

Water Resources Data Texas Water Year 2003

Volume 2. Trinity River Basin

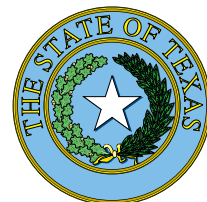
By Susan C. Gandara

Water-Data Report TX-03-2



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

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



U.S. Department of the Interior

Gale A. Norton, Secretary

U.S. Geological Survey

Charles G. Groat, Director

2004

U.S. Geological Survey
8027 Exchange Drive
Austin, Texas 78754-4733
512-927-3500

Information about the USGS, Texas District is available on the Internet at <http://tx.usgs.gov/>

Information about all USGS reports and products is available by calling 1-888-ASK-USGS or on the Internet via the World Wide Web at <http://www.usgs.gov/>

Additional earth science information is available by accessing the USGS home page at <http://www.usgs.gov/>

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:

Mike E. Dorsey
Addis M. Miller III
Jimmy G. Pond
Timothy H. Raines

Debra A. Sneck-Fahrer
John W. Unruh
Ken VanZandt

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

Houston Subdistrict Office

Cindy Billington	Mark C. Kasmarek
Dexter W. Brown	Patrick O. Keefe
J. Pat Bruchmiller	Christina Kela
Mike R. Burnich	Wesley D. Meehan
Al Campodonico	Edna M. Paul
Jeff W. East	Elizabeth A. Roach
Shawn M. French	Joseph Sullivan
Lee B. Goldstein	J. Gilbert Stuart
Jimmy E. Hopkins	

San Antonio Subdistrict Office

James M. Briers	Michael B. Nyman
Amy R. Clark	Cassi L. Otero
Allen L. Furlow	Diana E. Pedraza
Jon R. Gilhousen	Jorge O. Pena
Ken C. Grimm	Brian L. Petri
C.A. Hartmann, Jr.	Richard N. Slattery
Chiquita S. Lopez	Douglas E. Thomas
Stephanie L. Marr	Mark A. Warzecha
Vidal A. Mendoza	John F. Wojcik
Robert T. Meyer	

Austin Field Office

Joseph T. Bentley	Randy A. Samuelson
Michael G. Canova	Jonathan W. Snsic
Trixie A. DeLisle	Milton W. Sunvison
Michael L. Greenslate	K. Craig Weiss
Venezia Muniz	

Fort Worth Field Office

Jack D. Benton	Wilfredo Garcia-Garcia
Dana A. Blanchette	Anthony J. McGlone
Martin J. Danz	Roger K. Trader
Judith H. Donohue	David V. Tudor

Wichita Falls Field Office

Randal S. Alexander	Jackie D. Kelly
Stanley Baldys	Heather L. Null
Monti M. Haynie	Michael T. Pettibon
Laith P. Hairell	Keith R. Snider
David M. Holmes	

San Angelo Field Office

Joe G. Beauchamp	Lawanna M. Kiser
Cary D. Carman	Richard L. Nichols
Hector H. Garza	James B. Schiller
Henry Jacques, Jr.	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

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE March 2004	3. REPORT TYPE AND DATES COVERED Annual--Oct. 1, 2002, to Sept. 30, 2003	
4. TITLE AND SUBTITLE Water Resources Data--Texas, Water Year 2003, Volume 2 Trinity River Basin			5. FUNDING NUMBERS	
6. AUTHOR(S) S.C. Gandara				
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-03-2	
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-03-2	
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 2003 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 49 gaging stations; stage only at 3 gaging stations; stage and contents at 25 lakes and reservoirs; water quality at 27 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 365	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT	

CONTENTS

	Page
Preface -----	iii
Report documentation page -----	iv
List of surface-water stations, in downstream order, by which records are published -----	vi
List of discontinued surface-water discharge or stage-only stations -----	ix
List of discontinued surface-water-quality stations -----	xxv
Introduction -----	1
Cooperation -----	2
Summary of hydrologic conditions -----	2
Streamflow -----	2
Water quality -----	5
Downstream order and station number -----	6
Special networks and programs -----	6
Explanation of stage- and water-discharge records -----	7
Data collection and computation -----	7
Data presentation -----	8
Station manuscript -----	8
Peak discharge greater than base discharge -----	8
Data table of daily mean values -----	8
Statistics of monthly mean data -----	8
Summary statistics -----	8
Identifying estimated daily discharge -----	10
Accuracy of field data and computed results -----	10
Other data records available -----	10
Explanation of water-quality records -----	11
Collection and examination of data -----	11
Water analysis -----	11
Surface-water-quality records -----	11
Classification of records -----	11
Accuracy of the records -----	11
Arrangement of records -----	12
On-site measurements and sample collection -----	12
Water temperature -----	12
Sediment -----	12
Laboratory measurements -----	12
Data presentation -----	12
Remarks codes -----	13
Water Quality-Control Data -----	14
Blank samples -----	14
Reference samples -----	14
Replicate samples -----	15
Spike samples -----	15
Access to USGS water data -----	15
Definition of terms -----	16
Publications of techniques of water-resources investigations -----	28
Gaging-station records -----	32
Discharge at crest-stage partial-record stations -----	331
Index -----	333

ILLUSTRATIONS

Figure 1. Area of Texas covered by volume 2 and location of selected streamflow stations in volume 2 -----	3
2. Monthly mean discharges at four long-term hydrologic index stations during 2003 water year and median of the monthly mean discharges for 1971-2000 water years -----	4
3. Map showing location of gaging stations in the first section of the Trinity River Basin -----	32
4. Map showing location of gaging stations in the second section of the Trinity River Basin -----	154
5. Map showing location of gaging stations in the third section of the Trinity River Basin -----	262

TABLES

Table 1. Streamflow at two selected stations -----	5
--	---

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; (p) precipitation.]

	Station number	Page
WESTERN GULF OF MEXICO BASINS		
TRINITY RIVER BASIN		
West Fork Trinity River near Jacksboro (d) -----	08042800	34
Lost Creek:		
Lost Creek Reservoir near Jacksboro (e) -----	08042820	36
Bridgeport Reservoir above Bridgeport (e) -----	08043000	38
Big Sandy Creek:		
Lake Amon G. Carter near Bowie (e) -----	08043700	40
Big Sandy Creek near Chico (d) -----	08043950	42
West Fork Trinity River near Boyd (d) -----	08044500	44
Walnut Creek at Reno (d) -----	08044800	46
Eagle Mountain Reservoir above Fort Worth (e) -----	08045000	48
Lake Worth above Fort Worth (e) -----	08045400	50
Farmers Branch at Westworth Village, Fort Worth (e) -----	08045525	52
Lake Weatherford near Weatherford (e) -----	08045800	54
Clear Fork Trinity River near Weatherford (d) -----	08045850	56
Benbrook Lake near Benbrook (e) -----	08046500	58
Clear Fork Trinity River near Benbrook (d) -----	08047000	60
Mary's Creek at Benbrook (d) -----	08047050	62
Clear Fork Trinity River at Fort Worth (d) -----	08047500	64
West Fork Trinity River at Fort Worth (d) -----	08048000	66
West Fork Trinity River at Beach Street, Fort Worth (d) (c) (t) -----	08048543	68
Village Creek:		
Village Creek at Everman (d) -----	08048970	70
Lake Arlington at Arlington (e) -----	08049200	72
West Fork Trinity River at Grand Prairie (d) (c) (t) -----	08049500	76
Mountain Creek near Venus (d) (c) (t) -----	08049580	88
Walnut Creek near Mansfield (d) (c) (t) -----	08049700	92
Joe Pool Lake near Duncanville (e) (c) (t) -----	08049800	96
Mountain Creek above Duncanville (c) (t) -----	08049850	106
Mountain Creek Lake near Grand Prairie (e) -----	08050050	108
Mountain Creek at Grand Prairie (d) -----	08050100	110
Elm Fork Trinity River at Gainesville (d) -----	08050400	112
Isle du Bois Creek:		
Jordan Creek:		
Timber Creek near Collinsville (d) -----	08050800	114
Range Creek near Collinsville (d) -----	08050840	116
Ray Roberts Lake near Pilot Point (e) -----	08051100	118
Clear Creek near Sanger (d) (c) (t) -----	08051500	120
Little Elm Creek near Aubrey (d) -----	08052700	124
Lewisville Lake near Lewisville (e) -----	08052800	126
Elm Fork Trinity River near Lewisville (d) -----	08053000	128
Denton Creek near Justin (d) (c) (t) -----	08053500	130
Elizabeth Creek at State Highway 114 near Roanoke (c) (t) -----	08053800	134
Grapevine Lake near Grapevine (e) (c) (t) (b) -----	08054500	136
Denton Creek near Grapevine (d) (c) (t) -----	08055000	146
Elm Fork Trinity River near Carrollton (d) (p) -----	08055500	150
Elm Fork Trinity River at Frasier Dam, Dallas (e) -----	08056000	152
Trinity River at Dallas (d) (p) -----	08057000	156
Trinity River at Cedar Crest Boulevard, Dallas (c) (t) -----	08057055	158
White Rock Creek at Greenville Avenue, Dallas (d) (c) (t) -----	08057200	166
Trinity River below Dallas (d) (c) (t) -----	08057410	172
Prairie Creek at U.S. Highway 175, Dallas (d) -----	08057445	178
East Fork Trinity River at McKinney (d) -----	08058900	180
Sister Grove Creek near Blue Ridge (d) -----	08059400	182
Lavon Lake near Lavon (e) -----	08060500	184
Rowlett Creek near Sachse (d) -----	08061540	186

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

vii

	Station number	Page
WESTERN GULF OF MEXICO BASINS--Continued		
TRINITY RIVER BASIN--Continued		
Trinity River:--Continued		
Lake Ray Hubbard near Forney (e) -----	08061550	188
East Fork Trinity River near Forney (d) -----	08061750	190
East Fork Trinity River near Crandall (d) -----	08062000	192
Trinity River near Rosser (d) (c) (t)-----	08062500	194
Trinity River at Trinidad (d) -----	08062700	206
Cedar Creek:		
Muddy Cedar Creek:		
New Terrell City Lake near Terrell (e) -----	08062730	208
Cedar Creek near Kemp (d) -----	08062800	210
Cedar Creek Reservoir near Trinidad (e) -----	08063010	212
Richland Creek near Irene (c) (t) -----	08063045	214
Navarro Mills Lake near Dawson (e) (c) (t) (b) -----	08063050	216
Richland Creek near Dawson (d) (c) (t) -----	08063100	226
Chambers Creek:		
Waxahachie Creek:		
Lake Waxahachie near Waxahachie (e) -----	08063600	230
Waxahachie Creek near Waxahachie (c) (t) -----	08063685	232
Bardwell Lake near Ennis (e) (c) (t) (b)-----	08063700	234
Waxahachie Creek near Bardwell (d) (c) (t)-----	08063800	242
Chambers Creek near Rice (d) (c) (t) -----	08064100	246
Post Oak Creek:		
Halbert Lake near Corsicana (e) -----	08064510	258
Richland-Chambers Reservoir near Kerens (e) -----	08064550	260
Tehuacana Creek near Streetman (d) (c) (t) -----	08064700	264
Trinity River near Oakwood (d)-----	08065000	268
Upper Keechi Creek near Oakwood (d) -----	08065200	270
Big Elkhart Creek:		
Little Elkhart Creek:		
Houston County Lake near Crockett (e) -----	08065330	272
Trinity River near Crockett (d) (c) (t) -----	08065350	274
Bedias Creek near Madisonville (d)-----	08065800	286
Kickapoo Creek near Onalaska (d)-----	08066170	288
Livingston Reservoir near Goodrich (e) (c) (t)-----	08066190	290
Long King Creek at Livingston (d)-----	08066200	300
Trinity River near Goodrich (d) -----	08066250	302
Menard Creek near Rye (d) -----	08066300	304
Trinity River at Romayor (d) -----	08066500	306
Trinity River at Liberty (d) -----	08067000	308
CWA Canal near Dayton (d) -----	08067070	310
Lake Charlotte near Anahuac (e) (c) (t) -----	08067118	312
Trinity River at Wallisville (e) (c) (t) -----	08067252	318

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Texas have been discontinued. Daily stream-flow 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. A pound sign (#) after a station indicates a temporary discontinuance to redefine ratings. 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)
Punta De Agua Creek near Channing (d)	07227448	3,568	1968-73
East Cheyenne Creek Tributary near Channing (e)	07227460	1.60	1965-74
Canadian River at Tascosa (d)	07227470	18,536	1969-77
Tecovas Creek Tributary near Bushland (e)	07227480	2.5	1966-74
Dixon Creek near Borger (d)	07227920	134	1974-89
Palo Duro Creek near Canyon (e)	07229700	982	1942-54
White Woman Creek Tributary near Darrouzett (e)	07234150	4.03	1966-74
Tierra Blanca Creek above Buffalo Lake near Umbarger (d)	07295500	1,968	1939-54, 1967-73
Buffalo Lake near Umbarger (e)	07296000	2,075	1938-54
Prairie Dog Town Fork Red River near Canyon (d)	07297500	3,369	1924-26, 1938-49
Middle Tule Draw near Tulia (e)	07297920	313	1967-74
North Tule Draw at Reservoir near Tulia (d)	07298000	189	1939-40, 1941-73
Rock Creek Tributary near Silverton (d)	07298150	13.7	1966-74
Tule Creek near Silverton (d)	07298200	1,150	1964-86
Mulberry Creek near Brice (d)	07299000	534	1949-51
Prairie Dog Town Fork Red River near Lakeview (d)	07299200	6,792	1963-80
Little Red River near Turkey (d)	07299300	139	1968-81
Prairie Dog Town Fork Red River near Estelline (d)	07299500	7,293	1924-25, 1938-47
Prairie Dog Town Fork Red River below Mountain Creek near Estelline (e)	07299505	7,341	1974-77
Prairie Dog Town Fork Red River above Jonah Creek near Estelline (e)	07299510	7,533	1974-77
Jonah Creek at Weir near Estelline (d)	07299512	65.50	1974-82
Jonah Creek below Weir near Estelline (d)	07299514	66.60	1974-76
Jonah Creek at mouth near Estelline (d)	07299516	76	1974-76
Salt Creek near Estelline (d)	07299530	142	1974-79
Buck Creek near Wellington (e)	07299550	210	1951-64
Red River near Quanah (d)	07299570	8,321	1960-82
North Groesbeck Creek Tributary near Kirkland (d)	07299575	0.16	1966-74
Wanders Creek at Odell (e)	07299750	199	1949-50, 1952-89
Salt Fork Red River near Clarendon (d)	07299850	457	1960-64
Lelia Lake Creek near Hedley (e)	07299900	86	1951-70
Salt Fork Red River near Hedley (e)	07299930	744	1951, 1956-62
Oklahoma Draw Tributary near Hedley (e)	07299940	1.1	1965-74
Sweetwater Creek near Wheeler (e)	07301400	164	1951-64
Doodlebug Creek near Wheeler (e)	07301405	0.19	1967-73
Elm Creek near Shamrock (e)	07303300	N/A	1947-89
Quitaque Creek near Quitaque (d)	07307500	293	1945-59
North Pease River near Childress (d)	07307600	1,434	1973-79
North Pease River near Kirkland (e)	07307660	N/A	1973-79
Roaring Springs near Roaring Springs (e)	07307700	N/A	1937, 1943-95
Cottonwood Creek Tributary near Afton (e)	07307720	0.68	1967-74
Middle Pease River near Paducah (d)	07307750	1,086	1973-79
Middle Pease River near Paducah (d)	07307760	1,123	1980-82
Middle Pease River near Kirkland (e)	07307780	1,250	1973-79
Canal Creek near Crowell (e)	07307950	49.0	1968-70, 1978-79

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Pease River near Crowell (d)	07308000	3,037	1924-47
Plum Creek near Vernon (e)	07308220	4.99	1967-74
China Creek near Electra (e)	07308400	37	1967-76
North Fork Wichita River near Crowell (d)	07311622	591	1971-76
Middle Fork Wichita River near Truscott (d)	07311648	161	1971-76
South Fork Wichita River near Guthrie (d)	07311780	239	1952-54, 1956-57 1971-76
South Fork Wichita River at Ross Ranch near Benjamin (d)	07311790	499	1971-79
Wichita River at State Highway 25 near Kamay (d)	07312130	2,182	1996-2000
Beaver Creek Tributary near Crowell (e)	07312140	3.43	1966-74
Wolf Creek near Iowa Park (e)	07312300	8.5	1966-74
North Fork Little Wichita River Tributary near Archer City (e)	07314200	0.10	1966-74
Little Wichita River near Henrietta (d)	07315000	1,037	1953-79
Little Wichita River near Ringgold (d)	07315400	1,350	1959-65
Farmers Creek near Saint Jo (e)	07315550	0.82	1966-74
Mineral Creek near Sadler (d)	07316200	26	1968-77
Sandy Creek near Sadler (e)	07316230	24	1968-74
Lake Texoma near Denison (e)	07331500	39,719	1942-93, 2000
Bois D'Arc Creek near Randolph (d)	07332600	72	1963-85
Cooper Creek near Bonham (e)	07332602	6.21	1966-74
Sanders Creek near Chicota (d)	07335400	175	1968-86
Little Pine Creek near Kanawha (d)	07336750	75.40	1969-80
Pecan Bayou near Clarksville (d)	07336800	100	1962-77
Red River near DeKalb (d)	07336820	47,348	1967-98
McKinney Bayou near Leary (e)	07336940	3.33	1966-73
Barkman Creek near Leary (e)	07336950	31.5	1958-64
Nelson Branch near Leonard (e)	07342450	0.22	1966-74
South Sulphur River near Commerce (d)	07342470	189	1980-91
Cuthand Creek near Bogata (d)	07343300	69	1964-74
Dial Branch near Bagwell (e)	07343350	1.00	1966-74
White Oak Creek near Mt. Vernon (e)	07343480	434	1966, 1969-75
White Oak Creek below Talco (d)	07343800	579	1938-50
Buck Creek near Cookville (e)	07343900	0.78	1966-74
Sulphur River near Darden (d)	07344000	2,774	1924-56
Sulphur River near Texarkana (d)	07344210	3,443	1980-85
Big Cypress Creek near Winnsboro (d)	07344482	27.2	1974-92
Dragoo Creek near Mt. Pleasant (e)	07344490	4.27	1967-74
Williamson Creek near Pittsburg (e)	07344600	7.11	1967-74
Boggy Creek near Daingerfield (d)	07345000	72	1943-77
Ellison Creek Reservoir near Lone Star (e)	07345500	37	1943-62, 1974-89
Cypress Creek Tributary near Jefferson (e)	07346010	0.51	1966-74
Taylor Branch near Smithland (e)	07346072	0.73	1966-74
Big Cypress Creek near Karnack (e)	07346085	2,174	1980-85
Frazier Creek near Linden (d)	07346140	48.0	1965-91
Sabine River near Emory (d)	08017500	888	1952-73
Burnett Branch near Canton (e)	08017700	0.33	1966-74
Grand Saline Creek near Grand Saline (d)	08018200	91.4	1968-73
Burke Creek near Yantis (d)	08018730	33.10	1979-89
Dry Creek near Quitman (e)	08018950	63.6	1968-75
Lake Winnsboro near Winnsboro (d)	08019300	27.1	1962-86
Big Sandy Creek near Hawkins (e)	08019430	196	1980-82
Prairie Creek near Gladewater (d)	08020200	48.90	1968-77
Sabine River near Longview (d)	08020500	2,947	1904-07, 1924-33
Rabbit Creek at Kilgore (d)	08020700	75.80	1964-77

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Grace Creek Tributary at Longview (e)	08020800	5.05	1967-74
Mill Creek near Henderson (d)	08020960	20.30	1979-81
Mill Creek near Longview (d)	08020980	47.90	1979-81
Tiawichi Creek near Longview (d)	08020990	62.70	1978-81
Cherokee Bayou near Elderville (d)	08021000	120	1940-49
Lake Cherokee near Longview (e)	08021500	158	1951-83
Sabine River near Tatum (d)	08022000	3,493	1939-78, 1979-82
Redmon Branch near Hallesville (e)	08022010	0.46	1966-74
Eight Mile Creek near Tatum (e)	08022050	106	1962-71
Martin Creek near Tatum (d)	08022070	148	1974-96
Martin Creek near Beckville (e)	08022080	192	1962-71
Murvault Bayou near Gary (d)	08022300	134	1958-83
Socagee Creek near Carthage (d)	08022400	82.60	1962-73
Tenaha Creek near Shelbyville (d)	08023200	97.80	1952-81
Dorsey Branch near Milam (e)	08024290	0.70	1967-74
Patroon Bayou near Milam (e)	08024300	130	1952-54, 1959-63
Sabine River near Milam (d)	08024400	6,508	1924-25, 1939-68
Palo Gaucho Bayou near Hemphill (d)	08024500	123	1952-65
Housen Bayou near Yellowpine (e)	08025250	92.1	1952-54, 1957, 1959-63
Sandy Creek near Yellowpine (e)	08025300	135	1952-54, 1957, 1959-63
Mill Creek near Burkeville (d)	08025307	17.6	1974-79
Little Cow Creek below McGraw Creek near Burkeville (e)	08026500	112	1952-58
Moore Branch near Newton (e)	08028505	3.77	1967-74
Nichols Creek near Buna (e)	08029750	54.4	1959-64
Cypress Creek near Buna (d)	08030000	69.20	1952-83
Adams Bayou Tributary near Deweyville (e)	08030700	12.4	1966-74
Bethlehem Branch near Van (e)	08031100	1.09	1966-74
Kickapoo Creek near Brownsboro (d)	08031200	232	1962-89
Neches River near Reese (d)	08031500	851	1924-27
Hurricane Creek Tributary near Palestine (e)	08032100	0.39	1966-74
One Arm Creek near Maydelle (e)	08032250	6.01	1967-74
Squirrel Creek near Elkhart (e)	08032300	1.57	1967-74
Neches River near Alto (d)	08032500	1,945	1944-79
Piney Creek Tributary near Pennington (e)	08033250	1.17	1967-74
Piney Creek near Groveton (d)	08033300	79	1962-89
Shawnee Creek Tributary near Huntington (e)	08033450	0.52	1966-74
Greenwood Creek Tributary near Colmesneil (e)	08033480	0.15	1966-74
Bowles Creek near Selman City (e)	08033600	14.5	1968-85
Striker Creek near Summerfield (d)	08033700	146	1941-49
Striker Creek Reservoir near New Salem (e)	08033800	148	1941-49
East Fork Angelina River near Cushing (d)	08033900	158	1964-89
Mud Creek at Ponta (d)	08035000	475	1924-27
Angelina River near Lufkin (d)	08037000	1,600	1924-34, 1939-79
Bayou Lanana at Nacogdoches (d)	08037050	31.3	1965-86, 1988-93
Gingham Branch near Mt. Enterprise (e)	08037300	0.90	1967-74
Arenoso Creek near San Augustine (d)	08037500	75.30	1938-40
Angelina River near Zavalla (d)	08038500	2,892	1952-65
Ayish Bayou at San Augustine (d)	08039000	15.80	1924-25
Angelina River at Horger (d)	08039500	3,486	1928-51, 1967-73
Little Sandy Creek Tributary near Jasper (e)	08039900	0.46	1967-74

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Drakes Branch near Spurger (e)	08041400	5.03	1967-74
West Fork Double Bayou near Anahuac (e)	08042550	4.43	1967-74
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 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 (e)	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
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
Newton Creek at Interstate Highway 635, Dallas (e)	08057135	5.91	1974-78

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
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
Trinity River below Dallas (d)	08057410	6,278	1956-98
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
White Branch at Interstate Highway 635, Dallas (e)	08057440	2.53	1974-78
Trinity River near Wilmer (d)	08057448	6,387	1998-2002
Tenmile Creek at State Highway 342 at Lancaster (d)	08057450	52.80	1970-79
Honey Creek SWS #11 near McKinney (e)	08057500	2.14	1952-73
Honey Creek SWS #12 near McKinney (e)	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
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
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
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

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
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(e)	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
Goose Creek near McNair (e)	08067520	6.7	1963-65,
Welch Branch near Huntsville (e)	08067550	2.35	1965-74
Lake Conroe near Montgomery (e)	08067580	445	1973-76
Lake Conroe at Outflow Weir near Conroe (d)	08067610	445	1974, 1977-89
Caney Creek near Dobbin (d)	08067700	40.40	1963-65
Landrum Creek Tributary near Montgomery (e)	08067750	0.13	1965-74
Lake Creek near Conroe (e)	08067900	291	1969-89
West Fork San Jacinto River near Porter (e)	08068100	970	1970-76
Mill Creek Tributary near Dobbin (e)	08068300	4.07	1967-73
Swale No. 8 at Woodlands (e)	08068438	0.55	1975-76, 1980-88
Spring Creek at Spring (d)	08068520	419	1975-95
Spring Creek near Humble (e)	08068600	435	1971-76
Cypress Creek at Sharp Road near Hockley (d)	08068700*	80.7	1975-85
Cypress Creek near Cypress (e)	08068750*	138	1971-76
Cypress Creek at Stuebner-Airline Road near Westfield (d)	08068900*	248	1982-87
Cypress Creek near Humble (e)	08069200	319	1971-76
West Fork San Jacinto River near Humble (d)	08069500	1,741	1929-54
Bear Creek near Cleveland (e)	08069850	1.46	1967-73
Caney Creek near New Caney (e)	08070600	178	1970-76
Peach Creek near New Caney (e)	08071100	155	1970-76
Tarkington Bayou near Dayton (e)	08071200	142	1964-76
Luce Bayou near Huffman (e)	08071300	226	1971-76
San Jacinto River near Huffman (d)	08071500	2,800	1937-53
Buffalo Bayou at Clodine (e)	08072400	84.2	1974-85
Bettina Street Ditch at Houston (e)	08073630	1.37	1979-85
Stony Brook Street Ditch at Houston (e)	08073750	0.50	1967-72
Bering Ditch at Woodway Drive, Houston (e)	08073800	2.77	1965-73
Cole Creek at Guhn Road at Houston (e)	08074100	7.05	1964-72
Bingle Road Storm Sewer at Houston (e)	08074145	0.21	1980-88
Cole Creek at Deihl Road at Houston (d)	08074150*	7.50	1964-86
Brickhouse Gully at Clarblak Street at Houston (e)	08074200	2.56	1965-83
Brickhouse Gully at Costa Rica Street at Houston (d)	08074250*	11.4	1964-81
Lazybrook Street Storm Sewer, Houston (e)	08074400	0.13	1978-88
Little Whiteoak Bayou at Houston (e)	08074550	20.9	1971-79
Buffalo Bayou at Main St., Houston (d)	08074600	469	1962-94
Buffalo Bayou at McKee Street, Houston (d)	08074610	469	1992-2000
Buffalo Bayou at 69th Street, Houston (e)	08074700	476	1961-86
Brays Bayou at Addicks-Clodine Rd., Houston (e)	08074750	0.87	1974-77
Brays Bayou at Alief Road, Alief (e)	08074760*	12.9	1977-85
Keegans Bayou at Keegans Road near Houston (e)	08074780*	7.47	1964-71
Keegans Bayou at Roark Road near Houston (d)	08074800*	13.0	1964-85
Binliff Ditch at Bissonnet Street, Houston (e)	08074850	4.38	1968-82
Willow Waterhole Bayou at Landsdowne Street, Houston (e)	08074900	3.81	1965-72
Hummingbird Street Ditch at Mullins Street, Houston (e)	08074910	0.32	1979-84
Brays Bayou at Scott Street, Houston (e)	08075100	106	1971-81
Sims Bayou at Carlsbad Street, Houston (e)	08075300	3.81	1964-72
Sims Bayou at MLK Blvd., Houston (e)	08075470	48.4	1978-89
Sims Bayou at Houston (d)	08075500*	63.0	1953-95
Berry Bayou at Gilpin Street, Houston (e)	08075550	2.87	1965-84
Berry Bayou Tributary at Globe Street, Houston (e)	08075600	1.58	1965-72
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Hunting Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Hunting Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou at Cloverleaf (e)	08076900	25.8	1964, 1971-93
Clear Creek near Pearland (d)	08077000	38.8	1944-45, 1946-60, 1963-94
Clear Creek Tributary at Hall Road, Houston (e)	08077100	1.31	1965-86
Clear Creek at Friendswood (d)	08077540	99.6	1994-97
Cowart Creek near Friendswood (e)	08077550	18	1965-74
Clear Creek near Friendswood (e)	08077600*	126	1966-94
Armand Bayou near Genoa (e)	08077620	18.2	1968, 1971-73
Highland Bayou at Hitchcock (e)	08077700	15.6	1963-82
Highland Bayou Tributary near Texas City (e)	08077750	1.97	1966-73
Highland Bayou near Texas City (e)	08077780	20.8	1965-88
Flores Bayou near Danbury (e)	08078700	23.3	1967-72
Oyster Creek near Angleton (d)	08079000	171	1945-80
North Fork Double Mountain Fork Brazos River at Lubbock (d)	08079500	5,300	1940-49,
North Fork Double Mountain Fork Brazos River above Buffalo Springs nr Lubbock (e)	08079530	29.3	1952-54, 1957, 1962, 1967-76
Buffalo Springs Lake near Lubbock (e)	08079550	236	1967-77
Barnum Springs Draw near Post (e)	08079570	4.99	1965-73
North Fork Double Mountain Fork Brazos River near Post (d)	08079575	438	1984-93
Rattlesnake Creek near Post (e)	08079580	2.75	1966-74
Double Mountain Fork Brazos River near Rotan (d)	08080000	8,536	1950-51
Guest-Flowers Draw near Aspermont (e)	08080510	3.02	1965-74
McDonald Creek near Post (d)	08080540	103	1966-78
Callahan Draw near Lockney (e)	08080750	37.5	1966-77
White River near Crosbytown (e)	08080800	529	1951-64
White River below falls near Crosbytown (e)	08080900	529	1951-64
Salt Fork Brazos River at Farm Road 1081 near Clairemont (e)	08080916	1,135	1968-77
Red Mud Creek near Spur (e)	08080918	65.1	1967-74
Salt Fork Brazos River at State Highway 208 near Clairemont (e)	08080940	1,357	1968-77
Duck Creek near Girard (d)	08080950	431	1965-89
Salt Fork Brazos River at U.S. Highway 380 near Jayton (e)	08080959	1,797	1968-77
Salt Fork Brazos River near Peacock (d)	08081000	4,619	1950-51, 1965-86
Short Croton Creek at mouth near Jayton (e)	08081050	18.1	1959-82
Croton Creek below Short Croton Creek near Jayton (e)	08081100	250	1959-82
Croton Creek near Jayton (d)	08081200	290	1959-86
Salt Croton Creek at Weir D near Aspermont (e)	08081400	55.5	1957-76
Haystack Creek at Weir E near Aspermont (e)	08081450	15.1	1957-77
Salt Croton Creek near Aspermont (d)	08081500	64.30	1957-77
Stinking Creek near Aspermont (d)	08082100	88.80	1966-83
North Croton Creek near Knox City (d)	08082180	251	1965-86
North Elm Creek near Throckmorton (e)	08082900	3.58	1965-77
Elm Creek near Proffitt (e)	08082950	275	1969-85
Brazos River near Graham (d)	08083000	16,830	1916-20
Clear Fork Brazos River at Hawley (d)	08083240	1,416	1968-89
Mulberry Creek near Hawley (d)	08083245	205	1968-89
Elm Creek near Abilene (d)	08083300	133	1964-79
Little Elm Creek near Abilene (d)	08083400	39.10	1964-79
Elm Creek at Abilene (d)	08083430	422	1980-83
Cedar Creek at Abilene (d)	08083470	119	1971-84
Paint Creek near Haskell (d)	08085000	914	1950-51
Humphries Draw near Haskell (e)	08085300	3.51	1965-77

