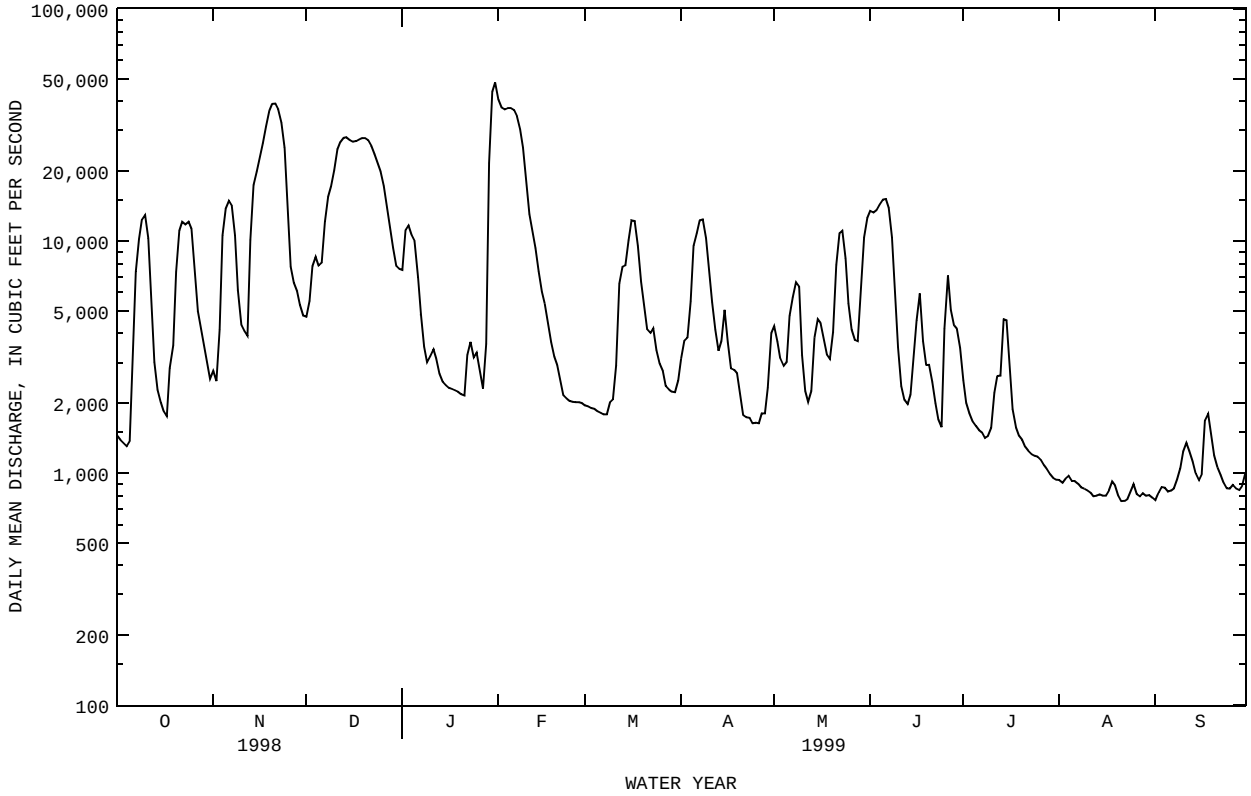
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

MEAN	3270	5748	7639	6503	8067	9962	8788	13390	9536	3393	1839	1777
MAX	16840	26110	35440	33620	30490	33670	25960	62100	29570	15030	7188	6932
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1989	1989	1982	1974
MIN	548	619	719	514	670	730	931	939	822	374	413	513
(WY)	1979	1967	1967	1964	1967	1967	1972	1971	1971	1964	1967	1972

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	3624368		2602896			
ANNUAL MEAN	9930		7131		6778	
HIGHEST ANNUAL MEAN					16810	1992
LOWEST ANNUAL MEAN					1352	1971
HIGHEST DAILY MEAN	64100	Jan 13	48200	Jan 31	109000	May 10 1990
LOWEST DAILY MEAN	890	Aug 3	758	Aug 21	278	Aug 12 1964
ANNUAL SEVEN-DAY MINIMUM	924	Jul 29	797	Aug 26	293	Aug 10 1964
INSTANTANEOUS PEAK FLOW			51600	Jan 30	109000	May 10 1990
INSTANTANEOUS PEAK STAGE			43.68	Jan 30	48.54	May 10 1990
ANNUAL RUNOFF (AC-FT)	7189000		5163000		4910000	
10 PERCENT EXCEEDS	25000		20100		19000	
50 PERCENT EXCEEDS	4370		3240		2400	
90 PERCENT EXCEEDS	1050		899		725	

e Estimated

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued



08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Feb 1964 to current year.
BIOCHEMICAL DATA: Feb 1968 to current year.
PESTICIDE DATA: Nov 1971 to Jul 1981.
SEDIMENT DATA:: Nov 1972 to Sep 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Feb 1964 to current year.
PH: Mar 1975 to current year.
WATER TEMPERATURE: Feb 1964 to Sep 1971, Mar 1975 to current year.
DISSOLVED OXYGEN: Mar 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: Jul 1972 to Sep 1977.

INSTRUMENTATION.--Water-quality monitor since Mar 1975.

REMARKS.--Interruption in the record was caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1990 to 1999. The standard error of estimate for dissolved solids is 7%, chloride is 17%, sulfate is 13% and for hardness is 7%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,370 microsiemens, Sep 22, 1964; minimum, 96 microsiemens, Mar 29, 1989.
PH: Maximum, 9.6 units, Aug 11-12, 1981; minimum, 5.9 units, Aug 12, 1977.
WATER TEMPERATURE: Maximum, 37.0°C, Jul 4, 1970, Sep 4, 1978; minimum, 1.0°C, Jan 17, 1978, Nov 24, 1984.
DISSOLVED OXYGEN: Maximum, 19.3 mg/L, Feb 10, 1981; minimum, 0.0 mg/L, Apr 20, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 865 microsiemens, Sep 18; minimum, 106 microsiemens, Jan 30.
PH: Maximum, 9.3 units, Aug 29; minimum, 6.6 units, Jul 17-18.
WATER TEMPERATURE: Maximum, 33.7°C, Aug 4; minimum, 7.6°C, Jan 5-6.
DISSOLVED OXYGEN: Maximum, 10.5 mg/L, Jan 11; minimum, 4.0 mg/L, May 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB										
25...	1230	2010	585	7.8	14.0	7.8	76	2.0	170	51
APR										
28...	1450	1540	565	7.5	25.0	8.0	98	2.7	160	51
JUN										
16...	1445	4700	602	7.6	29.0	6.4	84	2.4	170	47
AUG										
30...	1630	805	774	8.6	32.0	8.6	119	2.7	180	43
SEP										
10...	1850	1280	788	7.8	30.5	6.3	85	2.0	180	51

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
FEB										
25...	59	6.4	44	1	5.7	120	70	48	.52	11
APR										
28...	55	6.8	44	2	5.6	110	66	53	.46	9.5
JUN										
16...	59	5.5	49	2	6.7	120	65	51	.77	7.8
AUG										
30...	62	6.7	82	3	10	140	88	84	1.2	9.0
SEP										
10...	60	7.1	85	3	11	130	91	87	1.3	10

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB										
25...	337	4.12	.025	4.15	.021	.46	.48	.407	.388	1.2
APR										
28...	322	3.02	.012	3.03	.036	.43	.47	.254	.228	.70
JUN										
16...	344	5.19	.043	5.24	.023	.48	.50	.502	.391	1.2
AUG										
30...	458	6.73	.035	6.77	<.020	--	.65	.740	.717	2.2
SEP										
10...	473	8.63	.071	8.70	.028	.71	.74	1.26	1.19	3.7

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1998 TO SEPTEMBER 1999

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1998	178630	342	198	95560	22	10480	35	16710	120
NOV.	1998	473790	286	166	212100	15	19610	28	35960	110
DEC.	1998	565230	384	222	339200	25	38740	39	59770	130
JAN.	1999	236300	328	190	121200	21	13330	33	21200	110
FEB.	1999	418630	315	182	206000	18	20590	31	35410	110
MAR.	1999	133550	472	272	98120	37	13400	50	17960	140
APR.	1999	135200	432	249	90990	32	11600	45	16400	140
MAY	1999	162190	446	257	112700	33	14550	47	20380	140
JUNE	1999	186970	374	217	109300	24	12230	38	19180	130
JULY	1999	55154	506	291	43340	41	6180	54	8010	150
AUG.	1999	26199	765	437	30880	85	6010	88	6200	170
SEPT	1999	31053	726	415	34820	78	6530	82	6910	160
TOTAL		2602896	**	**	1494300	**	173200	**	264100	**
WTD.AVG.		7130	368	213	**	25	**	38	**	120

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	649	595	628	388	315	365	373	368	370	416	374	386
2	670	649	659	369	311	346	368	365	367	374	284	311
3	670	663	666	506	369	409	420	362	381	356	274	304
4	675	668	672	522	282	368	478	357	409	377	359	368
5	686	674	682	343	260	310	518	361	440	---	---	e340
6	729	670	700	314	300	309	365	337	355	---	---	e322
7	691	433	592	312	296	303	462	337	397	359	---	e351
8	433	351	381	296	284	290	349	265	281	443	359	401
9	351	266	307	298	284	292	306	278	287	443	439	441
10	313	260	287	296	292	294	311	279	299	545	441	497
11	351	313	329	342	293	314	283	263	273	552	519	534
12	364	351	361	375	342	359	291	275	285	530	451	479
13	384	363	372	369	174	224	302	291	295	480	466	473
14	393	342	357	301	213	258	324	302	315	479	473	476
15	367	355	361	260	181	216	337	324	330	598	480	532
16	384	367	375	188	169	181	352	336	345	615	599	608
17	402	384	391	213	182	200	371	352	363	624	612	618
18	403	189	267	229	213	223	393	371	383	627	623	625
19	444	226	307	235	229	232	415	393	405	639	627	633
20	467	377	420	274	235	251	436	415	427	641	632	637
21	377	222	265	316	274	299	449	436	444	658	632	643
22	284	232	252	337	316	327	465	451	459	658	408	558
23	306	258	284	359	337	350	481	465	476	446	404	417
24	277	254	264	371	359	365	493	481	488	534	415	475
25	279	255	263	380	371	376	498	489	494	615	534	577
26	311	279	299	378	339	359	---	---	e500	631	512	595
27	316	311	314	344	325	333	---	---	e500	522	499	505
28	328	308	317	339	333	338	500	469	493	496	323	442
29	329	325	327	346	339	343	469	390	427	328	118	204
30	330	326	327	374	346	359	423	389	402	308	106	205
31	387	329	344	---	---	---	428	416	426	296	220	247
MONTH	729	189	399	522	169	306	---	---	391	---	---	458

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	239	210	225	626	620	622	639	604	618	696	675	688
2	241	229	233	628	625	626	640	539	566	705	657	690
3	260	231	246	638	627	631	580	482	554	657	534	597
4	286	260	273	643	638	641	482	309	452	538	529	532
5	305	286	298	640	635	637	309	258	285	537	519	525
6	315	304	310	644	636	639	501	257	336	544	522	531
7	314	307	311	654	644	649	518	384	452	661	544	595
8	333	314	323	670	660	667	415	374	393	661	507	587
9	354	336	345	665	633	647	411	342	371	521	446	472
10	368	354	361	618	595	611	342	335	338	477	426	444
11	512	364	413	629	607	623	335	333	334	452	436	446
12	512	383	429	745	626	696	339	335	337	445	432	435
13	386	372	381	737	410	512	344	339	341	459	441	444
14	376	369	371	427	408	415	417	344	374	492	444	455
15	411	369	392	484	402	449	386	334	369	606	492	562
16	414	408	411	402	334	361	401	334	363	606	458	518
17	410	398	404	337	325	329	440	401	424	458	433	443
18	437	406	412	363	337	352	469	440	457	453	432	437
19	454	437	446	372	363	368	633	466	531	482	453	466
20	460	452	456	363	360	362	659	633	649	461	433	444
21	456	446	451	374	362	368	659	648	652	508	409	457
22	446	444	445	386	374	378	656	653	655	495	324	366
23	458	446	452	580	386	481	655	640	646	358	344	352
24	571	458	532	607	580	599	640	598	613	349	342	344
25	595	571	585	589	509	544	606	586	601	361	349	356
26	606	595	601	523	475	499	586	560	569	376	355	363
27	625	612	617	516	508	513	560	544	549	382	368	374
28	628	622	625	559	515	531	568	547	555	413	382	394
29	---	---	---	575	559	570	612	568	583	465	375	418
30	---	---	---	573	563	566	688	612	646	461	324	414
31	---	---	---	604	573	590	---	---	---	325	312	319
MONTH	628	210	405	745	325	531	688	257	487	705	312	467

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	324	312	318	418	396	412	733	725	727	803	793	796
2	313	309	312	417	372	392	734	726	730	805	787	794
3	385	303	342	377	373	376	732	724	726	791	783	787
4	316	301	306	411	373	380	746	732	742	790	759	773
5	341	316	329	477	411	457	747	739	743	766	752	757
6	395	341	366	481	472	475	756	740	746	780	766	774
7	422	395	409	529	481	503	755	750	752	793	780	785
8	432	422	428	572	529	555	766	755	759	795	782	788
9	445	431	437	597	572	586	768	761	764	809	785	794
10	448	440	443	599	586	592	767	763	765	800	778	787
11	458	448	455	612	553	582	789	767	777	803	795	800
12	483	---	e460	656	605	633	802	789	795	803	764	784
13	460	---	e453	659	634	653	791	766	779	769	757	762
14	474	457	465	641	439	568	769	762	765	778	769	773
15	---	---	e517	534	341	469	780	769	774	781	770	775
16	598	555	586	345	326	336	780	765	774	781	676	740
17	555	277	395	328	315	320	772	762	766	786	676	730
18	355	275	323	374	328	352	791	772	783	865	667	788
19	448	355	405	433	374	400	789	768	779	695	645	666
20	442	389	415	474	433	459	769	765	767	733	695	715
21	424	378	404	474	450	459	773	767	770	754	733	746
22	527	376	439	478	450	460	788	773	779	753	623	703
23	544	526	537	517	478	497	795	788	791	623	583	596
24	542	526	531	560	517	537	794	786	790	637	613	628
25	538	142	327	595	560	577	797	784	792	613	581	589
26	291	149	224	631	595	612	799	792	796	583	575	579
27	423	291	335	655	631	642	797	771	788	586	576	581
28	511	423	481	676	655	663	771	719	740	601	576	587
29	504	354	422	694	676	684	736	716	725	647	600	623
30	396	346	363	714	694	703	777	736	756	673	647	663
31	---	---	---	726	714	721	796	777	787	---	---	---
MONTH	---	---	408	726	315	518	802	716	765	865	575	722

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.0	7.7	7.8	7.3	7.1	7.2	7.9	7.8	7.8	8.1	8.0	8.0
2	8.0	7.8	7.9	7.2	7.1	7.2	7.9	7.9	7.9	8.0	7.9	7.9
3	8.2	7.9	8.0	7.3	7.2	7.3	8.0	7.9	8.0	8.0	7.8	7.9
4	8.2	7.8	8.0	7.4	7.3	7.4	8.1	7.9	8.0	7.9	7.7	7.8
5	8.2	7.9	8.1	7.5	7.4	7.4	8.1	7.9	8.0	---	---	---
6	8.1	7.6	7.9	7.4	7.4	7.4	8.0	7.9	7.9	---	---	---
7	7.6	7.4	7.4	7.4	7.4	7.4	8.1	7.9	8.0	8.0	7.9	7.9
8	7.5	7.4	7.5	7.5	7.4	7.4	8.0	7.9	8.0	7.8	7.4	7.7
9	7.8	7.5	7.6	7.4	7.3	7.4	8.0	7.9	8.0	7.8	7.7	7.7
10	7.9	7.6	7.8	7.4	7.3	7.4	8.0	7.9	8.0	7.7	7.6	7.7
11	7.7	7.7	7.7	7.4	7.4	7.4	8.1	8.0	8.1	7.6	7.5	7.6
12	7.7	7.6	7.7	7.4	7.4	7.4	8.2	8.1	8.2	7.8	7.4	7.6
13	7.7	7.6	7.7	7.4	7.3	7.3	8.1	8.0	8.0	8.0	7.7	7.9
14	7.9	7.6	7.7	7.6	7.3	7.4	8.0	7.9	8.0	8.0	7.9	8.0
15	7.9	7.8	7.8	7.7	7.5	7.6	8.2	8.2	8.2	7.9	7.8	7.9
16	7.9	7.8	7.8	7.9	7.6	7.7	8.2	8.1	8.2	8.0	7.9	7.9
17	7.9	7.8	7.8	7.9	7.7	7.8	7.9	7.9	7.9	8.0	7.9	7.9
18	8.0	7.1	7.6	7.8	7.7	7.8	8.1	8.0	8.1	8.0	7.8	8.0
19	7.6	7.3	7.4	7.8	7.4	7.6	7.8	7.8	7.8	8.1	7.9	8.0
20	7.6	7.5	7.5	7.4	7.1	7.3	7.8	7.8	7.8	8.0	7.9	8.0
21	7.8	7.5	7.7	7.1	7.0	7.1	8.0	8.0	8.0	8.1	7.9	8.0
22	7.6	7.5	7.6	7.1	7.0	7.1	8.0	8.0	8.0	8.0	7.5	7.8
23	7.5	7.4	7.5	7.1	7.0	7.0	7.8	7.7	7.8	7.6	7.5	7.5
24	7.5	7.4	7.5	7.3	7.0	7.1	7.8	7.8	7.8	7.8	7.5	7.6
25	7.5	7.3	7.4	7.3	7.0	7.1	7.8	7.7	7.8	7.9	7.7	7.8
26	7.4	7.2	7.3	7.2	6.9	7.0	8.0	7.9	8.0	7.8	7.7	7.8
27	7.2	7.1	7.2	7.4	7.0	7.3	8.0	7.9	8.0	8.0	7.7	7.8
28	7.2	7.1	7.1	7.6	7.4	7.5	7.7	7.6	7.6	8.0	7.6	7.9
29	7.2	7.1	7.1	7.7	7.5	7.5	7.9	7.7	7.8	7.8	7.6	7.7
30	7.4	7.1	7.2	7.7	7.5	7.6	8.0	7.9	8.0	7.8	7.2	7.4
31	7.3	7.2	7.3	---	---	---	8.1	7.8	8.0	7.5	7.4	7.5
MONTH	8.2	7.1	7.6	7.9	6.9	7.4	8.2	7.6	8.0	---	---	---

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	7.4	7.6	8.1	7.8	8.0	7.7	7.6	7.7	7.2	7.1	7.1
2	8.0	7.8	7.9	8.2	7.9	8.0	7.7	7.6	7.6	7.2	7.1	7.2
3	7.9	7.9	7.9	8.1	7.9	8.0	7.6	7.6	7.6	7.2	7.1	7.1
4	7.9	7.7	7.8	8.1	8.0	8.0	7.6	7.4	7.5	7.1	7.1	7.1
5	7.8	7.7	7.8	8.0	7.9	7.9	7.6	7.5	7.5	7.2	7.1	7.1
6	7.8	7.7	7.8	8.0	7.8	7.9	7.5	7.1	7.4	7.3	7.2	7.2
7	7.9	7.7	7.8	8.1	7.9	8.0	7.2	7.1	7.2	7.3	7.2	7.3
8	7.7	7.7	7.7	8.0	7.9	8.0	7.2	7.1	7.2	7.2	7.1	7.1
9	7.7	7.7	7.7	7.9	7.7	7.8	7.2	7.2	7.2	7.2	7.1	7.1
10	7.7	7.5	7.6	7.8	7.5	7.6	7.2	7.2	7.2	7.3	7.2	7.2
11	7.5	7.5	7.5	7.6	7.5	7.6	7.3	7.2	7.3	7.3	7.2	7.2
12	7.7	7.5	7.6	7.6	7.3	7.5	7.3	7.2	7.3	7.3	7.2	7.2
13	7.6	7.4	7.5	7.3	7.2	7.2	7.3	7.2	7.3	7.6	7.3	7.4
14	7.9	7.4	7.5	7.3	7.1	7.2	7.3	7.2	7.3	7.6	7.6	7.6
15	7.5	7.3	7.4	7.6	7.2	7.3	7.3	7.2	7.2	7.7	7.6	7.6
16	7.3	7.2	7.2	7.4	7.2	7.3	7.3	7.2	7.2	7.6	7.6	7.6
17	7.3	7.1	7.2	7.4	7.2	7.3	7.4	7.3	7.3	7.7	7.6	7.6
18	7.6	7.1	7.4	7.3	7.2	7.3	7.5	7.4	7.4	7.7	7.7	7.7
19	7.7	7.6	7.7	7.3	7.2	7.3	7.7	7.5	7.6	7.7	7.7	7.7
20	7.8	7.7	7.8	7.4	7.3	7.4	7.8	7.7	7.7	7.7	7.7	7.7
21	7.8	7.8	7.8	7.6	7.3	7.4	7.7	7.6	7.6	7.7	7.7	7.7
22	7.8	7.7	7.7	7.6	7.3	7.5	7.6	7.5	7.6	7.7	7.6	7.7
23	7.8	7.8	7.8	7.7	7.5	7.6	7.6	7.5	7.6	7.7	7.6	7.7
24	7.9	7.8	7.8	7.7	7.5	7.6	7.6	7.5	7.5	7.7	7.7	7.7
25	7.9	7.9	7.9	7.5	7.4	7.5	7.6	7.5	7.6	7.8	7.7	7.7
26	7.9	7.9	7.9	7.5	7.3	7.4	7.6	7.5	7.6	7.8	7.7	7.8
27	8.0	7.8	7.9	7.5	7.4	7.5	7.7	7.5	7.6	7.9	7.7	7.8
28	8.0	7.8	7.9	7.6	7.5	7.5	7.6	7.1	7.5	7.8	7.8	7.8
29	---	---	---	7.6	7.4	7.5	7.5	7.1	7.3	7.9	7.8	7.8
30	---	---	---	7.6	7.5	7.6	7.4	7.2	7.2	7.8	7.7	7.8
31	---	---	---	7.7	7.4	7.6	---	---	---	7.8	7.7	7.8
MONTH	8.0	7.1	7.7	8.2	7.1	7.6	7.8	7.1	7.4	7.9	7.1	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.8	7.8	7.4	7.0	7.1	8.1	7.3	7.6	8.0	7.6	7.8
2	7.8	7.8	7.8	7.2	7.0	7.1	8.1	7.3	7.5	7.7	7.5	7.6
3	7.9	7.8	7.8	7.3	7.0	7.1	7.7	7.3	7.5	7.8	7.4	7.6
4	7.9	7.8	7.9	7.3	7.1	7.1	8.1	7.3	7.6	7.5	7.3	7.4
5	7.9	7.8	7.8	7.4	7.2	7.3	8.0	7.3	7.6	7.6	7.3	7.4
6	7.9	7.8	7.8	7.5	7.1	7.3	7.9	7.4	7.5	7.6	7.3	7.4
7	8.0	7.8	7.9	7.4	7.2	7.3	8.0	7.4	7.6	7.6	7.3	7.4
8	8.0	7.9	7.9	7.5	7.3	7.4	8.0	7.4	7.6	7.6	7.4	7.5
9	8.1	7.9	8.0	7.6	7.4	7.5	7.9	7.4	7.6	7.8	7.5	7.5
10	8.0	7.9	8.0	7.7	7.4	7.6	7.9	7.4	7.6	7.9	7.5	7.6
11	8.0	7.8	7.9	7.7	7.2	7.4	8.0	7.4	7.6	8.0	7.6	7.9
12	---	---	7.8	7.6	7.5	7.5	---	---	---	8.0	7.6	7.9
13	8.0	---	7.8	7.6	7.3	7.5	8.1	7.3	7.9	8.0	7.8	8.0
14	8.1	7.5	7.8	7.6	6.8	7.3	8.1	7.7	8.0	8.0	7.6	7.9
15	---	---	---	7.4	6.8	7.1	8.2	7.2	7.9	8.1	7.6	7.9
16	7.9	7.8	7.9	7.3	6.7	7.0	8.2	7.3	8.0	8.1	7.6	7.9
17	7.8	7.6	7.7	7.2	6.6	7.0	8.3	7.4	8.0	8.2	7.8	8.0
18	7.8	7.6	7.7	7.3	6.6	7.0	8.3	7.5	8.1	8.2	7.9	8.1
19	7.9	7.6	7.8	7.4	6.7	7.1	8.3	7.3	8.0	8.2	7.7	8.0
20	7.9	7.8	7.8	7.4	6.8	7.1	8.3	7.3	8.0	8.0	7.7	7.9
21	7.9	7.8	7.9	7.4	6.8	7.2	8.4	7.6	8.1	8.1	7.9	8.0
22	7.9	7.8	7.8	7.4	6.9	7.2	8.4	7.8	8.2	8.1	8.0	8.0
23	7.9	7.8	7.9	7.4	7.0	7.3	8.4	8.1	8.3	8.1	7.9	8.0
24	7.9	7.8	7.8	7.6	7.2	7.4	8.4	7.6	8.2	8.2	8.0	8.1
25	7.9	7.7	7.8	7.7	7.4	7.5	8.4	7.5	8.2	8.3	8.1	8.2
26	7.7	7.6	7.6	7.6	7.3	7.5	8.4	7.6	8.2	8.3	8.2	8.3
27	7.7	7.5	7.6	7.6	7.3	7.5	8.5	7.6	8.3	8.4	8.2	8.3
28	7.8	7.6	7.7	7.7	7.3	7.5	9.1	8.4	8.8	8.4	8.2	8.3
29	7.8	7.6	7.7	8.2	7.3	7.7	9.3	8.6	9.0	8.5	8.3	8.4
30	7.9	7.1	7.6	8.1	7.4	7.6	9.0	8.4	8.8	8.4	8.3	8.4
31	---	---	---	8.1	7.4	7.6	8.4	7.8	8.2	---	---	---
MONTH	---	---	---	8.2	6.6	7.3	---	---	---	8.5	7.3	7.9

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	30.4	29.1	29.8	22.4	21.5	22.2	18.7	18.3	18.5	11.3	10.4	10.6
2	29.9	29.0	29.3	21.5	20.8	21.2	18.4	18.2	18.3	11.8	11.1	11.6
3	29.1	28.4	28.7	21.1	20.4	20.7	18.5	18.1	18.2	11.1	9.3	9.8
4	29.1	28.2	28.6	20.8	19.6	20.1	19.2	18.4	18.7	9.3	---	9.0
5	28.5	27.9	28.3	19.6	19.0	19.3	19.6	19.2	19.4	---	7.6	8.0
6	28.3	26.6	27.2	19.0	18.1	18.5	19.2	19.1	19.2	---	7.6	7.7
7	26.6	24.6	25.7	18.1	17.1	17.5	19.4	18.9	19.1	---	---	---
8	24.6	22.8	23.5	17.2	17.0	17.0	18.9	17.8	18.3	11.0	9.5	10.3
9	22.8	20.8	21.7	17.7	16.9	17.3	17.8	16.7	17.3	10.8	10.1	10.4
10	21.1	20.3	20.7	18.2	17.7	17.9	16.7	14.2	15.4	10.3	9.6	9.9
11	21.4	20.7	21.1	17.7	17.1	17.4	14.2	12.6	13.1	10.2	9.7	10.0
12	22.2	21.3	21.7	17.1	16.1	16.8	12.6	11.7	12.2	10.9	9.8	10.4
13	22.9	21.9	22.4	16.1	14.0	14.5	11.7	10.9	11.1	11.2	10.8	10.9
14	23.0	22.0	22.5	15.0	14.3	14.6	11.3	10.7	10.8	11.0	10.4	10.7
15	23.1	22.1	22.6	15.0	14.3	14.8	11.1	10.6	10.9	10.9	10.0	10.4
16	23.8	22.6	23.2	15.1	14.5	14.8	11.3	10.9	11.1	11.4	10.3	10.8
17	23.7	23.4	23.5	15.6	15.0	15.4	11.5	11.1	11.3	12.6	11.4	12.0
18	23.4	21.9	22.5	16.4	15.7	16.1	11.5	11.3	11.4	12.7	12.0	12.3
19	22.0	21.5	21.7	16.8	16.4	16.6	11.7	11.4	11.5	13.0	12.0	12.5
20	22.2	22.0	22.1	16.9	16.5	16.8	12.2	11.6	11.9	13.9	12.7	13.3
21	22.0	20.5	21.1	16.5	16.1	16.3	12.7	12.2	12.5	15.3	13.9	14.7
22	20.5	20.0	20.2	16.1	15.8	15.9	12.6	12.2	12.5	15.4	14.4	15.0
23	20.0	19.0	19.3	16.0	15.7	15.9	12.2	10.9	11.5	14.3	13.7	14.0
24	19.4	18.7	19.0	16.4	16.0	16.1	10.8	9.5	10.1	14.1	13.3	13.7
25	19.6	19.1	19.4	17.3	16.4	16.9	---	---	---	14.5	13.6	14.1
26	20.0	19.3	19.7	17.9	17.3	17.6	---	---	---	15.0	14.1	14.5
27	20.7	19.9	20.3	18.0	17.7	17.8	---	---	---	15.3	14.5	14.9
28	21.4	20.6	21.0	18.1	17.6	17.9	9.6	9.6	9.3	16.6	15.2	15.7
29	22.0	21.3	21.7	18.4	18.0	18.2	10.0	9.5	9.7	16.7	16.2	16.5
30	22.6	21.7	22.1	19.0	18.4	18.6	10.0	9.5	9.8	16.3	15.8	16.1
31	22.8	22.1	22.4	---	---	---	10.4	10.4	10.1	15.8	15.0	15.2
MONTH	30.4	18.7	23.0	22.4	14.0	17.4	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.0	13.9	14.3	17.4	16.1	16.8	17.6	17.2	17.4	25.6	24.7	25.1
2	13.9	13.4	13.6	18.3	17.2	17.7	18.0	17.5	17.7	25.0	24.2	24.6
3	13.4	13.2	13.2	18.0	17.1	17.5	18.6	18.0	18.2	24.5	23.8	24.1
4	13.9	13.2	13.5	17.6	16.5	17.0	18.7	17.9	18.1	24.7	24.0	24.3
5	14.3	13.8	14.1	17.5	16.9	17.2	19.5	18.7	19.1	25.5	24.1	24.7
6	14.8	14.3	14.5	18.2	17.0	17.6	19.9	18.9	19.4	25.0	24.3	24.6
7	15.3	14.8	15.0	17.8	17.0	17.4	20.0	19.6	19.8	24.8	23.8	24.3
8	15.6	15.3	15.4	17.2	16.7	16.9	21.0	19.9	20.3	24.3	23.5	23.9
9	15.9	15.6	15.7	17.4	16.2	16.8	21.7	20.8	21.2	24.2	23.5	23.8
10	15.9	15.9	15.9	17.1	16.4	16.7	22.0	21.5	21.8	24.1	23.2	23.8
11	16.2	15.9	16.1	17.8	16.9	17.3	22.3	21.4	21.8	23.8	22.8	23.2
12	16.3	15.9	16.2	17.8	17.0	17.3	22.4	21.3	21.9	24.3	23.2	23.7
13	15.9	15.2	15.5	17.0	14.3	15.6	22.2	21.7	22.0	24.6	23.3	24.0
14	15.2	14.5	14.8	14.3	13.2	13.6	22.8	21.7	22.1	25.2	23.9	24.5
15	14.8	14.1	14.5	14.1	13.3	13.7	22.3	20.8	21.6	25.5	24.7	25.1
16	14.9	14.5	14.7	13.9	12.9	13.4	20.8	19.8	20.4	25.8	25.1	25.4
17	15.1	14.5	14.8	12.9	12.3	12.7	19.9	19.1	19.5	26.3	25.4	25.8
18	15.2	14.4	14.8	14.3	12.9	13.7	19.9	18.6	19.2	25.7	25.1	25.3
19	15.3	14.5	14.9	14.9	14.3	14.7	21.0	19.1	20.0	26.1	24.8	25.3
20	14.8	14.2	14.6	15.9	14.9	15.4	22.2	20.6	21.3	26.0	25.1	25.5
21	14.3	13.6	13.9	16.5	15.3	15.9	22.7	21.4	22.0	26.2	25.2	25.7
22	13.8	13.1	13.5	16.9	15.8	16.4	23.4	22.0	22.7	25.3	24.1	24.7
23	---	---	---	17.5	16.6	17.0	24.9	22.9	23.8	25.8	24.8	25.3
24	14.3	13.1	13.7	18.4	17.5	17.9	25.8	24.2	24.9	26.5	25.4	25.9
25	14.9	13.8	14.3	18.7	18.0	18.3	25.5	24.8	25.2	26.7	25.9	26.3
26	16.0	14.9	15.5	18.7	17.6	18.2	25.1	23.9	24.5	27.0	26.3	26.6
27	17.0	16.0	16.5	18.2	17.7	17.9	24.9	23.3	24.1	26.8	26.2	26.5
28	17.1	16.1	16.6	18.3	17.6	17.9	25.5	23.8	24.6	26.4	25.9	26.1
29	---	---	---	18.2	17.6	18.0	25.9	24.6	25.2	26.3	25.7	26.0
30	---	---	---	17.6	17.1	17.3	26.0	24.9	25.4	26.1	25.1	25.8
31	---	---	---	17.6	17.1	17.3	---	---	---	25.2	24.8	25.0
MONTH	---	---	---	18.7	12.3	16.5	26.0	17.2	21.5	27.0	22.8	25.0

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	25.0	25.4	30.7	29.8	30.2	33.3	31.8	32.5	31.0	30.2	30.6
2	26.6	25.8	26.1	31.2	29.9	30.5	33.4	31.9	32.7	30.3	29.5	30.0
3	27.0	26.3	26.7	31.3	30.0	30.6	33.3	32.3	32.9	30.4	29.3	29.8
4	26.5	26.1	26.3	31.6	30.2	30.8	33.7	32.0	32.8	30.5	29.6	30.0
5	27.4	26.5	26.9	31.4	30.3	30.8	33.2	31.8	32.6	31.0	29.7	30.3
6	27.8	27.2	27.5	32.0	30.4	31.0	33.3	32.0	32.6	31.2	30.3	30.6
7	28.4	27.5	28.0	32.1	30.1	31.1	33.5	32.0	32.7	31.6	30.4	30.9
8	28.6	28.0	28.3	32.3	30.5	31.4	33.6	32.2	32.9	31.3	30.6	30.9
9	28.6	28.1	28.4	32.2	30.6	31.5	33.5	32.2	32.9	31.1	30.1	30.7
10	29.0	28.2	28.5	32.2	30.8	31.4	33.3	32.1	32.8	30.5	29.5	30.1
11	29.1	28.2	28.6	31.3	30.2	30.5	33.2	32.0	32.7	30.1	28.8	29.4
12	---	27.9	---	30.4	29.8	30.0	33.0	31.9	32.4	30.1	28.5	29.3
13	28.7	---	28.0	30.6	29.4	29.9	33.0	31.8	32.4	29.5	28.6	29.0
14	29.2	27.8	28.5	30.4	29.7	30.0	33.2	32.2	32.6	29.1	27.9	28.4
15	---	---	---	30.1	29.3	29.8	33.2	31.9	32.5	28.5	27.2	27.8
16	29.6	28.7	29.1	30.1	28.9	29.4	32.7	31.4	32.0	27.8	26.6	27.3
17	29.4	26.6	27.6	30.8	29.4	30.0	32.3	31.1	31.7	27.4	26.1	26.9
18	28.6	26.6	27.7	31.4	29.7	30.5	32.5	31.2	31.9	27.3	26.3	26.7
19	29.2	28.0	28.5	31.8	30.2	30.9	33.0	31.4	32.2	27.5	26.1	26.8
20	29.4	28.5	28.9	31.8	30.3	31.0	33.0	31.7	32.3	27.9	26.1	27.0
21	29.7	28.6	29.2	31.3	30.1	30.8	32.7	31.5	32.0	27.5	26.1	26.7
22	29.6	29.1	29.3	31.5	29.9	30.7	32.5	31.6	32.0	26.2	24.9	25.6
23	30.0	28.6	29.2	32.2	30.3	31.3	32.1	31.4	31.7	25.3	24.0	24.7
24	30.4	29.0	29.6	32.8	30.9	31.8	32.3	31.3	31.7	25.0	23.8	24.4
25	29.8	25.4	27.2	33.0	31.3	32.2	32.7	31.4	32.0	24.5	24.1	24.3
26	28.7	25.5	26.9	33.2	31.7	32.4	32.9	31.5	32.2	25.2	24.1	24.6
27	29.8	28.2	28.9	33.3	31.7	32.5	32.7	31.9	32.2	25.7	24.8	25.2
28	30.5	29.5	29.9	33.4	31.9	32.7	32.6	31.4	32.0	26.2	25.3	25.7
29	30.3	29.7	30.0	33.4	31.9	32.7	32.6	31.6	32.1	25.7	24.3	25.0
30	30.6	29.6	30.1	33.2	31.8	32.6	32.0	31.2	31.5	24.7	23.6	24.1
31	---	---	---	33.2	31.8	32.5	31.7	30.6	31.1	---	---	---
MONTH	---	---	---	33.4	28.9	31.1	33.7	30.6	32.3	31.6	23.6	27.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.0	6.1	6.9	6.9	6.2	6.6	7.6	7.3	7.5	8.1	7.3	7.8
2	7.3	6.3	6.7	6.7	6.2	6.4	7.6	7.2	7.4	7.5	5.7	6.5
3	7.1	6.0	6.4	6.9	6.1	6.6	7.4	6.7	7.2	7.0	5.6	6.4
4	6.8	5.8	6.3	6.1	4.1	4.9	7.1	6.7	6.9	7.5	6.6	7.0
5	7.2	5.8	6.4	4.8	4.2	4.3	6.8	5.9	---	---	---	---
6	6.8	---	6.3	5.0	4.4	4.6	6.8	6.0	6.5	---	---	---
7	---	---	---	5.1	4.5	4.8	6.2	4.4	---	---	---	---
8	---	---	---	6.7	5.0	5.7	4.5	4.2	---	9.8	9.3	9.5
9	---	---	---	7.8	6.6	7.3	---	---	---	9.8	9.4	9.6
10	---	---	---	7.8	7.2	7.5	---	---	---	9.9	9.6	9.8
11	---	---	---	8.0	7.1	7.5	---	---	---	10.5	9.9	10.2
12	---	---	---	8.4	7.7	8.1	---	---	---	---	9.1	10.1
13	---	---	---	9.2	8.2	8.8	---	---	---	9.5	8.9	9.2
14	---	---	---	8.5	7.7	8.0	---	---	---	9.6	9.3	9.5
15	7.0	6.7	6.8	8.1	7.4	7.7	---	---	---	9.7	9.3	9.5
16	7.2	6.9	7.0	8.3	7.3	7.7	---	---	---	9.7	9.3	9.5
17	7.3	7.0	7.1	7.3	6.5	6.8	---	---	---	9.9	9.2	9.5
18	7.5	6.4	6.8	6.9	6.0	6.4	---	---	---	9.9	9.4	9.6
19	7.5	6.5	6.9	---	---	---	---	---	---	10.2	9.6	9.9
20	7.5	5.3	6.2	---	---	---	---	---	---	10.3	9.6	9.9
21	5.6	4.9	5.1	---	---	---	---	---	---	10.4	9.6	10.0
22	5.6	5.0	5.2	---	---	---	---	---	---	9.7	8.3	9.0
23	5.2	4.7	4.9	---	---	---	---	---	---	8.6	8.3	8.4
24	4.8	4.6	4.7	---	---	---	---	---	---	9.6	8.4	9.1
25	4.7	4.6	4.6	---	---	---	---	---	---	10.1	9.3	9.6
26	5.2	4.6	4.9	---	---	---	---	---	---	9.6	9.1	9.3
27	6.3	---	5.5	---	---	---	---	---	---	---	7.8	8.3
28	6.4	5.9	6.1	---	---	---	---	---	---	---	---	---
29	7.1	5.9	6.5	---	---	---	---	---	---	---	---	---
30	7.5	6.7	7.1	---	---	---	---	---	---	---	---	---
31	6.9	6.5	6.7	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.2	7.0	7.6	9.4	9.1	9.3	6.0	5.3	5.6
2	---	---	---	8.0	6.9	7.4	9.6	8.9	9.2	5.8	5.2	5.5
3	---	---	---	7.9	6.9	7.4	9.3	9.0	9.2	5.7	5.3	5.5
4	---	---	---	8.0	6.6	7.3	9.4	7.0	8.9	5.8	5.3	5.5
5	---	---	---	7.3	6.6	7.1	7.3	5.7	6.7	6.0	5.4	5.7
6	---	---	---	7.5	6.5	6.9	7.3	6.3	6.8	6.8	6.0	6.3
7	---	---	---	7.6	6.7	7.0	7.3	6.2	6.7	6.6	5.6	6.2
8	---	---	---	7.2	6.7	6.9	6.8	6.2	6.5	6.2	5.5	5.7
9	---	---	---	7.5	6.4	6.9	7.1	6.3	6.9	6.1	5.5	5.8
10	---	---	---	---	---	---	7.2	6.5	6.9	6.4	5.8	6.1
11	---	---	---	---	---	---	7.6	6.6	7.1	6.6	6.0	6.3
12	---	---	---	8.6	7.1	7.9	7.8	6.8	7.4	7.0	6.0	6.6
13	---	---	---	7.5	6.7	6.9	7.8	7.0	7.4	7.1	5.8	6.6
14	---	---	---	8.1	7.5	7.9	7.8	6.8	7.3	5.9	5.4	5.7
15	---	---	---	8.2	7.8	8.0	7.2	6.7	6.9	5.6	5.2	5.4
16	---	---	---	8.7	7.9	8.2	7.9	6.8	7.3	5.5	4.9	5.2
17	---	---	---	9.2	8.7	9.0	8.4	7.4	7.8	5.7	5.1	5.3
18	---	---	---	9.2	8.8	9.0	9.1	8.3	8.7	5.7	5.3	5.5
19	8.7	8.3	8.4	9.2	8.8	9.0	9.4	8.3	8.9	6.2	5.3	5.7
20	8.5	8.2	8.4	9.1	8.8	9.0	9.9	8.3	9.1	6.3	5.9	6.1
21	8.8	8.3	8.5	9.2	8.3	8.9	9.3	8.1	8.6	6.2	5.1	5.8
22	8.9	8.5	8.7	9.0	8.3	8.7	8.5	7.5	8.0	5.1	4.4	4.7
23	8.9	8.5	8.7	8.8	8.2	8.5	8.5	7.3	7.9	5.2	5.0	5.1
24	8.8	8.4	8.6	8.5	8.2	8.4	8.5	7.3	7.7	5.2	4.0	4.4
25	8.6	7.8	8.3	8.5	8.1	8.3	8.1	7.1	7.5	6.0	4.3	5.4
26	8.2	7.7	7.9	8.5	8.3	8.5	8.0	7.2	7.5	6.1	5.7	5.9
27	7.8	7.1	7.6	9.0	8.4	8.7	8.8	7.1	7.9	6.4	5.8	6.0
28	7.8	7.0	7.4	9.1	8.8	8.9	8.3	7.2	7.7	6.2	5.8	5.9
29	---	---	---	9.2	8.8	9.0	9.2	7.1	7.9	6.5	5.7	6.2
30	---	---	---	9.3	9.0	9.1	8.0	5.8	6.9	5.8	4.7	5.1
31	---	---	---	9.5	9.1	9.3	---	---	---	5.0	4.6	4.8
MONTH	---	---	---	---	---	---	9.9	5.7	7.8	7.1	4.0	5.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.4	4.7	4.9	6.3	6.0	6.1	7.5	6.3	6.9	7.3	6.0	6.7
2	5.2	4.8	5.0	6.5	5.8	6.2	7.6	6.1	6.8	6.3	5.5	6.1
3	5.4	4.8	5.1	6.5	6.1	6.2	7.1	6.5	6.7	6.0	5.1	5.5
4	5.3	4.9	5.1	6.7	6.0	6.3	7.5	6.1	6.6	5.4	4.7	5.1
5	5.2	4.9	5.1	6.5	5.9	6.1	7.5	6.2	6.8	5.4	4.5	5.0
6	5.1	4.8	5.0	6.6	5.8	6.2	7.7	6.4	6.8	6.1	4.9	5.5
7	5.2	4.7	5.0	6.6	5.8	6.2	7.4	6.3	6.8	6.0	5.1	5.5
8	5.5	5.1	5.3	6.6	5.6	6.1	7.7	6.5	7.0	5.8	5.0	5.4
9	6.0	5.3	5.6	6.1	5.3	5.7	7.6	6.4	6.9	5.7	5.2	5.4
10	5.9	5.4	5.7	6.0	5.2	5.5	7.4	6.4	6.9	---	5.3	---
11	5.8	5.3	5.6	5.6	4.9	5.3	7.6	6.4	7.0	6.7	6.3	6.5
12	---	---	---	5.8	5.2	5.4	7.8	6.5	7.1	6.9	6.2	6.6
13	---	---	---	6.1	5.7	5.9	7.8	6.6	7.0	6.7	6.1	6.4
14	5.9	5.6	5.8	6.4	6.0	6.2	7.3	6.4	6.8	6.9	6.2	6.5
15	---	---	---	6.3	5.8	6.1	7.2	6.0	6.6	7.1	6.3	6.7
16	6.4	6.0	6.2	6.4	6.0	6.2	7.3	6.0	6.6	7.3	6.5	6.9
17	6.3	5.7	6.0	6.6	6.3	6.4	7.5	6.4	6.8	7.4	6.7	7.1
18	6.5	6.1	6.2	6.7	6.4	6.5	7.6	6.5	6.9	7.3	6.8	7.1
19	6.7	6.1	6.3	6.9	6.4	6.6	7.3	6.6	7.0	7.2	6.4	6.8
20	6.6	6.1	6.3	7.2	6.6	6.8	7.5	6.5	6.9	7.0	6.4	6.7
21	6.5	6.1	6.3	7.2	6.6	6.8	7.7	6.3	7.0	7.5	6.5	7.1
22	6.5	6.1	6.3	7.6	6.5	6.9	7.4	6.3	6.9	7.5	6.9	7.2
23	6.3	5.6	6.0	8.1	6.8	7.4	7.3	6.4	6.8	7.6	7.0	7.3
24	6.2	5.7	5.9	8.6	7.2	7.7	7.3	6.4	6.7	8.0	7.1	7.5
25	6.5	5.6	6.0	8.3	7.1	7.6	7.2	6.4	6.7	8.2	7.2	7.6
26	5.6	5.0	5.2	8.0	6.7	7.3	7.4	6.4	6.7	8.3	7.4	7.9
27	5.9	5.2	5.4	7.9	6.3	7.0	7.6	6.2	6.7	8.5	7.6	8.0
28	6.3	5.4	5.8	7.6	6.1	6.7	9.8	6.7	8.4	8.4	7.6	7.8
29	6.2	5.7	6.0	8.4	5.3	6.7	10.4	7.9	9.3	8.7	7.6	8.0
30	6.4	5.9	6.2	8.2	6.7	7.2	8.6	7.2	7.9	8.8	7.9	8.3
31	---	---	---	7.8	6.1	6.8	8.2	6.6	7.3	---	---	---
MONTH	---	---	---	8.6	4.9	6.5	10.4	6.0	7.0	---	4.5	---

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX

LOCATION.--Lat 30°53'03", long 95°46'39", Madison-Walker County line, Hydrologic Unit 12030202, on right bank at downstream side of bridge on U.S. Highways 75 and 190, 0.5 mi upstream from Interstate Highway 45, 1.5 mi downstream from Caney Creek, and 9.5 mi southeast of Madisonville.

DRAINAGE AREA.--321 mi^2.

PERIOD OF RECORD.--Oct 1967 to current year.
Water-quality records.--Chemical data: Jul 1962 to Apr 1964, Jan 1968 to Sep 1974, Oct 1984 to Sep 1987. Biochemical data: Sep 1970 to Sep 1974, Apr 1985 to Jun 1988, Apr 1993 to Sep 1995. Pesticide data: Apr 1985 to Apr 1988. Suspended sediment data: Oct 1984 to Sep 1986. Specific conductance: Oct 1984 to Sep 1987. Water temperature: Oct 1984 to Sep 1987.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 150.00 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good except for estimated daily discharges, which are fair. No known regulation or diversions. Flow may be slightly affected at times by discharge from the flood-detention pools of three floodwater-retarding structures with a combined detention capacity of 1,290 acre-ft. These structures control runoff from 2.71 mi^2 in the upper Caney Creek and Town Branch drainage basins. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 34 ft in May 1922 (discharge unknown), from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 19	0700	6,880	19.70	Dec 12	1300	7,860	19.70
Nov 13	2200	19,500	22.54	Jan 30	0900	6,850	19.34

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	50	20	41	1620	14	15	21	82	6.2	.18	.26
2	.63	625	19	1090	383	13	13	14	34	4.7	.11	.36
3	.57	1510	18	920	132	12	12	11	18	3.6	.15	.43
4	.59	1030	18	631	89	11	15	9.5	12	3.2	.16	.29
5	.55	136	17	157	69	11	50	8.5	8.6	3.0	.17	.25
6	.75	54	17	68	57	10	41	7.4	6.4	12	.18	.30
7	107	35	34	51	50	10	22	6.6	5.1	21	.18	.34
8	57	26	427	42	45	9.9	16	6.5	4.5	11	.17	.34
9	14	21	924	36	41	10	14	6.6	9.9	20	.16	.28
10	5.0	23	1260	31	38	12	11	9.4	24	12	.16	.27
11	2.6	40	4270	27	35	23	9.5	18	28	9.9	.20	.24
12	1.7	49	7030	24	31	18	8.2	23	13	294	.25	.23
13	1.1	7090	3820	22	28	51	7.3	88	12	546	.27	.21
14	.88	9120	1930	20	24	83	11	83	71	441	.26	.19
15	.76	3390	544	18	23	91	222	41	142	113	.21	.17
16	.80	2400	e164	18	21	49	572	23	59	42	.21	.13
17	2.5	1400	e100	17	20	28	219	16	25	22	.22	.11
18	1770	386	72	16	19	19	51	19	14	13	.24	.09
19	5670	136	62	15	18	35	31	22	9.8	17	.24	.08
20	3320	86	63	15	17	172	22	17	7.2	17	.24	.06
21	2100	66	63	14	16	209	18	12	7.0	19	.24	.05
22	1350	53	53	17	15	75	15	9.0	8.0	23	.25	.04
23	780	44	45	77	14	40	13	7.6	4.4	9.7	.27	.03
24	179	37	40	137	13	27	12	6.5	35	5.5	.29	.03
25	64	33	36	59	13	20	11	6.5	23	3.6	.29	.05
26	40	30	32	34	13	17	13	5.7	43	2.6	.28	.06
27	27	27	30	24	13	15	87	5.0	55	2.1	.32	.05
28	20	24	28	21	16	13	176	8.1	25	1.5	.35	.06
29	15	23	27	2160	---	13	70	9.5	13	1.2	.39	.07
30	13	21	25	5430	---	14	34	83	9.0	.93	.34	.07
31	10	---	24	3290	---	14	---	191	---	.59	.28	---
TOTAL	15555.11	27965	21212	14522	2873	1138.9	1811.0	794.4	807.9	1681.32	7.26	5.14
MEAN	502	932	684	468	103	36.7	60.4	25.6	26.9	54.2	.23	.17
MAX	5670	9120	7030	5430	1620	209	572	191	142	546	.39	.43
MIN	.55	21	17	14	13	9.9	7.3	5.0	4.4	.59	.11	.03
AC-FT	30850	55470	42070	28800	5700	2260	3590	1580	1600	3330	14	10
CFSM	1.56	2.90	2.13	1.46	.32	.11	.19	.08	.08	.17	.00	.00
IN.	1.80	3.24	2.46	1.68	.33	.13	.21	.09	.09	.19	.00	.00

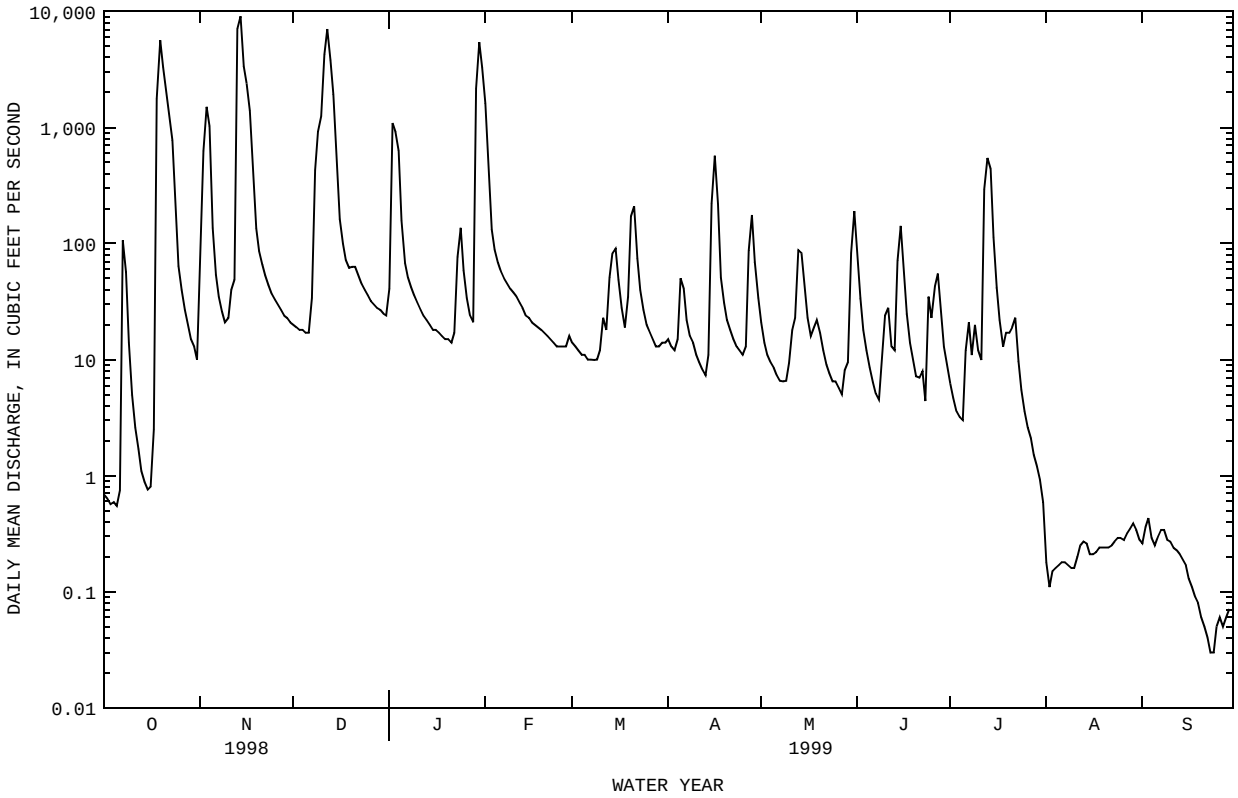
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1999, BY WATER YEAR (WY)

MEAN	217	143	229	323	315	268	246	309	252	22.3	26.3	89.0
MAX	3021	932	983	2015	1580	909	1333	1046	1745	260	266	1551
(WY)	1985	1999	1995	1991	1992	1973	1969	1969	1968	1979	1995	1974
MIN	.000	.025	.22	1.99	5.41	3.13	2.30	2.65	.43	.013	.000	.000
(WY)	1979	1989	1968	1971	1971	1971	1981	1998	1998	1977	1969	1969

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1968 - 1999	
ANNUAL TOTAL	104458.83		88373.03			
ANNUAL MEAN	286		242		203	
HIGHEST ANNUAL MEAN					423	1985
LOWEST ANNUAL MEAN					35.8	1984
HIGHEST DAILY MEAN	9120	Nov 14	9120	Nov 14	23000	Jan 10 1991
LOWEST DAILY MEAN	.00	Jul 9	.03	Sep 23	.00	Aug 31 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 12	.04	Sep 21	.00	Aug 31 1968
INSTANTANEOUS PEAK FLOW			19500	Nov 13	33800	Sep 14 1974
INSTANTANEOUS PEAK STAGE			22.54	Nov 13	25.07	Sep 14 1974
ANNUAL RUNOFF (AC-FT)	207200		175300		146900	
ANNUAL RUNOFF (CFSM)	.89		.75		.63	
ANNUAL RUNOFF (INCHES)	12.11		10.24		8.58	
10 PERCENT EXCEEDS	638		220		405	
50 PERCENT EXCEEDS	13		17		9.0	
90 PERCENT EXCEEDS	.04		.24		.07	

e Estimated



08066170 KICKAPOO CREEK NEAR ONALASKA, TX

LOCATION.--Lat 30°54'25", long 95°05'18", Polk County, Hydrologic Unit 12030202, on right bank 114 ft upstream from old bridge site, 1.2 mi downstream from Magnolia Creek, 6.2 mi upstream from Rocky Creek, 7.3 mi northeast of Onalaska, and 15.9 mi upstream from mouth.