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Clear Fork Brazos River at Crystall Falls (d)	08086000	4,323	1922-29
Hubbard Creek near Sedwick (d)	08086015	128	1964-66
Hubbard Creek at Highway 380 near Moran (e)	08086020	152	1963-76
Deep Creek near Putnam (e)	08086030	33.8	1963-66
Brushy Creek near Putnam (e)	08086040	27.6	1963-66
Mexia Creek near Putnam (e)	08086045	67.0	1963-66
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	61	1964-68
Cook Creek near Albany (e)	08086130	11.3	1963-76
North Fork Hubbard Creek near Albany (d)	08086150	39.3	1963-90
Salt Prong Hubbard Creek near Albany (d)	08086200	115	1962-63
Snailum Creek near Albany (d)	08086210	22.90	1964-66
Big Sandy Creek near Eolian (e)	08086220	91.4	1963-76
Battle Creek near Putnam (e)	08086230	32.0	1963-66
Battle Creek near Moran (d)	08086235	108	1967-68
Battle Creek near Eolian (e)	08086240	137	1963-66
Pecan Creek at FM 1853 near Eolian (e)	08086250	6.95	1963-66
Pecan Creek near Eolian (d)	08086260	26.40	1967-75
Big Sandy Creek near Breckenridge (e)	08086300	288	1962-75
Hubbard Creek near Breckenridge (d)	08086500	1,089	1955-86
Clear Fork Brazos River near Crystal Falls (e)	08087000	5,658	1916-20, 1928-51
Clear Fork Brazos River near Eliasville (d)	08087300	5,697	1916-20, 1924-25, 1928-51, 1962-82
Salt Creek at Olney (d)	08088100	11.80	1958-77
Salt Creek near Newcastle (d)	08088200	120	1958-60
Briar Creek near Graham (d)	08088300	24.20	1958-89
Brazos River at Farm Road 1287 near Graham (e)	08088420	13,432	1970-77
Big Cedar Creek near Ivan (d)	08088450	97	1965-89
Brazos River at Morris Sheppard Dam near Graford (d)	08088600	14,030	1990-94
Elm Creek Tributary near Graford (e)	08089100	1.10	1965-74
Palo Pinto Creek near Santo (d)	08090500	573	1925, 1951-76
Cidwell Branch near Granbury (e)	08090850	3.37	1966-73
Morris Branch near Bluff Dale (e)	08091200	0.06	1965-73
Panther Branch near Tolar (e)	08091700	7.82	1966-74
Nolan River at Blum (d)	08092000*	282.0	1924-87
Brazos River near Whitney (d)	08093000	17,648	1939-74
Bond Branch near Hillsboro (e)	08093200	0.36	1965-74
Hackberry Creek at Hillsboro (d)	08093250	57.9	1980-92
Hackberry Creek below Hillsboro (e)	08093260	86.8	1980-92
Cobb Creek near Abbott (d)	08093400	12.40	1967-79
Aquilla Creek near Aquilla (d)	08093500#	308	1939-2001
Aquilla Creek at RR bridge near Aquilla (e)	08093530	345	1976-85
Aquilla Creek at Farm Road 2114 near Aquilla (e)	08093540	351	1976-85
Aquilla Creek at Farm Road and 1858 near Ross (e)	08093560	392	1976-85
Aquilla Creek at Farm Road 933 near Ross (e)	08093580	397	1976-85
North Bosque River at Stephenville (d)	08093700	95.90	1958-79
Green Creek SWS #1 near Dublin (d)	08094000	4.19	1955-77
Green Creek near Alexander (d)	08094500	45.40	1958-73
South Bosque River near McGregor (e)	08095220	15.9	1967-73
Willow Branch at McGregor (e)	08095250	2.52	1966-73
Middle Bosque River near McGregor (d)	08095300*	182.0	1959-86
Hog Creek near Crawford (d)	08095400*	78.0	1959-86
South Bosque River near Speegleville (d)	08095500	386	1924-30
Bosque River near Waco (d)	08095600*	1,656	1960-82
Box Branch at Robinson (e)	08096550	0.34	1965-73

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Cow Bayou SWS No. 4 (inflow) near Bruceville (e)	08096800	5.04	1958-75
Cow Bayou at Mooreville (d)	08097000	83.50	1958-75
Brazos River near Marlin (d)	08097500	30,211	1939-51
Deer Creek at Chilton (d)	08098000	84.50	1934-36
Leon River near De Leon (d)	08099100*	479.0	1960-87
Sabana River Tributary near De Leon (e)	08099350	0.48	1966-74
Leon River near Hasse (d)	08099500	1,261	1939-91
Eidson Creek near Hamilton (e)	08100100	2.91	1965-73
Bermuda Branch near Gatesville (e)	08100400	0.50	1966-73
Hoffman Branch near Hamilton (e)	08100800	5.56	1966-74
Cowhouse Creek near Killeen (d)	08101500	667	1925, 1939-42
Nolan Creek at Belton (d)	08102600	112	1974-82
School Branch near Lampasas (e)	08102900	0.90	1966-73
Fleece Branch near Lampasas (e)	08103450	1.08	1965-74
Lampasas River at Youngsport (d)	08104000	1,240	1924-80
Lampasas River near Belton (d)	08104100*	1,321	1963-89
Salado Creek above Salado (e)	08104290*	134	1985-88
Salado Creek below Salado Springs (d)	08104310*	136	1985-87
N. Fork San Gabriel River upstream from State Highway 418 at Georgetown (e)	08104795*	271	1985-88
North Fork San Gabriel River at Georgetown (d)	08104800	268	1964-68
South Fork San Gabriel River near Bertram (e)	08104850	8.9	1967-74
San Gabriel River at Georgetown (d)	08105000*	405	1924-25, 1934-73, 1984-87
Berry Creek at State Hwy. 971 near Georgetown (d)	08105200*	117	1985-87
San Gabriel River near Weir (d)	08105300*	563	1977-90
San Gabriel River near Circleville (d)	08105400	599	1924-34, 1967-77
Avery Branch near Taylor (e)	08105900	3.52	1966-73
Brushy Creek at Coupland (d)	08106000	205.0	1924-26
Brushy Creek near Rockdale (d)	08106300	505	1967-80
San Gabriel River near Rockdale (d)	08106310	1,359	1975-92
Big Elm Creek near Temple (d)	08107000	74.70	1934-36
Big Elm Creek near Buckholts (d)	08107500	171	1934-36
North Elm Creek near Ben Arnold (d)	08108000	32.20	1935-36
North Elm Creek near Cameron (d)	08108200	44.80	1963-73
Little Branch near Bryan (e)	08108800	0.14	1966-73
Brazos River near Bryan (d)	08109000	39,515	1899-1903, 1918-92
Brazos River near College Station (d)	08109500	30,033	1899-1902, 1918-25
Yegua Creek near Somerville (d)	08110000	1,009	1924-92
Brazos River at Washington (e)	08110200	41,192	1966-95
Plummers Creek at Mexia (e)	08110350	4.42	1965-73
Navasota River near Groesbeck (d)	08110400	311	1965-79
Navasota River near Bryan (d)	08111000	1,454	1951-94, 1994-97
Navasota River near College Station (d)	08111010	1,809	1977-85
Burton Creek at Villa Maria Road, Bryan (d)	08111025	1.33	1968-70
Hudson Creek near Bryan (d)	08111050	1.94	1968-70
Winkleman Creek near Brenham (e)	08111100	0.75	1965-73
Piney Creek near Bellville (e)	08111600	30.7	1948, 1955, 1958, 1964-89
West Fork Mill Creek near Industry (e)	08111650	15.3	1964-89
Brazos River near San Felipe (d)	08112000	35,100	1939-57
Brazos River near Wallis (e)	08112200	44,700	1974-75
Brazos River Authority Canal A near Fulshear (d)	08112500	N/A	1932-54, 1958-73

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Richmond Irrigation Co. Canal near Richmond (d)	08113500	N/A	1932-54, 1956-78
Brazos River near Juliff (d)	08114500	45,084	1949-69
Seabourne Creek near Rosenberg (e)	08114900	5.78	1968-74
Fairchild Creek near Needville (d)	08115500	26.20	1947-55
Big Creek near Guy (d)	08116000	116	1947-50
Dry Creek near Rosenberg (d)	08116400	8.65	1959-79
Dry Creek near Richmond (d)	08116500	12.20	1947-50, 1957-58
San Bernard River near West Columbia (e)	08117700	766	1949, 1971-77
Mound Creek Tributary at Guy (e)	08117800	1.48	1966-73
Big Boggy Creek near Wadsworth (d)	08117900	10.30	1970-77
Bull Creek near Ira (d)	08118500	26.30	1948-54, 1959-62
Colorado River below Bull Creek near Ira (e)	08118600	3,524	1975-78
Bluff Creek near Ira (d)	08119000	42.60	1948-65
Bluff Creek at mouth near Ira (e)	08119100	44.1	1975-78
Colorado River near Ira (d)	08119500	3,483	1948-52, 1959-89
Colorado river near Cuthburt (d)	08120700	3,912	1965-2002
Morgan Creek near Westbrook (d)	08121500	273	1954-63
Graze Creek near Westbrook (d)	08122000	21.70	1954-59
Morgan Creek near Colorado City (d)	08122500	313	1947-49
Champlin Creek near Colorado City (d)	08123500	198	1948-59
Sulphur Springs Draw near Wellman (e)	08123620	41.80	1966-74
Beals Creek above Big Spring (d)	08123650	9,319	1959-79
Beals Creek at Big Spring (d)	08123700	9,341	1957-59
Beals Creek near Coahoma (d)	08123720	9,383	1983-88
Coahoma Draw Tributary near Big Spring (e)	08123750	2.38	1966-74
Bull Creek Tributary near Forsan (e)	08123760	0.4	1966-74
Colorado River near Silver (d)	08123900	14,997	1957-70
Bitter Creek near Silver (e)	08123920	4.3	1967-74
Salt Creek Tributary near Hylton (e)	08125450	0.25	1966-74
Fish Creek Tributary near Hylton (e)	08126300	0.25	1966-71
Colorado River at Ballinger (d)	08126500	16,413	1907-79
Dry Creek near Christoval (e)	08127100	0.79	1965-73
South Concho Irrigation Co. Canal at Christoval (d)	08127500	N/A	1940-83
Middle Concho River near Tankersley (d)	08128500	2,653	1930-61
Spring Creek above Tankersley (d)	08129300*	424.7	1961-95
Dove Creek Springs near Knickerbocker (d)	08129500*	N/A	1944-58
Dove Creek at Knickerbocker (d)	08130500*	226	1961-95
Spring Creek near Tankersley (d)	08131000	699	1930-60
South Concho River above Pecan Creek near San Angelo (e)	08131300	470	1963-84
Tom Green Co. WCID No. 1 Canal near San Angelo (d)	08131600	N/A	1963-81
South Concho River at San Angelo (d)	08132500	3,866	1932-53
Quarry Creek near Sterling City (e)	08133300	3.25	1965-73
North Concho River at Sterling City (d)	08133500*	588.0	1939-87
Broome Creek near Broome (e)	08133800	0.29	1965-73
Nolke Station Creek near San Angelo (e)	08134300	0.59	1965-73
Gravel Pit Creek near San Angelo (e)	08134400	0.19	1965-74
North Concho River at San Angelo (d)	08135000	1,525	1916-31, 1947-90
Concho River near Veribest (e)	08136150	5,610	1970-74, 1998-2000
Puddle Creek near Veribest (e)	08136200	12.0	1966-73
Frog Pond Creek near Eden (e)	08136300	1.96	1967-73
Mukewater Creek SWS No. 10A near Trickham (e)	08136900	15.3	1965-72
Mukewater Creek SWS No. 9 near Trickham (e)	08137000	4.02	1961-72

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Mukewater Creek at Trickham (d)	08137500	70	1951-73
Deep Creek SWS No. 3 near Placid (e)	08139000	3.42	1954-60
Deep Creek near Mercury (d)	08139500	43.90	1954-73
Deep Creek SWS No. 8 near Mercury (e)	08140000	5.14	1952-71
Dry Prong Deep Creek near Mercury (d)	08140500	8.31	1951-71
Lake Clyde near Clyde (e)	08140600	36.9	1970-85
Pecan Bayou near Cross Cut (d)	08140700	532	1968-79
Jim Ned Creek near Coleman (d)	08140800	333	1965-80
McCall Branch near Coleman (e)	08141100	2.17	1966-73
Hords Creek near Valera (d)	08141500	54.20	1947-91
Hords Creek at Coleman (d)	08142000	107	1941-70
Brown County WID No. 1 Canal near Brownwood (d)	08142500	N/A	1950-83
Pecan Bayou at Brownwood (d)	08143500	1,660	1917-18, 1924-83
Brown Creek Tributary near Goldthwaite (e)	08143700	2.48	1966-73
Noyes Canal at Menard (d)	08144000	N/A	1924-83
Brady Creek near Eden (d)	08144800	101	1962-85
Brady Creek Tributary near Brady (e)	08145100	4.05	1967-73
Lake Buchanan near Burnet (e)	08148000	31,910	1937-90
Llano River Tributary near London (e)	08150200	0.58	1966-73
Stone Creek Tributary near Art (e)	08150900	0.40	1966-73
Llano River near Castell (d)	08151000	3,747	1924-39
Johnson Creek near Valley Spring (e)	08151300	5.66	1967-73
Little Flatrock Creek near Marble Falls (e)	08152700	3.20	1966-74
Spring Creek near Fredericksburg (e)	08152800	15.20	1967-73
Pedernales River at Stonewall (d)	08153000	647	1924-34
Cane Branch at Stonewall (e)	08153100	1.37	1965-71
Pedernales River near Spicewood (d)	08154000	1,294	1924-39
Lake Travis near Austin (d)	08154500	38,755	1940-90
Colorado River below Mansfield Dam, Austin (d)	08154510	38,755	1975-90
West Bull Creek at Loop 360 near Austin (e)	08154750	6.77	1976-82
Bull Creek at FM 2222, Austin (e)	08154760	30.4	1975-78
Bee Creek at West Lake Drive near Austin (e)	08154950	3.28	1980-82
Barton Creek near Camp Craft Road near Austin (d)	08155260	109	1982-89
Skunk Hollow Creek below Pond 1 at Austin (e)	08155370	0.12	1982-84
West Bouldin Creek at Riverside Drive, Austin (e)	08155550	3.12	1976-82
Shoal Creek at Steck Avenue, Austin (e)	08156650	2.79	1975-82
Shoal Creek at Northwest Park at Austin (d)	08156700	6.52	1975-84
Shoal Creek at White Rick Drive, Austin (e)	08156750	12.30	1975-82
Waller Creek at 38th Street, Austin (d)	08157000	2.31	1955-80
Waller Creek at 23rd Street, Austin (d)	08157500	4.13	1955-80
East Bouldin Creek at South 1st Street, Austin (d)	08157600	2.4	1997-2001
Blunn Creek near Little Stacey Park, Austin	08157700	1.2	1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	1977-86 1994-2001
Walnut Creek at Farm-Market 1325 near Austin (e)	08158100	12.60	1975-88
Walnut Creek at Dessau Road, Austin (e)	08158200	26.20	1975-88
Ferguson Branch at Springdale Road, Austin (e)	08158300	1.63	1978-82
Little Walnut Creek at Georgian Drive, Austin (e)	08158380	5.22	1975-88
Little Walnut Creek at IH 35, Austin (e)	08158400	5.57	1975-82
Little Walnut Creek at Manor Road, Austin (e)	08158500	12.1	1975-82
Walnut Creek at Southern Pacific Railroad bridge, Austin (e)	08158640	53.5	1975-86
Onion Creek at Buda (e)	08158800	166	1961-78, 1979-83, 1992-95
“ “ “ (d)			
Bear Creek at Farm-Market Road 1626 near Manchaca (e)	08158820	24.0	1979-83
Little Bear Creek at Farm-Market Road 1626 near Manchaca (d)	08158825	21.0	1979
Slaughter Creek at FM 2304 near Austin (e)	08158860	23.1	1978-83
Boggy Creek (South) at Circle S Road, Austin (e)	08158880	3.58	1976-88
Fox Branch near Oak Hill (e)	08158900	0.12	1965-73

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Williamson Creek at Oak Hill (d)	08158920	6.30	1978-93
Williamson Creek at Jimmy Clay Road, Austin (d)	08158970	27.60	1975-85
Onion Creek below Del Valle (e)	08159100	339	1962-75
Wilbarger Creek near Pflugerville (d)	08159150	4.6	1963-80
Big Sandy Creek near McDade (d)	08159165	38.70	1979-85
Big Sandy Creek near Elgin (d)	08159170	63.80	1979-85
Dogwood Creek near McDade (e)	08159180	0.53	1980-85
Dogwood Creek at Highway 95 near McDade (e)	08159185	5.03	1980-85
Reeds Creek near Bastrop (e)	08159450	5.22	1967-73
Dry Creek at Buescher Lake near Smithville (d)	08160000	1.48	1940-66
Colorado River at La Grange (d)	08160500	40,430	1939-55
Colorado River above Columbus (d)	08160700	41,403	1983-85
Dry Branch Tributary near Altair (e)	08161580	0.68	1966-73
Little Robin Slough near Matagorda (e)	08162530	3.4	1969
Cashs Creek near Blessing (e)	08162650	14.8	1969-77
East Carancahua Creek near Blessing (e)	08162700	81.2	1968, 1970-83
West Carancahua Creek near Laward (e)	08162800	57.1	1970-76
Navidad River near Speaks (d)	08164350	437	1982-89, 1995-2000
Navidad River at Morales (d)	08164370	549	1995-2000
Navidad River near Ganado (d)	08164500	826	1939-80
Guadalupe River above Kerrville (e)	08166150	488	1976-79
Turtle Creek Tributary near Kerrville (e)	08166300	0.46	1966-74
Guadalupe River near Comfort (d)	08166500	762	1918-32
Rebecca Creek near Spring Branch (d)	08167600	10.90	1960-79
Blieders Creek at New Braunfels (e)	08168600	16.0	1962-89
Panther Canyon at New Braunfels (e)	08168700	0.73	1962-89
Trough Creek near New Braunfels (e)	08168720	0.48	1966-74
W.P. Dry Comal Creek Tributary near New Braunfels (e)	08168750	0.32	1966-74
Dry Comal Creek at New Braunfels (e)	08168800	N/A	1962-74
Walnut Branch near Seguin (e)	08169750	5.46	1967-74
East Pecan Branch near Gonzales (e)	08169850	0.24	1965-74
San Marcos River at San Marcos (d)	08169950	83.7	1915-21
West Elm Creek near Niederwald (e)	08172100	0.44	1965-74
San Marcos River at Ottine (d)	08173500	1,249	1915-43
Guadalupe River below Cuero (d)	08176000	4,923	1903-07, 1916-19, 1921-36
Irish Creek near Cuero (e)	08176200	15.5	1967-74
Three Mile Creek near Cuero (e)	08176600	0.48	1966-74
Coletto Creek Reservoir inflow (Guadalupe diversion) near Schroeder (d)	08176990	357	1980-94
Coletto Creek near Schroeder (d)	08177000	369	1930-34, 1953-79
Olmos Creek Tributary at FM 1535 at Savano Park (e)	08177600	0.33	1969-81
Olmos Reservoir at San Antonio (e)	08177800	32.4	1968-71, 1976-89, 1992-95
San Antonio River at Woodlawn Avenue, San Antonio (e)	08177860	36.4	1989-95
San Antonio River at Dolorosa, San Antonio (d)	08177920	N/A	1980-86
Alazan Creek at St. Cloud Street, San Antonio (e)	08178300	3.26	1969-79
San Pedro Creek at Furnish St., San Antonio (d)	08178500*	2.60	1916-29
Harlandale Creek at W. Harding Street, San Antonio (e)	08178555	2.43	1977-81
Panther Springs Creek at FM 2696 near San Antonio (e)	08178600	9.54	1969-77
Lorence Creek at Thousand Oaks Blvd., San Antonio (e)	08178620	4.05	1980-84
West Elm Creek at San Antonio (e)	08178640	2.45	1976-88
East Elm Creek at San Antonio (e)	08178645	2.33	1976-81
Salado Creek Tributary at Bitters Road, San Antonio (e)	08178690	0.26	1969-81
Salado Creek at Rittman Road, San Antonio (e)	08178720	137.1	1968-81

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Salado Creek Tributary at Bee Street, San Antonio (e)	08178736	0.45	1970-77
Salado Creek at E. Houston Street, San Antonio (e)	08178740	181	1968-81
Salado Creek at U.S. Highway 87, San Antonio (e)	08178760	186	1968-81
Salado Creek at Southcross Blvd., San Antonio (e)	08178780	188	1968-81
Bandera Creek Tributary near Bandera (e)	08178900	0.27	1966-74
Medina River near Pipe Creek (d)	08179000	474	1923-35, 1953-82
Red Bluff Creek near Pipe Creek (d)	08179100	56.30	1956-81
Medina River Tributary near Pipe Creek (e)	08179200	0.30	1966-74
Medina River at La Coste (d)	08180640	805	1987-2000
Medio Creek at Pearsall Road, San Antonio (e)	08180750	47.9	1987-95
Leon Creek Tributary at FM 1604, San Antonio (e)	08181000	5.57	1968-80
French Creek Tributary near Helotes (e)	08181200	1.08	1966-74
Ranch Creek near Helotes (d)	08181410		1978
Leon Creek Tributary at Kelly Air Force Base (d)	08181450	1.19	1969-79
Calaveras Creek SWS No. 6 (inflow) near Elmendorf (e)	08182400	7.01	1957-77
Calaveras Creek near Elmendorf (d)	08182500	77.20	1954-71
San Antonio River at Calaveras (d)	08183000	1,786	1918-25
Cibolo Creek near Boerne (d)	08183900	68.4	1963-95
Cibolo Creek near Bulverde (d)	08184000	198	1946-66
Cibolo Creek above Bracken (d)	08184500	250	1946-51
Cibolo Creek at Sutherland Springs (d)	08185500	665	1924-29
Ecleto Creek near Runge (d)	08186500	239	1962-89
Escondido Creek SWS No. 1 (inflow) near Kenedy (e)	08187000	3.29	1955-73
Escondido Creek at Kenedy (d)	08187500	72.40	1954-73
Escondido Creek SWS No. 11 (inflow) near Kenedy (e)	08187900	8.45	1959-77
Dry Escondido Creek near Kenedy (d)	08188000	9.43	1954-59
Baugh Creek at Goliad (e)	08188400	3.02	1966-74
Guadalupe-Blanco River Authority Calhoun Canal-Flume No. 2 near Long Mott (d)	08188750	N/A	1972-86
Guadalupe River at State Highway 35 near Tivoli (e)	08188810	10,280	1975-82
Olmos Creek Tributary near Skidmore (e)	08189600	0.58	1966-73
Chiltpin Creek at Sinton (d)	08189800	128	1970-91
Nueces River near Uvalde (d)	08191500	1,930	1928-39
Nueces River near Cinonia (d)	08192500	2,150	1915-25
Plant Creek near Tilden (e)	08194550	0.36	1965-74
Nueces River at Simmons (d)	08194600	8,561	1965-77
Frio River at Knippa (d)	08195700	N/A	1953
Dry Frio River at Knippa (d)	08196500	179	1953
East Elm Creek near Sabinal (e)	08198900	10.6	1967-74
Frio River near Frio Town (d)	08199700	1,460	1924-27
Hondo Creek near Hondo (d)	08200500	132	1953-64
Bone Creek near Hondo (e)	08200900	0.19	1965-74
Seco Creek near Utopia (d)	08202000	53.20	1952-61
Seco Creek Reservoir inflow near Utopia (d)	08202450	59.5	1991-98
Seco Creek near D'Hanis (d)	08202500	87.40	1952-64
Parkers Creek Reservoir (d)	08202800	10.0	1991-99
Leona River Tributary near Uvalde (e)	08203500	1.21	1966-74
Leona River Spring Flow near Uvalde (d)	08204000*	1.21	1939-65 1966-2002
Leona River near Divot (d)	08204500	565	1924-29
Frio River at Calliham (d)	08207000	5,491	1925-26, 1932-81
Rutledge Hollow Creek near Poteet (e)	08207200	9.33	1966-74
Rutledge Hollow at 7th Street, Poteet (d)	08207220	N/A	1979-2000
Atascoas River at U.S. Highway 281, Pleasanton (d)	08207300	N/A	1973-2000
Atascosa River near McCoy (d)	08207500	530	1951-57
Lucas Creek near Pleasanton (e)	08207700	32.80	1966-73
Ramirena Creek near George West (d)	08210300	84.40	1968-72
Lagarto Creek near George West (d)	08210400	155	1972-89

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Nueces River below Mathis (d)	08211100	16,726	1966-67
Rincon Bayou Channel near Calallen (d)	08211503	N/A	1996-2000
Pintas Creek Tributary near Banquete (e)	08211550	3.28	1966-74
Hamon Creek near Freer (e)	08211600	0.73	1965-73
San Diego Creek at Alice (d)	08211800	319	1964-89
Lake Alice at Alice (e)	08211850	150	1965-86
San Fernando Creek near Alice (d)	08212000	518	1962-63
North Las Animas Creek Tributary near Freer (e)	08212320	0.07	1969-74
Rio Grande at Vinton Bridge near Anthony (d)	08363840	28,680	1969-74
Northgate Reservoir at El Paso (e)	08365540	6.89	1973-75
Range Reservoir at El Paso (e)	08365545	11.89	1973-75
Franklin Canal at El Paso (d)	08365550	N/A	1969-72
McKelligon Canyon at El Paso (d)	08365600	2.30	1958-77
Government Ditch at El Paso (d)	08365800	6.40	1958-77
Rio Grande at Jaurez, MX (d)	08366000	29,350	1938-56
Riverside Canal near Socorro (d)	08366400	37,830	1969-72
Rio Grande at Island Station near El Paso (d)	08366500	29,743	1938-60
Rio Grande at Tornillo Branch near Fabens (d)	08367000	N/A	1924-38
Tornillo Drain at mouth near Tornillo (d)	08368000	N/A	1969-72
Tornillo Canal near Tornillo (d)	08368300	N/A	1969-72
Hudspeth Feeder Canal near Tornillo (d)	08368900	N/A	1969-72
Rio Grande at County Line Station near El Paso (d)	08369500	30,610	1938-60
Camo Rice Arroyo Tributary near Fort Hancock (e)	08370200	2.35	1966-74
Wild Horse Creek Tributary near Van Horn (e)	08370800	0.74	1966-73
Cibolo Creek near Presidio (d)	08373200	276	1971-77
Rio Grande above Presidio (lower Station) (d)	08373500	N/A	1901-13, 1924-54
Rio Grande at Langtry (d)	08377500	84,795	1900-14, 1920, 1924-60
Rio Grande Tributary near Langtry (e)	08377600	0.32	1966-74
Delaware River Tributary near Orla (e)	08407800	1.6	1966-74
Pecos River near Angeles (d)	08409500	20,540	1914-37
Salt Screwbean Draw near Orla (d)	08411500	464	1939-41, 1944-57
Pecos River near Mentone (d)	08414000	21,650	1922-26, 1969-73
Reeves County WID No. 2 Canal near Mentone (d)	08414500	N/A	1922-25, 1939-57, 1964-90
Ward County WID No. 3 Canal near Barstow (d)	08415000	N/A	1939-57, 1964-90
Pecos River above Barstow (d)	08416500	21,800	1916-21
Ward County Irrigation District No. 1 Canal near Barstow (d)	08418000	N/A	1922-25, 1939-57, 1964-90
Pecos River at Pecos (d)	08420500	22,100	1898-1907, 1914-15, 1922-26, 1939-55
Madera Canyon near Toyahvale (d)	08424500	53.80	1932-49
Phantom Lake Spring near Toyahvale (d)	08425500*	N/A	1932-34, 1942-66
San Solomon Springs at Toyahvale (d)	08427500*	N/A	1932-34, 1941-65
West Sandia Spring at Balmorhea (d)	08429000	N/A	1932-33
East Sandia Spring at Balmorhea (d)	08430000	N/A	1932-33
Toyah Creek near Pecos (d)	08431000	1,024	1940-41, 1944-45
Salt Draw near Pecos (d)	08431500	1,882	1939-41, 1944-45

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Limpia Creek below Fort Davis (d)	08431800	227	1962-77
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Toyah Creek below Toyah Lake near Pecos (d)	08434000	3,709	1939-51
Grandfalls-Big Valley Canal near Barstow (d)	08435000	N/A	1922-26, 1939-57, 1964-76
Pecos River below Barstow (d)	08435500	25,980	1939-41
Toronto Creek near Alpine (d)	08435600	27.90	1971-76
Alpine Creek at Alpine (d)	08435620	18.10	1971-76
Moss Creek near Alpine (d)	08435660	11.30	1971-76
Sunny Glen Canyon near Alpine (d)	08435700	29.70	1968-77
Coyanosa Draw near Fort Stockton (d)	08435800	1,182	1964-77
Pecos County WID No. 2 (Upper Div.) Canal near Grandfalls (d)	08436500	N/A	1922-25, 1939-57, 1964-90
Courtney Creek Tributary near Fort Stockton (e)	08436800	0.44	1966-74
Pecos County WID No. 2 Canal near Imperial (d)	08437500	N/A	1940-57, 1964-90
Lake Leon Tributary near Fort Stockton (e)	08437550	1.59	1966-74
Pecos County WID No. 3 Canal near Imperial (d)	08437600	N/A	1940-57, 1964-90
Monument Draw Tributary at Pyote (e)	08437650	178	1966-74
Ward County WID No. 2 Canal near Grand Falls (d)	08437700	N/A	1939-57, 1964-90
Pecos River near Grand Falls (d)	08438100	27,810	1916-26
Pecos River below Grand Falls (d)	08441500	27,820	1921-26, 1939-56
Three Mile Mesa Creek near Fort Stockton (e)	08444400	1.04	1966-74
Comanche Springs at Fort Stockton (d)	08444500	N/A	1936-64
Pecos River near Sheffield (d)	08447000	31,600	1922-25, 1940-49
Howards Creek Tributary near Ozona (e)	08447200	7.53	1967-73
Pecos River near Shumla (d)	08447400	35,162	1955-60
Pecos River near Comstock (d)	08447500	35,298	1900-54
Goodenough Springs near Comstock (e)	08448500	N/A	1929-60
Sonora Field Creek at Sonora (e)	08448800	2.60	1965-71
Devils River near Juno (d)	08449000	2,730	1925-49, 1964-73
Devils River near Comstock (d)	08449300	3,903	1955-58
Rough Canyon Tributary near Del Rio (e)	08449470	7.90	1967-73
Devils River near Del Rio (d)	08449500	4,185	1900-14, 1924-57
Evans Creek Tributary near Del Rio (e)	08449600	0.39	1966-73
Devils River near mouth, Del Rio (d)	08450500	4,305	1954-60
Rio Grande near Del Rio (d)	08452500	123,303	1900-15, 1920, 1924-54
San Felipe Creek near Del Rio (e)	08453000	46.0	1931-60
Zorro Creek near Del Rio (e)	08453100	10.0	1966-74
East Perdido Creek near Brackettville (e)	08454900	3.39	1965-74
Pinto Creek near Del Rio (d)	08455000	249	1929-69, 1971-72
Rio Grande at San Antonio Crossing (d)	08458700	129,226	1952-60
Arroyo San Bartolo at Zapata (e)	08459600	0.61	1966-74
Rio Grande near Zapata (d)	08460500	163,344	1932-53
International Falcon Reservoir near Falcon Heights (d)	08461200	N/A	1953-60
Rio Grande at Roma (d)	08462500	166,464	1900-13, 1923-54
Rio Grande near Rio Grande City (d)	08465500	180,941	1932-54
Rio Grande Tributary near Rio Grande City (e)	08466100	1.20	1966-74

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Rio Grande Tributary near Sullivan City (e)	08466200	0.40	1966-74
North Floodway South of McAllen (d)	08468000	N/A	1928-60
South Floodway South of McAllen (d)	08470000	N/A	1929-60
Rio Grande at Hildalgo (d)	08471500	176,100	1928-32, 1935, 1939, 1941-51
Rio Grande near Progreso Bridge (d)	08473300	176,228	1953-60
Rio Grande near San Beniot (d)	08473700	176,304	1953-60
Rio Grande at Matamoros, MX (d)	08474500	182,211	1900-13, 1923-54
Rio Grande near Brownsville (d)	08475000	176,333	1935-50