DRAINAGE AREA.--57.0 mi^2.

PERIOD OF RECORD.--Dec 1965 to current year.
Water-quality records.--Chemical data: Dec 1963 to Sep 1974. Biochemical data: Oct 1969 to Sep 1974.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 139.85 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. No known regulation or diversions. Low flow is sustained by wastewater effluent that enters the creek upstream from this station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 19	1400	8,550	20.33	Jan 29	1245	4,220	15.10
Nov 13	0715	21,900	29.16	Jun 25	1200	3,010	13.20
Dec 11	1330	3,060	13.29				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	126	9.5	161	75	6.2	14	2.1	3.1	17	4.5	.51
2	1.8	109	8.6	474	47	5.9	12	2.0	2.4	15	4.3	1.2
3	1.9	33	8.7	60	34	5.6	84	2.1	2.1	13	4.5	1.1
4	2.0	20	27	36	28	5.6	81	2.6	1.9	18	4.0	.71
5	2.0	16	31	31	22	6.2	34	2.8	1.7	28	4.4	.96
6	104	14	16	29	20	5.6	18	2.2	1.6	23	4.9	.76
7	32	13	25	29	18	5.2	11	1.9	1.5	15	5.2	.74
8	8.3	61	62	28	15	5.2	8.8	1.6	1.5	13	5.2	.83
9	4.8	32	25	25	14	4.3	7.3	1.6	2.1	13	3.6	1.1
10	3.5	48	621	23	12	4.4	6.1	28	2.1	12	2.5	1.1
11	2.8	30	1670	22	9.9	4.0	4.9	23	4.9	47	2.2	1.2
12	2.4	762	393	22	8.6	36	4.4	37	5.0	202	2.5	.95
13	2.1	9570	94	21	7.5	658	4.5	11	14	93	2.2	.78
14	1.9	643	48	20	7.4	71	5.5	5.5	21	36	2.3	.77
15	1.8	287	38	20	7.2	25	7.2	3.9	9.5	24	2.6	.81
16	1.9	179	34	20	7.1	15	4.9	3.1	6.8	17	2.7	.75
17	5.0	114	30	20	7.3	12	3.8	2.6	4.7	18	2.6	.71
18	256	90	28	19	7.1	9.9	3.3	3.6	3.4	18	2.5	.70
19	2330	75	33	18	7.1	48	3.1	2.9	2.7	13	1.7	.78
20	e600	60	30	18	6.4	50	2.9	2.6	2.3	11	1.6	.70
21	e180	39	29	18	6.1	21	2.8	2.3	2.1	9.8	1.1	.68
22	e80	31	27	370	5.7	11	2.7	2.1	1.9	8.8	.93	.71
23	e40	26	25	64	6.1	9.0	2.5	1.9	2.3	7.9	.94	.70
24	28	20	27	29	6.8	8.6	2.4	1.7	2.2	7.2	.88	.75
25	21	15	25	24	6.1	130	2.3	2.0	1010	7.0	.98	.80
26	18	13	24	21	6.5	50	4.3	2.3	183	6.9	1.1	.75
27	15	12	23	20	6.4	22	6.5	2.2	67	6.3	.97	.80
28	14	11	23	69	6.9	13	4.2	2.8	40	5.8	1.2	.80
29	13	11	22	2000	---	12	2.9	2.8	28	5.8	.85	8.9
30	12	10	20	416	---	19	2.4	9.7	22	4.9	.86	3.1
31	11	---	20	130	---	18	---	5.2	---	4.9	.61	---
TOTAL	3798.0	12470	3496.8	4257	411.2	1296.7	353.7	177.1	1452.8	721.3	76.42	35.15
MEAN	123	416	113	137	14.7	41.8	11.8	5.71	48.4	23.3	2.47	1.17
MAX	2330	9570	1670	2000	75	658	84	37	1010	202	5.2	8.9
MIN	1.8	10	8.6	18	5.7	4.0	2.3	1.6	1.5	4.9	.61	.51
AC-FT	7530	24730	6940	8440	816	2570	702	351	2880	1430	152	70
CFSM	2.15	7.29	1.98	2.41	.26	.73	.21	.10	.85	.41	.04	.02
IN.	2.48	8.14	2.28	2.78	.27	.85	.23	.12	.95	.47	.05	.02

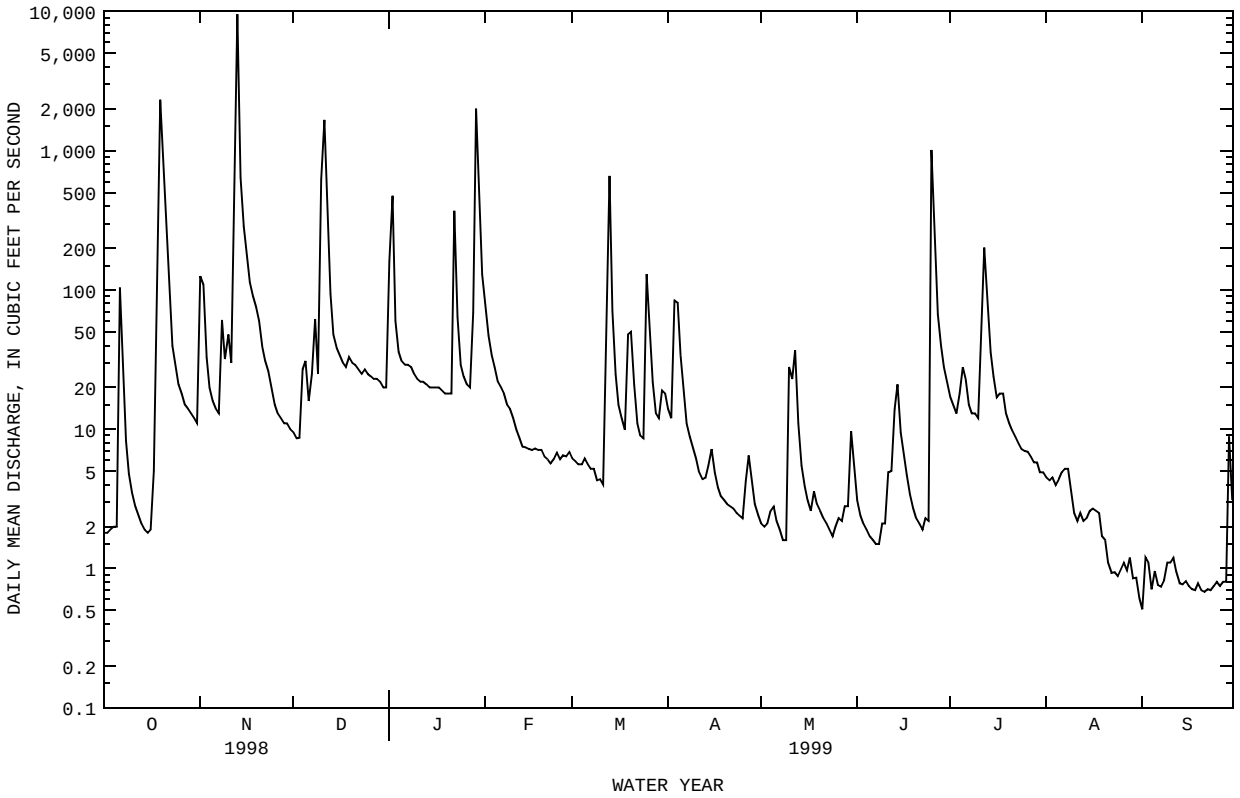
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	74.7	38.1	54.1	79.6	76.1	65.2	57.0	61.0	54.5	11.3	7.00	11.9
MAX	1891	416	177	320	288	236	270	202	365	100	51.4	107
(WY)	1995	1999	1966	1974	1992	1990	1979	1982	1973	1989	1975	1973
MIN	.31	.82	1.72	1.49	1.54	.76	1.13	.86	.31	.083	.32	.37
(WY)	1988	1991	1981	1971	1971	1971	1971	1988	1971	1971	1988	1989

08066170 KICKAPOO CREEK NEAR ONALASKA, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	36958.36		28546.17			
ANNUAL MEAN	101		78.2		49.0	
HIGHEST ANNUAL MEAN					223	1995
LOWEST ANNUAL MEAN					4.63	1971
HIGHEST DAILY MEAN	9570	Nov 13	9570	Nov 13	38800	Oct 17 1994
LOWEST DAILY MEAN	.35	Jul 13	.51	Sep 1	.02	Sep 27 1967
ANNUAL SEVEN-DAY MINIMUM	.37	Jul 8	.71	Sep 17	.02	Sep 27 1967
INSTANTANEOUS PEAK FLOW			21900	Nov 13	84600	Oct 17 1994
INSTANTANEOUS PEAK STAGE			29.16	Nov 13	41.85	Oct 17 1994
ANNUAL RUNOFF (AC-FT)	73310		56620		35490	
ANNUAL RUNOFF (CFSM)	1.78		1.37		.86	
ANNUAL RUNOFF (INCHES)	24.12		18.63		11.68	
10 PERCENT EXCEEDS	124		70		61	
50 PERCENT EXCEEDS	8.3		8.6		3.6	
90 PERCENT EXCEEDS	.66		1.2		.50	

e Estimated



08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX

LOCATION.--Lat 30°38'00", long 95°00'36", Polk-San Jacinto County line, Hydrologic Unit 12030202, at left end of gated spillway at Livingston Dam on Trinity River, 4.4 mi northwest of Goodrich, 7 mi southwest of Livingston, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Sep 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Trinity River Authority). Prior to Feb 26, 1969, temporary nonrecording gages at site about 200 ft upstream and at same datum. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by an earthfill dam 14,400 ft long. The dam was completed Sep 29, 1968, and deliberate impoundment began Jun 26, 1969. The reservoir is operated for industrial water supply in the Houston metropolitan area. The spillway has twelve 40 x 35 ft tainter gates located near the left end of dam. Low-flow releases may be made through multi-gated inlet tower. There are five gated openings at various elevations located in the tower, and all discharge into a 10-foot-diameter concrete conduit through the dam. Flow is affected at times by discharge from the flood-detention pools of 255 floodwater-retarding structures with a combined detention capacity of l84,600 acre-ft. These structures control runoff from 617 mi^2 in the Richland, Chambers, Tehuacana, and Bedias Creeks drainage basins. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	145.0
Design flood	l35.0
Top of tainter gates	134.0
Top of conservation pool	131.0
Crest of spillway (sill of tainter gates)	99.0
Lowest gated outlet (invert)	58.0

COOPERATION.--The capacity table, furnished by the Trinity River Authority, is based on a survey by the Bureau of Reclamation dated Dec 1991.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,081,000 acre-ft, Oct 17, 1994 (elevation, 134.39 ft); minimum since conservation pool capacity was reached on Nov 2, 1971, 1,345,000 acre-ft, Oct 25, 1988 (elevation, 125.22 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,906,000 acre-ft, Nov 14 (elevation, 132.91 ft); minimum contents, 1,523,000 acre-ft, Oct 2, 4-5 (elevation, 128.25 ft).

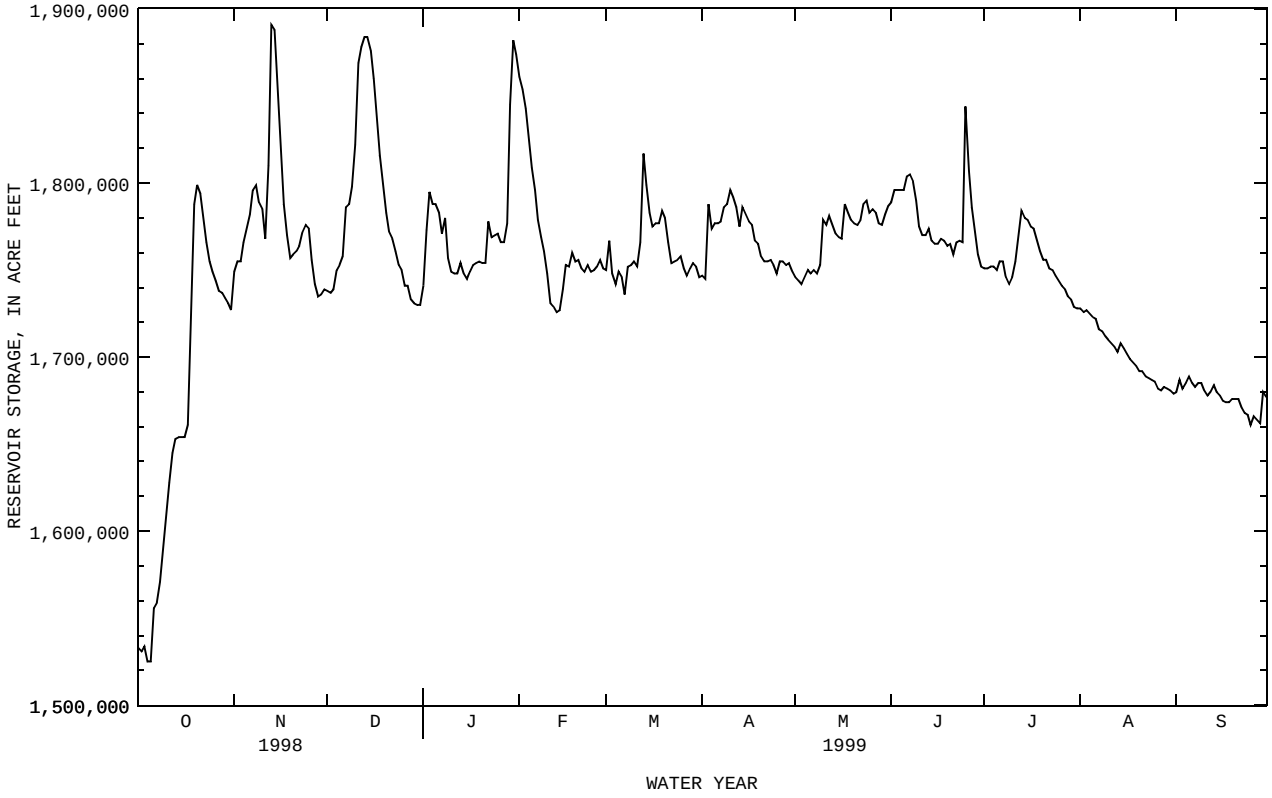
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1533000	1749000	1738000	1741000	1861000	1750000	1747000	1746000	1789000	1751000	1728000	1680000
2	1531000	1755000	1737000	1773000	1854000	1767000	1745000	1744000	1796000	1751000	1726000	1687000
3	1534000	1755000	1739000	1795000	1843000	1748000	1788000	1742000	1796000	1752000	1727000	1682000
4	1525000	1766000	1750000	1788000	1826000	1742000	1774000	1746000	1796000	1752000	1725000	1685000
5	1525000	1774000	1753000	1788000	1809000	1749000	1777000	1750000	1796000	1750000	1723000	1689000
6	1556000	1782000	1758000	1783000	1796000	1746000	1777000	1748000	1804000	1755000	1722000	1685000
7	1559000	1796000	1786000	1771000	1779000	1736000	1778000	1750000	1805000	1755000	1716000	1683000
8	1571000	1799000	1788000	1780000	1769000	1752000	1786000	1748000	1801000	1746000	1715000	1685000
9	1587000	1789000	1798000	1757000	1761000	1753000	1788000	1753000	1790000	1742000	1712000	1685000
10	1606000	1785000	1822000	1749000	1748000	1755000	1796000	1779000	1775000	1746000	1710000	1681000
11	1628000	1768000	1869000	1748000	1731000	1752000	1792000	1776000	1770000	1755000	1708000	1678000
12	1645000	1810000	1878000	1748000	1729000	1766000	1786000	1781000	1770000	1768000	1706000	1680000
13	1653000	1891000	1884000	1754000	1726000	1817000	1775000	1776000	1774000	1784000	1703000	1684000
14	1654000	1888000	1884000	1748000	1727000	1799000	1786000	1771000	1767000	1780000	1708000	1680000
15	1654000	1845000	1876000	1745000	1739000	1783000	1782000	1769000	1765000	1779000	1705000	1678000
16	1654000	1816000	1860000	1749000	1753000	1775000	1778000	1768000	1765000	1775000	1702000	1675000
17	1661000	1788000	1837000	1753000	1752000	1777000	1776000	1788000	1768000	1774000	1699000	1674000
18	1711000	1770000	1816000	1754000	1760000	1777000	1767000	1783000	1767000	1767000	1697000	1674000
19	1788000	1757000	1799000	1755000	1755000	1784000	1765000	1779000	1764000	1761000	1695000	1676000
20	1799000	1759000	1783000	1754000	1756000	1780000	1758000	1777000	1765000	1756000	1692000	1676000
21	1794000	1761000	1772000	1754000	1751000	1766000	1755000	1776000	1759000	1756000	1692000	1676000
22	1781000	1764000	1768000	1778000	1749000	1754000	1755000	1779000	1766000	1751000	1689000	1671000
23	1766000	1772000	1761000	1769000	1753000	1755000	1756000	1788000	1767000	1750000	1688000	1668000
24	1755000	1776000	1753000	1770000	1749000	1756000	1753000	1790000	1766000	1747000	1687000	1667000
25	1749000	1774000	1750000	1771000	1750000	1758000	1748000	1783000	1844000	1744000	1686000	1661000
26	1744000	1756000	1741000	1766000	1752000	1751000	1755000	1785000	1807000	1741000	1682000	1666000
27	1738000	1742000	1741000	1766000	1756000	1747000	1755000	1783000	1786000	1739000	1681000	1664000
28	1737000	1735000	1733000	1777000	1751000	1751000	1753000	1777000	1771000	1735000	1683000	1662000
29	1734000	1736000	1731000	1845000	---	1754000	1754000	1776000	1759000	1733000	1682000	1680000
30	1731000	1739000	1730000	1882000	---	1752000	1749000	1782000	1752000	1729000	1681000	1677000
31	1727000	---	1730000	1874000	---	1746000	---	1787000	---	1728000	1679000	---
MAX	1799000	1891000	1884000	1882000	1861000	1817000	1796000	1790000	1844000	1784000	1728000	1689000
MIN	1525000	1735000	1730000	1741000	1726000	1736000	1745000	1742000	1752000	1728000	1679000	1661000
(+)	130.82	130.97	130.86	132.54	131.11	131.05	131.08	131.53	131.12	130.83	131.23	130.21
(@)	+191000	+12000	-9000	+144000	-123000	-5000	+3000	-38000	-35000	-24000	-49000	-2000

CAL YR 1998 MAX 1898000 MIN 1433000 (@) -95000
WTR YR 1999 MAX 1891000 MIN 1525000 (@) +141000

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued



08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct 1969 to current year.
BIOCHEMICAL DATA: Oct 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

303807095011101 - LIVINGSTON RES SITE AC

DATE	TIME	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
17...	1145	1760000	1.00	230	7.6	16.0	.30	8.2	83	77	15
17...	1147	--	10.0	230	7.6	15.5	--	8.2	82	--	--
17...	1149	--	20.0	230	7.6	15.5	--	8.2	82	--	--
17...	1151	--	30.0	230	7.6	15.5	--	8.2	82	--	--
17...	1153	--	40.0	230	7.6	15.5	--	8.1	81	--	--
17...	1155	--	50.0	230	7.5	15.5	--	8.0	80	--	--
17...	1157	--	60.0	230	7.5	15.5	--	8.0	80	--	--
17...	1159	--	72.0	230	7.5	15.5	--	8.0	80	80	16
SEP											
09...	1148	1690000	1.00	335	8.8	30.5	1.10	6.0	80	100	12
09...	1150	--	10.0	335	8.7	30.0	--	5.4	72	--	--
09...	1152	--	20.0	335	8.6	30.0	--	5.3	70	--	--
09...	1154	--	30.0	335	8.5	29.5	--	4.8	63	--	--
09...	1156	--	40.0	335	8.4	29.5	--	4.6	61	--	--
09...	1158	--	50.0	340	7.7	29.5	--	2.1	28	--	--
09...	1200	--	60.0	340	7.7	29.5	--	2.1	28	--	--
09...	1202	--	70.0	355	7.9	25.5	--	2.0	--	110	10

303807095011101 - LIVINGSTON RES SITE AC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
FEB											
17...	26	2.7	12	.6	3.8	62	23	14	.16	7.5	131
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	27	2.8	12	.6	3.8	64	23	14	<.10	7.7	133
SEP											
09...	34	4.1	23	1	4.7	90	34	24	.29	4.2	182
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	39	4.2	20	.8	4.5	110	32	24	.28	5.5	198

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

303807095011101 - LIVINGSTON RES SITE AC

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB											
17...	--	<.010	.692	<.020	--	.37	.058	.070	.21	43	E1.8
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	.703	<.020	--	.41	.064	.073	.22	29	E1.7
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	.701	<.020	--	.44	.065	.070	.21	22	3.6
SEP											
09...	--	<.010	<.050	<.020	--	.31	.084	.067	.21	<10	16
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.010	<.050	<.020	--	.27	.076	.069	.21	<10	94
09...	--	--	--	--	--	--	--	--	--	--	--
09...	.101	.028	.129	.117	.27	.38	.112	.117	.36	18	272
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	<.010	<.050	1.08	.28	1.4	.726	.760	2.3	350	1210

303821095005001 - LIVINGSTON RES SITE AL

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
FEB								
17...	1210	1.00	230	7.6	16.0	.22	8.2	83
17...	1212	10.0	230	7.5	15.5	--	7.5	75
17...	1214	20.0	230	7.5	15.5	--	7.5	75
17...	1216	30.0	230	7.5	15.5	--	8.0	80
17...	1218	40.0	230	7.5	15.5	--	8.0	80
17...	1220	50.0	230	7.4	15.5	--	7.9	79
17...	1222	58.0	235	7.5	15.5	--	8.0	80
SEP								
09...	1225	1.00	335	8.8	30.5	1.12	5.5	74
09...	1227	10.0	335	8.7	29.5	--	5.1	67
09...	1229	20.0	335	8.7	29.5	--	5.1	67
09...	1231	30.0	335	8.6	29.5	--	4.8	63
09...	1233	40.0	335	8.6	29.5	--	4.7	62
09...	1235	51.0	340	8.0	29.5	--	2.6	34

303935095055401 - LIVINGSTON RES SITE BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)
FEB									
17...	1100	1.00	235	7.5	15.5	.20	8.3	83	--
17...	1102	10.0	235	7.5	15.5	--	8.3	83	--
17...	1104	20.0	235	7.5	15.5	--	8.3	83	--
17...	1106	30.0	235	7.5	15.5	--	8.3	83	--
17...	1108	40.0	235	7.5	15.5	--	8.3	83	--
17...	1110	55.0	235	7.5	15.5	--	8.3	83	--
SEP									
09...	1118	1.00	340	8.9	30.0	.82	6.4	85	--
09...	1120	10.0	340	8.8	30.0	--	6.0	80	--
09...	1122	20.0	340	8.6	30.0	--	5.4	72	--
09...	1124	30.0	340	8.6	30.0	--	5.4	72	--
09...	1126	40.0	340	8.6	30.0	--	5.1	68	--
09...	1128	54.5	340	8.1	29.5	--	3.8	50	99

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

304144095073001 - LIVINGSTON RES SITE CC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB								
17...	1030	1.00	235	7.6	15.5	.20	8.4	84
17...	1032	10.0	235	7.6	15.5	--	8.4	84
17...	1034	20.0	235	7.6	15.5	--	8.4	84
17...	1036	30.0	235	7.6	15.5	--	8.4	84
17...	1038	40.0	235	7.6	15.5	--	8.4	84
17...	1040	52.0	235	7.5	15.5	--	8.2	82
SEP								
09...	1055	1.00	345	8.7	30.0	.80	5.5	73
09...	1057	10.0	345	8.7	30.0	--	5.4	72
09...	1059	20.0	345	8.6	29.5	--	5.1	67
09...	1101	30.0	350	8.5	29.5	--	4.8	63
09...	1103	40.0	350	8.4	29.5	--	4.5	59
09...	1105	51.0	350	8.3	29.5	--	4.3	57

304521095075501 - LIVINGSTON RES SITE DC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
FEB											
17...	0950	1.00	240	7.6	15.5	.20	8.4	85	--	--	--
17...	0952	40.0	240	7.6	15.5	--	8.4	85	--	--	--
17...	0954	40.0	240	7.6	15.5	--	8.4	85	--	--	--
17...	0956	40.0	240	7.6	15.5	--	8.4	85	--	--	--
17...	0958	40.0	245	7.5	15.5	--	8.3	84	--	--	--
17...	1000	54.0	250	7.4	15.5	--	8.0	81	--	--	--
SEP											
09...	1005	1.00	350	8.8	30.0	.70	5.3	70	110	2	36
09...	1007	10.0	350	8.7	30.0	--	5.2	69	--	--	--
09...	1009	20.0	350	8.7	30.0	--	5.2	69	--	--	--
09...	1011	30.0	350	8.6	30.0	--	4.9	65	--	--	--
09...	1013	40.0	355	8.6	30.0	--	4.9	65	--	--	--
09...	1015	50.0	355	8.6	30.0	--	4.8	64	110	6	36

304521095075501 - LIVINGSTON RES SITE DC

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
FEB											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	.632
SEP											
09...	3.9	24	1	4.7	110	34	27	.35	6.1	200	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	3.9	24	1	4.6	100	34	24	.34	6.2	193	--

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

304521095075501 - LIVINGSTON RES SITE DC

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB										
17...	<.010	.687	<.020	--	.41	.062	.069	.21	22	E1.5
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	.017	.649	.034	.37	.41	.057	.064	.20	23	14
SEP										
09...	<.010	<.050	<.020	--	.32	.087	.071	.22	<10	<2.2
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	<.010	<.050	<.020	--	.34	.092	.074	.23	<10	E2.0
09...	--	--	--	--	--	--	--	--	--	--
09...	<.010	<.050	.024	.33	.35	.102	.082	.25	<10	2.3

304453095064901 - LIVINGSTON RES SITE DL

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB								
17...	0925	1.00	245	7.6	15.5	.30	8.5	86
17...	0927	10.0	245	7.6	15.5	--	8.5	86
17...	0929	19.8	245	7.5	15.5	--	8.5	86
SEP								
09...	0922	1.00	340	8.8	30.0	.70	5.9	78
09...	0924	10.0	340	8.8	30.0	--	5.9	78
09...	0926	18.0	340	8.8	30.0	--	5.9	78

304659095052001 - LIVINGSTON RES SITE EC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
FEB									
17...	0900	1.00	245	7.5	15.5	.30	8.6	87	.672
17...	0902	20.0	245	7.5	15.5	--	8.6	87	--
17...	0904	20.0	245	7.4	15.5	--	8.6	87	--
17...	0906	29.5	245	7.3	15.0	--	8.4	84	.657
SEP									
09...	0850	1.00	350	8.7	30.0	.72	5.8	77	--
09...	0852	10.0	350	8.7	30.0	--	5.8	77	--
09...	0854	20.0	350	8.7	30.0	--	5.8	77	--
09...	0856	26.5	350	8.6	30.0	--	5.8	77	--

304659095052001 - LIVINGSTON RES SITE EC

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB									
17...	.011	.683	<.020	.39	.060	.067	.21	34	12
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	.015	.672	<.020	.42	.055	.068	.21	31	8.4
SEP									
09...	<.010	<.050	<.020	.35	.087	.073	.22	<10	3.1
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	<.010	<.050	<.020	.36	.085	.077	.24	<10	6.7

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

304843095104001 - LIVINGSTON RES SITE FC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB								
17...	1420	1.00	270	7.7	16.5	.20	8.4	86
17...	1422	10.0	270	7.7	16.0	--	8.4	85
17...	1424	20.0	270	7.6	15.5	--	8.3	83
17...	1426	30.0	270	7.6	15.5	--	8.2	82
17...	1428	40.0	270	7.6	15.5	--	7.7	77
17...	1430	55.5	270	7.5	15.5	--	7.6	76
SEP								
09...	1340	1.00	375	9.5	32.0	.50	8.1	111
09...	1342	10.0	395	9.1	30.0	--	4.6	61
09...	1344	20.0	395	9.1	30.0	--	4.6	61
09...	1346	30.0	410	8.7	30.0	--	3.0	40
09...	1348	40.0	420	8.5	30.0	--	2.3	31
09...	1350	52.0	420	8.5	30.0	--	2.1	28

305411095144901 - LIVINGSTON RES SITE GC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVFLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
FEB											
17...	1500	1.00	350	7.6	16.0	.15	8.1	82	120	24	41
17...	1502	10.0	355	7.7	15.5	--	8.3	83	--	--	--
17...	1504	20.0	355	7.6	15.5	--	8.1	81	--	--	--
17...	1506	30.0	355	7.6	15.5	--	8.1	81	--	--	--
17...	1508	43.0	360	7.5	15.5	--	8.1	81	120	32	42
SEP											
09...	1420	1.00	510	9.5	32.5	.42	8.2	114	130	8	44
09...	1422	10.0	575	9.2	30.0	--	4.4	59	--	--	--
09...	1424	20.0	600	9.2	30.0	--	4.4	59	--	--	--
09...	1426	30.0	605	9.2	30.0	--	4.4	59	--	--	--
09...	1428	40.0	605	9.2	30.0	--	4.4	59	150	15	52

305411095144901 - LIVINGSTON RES SITE GC

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
FEB											
17...	4.0	21	.8	4.5	94	41	20	.30	9.1	203	1.44
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	1.46
17...	--	--	--	--	--	--	--	--	--	--	--
17...	4.1	21	.8	4.6	90	41	20	.29	8.9	203	1.48
SEP											
09...	4.9	46	2	6.1	120	56	50	.68	9.8	294	.505
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	1.24
09...	--	--	--	--	--	--	--	--	--	--	1.22
09...	5.5	56	2	6.7	140	65	62	.83	9.5	348	1.21

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

305411095144901 - LIVINGSTON RES SITE GC

DATE	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB										
17...	.021	1.47	.027	.40	.42	.139	.132	.40	16	4.9
17...	--	--	--	--	--	--	--	--	--	--
17...	.025	1.49	.033	.40	.43	.127	.137	.42	10	7.5
17...	--	--	--	--	--	--	--	--	--	--
17...	.023	1.51	.030	.45	.48	.131	.137	.42	E6.6	6.7
SEP										
09...	.134	.639	<.020	--	.56	.122	.109	.33	<10	E1.3
09...	--	--	--	--	--	--	--	--	--	--
09...	.279	1.52	.212	.46	.68	.192	.189	.58	<10	12
09...	.277	1.49	.216	.52	.73	.203	.186	.57	<10	17
09...	.277	1.48	.224	.47	.69	.195	.189	.58	<10	33

305447095161401 - LIVINGSTON RES SITE HC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
FEB										
17...	1530	1.00	135	7.2	18.0	.22	8.2	87	.181	.012
17...	1532	20.0	340	7.5	16.0	--	8.0	81	--	--
17...	1534	20.0	340	7.6	15.5	--	8.1	81	--	--
17...	1536	35.0	345	7.6	15.5	--	8.1	81	1.40	.026
SEP										
09...	1450	1.00	415	9.6	32.5	.40	9.1	126	--	.018
09...	1452	10.0	495	9.2	29.5	--	4.0	53	--	--
09...	1454	20.0	525	9.2	29.5	--	4.0	53	--	--
09...	1456	30.0	505	9.0	29.5	--	3.5	46	--	--
09...	1458	37.0	510	9.0	29.5	--	3.4	45	.593	.161

305447095161401 - LIVINGSTON RES SITE HC

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB									
17...	.193	.053	.46	.51	E.044	.043	.13	41	9.3
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	1.42	.035	.43	.46	.124	.134	.41	15	8.0
SEP									
09...	<.050	<.020	--	.40	.071	.064	.20	<10	9.8
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	.754	.227	.43	.66	.140	.123	.38	<10	105

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

305135095193601 - LIVINGSTON RES SITE IC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB								
18...	1000	1.00	360	7.5	15.5	.22	8.2	83
18...	1002	10.0	360	7.5	15.5	--	8.2	83
18...	1004	20.0	360	7.5	15.5	--	8.2	83
18...	1006	30.0	360	7.5	15.5	--	8.2	83
18...	1008	38.0	360	7.4	15.5	--	8.2	83
SEP								
10...	0832	1.00	730	7.7	31.0	.70	5.1	69
10...	0834	10.0	730	7.7	30.5	--	5.1	68
10...	0836	20.0	730	7.7	30.5	--	5.1	68
10...	0838	36.0	730	7.7	30.5	--	5.1	68

305135095235401 - LIVINGSTON RES SITE JC

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
FEB											
18...	0925	1.00	365	7.5	15.0	.22	8.4	84	130	29	44
18...	0927	10.0	365	7.4	15.0	--	8.4	84	--	--	--
18...	0929	20.0	365	7.4	15.0	--	8.4	84	--	--	--
18...	0931	30.0	365	7.4	15.0	--	8.4	84	--	--	--
18...	0933	41.0	365	7.3	15.0	--	8.3	83	130	26	43
SEP											
10...	0900	1.00	745	8.5	31.5	.82	9.0	123	180	29	62
10...	0902	10.0	745	8.4	31.0	--	8.8	119	--	--	--
10...	0904	20.0	755	7.9	31.0	--	5.3	72	--	--	--
10...	0906	33.0	750	7.7	31.0	--	4.4	60	180	39	63

305135095235401 - LIVINGSTON RES SITE JC

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
FEB											
18...	4.4	21	.8	4.5	98	37	19	.26	8.2	202	1.11
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	1.41
18...	--	--	--	--	--	--	--	--	--	--	--
18...	4.4	21	.8	4.4	100	40	21	.28	9.2	210	1.44
SEP											
10...	6.5	77	2	8.7	150	84	82	1.2	9.9	449	4.87
10...	--	--	--	--	--	--	--	--	--	--	4.83
10...	--	--	--	--	--	--	--	--	--	--	5.25
10...	6.5	76	2	8.8	140	83	80	1.1	9.9	440	4.85

305135095235401 - LIVINGSTON RES SITE JC

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB										
18...	.017	1.12	<.020	--	.28	.095	.098	.30	<10	3.4
18...	--	--	--	--	--	--	--	--	--	--
18...	.020	1.43	.022	.35	.37	.104	.113	.35	<10	4.4
18...	--	--	--	--	--	--	--	--	--	--
18...	.021	1.46	<.020	--	.36	.105	.111	.34	<10	4.1
SEP										
10...	.419	5.29	.042	.58	.62	.554	.502	1.5	<10	<2.2
10...	.422	5.25	.041	.51	.55	.500	.507	1.6	<10	E1.1
10...	.489	5.74	.039	.57	.61	.557	.535	1.6	<10	E2.0
10...	.512	5.37	.043	.52	.56	.515	.527	1.6	<10	2.9

This page intentionally left blank.

08066200 LONG KING CREEK AT LIVINGSTON, TX

LOCATION.--Lat 30°42'58", long 94°57'31", Polk County, Hydrologic Unit 12030202, on right bank at upstream side of bridge on U.S. Highway 190, 2 mi west of Livingston, 2 mi upstream from Choates Creek, and 14.8 mi upstream from mouth.

DRAINAGE AREA.--141 mi^2.

PERIOD OF RECORD.--Jan 1963 to current year.
Water-quality records.--Chemical data: Jan 1963 to Sep 1972. Specific conductance: Jan 1963 to Sep 1972. Water temperature: Jan 1963 to Sep 1972.

GAGE.--Water-stage recorder. Datum of gage is 100.12 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, about 41 ft in May 1929.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 14	Unknown	e10,000	Unknown	Mar 13	0945	9,190	19.77
Dec 12	0015	6,370	16.67	Apr 4	0030	17,600	24.95
Jan 2	0515	4,950	14.69	Jun 13	1900	6,160	16.39
Jan 29	2400	3,150	11.58	Jun 26	0030	10,700	21.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	80	41	231	125	58	45	15	12	36	9.1	4.1
2	5.7	278	37	2940	87	40	40	14	9.1	31	8.6	7.1
3	8.2	71	37	442	68	33	2640	13	7.4	27	8.4	6.0
4	8.7	39	41	154	59	27	7150	15	6.3	29	8.5	4.5
5	7.2	30	168	102	50	26	466	16	5.5	125	7.7	3.6
6	74	25	71	87	47	27	197	14	4.6	127	7.2	3.3
7	81	24	52	86	46	25	110	11	4.3	142	7.7	3.3
8	25	39	347	101	43	27	76	10	15	210	6.6	3.4
9	13	69	160	85	40	60	60	10	21	203	6.2	6.8
10	9.5	45	604	61	38	36	50	139	12	150	5.8	5.6
11	8.0	56	3660	53	37	29	42	157	14	52	5.3	3.4
12	7.4	2030	3190	51	35	42	36	117	207	99	4.8	2.9
13	6.9	e7700	537	49	32	5640	32	91	1500	249	4.5	2.7
14	6.4	e10000	230	45	29	886	49	35	439	99	4.3	2.4
15	6.2	e5000	130	41	29	195	41	23	70	46	4.2	2.2
16	15	e750	96	40	30	111	29	18	153	30	3.8	2.0
17	14	e290	79	40	30	82	26	15	202	25	3.7	2.0
18	1050	e170	69	e39	29	67	24	25	44	66	3.7	2.0
19	e2300	e125	110	e37	28	68	23	22	24	42	3.6	2.0
20	e3000	e110	97	e35	27	117	23	16	18	29	4.4	1.8
21	380	e93	82	e34	27	92	22	13	17	42	4.0	1.9
22	124	e81	94	e59	26	59	21	11	14	31	3.4	1.8
23	65	e76	215	85	26	48	20	10	25	23	3.6	1.8
24	46	e72	144	47	25	45	18	9.2	36	18	4.1	1.9
25	38	71	101	37	25	45	17	8.3	3660	16	3.4	2.0
26	32	67	74	34	27	65	25	11	4400	14	2.9	2.1
27	29	60	64	33	146	43	55	15	334	13	3.5	2.3
28	26	e55	61	34	109	37	29	15	108	12	9.7	2.3
29	24	e50	56	1050	---	37	21	134	69	11	4.2	93
30	23	e45	49	1360	---	57	17	29	47	10	3.2	30
31	22	---	45	267	---	54	---	17	---	9.7	2.9	---
TOTAL	7461.1	27601	10741	7759	1320	8178	11404	1048.5	11478.2	2016.7	163.0	210.2
MEAN	241	920	346	250	47.1	264	380	33.8	383	65.1	5.26	7.01
MAX	3000	10000	3660	2940	146	5640	7150	157	4400	249	9.7	93
MIN	5.7	24	37	33	25	25	17	8.3	4.3	9.7	2.9	1.8
AC-FT	14800	54750	21300	15390	2620	16220	22620	2080	22770	4000	323	417
CFSM	1.71	6.53	2.46	1.78	.33	1.87	2.70	.24	2.71	.46	.04	.05
IN.	1.97	7.28	2.83	2.05	.35	2.16	3.01	.28	3.03	.53	.04	.06

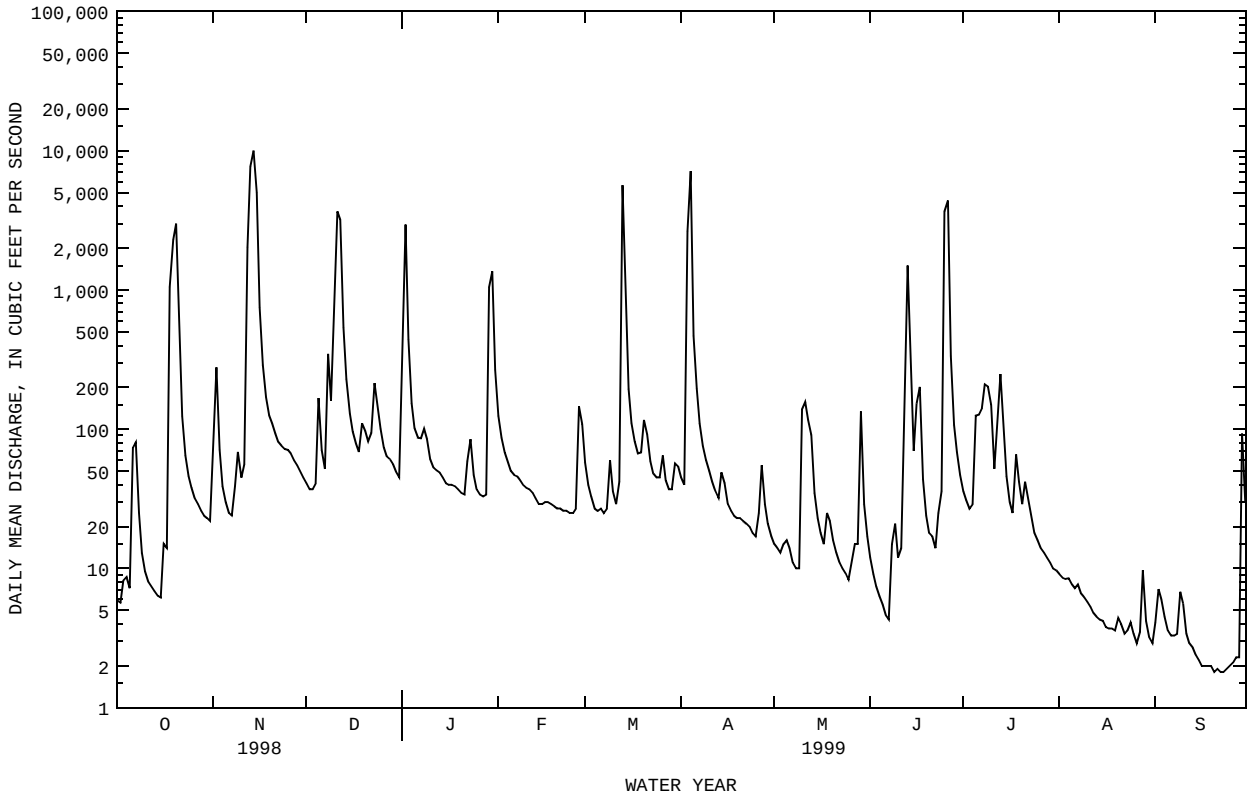
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1999, BY WATER YEAR (WY)

MEAN	71.7	94.5	160	199	184	155	140	134	140	35.5	17.2	31.3
MAX	1342	920	626	1026	629	640	844	662	869	493	191	288
(WY)	1995	1999	1995	1998	1992	1990	1979	1969	1989	1989	1983	1996
MIN	.18	.92	2.83	2.79	5.53	3.75	4.06	2.58	.72	.000	.000	.15
(WY)	1966	1989	1971	1971	1971	1971	1971	1963	1971	1971	1971	1967

08066200 LONG KING CREEK AT LIVINGSTON, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1963 - 1999	
ANNUAL TOTAL	100951.96		89380.7			
ANNUAL MEAN	277		245		115	
HIGHEST ANNUAL MEAN					318	1995
LOWEST ANNUAL MEAN					12.3	1970
HIGHEST DAILY MEAN	13000	Jan 7	10000	Nov 14	30100	Oct 17 1994
LOWEST DAILY MEAN	.96	Jul 12	1.8	Sep 20	.00	Aug 5 1965
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 27	1.9	Sep 18	.00	Jun 28 1971
INSTANTANEOUS PEAK FLOW			17600	Apr 4	50900	Oct 17 1994
INSTANTANEOUS PEAK STAGE			24.95	Apr 4	30.49	Oct 17 1994
ANNUAL RUNOFF (AC-FT)	200200		177300		83110	
ANNUAL RUNOFF (CFSM)	1.96		1.74		.81	
ANNUAL RUNOFF (INCHES)	26.63		23.58		11.06	
10 PERCENT EXCEEDS	351		208		153	
50 PERCENT EXCEEDS	29		35		13	
90 PERCENT EXCEEDS	2.0		4.2		.97	

e Estimated



08066250 TRINITY RIVER NEAR GOODRICH, TX

LOCATION.--Lat 30°34'19", long 94°56'55", Polk-San Jacinto County line, Hydrologic Unit 12030202, on left bank at downstream bridge on U.S. Highway 59, 0.2 mi downstream from Long King Creek, 3.0 mi southeast of Goodrich, 11.9 mile downstream from Livingston Dam, and at mile 117.3.

DRAINAGE AREA.--16,844 mi^2.

PERIOD OF RECORD.--Dec 1965 to current year.
Water-quality records.--Chemical data: Mar 1966 to Sep 1973. Specific conductance: Oct 1969 to Sep 1973. Water temperature: Oct 1969 to Sep 1973.

GAGE.--Water-stage recorder. Datum of gage is 40.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Dec 1965, at least 10% of contributing drainage area has been regulated by Lake Worth, Livingston Reservoir, and twenty-one additional upstream reservoirs with a capacity of 6,246,000 acre-ft, of which 1,362,000 acre-ft is for flood control. Streamflow is affected at times by discharge from the flood-detention pools of 252 floodwater-retarding structures with a combined detention capacity of 183,300 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1929, 52.0 ft in May 1942, from information by Texas Department of Transportation and by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

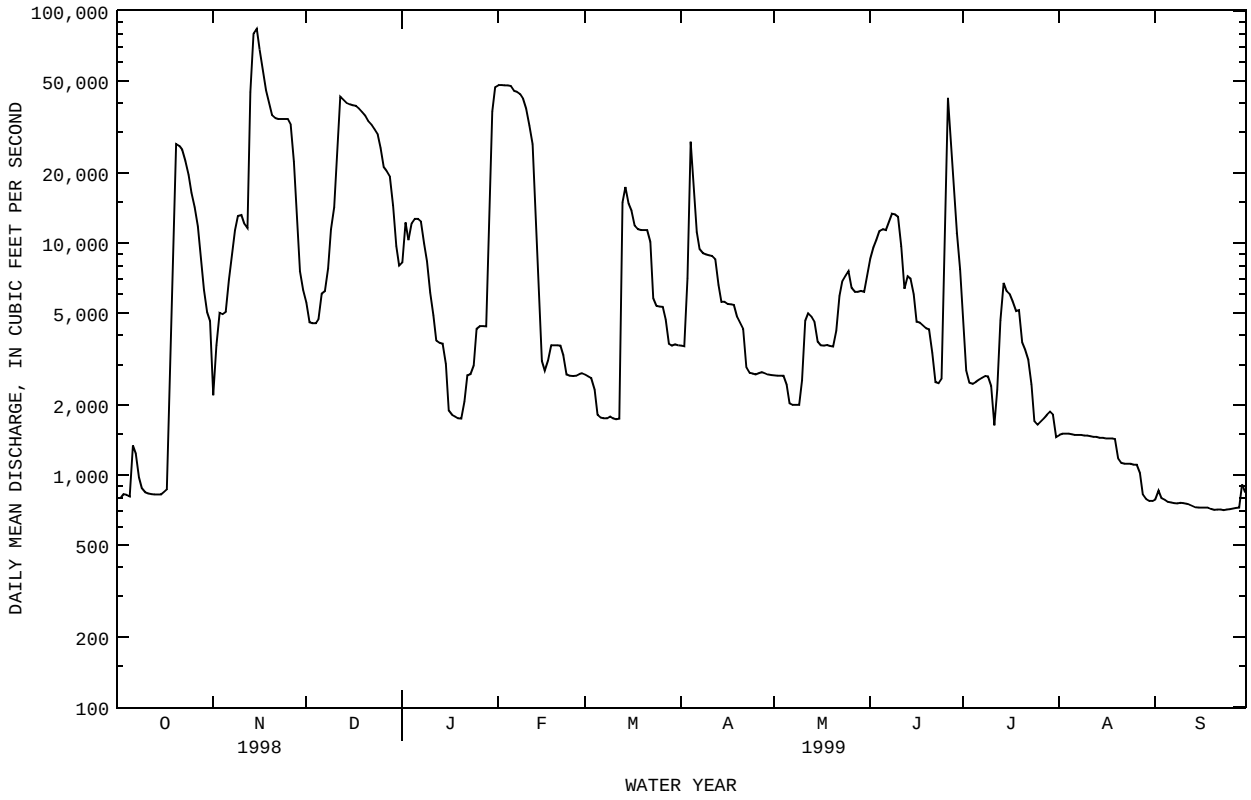
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	2210	5550	8260	47900	2710	3610	2690	8540	4730	1490	788
2	798	3640	4560	12300	47900	2660	3590	2680	9570	2830	1510	857
3	827	5010	4510	10300	47800	2620	7030	2680	10300	2500	1510	797
4	823	4950	4510	12200	47800	2330	27300	2680	11300	2480	1510	784
5	811	5070	4720	12700	47500	1820	17400	2450	11500	2530	1500	769
6	1340	6960	6060	12700	45300	1770	11200	2040	11400	2580	1490	762
7	1240	8670	6220	12400	44900	1760	9390	2010	12300	2630	1490	757
8	976	11400	7800	9960	43800	1760	9040	2010	13400	2670	1490	755
9	878	13100	11500	8360	41900	1790	8920	2010	13300	2660	1480	759
10	844	13200	14300	6120	37900	1760	8850	2560	13000	2420	1480	758
11	833	12100	26000	4890	32200	1740	8800	4630	9710	1640	1470	752
12	829	11600	42800	3810	26700	1750	8520	4980	6360	2330	1460	748
13	826	44700	41500	3720	15400	15000	6610	4830	7210	4660	1460	737
14	824	80100	40300	3680	8010	17500	5590	4570	7040	6740	1450	727
15	825	84100	39700	3010	3100	14800	5580	3750	6030	6230	1450	726
16	843	68300	39300	1900	2820	13800	5470	3630	4580	6030	1440	725
17	868	55900	39000	1820	3120	11900	5440	3610	4550	5630	1440	724
18	3830	45500	38000	1790	3630	11500	5420	3640	4410	5100	1440	725
19	12500	40000	36700	1760	3630	11400	4800	3600	4290	5150	1430	716
20	26700	35500	35400	1750	3630	11400	4540	3580	4250	3730	1180	709
21	26200	34500	33600	2080	3610	11400	4270	4200	3370	3480	1130	711
22	25200	34300	32400	2690	3280	10100	2910	5930	2520	3150	1120	710
23	22600	34200	30900	2730	2720	5790	2760	6890	2490	2460	1120	707
24	19700	34200	29400	2970	2680	5360	2740	7260	2610	1710	1120	710
25	16500	34200	25700	4280	2670	5330	2720	7610	14500	1650	1110	713
26	14300	32400	21200	4390	2680	5320	2750	6390	42200	1700	1110	719
27	11800	22500	20400	4390	2730	4700	2780	6150	27900	1760	1020	722
28	8480	12400	19300	4380	2750	3690	2750	6170	17100	1820	825	725
29	6310	7570	14500	11000	---	3620	2710	6220	11100	1880	790	914
30	5030	6280	9750	37000	---	3660	2700	6170	7700	1830	774	842
31	4620	---	8010	47100	---	3630	---	7360	---	1460	775	---
TOTAL	218951	804560	693590	256440	578060	194370	196190	134980	304530	98170	40064	22548
MEAN	7063	26820	22370	8272	20650	6270	6540	4354	10150	3167	1292	752
MAX	26700	84100	42800	47100	47900	17500	27300	7610	42200	6740	1510	914
MIN	796	2210	4510	1750	2670	1740	2700	2010	2490	1460	774	707
AC-FT	434300	1596000	1376000	508600	1147000	385500	389100	267700	604000	194700	79470	44720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	3625	6669	9059	9487	10120	12060	11330	14970	12180	4584	2254	2087
MAX	25630	30260	30270	45550	38660	40490	30750	57850	32120	24310	6819	15230
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1973	1989	1982	1974
MIN	283	449	317	321	472	724	1262	1294	907	1043	355	455
(WY)	1973	1971	1971	1971	1971	1981	1971	1971	1972	1971	1972	1971

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	4771456		3542453			
ANNUAL MEAN	13070		9705		8140	
HIGHEST ANNUAL MEAN					18310	1992
LOWEST ANNUAL MEAN					746	1971
HIGHEST DAILY MEAN	84100	Nov 15	84100	Nov 15	120000	Oct 18 1994
LOWEST DAILY MEAN	796	Oct 1	707	Sep 23	191	Aug 6 1971
ANNUAL SEVEN-DAY MINIMUM	805	Sep 26	711	Sep 19	240	Aug 16 1972
INSTANTANEOUS PEAK FLOW			86500	Nov 15	125000	Oct 18 1994
INSTANTANEOUS PEAK STAGE			43.69	Nov 15	48.97	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	9464000		7026000		5897000	
10 PERCENT EXCEEDS	35400		32900		23600	
50 PERCENT EXCEEDS	4510		4290		2770	
90 PERCENT EXCEEDS	1140		825		755	

08066250 TRINITY RIVER NEAR GOODRICH, TX--Continued



08066300 MENARD CREEK NEAR RYE, TX

LOCATION.--Lat 30°28'52", long 94°46'46", Liberty County, Hydrologic Unit 12030202, on left bank 20 ft downstream from bridge on State Highway 146, 2.3 mi northwest of Rye, and about 6 mi upstream from mouth.