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 2000 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)
Canadian River at Tascosa	07227470	19,200	SC, T, Cl	1948-53,
		18,536	SC, T, pH, Cl	1969-77
Canadian River near Canadian	07228000	22,866	SC, T	1974-81
Prairie Dog Town Fork Red River near Wayside	07297910	4,221	SC, T	1969-81
Tule Creek near Silverton	07298200	1,150	SC, T, pH, Cl	1968-69
Prairie Dog Town Fork Red River near Brice	07298500	6,082	SC, pH, Cl, S	1949-51,
			T	1950-51
Mulberry Creek near Brice	07299000	534	SC, pH, Cl, S	1949-51
Prairie Dog Town Fork Red River near Lakeview	07299200	6,792	SC, T	1968-80,
			S	1979-80
Little Red River near Turkey	07299300	139	SC, T	1968-81,
			S	1979-81
Jonah Creek at Weir near Estelline	07299512	65.50	SC	1974-82
Jonah Creek below Weir near Estelline	07299514	66.60	SC	1974-76
Salt Creek near Estelline	07299530	142	SC	1974-79
Prairie Dog Town Fork Red River near Childress	07299540	7,725	SC, T	1968-82,
				1994-97
Salt Fork Red River near Hedley	07299930	868	SC, T, pH, Cl	1956-61
North Pease River near Childress	07307600	1,434	SC, T	1973-79
Middle Pease River near Paducah	07307750	1,086	SC	1973-79,
			T	1973-79,
			S	1994-97
Middle Pease River near Paducah	07307760	1,128	SC	1980-82,
			T	1980
Pease River near Childress	07307800	2,754	SC, T	1968-82,
				1994-97
Pease River near Crowell	07308000	3,037	SC	1942-43
Pease River near Vernon	07308200	3,488	SC, T	1999
Red River near Burkburnett	07308500	20,570	SC, T	1968-81
North Fork Wichita River near Paducah	07311600	540	SC, T	1968-76
North Fork Wichita River near Crowell	07311622	591	SC	1971-76
Middle Fork Wichita River near Truscott	07311648	161	SC	1970-76
Truscott Brine Lake near Truscott	07311669	26.2	SC, T	1985-90
North Fork Wichita River near Truscott	07311700	937	SC, T	1969-92
South Fork Wichita River near Guthrie	07311780	239	SC	1970-76
South Fork Wichita River at Ross Ranch near Guthrie	07311790	499	SC	1971-79,
			Cl	1988-97,
			S	1978-79
Beaver Creek near Electra	07312200	652	SC,T	1969-70
				1996-2002
Wichita River at State Highway 25 near Kamay	07312130	2,182	SC, T	1996-2002
Wichita River at Wichita Falls	07312500	3,140	SC, T	1981-89,
				1996-2002
Wichita River near Charlie	07312700	3,439	SC, T	1967-81,
				1996-2002
Little Wichita River near Archer City	07314500	481	SC	1953-55,
			T	1953-54
Little Wichita River near Henrietta	07314900	1,037	SC, DO	1999
Little Wichita River near Henrietta	07315000	1,037	SC, T, pH, Cl	1953-56,
			S, T	1959-66,
East Fork Little Wichita River near Henrietta	07315200	178	T	1954

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

xxv

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
Little Wichita River near Ringgold	07315400	1,350	SC, pH, Cl	1959-62
Red River near Gainesville	07316000	30,872	SC, Cl	1944-46,
			SC, T, pH, Cl	1953-63,
			SC, T	1967-89,
Red River at Denison Dam near Denison	07331600	39,720	SC	1944-89,
			T	1945-89
Little Pine Creek near Kanawha	07336750	75.40	T	1980
Red River near De Kalb	07336820	47,348	SC, T	1968-91
Middle Sulphur River near Commerce	07342480	44.1	Cl, pH	1987-2001
South Sulphur River near Cooper	07342500	527	SC, T, pH, Cl	1959-66,
				1968-72,
			SC, T	1973-89
Sulphur River near Talco	07343200	1,365	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
White Oak Creek near Talco	07343500	494	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
Sulphur River near Darden	07344000	2,774	SC, T, pH, Cl	1947-50
Big Cypress Creek near Pittsburg	07344500	366	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Little Cypress Creek near Jefferson	07346070	675	SC, T, pH, Cl	1968-72,
			SC, T	1973-91
Sabine River near Emory	08017500	888	SC, T, pH, Cl	1952-54
Grand Saline Creek near Grand Saline	08018200	91.40	SC, T, pH, Cl	1968-73
Sabine River near Mineola	08018500	1,357	SC, T, pH, Cl	1968-72,
			SC, T	1973-92
Lake Fork Creek near Quitman	08019000	585	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Big Sandy	08019500	231	SC, T, S	1985-86
Sabine River near Beckville	08022040	3,589	SC, T	1952-98
Sabine River below Toledo Bend near Burkeville	08026000	7,482	SC, T	1969-86,
			C	1969-75
Sabine River near Bon Wier	08028500	8,229	SC, T, C	1969-84
Sabine River near Ruliff	08030500	9,329	SC	1945,
				1947-98
			T	1947-98
			pH, DO	1968-75,
			C	1970-76,
			Cl	1968
Cow Bayou near Mauriceville	08031000	83.30	SC, T, pH, Cl	1952-54,
			SC, T	1954-56
Neches River near Neches	08032000	1,145	SC, T	1974-91
Neches River near Alto	08032500	1,945	SC, T	1950-69
Neches River near Diboll	08033000	2,724	SC, T	1970-81
Neches River near Rockland	08033500	3,636	SC	1941-42,
				1946-47
Angelina River near Lufkin	08037000	1,600	SC, T, pH, Cl	1955-78,
			SC, T	1955-
Attoyac Bayou near Chireno	08038000	503	SC, T	1984-99
Sam Rayburn Reservoir near Jasper	08039300	3,449	SC, T	1964-84,
				1993-99
Angelina River below Sam Rayburn Dam near Jasper	08039400	3,449	SC, T	1964-79
Angelina River at SH 63 near Ebenezer	08039500	3,435	SC, T	1994-99
Village Creek near Kountze	08041500	860	SC, T	1968-70
Pine Island Bayou near Sour Lake	08041700	336	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Bridgeport	08044000	333	SC, T, S	1968-77,
Lake Worth above Fort Worth	08045400	2,064	pH, Cl	

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl T	1949-52, 1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Lake Arlington at Arlington	08049200	143	SC, pH, T, DO	1989-2002
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46	SC T	1967-68, 1957-58, 1966-68, 1957-68
Clear Creek near Sanger	08051500	295	SC, T, S	1968-77
Little Elm Creek near Celina	08052650	46.70	SC T, S	1967-75, 1966-75
Little Elm Creek near Aubrey	08052700	75.50	SC T, S	1967-75, 1967-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC T	1982-86, 1976-86
White Rock Creek at Greenville Avenue, Dallas	08057200	66.4	SC, pH, T, DO	1997-2000
Trinity River below Dallas	08057410	6,278	SC, T S Cl	1968-2000, 1972-75, 1998-2000 1970-81, 1998-99
Lavon Lake near Lavon	08060500	770	SC,T,CL	1969-74, 1975,82, 1995-99
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
East Fork Trinity River near Crandall	08062000	1,256	SC, T pH, DO Cl	1968-1981, 1987-2000 1977, 1986-2000 1964-81, 1986-2000
Trinity River at Trinidad	08062700	8,538	SC, T pH, DO Cl S	1967-81, 1986-2000 1967-81, 1986-2000 1966-94 1978-94
Cedar Creek near Mabank	08063000	733	SC, T, pH, Cl	1956-57
Pin Oak Creek near Hubbard	08063200	17.60	SC T S	1967-72, 1957-60, 1965-72, 1957-60, 1962-72
Richland Creek near Richland	08063500	734	SC, T, pH, Cl SC, T	1968-69, 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 SC, T	1956-66, 1972, 1973-83
Trinity River near Oakwood	08065000	12,833	SC, T, pH, Cl SC, T, S	1948-54, 1977-81
Bedias Creek near Madisonville	08065800	321	SC, T S	1985-87, 1986
Long King Creek at Livingston	08066200	141	SC, T, pH, Cl	1963-72

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
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 T	1950-65, 1965
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65
Cedar Bayou near Crosby	08067500	69.4	SC, pH, Cl	1971-79
West Fork San Jacinto River near Conroe	08068000	828	SC, T DO	1962-90, 1979-81
Panther Branch near Spring	08068450	34.50	S	1975-76
West Fork San Jacinto River near Humble	08069500	1,741	SC, Cl	1945-46
East Fork San Jacinto River near New Caney	08070200	388	SC, T	1984-99
San Jacinto River near Huffman	08071500	2,800	SC T	1945-54, 1949-54
Buffalo Bayou at West Belt Drive at Houston	08073600	307	SC, T	1979-81
Buffalo Bayou at Houston	08074000	358	SC, pH, T, DO Cl	1986-2000 1969-81
Whiteoak Bayou at Main Street, Houston	08074598	127	SC, T, DO	1992-97
Buffalo Bayou at Main Street, Houston	08074600	469	SC, T, DO	1986-92
Buffalo Bayou at McKee Street, Houston	08074610	469	SC, T, DO pH	1992-2000 1998-2000
Sims Bayou at Houston	08075500	63.0	SC, T, DO	1994-97
Chocolate Bayou near Alvin	08078000	87.70	SC, T	1978-81
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1984-93
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1950-51
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S SC, T	1949-51 1957-95
McDonald Creek near Post	08080540	103	SC, T	1996-2002 1964-78
Salt Fork Brazos River near Peacock	08081000	4,619	SC, T	1950-51, 1965-86
Croton Creek near Jayton	08081200	290	SC, T	1961-80
Salt Croton Creek near Aspermont	08081500	64.30	SC T	1969-77, 1972-73
Salt Fork Brazos River near Aspermont	08082000	5,130	SC, T, pH, Cl SC, T	1949-51, 1957-82
Stinking Creek near Aspermont	08082100	88.80	T SC, T	1950, 1966-69
North Croton Creek near Knox City	08082180	251	SC, T	1966-86
Brazos River at Seymour	08082500	15,538	SC, T	1960-95 1996-2002
Medina River near Somerset	08082800	967	SC, T, Cl	1998-2000
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1968-79, 1982-84
Clear Fork Brazos River at Nugent	08084000	2,199	SC, T, pH, Cl	1948-53
California Creek near Stamford	08084800	478	SC, T	1963-79
Paint Creek near Haskell	08085000	914	SC, T	1950-5
Clear Fork Brazos River at Fort Griffin	08085500	3,988	SC, T, S SC, T	1950-51, 1968-79, 1982-84
Hubbard Creek near Sedwick	08086015	128	SC, T	1964-66
Deep Creek at Moran	08086050	228	SC, T	1963-75
Hubbard Creek near Albany	08086100	454	SC, T	1962-75
Salt Prong Hubbard Creek at U.S. Highway 380 near Albany	08086120	61	SC, T	1964-68
North Fork Hubbard Creek near Albany	08086150	39.30	SC, T	1964-90
Salt Prong Hubbard Creek near Albany	08086200	115	SC, T	1962-63
Snailum Creek near Albany	08086210	22.90	SC, T	1964-66
Battle Creek near Moran	08086235	108	SC, T	1967-68

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
Pecan Creek near Eolian	08086260	26.40	SC, T	1967-75
Big Sandy Creek near Breckenridge	08086300	288	SC, T	1962-77
Hubbard Creek near Breckenridge	08086500	1,089	SC, T	1955-75
Clear Fork Brazos River at Eliasville	08087300	5,697	SC, T	1962-82
Brazos River near South Bend	08088000	22,673	SC, CI	1942-48, 1978-81
Salt Creek at Olney	08088100	11.80	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC T	1942-91, 1950-55, 1966-91
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	196066, 1968-82
Bosque River near Waco	08095600	1,656	SC, T	1998-2002
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82, 1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsport	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73, 1980-82
Little River near Cameron	08106500	7,065	SC, T	1959-97
San Gabriel River near Weir	08105300	563	T	1977-82
San Gabriel River at Laneport	08105700	738	T	1977-82
Brazos River at State Highway 21 near Bryan	08108700	39,049	SC, T	1961-65
Brazos River near Bryan	08109000	39,515	SC, T	1966
Brazos River near College Station	08109500	39,599	SC, T	1961-84
Yegua Creek near Somerville	08110000	1,009	SC, T	1961-67
Navasota River above Groesbeck	08110325	239	SC, T	1968-89
Navasota River near Groesbeck	08110400	311	SC, T	1968-78
Navasota River near Easterly	08110500	968	SC	1942-43, 1947
Navasota River near Bryan	08111000	1,454	SC, T S	1959-81, 1976-81
Brazos River near Richmond	08114000	45,107	S SC T	1966-86, 1942-95, 1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC T	1962-77, 1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC T	1962-77, 1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
Colorado River above Bull Creek near Knapp	08118200	N/A	SC, T, CI	1950-52
Bull Creek near Ira	08118500	26.30	SC, T, pH, CI	1950-51
Bluff Creek near Ira	08119000	42.60	SC, T, pH, CI	1950
Colorado River near Ira	08119500	3,483	SC, T	1950-52, 1959-70, 1975-82, 1951-52
Deep Creek near Dunn	08120500	198	CI SC, T	1953-54

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
Colorado River near Cuthbert	08120700	3,912	SC, T	1965-99 2001-02
Morgan Creek near Westbrook	08121500	273	T	1954-55
Graze Creek near Westbrook	08122000	21.70	T	1954-55
Morgan Creek near Colorado City	08122500	313	T	1947-49
Lake Colorado City near Colorado City	08123000	340	T	1954-55
Beals Creek above Big Spring	08123650	9,319	SC, T	1973-78
Beals Creek near Big Spring	08123700	9,341	SC, T	1956-57
Beals Creek near Coahoma	08123720	9,383	SC, T	1983-88
Colorado River near Silver	08123900	14,997	SC, T	1957-68
Colorado River at Robert Lee	08124000	15,307	SC, T, pH, Cl S	1948-51, 1949-51
Oak Creek near Blackwell	08126000	209	SC, T	1950
Colorado River at Ballinger	08126500	16,413	SC, T S	1961-79, 1978-79
Pecan Bayou at Brownwood	08143500	1,660	SC, T	1948-49
Pecan Bayou near Mullin	08143600	2,073	SC, T	1968-91
San Saba River near San Saba	08145500	N/A	SC, T	1962-65
San Saba River at San Saba	08146000	3,046	SC T	1962-69, 1963-70
Colorado River near San Saba	08147000	37,217	SC, T S	1947-92, 1951-62
Llano River at Llano	08151500	4,197	SC, T	1979-81
Lake Austin at Austin	08154900	38,240	SC, T	1965-80
Barton Creek below Barton Springs at Austin	08155505	125	SC, T,	1965, 1975-83, 1989-91, 1994-97
Waller Creek at 23rd Street at Austin	08157500	4.13	T	1955-60
East Bouldin Creek at South 1st Street, Austin	08157600	2.4	Cl	1997-2000
Blunn Creek near Little Stacey Park, Austin	08157700	1.2		1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	C C, T	1977-86 1994-2001
Colorado River at Austin	08158000	39,009	SC, T	1948-91
Colorado River above Columbus	08160700	41,403	SC, T	1983-86
Colorado River at Columbus	08161000	41,640	SC T	1967-73, 1957-59, 1961-68
Colorado River at Wharton	08162000	42,003	S SC T	1957-73 1945-92, 1946-48,
Lavaca River near Edna	08164000	817	SC, T	1978-81
Navidad River near Speaks	08164350	437	SC, T, pH, Cl	1996-97
Navidad River near Ganado	08164500	826	SC, T	1960-80
Guadalupe River near Spring Branch	08167500	1,315	SC	1942-45
Guadalupe River at Sattler	08167800	1,436	T	1984-87
Blanco River at Wimberley	08171000	355	T	1977-78
Plum Creek near Luling	08173000	309	SC, T	1968-86
Sandies Creek near Westhoff	08175000	549	S Cl	1966 1962-99
Guadalupe River at Victoria	08176500	5,198	SC T	1946-81, 1951-81
Coletto Creek Reservoir (Condenser No. 1) near Fannin	08177360	414	T	1980-94
Coletto Creek Reservoir (outflow) near Victoria	08177410	494	T	1980-94
Olmos Creek at Dresden Drive, San Antonio	08177700	21.2	SC, pH, T, DO S	1969-99 1973

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
San Antonio River at San Antonio	08178000	41.8	SC, T	1991-92, 1996-97
San Antonio River at Mitchell Street, San Antonio	08178050	42.4	SC, pH, T, DO	1992-99
San Antonio River at Loop 410 at San Antonio	08178565	125	SC, pH, T, DO	1987-2000
Medina River near Macdona	08180700	885	SC, pH, T, DO	1998-2000
Medina River at La Coste	08180640	805	SC, pH, T, DO	1987-95
Medio Creek at Pearsall Rd. at San Antonio	08180750	47.9	SC, pH, T, DO	1987-95
Ingram Road Outfall at Leon Creek Tributary at San Antonio	08181410	0.02	SC, pH, T, DO	1994-2000
Leon Creek at Interstate Highway 35 at San Antonio	08181480	219	SC, pH, T, DO	1985-2000
Medina River at San Antonio	08181500	1,317	SC, pH, T, DO CI	1987-2000 1965-2000
San Antonio River near Falls City	08183500	2,113	SC, pH, T, DO	1987-96
Cibolo Creek near Falls City	08186000	827	SC, T	1969-91
Escondido Creek SWS #1 near Kenedy	08187000	3.29	S	1955-65
Guadalupe River at Tivoli	08188800	10,128	SC, T	1966-82
Mission River at Refugio	08189500	690	SC, T	1961-81
Nueces River at Cotulla	08194000	5,171	SC	1942
Frio River at Calliham	08207000	5,491	SC, T	1968-81
Nueces River at Bluntzer	08211000	16,772	SC, T	1948-91
Los Olmos Creek near Falfurrias	08212400	480	SC, T	1975-81
Rio Grande at El Paso	08364000	29,267	SC, pH, T, DO	1930-2000
Rio Grande at Fort Quitman	08370500	31,944	SC, T	1975-78.
Rio Grande at Foster Ranch near Langtry	08377200	80,742	SC, T	1975-81
Pecos River below Red Bluff Dam near Orla	08410100	20,720	SC T	1937-69, 1953-69
Salt Draw near Orla	08411500	464	SC, T	1943-48
Pecos River near Mentone	08414000	21,650	SC	1939
Pecos River at Pecos	08420500	22,100	SC	1939-41
Toyah Creek near Pecos	08431000	1,024	SC	1940, 1944
Salt Draw near Pecos	08431500	1,882	SC	1940, 1944
Toyah Creek below Toyah Lake near Pecos	08434000	3,709	SC CI	1940-50, 1940
Pecos River below Grand Falls	08441500	27,820	SC	1939-42, 1947-56
Pecos River near Girvin	08446500	29,560	SC	1940-41, 1947, 1954-82
Pecos River near Sheffield	08447000	31,600	SC T	1940-41, 1947 1954-59, 1964-82
Pecos River near Langtry	08447410	35,179	SC, T	1971-76, 1981-85
Devils River at Pafford Crossing near Comstock	08449400	3,961	SC, T	1978-85
Rio Grande at Laredo	08459000	132,578	SC T	1975-86, 1974-76
Rio Grande at Roma	08462500	166,464	SC	1942-43
Rio Grande at Fort Ringgold, Rio Grande City	08464700	174,362	SC, pH, T	1959-2000
Rio Grande near Los Ebanos	08466300	N/A	SC, pH, T	1977-2000
Rio Grande at Mission Pumping Plant	08468000	171,800	SC	1945-50
Rio Grande below Anzalduas Dam	08469200	176,112	SC, pH, T	1967-72, 1959-2000
Rio Grande at Cameron Co. WID #2 near San Benito	08473800	N/A	SC	1942-43
Rio Grande at Los Fresnos Pumping Plant near Brownsville	08474130	N/A	SC	1945-46
Rio Grande near Brownsville	08475000	176,333	SC SC, T S	1943-44, 1967-83 1966-83

WATER RESOURCES DATA—TEXAS, 2003

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 49 gaging stations; stage only at 3 gaging stations; stage and contents at 25 lakes and reservoirs; and water quality at 27 gaging stations. Also included are data for 3 partial-record stations comprised of 2 flood-hydrograph and 1 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-03-2." 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 Texas 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 2003 are:

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

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

Texas Water Development Board (TWDB), 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 Conservation District; Brazos River Authority; Canadian Municipal Water Authority; Coastal Water Authority; Colorado River Municipal Water District; Dallas Public Works Department; Dallas Water Utilities; Edwards Underground Aquifer Authority; 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 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 of Texas; 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 Department of Public Transportation; Texas Natural Resources Conservation Commission; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Colo-

rado 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.

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation

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 2003.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,485,000 acre-feet, remained at 77 percent from the end of September 2002 to the end of September 2003. Records from these reservoirs indicate that storage increased in 25, decreased in 48, and remained the same in 4.

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

Streamflow

Monthly mean streamflow was normal in most streams in Texas during the 2003 water year. Comparisons of monthly mean and annual mean discharges in the 2003 water year, with median values for the period 1971-2000, were made for the following four representative index stations in Texas: the Neches River near Rockland (08033500) in southeastern Texas, the North Bosque River near Clifton (08095000) in east central Texas, the North Concho River near Carlsbad (08134000) in west central Texas, and the Guadalupe River near Spring Branch (08167500) in south central Texas (fig. 2).

Annual mean streamflow for the Neches River near Rockland was 3,285 cubic feet per second (ft³/s) for the 2003 water year, or 181 percent of 1,811 ft³/s for the reference period 1971-2003. The 2003 water year monthly mean discharges were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the

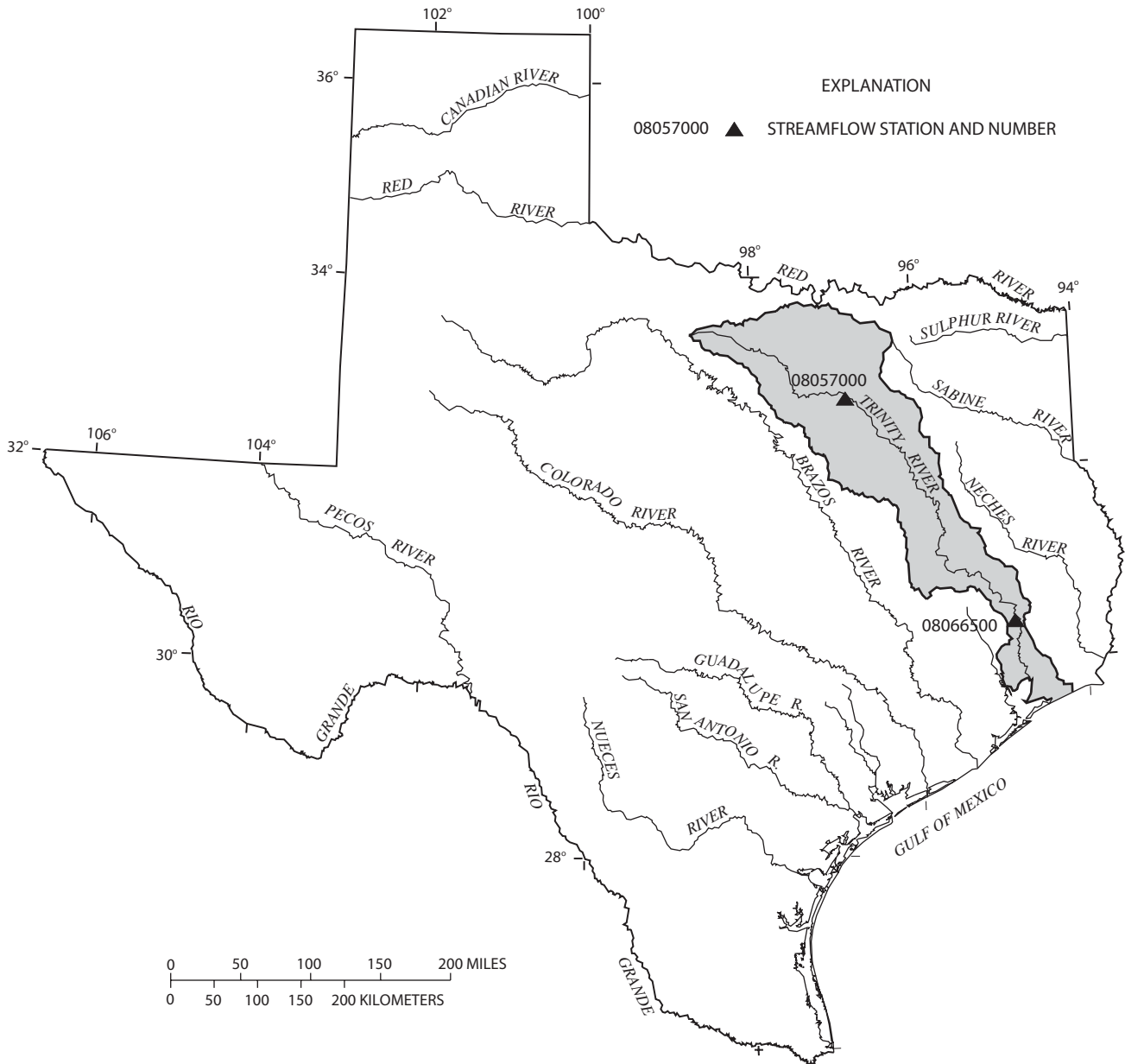


Figure 1. Area of Texas covered by volume 2 (shaded) and location of selected streamflow stations in volume 2.

WATER RESOURCES DATA—TEXAS, 2003

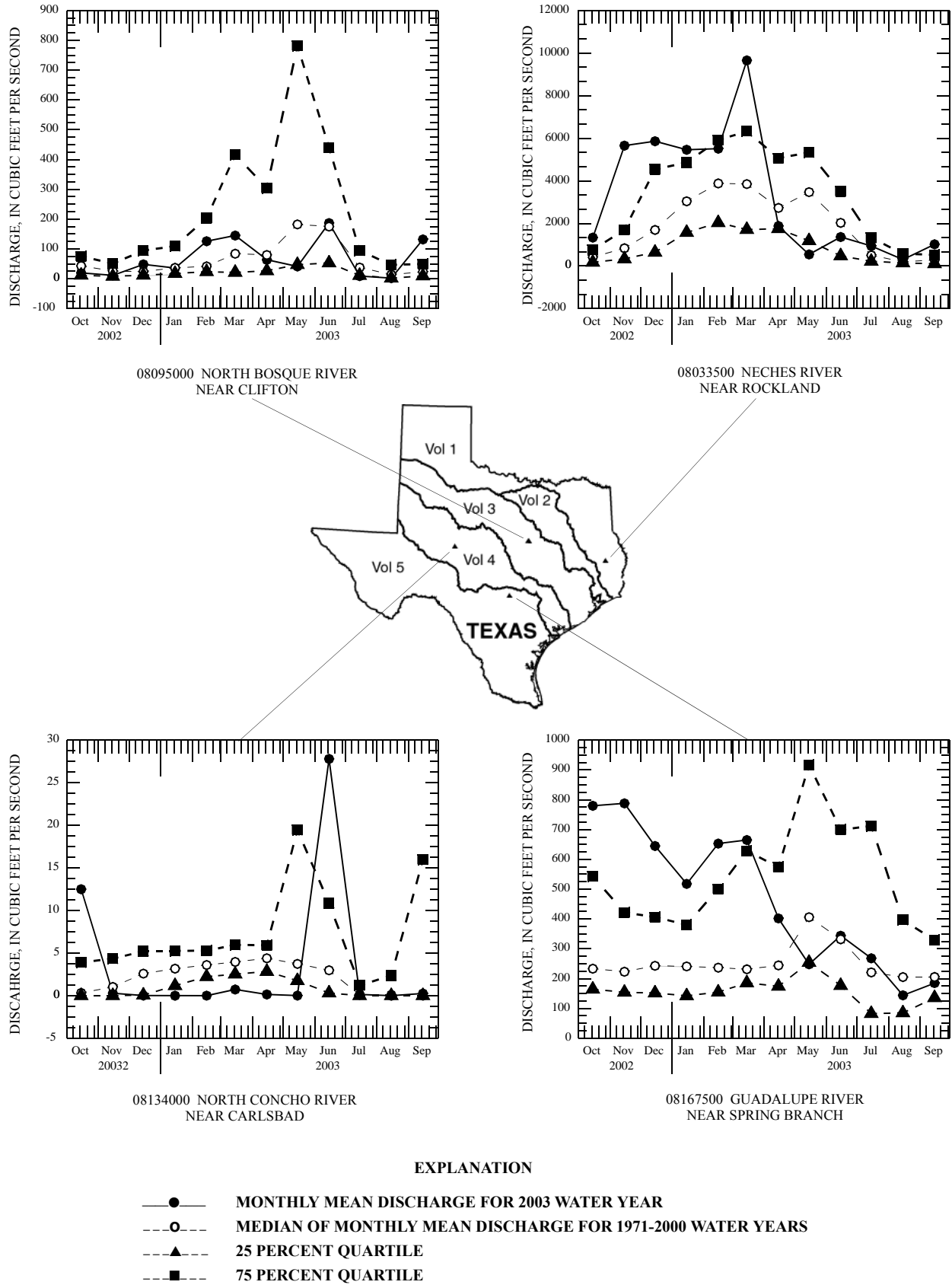


Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2003 water year and median of the monthly mean discharges for 1971-2000 water years.

months of October, November, December, January, March, and September, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during May. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the North Bosque River near Clifton was 67.6 ft³/s for the 2003 water year, or 112 percent of 60.6 ft³/s for the reference period 1971-2000. The 2003 water year monthly mean discharges for the North Bosque River near Clifton were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the month of September, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during the months of May and July. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the North Concho River near Carlsbad was 3.48 ft³/s for the 2003 water year, or 170 percent of 2.05 ft³/s for the reference period 1971-2000. The 2003 water year monthly mean discharges for the North Concho River near Carlsbad were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of October and June, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during the months of January, February, March, April, and May. Monthly mean discharges for other months were within the normal range.

Annual mean streamflow for the Guadalupe River near Spring Branch was 460 ft³/s for the 2003 water year or 176 percent of 267 ft³/s for the reference period 1971-2000. The 2003 water year monthly mean discharges for the Guadalupe River near Spring Branch were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of October, November, December, January, February, and March, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during May. Monthly mean discharges for other months were within the normal range.

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 93 percent of capacity from the end of September 2002 to the end of September 2003. Records from these reservoirs indicate that storage increased in 8 and decreased in 6 during the water year.

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 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.

Table 1. Streamflow at two selected stations

Station no. and name	Discharge during 2003 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
<u>Trinity River Basin</u>						
08057000 Trinity River at Dallas, TX	27,200	441	1,277	111,000	10	1,818 (1931-2003)
08066500 Trinity River at Romayor, TX	78,100	895	9,113	122,000	104	7,882 (1924-2003)

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, 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 composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. 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 these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (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 may be accessed from <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

The USGS National Water-Quality Assessment (NAWQA) Program 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; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 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 is 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 water-resources managers to use in making decisions 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. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables,

then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, 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.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

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

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of

recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station 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 term indicates the time period for which records have been published 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (<http://water.usgs.gov/nwis/nwis>). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-

related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is expressed in cubic feet per second per square mile (line headed CF5M); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

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

indicated in the manuscript. 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 heading. When the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the

maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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 equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

Inches (INCHES) indicate 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 table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow 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 often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a 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. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e—Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

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

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to the nearest tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

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, values 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 Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

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

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

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report 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 *continuous-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 continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. 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.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating classifications for continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤ ±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤ ±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤ ±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤ ±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤ ±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

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 is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRIs are listed in this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

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 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 section.

During periods of rapidly changing flow or rapidly changing concentration, samples may be 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 are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, 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

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information 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 information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

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

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

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (<http://waterdata.usgs.gov/nwis>). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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 Code
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
V	Analyte was detected in both the environmental sample and the associated blanks
M	Presence of material verified but not quantified

Printed Output	Value-Qualifier Code
b	Value was extrapolated below
c	See laboratory comment
d	Diluted sample: method hi range exceeded
e	See field comment
i	Result may be affected by interference
k	Counts outside the acceptable range
m	Highly var comp using method, ? prec
n	Below the NVD
o	Result determined by alternate method
p	Value reported is preferred
q	Insufficient sample received
r	Value verified by rerun, same method
t	Below the long-term MDL
v	Analyte detected in laboratory blank
@	Holding time exceeded
+	Improper preservation

Printed Output	Null Value-Qualifier Code
e	Required equipment not functional or available
i	Required sample type not received
l	Analysis discarded: lab QC failure
m	Results sent by separate memo
q	Sample discarded: holding time exceeded
r	Sample ruined in preparation
u	Unable to determine - matrix interference

Dissolved Trace-Element Concentrations

***NOTE:**--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/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 nan-

ograms per liter (ng/L). Data above the $\mu\text{g/L}$ 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 Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (217-333-7873).

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

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 office 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. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in 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. Many types of blank samples are possible; each is 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 a 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 sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be 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. Many types of replicate samples are 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:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are 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, each subsample 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 the 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 from <http://water.usgs.gov>.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions

of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

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 a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

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

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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. (See also “Biomass” and “Dry weight”)

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

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is 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 collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

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

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to con-

sist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. 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 mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (mm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/ cm^2) or biovolume per square centimeter (mm^3/cm^2). (See also "Phytoplankton" and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (mm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159....

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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. [See also "Biochemical oxygen demand (BOD)"]

Clostridium perfringens (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, $[(\text{ft}^3/\text{s})/\text{d}]$) 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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(\text{ft}^3/\text{s})/\text{mi}^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data

values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

Diatoms (*Bacillariophyta*) are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or flow, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids

concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO₃) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, 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. (See also “Ash mass,” “Biomass,” and “Wet mass”)

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also “Substrate embeddedness class”)

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli (*E. coli*) are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also “Phytoplankton”)

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. 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 the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. 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 plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also “Phytoplankton”)

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term “stage,” although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating “moss” in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (mm³/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter (mm³/cm²). (See also “Phytoplankton” and “Periphyton”)

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site:
<http://www.co-ops.nos.noaa.gov/tideglos.html>

Hilsenhoff’s Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See “Datum”)

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also “Annual runoff”)

Instantaneous discharge is the discharge at a particular instant of time. (See also “Discharge”)

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term ‘nondetection value’ (NDV).

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_0 e^{-\lambda L},$$

where I_0 is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA Web site:*
<http://www.co-ops.nos.noaa.gov/tideglos.html>

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also “Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also “Discharge”)

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum

Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also “Datum”)

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

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.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

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

Micrograms per gram (UG/G, 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 kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, $\mu\text{S}/\text{cm}$) 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 water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

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.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or volatile mass of a 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. (See also "Ash mass," "Biomass," and "Dry mass")

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.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are

important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedi-graph) 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, as 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
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series

of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or percent of total 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, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

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

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are 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 commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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.

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.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

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 (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines 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 with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines 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. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453.

Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (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. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

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. Sodium

hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 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.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as 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 suspended water-sediment sample that is retained on a 0.45-micrometer 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 directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units

of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. 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 suspended-sediment discharge or concentration. (See also "Sediment")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Synoptic studies are 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.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions 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 resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (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, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 at least 95 percent of the constituent in the sample.)

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-shaped bacteria that 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 plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also “Bacteria”)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other

than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

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

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume”)

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Bedload,” “Bedload discharge,” “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Total sediment load or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-sediment load,” and “Total load”)

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross sec-

tion, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

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 human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are 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 toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS 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, 2003, is called the “2003 water year.”

Watershed (See “Drainage basin”)

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.

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals titled the “Techniques of Water-Resources Investigations” that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals 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. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at <http://water.usgs.gov/pubs/twri/>. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal

Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone “1-888-ASK-USGS” for current prices, and refer to the title, book number, section number, chapter number, and mention the “U.S. Geological Survey Techniques of Water-Resources Investigations.” Other products can be viewed online at <http://www.usgs.gov/sales.html>, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the “U.S. Geological Survey” is required.

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, chap. D1. 1975. 65 p.
- 1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

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, chap. D1. 1974. 116 p.
- 2–D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

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 book 2, chap. E1. 1971. 126 p.
- 2–E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

- 2–F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

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, chap. A1. 1967. 30 p.
- 3–A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
- 3–A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 p.

- 3–A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.
- 3–A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
- 3–A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
- 3–A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
- 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, chap. A9. 1989. 27 p.
- 3–A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
- 3–A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.
- 3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
- 3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
- 3–A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.
- 3–A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.
- 3–A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.
- 3–A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
- 3–A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.
- 3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
- 3–A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.
- 3–A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

- 3–B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
- 3–B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
- 3–B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
- 3–B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

- 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, chap. B4. 1993. 8 p.
- 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, chap. B5. 1987. 15 p.
- 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, chap. B6. 1987. 28 p.
- 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, chap. B7. 1992. 190 p.
- 3–B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

- 3–C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
- 3–C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

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, chap. A1. 1968. 39 p.
- 4–A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.
- 4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

Section B. Surface Water

- 4–B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
- 4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.
- 4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

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, chap. D1. 1970. 17 p.

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, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

- 5–A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
- 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, chap. A3. 1987. 80 p.
- 5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greenson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
- 5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
- 5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

- 5–C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

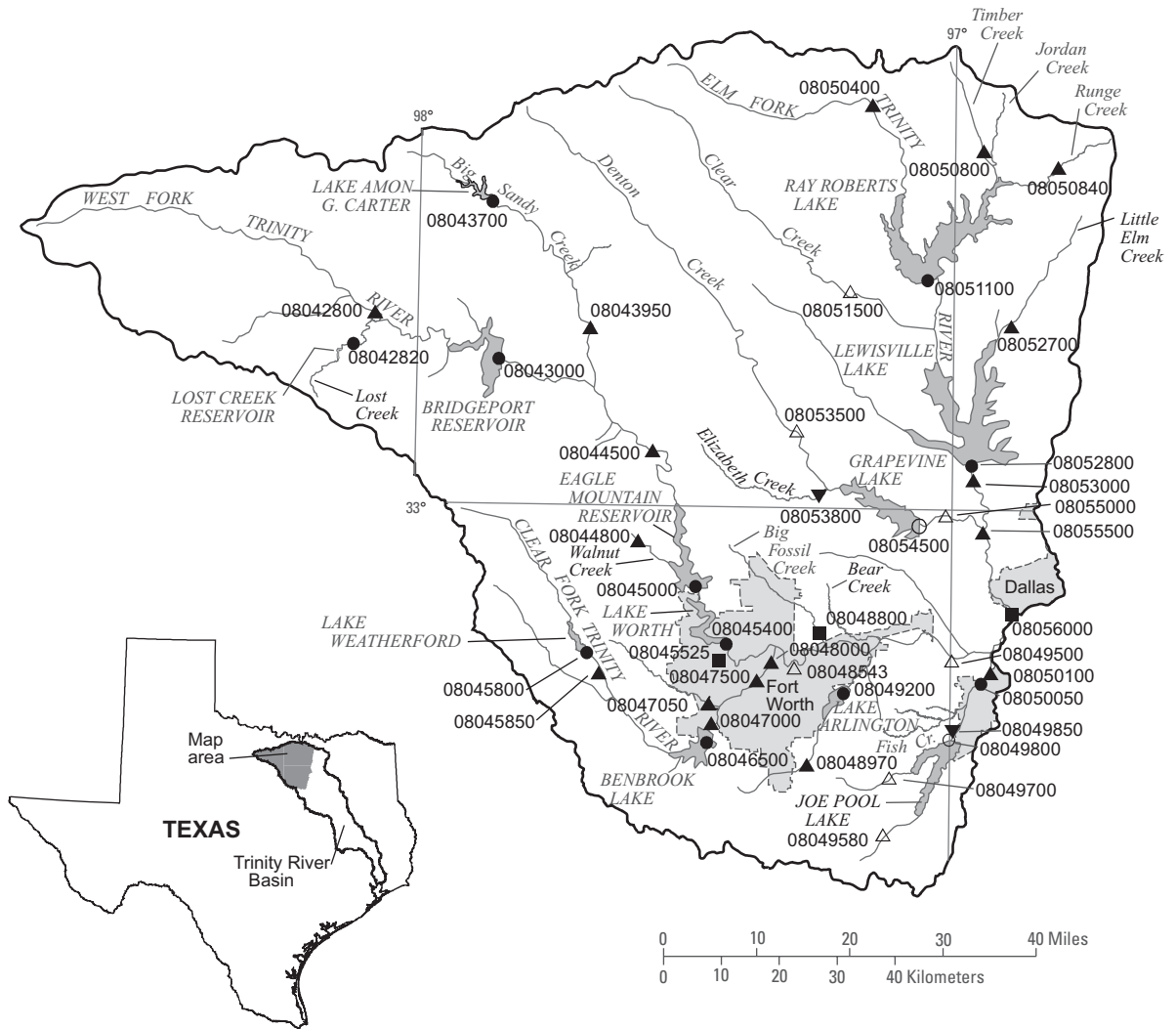
- 6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.
- 6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.
- 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, chap. A3. 1993. 136 p.
- 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, chap. A4. 1992. 108 p.
- 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, chap. A5. 1993. 243 p.
- 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: USGS–TWRI book 6, chap. A6. 1996. 125 p.
- 6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

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

- P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.
- 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, chap. C2. 1978. 90 p.
- 7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.
- 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, chap. A1. 1968. 23 p.
- 8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.
- 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, chap. B2. 1968. 15 p.
- 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, chap. A1. 1998. 47 p.
- 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, chap. A2. 1998. 94 p.
- 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, chap. A3. 1998. 75 p.
- 9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 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, chap. A5. 1999. 149 p.
- 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, chap. A6. 1998. Various 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, chap. A7. 1997 and 1999. Various paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



EXPLANATION

- 08042800 ▲ Surface-water continuous station and number
- 08048543 △ Surface-water continuous/water-quality station and number
- 08045000 ● Reservoir station and number
- 08054500 ○ Reservoir/water-quality station and number
- 08053800 ▼ Water-quality station and number
- 08048800 ■ Surface-water partial record/stage only station and number

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	34
08042820	Lost Creek Reservoir near Jacksboro, TX	36
08043000	Bridgeport Reservoir above Bridgeport, TX	38
08043700	Lake Amon G. Carter near Bowie, TX	40
08043950	Big Sandy Creek near Chico, TX	42
08044500	West Fork Trinity River near Boyd, TX	44
08044800	Walnut Creek at Reno, TX	46
08045000	Eagle Mountain Reservoir above Fort Worth, TX	48
08045400	Lake Worth above Fort Worth, TX	50
08045525	Farmers Branch at Westworth Village, TX	52
08045800	Lake Weatherford near Weatherford, TX	54
08045850	Clear Fork Trinity River near Weatherford, TX	56
08046500	Benbrook Lake near Benbrook, TX	58
08047000	Clear Fork Trinity River near Benbrook, TX	60
08047050	Mary's Creek at Benbrook, TX	62
08047500	Clear Fork Trinity River at Fort Worth, TX	64
08048000	West Fork Trinity River at Fort Worth, TX	66
08048543	West Fork Trinity River at Beach Street, Fort Worth, TX	68
08048800	Big Fossil Creek at Haltom City, TX	331
08048970	Village Creek at Everman, TX	70
08049200	Lake Arlington at Arlington, TX	72
08049500	West Fork Trinity River at Grand Prairie, TX	76
08049580	Mountain Creek near Venus, TX	88
08049700	Walnut Creek near Mansfield, TX	92
08049800	Joe Pool Lake near Duncanville, TX	96
08049850	Mountain Creek above Duncanville, TX	106
08050050	Mountain Creek Lake near Grand Prairie, TX	108
08050100	Mountain Creek at Grand Prairie, TX	110
08050400	Elm Fork Trinity River at Gainesville, TX	112
08050800	Timber Creek near Collinsville, TX	114
08050840	Range Creek near Collinsville, TX	116
08051100	Ray Roberts Lake near Pilot Point, TX	118
08051500	Clear Creek near Sanger, TX	120
08052700	Little Elm Creek near Aubrey, TX	124
08052800	Lewisville Lake near Lewisville, TX	126
08053000	Elm Fork Trinity River near Lewisville, TX	128
08053500	Denton Creek near Justin, TX	130
08053800	Elizabeth Creek at State Highway 114 near Roanoke, TX	134
08054500	Grapevine Lake near Grapevine, TX	136
08055000	Denton Creek near Grapevine, TX	146
08055500	Elm Fork Trinity River near Carrollton, TX	150
08056000	Elm Fork Trinity River at Frasier Dam, Dallas, TX	152

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, 4.0 mi downstream from Big Cleveland Creek, 7.0 mi upstream from Carroll Creek, 7.0 mi northeast of Jacksboro and at mile 660.

DRAINAGE AREA.--683 mi².

PERIOD OF RECORD.--Mar. 1956 to current year.

Water-quality records.--Sediment data: Oct. 1976 to Sept. 1978.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 869.28 ft above NGVD of 1929 (from Texas Department of Transportation). Sept. 1960 to May 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 regulated. Flow affected at times by discharge from the floodwater-retarding structures controlling runoff from 70.9 mi² in the West Fork Trinity River drainage basin upstream from this station. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1957-73), 104 ft³/s (75,350 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1956-73).--Maximum discharge, 35,100 ft³/s, Apr. 27, 1957, gage height, 32.10 ft; no flow at times.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	16	1.0	1.2	0.00	5.6	0.01	0.05	1.3	6.2	0.00	0.00
2	0.00	14	0.98	0.65	0.00	2.0	0.01	0.01	1.0	2.7	0.00	22
3	0.00	14	1.9	0.50	0.00	1.1	0.00	0.01	0.83	1.3	0.00	20
4	0.00	36	5.0	0.44	0.00	0.80	0.00	0.00	0.82	0.94	0.00	13
5	0.00	42	5.7	0.20	0.00	0.68	0.00	0.00	418	0.76	0.00	7.0
6	0.00	39	3.9	2.3	0.00	0.60	0.00	0.00	707	0.61	0.00	3.2
7	0.00	37	1.9	2.4	0.00	0.44	0.00	0.00	230	0.58	0.00	1.9
8	0.00	27	1.1	1.8	0.00	0.16	0.00	0.00	236	0.58	0.00	1.2
9	0.00	16	11	1.5	0.00	0.05	0.00	0.00	361	0.41	0.00	1.1
10	0.00	8.6	29	1.1	0.00	0.01	0.00	0.00	195	0.20	0.00	0.96
11	0.00	6.3	30	0.82	0.00	0.01	0.00	0.00	699	0.10	0.00	287
12	0.00	4.5	14	0.62	0.00	0.01	0.00	0.00	1450	0.04	0.00	355
13	0.00	4.0	11	0.52	0.00	0.01	0.00	0.00	1620	0.02	0.00	93
14	0.00	3.5	4.9	0.50	0.00	0.01	0.00	0.00	2120	0.01	0.00	46
15	0.00	2.5	2.3	0.49	0.00	0.00	0.00	0.00	1570	0.00	0.00	20
16	0.00	2.1	1.3	0.38	0.00	0.00	0.00	0.00	1300	0.00	0.00	9.0
17	0.00	1.9	0.98	0.18	0.00	0.00	0.00	0.00	932	0.00	0.00	4.5
18	0.10	1.8	0.82	0.09	0.00	0.35	0.00	0.00	255	0.00	0.00	2.7
19	1.0	1.9	0.64	0.05	0.00	1.0	0.00	0.00	46	0.00	0.00	1.9
20	0.70	2.1	0.46	0.04	0.00	1.2	0.00	0.00	16	0.00	0.00	1.3
21	25	2.2	0.43	0.04	0.00	1.2	0.00	0.05	6.8	0.00	0.00	1.3
22	36	2.2	0.46	0.04	0.04	1.1	0.00	0.05	3.3	0.00	0.00	1.3
23	38	2.0	0.55	0.03	0.01	1.1	0.00	0.04	1.7	0.00	0.00	1.3
24	30	1.9	0.22	0.01	0.01	1.1	0.00	1.6	1.1	0.00	0.00	1.2
25	18	1.6	0.11	0.01	0.05	1.1	0.00	130	0.82	0.00	0.00	0.94
26	44	1.4	0.06	0.01	0.06	0.83	0.00	162	1.3	0.00	0.00	0.80
27	169	1.3	0.06	0.01	0.89	0.45	0.00	132	85	0.00	0.00	0.64
28	143	1.2	0.10	0.01	2.9	0.21	0.00	49	203	0.00	0.00	0.55
29	86	1.2	0.16	0.01	---	0.09	0.07	13	98	0.00	0.00	0.45
30	53	1.1	0.74	0.01	---	0.04	1.1	4.6	21	0.00	0.00	0.28
31	27	---	4.9	0.01	---	0.02	---	2.3	---	0.00	0.00	---
TOTAL	670.80	296.3	135.67	15.97	3.96	21.27	1.19	494.71	12580.97	14.45	0.00	899.52
MEAN	21.6	9.88	4.38	0.52	0.14	0.69	0.040	16.0	419	0.47	0.000	30.0
MAX	169	42	30	2.4	2.9	5.6	1.1	162	2120	6.2	0.00	355
MIN	0.00	1.1	0.06	0.01	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00
AC-FT	1330	588	269	32	7.9	42	2.4	981	24950	29	0.00	1780

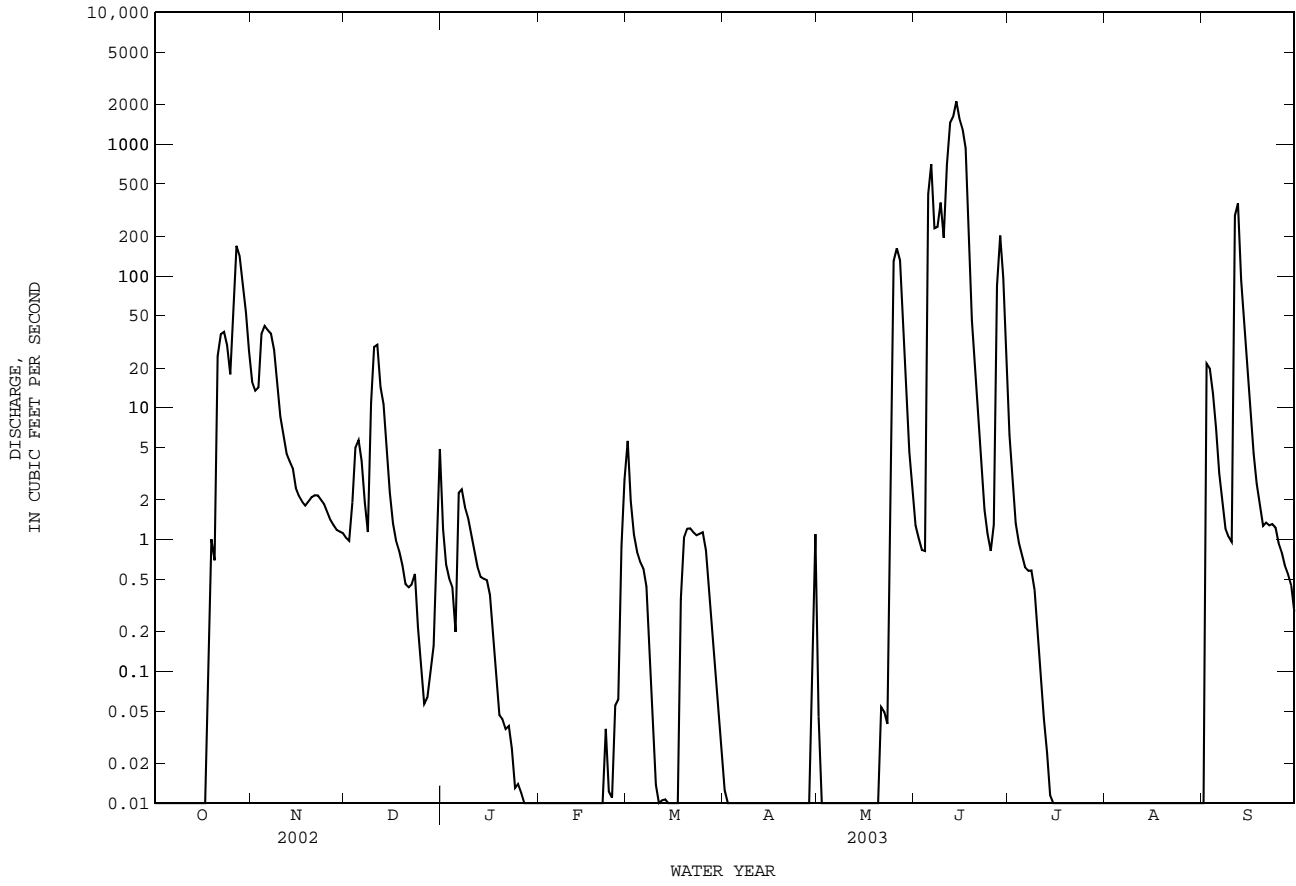
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003z, BY WATER YEAR (WY)

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2003z		
MEAN	133	40.7	58.1	31.9	100	123	121	340	246	25.6	15.7	42.6																					
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																					
(WY)	1978	1978	1978	1978	1978	1978	1980	1984	1984	1978	1980	1982																					

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003z	
ANNUAL TOTAL	3642.51		15134.81			
ANNUAL MEAN	9.98		41.5		107	
HIGHEST ANNUAL MEAN					468	
LOWEST ANNUAL MEAN					0.072	
HIGHEST DAILY MEAN	249	Apr 15	2120	Jun 14	29100	May 17 1989
LOWEST DAILY MEAN	0.00	Jan 17	0.00	Oct 1	0.00	Apr 6 1974
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 27	0.00	Oct 1	0.00	Apr 12 1974
MAXIMUM PEAK FLOW			2260		33300	
MAXIMUM PEAK STAGE			18.35		31.52	
ANNUAL RUNOFF (AC-FT)	7220		30020		77160	
10 PERCENT EXCEEDS	28		36		135	
50 PERCENT EXCEEDS	0.61		0.20		0.88	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

z Period of regulated streamflow.

08042800 West Fork Trinity River near Jacksboro, TX--Continued



TRINITY RIVER BASIN

08042820 Lost Creek Reservoir near Jacksboro, TX

LOCATION.--Lat 33°14'36", long 98°07'11", Jack County, Hydrologic Unit 12030101, located on north streamward side of dam on Lost Creek 3.0 mi northeast of Jacksboro.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--Mar. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a zoned earth and rock fill embankment 2,245 ft long. The dam was completed and storage began in early to mid 1990. A 60-inch diameter reinforced concrete tower serves as the principal spillway. The emergency spillway is an earth-cut side-channel spillway. The dam was built by the city of Jacksboro to impound water for municipal and recreational use. There was no known diversion from the lake during the current water year. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam.....	1028.0
Crest of spillway.....	1009.0
Crest of emergency spillway.....	1016.0
Lowest gated outlet (invert).....	947.0

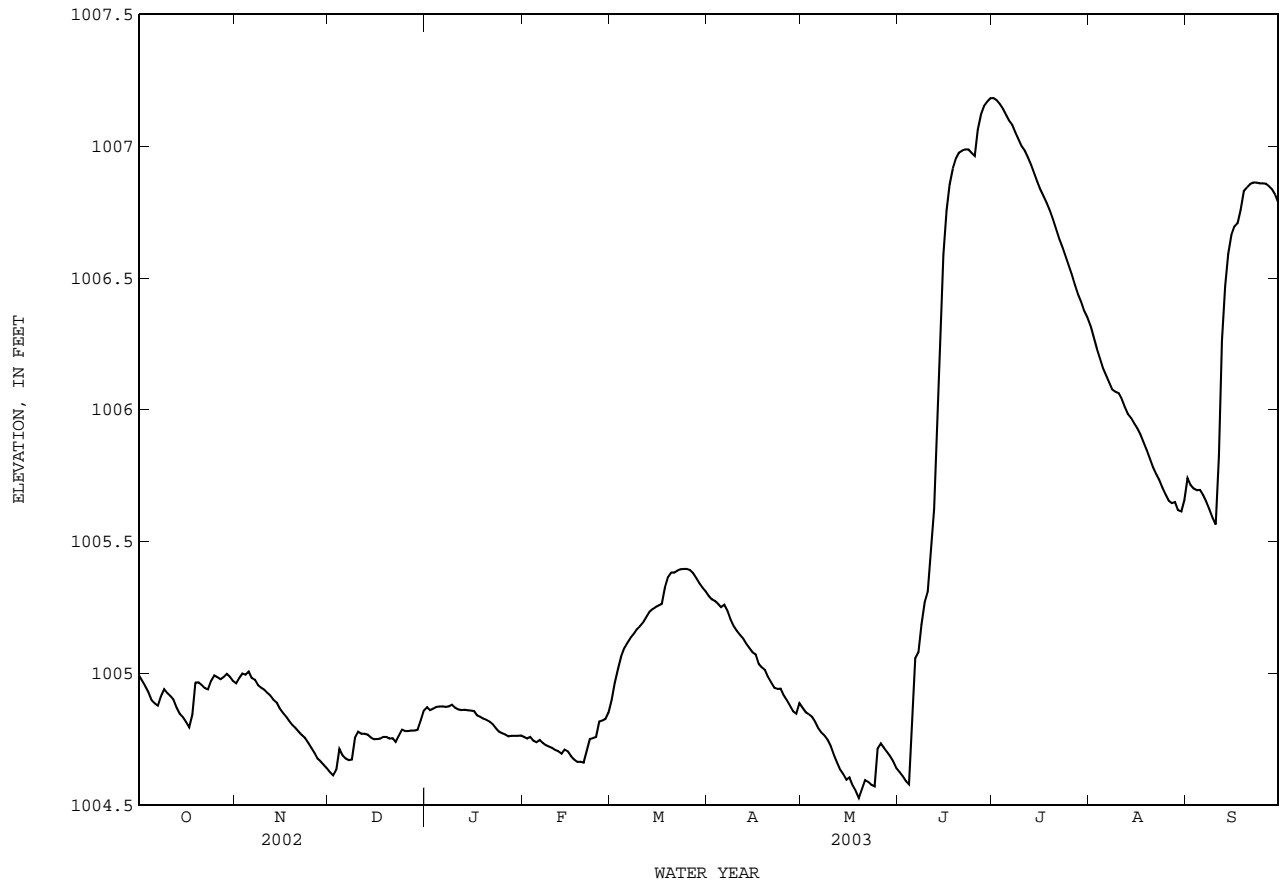
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 13,440 acre-ft, Feb. 16, 2001, elevation, 1012.95 ft; minimum contents, 8,680 acre-ft, Oct. 20, 2000, elevation, 1000.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,007.20 ft, June 30, July 1; minimum elevation, 1,004.49 ft, May 20.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1004.99	1004.96	1004.62	1004.87	1004.76	1004.90	1005.29	1004.87	1004.63	1007.18	1006.32	1005.74
2	1004.97	1004.98	1004.61	1004.86	1004.75	1004.96	1005.28	1004.85	1004.61	1007.17	1006.28	1005.72
3	1004.95	1005.00	1004.63	1004.87	1004.76	1005.02	1005.27	1004.85	1004.59	1007.16	1006.23	1005.70
4	1004.93	1005.00	1004.71	1004.87	1004.74	1005.06	1005.26	1004.84	1004.58	1007.14	1006.20	1005.70
5	1004.90	1005.01	1004.69	1004.87	1004.74	1005.10	1005.25	1004.82	1004.86	1007.12	1006.16	1005.70
6	1004.89	1004.98	1004.68	1004.88	1004.75	1005.12	1005.26	1004.79	1005.06	1007.10	1006.13	1005.68
7	1004.88	1004.98	1004.67	1004.87	1004.74	1005.13	1005.24	1004.78	1005.08	1007.08	1006.10	1005.65
8	1004.91	1004.96	1004.67	1004.88	1004.73	1005.15	1005.21	1004.76	1005.18	1007.05	1006.08	1005.62
9	1004.94	1004.95	1004.76	1004.88	1004.72	1005.17	1005.18	1004.75	1005.27	1007.03	1006.07	1005.59
10	1004.93	1004.94	1004.78	1004.87	1004.72	1005.18	1005.16	1004.73	1005.31	1007.00	1006.06	1005.57
11	1004.91	1004.93	1004.77	1004.86	1004.71	1005.19	1005.15	1004.69	1005.46	1006.98	1006.04	1005.82
12	1004.90	1004.91	1004.77	1004.86	1004.70	1005.21	1005.13	1004.66	1005.62	1006.96	1006.01	1006.26
13	1004.87	1004.90	1004.77	1004.86	1004.70	1005.23	1005.11	1004.63	1005.89	1006.93	1005.98	1006.47
14	1004.85	1004.89	1004.76	1004.86	1004.71	1005.24	1005.10	1004.62	1006.33	1006.90	1005.97	1006.59
15	1004.83	1004.87	1004.75	1004.86	1004.70	1005.25	1005.08	1004.60	1006.59	1006.87	1005.95	1006.66
16	1004.82	1004.85	1004.75	1004.86	1004.69	1005.26	1005.07	1004.61	1006.76	1006.84	1005.93	1006.70
17	1004.79	1004.84	1004.75	1004.84	1004.67	1005.26	1005.04	1004.58	1006.86	1006.81	1005.90	1006.71
18	1004.84	1004.82	1004.76	1004.84	1004.66	1005.32	1005.02	1004.55	1006.91	1006.78	1005.88	1006.76
19	1004.97	1004.80	1004.76	1004.83	1004.66	1005.37	1005.01	1004.53	1006.95	1006.76	1005.85	1006.83
20	1004.97	1004.79	1004.75	1004.82	1004.66	1005.38	1004.99	1004.56	1006.98	1006.72	1005.81	1006.84
21	1004.96	1004.78	1004.75	1004.82	1004.70	1005.38	1004.97	1004.60	1006.98	1006.69	1005.78	1006.86
22	1004.94	1004.77	1004.74	1004.81	1004.75	1005.39	1004.95	1004.59	1006.99	1006.65	1005.76	1006.86
23	1004.94	1004.75	1004.76	1004.79	1004.75	1005.39	1004.94	1004.58	1006.99	1006.62	1005.73	1006.86
24	1004.97	1004.74	1004.79	1004.78	1004.76	1005.40	1004.94	1004.57	1006.98	1006.58	1005.71	1006.86
25	1004.99	1004.72	1004.78	1004.77	1004.82	1005.40	1004.92	1004.72	1006.96	1006.55	1005.68	1006.86
26	1004.99	1004.70	1004.78	1004.77	1004.82	1005.39	1004.90	1004.73	1007.06	1006.51	1005.65	1006.86
27	1004.98	1004.68	1004.78	1004.76	1004.83	1005.38	1004.88	1004.72	1007.12	1006.48	1005.65	1006.85
28	1004.99	1004.67	1004.78	1004.76	1004.85	1005.36	1004.86	1004.70	1007.15	1006.44	1005.65	1006.84
29	1005.00	1004.65	1004.79	1004.76	---	1005.34	1004.85	1004.68	1007.17	1006.41	1005.62	1006.82
30	1004.99	1004.64	1004.82	1004.76	---	1005.33	1004.89	1004.67	1007.18	1006.38	1005.61	1006.79
31	1004.97	---	1004.86	1004.76	---	1005.31	---	1004.64	---	1006.35	1005.66	---
MEAN	1004.93	1004.85	1004.74	1004.83	1004.73	1005.24	1005.07	1004.69	1006.14	1006.81	1005.92	1006.36
MAX	1005.00	1005.01	1004.86	1004.88	1004.85	1005.40	1005.29	1004.87	1007.18	1007.18	1006.32	1006.86
MIN	1004.79	1004.64	1004.61	1004.76	1004.66	1004.90	1004.85	1004.53	1004.58	1006.35	1005.61	1005.57
CAL YR 2002	MAX 1006.88	MIN 1004.61										
WTR YR 2003	MAX 1007.18	MIN 1004.53										

08042820 Lost Creek Reservoir near Jacksboro, TX--Continued



TRINITY RIVER BASIN

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, 13.0 mi upstream from Big Sandy Creek and at mile 626.

DRAINAGE AREA.--1,111 mi².

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 Sept. 1984.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Jan. 12, 1988, nonrecording gages at various sites in vicinity of present gage at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records fair. 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 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. The dam is owned by the Tarrant Regional Water District. For elevations of outlet works, see table below. Capacity tables are based on surveys made in 1956 and 1968. Conservation pool storage is 374,836 acre-ft. 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.....	836.9
Sill of gates.....	820.0
Lowest value outlet (invert).....	751.4

COOPERATION.--Capacity table No. 5-C dated Oct. 1, 1988, was provided by Tarrant Regional Water District.

EXTREMES FOR PERIOD OF RECORD.--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.