DRAINAGE AREA.--152 mi^2.

PERIOD OF RECORD.--Dec 1965 to current year.
Water-quality records.--Chemical data: Aug 1950 to Aug 1994.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.32 ft above sea level. Sep 1974 to Aug 1976, wire-weight gage read twice daily. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 1966, at least 10% contributing drainage area has been regulated by Bear Foot Lake (capacity 3,207 acre-ft) on Mill Creek, located 0.5 mi upstream from station. No known diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1929 reached a stage of about 39.4 ft, from information by the Texas Department of Transportation. Flood in Sep 1961 reached a stage of about 34.0 ft, from information by local resident. Flood of May 1929 may have been equaled or exceeded by other floods during the period 1929-65.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 14	2045	4,730	24.73	Apr 4	0600	3,370	23.32
Dec 13	1145	2,270	21.72	Apr 5	0345	13,200	31.41
Jan 4	0530	1,660	20.15	Jun 27	0800	2,170	21.52
Mar 14	1745	4,600	24.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

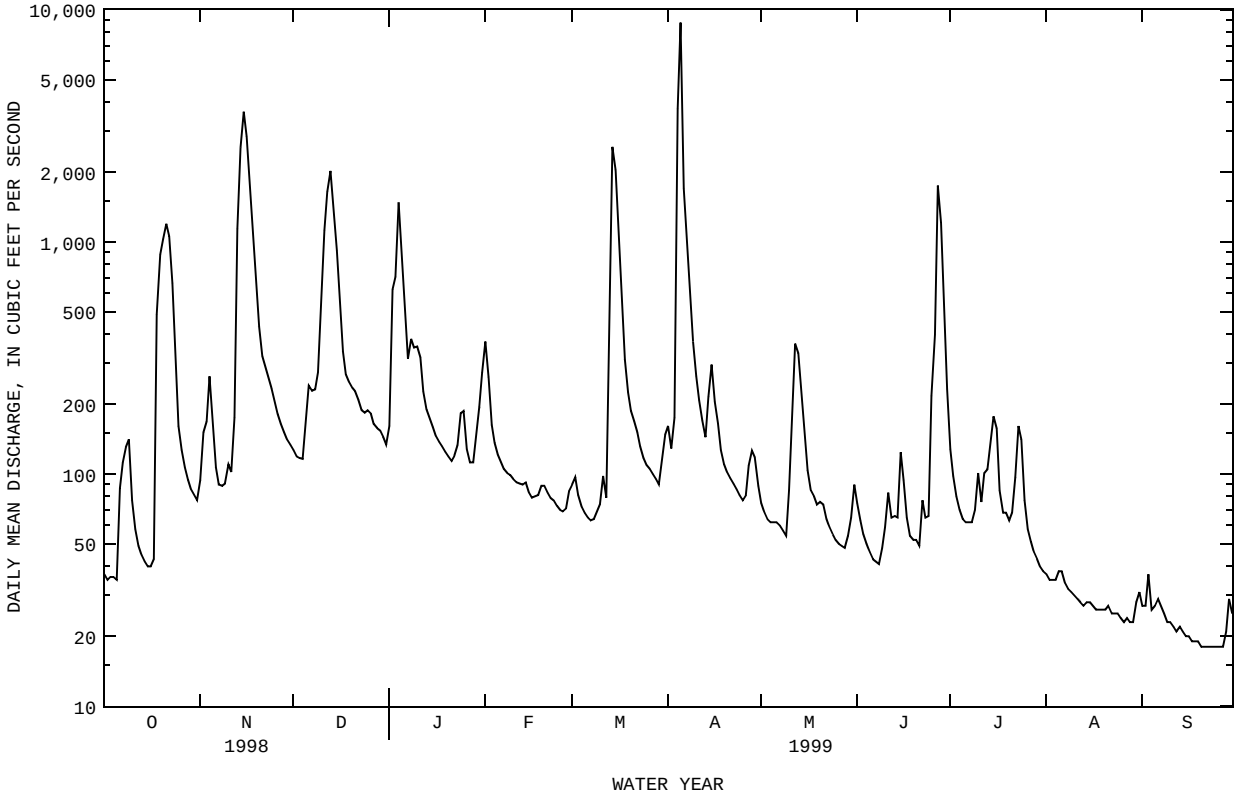
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	94	127	161	372	90	161	75	75	128	37	27
2	35	151	119	625	262	97	129	68	63	98	35	27
3	36	168	117	708	163	81	175	64	55	80	35	37
4	36	263	116	1480	136	72	3750	62	50	70	35	26
5	35	172	169	936	121	68	8820	62	46	64	38	27
6	87	107	240	515	112	65	1700	62	43	62	38	29
7	112	90	228	314	105	63	1030	60	42	62	34	27
8	131	89	231	382	101	64	635	57	41	62	32	25
9	141	91	275	351	99	69	373	54	48	70	31	23
10	77	110	556	354	95	74	264	85	59	101	30	23
11	58	102	1120	318	92	98	208	205	83	76	29	22
12	49	175	1650	227	91	79	170	364	65	101	28	21
13	45	1140	2020	190	90	737	144	331	66	105	27	22
14	42	2560	1470	174	92	2570	215	218	65	138	28	21
15	40	3640	916	159	83	2040	296	151	124	177	28	20
16	40	2850	548	146	79	1090	205	104	94	157	27	20
17	43	1760	338	138	80	598	165	85	65	85	26	19
18	487	1100	268	132	81	312	127	80	54	68	26	19
19	883	678	249	125	89	225	110	74	52	68	26	19
20	1030	432	235	119	89	187	102	76	52	63	26	18
21	1200	322	227	114	83	169	96	74	49	68	27	18
22	1060	290	209	120	79	151	91	64	77	97	25	18
23	663	259	189	133	77	131	86	59	65	161	25	18
24	278	234	184	183	73	117	81	55	66	141	25	18
25	161	205	188	187	70	109	77	52	217	77	24	18
26	127	181	182	128	69	105	81	50	398	58	23	18
27	107	164	164	112	71	100	109	49	1750	51	24	18
28	94	151	158	112	85	95	126	48	1210	46	23	21
29	86	141	154	144	---	90	118	54	658	43	23	29
30	81	134	144	195	---	117	89	65	232	40	28	25
31	77	---	134	275	---	148	---	90	---	38	31	---
TOTAL	7378	17853	12925	9257	3039	10011	19733	2997	5964	2655	894	673
MEAN	238	595	417	299	109	323	658	96.7	199	85.6	28.8	22.4
MAX	1200	3640	2020	1480	372	2570	8820	364	1750	177	38	37
MIN	35	89	116	112	69	63	77	48	41	38	23	18
AC-FT	14630	35410	25640	18360	6030	19860	39140	5940	11830	5270	1770	1330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	80.2	93.1	161	219	228	189	186	188	147	64.5	45.7	50.5
MAX	1092	595	457	777	727	528	977	757	788	464	354	192
(WY)	1995	1999	1975	1974	1992	1997	1979	1983	1986	1989	1983	1983
MIN	3.42	3.55	8.05	14.6	14.0	13.5	9.77	21.8	8.72	4.52	5.47	4.43
(WY)	1968	1968	1968	1971	1971	1971	1971	1996	1971	1971	1967	1967

08066300 MENARD CREEK NEAR RYE, TX--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	83292		93379			
ANNUAL MEAN	228		256		139	
HIGHEST ANNUAL MEAN					279	1975
LOWEST ANNUAL MEAN					14.7	1971
HIGHEST DAILY MEAN	3800	Jan 8	8820	Apr 5	12000	Oct 18 1994
LOWEST DAILY MEAN	11	Jul 30	18	Sep 20	2.6	Nov 1 1967
ANNUAL SEVEN-DAY MINIMUM	11	Jul 30	18	Sep 20	2.9	Nov 1 1967
INSTANTANEOUS PEAK FLOW			13200	Apr 5	13700	Oct 17 1994
INSTANTANEOUS PEAK STAGE			31.41	Apr 5	31.41	Apr 5 1999
ANNUAL RUNOFF (AC-FT)	165200		185200		100500	
10 PERCENT EXCEEDS	551		528		288	
50 PERCENT EXCEEDS	77		92		50	
90 PERCENT EXCEEDS	15		27		14	



08066500 TRINITY RIVER AT ROMAYOR, TX

LOCATION.--Lat 30°25'30", long 94°51'02", Liberty County, Hydrologic Unit 12030202, near right bank at downstream side of bridge on State Highway 787, 1.9 mi south of Romayor, 1.9 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.7 mi downstream from Big Creek, and at mile 94.3.

DRAINAGE AREA.--17,186 mi^2.

PERIOD OF RECORD.--May 1924 to current year. Monthly discharge only for some periods, published in WSP 1312.
Water-quality records.--Chemical data: Oct 1941 to Nov 1949, Feb 1950 to Sep 1951, Oct 1953 to Sep 1995. Biochemical data: Feb 1968 to Sep 1995. Pesticide data: Feb 1968 to Jul 1981, Aug 1983 to Sep 1995. Sediment data: Mar 1959 to Sep 1995. Suspended sediment data: Oct 1954 to Sep 1955, Oct 1968 to Sep 1971. Specific conductance: Oct 1941 to Sep 1942, Jan 1944 to Sep 1951, Oct 1953 to Sep 1994. Water temperature: Oct 1941 to Sep 1950, Oct 1953 to Sep 1994.

REVISED RECORDS.--WSP 1392: 1932, 1935. WSP 1922: Drainage area. WDR TX-81-1: 1980 (M, m).

GAGE.--Water-stage recorder. Datum of gage is 25.92 ft above sea level. Prior to Oct 1, 1943, nonrecording gage at datum 63.57 ft higher at railroad bridge 1.9 mi upstream. Oct 1, 1943 to Dec 31, 1988, water-stage recorder and nonrecording gage (Sep 15, 1975 to Jun 16, 1977) at present site and at datum 10.00 ft higher than current datum. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in water year 1924, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400, normal storage 38,130 acre-ft). Additional regulation since Sep 28, 1968, by Livingston Reservoir (station 08066190, normal storage 1,788,000 acre-ft), 35 mi upstream. There are no known large diversions between Livingston Reservoir and this station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	3050	8340	10600	54300	3050	4350	2830	9240	6840	1300	799
2	1150	2780	6580	14300	54800	3000	4280	2810	11000	4000	1290	870
3	1160	4500	6260	14100	54500	2940	5140	2800	11400	2880	1290	891
4	1180	4650	6230	15200	54400	2790	30900	2800	12600	2740	1310	858
5	1160	4570	6360	16000	54300	2040	30400	2750	12800	2710	1310	844
6	1550	5550	7890	15500	52400	1900	18800	2210	12700	2820	1320	828
7	1900	7250	8540	15100	51400	1840	13600	2090	13100	2840	1320	817
8	1580	9200	9740	13100	50300	1850	12100	2070	14500	2860	1320	814
9	1460	11700	13400	11600	47800	1920	11400	2060	14700	2850	1320	807
10	1340	12000	16400	8670	44200	1910	11100	2350	14700	2920	1320	804
11	1260	11600	25600	7080	37600	1920	10800	4750	12500	2060	1320	802
12	1240	9730	46500	5160	32500	1910	10600	6100	8410	2130	1300	798
13	1220	35700	49900	4750	20600	12700	8790	6280	8100	4170	1310	795
14	1210	79100	47600	4580	12900	22600	6890	5770	8490	7720	1310	775
15	1200	95000	45600	4230	4830	20600	6850	4810	7470	7540	1330	766
16	1200	92500	44600	2480	3350	17700	6590	4180	5730	7170	1310	766
17	1230	78400	43900	2090	3350	15400	6430	4020	5120	6750	1280	764
18	2830	62800	43200	2010	4180	14000	6310	4010	5030	6000	1290	766
19	10400	51800	41400	1960	4270	13700	5830	3940	4860	5920	1280	766
20	25300	44200	40400	2100	4250	13600	5180	3880	4790	4770	1190	759
21	28300	41200	37900	e2500	4230	13500	5060	4080	4260	3860	1080	760
22	26600	40400	36900	3110	4030	13100	3610	5940	3230	3730	1070	754
23	23700	39900	34500	3240	3140	8440	3030	7680	2890	2990	1070	755
24	20200	39600	33500	3230	2980	6650	2950	8040	3020	2290	1070	758
25	16900	39400	29700	4750	2960	6500	2910	8780	9030	1860	1080	760
26	13800	38900	24700	5240	2950	6460	2940	7810	43700	1800	1040	765
27	11400	29800	22600	5210	3000	6150	3010	6900	36700	1720	1020	772
28	8450	18400	22100	5200	3110	4610	2980	6860	23500	1700	880	783
29	6270	12000	18300	7960	---	4340	2940	6980	15100	1700	814	900
30	4850	9120	13400	32700	---	4380	2870	7080	10900	1680	793	952
31	4440	---	10700	50700	---	4370	---	7870	---	1410	794	---
TOTAL	225640	934800	802740	294450	672630	235870	248640	150530	349570	112430	36731	24048
MEAN	7279	31160	25890	9498	24020	7609	8288	4856	11650	3627	1185	802
MAX	28300	95000	49900	50700	54800	22600	30900	8780	43700	7720	1330	952
MIN	1150	2780	6230	1960	2950	1840	2870	2060	2890	1410	793	754
AC-FT	447600	1854000	1592000	584000	1334000	467800	493200	298600	693400	223000	72860	47700

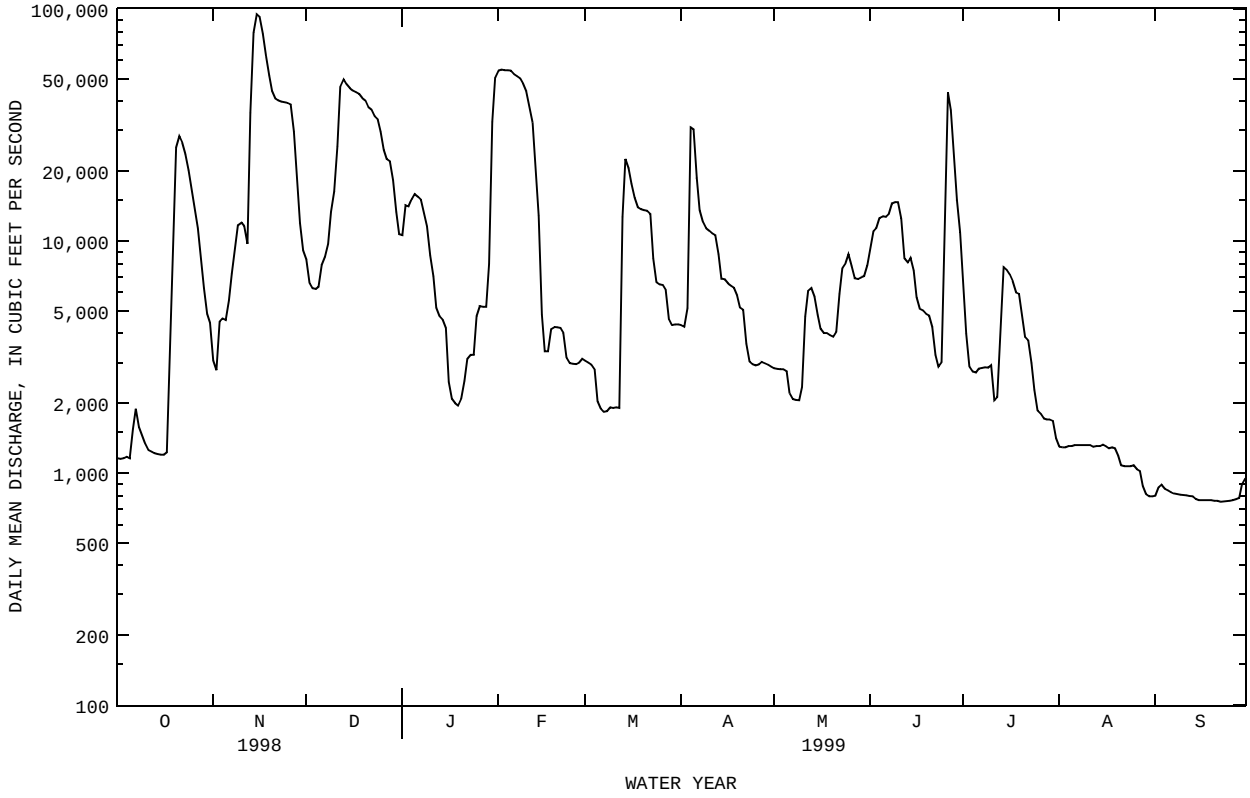
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1999, BY WATER YEAR (WY)

MEAN	3379	5531	7955	9456	10010	11480	10810	15430	11520	4512	1898	2046
MAX	25380	31160	43240	51740	44510	46100	65710	62000	45120	28480	10140	14850
(WY)	1974	1999	1941	1992	1992	1992	1945	1957	1957	1941	1957	1974
MIN	181	274	351	347	450	528	415	1285	455	201	128	165
(WY)	1957	1956	1971	1971	1971	1925	1925	1937	1925	1956	1956	1956

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1924 - 1999	
ANNUAL TOTAL	5270650		4088079			
ANNUAL MEAN	14440		11200		7834	
HIGHEST ANNUAL MEAN					20630	1992
LOWEST ANNUAL MEAN					730	1971
HIGHEST DAILY MEAN	95000	Nov 15	95000	Nov 15	117000	Oct 19 1994
LOWEST DAILY MEAN	1050	Jul 26	754	Sep 22	104	Aug 23 1956
ANNUAL SEVEN-DAY MINIMUM	1070	Jul 23	759	Sep 20	106	Aug 20 1956
INSTANTANEOUS PEAK FLOW			98600	Nov 15	122000	Oct 19 1994
INSTANTANEOUS PEAK STAGE			39.87	Nov 15	45.80	May 9 1942
ANNUAL RUNOFF (AC-FT)	10450000		8109000		5676000	
10 PERCENT EXCEEDS	40700		37200		22300	
50 PERCENT EXCEEDS	4560		4770		2710	
90 PERCENT EXCEEDS	1600		1060		546	

e Estimated

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued



08067000 TRINITY RIVER AT LIBERTY, TX

LOCATION.--Lat 30°03'27", long 94°49'05", Liberty County, Hydrologic Unit 12030203, at downstream side of downstream bridge on U.S. Highway 90 in Liberty, 450 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 40.3.

DRAINAGE AREA.--17,468 mi^2.

PERIOD OF RECORD.--Oct 1938 to Sep 1940 (gage heights, discharge measurements, and some records of daily discharge), Oct 1940 to current year (high-water records only). Gage-height records collected in this vicinity since 1903 are contained in reports of the National Weather Service.
Water-quality records.--Chemical data: Oct 1970 to Sep 1972. Biochemical data: Oct 1970 to Sep 1972. Pesticide data: May 1971 to Sep 1972.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.22 ft below sea level; unadjusted land-surface subsidence. Prior to Mar 13, 1973, nonrecording gage at site at same datum. Satellite telemeter at station. Gage-height telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Discharges for current year were computed using stage discharge relationship. During years with predominantly low releases from Livingston Reservoir, discharges are estimated using records for Trinity River near Romayor (station 08066500), intervening area computation, and discharge measurements. Estimated discharges below 10,000 ft^3/s are not published. Since installation of gage in water year 1941, at least 10% of contributing drainage area has been regulated by Lake Worth (station 08045400, normal storage 38,130 acre-ft), Livingston Reservoir (station 08066190, normal storage 1,788,000 acre-ft), and other major reservoirs. Many diversions above station for municipal supplies, industrial uses, and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 135,000 ft^3/s Oct 12, 1994 (gage height, 31.00 ft); minimum not determined (affected by tides); minimum gage height observed, 2.32 ft Nov 24, 1970. Maximum gage height since at least 1903, 31.00 ft, Oct 21, 1994 (at 0500 hours).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8-11, 1922, reached a stage of 28.6 ft, present datum, from observations by the National Weather Service at nonrecording gage on railroad bridge upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,400 ft^3/s Nov 18 at 0330 hours (gage height, 28.88 ft); minimum discharge not determined (affected by tides); minimum gage height, 4.03 ft, Sep 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	12000	11000	31900	---	---	---	---	---	---	---
2	---	---	---	10700	34900	---	---	---	---	---	---	---
3	---	---	---	12700	38100	---	---	---	---	---	---	---
4	---	---	---	12400	39700	---	---	---	---	---	---	---
5	---	---	---	13000	41100	---	22700	---	---	---	---	---
6	---	---	---	13300	42200	---	22200	---	---	---	---	---
7	---	---	---	13000	42400	---	16000	---	---	---	---	---
8	---	---	---	12600	42200	---	12500	---	10100	---	---	---
9	---	---	---	11200	41700	---	10800	---	11000	---	---	---
10	---	11500	---	---	40900	---	---	---	11300	---	---	---
11	---	11900	14400	---	39200	---	---	---	11200	---	---	---
12	---	11600	25900	---	36100	---	---	---	---	---	---	---
13	---	15800	32800	---	31200	---	---	---	---	---	---	---
14	---	33400	36300	---	23100	---	---	---	---	---	---	---
15	---	39100	37700	---	15600	17000	---	---	---	---	---	---
16	---	45200	38000	---	10600	16100	---	---	---	---	---	---
17	---	56500	38000	---	---	14200	---	---	---	---	---	---
18	---	61000	37800	---	---	12500	---	---	---	---	---	---
19	11100	58000	37400	---	---	11600	---	---	---	---	---	---
20	20400	52600	36700	---	---	11200	---	---	---	---	---	---
21	27500	46300	35600	---	---	10900	---	---	---	---	---	---
22	28600	41700	34400	---	---	10800	---	---	---	---	---	---
23	27900	38800	33300	---	---	10000	---	---	---	---	---	---
24	25900	36800	32000	---	---	---	---	---	---	---	---	---
25	23000	35600	30800	---	---	---	---	---	---	---	---	---
26	19700	34900	28300	---	---	---	---	---	12400	---	---	---
27	16900	33500	24900	---	---	---	---	---	29000	---	---	---
28	14300	28700	22900	---	---	---	---	---	27200	---	---	---
29	11400	20700	20800	---	---	---	---	---	20500	---	---	---
30	---	15000	17100	---	---	---	---	---	14800	---	---	---
31	---	---	13300	26100	---	---	---	---	---	---	---	---

This page intentionally left blank.

08067070 CWA CANAL NEAR DAYTON, TX

LOCATION.--Lat 29°57'40", long 94°48'36", Liberty County, Hydrologic Unit 12030203, at flume on left bank of Coastal Water Authority canal, 1,000 ft west of the Trinity River, 2 mi east of Farm Road 1409, and 7.4 mi southeast of Dayton.

PERIOD OF RECORD.--Apr 1981 to current year. Prior to Oct 1990, published as "CIWA Canal near Dayton, TX".

GAGE.--Water-stage recorder. Datum of gage not determined.

REMARKS.--No estimated daily discharges. Records good. There are no known diversions between pumping plant and the gage. Water is pumped from the Trinity River for industrial and municipal use in the area.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

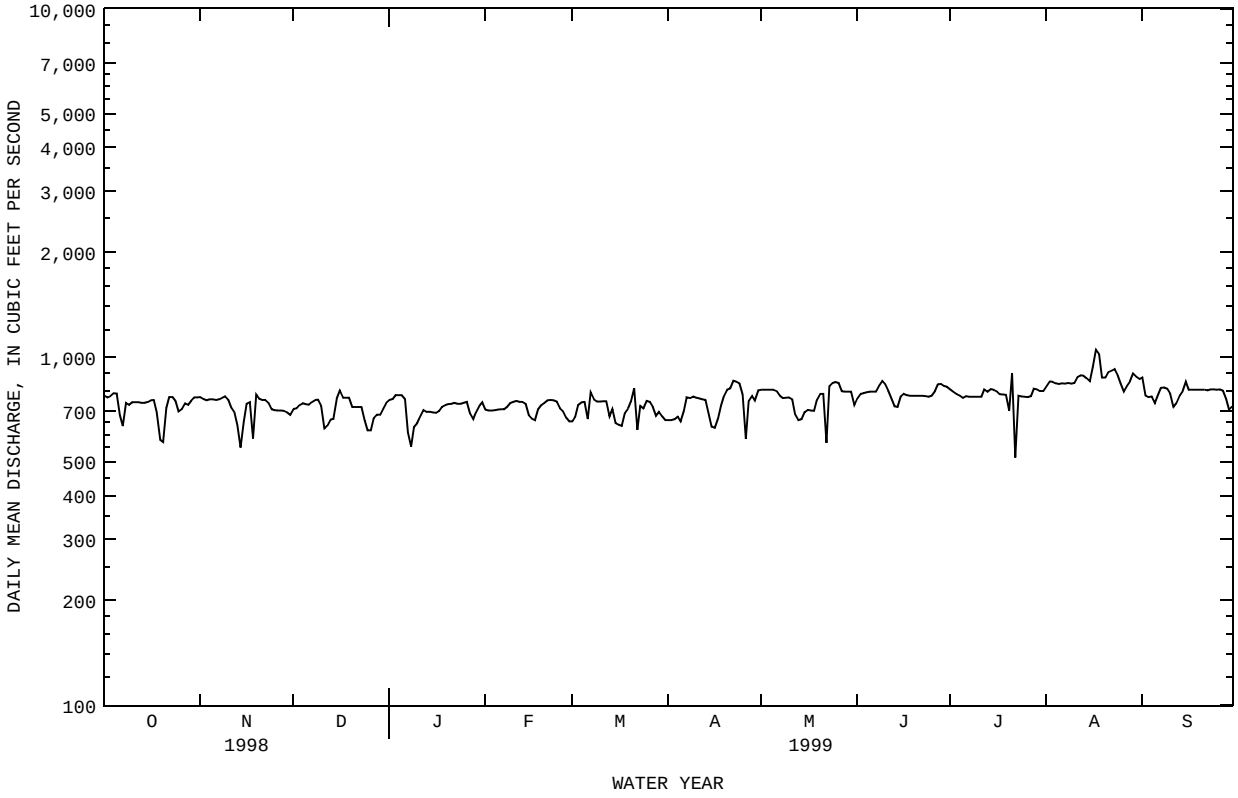
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	776	768	709	754	707	654	659	805	761	807	825	876
2	766	759	713	759	703	677	659	805	784	796	852	776
3	773	752	727	778	703	729	663	805	788	784	851	767
4	788	756	737	777	704	741	674	806	792	775	841	770
5	786	756	733	777	707	743	654	805	795	764	837	738
6	681	753	730	757	708	665	699	799	795	772	841	779
7	634	756	744	608	708	792	766	775	795	769	840	816
8	739	764	753	554	721	756	763	762	829	769	843	818
9	730	773	755	631	738	745	771	764	855	769	839	810
10	742	753	723	646	744	745	764	766	838	769	842	786
11	742	716	624	679	748	746	761	756	801	769	877	720
12	742	693	636	705	744	747	756	685	760	807	887	738
13	739	638	661	697	743	677	753	660	722	796	885	778
14	740	551	665	696	735	710	694	663	718	809	870	799
15	743	652	763	693	680	646	632	696	770	806	854	850
16	751	736	801	691	666	640	626	705	784	798	936	805
17	754	743	764	700	660	634	666	703	778	782	1050	805
18	695	585	764	720	710	691	723	701	774	780	1020	805
19	579	781	764	727	729	713	776	755	774	779	874	806
20	571	760	719	733	740	746	805	784	774	702	874	806
21	715	753	718	735	751	814	812	784	774	900	906	806
22	767	754	718	739	753	618	856	567	774	514	916	803
23	768	739	718	734	751	725	851	825	773	774	925	808
24	747	708	658	735	745	713	841	843	769	770	887	808
25	699	704	616	739	713	748	781	848	774	769	841	806
26	709	703	616	744	699	743	582	842	799	768	798	808
27	737	703	667	689	670	720	750	797	836	773	828	801
28	729	701	683	664	654	679	774	795	837	810	852	759
29	748	695	683	697	---	696	750	795	827	807	898	707
30	766	683	713	726	---	676	802	795	822	799	879	722
31	766	---	740	741	---	659	---	729	---	799	867	---
TOTAL	22622	21588	22015	22025	20034	21988	22063	23620	23672	24085	27135	23676
MEAN	730	720	710	710	716	709	735	762	789	777	875	789
MAX	788	781	801	778	753	814	856	848	855	900	1050	876
MIN	571	551	616	554	654	618	582	567	718	514	798	707
AC-FT	44870	42820	43670	43690	39740	43610	43760	46850	46950	47770	53820	46960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999, BY WATER YEAR (WY)

MEAN	458	438	422	424	432	448	480	506	534	552	526	498
MAX	738	720	710	710	716	709	738	831	973	888	875	789
(WY)	1998	1999	1999	1999	1999	1999	1998	1998	1998	1998	1999	1999
MIN	226	236	219	233	226	235	275	273	303	293	237	251
(WY)	1985	1985	1983	1983	1983	1985	1982	1986	1983	1983	1983	1983

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1981 - 1999	
ANNUAL TOTAL	280854		274523			
ANNUAL MEAN	769		752		481	
HIGHEST ANNUAL MEAN					764	1998
LOWEST ANNUAL MEAN					259	1983
HIGHEST DAILY MEAN	1080	Jun 24	1050	Aug 17	1080	Jun 24 1998
LOWEST DAILY MEAN	274	Sep 11	514	Jul 22	52	Aug 18 1983
ANNUAL SEVEN-DAY MINIMUM	629	Mar 12	646	Jan 7	167	Aug 18 1983
INSTANTANEOUS PEAK FLOW			1090	Aug 16	1220	Jun 2 1998
INSTANTANEOUS PEAK STAGE			2.86	Aug 16	3.07	Jun 2 1998
ANNUAL RUNOFF (AC-FT)	557100		544500		348800	
10 PERCENT EXCEEDS	934		839		738	
50 PERCENT EXCEEDS	753		754		444	
90 PERCENT EXCEEDS	659		664		250	

08067070 CWA CANAL NEAR DAYTON, TX--Continued



08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX

LOCATION.--Lat 29°52′02", long 94°42′53", Chambers County, Hydrologic Unit 12030203, on east side of Lake Charlotte, which is connected to the Trinity River by a small channel, 1.0 mi west of State Highway 563, 1.9 mi north of Interstate Highway 10, and 2.7 mi northeast of Wallisville.

DRAINAGE AREA.--55 mi^2.

WATER-STAGE RECORDS

PERIOD OF RECORD.--Dec 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.81 ft below sea level. Satellite telemeter at station.

REMARKS.--Records good. Lake Charlotte is a shallow natural lake within the Trinity River delta. Dec 1991 to Nov 9, 1992, the lowest stilling well intake was at gage height of 7.3 ft. Thereafter it was at gage height of 6.7 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.9 ft, Oct 22, 1994 at 1345 hours.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.6 ft, Nov 20; minimum gage height, ft.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	9.4	11.3	10.8	10.0	6.8	7.5	7.3	7.7	10.9	<6.8	<6.8
2	7.3	8.8	10.7	10.5	11.0	7.2	7.6	7.5	7.9	10.1	<6.8	7.0
3	7.4	8.3	10.0	10.4	11.7	6.7	8.1	7.6	8.1	9.3	<6.8	7.0
4	7.5	7.9	9.5	10.3	12.0	6.9	8.1	7.8	8.3	8.6	<6.8	7.2
5	8.0	7.6	9.0	10.3	12.3	7.3	9.3	7.9	8.6	8.1	<6.8	7.0
6	8.0	7.4	8.7	10.4	12.4	6.8	10.2	7.5	8.7	7.7	<6.8	6.8
7	7.6	7.6	8.6	10.5	12.5	6.7	10.6	7.2	8.8	7.3	<6.8	<6.8
8	7.1	7.9	8.3	10.5	12.5	7.4	10.6	7.2	8.9	7.2	<6.8	<6.8
9	7.0	8.3	8.2	10.2	12.5	7.2	10.3	7.4	9.1	7.2	<6.8	<6.8
10	7.0	8.9	8.7	9.8	12.5	7.1	10.0	7.6	9.3	7.3	<6.8	<6.8
11	7.0	9.1	9.6	9.3	12.5	7.2	9.5	7.8	9.4	7.3	<6.8	<6.8
12	7.0	9.4	10.6	8.9	12.4	7.2	9.2	7.9	9.4	7.3	6.8	6.9
13	6.7	9.9	11.3	8.4	12.3	7.4	9.0	7.8	9.0	7.0	<6.8	<6.8
14	6.7	11.1	11.7	8.0	12.0	7.5	9.3	7.7	8.5	7.2	<6.8	<6.8
15	6.9	11.6	12.0	7.7	11.7	8.3	8.7	7.7	8.3	7.4	<6.8	<6.8
16	7.4	12.1	12.2	7.6	11.1	9.3	8.1	7.8	8.1	7.6	<6.8	<6.8
17	7.8	12.6	12.3	7.5	10.3	9.9	7.8	7.9	7.8	7.7	<6.8	<6.8
18	8.4	13.2	12.3	7.1	9.6	10.0	7.5	7.6	7.5	7.7	<6.8	<6.8
19	9.0	13.6	12.3	6.8	8.9	10.1	7.4	7.3	7.7	7.7	<6.8	<6.8
20	10.0	13.4	12.3	6.8	8.5	9.8	7.3	7.3	7.7	7.7	<6.8	<6.8
21	10.8	13.0	12.3	7.0	8.1	9.6	7.4	7.3	7.9	7.6	<6.8	6.8
22	11.2	12.7	12.2	7.4	7.8	9.5	7.6	7.1	7.8	7.3	<6.8	<6.8
23	11.5	12.6	12.1	6.8	7.8	9.6	7.5	7.1	7.7	6.9	<6.8	6.9
24	11.7	12.6	12.0	<6.7	7.4	9.1	7.2	7.1	7.6	6.8	<6.8	7.0
25	11.7	12.5	12.0	<6.7	7.2	8.6	7.0	7.3	7.8	<6.8	<6.8	6.9
26	11.7	12.4	11.9	6.8	7.1	8.1	7.4	7.5	8.2	<6.8	<6.8	7.1
27	11.5	12.4	11.9	6.9	7.3	8.0	7.2	7.4	9.6	<6.8	<6.8	7.2
28	11.3	12.3	11.7	7.2	6.8	8.1	7.0	7.3	10.6	<6.8	<6.8	7.4
29	10.8	12.0	11.6	7.5	---	7.8	6.9	7.3	11.1	<6.8	<6.8	7.4
30	10.2	11.7	11.5	7.6	---	7.5	7.0	7.4	11.1	<6.8	<6.8	7.1
31	9.6	---	11.2	8.6	---	7.4	---	7.5	---	<6.8	<6.8	---
MAX	11.7	13.6	12.3	10.8	12.5	10.1	10.6	7.9	11.1	10.9	6.8	7.4

< Actual value is known to be less than the value shown

08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec 1991 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1994 to current year.
WATER TEMPERATURE: Dec 1991 to current year.

INSTRUMENTATION.--Water-quality monitor since Jun 1995.

REMARKS.--Interruption in the record was caused by malfunctions of the instrumentation.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 4,560 microsiemens, Nov 17, 1997; minimum recorded, 46 microsiemens, Oct 20, 1994.
WATER TEMPERATURES: Maximum recorded, 40.5°C, Aug 28, 1999; minimum recorded, 4.1°C, Nov 17, 1998.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,990 microsiemens, Sep 28; minimum, 129 microsiemens, Apr 8.
WATER TEMPERATURE: Maximum, 40.5°C, Aug 28; minimum, 7.8°C, Jan 5.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	913	807	862	322	302	311	291	289	290	272	259	265
2	999	827	909	316	303	308	295	291	293	265	257	259
3	887	729	816	333	313	325	299	293	295	273	263	266
4	865	769	824	341	328	334	296	292	293	279	265	269
5	848	555	633	351	322	330	299	290	293	280	262	274
6	1740	561	1030	373	330	355	308	290	294	267	250	260
7	881	623	747	376	355	366	311	287	294	264	252	261
8	799	771	782	368	355	361	308	287	297	252	236	246
9	872	744	796	386	352	360	314	298	306	250	243	246
10	957	807	892	373	352	359	303	286	295	259	247	254
11	1080	847	969	377	365	369	299	282	290	272	258	264
12	1130	911	1050	382	373	378	297	258	277	302	252	262
13	1060	963	1010	374	367	371	264	245	252	265	252	260
14	---	---	---	372	362	364	246	238	241	281	253	267
15	---	---	---	368	316	352	250	243	248	299	253	274
16	---	---	---	346	316	336	250	218	241	339	261	294
17	---	---	---	349	274	316	231	218	224	271	254	259
18	---	---	---	302	274	291	247	225	237	287	257	267
19	---	---	---	309	302	306	248	245	246	347	264	285
20	---	---	---	313	308	311	257	247	249	330	267	296
21	---	---	---	315	312	313	258	253	256	355	261	279
22	---	---	---	319	314	316	262	257	261	373	284	306
23	332	270	289	325	317	322	263	261	262	334	292	312
24	321	270	300	327	322	325	271	262	265	352	332	341
25	335	310	316	327	312	318	274	263	266	350	309	325
26	344	310	320	312	302	304	270	264	267	352	309	335
27	319	300	309	310	299	303	274	266	269	400	310	342
28	316	302	311	304	294	297	273	261	264	376	311	331
29	323	312	318	297	291	295	273	262	265	351	302	318
30	323	314	320	291	288	289	273	260	263	318	291	300
31	326	312	319	---	---	---	273	262	264	315	293	303
MONTH	---	---	---	386	274	330	314	218	270	400	236	285

08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	302	290	294	327	292	307	286	245	269	266	254	261
2	294	287	292	308	294	300	281	240	250	299	256	272
3	289	286	288	314	298	307	292	249	260	298	280	286
4	288	285	286	344	311	328	327	255	272	290	266	278
5	309	287	297	330	313	317	278	260	268	292	270	280
6	302	289	292	318	311	314	266	139	219	310	277	288
7	291	289	290	347	315	326	178	132	152	296	283	289
8	296	290	293	369	312	335	162	129	144	304	286	296
9	297	294	296	325	316	320	167	150	160	327	301	317
10	301	296	298	355	325	340	165	152	158	323	272	295
11	299	297	299	374	312	342	165	159	161	407	263	294
12	303	299	301	359	307	326	172	159	166	309	282	295
13	307	299	302	348	298	315	178	164	170	332	300	308
14	305	295	301	405	305	334	175	164	168	373	316	342
15	298	285	289	323	249	290	170	163	167	370	298	333
16	294	284	290	286	215	256	200	167	179	319	287	304
17	296	285	289	283	212	247	198	184	190	303	278	293
18	318	286	297	234	206	219	200	189	194	309	279	290
19	306	287	295	234	218	229	203	178	191	331	308	318
20	315	292	305	232	223	226	218	179	190	374	318	335
21	316	283	302	231	225	227	226	194	210	357	329	337
22	365	298	318	274	231	246	271	197	227	342	328	334
23	344	303	317	270	237	245	279	204	257	341	324	336
24	365	312	331	250	241	245	274	226	255	342	311	327
25	356	300	328	270	238	250	276	251	261	346	332	338
26	343	305	323	295	256	268	279	236	259	346	331	340
27	343	296	307	297	245	271	268	235	252	344	330	338
28	332	304	314	261	242	252	259	236	250	346	332	341
29	---	---	---	270	242	261	291	259	276	350	333	343
30	---	---	---	308	259	285	270	248	262	359	334	344
31	---	---	---	322	254	276	---	---	---	356	320	336
MONTH	365	283	301	405	206	284	327	129	215	407	254	313

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	350	320	331	325	321	323	371	358	362	407	364	392
2	360	333	350	334	322	328	370	359	363	415	394	400
3	345	328	338	334	327	331	---	---	---	443	400	414
4	343	327	338	336	331	334	---	---	---	443	398	421
5	342	335	339	339	332	335	---	---	---	436	403	423
6	346	326	337	337	327	333	---	---	---	446	410	423
7	348	326	336	329	318	323	382	369	376	459	420	444
8	341	327	336	331	284	307	391	374	382	464	397	444
9	354	339	344	355	292	311	382	365	371	429	394	408
10	356	342	349	339	306	322	372	359	367	432	414	423
11	359	345	351	338	304	328	371	357	365	448	428	439
12	359	350	354	307	279	296	388	369	380	450	429	441
13	353	344	347	286	222	240	399	378	388	454	430	443
14	349	341	346	275	233	248	---	---	---	465	438	457
15	356	349	353	328	275	306	---	---	---	470	437	452
16	356	347	351	325	306	316	403	384	396	474	455	466
17	353	336	345	327	284	309	402	394	399	482	455	469
18	345	338	341	297	278	289	417	396	407	493	460	476
19	343	327	338	291	284	287	442	417	433	486	443	467
20	334	326	331	330	284	302	452	431	443	468	435	452
21	336	324	330	333	318	327	468	447	459	517	445	471
22	382	333	346	327	317	322	468	437	450	547	463	505
23	372	331	355	346	309	321	458	425	445	561	482	510
24	366	331	350	324	315	320	471	438	449	601	507	560
25	385	306	342	324	314	319	472	430	450	741	575	610
26	331	306	318	323	308	316	443	429	435	---	---	---
27	428	311	341	322	310	315	459	436	446	2360	1490	2040
28	342	317	325	321	313	317	470	447	456	2990	2110	2470
29	334	318	327	343	318	327	458	436	447	2600	2220	2350
30	336	321	326	369	336	352	457	433	447	2980	2080	2460
31	---	---	---	372	364	369	462	440	449	---	---	---
MONTH	428	306	341	372	222	315	---	---	---	---	---	---

08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	35.0	28.5	31.9	24.9	22.9	23.8	20.8	20.2	20.3	15.1	11.9	13.2
2	31.9	28.6	30.3	23.5	21.6	22.8	20.4	19.9	20.2	15.2	13.0	14.5
3	30.0	27.6	28.7	21.6	19.5	20.8	22.1	20.1	20.7	13.0	9.8	11.3
4	28.8	26.8	27.8	22.0	19.2	20.6	23.3	20.7	22.0	9.8	8.2	8.9
5	29.9	25.9	27.7	19.4	16.9	18.0	24.1	22.5	23.3	9.8	7.8	8.6
6	28.6	24.1	26.7	16.9	---	e16.2	24.7	23.0	23.8	11.2	9.4	10.2
7	25.0	21.8	23.2	17.2	---	e16.7	25.3	23.6	24.3	13.3	11.2	12.1
8	25.7	20.7	22.7	20.4	17.2	18.8	23.6	17.2	19.9	15.4	13.3	14.3
9	26.4	22.2	23.7	22.4	19.7	20.9	17.3	16.1	16.7	14.9	11.7	13.1
10	---	---	e23.5	21.9	19.8	21.1	16.4	13.6	15.1	11.7	10.7	11.1
11	24.5	21.9	23.3	19.8	17.7	18.3	13.6	12.2	12.8	13.3	10.5	11.7
12	27.0	22.9	24.6	17.9	16.9	17.4	13.1	12.0	12.6	14.5	12.4	13.5
13	28.7	22.7	25.6	16.9	16.5	16.6	13.9	12.2	13.2	16.7	14.4	15.4
14	25.0	---	---	17.6	16.4	17.1	14.2	13.8	14.0	16.5	12.9	14.4
15	---	---	---	17.6	17.3	17.4	14.2	13.1	13.5	14.6	11.4	e12.6
16	---	---	---	17.9	17.3	17.5	13.4	12.1	12.7	16.7	12.4	e14.6
17	---	---	---	17.7	17.0	17.3	13.5	12.4	13.0	19.4	16.0	17.5
18	---	---	---	18.2	17.0	17.5	14.5	12.5	13.3	19.8	16.6	18.1
19	---	---	---	19.2	18.1	18.5	14.6	14.4	14.4	20.8	---	e19.2
20	---	---	---	19.1	18.5	18.8	15.9	14.5	14.9	22.4	19.3	20.5
21	---	---	---	18.5	17.9	18.1	18.1	15.1	16.8	23.3	20.2	21.6
22	---	---	---	17.9	17.5	17.6	18.0	13.9	15.5	22.5	17.1	20.8
23	21.4	20.1	20.6	17.9	17.6	17.7	13.9	11.6	12.7	17.1	13.5	15.0
24	20.9	19.5	20.1	18.7	17.9	18.1	11.6	10.0	11.1	---	10.0	e13.8
25	20.4	20.1	20.3	19.8	18.3	19.0	10.0	9.2	9.5	17.4	13.4	15.6
26	20.7	20.3	20.5	19.6	18.9	19.1	10.0	8.6	9.2	20.4	---	e17.8
27	21.4	20.7	21.0	19.9	19.0	19.2	11.0	9.3	9.8	23.3	18.4	20.6
28	22.3	21.3	21.6	20.5	19.4	20.0	11.5	11.0	11.3	22.2	20.4	21.3
29	22.6	21.8	22.1	20.6	19.8	20.2	12.4	11.0	11.7	22.8	21.2	21.9
30	23.4	22.3	22.5	21.0	20.2	20.6	12.1	11.6	11.8	22.3	17.9	20.0
31	23.7	22.6	22.8	---	---	---	12.0	11.6	11.8	17.9	16.0	17.1
MONTH	---	---	---	24.9	---	18.9	25.3	8.6	15.2	---	---	15.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	17.1	14.8	16.1	22.8	17.4	20.0	22.8	20.4	21.6	27.8	23.5	25.7
2	17.3	15.6	16.5	22.4	19.3	20.6	22.7	21.2	22.0	28.3	24.0	26.2
3	16.0	14.9	15.5	20.0	16.3	17.9	24.2	22.0	23.1	26.2	24.3	25.0
4	16.3	15.4	15.8	20.3	14.6	17.4	23.6	23.0	23.3	26.5	24.2	25.1
5	16.6	15.6	16.0	19.4	17.5	18.6	24.8	23.0	23.6	29.7	25.6	27.3
6	17.6	16.4	17.0	---	---	19.6	24.2	21.6	22.6	29.2	25.7	27.4
7	17.6	17.1	17.3	---	16.3	17.9	24.5	21.5	23.0	30.1	22.7	26.3
8	18.7	17.2	17.7	21.3	16.2	18.9	24.4	23.1	23.8	32.5	24.6	28.6
9	19.4	17.7	18.4	---	---	22.5	26.1	23.7	24.7	30.2	28.0	29.2
10	19.9	18.6	19.2	---	20.6	23.2	26.6	24.7	25.5	28.5	23.7	26.5
11	20.2	18.6	19.6	25.3	22.4	23.6	26.6	25.7	26.0	28.7	22.8	25.6
12	18.6	16.4	17.0	22.9	20.3	21.7	26.5	24.1	25.1	27.7	24.6	25.8
13	16.9	15.8	16.3	21.7	13.4	18.1	26.2	23.6	24.8	28.5	24.0	25.7
14	16.4	15.4	15.7	13.6	9.0	11.5	25.7	24.8	25.2	29.9	25.2	27.4
15	16.4	15.2	15.8	18.2	10.1	13.6	25.1	20.9	22.9	30.3	27.0	28.5
16	16.5	15.9	16.1	17.5	14.0	15.8	20.9	18.0	19.4	31.0	27.4	28.9
17	16.8	16.1	16.5	17.7	16.6	17.1	21.8	16.1	19.0	30.9	27.4	29.0
18	18.1	15.7	17.0	17.8	16.9	17.3	23.7	17.4	20.6	29.4	25.2	27.5
19	17.6	15.9	16.7	18.0	17.6	17.8	26.0	20.1	22.7	29.3	23.6	26.3
20	17.2	16.6	16.8	20.0	17.7	19.0	27.6	21.8	24.4	30.6	25.6	27.8
21	16.7	14.3	15.5	20.7	17.4	18.9	26.4	22.4	24.4	31.7	26.5	28.9
22	15.1	12.4	e13.8	20.7	18.6	19.5	27.7	22.7	25.1	33.0	27.1	29.9
23	18.2	14.7	16.1	20.2	18.6	19.3	30.1	24.9	26.9	33.7	27.6	30.4
24	18.3	13.9	16.3	22.5	19.6	20.7	29.1	26.5	28.0	35.8	27.8	31.1
25	20.4	16.5	18.6	22.0	19.8	21.5	29.1	26.5	28.0	33.1	29.5	31.2
26	22.1	18.9	20.3	21.3	18.8	19.8	27.2	24.9	26.4	30.3	28.1	29.1
27	23.1	20.2	21.2	19.4	18.0	18.6	31.1	23.1	27.0	32.4	27.3	29.6
28	21.3	---	e19.8	19.6	18.1	18.8	34.0	27.0	30.4	29.9	26.8	28.5
29	---	---	---	19.4	18.5	19.1	31.9	27.8	30.1	29.0	26.3	27.7
30	---	---	---	18.8	18.0	18.4	30.6	24.7	27.9	29.4	24.9	27.2
31	---	---	---	22.0	17.9	19.9	---	---	---	31.6	26.8	29.0
MONTH	23.1	---	17.1	---	---	18.9	34.0	16.1	24.6	35.8	22.7	27.8

08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	32.1	28.1	29.8	29.9	28.5	29.1	37.9	29.4	33.3	29.9	24.7	26.9
2	31.7	28.1	29.9	29.7	28.9	29.2	36.2	29.6	32.9	32.2	26.2	28.5
3	31.5	28.5	29.9	29.0	28.1	28.7	39.2	---	e33.2	30.7	27.7	29.4
4	32.0	28.2	29.9	29.4	27.6	28.5	38.5	---	---	30.5	27.5	29.2
5	31.3	28.6	30.0	30.0	27.0	28.5	37.3	---	---	33.4	27.6	30.3
6	31.9	28.6	30.1	32.5	28.1	29.8	37.5	---	e32.9	37.0	28.2	31.8
7	30.9	29.6	30.1	31.5	26.5	29.0	37.6	29.0	33.1	35.7	28.8	32.0
8	29.6	28.5	28.9	32.5	27.5	30.1	36.8	29.8	33.1	36.5	28.4	31.8
9	28.5	27.7	28.1	30.7	28.7	29.7	35.9	29.4	32.4	35.1	26.4	30.6
10	28.2	27.4	27.7	31.3	27.4	29.3	35.5	28.9	31.9	35.4	25.0	30.1
11	30.1	27.3	28.4	32.9	28.8	30.9	35.7	28.4	31.6	33.2	25.2	29.6
12	30.7	28.4	29.4	30.4	27.7	28.8	34.8	28.3	31.2	33.1	27.4	30.2
13	29.7	27.7	28.7	28.7	25.5	27.5	34.9	28.2	31.1	32.5	27.0	29.7
14	32.7	27.6	29.9	33.1	26.3	29.5	38.8	28.4	32.7	31.7	25.4	28.6
15	31.2	28.3	29.3	33.6	28.7	31.1	33.7	---	---	30.2	23.4	26.9
16	32.2	26.3	28.8	32.0	29.0	30.7	35.8	---	---	30.3	21.7	25.5
17	30.1	27.2	28.5	30.6	28.8	29.5	34.9	28.7	31.4	29.5	23.3	26.4
18	29.6	25.5	27.7	29.9	28.0	29.1	40.0	28.2	33.2	29.9	22.0	26.0
19	28.8	26.9	27.7	29.7	27.3	28.5	36.8	28.1	31.9	31.8	22.3	26.7
20	28.1	26.5	27.3	30.0	27.8	28.9	37.0	27.4	31.7	32.2	23.8	28.0
21	28.7	27.0	27.7	30.0	27.2	28.6	34.2	28.4	31.4	29.1	24.4	27.2
22	29.9	26.8	28.1	35.0	27.6	31.1	34.4	27.9	31.2	27.8	20.0	24.0
23	30.9	27.9	29.4	37.3	29.8	33.2	33.9	28.5	31.2	28.0	19.4	23.4
24	32.0	28.3	30.0	38.0	30.1	33.9	32.9	29.1	31.2	28.2	21.2	25.0
25	30.8	27.6	28.6	34.3	29.8	32.2	39.9	28.6	32.7	27.0	23.6	25.5
26	31.7	27.5	29.3	36.3	29.0	32.4	37.5	29.6	33.0	28.8	24.7	26.3
27	30.5	28.7	29.6	37.8	29.1	33.2	38.7	28.9	32.8	29.7	24.7	27.2
28	29.7	27.9	29.0	38.6	29.2	33.6	40.5	27.4	33.3	28.2	25.9	27.0
29	30.2	28.2	29.2	36.7	29.7	33.0	35.6	29.3	32.4	27.2	21.5	24.4
30	30.0	28.2	29.0	36.3	28.9	32.3	36.0	27.5	31.4	24.9	19.0	21.9
31	---	---	---	35.8	28.5	32.0	33.6	25.6	28.6	---	---	---
MONTH	32.7	25.5	29.0	38.6	25.5	30.4	40.5	---	---	37.0	19.0	27.7

e Estimated

This page intentionally left blank.