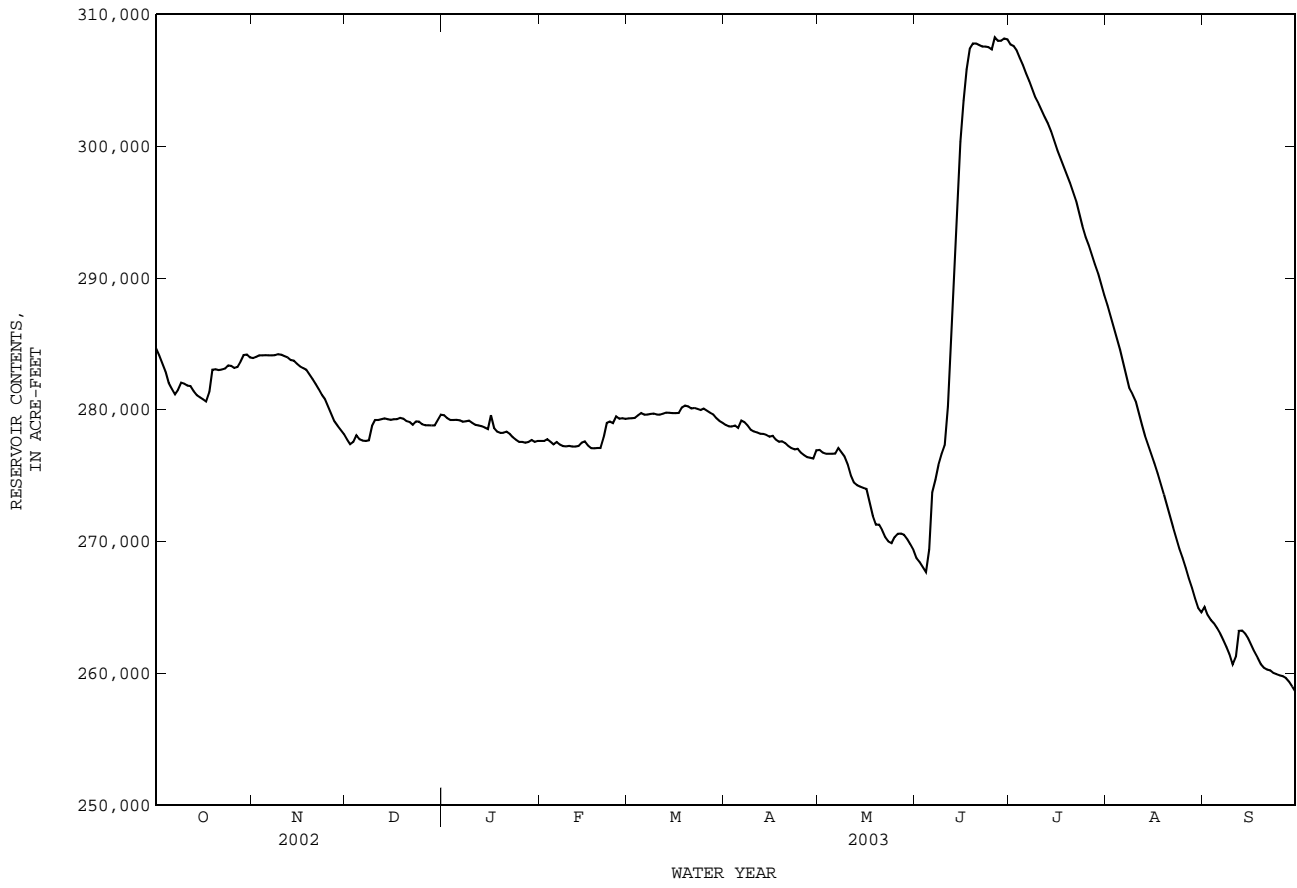
EXTREMES FOR CURRENT YEAR.--Maximum contents, 308,600 acre-ft, June 26, elevation, 830.57 ft; minimum contents, 258,500 acre-ft, Sept. 29, 30, elevation, 825.95 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284700	283900	277800	279600	277600	279400	278900	277000	268700	307700	287900	265000
2	284100	284000	277400	279400	277600	279400	278700	276800	268400	307600	287100	264400
3	283500	284100	277600	279200	277800	279400	278700	276700	268100	307300	286300	264100
4	282900	284100	278100	279200	277600	279600	278800	276700	267700	306700	285400	263800
5	282000	284200	277800	279200	277400	279700	278600	276700	269400	306200	284600	263400
6	281600	284100	277700	279200	277500	279600	279200	276700	273700	305500	283600	263000
7	281200	284100	277600	279100	277400	279600	279100	277100	274700	304900	282600	262500
8	281500	284100	277700	279100	277200	279700	278800	276800	275800	304300	281600	262000
9	282100	284200	278800	279200	277200	279700	278500	276400	276700	303700	281200	261500
10	282000	284200	279200	279000	277300	279600	278300	275900	277300	303200	280700	260700
11	281800	284100	279200	278900	277200	279600	278300	275000	280300	302700	279800	261300
12	281800	284000	279300	278800	277200	279700	278200	274500	286100	302200	278900	263200
13	281400	283800	279300	278800	277300	279800	278200	274300	291500	301700	278000	263300
14	281100	283700	279300	278700	277500	279800	278100	274200	296200	301100	277300	263000
15	281000	283500	279200	278500	277600	279800	278000	274100	300300	300400	276600	262600
16	280800	283300	279300	279600	277300	279700	278000	274000	303500	299700	275900	262100
17	280600	283200	279300	278600	277100	279800	277700	273000	305800	299100	275200	261600
18	281300	283000	279400	278300	277100	280200	277600	271900	307400	298500	274400	261200
19	283000	282700	279300	278200	277100	280300	277600	271300	307800	297900	273600	260700
20	283100	282300	279100	278300	277100	280300	277500	271300	307800	297200	272700	260400
21	283000	281900	279100	278300	277900	280100	277300	270900	307700	296600	271900	260300
22	283100	281600	278900	278200	279000	280100	277100	270300	307600	295800	271100	260200
23	283100	281100	279100	277900	279100	280100	277000	270000	307600	294900	270300	260000
24	283400	280800	279100	277700	279000	280000	277000	269900	307500	293900	269500	259900
25	283300	280200	278900	277600	279500	280100	276800	270300	307400	293100	268800	259800
26	283200	279700	278800	277600	279300	279900	276600	270600	308300	292500	268000	259800
27	283200	279100	278800	277500	279400	279800	276400	270600	308000	291800	267200	259700
28	283600	278800	278800	277600	279300	279700	276400	270500	308000	291000	266500	259400
29	284200	278500	278800	277700	---	279400	276300	270200	308200	290300	265700	259000
30	284200	278200	279200	277600	---	279200	276900	269800	308100	289500	265000	258600
31	284000	---	279600	277600	---	279000	---	269400	---	288700	264600	---
MEAN	282600	282500	278800	278500	277800	279700	277800	273300	292900	299200	275900	261600
MAX	284700	284200	279600	279600	279500	280300	279200	277100	308300	307700	287900	265000
MIN	280600	278200	277400	277500	277100	279000	276300	269400	267700	288700	264600	258600
(+)	828.36	827.82	827.96	827.77	827.93	827.90	827.70	827.00	830.53	828.79	826.54	825.96
(@)	-1200	-5800	+1400	-2000	+1700	-300	-2100	-7500	+38700	-19400	-24100	-6000
CAL YR 2002	MAX 313400	MIN 277400	(@) -9900									
WTR YR 2003	MAX 308300	MIN 258600	(@) -26600									

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

08043000 Bridgeport Reservoir above Bridgeport, TX--Continued



TRINITY RIVER BASIN

08043700 Lake Amon G. Carter near Bowie, TX

LOCATION.--Lat 33°28'08", long 97°51'56", Montague County, Hydrologic Unit 12030101, on Big Sandy Creek, in pumping station 7.1 mi south of Bowie.

DRAINAGE AREA.--100.0 mi².

PERIOD OF RECORD.--Mar. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. In 1954 the original lake was formed by an earthfill dam 2,000 ft across Big Sandy Creek for the city of Bowie. In 1985 a new reservoir dam was completed 1.0 mi below the old dam. The old and new portions of the reservoir are connected by a corrugated metal pipe arch culvert (boat pass breach) with an invert elevation of 908 ft NGVD of 1929. The reservoirs are also connected by a 12 in siphon pipe through the old dam. Both reservoirs employ the emergency spillway on the old reservoir to pass flood water above elevation of 927 ft NGVD of 1929. The principal spillway tower has a 24 ft uncontrolled weir at 920 ft NGVD of 1929. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of new dam.....	945.0
Crest of spillway.....	927.0
Uncontrolled weir.....	920.0
Pipe arch culvert (boat pass breach).....	908.0

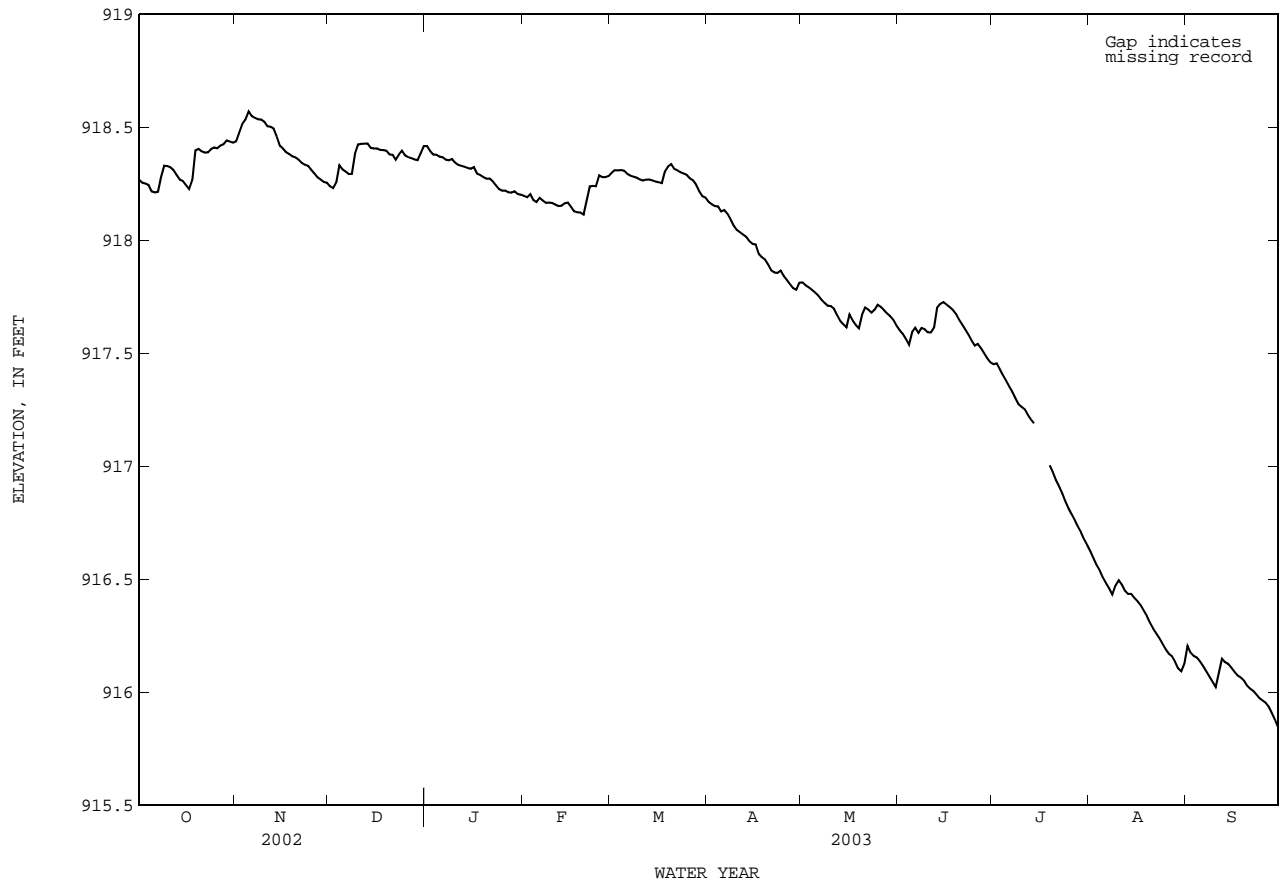
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 38,060 acre-ft, Mar. 1, 2001, elevation, 924.46 ft; minimum contents, 14,180 acre-ft, Oct. 13, 2000, elevation, 910.18 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 918.60 ft, Nov. 5; minimum elevation, 915.83 ft, Sept. 30.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	918.27	918.44	918.24	918.42	918.20	918.30	918.17	917.81	917.60	917.45	916.62	916.21
2	918.26	918.48	918.23	918.40	918.19	918.31	918.16	917.80	917.59	917.46	916.59	916.18
3	918.25	918.52	918.26	918.38	918.21	918.31	918.15	917.79	917.56	917.43	916.56	916.16
4	918.25	918.53	918.33	918.38	918.18	918.31	918.15	917.78	917.54	917.40	916.54	916.15
5	918.22	918.57	918.31	918.37	918.17	918.31	918.13	917.77	917.59	917.38	916.51	916.14
6	918.21	918.55	918.30	918.37	918.19	918.29	918.13	917.76	917.61	917.35	916.48	916.11
7	918.22	918.54	918.29	918.36	918.18	918.29	918.12	917.74	917.59	917.33	916.46	916.09
8	918.28	918.54	918.29	918.35	918.17	918.28	918.09	917.72	917.61	917.30	916.43	916.07
9	918.33	918.54	918.38	918.36	918.17	918.28	918.06	917.71	917.61	917.27	916.47	916.05
10	918.33	918.53	918.42	918.34	918.17	918.27	918.05	917.71	917.59	917.26	916.50	916.02
11	918.32	918.51	918.43	918.33	918.16	918.26	918.04	917.70	917.59	917.25	916.48	916.09
12	918.31	918.50	918.43	918.33	918.15	918.27	918.03	917.67	917.61	917.23	916.45	916.15
13	918.29	918.50	918.43	918.33	918.15	918.27	918.02	917.64	917.70	917.21	916.44	916.13
14	918.27	918.46	918.41	918.32	918.16	918.26	918.00	917.63	917.72	917.19	916.44	916.13
15	918.26	918.42	918.41	918.32	918.17	918.26	917.98	917.62	917.73	---	916.42	916.11
16	918.24	918.41	918.41	918.32	918.15	918.26	917.98	917.67	917.72	---	916.40	916.09
17	918.23	918.39	918.40	918.29	918.13	918.25	917.94	917.65	917.71	---	916.38	916.07
18	918.27	918.38	918.40	918.29	918.12	918.30	917.92	917.63	917.69	---	916.36	916.07
19	918.40	918.37	918.40	918.28	918.12	918.33	917.92	917.61	917.67	917.00	916.34	916.05
20	918.40	918.37	918.38	918.27	918.11	918.34	917.89	917.67	917.65	916.97	916.31	916.03
21	918.39	918.36	918.38	918.27	918.18	918.32	917.87	917.70	917.63	916.94	916.28	916.02
22	918.39	918.34	918.36	918.26	918.24	918.31	917.86	917.69	917.60	916.91	916.26	916.01
23	918.39	918.33	918.38	918.24	918.24	918.30	917.86	917.68	917.58	916.88	916.24	915.99
24	918.40	918.33	918.40	918.23	918.24	918.30	917.87	917.69	917.56	916.84	916.22	915.97
25	918.41	918.31	918.38	918.22	918.29	918.29	917.84	917.71	917.53	916.81	916.19	915.96
26	918.41	918.30	918.37	918.22	918.28	918.27	917.82	917.71	917.54	916.79	916.17	915.95
27	918.42	918.28	918.36	918.21	918.28	918.27	917.81	917.69	917.52	916.76	916.16	915.94
28	918.43	918.27	918.36	918.21	918.28	918.25	917.79	917.68	917.50	916.73	916.13	915.91
29	918.44	918.26	918.36	918.22	---	918.22	917.78	917.66	917.48	916.71	916.11	915.88
30	918.44	918.26	918.39	918.20	---	918.20	917.81	917.65	917.46	916.68	916.09	915.84
31	918.43	---	918.42	918.20	---	918.19	---	917.62	---	916.65	916.13	---
MEAN	918.33	918.42	918.36	918.30	918.19	918.28	917.97	917.70	917.60	---	916.36	916.05
MAX	918.44	918.57	918.43	918.42	918.29	918.34	918.17	917.81	917.73	---	916.62	916.21
MIN	918.21	918.26	918.23	918.20	918.11	918.19	917.78	917.61	917.46	---	916.09	915.84
CAL YR 2002	MAX 919.92	MIN 917.16										
WTR YR 2003	MAX 918.57	MIN 915.84										

08043700 Lake Amon G. Carter near Bowie, TX--Continued



TRINITY RIVER BASIN

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 mi².

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 Sept. 1995. Biochemical data: Apr. 1993 to Sept. 1995. Sediment data: Apr. 1993 to Sept. 1995.

REVISED RECORDS.--WSP 1148: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 728.88 ft above NGVD of 1929. 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.--Records poor. Since May 1, 1956, at least 10% of contributing drainage area has been regulated. 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 is also affected at times by discharge from floodwater-retarding structures controlling runoff from a 46.0 mi² area upstream from this station and below Lake Amon G. Carter. No known diversions. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1936-55), 85.6 ft³/s (62,030 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1936-55).--Maximum discharge, 53,000 ft³/s June 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 June 10, 1941, at site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.89	1.2	1.6	e15	6.1	89	8.3	6.1	3.7	5.9	2.3	3.2
2	0.88	2.2	1.6	e10	1.6	60	8.1	4.4	3.0	9.1	1.9	3.4
3	0.89	3.8	2.6	9.2	1.1	33	8.1	3.9	3.1	17	1.7	3.7
4	0.88	6.2	6.8	8.8	4.8	22	8.0	4.3	3.0	7.3	1.8	3.6
5	0.86	4.4	8.6	8.3	6.1	17	7.3	3.1	360	5.1	1.7	3.9
6	1.3	3.9	4.1	7.9	6.9	14	7.7	3.6	161	4.4	1.6	3.8
7	1.1	4.3	2.8	7.3	7.3	13	6.7	3.9	32	4.0	1.6	2.9
8	2.3	3.2	3.3	7.7	7.4	13	5.8	4.4	29	3.4	1.9	2.1
9	7.1	2.7	49	7.9	7.8	11	5.5	3.8	40	3.3	8.8	1.6
10	3.4	2.0	62	7.3	7.9	11	5.8	2.8	18	3.4	12	1.3
11	1.8	2.2	37	7.1	7.9	11	6.4	1.9	29	3.1	4.3	4.0
12	1.3	2.6	20	7.0	7.8	11	6.4	1.6	359	2.9	3.7	11
13	1.1	2.5	13	7.2	7.6	10	6.3	1.7	649	3.2	4.2	1.6
14	1.0	2.4	10	7.2	8.4	9.6	6.5	2.0	365	3.3	4.9	0.85
15	1.1	2.1	9.2	7.4	8.0	9.5	6.6	1.9	107	3.2	2.7	0.64
16	1.1	2.7	8.7	7.0	7.1	9.6	6.2	2.4	108	3.7	2.0	0.58
17	0.92	2.4	8.6	6.6	7.0	9.8	5.1	1.8	45	3.8	1.9	0.53
18	9.4	2.2	8.2	7.2	7.2	17	5.2	2.5	28	3.8	1.8	0.48
19	78	1.9	7.3	7.4	7.2	32	5.4	2.6	20	4.1	1.7	0.45
20	13	1.9	6.7	7.6	e7.0	20	4.0	27	16	4.0	2.3	0.39
21	2.1	2.0	6.9	7.5	e17	15	3.7	28	14	3.5	2.3	0.36
22	1.0	2.1	6.4	7.0	59	12	4.1	13	12	2.9	1.8	0.33
23	0.82	2.4	8.6	6.3	31	11	4.6	8.9	10	2.8	1.5	0.34
24	0.85	2.3	13	6.6	17	11	5.2	7.6	9.2	3.1	1.4	0.35
25	0.87	1.8	11	7.0	14	9.9	4.4	175	8.5	2.9	1.3	0.35
26	0.82	1.7	8.7	7.1	15	9.3	4.0	71	20	2.7	1.3	0.34
27	0.82	1.6	8.1	7.4	20	9.6	4.5	21	11	2.4	1.3	0.33
28	1.5	1.6	7.9	7.8	56	8.5	3.5	12	8.3	2.4	1.4	0.34
29	5.0	1.8	8.1	7.2	---	7.7	4.1	9.3	7.0	2.1	1.6	0.41
30	1.5	1.7	9.6	7.3	---	7.5	6.3	7.8	5.9	2.1	2.2	0.46
31	0.93	---	e25	6.7	---	7.7	---	5.8	---	2.4	2.9	---
TOTAL	144.53	75.8	384.4	239.0	361.2	531.7	173.8	445.1	2484.7	127.3	83.8	53.63
MEAN	4.66	2.53	12.4	7.71	12.9	17.2	5.79	14.4	82.8	4.11	2.70	1.79
MAX	78	6.2	62	15	59	89	8.3	175	649	17	12	11
MIN	0.82	1.2	1.6	6.3	1.1	7.5	3.5	1.6	3.0	2.1	1.3	0.33
AC-FT	287	150	762	474	716	1050	345	883	4930	252	166	106

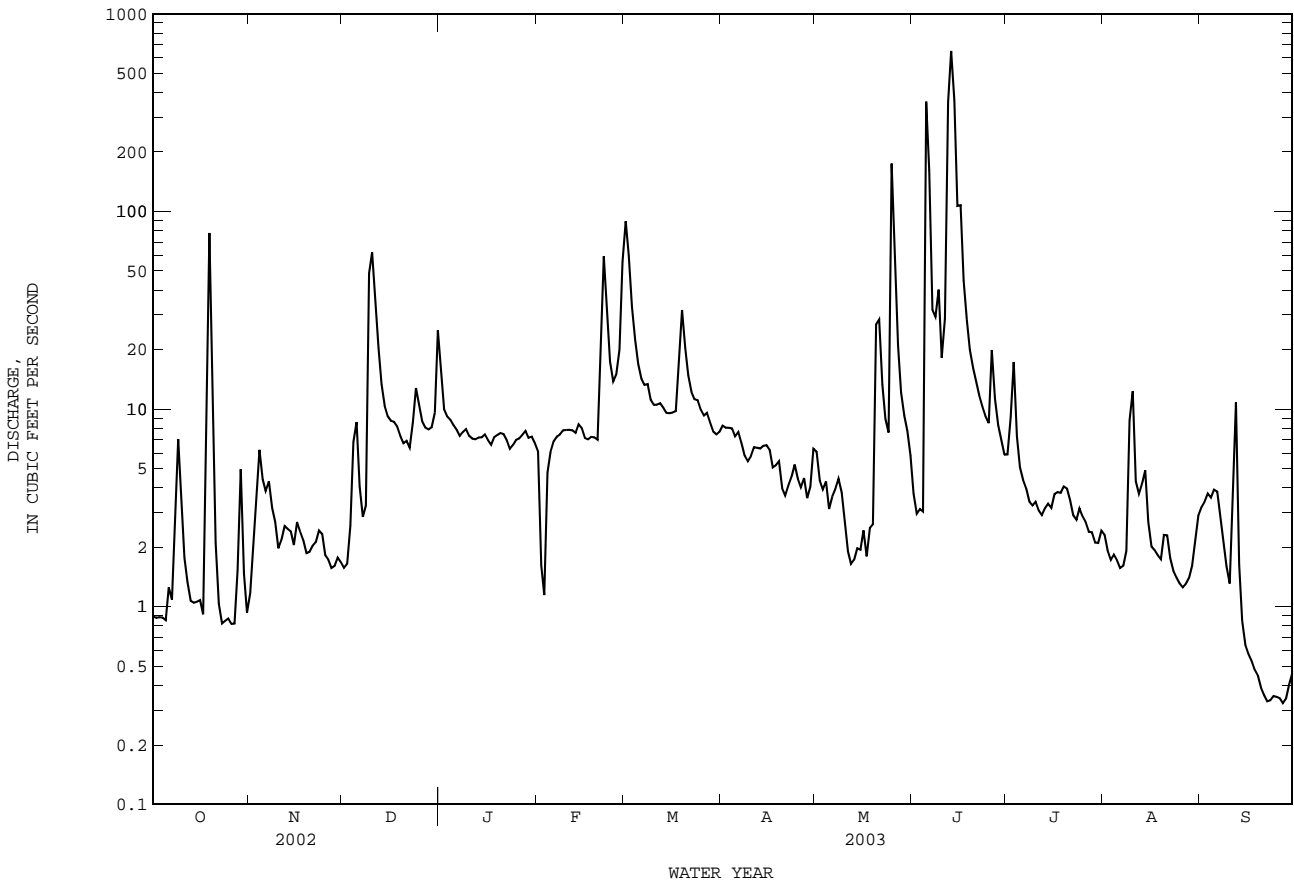
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003z, BY WATER YEAR (WY)

	1956	1957	1958	1959	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	95.3	39.0	38.7	28.3	50.8	90.2	101	207	129	18.4	10.2	26.0
MAX	1829	298	743	257	401	570	1175	1284	1250	181	230	491
(WY)	1982	1965	1992	1992	2001	1977	1957	1990	1989	1973	1973	1962
MIN	0.000	0.000	0.000	0.000	0.13	0.000	0.000	0.002	0.000	0.000	0.000	0.000
(WY)	1959	1956	1956	1956	2000	1956	1956	1980	1956	1964	1957	1956

08043950 Big Sandy Creek near Chico, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1956 - 2003z	
ANNUAL TOTAL	12111.85	5104.96	69.6	
ANNUAL MEAN	33.2	14.0	317	1982
HIGHEST ANNUAL MEAN			0.40	2000
LOWEST ANNUAL MEAN			23800	Oct 13 1981
HIGHEST DAILY MEAN	1170 Apr 8	649 Jun 13	0.00	Oct 1 1955
LOWEST DAILY MEAN	0.67 Jan 12	0.33 Sep 22	0.00	Oct 5 1955
ANNUAL SEVEN-DAY MINIMUM	0.71 Jan 11	0.34 Sep 22	945000	Oct 13 1981
MAXIMUM PEAK FLOW		964 Jun 13	g14.78	Oct 13 1981
MAXIMUM PEAK STAGE		9.50 Jun 13	50450	
ANNUAL RUNOFF (AC-FT)	24020	10130	89	
10 PERCENT EXCEEDS	45	19	6.0	
50 PERCENT EXCEEDS	3.9	5.2	0.00	
90 PERCENT EXCEEDS	0.92	1.2		

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



TRINITY RIVER BASIN

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 Bogy Creek and at mile 602.

DRAINAGE AREA.--1,725 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 660.57 ft above NGVD of 1929. 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.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Jan. 1947, at least 10% of contributing drainage area has been regulated. In addition, flow from 91.2 mi² above station is affected at times by discharge from floodwater-retarding structures in the Big Sandy and Salt Creek drainage basins. No known diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, about 25 ft in May 1908, present site and datum, from information by local residents, who also reported a flood of about the same gage height between 1870-80. A flood in 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	8.3	139	70	16	180	23	31	187	40	245	284
2	210	8.0	140	32	16	147	23	23	185	107	242	229
3	239	8.9	119	23	15	93	23	19	162	145	241	118
4	238	12	26	21	13	63	23	18	151	196	240	116
5	238	13	18	20	13	49	25	19	275	189	298	118
6	238	15	15	19	15	41	36	17	744	187	329	110
7	243	12	12	18	16	36	36	25	336	187	326	108
8	253	10	10	18	16	34	24	38	199	186	323	108
9	163	9.2	37	18	16	34	22	61	164	184	331	108
10	29	8.0	150	18	16	31	21	225	80	183	348	211
11	17	7.6	78	17	16	30	21	302	150	178	337	340
12	13	7.3	37	17	16	31	21	249	521	151	312	369
13	11	7.1	22	17	16	31	21	40	847	130	298	197
14	9.1	7.4	16	17	17	30	21	19	876	129	303	192
15	7.7	6.8	13	17	17	29	20	16	477	171	296	180
16	6.7	6.7	12	16	17	28	20	15	220	194	290	174
17	6.3	6.6	12	16	16	29	20	51	148	194	287	173
18	e10	6.9	11	17	16	33	20	240	84	193	282	182
19	e458	34	11	16	16	55	20	216	63	190	280	197
20	126	134	10	17	16	55	19	243	49	188	279	85
21	25	138	9.9	16	32	43	18	318	39	186	278	20
22	13	137	9.5	16	454	37	18	283	34	203	276	13
23	12	137	11	16	220	32	19	262	30	224	274	11
24	12	139	19	15	74	29	79	423	27	224	273	9.9
25	e12	141	19	15	50	29	34	620	25	224	271	9.5
26	e11	141	14	16	43	28	21	617	88	223	271	9.0
27	9.9	140	12	16	54	26	18	350	90	222	272	8.3
28	e9.8	141	11	16	181	25	17	237	41	222	272	7.6
29	e11	141	12	16	---	24	17	203	29	234	268	7.4
30	13	140	49	16	---	23	41	195	27	248	268	7.0
31	10	---	197	16	---	23	---	189	---	247	272	---
TOTAL	2844.5	1723.8	1251.4	598	1423	1378	741	5564	6348	5779	8882	3701.7
MEAN	91.8	57.5	40.4	19.3	50.8	44.5	24.7	179	212	186	287	123
MAX	458	141	197	70	454	180	79	620	876	248	348	369
MIN	6.3	6.6	9.5	15	13	23	17	15	25	40	240	7.0
AC-FT	5640	3420	2480	1190	2820	2730	1470	11040	12590	11460	17620	7340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

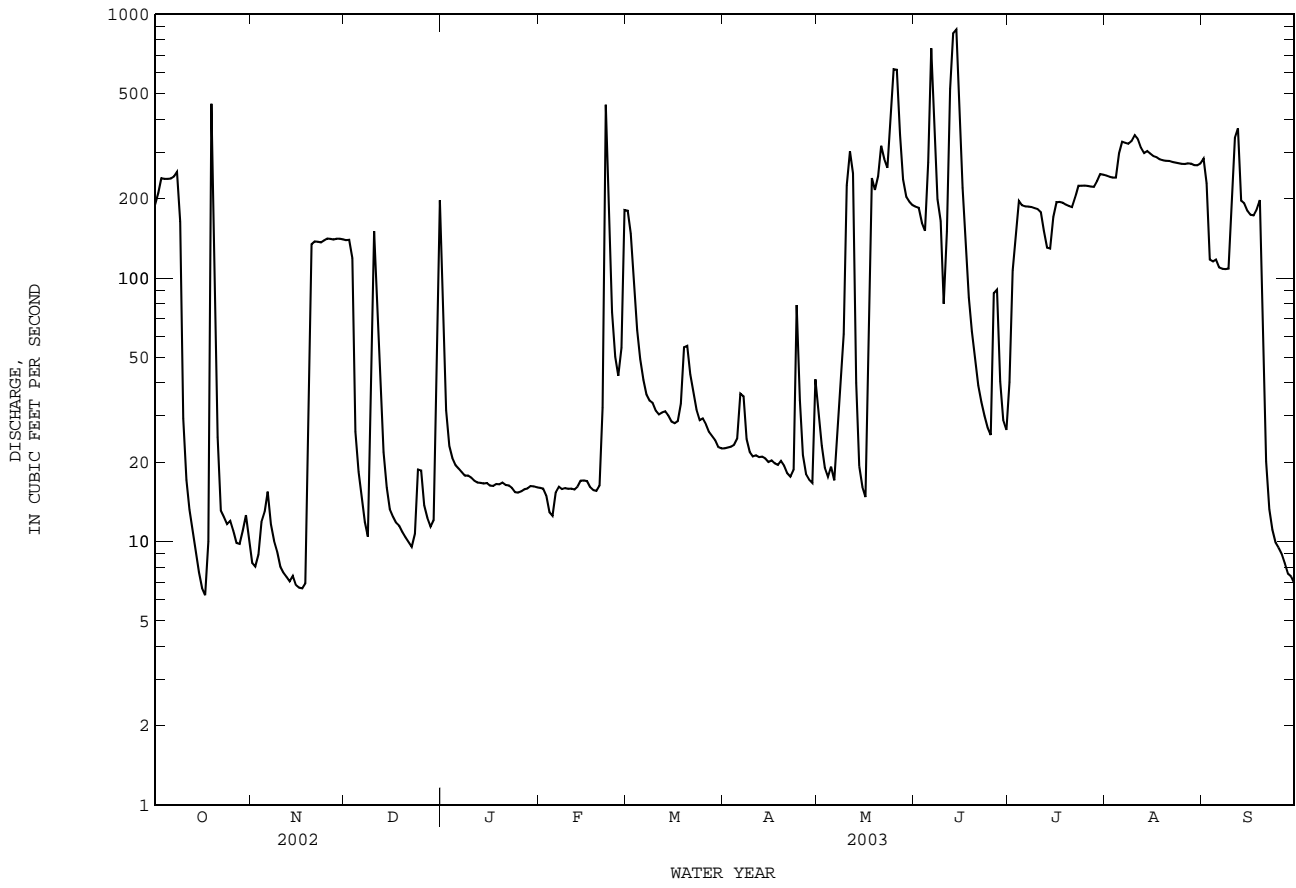
MEAN	292	184	172	104	152	231	267	678	448	197	220	177
MAX	4063	1248	3073	929	2003	1728	4339	5908	5439	1330	1157	1643
(WY)	1982	1982	1992	1992	1997	1998	1990	1990	1989	1950	1950	1962
MIN	2.96	4.81	2.21	0.75	0.10	0.26	0.59	25.2	2.76	7.11	0.025	0.23
(WY)	1957	1984	1953	1956	1953	1955	1955	1959	1953	1979	1980	1956

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	37801.0		40234.4			
ANNUAL MEAN	104		110		261	
HIGHEST ANNUAL MEAN					1094	
LOWEST ANNUAL MEAN					58.6	
HIGHEST DAILY MEAN	1870		876		38800	
LOWEST DAILY MEAN	6.3		6.3		0.00	
ANNUAL SEVEN-DAY MINIMUM	7.0		7.0		0.00	
MAXIMUM PEAK FLOW			920		60400	
MAXIMUM PEAK STAGE			13.28		25.87	
ANNUAL RUNOFF (AC-FT)	74980		79800		189000	
10 PERCENT EXCEEDS	192		275		471	
50 PERCENT EXCEEDS	32		34		66	
90 PERCENT EXCEEDS	8.7		11		4.5	

e Estimated

08044500 West Fork Trinity River near Boyd, TX--Continued



TRINITY RIVER BASIN

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 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 681.11 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair except those above 3,000 ft³/s, which are poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	1.1	2.0	3.8	6.3	13	2.7	13	0.83	1.3	0.11	4.4
2	0.03	1.2	2.2	1.9	7.4	7.7	2.9	3.6	0.79	1.1	0.11	1.1
3	0.03	2.4	3.0	1.5	6.5	5.6	3.2	2.4	0.73	1.1	0.11	0.64
4	0.02	3.4	21	1.5	4.5	4.9	4.1	2.4	0.72	0.95	0.12	0.48
5	0.02	1.9	7.3	1.5	4.0	4.3	204	2.2	1.7	0.91	0.11	0.40
6	0.02	1.6	3.1	1.6	7.3	3.5	116	2.2	9.7	0.79	0.11	0.36
7	0.02	1.3	2.2	1.6	6.0	3.7	27	8.1	2.2	0.73	0.10	0.66
8	0.04	1.1	1.6	1.8	3.7	3.7	17	4.3	2.1	0.73	0.10	0.52
9	0.09	1.1	52	2.2	3.9	3.7	9.3	2.4	2.4	0.76	0.16	0.47
10	0.69	0.85	24	2.0	4.0	3.4	7.7	2.0	2.3	0.64	0.16	0.38
11	0.67	0.81	7.4	1.9	4.0	3.4	6.5	1.6	2.2	0.55	0.15	183
12	0.35	0.64	3.0	2.3	3.6	4.0	5.1	1.2	2.2	0.48	0.13	137
13	0.16	0.99	2.0	3.1	3.4	4.1	4.4	1.2	597	0.41	0.12	41
14	0.13	0.99	1.5	3.1	3.9	4.4	4.0	1.4	48	0.38	0.13	8.6
15	0.12	0.78	1.4	3.0	3.2	4.3	3.7	1.7	24	0.32	0.17	6.7
16	0.10	0.95	1.3	2.8	2.2	3.9	3.7	1.9	22	0.30	0.15	2.1
17	0.09	1.4	1.3	2.5	2.1	4.4	2.8	1.8	13	0.27	0.14	0.99
18	361	1.3	1.3	2.5	2.3	9.7	2.9	1.7	6.6	0.25	0.14	2.4
19	138	1.6	1.1	2.9	2.3	13	3.1	1.7	4.3	0.24	0.12	6.9
20	17	1.7	1.0	3.8	2.6	4.6	2.4	2.6	3.1	0.22	0.11	1.1
21	4.0	1.8	1.1	4.3	30	3.4	2.0	12	2.6	0.20	0.10	0.86
22	1.8	1.8	1.1	3.7	76	3.1	2.1	3.5	2.2	0.20	0.10	0.60
23	1.2	2.0	14	3.1	17	3.5	2.5	2.6	1.8	0.18	0.10	0.53
24	4.7	2.1	15	3.0	5.6	3.4	3.7	4.6	1.7	0.18	0.09	0.49
25	29	2.1	4.2	3.1	5.7	3.6	2.8	24	1.5	0.17	0.09	0.44
26	5.9	2.6	2.0	3.1	5.0	3.4	2.0	6.4	2.4	0.16	0.10	0.45
27	1.7	1.6	1.6	3.2	14	3.0	1.9	2.0	6.3	0.14	0.11	0.43
28	1.2	1.6	1.5	5.0	26	2.8	1.8	1.3	2.6	0.12	0.11	0.31
29	17	1.7	1.6	4.8	---	2.6	1.8	1.1	1.8	0.12	0.10	0.38
30	4.7	1.9	12	5.2	---	2.4	65	0.98	1.5	0.12	0.13	0.38
31	1.5	---	15	6.4	---	2.7	---	0.87	---	0.11	40	---
TOTAL	591.30	46.31	208.8	92.2	262.5	143.2	518.1	118.75	770.27	14.13	43.58	404.07
MEAN	19.1	1.54	6.74	2.97	9.38	4.62	17.3	3.83	25.7	0.46	1.41	13.5
MAX	361	3.4	52	6.4	76	13	204	24	597	1.3	40	183
MIN	0.02	0.64	1.0	1.5	2.1	2.4	1.8	0.87	0.72	0.11	0.09	0.31
AC-FT	1170	92	414	183	521	284	1030	236	1530	28	86	801

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	5.05	17.3	7.37	6.49	41.9	36.9	19.8	20.5
MAX	19.1	120	17.9	17.0	178	104	82.1	92.2
(WY)	2003	1997	1998	1998	1997	1998	1997	2000
MIN	0.003	0.25	0.61	0.27	0.54	4.62	5.36	1.43
(WY)	2000	2000	2000	2000	2000	2003	2000	1996

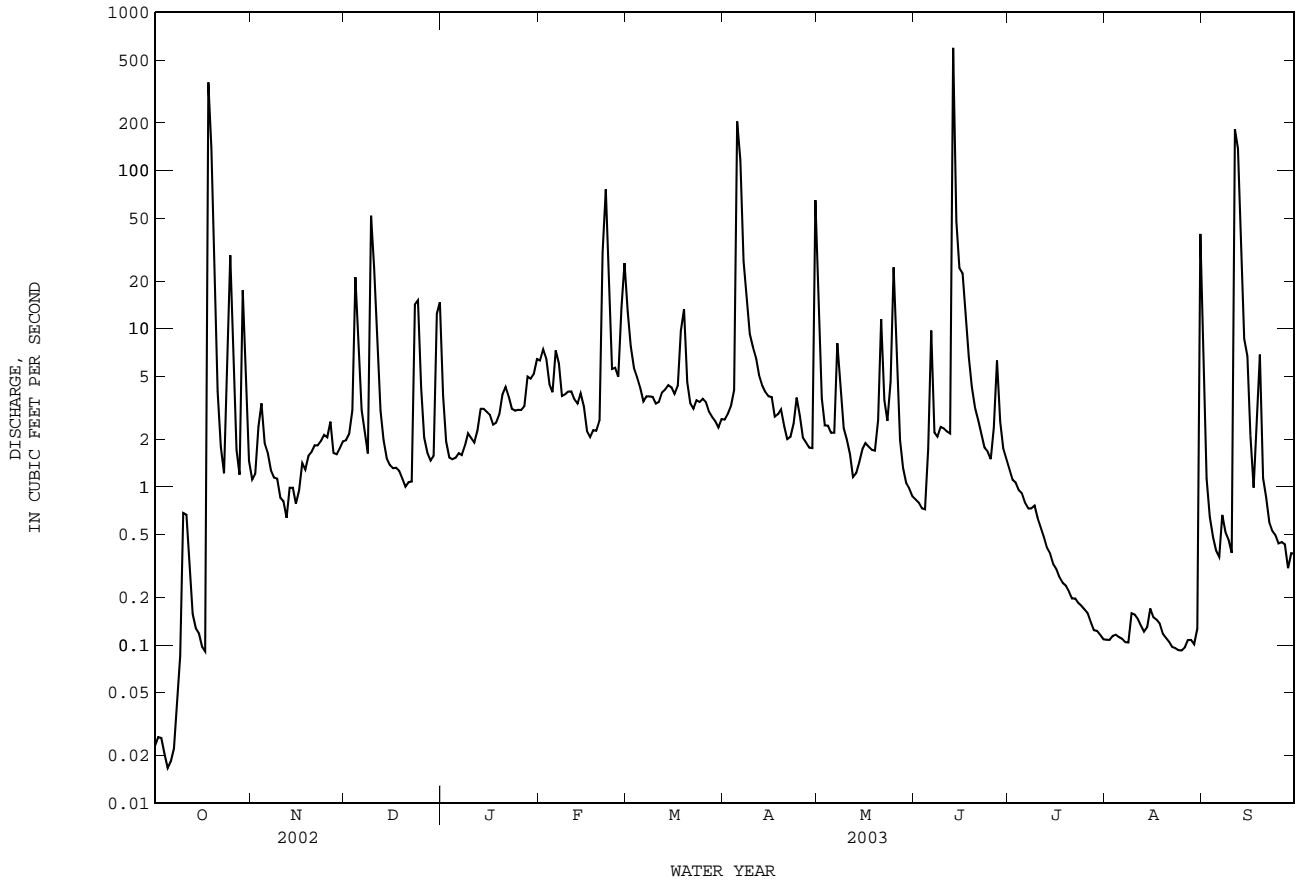
SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	2448.70	3213.21	
ANNUAL MEAN	6.71	8.80	15.0
HIGHEST ANNUAL MEAN			53.7
LOWEST ANNUAL MEAN			3.98
HIGHEST DAILY MEAN	443	597	2350
LOWEST DAILY MEAN	0.02	0.02	0.00
ANNUAL SEVEN-DAY MINIMUM	0.02	0.02	0.00
MAXIMUM PEAK FLOW		4450	b12100
MAXIMUM PEAK STAGE		12.06	d21.21
ANNUAL RUNOFF (AC-FT)	4860	6370	10850
10 PERCENT EXCEEDS	9.9	11	19
50 PERCENT EXCEEDS	1.3	2.0	2.0
90 PERCENT EXCEEDS	0.04	0.13	0.11

b After channel rectification, which occurred Nov. 1995 to Mar. 1997, peak gage-height, 17.30 ft.

d Prior to channel rectification, which occurred Nov. 1995 to Mar. 1997, peak discharge, 7,760 ft³/s.

08044800 Walnut Creek at Reno, TX--Continued



TRINITY RIVER BASIN

08045000 Eagle Mountain Reservoir above Fort Worth, TX

LOCATION.--Lat 32°52'39", long 97°28'29", Tarrant County, Hydrologic Unit 12030101, at left 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 mi².

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 NGVD of 1929. 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 except those for estimated daily contents, which are fair. 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 dam is owned by the Tarrant Regional Water District. The reservoir is used for flood control and for part of the municipal water supply for the city of Fort Worth. Flow from 91.2 mi² 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. Conservation pool storage is 190,300 acre-ft. 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.....	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.--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, 155,700 acre-ft, June 18, elevation, 646.45 ft; minimum contents, 135,000 acre-ft, May 19, 21, elevation, 643.76 ft.

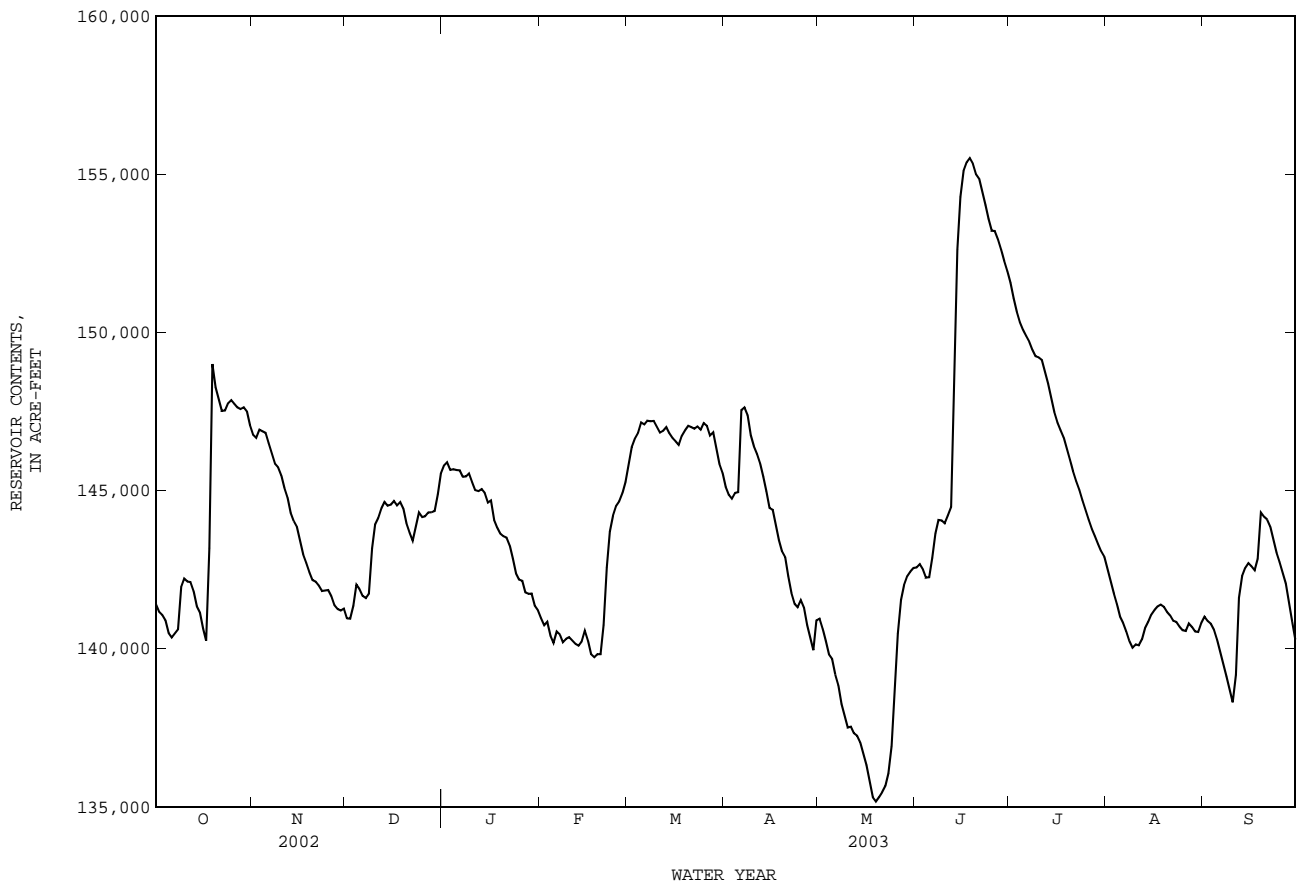
RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141400	146800	141000	145800	141000	145800	145100	140900	142600	151600	142500	141000
2	141200	146700	140900	145900	140700	146400	144900	140600	142700	151100	142200	140900
3	141100	146900	141400	145700	140800	146600	144700	140200	142500	150700	141800	140800
4	140900	146900	142000	145700	140400	146800	144900	139800	142300	150300	141400	140600
5	140500	146800	141900	145600	140200	147100	144900	139700	142300	150100	141000	140300
6	140400	146500	141700	145600	140500	147100	147500	139200	142900	149900	140800	139900
7	140500	146200	141600	145400	140400	147200	147600	138900	143600	149700	140500	139500
8	140600	145800	141700	145400	140200	147200	147400	138300	144100	149500	140200	139100
9	141900	145700	143200	145500	140300	147200	146700	137900	144100	149200	140000	138700
10	142200	145500	143900	145300	140400	147000	146400	137500	144000	149200	140100	138300
11	142100	145100	144100	145000	140300	146800	146200	137500	144200	149100	140100	139200
12	142100	144800	144400	145000	140200	146900	145900	137300	144500	148800	140300	141600
13	141800	144300	144600	145000	140100	147000	145400	137200	144800	148900	140600	142300
14	141300	144000	144500	144900	140200	146800	145000	137000	152600	147900	140800	142600
15	141100	143900	144600	144600	140600	146700	144500	136700	154300	147500	141100	142700
16	140600	143400	144700	144700	140200	146600	144400	136300	155100	147100	141200	142600
17	140200	143000	144500	144100	139800	146400	143900	135800	155400	146900	141300	142500
18	e143200	142700	144600	143800	139700	146700	143400	135300	155500	146700	141400	142800
19	e149000	142400	144400	143600	139800	146900	143100	135200	e155300	146300	141300	144300
20	e148300	142200	144000	143600	139800	147000	142900	e135300	e155000	146000	141200	144200
21	e147900	142100	143700	143500	140700	147000	142300	e135500	154800	145600	141100	144100
22	147500	142000	143400	143300	142600	147000	141800	135700	154400	145300	140900	143900
23	147500	141800	143900	142800	143700	147000	141400	136100	154000	145000	140800	143500
24	147800	141800	144300	142400	144200	146900	141300	136900	153600	144700	140700	143000
25	147900	141900	144200	142200	144500	147100	141500	138800	153200	144400	140600	142700
26	147700	141700	144200	142100	144700	147000	141300	140500	153200	144100	140600	142400
27	147600	141400	144300	141800	144900	146700	140800	141500	152900	143800	140800	142100
28	147600	141300	144300	141700	145300	146800	140400	142000	152600	143600	140700	141500
29	147600	141200	144300	141700	---	146300	140000	142300	152300	143300	140500	140800
30	147500	141300	144900	141400	---	145800	140900	142400	151900	143100	140500	140300
31	147100	---	145500	141200	---	145600	---	142600	---	142900	140800	---
MEAN	144000	143900	143600	144000	141300	146800	143900	138400	149500	147200	140900	141600
MAX	149000	146900	145500	145900	145300	147200	147600	142600	155500	151600	142500	144300
MIN	140200	141200	140900	141200	139700	145600	140000	135200	142300	142900	140000	138300
(+)	645.36	644.61	645.17	644.60	645.13	645.17	644.56	644.78	645.98	644.82	644.54	644.48
(@)	+5500	-5800	+4200	-4300	+4100	+300	-4700	+1700	+9300	-9000	-2100	-500
CAL YR 2002	MAX 181100	MIN 140200	(@) -500									
WTR YR 2003	MAX 155500	MIN 135200	(@) -1300									

e Estimated

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

08045000 Eagle Mountain Reservoir above Fort Worth, TX--Continued



TRINITY RIVER BASIN

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, at mile 572.0.

DRAINAGE AREA.--2,064 mi².

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records 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 June 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. Conservation pool storage is 38,130 acre-ft. 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 U.S. Army Corps of Engineers, and put into effect Feb. 1968.

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

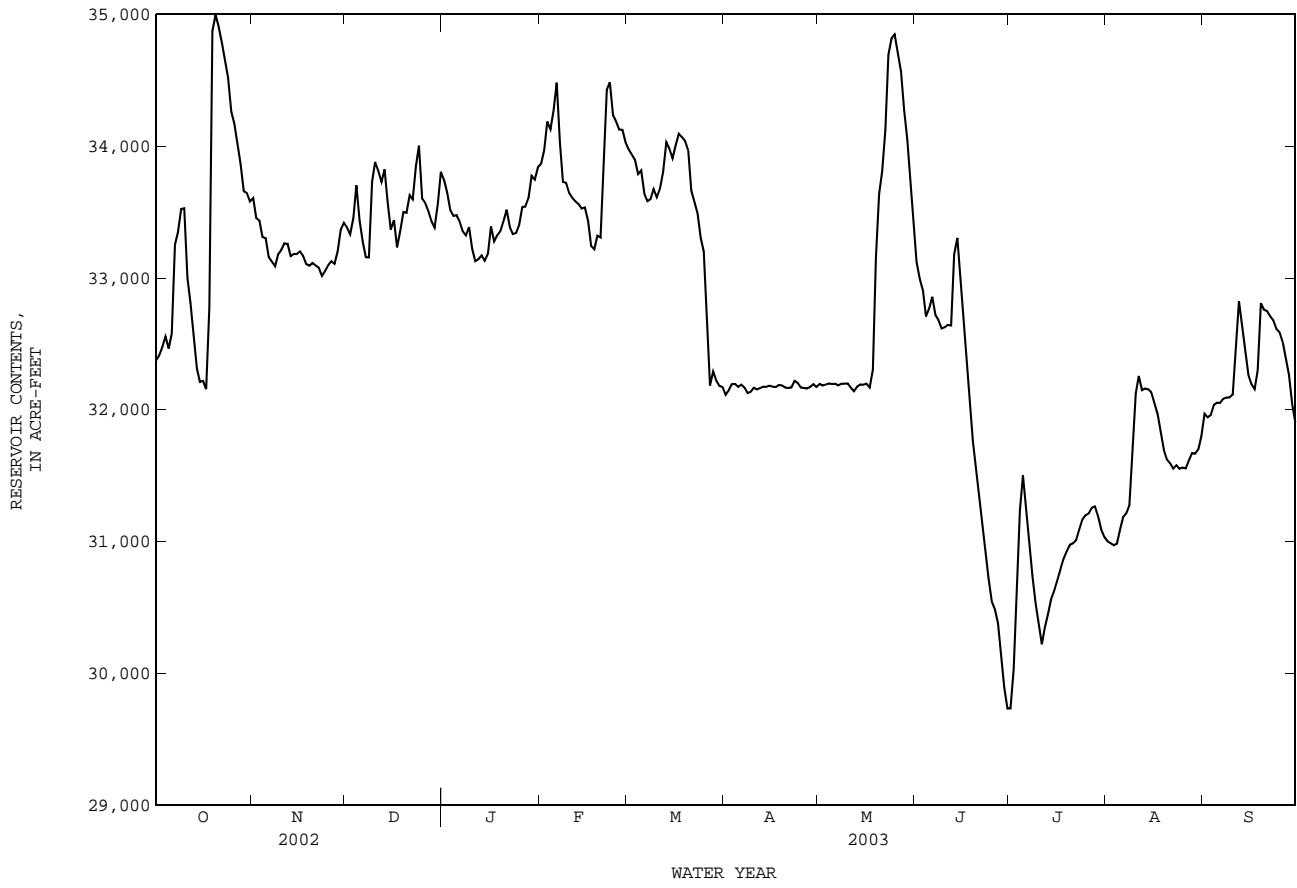
EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,210 acre-ft, Oct. 20, elevation, 593.45 ft; minimum contents, 29,600 acre-ft, July 1, elevation, 591.68 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32380	33610	33380	33740	33870	33980	32110	32200	33120	29730	31000	31970
2	32410	33460	33330	33650	33970	33940	32150	32180	32990	30030	30990	31940
3	32470	33440	33460	33510	34190	33900	32190	32190	32910	30590	30970	31960
4	32560	33310	33700	33470	34130	33790	32200	32200	32710	31240	30980	32040
5	32470	33300	33440	33480	34270	33820	32170	32200	32770	31500	31090	32050
6	32580	33160	33280	33430	34480	33640	32190	32200	32860	31260	31180	32050
7	33250	33120	33160	33350	34030	33580	32170	32190	32720	31010	31210	32080
8	33350	33090	33160	33320	33730	33600	32130	32200	32680	30740	31270	32090
9	33520	33180	33730	33390	33720	33680	32140	32200	32620	30530	31690	32090
10	33530	33210	33880	33220	33650	33610	32170	32200	32630	30380	32120	32110
11	33000	33260	33810	33130	33610	33680	32150	32170	32640	30220	32260	32450
12	32810	33260	33730	33140	33580	33800	32160	32140	32640	30350	32150	32820
13	32550	33170	33820	33170	33560	34030	32170	32180	33180	30450	32160	32630
14	32320	33180	33570	33130	33530	33980	32170	32190	33300	30560	32160	32440
15	32210	33180	33370	33180	33530	33910	32180	32190	33020	30630	32130	32260
16	32220	33200	33440	33390	33430	34000	32170	32200	32720	30710	32050	32200
17	32160	33170	33230	33280	33240	34100	32170	32170	32370	30790	31970	32160
18	32780	33110	33360	33320	33220	34070	32190	32300	32050	30870	31840	32300
19	34880	33090	33500	33350	33320	34040	32190	33150	31760	30930	31690	32810
20	35000	33110	33490	33430	33310	33970	32170	33640	31550	30980	31620	32760
21	34910	33090	33630	33520	33770	33660	32170	33810	31350	30990	31590	32750
22	34790	33080	33600	33390	34430	33580	32170	34120	31130	31010	31550	32710
23	34650	33020	33850	33330	34490	33490	32220	34690	30910	31100	31580	32680
24	34520	33050	34000	33340	34240	33300	32200	34820	30720	31170	31550	32610
25	34260	33100	33600	33400	34190	33200	32170	34850	30550	31200	31560	32590
26	34170	33130	33570	33540	34130	32760	32170	34710	30490	31210	31560	32510
27	34020	33110	33510	33540	34120	32180	32160	34560	30380	31260	31610	32400
28	33870	33200	33430	33610	34030	32290	32170	34280	30140	31270	31670	32260
29	33660	33370	33380	33780	---	32220	32190	34050	29890	31190	31670	32040
30	33640	33420	33560	33750	---	32180	32170	33740	29730	31090	31700	31900
31	33580	---	33810	33840	---	32170	---	33440	---	31040	31800	---
MAX	35000	33610	34000	33840	34490	34100	32220	34850	33300	31500	32260	32820
MIN	32160	33020	33160	33130	33220	32170	32110	32140	29730	29730	30970	31900
(+)	592.97	592.91	593.03	593.04	593.10	592.52	592.52	592.92	591.73	592.16	592.40	592.43
(@)	+1260	-160	+390	+30	+190	-1860	0	+1270	-3710	+1310	+760	+100
CAL YR 2002	MAX 38430	MIN 32100	(@) -50									
WTR YR 2003	MAX 35000	MIN 29730	(@) -420									

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

08045400 Lake Worth above Fort Worth, TX--Continued



TRINITY RIVER BASIN

08045525 Farmers Branch at Westworth Village, Fort Worth, TX

LOCATION.--Lat 32°45'52", long 97°25'56", Tarrant County, Hydrologic Unit 12030102, on left bank 0.6 mi northwest of Hwy 183 on Roaring Springs Road, along north side of Cottonwood tree grove, 1.62 mi upstream of confluence with West Fork Trinity River.

DRAINAGE AREA.--6.09 mi².

PERIOD OF RECORD.--July 1998 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 580.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions.

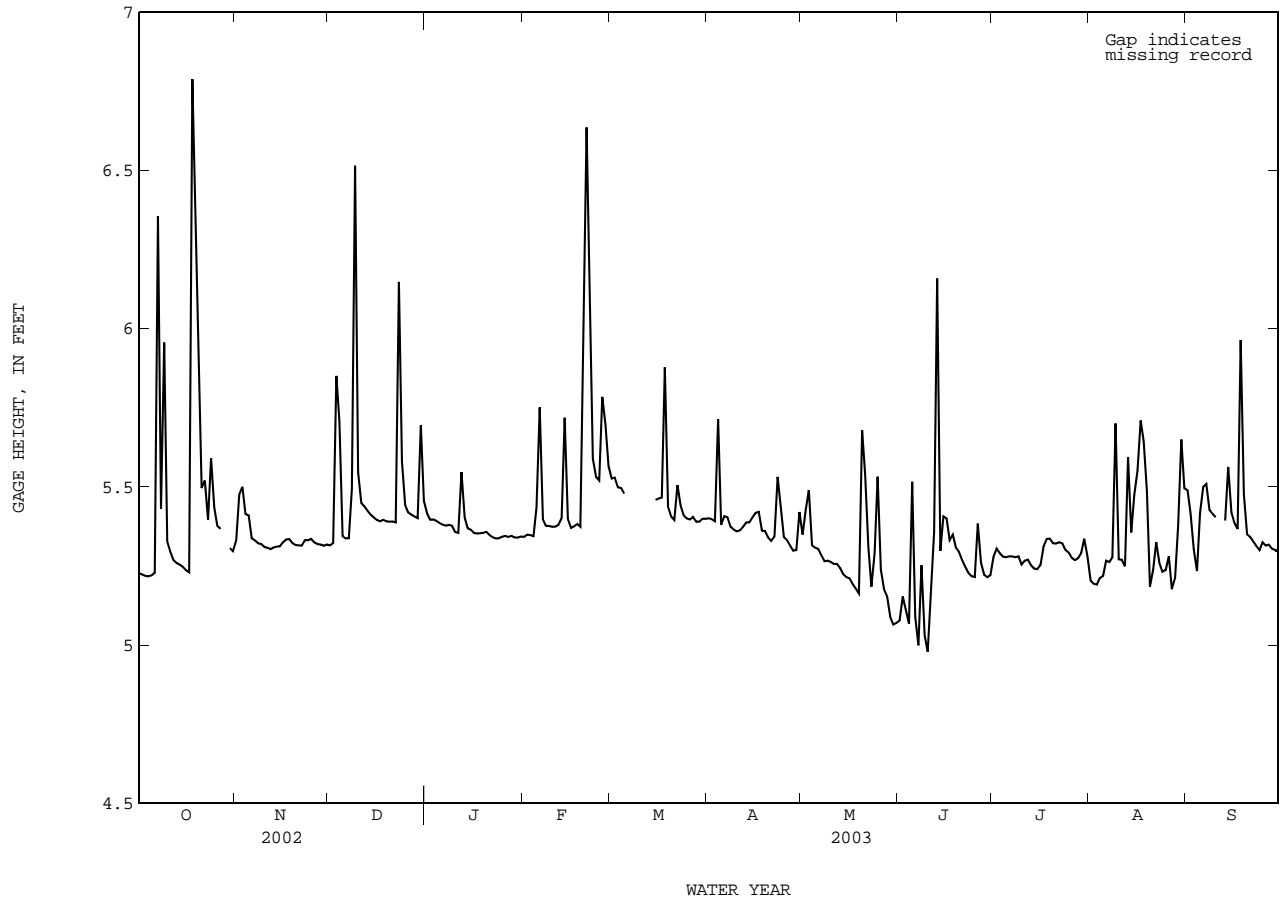
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 14.70, June 4, 2000; minimum gage height, 4.36, June 20, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.84 ft, Oct. 18; minimum gage height, 4.94 ft, June 10, 11.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.23	5.33	5.32	5.42	5.34	5.53	5.40	5.35	5.08	5.28	5.20	5.49
2	5.22	5.48	5.32	5.40	5.35	5.53	5.40	5.43	5.15	5.30	5.19	5.41
3	5.22	5.50	5.85	5.40	5.35	5.50	5.39	5.49	5.11	5.29	5.19	5.30
4	5.22	5.41	5.71	5.39	5.34	5.50	5.71	5.32	5.07	5.28	5.21	5.23
5	5.22	5.41	5.34	5.39	5.44	5.48	5.38	5.31	5.52	5.28	5.22	5.42
6	5.23	5.34	5.34	5.38	5.75	---	5.41	5.30	5.09	5.28	5.27	5.50
7	6.36	5.33	5.34	5.38	5.40	---	5.40	5.28	5.00	5.28	5.26	5.51
8	5.43	5.32	5.49	5.38	5.38	---	5.37	5.27	5.25	5.28	5.28	5.43
9	5.96	5.32	6.52	5.38	5.38	---	5.36	5.27	5.03	5.28	5.70	5.42
10	5.33	5.31	5.55	5.36	5.37	---	5.36	5.26	4.98	5.25	5.27	5.40
11	5.29	5.31	5.45	5.35	5.37	---	5.36	5.26	5.19	5.27	5.27	---
12	5.27	5.30	5.44	5.55	5.38	---	5.37	5.26	5.36	5.27	5.25	---
13	5.26	5.31	5.42	5.40	5.40	---	5.39	5.24	6.16	5.25	5.59	5.39
14	5.25	5.31	5.41	5.37	5.72	---	5.39	5.22	5.30	5.24	5.36	5.56
15	5.25	5.31	5.40	5.36	5.40	5.46	5.40	5.21	5.41	5.24	5.47	5.42
16	5.24	5.32	5.39	5.35	5.37	5.46	5.42	5.21	5.40	5.25	5.55	5.39
17	5.23	5.33	5.39	5.35	5.37	5.47	5.42	5.19	5.33	5.31	5.71	5.37
18	6.79	5.33	5.40	5.35	5.38	5.88	5.36	5.18	5.35	5.34	5.64	5.96
19	6.30	5.32	5.39	5.35	5.37	5.44	5.36	5.16	5.31	5.34	5.49	5.48
20	5.86	5.32	5.39	5.36	5.97	5.41	5.34	5.68	5.29	5.32	5.18	5.35
21	5.50	5.32	5.39	5.35	6.64	5.40	5.33	5.54	5.27	5.32	5.24	5.34
22	5.52	5.31	5.39	5.34	6.03	5.51	5.34	5.31	5.25	5.32	5.33	5.33
23	5.40	5.33	6.15	5.34	5.59	5.44	5.53	5.18	5.23	5.32	5.26	5.31
24	5.59	5.33	5.58	5.34	5.53	5.41	5.43	5.29	5.22	5.30	5.23	5.30
25	5.43	5.34	5.44	5.34	5.52	5.40	5.34	5.53	5.22	5.29	5.24	5.32
26	5.38	5.32	5.42	5.35	5.78	5.40	5.33	5.24	5.38	5.28	5.28	5.31
27	5.37	5.32	5.41	5.34	5.70	5.40	5.31	5.18	5.26	5.27	5.18	5.32
28	---	5.32	5.41	5.34	5.57	5.39	5.30	5.15	5.22	5.27	5.21	5.30
29	---	5.31	5.40	5.34	---	5.39	5.30	5.09	5.21	5.29	5.38	5.30
30	5.31	5.32	5.69	5.34	---	5.40	5.42	5.06	5.22	5.34	5.65	5.30
31	5.30	---	5.46	5.34	---	5.40	---	5.07	---	5.28	5.50	---
MEAN	---	5.34	5.50	5.37	5.54	---	5.39	5.28	5.26	5.29	5.35	---
MAX	---	5.50	6.52	5.55	6.64	---	5.71	5.68	6.16	5.34	5.71	---
MIN	---	5.30	5.32	5.34	5.34	---	5.30	5.06	4.98	5.24	5.18	---