08067252 TRINITY RIVER AT WALLISVILLE, TX

LOCATION.--Lat 29°48'44", long 94°43'52", Chambers County, Hydrologic Unit 12030203, in the center of the Trinity River Dam at the U.S. Army Corps of Engineers river lock which is located 3.0 miles west along Interstate 10 highway from the Interstate overpass over Farm Road 563, 2.0 miles below Wallisville and 3.9 river miles from mouth.

DRAINAGE AREA.--17,796 mi^2.

WATER-STAGE RECORDS

PERIOD OF RECORD.--Oct 1994 to current year.

GAGE.--Water-stage recorders. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records fair. Gage was relocated to permanent location after dam and lock were completed on March 18, 1999 from temporary location 2.3 miles upstream. Pressure transducers are installed to record river elevation on the upstream and downstream side of the dam. Mostly tidal.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 7.7 ft Oct 22, 1994 at 0300 hours; minimum, less than -.1 ft at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum (upstream), 6.0 ft Nov 19-20; minimum, less than -.1 ft at times during the year. Maximum (downstream), 3.3 ft Apr 3; minimum, -.2 ft Apr 30 and May 19.

ELEVATION UPSTREAM (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.45	.12	3.25	2.28	4.08	3.42	3.61	3.09	3.44	2.86	1.42	.32
2	2.01	.45	2.29	1.39	3.43	2.87	3.88	2.64	3.81	3.42	1.70	1.00
3	2.55	1.05	1.78	.75	3.08	2.42	2.65	2.47	4.51	3.77	1.00	.06
4	2.34	.82	1.68	.75	2.82	2.04	2.55	2.40	4.75	4.45	2.26	.28
5	3.27	2.15	1.19	.30	2.48	1.48	2.93	2.49	4.98	4.69	2.28	1.22
6	2.57	1.17	1.44	.54	2.24	1.60	3.18	2.87	5.08	4.91	1.22	.45
7	1.23	.07	1.92	1.07	2.27	1.54	3.13	2.83	5.13	5.01	1.71	.07
8	1.35	.25	2.14	1.07	1.73	.88	3.06	2.90	5.15	5.01	2.72	1.69
9	1.55	.31	2.21	1.48	1.58	.95	3.03	2.37	5.18	5.04	1.93	.63
10	1.66	.21	2.88	1.82	2.07	1.58	2.48	2.25	5.17	5.01	1.81	.40
11	1.55	.47	2.22	1.81	2.92	1.88	2.42	1.88	5.25	4.99	1.87	.73
12	1.80	.14	2.66	2.15	3.41	2.91	2.10	1.43	5.06	4.89	2.71	.50
13	1.13	.06	3.26	2.45	3.97	3.38	1.80	1.04	4.97	4.78	2.97	.22
14	1.19	.07	3.75	3.17	4.33	3.91	1.47	.47	4.86	4.63	1.45	.08
15	1.36	.21	4.13	3.65	4.62	4.31	1.50	.47	4.74	4.30	2.39	1.45
16	2.18	.88	4.71	4.11	4.76	4.55	1.59	.77	4.33	3.55	---	---
17	2.69	1.85	5.07	4.67	4.83	4.68	1.74	.83	3.55	2.62	---	---
18	2.67	1.96	5.60	5.03	5.00	4.74	1.47	.14	2.77	2.14	---	---
19	2.88	1.96	5.97	5.55	5.00	4.70	1.11	.19	2.20	1.34	---	---
20	3.41	2.74	5.97	5.73	4.82	4.67	1.15	.27	2.10	1.50	---	---
21	3.44	3.18	5.76	5.41	4.84	4.66	1.82	1.08	1.50	.73	---	---
22	3.73	3.34	5.46	5.14	4.78	4.57	2.27	.82	---	.65	---	---
23	4.23	3.69	5.22	4.98	4.67	4.52	.86	---	---	1.16	2.06	---
24	4.34	4.07	5.08	4.86	---	4.40	.83	---	1.30	.28	2.18	1.14
25	4.53	4.11	5.03	4.85	4.51	4.31	.90	---	1.47	.54	1.42	.45
26	4.51	3.99	---	---	4.46	4.29	1.10	.24	1.72	.48	1.43	.19
27	4.42	3.77	---	---	4.43	4.24	1.26	.35	1.89	.72	1.76	.63
28	4.07	3.43	---	---	4.39	4.11	1.89	.68	1.16	.07	1.97	1.03
29	3.66	2.96	4.72	4.52	4.18	3.89	2.08	1.01	---	---	1.41	.37
30	3.30	2.49	4.59	4.05	3.97	3.72	2.13	.92	---	---	.93	.31
31	2.95	2.28	---	---	3.91	3.43	2.90	1.94	---	---	1.26	.53
MONTH	4.53	.06	---	---	---	.88	3.88	---	---	.07	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

ELEVATION UPSTREAM (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1.48	.76	1.79	.43	1.81	.76	2.86	2.21	---	---	1.39	.78
2	1.78	.88	2.17	.85	1.98	.90	2.31	---	.78	.27	1.87	.74
3	3.03	1.50	1.78	.70	1.96	1.03	---	---	.91	.26	1.81	.83
4	2.55	.90	2.78	1.06	1.93	1.11	---	---	---	---	1.79	.84
5	2.75	1.89	2.05	.96	2.20	1.29	---	---	---	---	1.37	.69
6	2.27	1.12	1.46	.24	1.93	1.24	1.16	---	---	---	1.12	.50
7	2.33	1.41	1.32	---	1.77	1.00	1.08	.42	1.19	---	1.08	.26
8	2.63	1.83	1.55	.24	1.92	1.39	1.30	.38	1.29	.19	1.23	.45
9	2.48	1.64	1.95	.77	2.10	1.56	1.76	.58	1.13	.15	.85	.26
10	2.22	1.55	1.92	.73	2.17	1.50	2.29	.50	1.02	.09	1.52	-.02
11	2.02	1.07	2.47	.73	2.12	1.40	1.76	.39	1.45	.02	1.42	.89
12	1.57	.74	2.01	.94	2.32	1.24	1.45	.18	1.54	.37	1.38	.97
13	1.96	1.17	1.42	.57	1.85	1.01	1.54	-.03	1.14	.45	1.28	.36
14	3.01	1.95	---	.40	1.54	.70	1.56	.30	.79	---	1.15	.67
15	2.06	---	2.17	.84	1.44	.52	1.44	.66	---	---	1.18	.59
16	.63	---	2.36	.88	1.61	.47	1.63	.73	---	---	1.25	.69
17	.65	.02	2.44	1.07	1.21	.38	1.56	.81	---	.39	1.17	.36
18	.99	---	1.58	.40	1.72	.17	1.79	.81	---	---	1.07	.39
19	.96	.05	1.67	.15	2.08	.86	1.84	1.15	---	.29	1.28	.44
20	1.03	---	1.80	.35	1.93	.98	1.82	1.09	.97	.26	1.27	.52
21	1.75	.30	1.83	.64	2.41	1.44	2.21	.64	1.12	.25	1.51	.09
22	1.96	.74	1.44	.50	1.97	1.19	1.40	.54	1.58	.15	1.51	-.05
23	1.76	.32	1.55	.47	1.96	1.08	1.16	.19	1.88	.47	1.61	.80
24	1.19	.18	1.04	.30	1.83	.98	.98	.09	1.31	.47	1.38	.95
25	1.13	.27	1.45	.57	2.40	.92	1.27	.13	---	---	1.77	.74
26	1.66	.72	1.24	.58	2.23	1.00	1.24	.24	---	---	1.76	1.28
27	1.30	.59	1.12	.44	2.69	1.88	1.07	.17	---	---	1.75	1.16
28	1.11	.32	1.32	.27	2.78	2.09	1.14	-.01	---	---	2.10	1.50
29	1.08	.21	1.37	.16	2.62	2.16	1.35	.06	---	---	2.16	.30
30	1.60	---	1.64	.34	2.66	2.13	---	.30	1.17	---	1.44	.45
31	---	---	1.80	.52	---	---	---	---	1.29	.41	---	---
MONTH	3.03	---	---	---	2.78	.17	---	---	---	---	2.16	-.05

ELEVATION DOWNSTREAM (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	1.90
19	---	---	---	---	---	---	---	---	---	---	2.38	1.94
20	---	---	---	---	---	---	---	---	---	---	1.94	1.40
21	---	---	---	---	---	---	---	---	---	---	1.76	1.00
22	---	---	---	---	---	---	---	---	---	---	2.03	1.26
23	---	---	---	---	---	---	---	---	---	---	---	1.57
24	---	---	---	---	---	---	---	---	---	---	1.82	.58
25	---	---	---	---	---	---	---	---	---	---	1.49	.53
26	---	---	---	---	---	---	---	---	---	---	1.72	.12
27	---	---	---	---	---	---	---	---	---	---	2.05	.62
28	---	---	---	---	---	---	---	---	---	---	2.28	1.31
29	---	---	---	---	---	---	---	---	---	---	1.70	.31
30	---	---	---	---	---	---	---	---	---	---	1.22	.46
31	---	---	---	---	---	---	---	---	---	---	1.54	.82
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

ELEVATION DOWNSTREAM (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1.76	1.05	1.97	.58	1.84	.78	2.97	2.35	---	---	1.37	.63
2	2.08	1.16	2.34	1.01	2.01	.92	---	---	.69	---	1.87	.50
3	3.31	1.77	1.94	.86	1.99	1.02	---	---	.83	.17	1.72	.34
4	2.75	1.15	2.93	1.21	1.94	1.09	---	---	---	---	1.86	.26
5	2.73	2.02	2.21	1.09	2.23	1.29	---	---	---	---	1.30	.12
6	2.42	1.50	1.59	.38	1.94	1.24	1.15	---	---	---	1.07	.09
7	2.48	1.35	1.47	-.02	1.80	.98	1.06	.40	1.25	.02	1.06	---
8	2.79	1.88	1.71	.38	1.95	1.38	1.28	.35	1.33	.13	1.16	.12
9	2.63	1.76	2.09	.90	2.12	1.60	1.75	.55	1.21	.05	.63	-.03
10	2.40	1.69	2.05	.85	2.21	1.50	2.27	.48	1.07	.00	1.62	---
11	2.22	1.26	2.59	.85	2.10	1.40	1.72	.36	1.52	---	1.38	.63
12	1.75	.75	2.13	.93	2.34	1.22	1.40	.16	1.61	.28	1.35	.74
13	2.17	1.36	1.48	.66	1.89	1.02	1.49	.00	1.19	.38	1.25	.11
14	3.23	2.16	---	.46	1.60	.73	1.52	.25	.94	---	1.37	.43
15	2.28	.14	1.87	.52	1.51	.58	1.40	.62	---	---	1.14	.37
16	.84	-.08	2.06	.55	1.69	.50	1.58	.68	---	---	1.20	.44
17	.84	.21	2.13	.74	1.31	.46	1.50	.75	---	.25	1.14	.08
18	1.20	-.11	1.27	.06	1.82	.25	1.72	.74	---	---	1.11	.14
19	1.18	.24	1.67	---	2.20	.96	1.78	1.09	---	.21	1.32	.27
20	1.24	.06	1.79	.33	2.04	1.09	1.75	1.01	.96	.11	1.32	.31
21	1.98	.49	1.83	.62	2.53	1.53	2.13	.58	1.10	.11	1.67	---
22	2.17	.94	1.45	.49	2.08	1.28	1.32	.47	1.58	.01	1.68	---
23	1.96	.51	1.57	.47	2.08	1.20	1.08	.11	1.84	.32	1.69	.54
24	1.39	.37	1.05	.32	1.95	1.09	.89	.01	1.26	.28	1.42	.63
25	1.32	.45	1.46	.56	2.51	1.01	1.18	.04	---	---	1.88	.44
26	1.85	.89	1.25	.56	2.28	1.08	1.16	.15	---	---	1.82	1.02
27	1.49	.77	1.13	.42	2.75	1.75	.97	.08	---	---	1.72	.84
28	1.30	.49	1.34	.28	2.87	2.17	1.06	---	---	---	2.05	1.16
29	1.27	.40	1.39	.17	2.88	2.27	1.25	.00	---	---	2.24	---
30	1.80	-.17	1.67	.34	2.79	2.24	---	.19	1.21	---	1.30	.25
31	---	---	1.83	.53	---	---	---	---	1.28	.26	---	---
MONTH	3.31	-.17	---	---	2.88	.25	---	---	---	---	2.24	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct 1995 to current year.
WATER TEMPERATURE: Oct 1995 to current year.

INSTRUMENTATION.--Water-quality monitor since Jul 1995.

REMARKS.--Interruption in the record was caused by malfunctions of the instrumentation. Gage was relocated to permanent location after dam and lock were completed on March 18, 1999 from temporary location 2.3 miles upstream. Water-quality monitors are installed to record data on the upstream and downstream sides of the dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 19,100 microsiemens, Sep 28, 1999; minimum, 109 microsiemens, Apr 5-6, 1999.
WATER TEMPERATURES: Maximum, 34.0°C, Jul 28, 1997; minimum, 7.0°C, Feb 4-7, 1996, Jan 15, 1997.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 19,100 microsiemens, Sep 28; minimum, 109 microsiemens, Apr 5-6.
WATER TEMPERATURE: Maximum, 33.0°C, Aug 6, Sep 9; minimum, 16.0°C, Nov 14.
SPECIFIC CONDUCTANCE: Maximum, 20,900 microsiemens, Sep 23-24; minimum, 125 microsiemens, Apr 6.
WATER TEMPERATURE: Maximum, 34.4°C, Aug 10; minimum, 16.3°C, Mar 19.

SPECIFIC CONDUCTANCE UPSTREAM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	522	446	475	345	338	342	---	---	---	---	---	---
2	719	472	545	351	343	347	---	---	---	---	---	---
3	1350	499	817	352	347	351	---	---	---	---	---	---
4	1580	566	1070	350	343	347	---	---	---	---	---	---
5	6590	1440	4310	349	338	345	---	---	---	---	---	---
6	5080	692	2570	357	333	345	---	---	---	---	---	---
7	738	570	665	367	356	360	---	---	---	---	---	---
8	600	538	567	379	367	371	---	---	---	---	---	---
9	538	419	478	383	370	378	---	---	---	---	---	---
10	423	387	402	385	375	379	---	---	---	---	---	---
11	423	372	398	392	382	388	---	---	---	---	---	---
12	418	379	402	395	390	392	---	---	---	---	---	---
13	475	377	401	394	386	392	---	---	---	---	---	---
14	474	441	448	390	304	353	---	---	---	---	---	---
15	445	419	437	342	313	335	---	---	---	---	---	---
16	705	430	504	334	306	317	---	---	---	---	---	---
17	3100	552	1730	319	311	315	---	---	---	---	---	---
18	3210	420	1960	319	310	313	---	---	---	---	---	---
19	420	312	388	317	311	315	---	---	---	---	---	---
20	312	239	270	321	314	318	---	---	---	---	---	---
21	308	204	257	326	319	323	---	---	---	---	---	---
22	331	308	321	333	325	329	---	---	---	---	---	---
23	362	329	345	333	327	331	---	---	---	---	---	---
24	364	354	360	---	---	---	---	---	---	---	---	---
25	359	348	355	---	---	---	---	---	---	---	---	---
26	354	349	352	---	---	---	---	---	---	---	---	---
27	356	346	351	---	---	---	---	---	---	---	---	---
28	351	346	349	---	---	---	---	---	---	---	---	---
29	348	338	342	---	---	---	---	---	---	---	---	---
30	342	338	340	---	---	---	---	---	---	---	---	---
31	342	338	341	---	---	---	---	---	---	---	---	---
MONTH	6590	204	727	---	---	---	---	---	---	---	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

SPECIFIC CONDUCTANCE UPSTREAM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	280	276	279	300	296	297
2	---	---	---	---	---	---	278	274	276	300	298	299
3	---	---	---	---	---	---	274	272	273	300	296	297
4	---	---	---	---	---	---	272	270	271	457	296	326
5	---	---	---	---	---	---	272	109	211	320	297	299
6	---	---	---	---	---	---	134	109	124	307	301	304
7	---	---	---	---	---	---	179	130	155	307	296	304
8	---	---	---	---	---	---	203	179	192	308	304	306
9	---	---	---	---	---	---	217	203	211	309	304	306
10	---	---	---	---	---	---	228	216	222	308	303	305
11	---	---	---	---	---	---	238	228	234	311	304	308
12	---	---	---	---	---	---	248	238	244	308	304	306
13	---	---	---	---	---	---	257	248	252	---	---	---
14	---	---	---	---	---	---	260	254	257	---	---	---
15	---	---	---	---	---	---	262	258	260	---	---	---
16	---	---	---	---	---	---	262	258	260	---	---	---
17	---	---	---	---	---	---	264	259	261	---	---	---
18	---	---	---	---	---	---	265	259	260	---	---	---
19	---	---	---	239	233	236	281	265	273	---	---	---
20	---	---	---	242	239	241	289	281	286	295	290	292
21	---	---	---	245	242	244	291	285	289	340	295	297
22	---	---	---	248	245	247	297	290	295	302	297	299
23	---	---	---	---	---	---	303	296	300	303	300	301
24	---	---	---	251	248	250	301	294	297	304	302	303
25	---	---	---	260	250	254	301	293	296	305	303	303
26	---	---	---	262	259	261	306	298	302	306	301	304
27	---	---	---	264	260	262	312	301	305	308	303	305
28	---	---	---	266	263	264	304	296	301	308	305	307
29	---	---	---	269	265	267	301	295	298	309	306	308
30	---	---	---	274	268	272	300	296	298	311	306	309
31	---	---	---	276	273	274	---	---	---	314	308	312
MONTH	---	---	---	---	---	---	312	109	259	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	314	308	311	303	290	299	---	---	---	4310	2140	3780
2	334	312	322	---	---	---	---	---	---	5460	2260	4280
3	340	316	323	---	---	---	---	---	---	3660	920	2170
4	335	318	325	---	---	---	---	---	---	1970	748	1420
5	357	325	344	---	---	---	---	---	---	914	525	758
6	414	355	396	---	---	---	---	---	---	861	477	689
7	420	398	410	292	287	290	444	390	402	1640	435	969
8	442	414	431	301	289	296	538	415	454	2550	615	1610
9	436	381	401	303	297	300	519	436	472	1910	692	945
10	381	361	366	302	296	298	495	412	458	4190	823	1820
11	397	354	364	305	298	301	1040	418	534	5960	2650	4050
12	395	354	381	302	297	299	1670	514	847	6620	2110	4410
13	445	390	423	297	289	292	1670	500	804	5420	1790	2770
14	491	436	474	310	289	300	---	---	---	4980	2230	3440
15	---	---	---	311	271	294	---	---	---	5790	2930	4050
16	---	---	---	288	253	278	---	---	---	6930	2780	5610
17	309	281	296	281	250	267	---	---	---	7240	3760	5650
18	312	308	310	289	279	284	---	---	---	7490	3840	5960
19	317	310	313	312	287	302	---	---	---	8370	4140	7010
20	322	311	316	321	312	316	891	468	706	9080	5000	7130
21	317	311	314	322	315	318	1180	425	841	10900	5730	8380
22	318	311	315	323	315	319	2110	531	1290	12500	6610	8610
23	320	308	313	326	320	323	3110	1020	2180	14600	8960	11900
24	317	305	311	328	324	326	2570	1160	1940	14100	9530	12700
25	324	315	322	329	326	328	---	---	---	15200	9630	12700
26	329	247	307	329	324	326	---	---	---	16100	13300	15300
27	290	244	276	331	328	329	---	---	---	17800	14100	16500
28	289	274	282	336	331	334	---	---	---	19100	17200	18500
29	285	279	282	337	332	335	---	---	---	19000	10900	15900
30	300	281	290	---	---	---	---	---	---	14700	9130	12600
31	---	---	---	---	---	---	3580	2120	2930	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	19100	435	6720

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

TEMPERATURE, WATER UPSTREAM (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	31.4	30.5	30.8	23.2	22.9	23.0	---	---	---	---	---	---
2	31.1	30.1	30.5	23.0	22.4	22.7	---	---	---	---	---	---
3	30.3	29.8	30.1	22.5	21.7	22.0	---	---	---	---	---	---
4	30.3	29.6	29.9	22.0	21.2	21.6	---	---	---	---	---	---
5	29.6	28.3	28.9	21.2	19.6	20.3	---	---	---	---	---	---
6	29.1	27.8	28.6	19.6	18.7	19.1	---	---	---	---	---	---
7	27.8	26.6	26.9	18.7	18.3	18.5	---	---	---	---	---	---
8	26.6	25.2	25.7	18.8	18.3	18.5	---	---	---	---	---	---
9	25.2	24.3	24.6	19.7	18.8	19.2	---	---	---	---	---	---
10	24.6	24.1	24.3	20.1	19.7	20.0	---	---	---	---	---	---
11	24.4	24.1	24.3	20.0	19.2	19.5	---	---	---	---	---	---
12	24.7	24.1	24.3	19.2	18.4	18.7	---	---	---	---	---	---
13	25.1	24.5	24.7	18.4	17.3	18.0	---	---	---	---	---	---
14	25.8	24.6	25.0	17.3	16.0	16.6	---	---	---	---	---	---
15	25.9	24.9	25.3	17.2	16.8	17.1	---	---	---	---	---	---
16	25.8	25.1	25.4	17.1	16.8	16.9	---	---	---	---	---	---
17	26.0	25.3	25.5	17.1	16.7	16.9	---	---	---	---	---	---
18	25.9	24.9	25.4	17.4	16.8	17.0	---	---	---	---	---	---
19	25.2	23.2	24.6	17.8	17.3	17.5	---	---	---	---	---	---
20	23.2	22.4	22.7	18.0	17.7	17.8	---	---	---	---	---	---
21	23.0	22.3	22.6	17.7	16.9	17.2	---	---	---	---	---	---
22	22.9	22.5	22.7	16.9	16.5	16.7	---	---	---	---	---	---
23	22.5	21.7	21.9	17.2	16.6	16.9	---	---	---	---	---	---
24	21.7	21.0	21.3	---	16.9	---	---	---	---	---	---	---
25	21.6	20.9	21.2	---	---	---	---	---	---	---	---	---
26	21.8	21.1	21.5	---	---	---	---	---	---	---	---	---
27	22.1	21.4	21.7	---	---	---	---	---	---	---	---	---
28	22.4	21.8	22.1	---	---	---	---	---	---	---	---	---
29	22.4	22.0	22.3	---	---	---	---	---	---	---	---	---
30	22.6	22.3	22.4	---	---	---	---	---	---	---	---	---
31	23.0	22.6	22.8	---	---	---	---	---	---	---	---	---
MONTH	31.4	20.9	24.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	18.3	17.7	18.0	26.0	25.0	25.4
2	---	---	---	---	---	---	18.7	18.1	18.4	25.6	25.1	25.3
3	---	---	---	---	---	---	19.6	18.7	19.1	25.3	24.9	25.1
4	---	---	---	---	---	---	20.4	19.4	19.9	24.9	24.5	24.7
5	---	---	---	---	---	---	20.6	19.8	20.2	25.6	24.5	24.8
6	---	---	---	---	---	---	20.2	19.6	19.9	25.2	24.2	24.6
7	---	---	---	---	---	---	21.1	20.1	20.6	26.4	24.3	24.7
8	---	---	---	---	---	---	22.0	21.0	21.4	25.4	24.3	24.8
9	---	---	---	---	---	---	22.3	21.8	22.0	25.5	25.0	25.3
10	---	---	---	---	---	---	22.7	22.1	22.3	25.6	24.9	25.2
11	---	---	---	---	---	---	23.1	22.5	22.8	25.7	24.8	25.1
12	---	---	---	---	---	---	22.9	22.5	22.7	25.4	24.4	24.9
13	---	---	---	---	---	---	22.5	22.0	22.2	---	24.1	---
14	---	---	---	---	---	---	22.3	22.0	22.2	---	---	---
15	---	---	---	---	---	---	22.0	21.3	21.6	---	---	---
16	---	---	---	---	---	---	21.4	20.3	20.6	---	---	---
17	---	---	---	---	---	---	20.3	19.5	19.8	---	---	---
18	---	---	---	16.5	---	---	20.0	19.0	19.5	---	---	---
19	---	---	---	16.7	16.4	16.5	20.7	19.7	20.2	27.5	---	---
20	---	---	---	17.1	16.5	16.8	21.7	20.4	20.9	27.8	26.8	27.2
21	---	---	---	17.3	16.5	16.9	22.3	21.4	21.8	28.0	27.0	27.3
22	---	---	---	17.5	16.8	17.1	23.2	22.2	22.7	28.5	27.3	27.7
23	---	---	---	17.9	---	---	24.3	23.0	23.6	28.3	27.5	28.0
24	---	---	---	18.7	17.7	18.1	25.0	24.1	24.5	28.3	27.8	28.0
25	---	---	---	19.1	18.6	18.8	25.5	24.7	25.1	28.0	27.6	27.8
26	---	---	---	19.0	18.5	18.7	25.4	25.0	25.1	27.7	27.3	27.5
27	---	---	---	18.9	18.2	18.4	26.1	24.8	25.3	27.7	26.9	27.3
28	---	---	---	18.3	18.0	18.2	27.3	25.3	25.9	27.5	27.0	27.2
29	---	---	---	18.1	17.8	18.0	27.5	25.5	26.0	27.4	26.8	27.2
30	---	---	---	18.1	17.8	17.9	26.4	25.1	25.5	27.0	26.7	26.8
31	---	---	---	18.1	17.7	17.9	---	---	---	27.1	26.3	26.8
MONTH	---	---	---	---	---	---	27.5	17.7	22.0	---	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