08045525 Farmers Branch at Westworth Village, Fort Worth, TX--Continued



TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--June 1976 to May 1980, Aug. 1998 to Sept. 2002 (contents), Oct. 2002 to current year.
Water-quality records.--Chemical data: Oct. 1978 to Sept. 1979.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfilled dam 4,055 ft long. The dam was completed and deliberate impoundment began in Mar. 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 9 x 9 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 mi² 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. Data regarding the dam 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

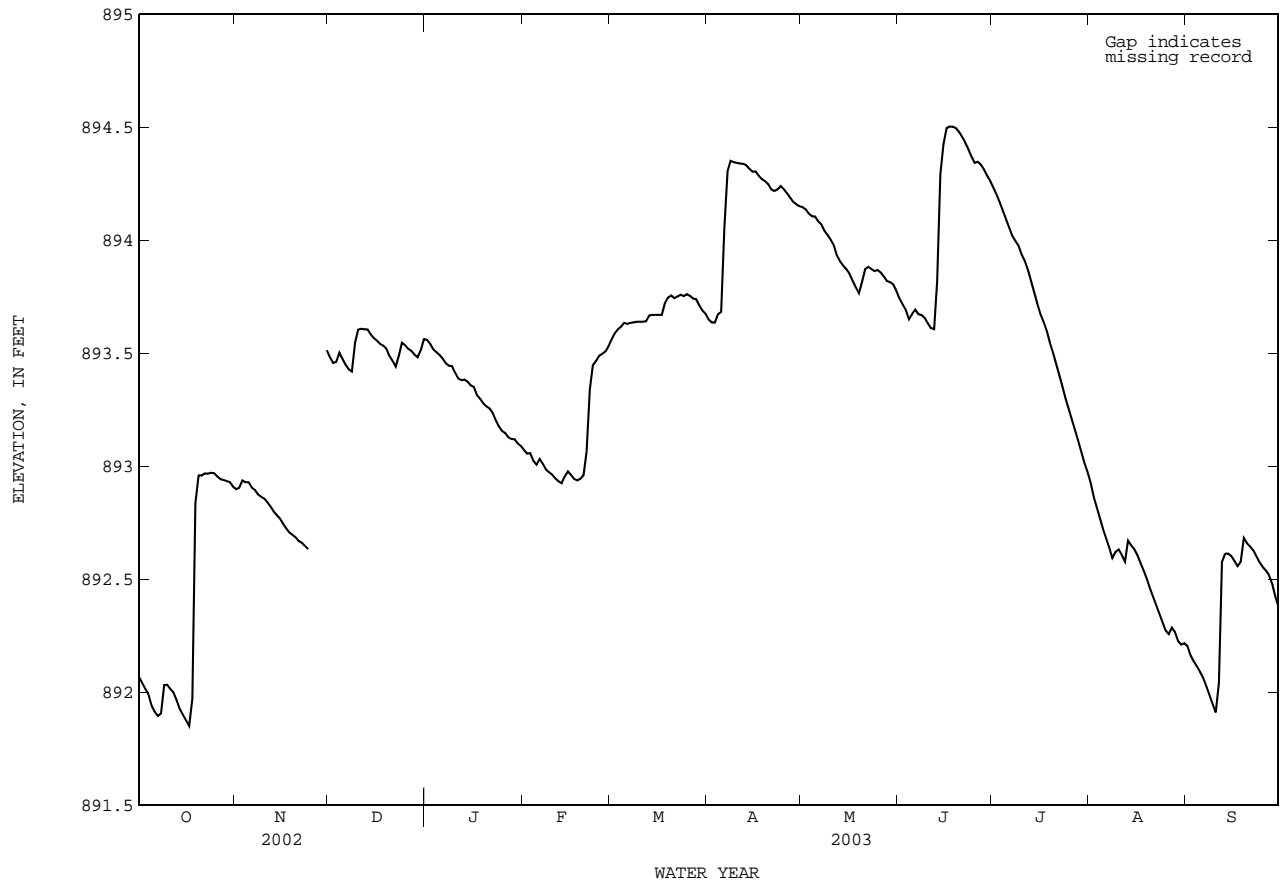
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 23,560 acre-ft, Mar. 27, 1977, elevation, 899.65 ft, from floodmark; minimum contents, 12,880 acre-ft, Jan. 9, 10, 1979, elevation, 889.99 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 894.51 ft, June 16, 17, 18, 19; minimum elevation, 891.82 ft, Oct. 18.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	892.07	892.90	893.48	893.56	893.07	893.56	893.65	894.15	893.74	894.23	892.93	892.20
2	892.04	892.90	893.46	893.54	893.06	893.59	893.64	894.14	893.72	894.20	892.87	892.16
3	892.01	892.94	893.46	893.52	893.06	893.61	893.64	894.12	893.69	894.17	892.82	892.14
4	891.99	892.93	893.50	893.51	893.02	893.62	893.67	894.11	893.65	894.13	892.77	892.11
5	891.94	892.93	893.48	893.49	893.01	893.64	893.68	894.11	893.67	894.09	892.72	892.09
6	891.91	892.91	893.45	893.48	893.03	893.63	894.05	894.08	893.69	894.06	892.68	892.06
7	891.89	892.89	893.43	893.46	893.01	893.63	894.30	894.07	893.67	894.02	892.64	892.03
8	891.91	892.87	893.42	893.44	892.99	893.64	894.35	894.04	893.67	894.00	892.59	891.99
9	892.03	892.87	893.55	893.44	892.97	893.64	894.35	894.02	893.66	893.98	892.62	891.95
10	892.03	892.86	893.60	893.41	892.96	893.64	894.34	894.00	893.63	893.94	892.63	891.91
11	892.01	892.84	893.61	893.39	892.95	893.64	894.34	893.98	893.61	893.91	892.61	892.04
12	892.00	892.82	893.61	893.38	892.93	893.64	894.34	893.93	893.61	893.87	892.58	892.58
13	891.96	892.80	893.61	893.38	892.92	893.67	894.33	893.91	893.82	893.82	892.67	892.61
14	891.92	892.78	893.58	893.37	892.95	893.67	894.32	893.89	894.29	893.77	892.65	892.61
15	891.90	892.77	893.57	893.36	892.98	893.67	894.30	893.87	894.42	893.72	892.63	892.60
16	891.88	892.75	893.56	893.35	892.96	893.67	894.30	893.85	894.50	893.67	892.61	892.58
17	891.85	892.72	893.54	893.31	892.94	893.67	894.29	893.82	894.50	893.64	892.57	892.56
18	891.97	892.71	893.53	893.30	892.94	893.72	894.27	893.79	894.50	893.60	892.54	892.58
19	892.84	892.70	893.52	893.28	892.94	893.75	894.26	893.77	894.50	893.55	892.50	892.68
20	892.96	892.69	893.49	893.27	892.96	893.76	894.25	893.82	894.48	893.50	892.46	892.66
21	892.96	892.67	893.47	893.26	893.06	893.74	894.23	893.87	894.46	893.45	892.42	892.64
22	892.97	892.66	893.44	893.24	893.34	893.75	894.22	893.88	894.43	893.40	892.39	892.63
23	892.97	892.65	893.49	893.20	893.45	893.76	894.23	893.87	894.40	893.35	892.35	892.60
24	892.97	892.63	893.55	893.18	893.47	893.75	894.24	893.86	894.37	893.30	892.31	892.58
25	892.97	---	893.54	893.16	893.49	893.76	894.23	893.87	894.34	893.25	892.27	892.56
26	892.95	---	893.52	893.15	893.50	893.75	894.21	893.86	894.35	893.21	892.26	892.54
27	892.94	---	893.51	893.13	893.51	893.74	894.19	893.84	894.33	893.16	892.28	892.52
28	892.94	---	893.49	893.12	893.53	893.74	894.17	893.82	894.31	893.12	892.27	892.48
29	892.93	---	893.48	893.12	---	893.71	894.16	893.81	894.29	893.07	892.23	892.43
30	892.93	893.51	893.51	893.10	---	893.69	894.15	893.80	894.26	893.02	892.21	892.38
31	892.91	---	893.56	893.09	---	893.67	---	893.78	---	892.98	892.22	---
MEAN	892.37	---	893.52	893.32	893.11	893.68	894.16	893.93	894.09	893.65	892.53	892.38
MAX	892.97	---	893.61	893.56	893.53	893.76	894.35	894.15	894.50	894.23	892.93	892.68
MIN	891.85	---	893.42	893.09	892.92	893.56	893.64	893.77	893.61	892.98	892.21	891.91
CAL YR 2002	MAX 895.58	MIN 891.21										
WTR YR 2003	MAX 894.50	MIN 891.85										

08045800 Lake Weatherford near Weatherford, TX--Continued



TRINITY RIVER BASIN

08045850 Clear Fork Trinity River near Weatherford, TX

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

DRAINAGE AREA.--121 mi².

PERIOD OF RECORD.--May 1980 to Sept. 1985 (daily mean discharge), Oct. 1985 to Sept. 1998 (peaks above base discharge), Oct. 1998 to current year.

Water-quality records.--Chemical data: Oct. 1980 to Sept. 1982. Biochemical data: Oct. 1980 to Sept. 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 810.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated discharges, which are poor. Since installation of gage in 1980 at least 10% the contributing drainage area has been regulated. No known diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.25	0.64	0.62	0.68	1.3	8.1	2.5	1.3	0.92	1.2	e0.00	1.4
2	0.23	0.72	0.65	0.66	1.4	7.4	2.6	1.3	0.80	0.96	e0.00	1.1
3	0.23	1.3	2.9	0.64	1.3	6.1	2.5	1.3	0.76	0.95	e0.00	1.1
4	0.24	0.71	1.8	0.53	0.90	5.6	5.3	1.3	0.98	0.90	e0.00	0.98
5	0.26	0.67	0.59	0.54	1.0	4.9	3.9	1.3	4.5	0.69	e0.00	0.99
6	0.27	0.64	0.62	0.59	2.1	4.2	3.6	1.3	1.2	0.97	e0.00	1.0
7	0.29	0.60	0.60	0.76	1.1	4.5	3.4	1.3	1.0	0.72	e0.00	0.96
8	0.58	0.67	0.75	0.81	1.1	4.2	3.5	1.1	1.8	0.87	e0.00	0.87
9	12	0.74	26	0.82	1.2	4.3	2.8	1.2	1.1	0.84	3.3	0.91
10	1.4	1.1	1.2	0.77	1.7	5.1	2.5	1.4	1.3	1.1	0.58	0.59
11	1.2	1.5	0.66	0.77	2.1	4.2	2.3	1.0	1.2	0.82	e0.40	42
12	0.88	1.2	0.58	1.1	2.1	3.9	2.3	0.88	6.9	0.85	0.64	19
13	0.83	1.2	0.57	0.89	2.3	4.1	2.1	0.94	15	1.0	8.9	3.3
14	0.97	1.1	0.59	0.79	3.1	4.2	2.0	1.1	4.4	0.89	0.78	4.4
15	1.0	1.1	0.56	0.65	2.2	3.8	2.1	0.98	4.1	0.85	0.53	2.2
16	1.00	1.1	0.56	0.61	2.0	4.1	2.2	0.91	2.4	0.81	0.61	1.7
17	1.1	1.1	0.59	0.68	2.1	4.4	2.2	0.93	2.3	0.75	0.79	1.6
18	61	1.1	0.55	e0.94	2.1	8.3	2.1	0.98	1.9	0.93	0.77	38
19	29	0.98	0.54	0.93	2.2	7.0	1.7	0.94	1.8	1.1	0.53	8.2
20	2.3	1.1	0.55	0.96	5.6	5.7	1.7	5.4	1.6	0.92	0.48	2.2
21	1.4	0.95	0.46	1.1	46	5.0	1.7	2.2	1.7	0.87	0.48	1.9
22	1.5	0.95	0.45	1.1	37	4.9	1.7	1.6	1.5	0.55	0.48	1.6
23	0.82	0.93	5.7	e1.1	14	5.0	2.0	0.93	1.4	e0.39	e0.40	1.2
24	0.84	1.0	1.2	1.0	25	4.9	1.6	0.91	1.3	e0.23	e0.38	1.2
25	0.92	0.96	0.67	1.0	92	4.5	1.4	2.0	0.92	e0.40	e0.32	1.0
26	0.80	1.0	0.78	1.1	160	3.8	1.4	1.2	2.3	e0.44	1.2	1.0
27	0.74	1.3	0.71	1.0	10	3.5	1.5	0.78	1.4	e0.20	1.1	1.0
28	0.78	1.0	0.64	1.1	9.5	3.3	1.3	0.86	1.1	e0.08	0.83	0.98
29	0.67	0.64	0.65	1.2	---	3.0	1.3	0.94	0.89	e0.00	e0.55	1.1
30	0.66	0.71	8.1	1.2	---	2.8	1.4	0.94	1.1	e0.00	8.7	1.3
31	0.65	---	1.0	1.3	---	2.7	---	0.91	---	e0.00	2.2	---
TOTAL	124.81	28.71	61.84	27.32	432.40	147.5	68.6	40.13	69.57	21.28	34.95	144.78
MEAN	4.03	0.96	1.99	0.88	15.4	4.76	2.29	1.29	2.32	0.69	1.13	4.83
MAX	61	1.5	26	1.3	160	8.3	5.3	5.4	15	1.2	8.9	42
MIN	0.23	0.60	0.45	0.53	0.90	2.7	1.3	0.78	0.76	0.00	0.00	0.59
AC-FT	248	57	123	54	858	293	136	80	138	42	69	287

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003h, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	28.8	32.5	26.6	13.1	37.6	39.1	38.3	59.2	42.8	8.23	3.61	2.75												
MAX	294	341	384	110	215	144	399	418	509	75.7	12.8	9.57												
(WY)	1982	1982	1992	1992	1997	2001	1990	1989	1989	1982	1997	1994												
MIN	0.59	0.51	0.000	0.88	0.94	1.00	1.06	0.71	0.46	0.032	0.000	0.024												
(WY)	2000	1985	1991	2003	2000	2000	2000	1984	1998	1998	1998	2001												

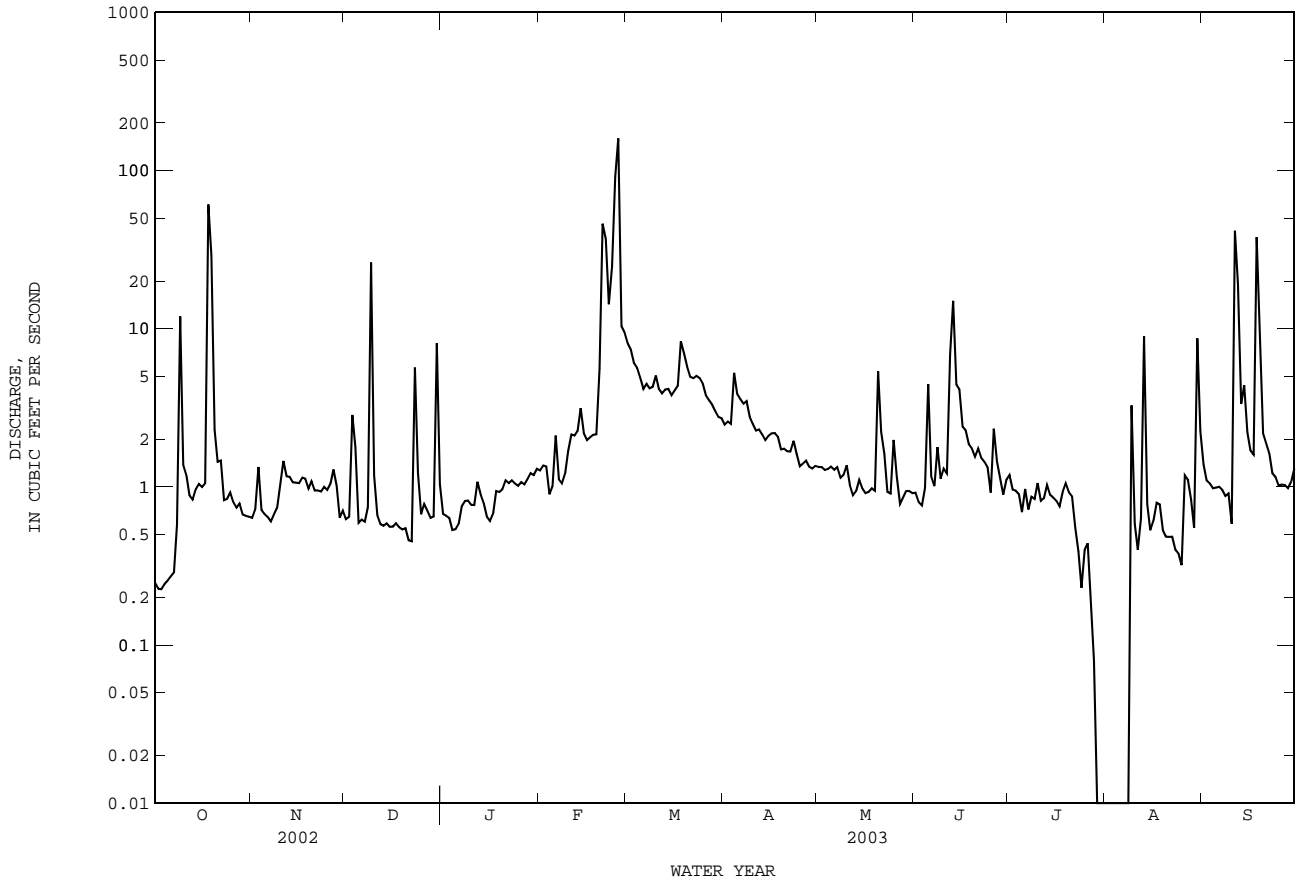
SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1980 - 2003h

ANNUAL TOTAL	920.31	1201.89	
ANNUAL MEAN	2.52	3.29	
HIGHEST ANNUAL MEAN			106 1982
LOWEST ANNUAL MEAN			0.91 1984
HIGHEST DAILY MEAN	88 Mar 19	160 Feb 26	3180 Apr 27 1990
LOWEST DAILY MEAN	0.19 Sep 4	0.00 Jul 29	0.00 Sep 12 1984
ANNUAL SEVEN-DAY MINIMUM	0.20 Sep 1	0.00 Jul 29	0.00 Dec 26 1987
MAXIMUM PEAK FLOW		632 Feb 26	3810 Apr 27 1990
MAXIMUM PEAK STAGE		12.03 Feb 26	22.07 Apr 27 1990
ANNUAL RUNOFF (AC-FT)	1830	2380	20110
10 PERCENT EXCEEDS	3.2	4.9	45
50 PERCENT EXCEEDS	1.2	1.1	1.7
90 PERCENT EXCEEDS	0.31	0.54	0.48

e Estimated

h See PERIOD OF RECORD paragraph.

08045850 Clear Fork Trinity River near Weatherford, TX--Continued



TRINITY RIVER BASIN

08046500 Benbrook Lake near Benbrook, TX

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

DRAINAGE AREA.--429 mi².

PERIOD OF RECORD.--Sept. 1952 to Sept. 2000, (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 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 NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 9,130 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with a 100-foot notch in center of ogee weir section. The outlet works consist of a 13.0-foot diameter concrete conduit controlled by two 6.5 by 13.0-foot broome-type gates and two 30-inch steel pipes controlled by slide gates. Deliberate impoundment began Sept. 29, 1952. From Aug. 1950 to Sept. 28, 1952, the lake was operated as a detention basin only. The lake was built for flood control, navigation and low-flow regulation. Inflow is affected at times by the discharge from flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 11,170 acre-ft. These structures control runoff from 37.6 mi². 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.....	693.3
Crest of intake to wet wells (inverts).....	656.0
Lowest gated outlet (invert).....	622.0

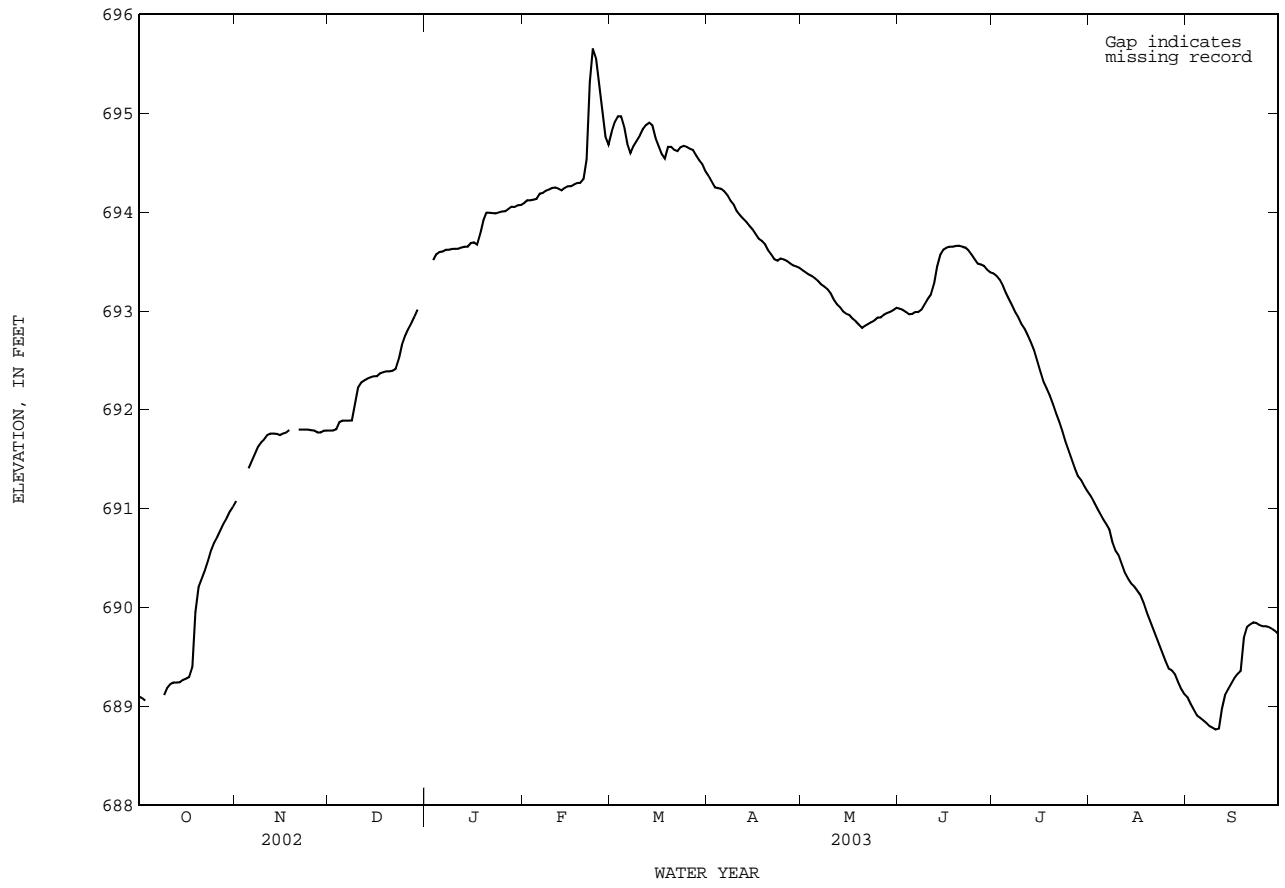
EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 212,200 acre-ft, May 3, 1990, elevation, 717.54 ft; minimum since lake first filled in 1957, 57,990 acre-ft, Sept. 30, 1999, elevation, 685.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 695.75 ft, Feb. 24; minimum elevation, 688.70 ft, Sept. 11.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689.10	691.08	691.79	---	694.09	694.81	694.36	693.41	693.02	693.38	691.13	689.09
2	689.08	---	691.79	---	694.12	694.91	694.31	693.39	693.01	693.35	691.07	689.03
3	689.06	---	691.80	693.51	694.12	694.97	694.25	693.37	692.99	693.32	691.01	688.96
4	---	---	691.87	693.57	694.13	694.97	694.24	693.35	692.97	693.26	690.95	688.91
5	---	691.41	691.89	693.60	694.13	694.86	694.24	693.33	692.97	693.18	690.89	688.88
6	---	691.48	691.89	693.60	694.19	694.69	694.21	693.30	692.99	693.12	690.85	688.86
7	---	691.55	691.89	693.62	694.19	694.60	694.17	693.27	692.99	693.05	690.79	688.83
8	---	691.63	691.89	693.62	694.22	694.67	694.12	693.25	693.01	692.99	690.66	688.80
9	689.11	691.67	692.07	693.63	694.23	694.72	694.08	693.22	693.07	692.93	690.57	688.78
10	689.19	691.70	692.23	693.63	694.24	694.77	694.01	693.18	693.12	692.87	690.53	688.76
11	689.22	691.75	692.28	693.63	694.25	694.84	693.97	693.11	693.17	692.82	690.44	688.77
12	689.24	691.76	692.30	693.64	694.24	694.88	693.94	693.07	693.28	692.75	690.35	688.98
13	689.24	691.76	692.32	693.65	694.22	694.90	693.90	693.04	693.45	692.68	690.29	689.12
14	689.24	691.76	692.33	693.65	694.24	694.88	693.86	693.00	693.57	692.60	690.24	689.17
15	689.27	691.74	692.34	693.69	694.26	694.75	693.83	692.97	693.62	692.50	690.21	689.23
16	689.28	691.76	692.34	693.69	694.26	694.67	693.78	692.96	693.64	692.38	690.17	689.29
17	689.30	691.77	692.37	693.67	694.28	694.59	693.73	692.92	693.65	692.29	690.12	689.33
18	689.40	691.80	692.38	693.78	694.29	694.54	693.71	692.90	693.65	692.22	690.05	689.36
19	689.95	---	692.39	693.92	694.30	694.66	693.68	692.86	693.66	692.15	689.95	689.69
20	690.21	---	692.39	694.00	694.33	694.66	693.61	692.83	693.66	692.06	689.87	689.80
21	690.29	691.80	692.39	693.99	694.53	694.63	693.57	692.85	693.65	691.97	689.78	689.83
22	690.37	691.80	692.42	693.99	695.32	694.62	693.52	692.87	693.64	691.88	689.70	689.85
23	690.47	691.80	692.52	693.99	695.65	694.66	693.51	692.89	693.61	691.78	689.62	689.84
24	690.58	691.80	692.66	694.00	695.55	694.67	693.53	692.90	693.57	691.68	689.54	689.82
25	690.66	691.79	692.75	694.01	695.28	694.66	693.52	692.93	693.52	691.59	689.46	689.81
26	690.71	691.79	692.82	694.01	695.01	694.64	693.51	692.93	693.48	691.50	689.38	689.81
27	690.78	691.77	692.88	694.03	694.76	694.63	693.48	692.96	693.47	691.41	689.36	689.80
28	690.85	691.77	692.95	694.06	694.68	694.57	693.46	692.98	693.45	691.33	689.32	689.78
29	690.91	691.79	693.01	694.05	---	694.52	693.45	692.99	693.42	691.29	689.25	689.76
30	690.97	691.79	---	694.07	---	694.48	693.44	693.01	693.39	691.23	689.17	689.73
31	691.02	---	---	694.07	---	694.41	---	693.03	---	691.18	689.12	---
MEAN	---	---	---	---	694.47	694.70	693.83	693.07	693.36	692.35	690.12	689.32
MAX	---	---	---	---	695.65	694.97	694.36	693.41	693.66	693.38	691.13	689.85
MIN	---	---	---	---	694.09	694.41	693.44	692.83	692.97	691.18	689.12	688.76
CAL YR 2002	MAX 698.64	MIN 689.06										
WTR YR 2003	MAX 695.65	MIN 688.76										

08046500 Benbrook Lake near Benbrook, TX--Continued



TRINITY RIVER BASIN

08047000 Clear Fork Trinity River near Benbrook, TX

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

DRAINAGE AREA.--431 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 604.22 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges and those from Feb. 24 to Mar. 24 and May 30 to June 20, which are poor. Since water year 1953, at least 10% of contributing drainage area has been regulated. No flow at times most years.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1948-52) prior to regulation by Benbrook Lake, 105 ft³/s (76,070 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1948-52).--Maximum discharge, 82,900 ft³/s, May 17, 1949, gage height, 28.72 ft from rating curve extended above 11,000 ft³/s on basis of velocity-area studies and slope-area measurement of 82,900 ft³/s; no flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.2	10	1.6	2.9	33	37	2.4	1.9	69	5.5	7.8
2	0.69	3.0	12	1.6	2.4	31	37	2.3	2.4	66	5.2	7.4
3	0.68	3.7	19	1.6	3.6	97	38	2.7	2.5	63	5.5	7.7
4	2.1	2.8	5.0	1.9	3.3	168	41	2.6	3.4	63	4.4	7.7
5	3.7	3.2	1.8	2.2	3.3	263	37	2.5	7.2	63	3.6	7.4
6	3.5	2.9	1.8	2.1	6.4	339	37	2.8	6.3	63	5.0	7.3
7	3.2	3.1	2.3	1.9	2.3	197	35	2.9	6.7	62	26	7.5
8	0.85	3.3	3.9	2.4	2.2	3.8	34	3.7	11	58	67	5.8
9	5.7	5.8	22	2.9	2.2	3.3	33	3.2	11	54	73	6.2
10	0.91	7.8	2.5	2.9	2.2	2.9	20	3.2	12	54	66	5.7
11	0.95	9.4	2.3	2.8	2.9	2.5	7.6	3.0	16	54	36	23
12	0.95	14	2.4	4.0	61	2.1	7.0	2.7	14	54	8.3	14
13	1.0	18	2.2	2.2	81	1.9	6.5	2.9	9.5	54	9.9	7.1
14	1.0	20	2.2	1.9	38	45	6.6	2.5	2.3	55	9.9	11
15	0.90	16	2.7	2.2	6.4	119	5.8	2.4	4.5	55	9.1	7.1
16	0.61	2.1	3.9	1.6	6.1	116	4.9	2.8	16	55	8.5	6.7
17	1.2	2.2	4.6	2.2	6.2	112	4.9	2.5	48	55	7.7	6.7
18	38	5.2	5.1	2.2	5.9	92	5.9	2.5	53	54	8.3	51
19	10	3.7	3.8	2.5	13	50	5.4	2.1	48	54	7.3	12
20	e1.5	6.2	5.4	2.5	44	47	4.6	3.8	46	55	6.5	18
21	e1.4	7.2	5.8	3.0	58	44	4.7	2.4	48	54	6.9	17
22	2.2	5.5	4.8	2.6	39	43	3.5	1.5	50	54	7.2	17
23	1.4	5.5	15	1.9	30	41	5.8	1.2	46	57	7.1	17
24	2.2	11	2.4	2.7	452	38	4.0	1.2	44	59	7.2	18
25	1.6	15	1.7	2.9	738	38	3.4	2.6	55	59	6.6	18
26	1.4	13	1.7	2.8	720	38	3.3	1.2	66	60	14	18
27	1.6	14	1.6	2.7	704	39	3.1	0.90	66	60	7.6	18
28	1.8	10	1.7	2.3	254	39	2.5	0.85	68	29	8.3	18
29	2.5	12	1.7	2.3	---	38	2.4	0.81	67	4.6	8.7	18
30	1.9	11	6.7	3.3	---	38	2.4	1.1	67	4.4	9.4	18
31	2.1	---	1.8	3.3	---	38	---	1.4	---	4.6	11	---
MEAN	3.19	7.96	5.15	2.42	118	69.7	14.8	2.28	30.0	51.8	15.1	13.5
MAX	38	20	22	4.0	738	339	41	3.8	68	69	73	51
MIN	0.61	2.1	1.6	1.6	2.2	1.9	2.4	0.81	1.9	4.4	3.6	5.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003z, BY WATER YEAR (WY)