TEMPERATURE, WATER UPSTREAM (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	26.8	27.1	29.5	28.8	29.1	---	---	---	31.1	29.6	30.1
2	27.9	27.1	27.5	---	---	---	---	---	---	31.5	28.8	30.0
3	28.4	27.6	28.0	---	---	---	---	---	---	31.2	30.1	30.7
4	28.4	27.8	28.1	---	---	---	---	---	---	31.1	30.3	30.6
5	28.3	27.9	28.1	---	---	---	---	---	---	31.5	30.4	30.8
6	28.5	28.0	28.2	30.2	---	---	33.0	---	---	31.6	31.0	31.3
7	28.4	28.1	28.2	30.3	29.6	30.0	32.8	32.4	32.6	31.5	31.0	31.2
8	28.1	27.6	27.8	30.7	30.2	30.4	32.8	32.2	32.5	31.2	30.7	31.0
9	27.8	27.3	27.6	30.8	30.2	30.5	32.8	32.1	32.4	33.0	30.7	31.4
10	27.8	27.5	27.6	30.3	30.0	30.2	32.9	32.1	32.4	31.5	30.0	30.8
11	28.3	27.4	27.8	30.6	30.1	30.3	32.5	31.8	32.3	30.8	29.5	30.0
12	28.4	27.8	28.1	30.4	29.6	30.0	32.2	31.5	31.9	31.5	29.3	30.2
13	28.1	27.4	27.7	29.8	29.3	29.5	32.3	31.3	31.9	31.6	29.5	30.6
14	28.4	27.4	27.9	30.4	29.2	29.8	---	31.7	---	31.9	29.3	30.3
15	---	27.6	---	30.2	29.2	29.6	---	---	---	30.8	28.3	29.6
16	28.0	---	---	30.0	29.2	29.5	---	---	---	30.3	28.6	29.1
17	28.5	27.2	27.8	30.5	29.5	30.0	---	---	---	29.4	28.0	28.5
18	28.8	28.3	28.5	30.6	30.2	30.4	---	---	---	29.8	27.8	28.4
19	29.8	28.6	29.0	30.5	30.3	30.4	---	---	---	29.4	27.3	27.9
20	29.2	28.8	29.0	30.3	30.3	30.3	32.6	31.6	31.9	29.2	27.2	28.2
21	29.1	28.8	29.0	30.5	30.1	30.2	32.4	31.6	32.0	28.8	27.0	27.8
22	29.2	28.6	28.9	30.7	30.1	30.4	32.1	31.2	31.6	27.5	24.6	26.5
23	29.5	28.8	29.1	30.8	30.1	30.5	31.4	30.7	31.0	25.5	24.5	25.0
24	29.9	29.2	29.5	31.5	30.8	31.1	31.9	30.9	31.2	25.9	24.3	24.8
25	29.6	29.2	29.4	32.2	31.1	31.3	---	---	---	25.3	24.6	24.9
26	29.6	27.9	29.0	32.1	31.1	31.4	---	---	---	25.4	24.5	24.8
27	28.0	26.9	27.6	32.6	31.2	31.6	---	---	---	26.8	24.9	25.6
28	28.7	27.7	28.2	32.7	31.5	31.8	---	---	---	26.7	25.8	26.3
29	29.1	28.4	28.7	32.5	31.8	32.1	---	---	---	26.6	25.0	25.9
30	29.4	28.7	29.0	---	---	---	---	---	---	26.3	24.7	25.1
31	---	---	---	---	---	---	31.6	30.8	31.2	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	33.0	24.3	28.6

SPECIFIC CONDUCTANCE DOWNSTREAM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

SPECIFIC CONDUCTANCE DOWNSTREAM (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	309	298	305	340	336	338
2	---	---	---	---	---	---	307	297	304	342	338	339
3	---	---	---	---	---	---	306	291	299	342	339	340
4	---	---	---	---	---	---	298	287	295	503	339	372
5	---	---	---	---	---	---	296	127	233	361	343	348
6	---	---	---	---	---	---	157	125	147	346	343	344
7	---	---	---	---	---	---	205	155	179	349	343	345
8	---	---	---	---	---	---	228	205	217	350	343	346
9	---	---	---	---	---	---	254	228	243	351	343	346
10	---	---	---	---	---	---	267	254	260	349	341	344
11	---	---	---	---	---	---	275	267	271	349	342	346
12	---	---	---	---	---	---	285	275	281	347	342	344
13	---	---	---	---	---	---	293	284	289	---	---	---
14	---	---	---	---	---	---	298	292	295	---	---	---
15	---	---	---	---	---	---	301	297	299	---	---	---
16	---	---	---	---	---	---	304	300	301	---	---	---
17	---	---	---	---	---	---	306	302	305	---	---	---
18	---	---	---	---	---	---	307	305	306	---	---	---
19	---	---	---	252	238	245	317	307	312	---	---	---
20	---	---	---	254	248	251	326	317	323	304	298	300
21	---	---	---	264	251	255	330	324	328	306	301	303
22	---	---	---	269	257	260	334	330	332	309	305	307
23	---	---	---	---	---	---	341	334	338	322	306	309
24	---	---	---	272	259	263	341	336	338	313	310	312
25	---	---	---	274	261	267	346	336	341	316	313	314
26	---	---	---	285	272	277	345	338	342	322	315	318
27	---	---	---	289	277	282	346	341	343	323	320	321
28	---	---	---	292	280	287	345	338	341	328	322	325
29	---	---	---	297	283	290	342	337	339	328	325	327
30	---	---	---	300	289	295	343	336	339	334	328	331
31	---	---	---	305	292	300	---	---	---	337	325	329
MONTH	---	---	---	---	---	---	346	125	295	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	330	325	328	---	---	---	---	---	---	7470	3850	5540
2	331	329	330	---	---	---	---	---	---	7140	5560	6410
3	341	330	337	---	---	---	---	---	---	5770	3030	3880
4	341	336	339	---	---	---	---	---	---	5010	1550	2800
5	349	337	341	---	---	---	---	---	---	2560	990	1800
6	349	315	341	---	---	---	---	---	---	2990	1020	1890
7	351	309	343	316	312	315	387	366	371	5300	1250	2520
8	358	344	353	326	314	321	594	377	430	6390	1910	3620
9	363	349	356	327	324	326	526	433	467	5600	1930	2870
10	363	352	358	329	322	325	841	445	486	7570	1400	3350
11	367	355	361	330	327	329	1240	466	578	10700	5750	8350
12	374	359	367	330	324	326	1930	574	886	11300	6310	9630
13	385	361	375	325	314	318	2070	735	1070	10500	4080	7260
14	417	379	401	338	316	327	---	---	---	9610	4150	7780
15	423	317	384	340	289	316	---	---	---	10200	6640	8870
16	---	---	---	303	263	294	---	---	---	12000	6160	9300
17	330	299	317	297	262	283	---	---	---	12600	8400	10500
18	366	330	341	307	296	302	---	---	---	12400	7350	9790
19	359	335	346	316	307	311	---	---	---	13100	8850	10700
20	379	344	355	322	316	319	---	---	---	13300	9060	11300
21	363	340	352	328	319	321	---	---	---	14900	10800	12700
22	361	340	347	325	321	323	---	---	---	17600	9030	11900
23	382	346	363	333	321	326	---	---	---	20900	14000	17000
24	369	347	359	348	331	333	---	---	---	20900	15900	17700
25	380	366	372	344	336	338	---	---	---	20000	15100	17500
26	393	315	363	342	337	339	---	---	---	20100	17100	19000
27	---	---	---	345	341	343	---	---	---	20100	17500	18700
28	---	---	---	349	341	345	---	---	---	19900	17800	18500
29	---	---	---	350	343	347	---	---	---	19100	14900	18400
30	---	---	---	---	---	---	---	---	---	18000	12500	15200
31	---	---	---	---	---	---	4970	3110	3870	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	20900	990	9830

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

TEMPERATURE, WATER DOWNSTREAM (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	18.2	17.7	17.9	26.0	24.9	25.4
2	---	---	---	---	---	---	18.6	18.0	18.3	25.5	25.0	25.3
3	---	---	---	---	---	---	19.5	18.6	19.0	25.2	24.8	25.1
4	---	---	---	---	---	---	20.3	19.3	19.8	24.9	24.4	24.6
5	---	---	---	---	---	---	20.6	19.7	20.1	25.5	24.4	24.9
6	---	---	---	---	---	---	20.1	19.5	19.8	25.4	24.1	24.6
7	---	---	---	---	---	---	21.0	20.0	20.5	25.6	24.2	24.5
8	---	---	---	---	---	---	21.9	20.9	21.3	26.6	24.2	24.9
9	---	---	---	---	---	---	22.3	21.7	21.9	25.6	25.0	25.3
10	---	---	---	---	---	---	22.6	22.0	22.2	25.5	24.8	25.2
11	---	---	---	---	---	---	23.0	22.4	22.7	25.7	24.8	25.1
12	---	---	---	---	---	---	22.8	22.4	22.6	25.4	24.4	24.9
13	---	---	---	---	---	---	22.4	21.9	22.1	---	24.1	---
14	---	---	---	---	---	---	22.2	21.9	22.1	---	---	---
15	---	---	---	---	---	---	21.9	21.2	21.5	---	---	---
16	---	---	---	---	---	---	21.3	20.2	20.6	---	---	---
17	---	---	---	---	---	---	20.2	19.5	19.8	---	---	---
18	---	---	---	---	---	---	19.9	19.0	19.4	---	---	---
19	---	---	---	16.6	16.3	16.4	20.6	19.6	20.1	---	---	---
20	---	---	---	17.0	16.4	16.7	21.6	20.3	20.8	27.7	26.8	27.1
21	---	---	---	17.2	16.4	16.8	22.3	21.3	21.7	28.0	26.9	27.3
22	---	---	---	17.4	16.7	17.0	23.1	22.1	22.6	28.1	27.2	27.6
23	---	---	---	17.8	---	---	24.3	23.0	23.5	28.2	27.5	27.9
24	---	---	---	18.6	17.6	18.0	24.9	24.1	24.4	28.2	27.7	27.9
25	---	---	---	19.0	18.5	18.7	25.3	24.6	25.0	27.9	27.5	27.7
26	---	---	---	18.9	18.4	18.7	25.3	24.9	25.0	27.7	27.3	27.4
27	---	---	---	18.8	18.1	18.3	25.8	24.7	25.2	27.6	26.8	27.2
28	---	---	---	18.2	17.9	18.1	26.5	25.3	25.8	27.4	26.9	27.1
29	---	---	---	18.0	17.7	17.9	26.5	25.4	25.9	27.3	26.8	27.1
30	---	---	---	18.0	17.7	17.8	26.2	25.0	25.5	26.9	26.6	26.8
31	---	---	---	18.1	17.6	17.8	---	---	---	27.1	26.3	26.7
MONTH	---	---	---	---	---	---	26.5	17.7	21.9	---	---	---

08067252 TRINITY RIVER AT WALLISVILLE, TX--Continued

TEMPERATURE, WATER DOWNSTREAM (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.4	26.7	27.1	29.4	28.8	29.1	---	---	---	30.7	28.4	29.7
2	27.9	27.0	27.4	---	---	---	33.2	---	---	30.7	28.5	29.3
3	28.4	27.5	28.0	---	---	---	---	32.3	---	31.0	29.8	30.2
4	28.4	27.7	28.1	---	---	---	---	---	---	30.7	29.8	30.3
5	28.2	27.8	28.0	---	---	---	---	---	---	31.8	30.0	30.6
6	28.4	27.9	28.1	30.2	---	---	33.4	---	---	31.2	30.5	30.9
7	28.4	28.0	28.2	30.2	29.6	29.9	33.3	32.6	32.8	31.4	29.7	30.8
8	28.0	27.5	27.7	30.6	30.1	30.3	33.3	32.4	32.8	31.0	29.1	30.4
9	27.7	27.2	27.5	30.7	30.1	30.4	34.2	32.4	32.8	31.1	29.6	30.3
10	27.7	27.4	27.5	30.3	30.0	30.1	34.4	31.6	32.7	30.8	30.1	---
11	28.3	27.3	27.7	30.7	30.0	30.3	34.0	31.2	32.5	29.6	28.3	29.1
12	28.4	27.7	28.1	30.2	29.6	30.0	33.4	30.8	31.9	30.5	29.4	29.8
13	28.0	27.3	27.6	29.7	29.2	29.4	33.5	30.8	31.9	31.4	29.3	30.4
14	28.4	27.3	27.8	30.6	29.2	29.8	---	30.6	---	31.0	29.9	30.3
15	28.1	27.5	27.8	30.2	29.2	29.5	---	---	---	30.7	29.1	29.9
16	28.0	---	---	29.9	29.1	29.5	---	---	---	29.9	26.6	28.5
17	28.4	27.2	27.7	30.4	29.4	29.9	---	---	---	29.7	26.5	28.1
18	28.8	28.3	28.5	30.6	30.1	30.3	---	---	---	29.3	26.7	27.9
19	29.5	28.6	28.9	30.5	30.2	30.3	---	---	---	28.8	26.1	27.7
20	29.2	28.7	29.0	30.3	30.2	30.2	---	---	---	28.4	26.3	27.3
21	29.0	28.8	28.9	30.4	30.0	30.2	---	---	---	28.2	26.0	27.0
22	29.1	28.6	28.9	30.7	30.0	30.3	---	---	---	26.9	23.8	25.8
23	29.4	28.8	29.1	30.7	30.1	30.4	---	---	---	24.4	22.8	23.8
24	29.7	29.1	29.4	31.7	30.7	31.1	---	---	---	25.5	22.9	23.8
25	29.5	29.1	29.3	32.0	31.0	31.3	---	---	---	25.2	23.7	24.2
26	29.6	27.8	28.9	32.5	31.0	31.4	---	---	---	25.2	24.0	24.3
27	27.9	26.8	27.5	32.5	31.2	31.6	---	---	---	26.7	24.3	25.2
28	28.7	27.6	28.1	32.6	31.4	31.8	---	---	---	26.8	25.4	26.3
29	29.0	28.4	28.6	33.1	31.8	32.2	---	---	---	26.5	24.9	26.1
30	29.3	28.6	28.9	---	---	---	31.9	---	---	25.5	24.4	24.8
31	---	---	---	---	---	---	31.6	30.3	30.7	---	---	---
MONTH	29.7	---	---	---	---	---	---	---	---	31.8	22.8	---

08043900 LYNDON B. JOHNSON NATIONAL GRASSLANDS NEAR ALVORD, TX
(National Atmospheric Deposition Program)

PRECIPITATION WATER-QUALITY RECORDS

LOCATION.--Lat 33°23'33", long 97°38'23", Wise County, Hydrologic Unit 12030104, at State Highway 11, 6 mi northeast of Alvord, TX and 11 mi north of Decatur, TX.

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

INSTRUMENTATION.--Wet/dry precipitation collector, weighing bucket type rain gage and event recorder. National Weather Service 8 in rain gage (back-up only).

EXTREMES FOR CURRENT YEAR.--Maximum field pH, 7.2, Mar 30-Apr 6; minimum field pH, 4.4 Jun 8-15, Jun 15-22

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	CALCIUM ATM DEP WET DIS (MG/L) (82932)	MAG-NESIUM ATM DEP WET DIS (MG/L) (83002)	POTAS-SIUM ATM DEP WET DIS (MG/L) (83120)	SODIUM ATM DEP WET DIS (MG/L) (83138)	NI-TROGEN AMMON. ATM DEP WET DIS AS N (MG/L) (83044)	NI-TROGEN NITRATE ATM DEP WET DIS AS N (MG/L) (83068)	CHLO-RIDE ATM DEP WET DIS (MG/L) (82944)	SULFATE ATM DEP WET DIS AS SO4 (MG/L) (83160)
OCT 06-13	--	--	--	--	--	--	--	--	--	--
OCT 13-20	--	--	--	--	--	--	--	--	--	--
OCT 20-27	--	--	--	--	--	--	--	--	--	--
OCT 27-NOV 03	8	4.9	.051	.017	.007	.137	.078	.09	.21	.62
NOV 03-10	18	5.2	.951	.063	.059	.244	.404	.25	.26	3.22
NOV 10-17	7	5.0	.043	.004	.005	.008	.054	.11	.03	.37
NOV 17-24	--	--	--	--	--	--	--	--	--	--
NOV 24-DEC 01	14	5.0	.317	.027	.028	.128	.405	.15	.24	2.18
DEC 01-08	14	4.9	.189	.019	.032	.112	.249	.14	.22	1.64
DEC 08-15	15	4.5	.143	.010	.014	.014	.117	.17	.15	1.25
DEC 15-22	12	4.8	.158	.013	.042	.056	.117	.09	.11	.98
DEC 22 1998-JAN 05 1999	15	5.1	.605	.035	.063	.109	.583	.25	.10	2.58
JAN 05-12	--	--	--	--	--	--	--	--	--	--
JAN 12-19	--	--	.026	<.003	.045	.016	.047	.03	.09	.03
JAN 19-26	31	7.0	6.10	.099	.129	.090	.078	.68	.14	1.24
JAN 26-FEB 02	10	4.8	.143	.013	.011	.055	.171	.20	.11	.89
MAR 02-09	12	4.9	.332	.026	.134	.134	.280	.14	.24	1.65
MAR 09-16	28	4.5	.364	.044	.047	.222	.482	.44	.36	3.27
MAR 16-23	22	4.8	.348	.120	.075	.930	.342	.29	1.48	2.30
MAR 23-30	18	4.6	.357	.029	.050	.100	.296	.28	.20	1.95
MAR 30-APR 06	31	7.2	3.04	.211	.236	.821	.498	.43	1.06	3.44
APR 06-13	--	--	--	--	--	--	--	--	--	--
APR 13-20	8	5.9	.443	.041	.163	.181	.202	.16	.24	.95
APR 20-27	9	5.3	.156	.034	.064	.206	.327	.17	.33	1.03
APR 27-MAY 04	11	5.8	.470	.049	.104	.235	.451	.28	.36	1.69
MAY 04-11	18	5.9	.778	.082	.160	.344	.856	.46	.37	3.07
MAY 11-18	23	6.9	1.56	.107	.270	.627	1.17	.40	.79	2.55
MAY 18-25	19	4.6	.362	.021	.024	.077	.287	.45	.12	1.49
MAY 25-JUN 01	9	5.0	.122	.011	.028	.027	.171	.20	.05	.67
JUN 01-08	--	--	--	--	--	--	--	--	--	--
JUN 08-15	30	4.4	.325	.029	.051	.041	.863	.61	.15	3.17
JUN 15-22	24	4.4	.225	.017	.025	.081	.171	.38	.21	1.85
JUN 22-29	12	4.8	.225	.036	.019	.191	.163	.28	.29	1.04
JUN 29-JUL 06	19	5.0	.890	.106	.050	.570	.132	.60	.95	1.50
JUL 06-13	20	5.0	1.51	.082	.048	.241	.226	.88	.38	2.09
JUL 13-20	--	--	--	--	--	--	--	--	--	--
JUL 20-27	--	--	--	--	--	--	--	--	--	--
JUL 27-AUG 03	--	--	--	--	--	--	--	--	--	--
AUG 03-10	45	6.3	6.29	.095	.063	.049	.840	1.95	.23	6.32
AUG 10-17	19	6.7	1.91	.071	.079	.249	.396	.60	.27	.93
AUG 17-24	--	--	--	--	--	--	--	--	--	--
AUG 24-31	--	--	--	--	--	--	--	--	--	--
AUG 31-SEP 07	19	6.7	2.21	.061	.034	.217	.241	.62	.35	1.56
SEP 07-14	16	5.0	.555	.031	.039	.109	.420	.61	.18	1.81
SEP 14-21	--	--	--	--	--	--	--	--	--	--
SEP 21-28	--	--	--	--	--	--	--	--	--	--
SEP 28-OCT 05	--	--	--	--	--	--	--	--	--	--

08043900 LYNDON B. JOHNSON NATIONAL GRASSLANDS NEAR ALVORD, TX--Continued
(National Atmospheric Deposition Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PHOS-PHORUS ORTHO ATM DEP WET DIS AS P (MG/L) (83108)	CALCIUM ATM DEP WET DIS (MG/M2) (82933)	MAG-NESIUM ATM DEP WET DIS (MG/M2) (83003)	POTAS-SIUM ATM DEP WET DIS (MG/M2) (83121)	SODIUM ATM DEP WET DIS (MG/M2) (83139)	NI-TROGEN AMMON. ATM DEP WET DIS AS N (MG/M2) (83045)	NI-TROGEN NITRATE ATM DEP WET DIS AS N (MG/M2) (83069)	CHLO-RIDE ATM DEP WET DIS (MG/M2) (82945)	SULFATE ATM DEP WET DIS AS SO4 (MG/M2) (83161)	PHOS-PHORUS ORTHO ATM DEP WET DIS AS P (MG/M2) (83109)	HY-DROGEN ION ATM DEP WET DIS (MG/M2) (82975)
OCT 06-13	--	--	--	--	--	--	--	--	--	--	--
OCT 13-20	--	--	--	--	--	--	--	--	--	--	--
OCT 20-27	--	--	--	--	--	--	--	--	--	--	--
OCT 27-NOV 03	.001	1.9	.6	.3	5.0	2.85	3.3	7.7	22.7	<.1	.4
NOV 03-10	.001	6.8	.4	.4	1.7	2.87	1.8	1.8	22.8	<.1	<.1
NOV 10-17	.001	.9	.1	.1	.2	1.10	2.2	.6	7.4	<.1	.2
NOV 17-24	--	--	--	--	--	--	--	--	--	--	--
NOV 24-DEC 01	.001	3.8	.3	.3	1.5	4.81	1.8	2.8	25.9	<.1	.1
DEC 01-08	.001	4.6	.5	.8	2.8	6.10	3.4	5.4	40.2	<.1	.4
DEC 08-15	.001	3.5	.3	.3	.3	2.88	.8	3.7	30.8	<.1	.6
DEC 15-22	.001	3.0	.3	.8	1.1	2.21	1.8	2.1	18.5	<.1	.2
DEC 22 1998-JAN 05 1999	.001	2.9	.2	.3	.5	2.78	1.2	.5	12.3	<.1	<.1
JAN 05-12	--	--	--	--	--	--	--	--	--	--	--
JAN 12-19	<.001	.0	<.1	<.1	<.1	.031	<.1	.1	<.1	<.1	<.1
JAN 19-26	<.001	9.6	.2	.2	.1	.124	1.1	.2	2.0	<.1	<.1
JAN 26-FEB 02	<.001	6.5	.6	.5	2.5	7.77	9.2	5.0	40.4	<.1	.6
MAR 02-09	<.001	10.5	.8	.8	4.2	8.86	4.4	7.6	52.2	<.1	.3
MAR 09-16	<.001	3.2	.4	.4	1.9	4.37	3.8	3.2	28.6	<.1	.3
MAR 16-23	<.001	18.3	6.3	3.9	48.9	18.0	15.5	77.8	121	.1	1.0
MAR 23-30	<.001	8.0	.6	1.1	2.3	6.65	6.3	4.5	43.8	<.1	.4
MAR 30-APR 06	<.001	11.2	.8	.9	3.0	1.84	1.6	3.9	12.7	<.1	<.1
APR 06-13	--	--	--	--	--	--	--	--	--	--	--
APR 13-20	.001	10.1	.9	3.7	4.2	4.63	3.6	5.5	21.8	<.1	<.1
APR 20-27	.001	4.6	1.0	1.9	6.1	9.65	5.0	9.7	30.4	<.1	.1
APR 27-MAY 04	.001	9.6	1.0	2.1	4.8	9.23	5.7	7.4	34.5	<.1	<.1
MAY 04-11	.001	9.2	1.0	1.9	4.1	10.2	5.4	4.4	36.4	<.1	<.1
MAY 11-18	.001	11.1	.8	1.9	4.5	8.37	2.8	5.6	18.2	<.1	<.1
MAY 18-25	.001	4.7	.3	.3	1.0	3.77	5.8	1.6	19.5	<.1	.3
MAY 25-JUN 01	.001	7.8	.7	1.8	1.7	11.0	13.1	3.2	43.1	.1	.7
JUN 01-08	--	--	--	--	--	--	--	--	--	--	--
JUN 08-15	.001	3.2	.3	.5	.4	8.43	5.9	1.5	30.9	<.1	.4
JUN 15-22	.001	4.5	.3	.5	1.6	3.39	7.5	4.2	36.7	<.1	.8
JUN 22-29	.001	1.2	.2	.1	1.0	.879	1.5	1.6	5.6	<.1	.1
JUN 29-JUL 06	.001	2.6	.3	.2	1.7	.389	1.8	2.8	4.4	<.1	<.1
JUL 06-13	.001	3.6	.2	.1	.6	.544	2.1	.9	5.0	<.1	<.1
JUL 13-20	--	--	--	--	--	--	--	--	--	--	--
JUL 20-27	--	--	--	--	--	--	--	--	--	--	--
JUL 27-AUG 03	--	--	--	--	--	--	--	--	--	--	--
AUG 03-10	.001	64.8	1.0	.6	.5	8.65	20.1	2.4	65.1	<.1	<.1
AUG 10-17	.001	--	--	--	--	--	--	--	--	--	--
AUG 17-24	--	--	--	--	--	--	--	--	--	--	--
SUG 24-31	--	--	--	--	--	--	--	--	--	--	--
AUG 31-SEP 07	.001	20.9	.6	.3	2.1	2.29	5.9	3.3	14.8	<.1	<.1
SEP 07-14	.001	5.0	.3	.3	1.0	3.77	5.7	1.6	16.2	<.1	.1
SEP 14-21	--	--	--	--	--	--	--	--	--	--	--
SEP 21-28	--	--	--	--	--	--	--	--	--	--	--
SEP 28-OCT 05	--	--	--	--	--	--	--	--	--	--	--

This page intentionally left blank.

The U.S. Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations 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. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

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), the data are generally collected for use in stage-frequency studies of flood-profile definition. Gages at these stations usually consist of a device that will register the peak stage occurring between inspection 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 1999

Station name and number	Location	Period of record	Water Year 1999 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Trinity River Basin								
Big Fossil Creek Haltom City, Tex. 08048800	Lat 32°48'26", long 97°14'54", Tarrant County, at center of channel at downstream side of downstream bridge on State Highway 183, 2.0 mi upstream from Little Fossil Creek, 3.5 mi upstream from mouth, and 6.0 mi northeast of Tarrant County Courthouse in Fort Worth. Drainage area is 52.8 mi^2.	1960-73✞ 1974-84ϕ 1985-99	03-19-99	9.76	--a/	09-07-62	26.90	27,000

✞ Operated as a continuous-record station.

ϕ Operated as an unpublished stage-only station.

a/ Gage Height only, discharge measurement not available.

This page intentionally left blank.

INDEX