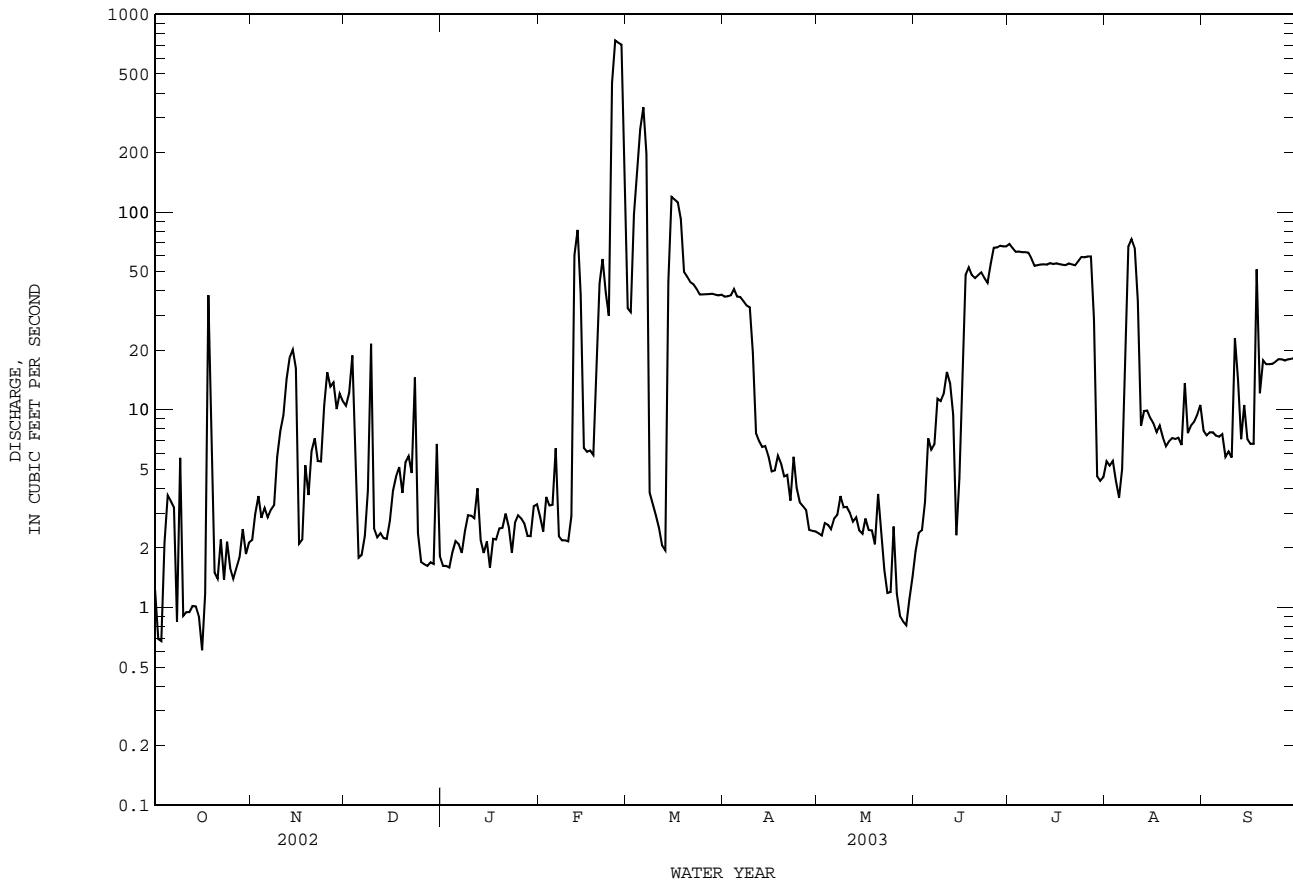
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
MEAN	22.5	86.7	56.0	77.8	90.0	185	119	213	203	56.9	24.8	17.6
MAX	215	1479	680	1845	792	1734	881	2351	1804	1070	198	164
(WY)	1994	1992	1992	1992	1992	1997	1977	1990	1957	1989	1979	1962
MIN	0.000	0.053	0.042	0.000	0.000	0.13	0.10	0.000	0.000	0.029	0.000	0.000
(WY)	1953	1971	1954	1953	1953	1953	1959	1959	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2004 WATER YEAR	FOR 2005 WATER YEAR	FOR 2006 WATER YEAR	FOR 2007 WATER YEAR	FOR 2008 WATER YEAR	FOR 2009 WATER YEAR	FOR 2010 WATER YEAR	FOR 2011 WATER YEAR	FOR 2012 WATER YEAR	FOR 2013 WATER YEAR	
ANNUAL MEAN	78.6	27.2	95.9	51.4	1992	0.27	1953	1160	Mar 26	738	Feb 25	6320	May 3 1990
HIGHEST ANNUAL MEAN													
LOWEST ANNUAL MEAN													
HIGHEST DAILY MEAN													
LOWEST DAILY MEAN	0.00	May 7	0.61	Oct 16	0.00	Oct 1 1952	0.00	Oct 1 1952	0.00	Oct 1 1952	0.00	Oct 1 1952	
ANNUAL SEVEN-DAY MINIMUM	0.35	Apr 28	0.90	Oct 10	0.00	Oct 1 1952	0.00	Oct 1 1952	0.00	Oct 1 1952	0.00	Oct 1 1952	
MAXIMUM PEAK FLOW			820	Feb 24	6740	May 3 1990	14.71	May 3 1990	191	191	191	191	
MAXIMUM PEAK STAGE			6.04	Feb 24	14.71	May 3 1990	0.10	0.10	0.10	0.10	0.10	0.10	
10 PERCENT EXCEEDS	55		58		191		6.8		6.8		6.8		
50 PERCENT EXCEEDS	5.0		6.2		6.8		0.10		0.10		0.10		
90 PERCENT EXCEEDS	0.90		1.8		0.10								

e Estimated

z Period of regulated streamflow.

08047000 Clear Fork Trinity River near Benbrook, TX--Continued



TRINITY RIVER BASIN

08047050 Marys Creek at Benbrook, TX

LOCATION.--Lat 32°41'42", long 97°26'49", Tarrant County, Hydrologic Unit 12030102, near left end of upstream side of bridge, 0.75 mi north of I-20 on Winscott Road in Benbrook, and 0.25 mi upstream from confluence with Clear Fork Trinity River.

DRAINAGE AREA.--24 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 604.97 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. Low flow is affected at times by diversions from small dams upstream. No flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.99	0.34	34	6.8	68	17	14	2.6	2.5	1.3	2.1
2	0.07	2.2	0.33	27	6.7	64	20	16	2.3	1.2	1.2	3.9
3	0.08	3.8	30	19	6.8	60	27	15	4.0	0.19	0.93	3.4
4	0.05	2.9	20	18	5.2	56	46	9.5	7.3	0.19	0.95	2.6
5	0.05	2.0	5.4	17	13	51	22	11	34	0.21	0.91	2.8
6	0.06	0.69	2.5	15	42	49	23	15	13	0.87	0.77	2.7
7	47	0.45	2.3	13	18	48	13	10	3.2	0.75	0.66	2.2
8	1.9	0.59	12	12	9.6	47	12	12	22	0.55	0.47	1.2
9	43	0.27	122	13	9.3	43	8.6	12	7.3	0.68	31	1.6
10	0.34	0.25	50	12	8.9	44	11	8.8	4.3	3.1	2.1	2.4
11	0.12	0.22	33	10	8.6	41	9.5	6.1	5.0	3.2	0.61	71
12	0.07	0.31	30	23	8.6	39	13	6.1	48	1.5	1.1	61
13	0.04	0.27	22	21	9.9	31	14	7.2	94	1.1	26	18
14	0.03	0.30	15	16	23	33	15	6.5	27	1.3	4.2	51
15	0.12	0.26	16	14	17	33	15	8.4	40	1.2	0.84	22
16	0.04	0.18	16	12	13	35	14	12	16	0.98	0.67	12
17	1.1	0.57	15	9.0	9.5	31	12	11	15	0.68	0.92	21
18	140	1.1	13	8.2	11	70	14	10	7.4	0.89	0.92	e43
19	80	0.50	14	8.2	7.2	41	21	10	6.4	1.1	0.88	e19
20	41	0.27	12	8.4	61	26	16	45	5.2	1.1	0.43	20
21	4.8	0.16	12	8.5	205	21	14	26	6.5	0.82	0.24	7.7
22	5.8	0.20	11	8.8	276	31	19	11	4.0	1.4	0.31	5.1
23	1.4	0.20	94	7.8	102	26	38	8.7	3.1	1.5	0.12	4.0
24	9.8	0.27	39	7.5	78	22	51	13	2.3	0.58	0.12	2.8
25	1.7	0.55	20	8.3	75	20	23	40	3.8	0.60	0.09	2.1
26	0.72	0.27	16	8.3	90	19	17	14	7.7	0.71	0.44	1.7
27	0.59	0.20	13	8.4	96	20	6.3	14	4.4	0.74	0.29	1.1
28	0.79	0.24	10	8.2	81	16	4.9	18	2.6	0.72	0.45	e0.60
29	0.33	0.36	10	9.2	---	15	13	20	2.1	0.68	0.24	e0.26
30	0.21	0.40	51	8.1	---	14	16	15	2.3	0.82	28	e0.18
31	0.10	---	55	7.2	---	13	---	22	---	1.4	13	---
TOTAL	381.40	20.97	761.87	400.1	1298.1	1127	545.3	447.3	402.8	33.26	120.16	388.44
MEAN	12.3	0.70	24.6	12.9	46.4	36.4	18.2	14.4	13.4	1.07	3.88	12.9
MAX	140	3.8	122	34	276	70	51	45	94	3.2	31	71
MIN	0.03	0.16	0.33	7.2	5.2	13	4.9	6.1	2.1	0.19	0.09	0.18
AC-FT	757	42	1510	794	2570	2240	1080	887	799	66	238	770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	2003
MEAN	5.63	9.87	13.3	17.2	50.6	50.4
MAX	12.3	32.7	24.6	50.2	181	127
(WY)	2003	2001	2003	2001	2001	2002
MIN	1.34	0.70	3.73	2.36	6.80	11.1
(WY)	2002	2003	2000	2000	2000	1999

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

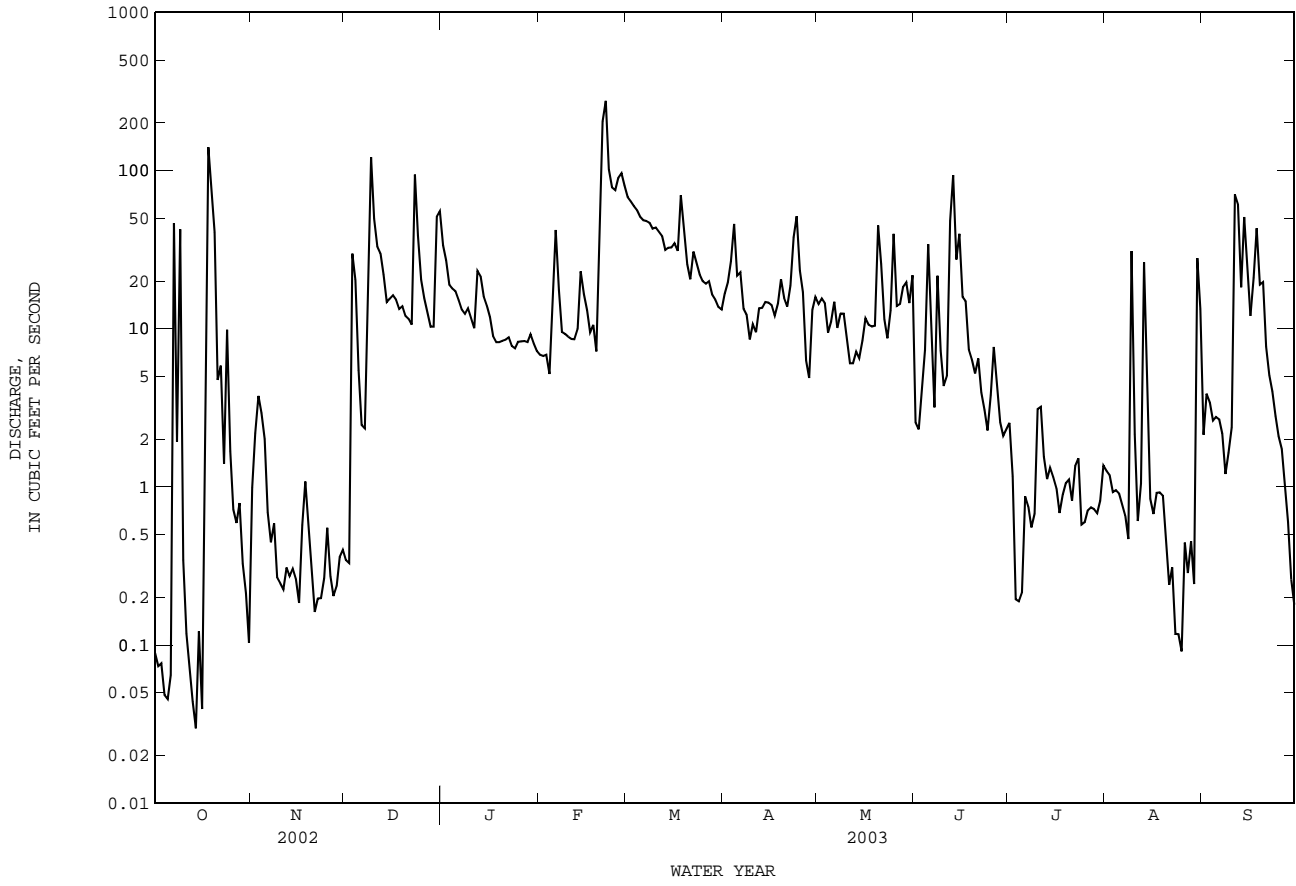
FOR 2003 WATER YEAR

WATER YEARS 1998 - 2003

ANNUAL TOTAL	6312.15	5926.70		
ANNUAL MEAN	17.3	16.2	21.5	
HIGHEST ANNUAL MEAN			42.5	2001
LOWEST ANNUAL MEAN			14.8	2002
HIGHEST DAILY MEAN	1120	Mar 19	276	Feb 22
LOWEST DAILY MEAN	0.00	Aug 20	0.03	Oct 14
ANNUAL SEVEN-DAY MINIMUM	0.01	Aug 20	0.11	Oct 10
MAXIMUM PEAK FLOW			672	Feb 22
MAXIMUM PEAK STAGE			3.29	Feb 22
ANNUAL RUNOFF (AC-FT)	12520		11760	
10 PERCENT EXCEEDS	34		43	
50 PERCENT EXCEEDS	2.7		8.5	4.5
90 PERCENT EXCEEDS	0.04		0.27	0.08

e Estimated

08047050 Marys Creek at Benbrook, TX--Continued



TRINITY RIVER BASIN

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, 5.0 mi downstream from Marys Creek, and 10.0 mi downstream from Benbrook Dam.

DRAINAGE AREA.--518 mi².

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 NGVD of 1929. 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.--No estimated daily discharges. Records good. Since water year 1953, at least 10% of contributing drainage area has been regulated. 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 for municipal use.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--28 years (water years 1925-52) prior to regulation by Benbrook Lake, 112 ft³/s (81,140 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1924-52).--Maximum discharge, 107,000 ft³/s, May 17, 1949, gage height, 28.20 ft, present datum, from rating curve extended above 16,000 ft³/s on basis of contracted-opening measurement of 107,000 ft³/s. No flow at times many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 25, 1922, reached a stage of 27.5 ft, present datum, discharge, 74,300 ft³/s, by slope-area measurement of peak flow; data furnished by Fort Worth city engineer. Maximum stage since at least 1900, that of May 17, 1949, at present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	16	9.8	47	22	133	53	16	6.9	23	3.7	38
2	8.9	25	9.9	39	23	129	52	15	5.5	27	2.6	14
3	6.8	38	129	37	22	171	56	18	4.4	21	2.0	10
4	4.7	25	121	37	20	321	205	16	5.7	19	1.8	9.7
5	3.2	32	27	37	32	419	65	14	66	22	3.5	9.0
6	3.6	19	17	39	120	571	63	11	28	23	6.6	8.6
7	75	16	15	38	36	446	53	12	16	22	3.4	6.6
8	41	14	34	38	29	61	49	13	49	95	10	6.1
9	280	13	574	39	27	57	45	13	20	24	260	5.6
10	33	11	79	34	25	53	43	13	12	7.1	46	5.7
11	19	9.6	47	32	22	55	28	11	13	11	47	376
12	13	8.8	40	61	42	55	32	13	200	14	39	227
13	9.7	13	37	42	89	57	29	14	509	12	76	38
14	8.9	22	33	36	108	80	26	12	46	10	39	116
15	8.4	22	31	33	39	279	24	12	182	8.0	19	31
16	7.9	16	30	32	32	278	24	17	30	12	13	20
17	7.3	9.7	31	27	29	280	20	14	45	12	9.6	16
18	975	10	31	26	29	442	22	9.9	40	11	7.6	310
19	505	10	28	27	27	105	23	10	39	10	1.5	130
20	102	10	23	27	314	81	20	176	33	8.6	0.78	40
21	41	9.3	22	26	666	74	17	66	34	12	0.67	35
22	56	8.9	21	24	685	111	19	33	34	6.5	1.4	33
23	31	12	306	22	169	101	74	18	31	0.20	6.4	30
24	55	11	86	21	495	79	66	16	27	0.00	5.9	27
25	37	9.9	42	22	1020	73	21	182	17	0.35	5.1	29
26	23	11	41	25	1070	70	18	22	28	4.2	6.2	31
27	19	10	40	27	1080	66	17	16	23	5.4	30	28
28	21	11	37	25	583	60	14	12	19	21	9.4	27
29	23	9.9	37	23	---	58	14	10	18	16	5.9	25
30	17	10	222	25	---	59	26	10	21	2.8	11	25
31	15	---	93	23	---	59	---	7.8	---	2.8	52	---
TOTAL	2458.6	443.1	2293.7	991	6855	4883	1218	822.7	1602.5	462.95	726.05	1707.3
MEAN	79.3	14.8	74.0	32.0	245	158	40.6	26.5	53.4	14.9	23.4	56.9
MAX	975	38	574	61	1080	571	205	182	509	95	260	376
MIN	3.2	8.8	9.8	21	20	53	14	7.8	4.4	0.00	0.67	5.6
AC-FT	4880	879	4550	1970	13600	9690	2420	1630	3180	918	1440	3390

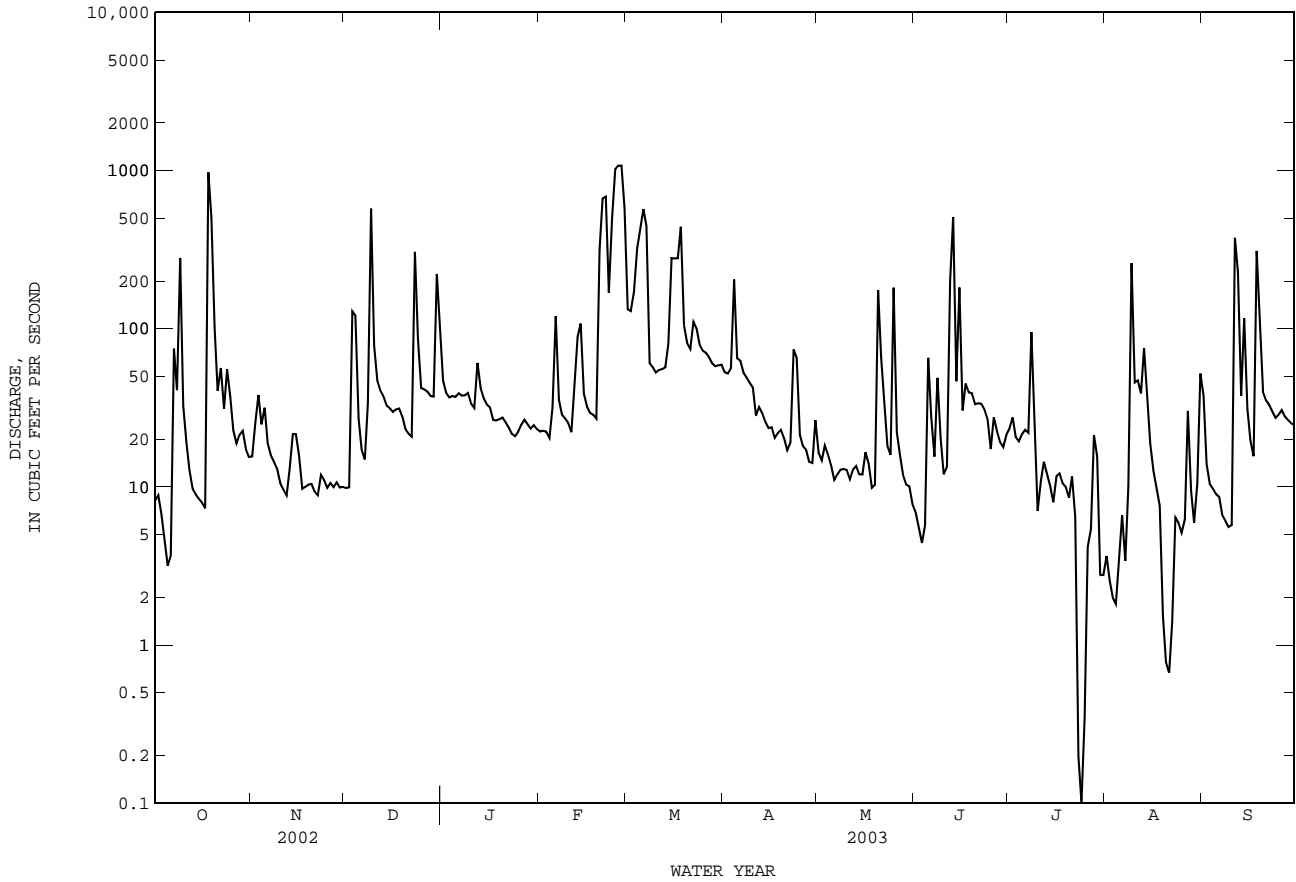
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003z, BY WATER YEAR (WY)

MEAN	56.5	106	86.5	108	140	252	185	301	253	71.2	32.3	31.6
MAX	353	1555	1118	2198	1019	1838	1012	3020	2219	1300	247	245
(WY)	1994	1992	1992	1992	1992	1997	1977	1990	1989	1989	1979	1962
MIN	0.000	0.84	1.68	2.28	2.84	0.91	3.12	3.41	0.27	0.75	0.54	0.28
(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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003z	
ANNUAL TOTAL	52870.1		24463.90		135	
ANNUAL MEAN	145		67.0		660	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					1954	
HIGHEST DAILY MEAN	3350	Apr 7	1080	Feb 27	11000	Mar 11 1990
LOWEST DAILY MEAN	2.3	Aug 6	0.00	Jul 24	0.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 2	2.7	Jul 30	0.00	Oct 1 1952
MAXIMUM PEAK FLOW			4950	Oct 18	20900	May 2 1990
MAXIMUM PEAK STAGE			11.91	Oct 18	16.80	May 2 1990
ANNUAL RUNOFF (AC-FT)	104900		48520		97860	
10 PERCENT EXCEEDS	399		129		297	
50 PERCENT EXCEEDS	25		25		17	
90 PERCENT EXCEEDS	6.3		7.0		1.2	

z Period of regulated streamflow.



TRINITY RIVER BASIN

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 mi².

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 Sept. 1976. Biochemical data: Oct. 1967 to Sept. 1976.

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

GAGE.--Water-stage recorder and concrete dam control with angle-iron-crested notch for flow below 50 ft³/s. Datum of gage is 519.24 ft above NGVD of 1929. 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. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. The city of Fort Worth diverts water upstream of 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 stages have been affected by levee construction, levee breaks and channel rectification. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1866, that of May 17, 1949.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

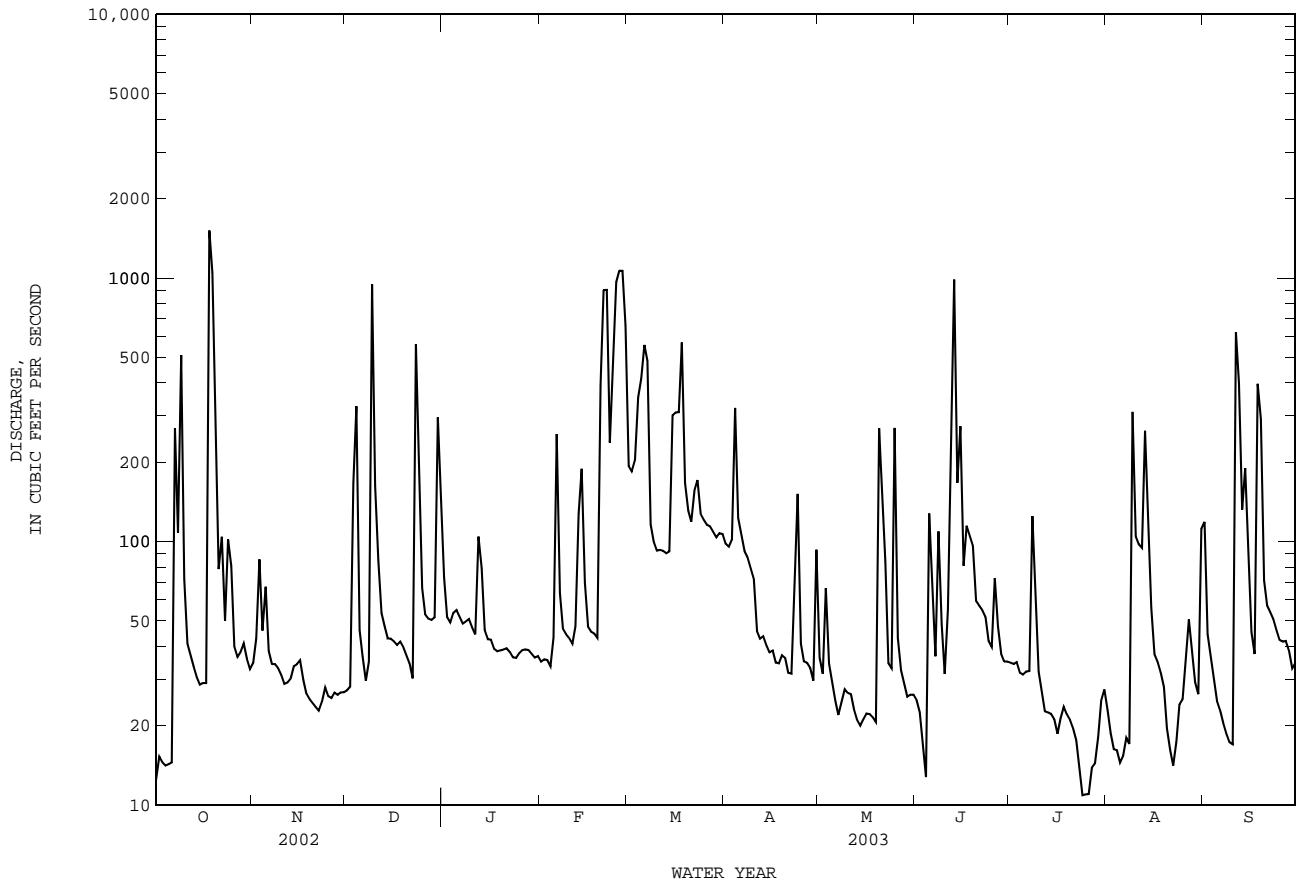
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	35	27	73	35	193	98	36	25	35	23	119
2	15	43	28	52	36	184	96	32	23	34	19	45
3	15	86	167	49	36	203	102	67	17	35	16	36
4	14	46	326	54	34	352	321	34	13	32	16	30
5	14	67	46	55	43	414	123	29	128	31	14	25
6	15	39	37	52	256	557	107	25	63	32	15	23
7	269	34	30	49	64	484	92	22	37	32	18	20
8	108	34	35	50	47	116	87	25	109	125	17	19
9	510	33	945	51	44	100	79	28	49	69	310	17
10	72	31	163	47	43	92	72	27	31	32	105	17
11	41	29	85	44	41	93	46	26	55	27	98	623
12	37	29	54	104	48	92	43	23	294	23	95	399
13	34	30	48	79	128	90	44	21	986	22	263	132
14	31	34	43	46	189	92	41	20	167	22	110	190
15	29	34	43	43	70	301	38	21	274	21	56	105
16	29	35	42	42	48	309	39	22	81	19	37	45
17	29	30	41	39	46	310	35	22	115	21	35	37
18	1510	27	42	38	45	569	34	22	105	24	32	397
19	1050	25	40	39	43	167	37	21	97	22	28	292
20	303	24	37	39	392	131	36	269	60	22	20	71
21	79	24	34	39	901	119	32	148	57	20	16	57
22	104	23	30	38	901	156	32	84	55	18	14	54
23	50	25	560	36	237	171	81	35	52	14	17	51
24	102	28	182	36	433	127	152	33	42	11	24	46
25	81	26	67	38	965	121	41	270	40	11	25	42
26	40	25	53	39	1070	116	35	43	73	11	35	42
27	37	27	51	39	1060	114	35	33	48	14	51	42
28	38	26	50	39	660	109	33	29	37	14	39	39
29	41	27	52	38	---	104	30	26	35	18	29	33
30	36	27	296	36	---	107	93	26	35	25	26	35
31	33	---	161	37	---	107	---	26	---	27	112	---
TOTAL	4778	1003	3815	1460	7915	6200	2134	1545	3203	862	1715	3083
MEAN	154	33.4	123	47.1	283	200	71.1	49.8	107	27.8	55.3	103
MAX	1510	86	945	104	1070	569	321	270	986	125	310	623
MIN	12	23	27	36	34	90	30	20	13	11	14	17
AC-FT	9480	1990	7570	2900	15700	12300	4230	3060	6350	1710	3400	6120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	MEAN	282	278	265	241	388	536	603	1103	758	235	113	148
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	0.12	3.64	5.02	6.08	5.57	4.72	7.71	15.2	5.73	1.33	0.000	0.000	
(WY)	1940	1956	1935	1930	1940	1940	1930	1959	1954	1956	1956	1930	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1921 - 2003	
ANNUAL TOTAL	84401.9		37713			
ANNUAL MEAN	231		103		412	
HIGHEST ANNUAL MEAN					1823	
LOWEST ANNUAL MEAN					15.6	
HIGHEST DAILY MEAN	4920	Mar 19	1510	Oct 18	47300	Apr 25 1922
LOWEST DAILY MEAN	2.9	Aug 7	11	Jul 24	0.00	Aug 2 1924
ANNUAL SEVEN-DAY MINIMUM	4.6	Aug 3	13	Jul 22	0.00	Jul 24 1925
MAXIMUM PEAK FLOW			7130	Oct 18	85000	Apr 25 1922
MAXIMUM PEAK STAGE			4.20	Oct 18	25.91	May 17 1949
ANNUAL RUNOFF (AC-FT)	167400		74800		298700	
10 PERCENT EXCEEDS	902		265		1060	
50 PERCENT EXCEEDS	34		41		40	
90 PERCENT EXCEEDS	13		21		6.2	

08048000 West Fork Trinity River at Fort Worth, TX--Continued



TRINITY RIVER BASIN

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 mi².

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

Water-quality records.--Chemical data: Oct. 1976 to Sept. 1999. Biochemical data: Oct. 1976 to Sept. 1999.
Specific conductance: Oct. 1976 to Sept. 2002. pH: Oct. 1976 to Sept. 2002. Water temperature: Oct 1976 to Sept. 2002.
Dissolved oxygen: Oct. 1976 to Sept. 2002.

GAGE.--Water-stage recorder. Datum of gage is 478.70 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Oct. 1976, at least 10% of contributing drainage area has been regulated. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e19	45	29	196	74	302	72	126	219	67	51	237
2	27	71	32	170	74	257	68	94	183	66	51	109
3	28	157	154	154	78	229	73	145	45	66	41	84
4	27	97	610	146	69	326	428	112	29	64	37	72
5	26	128	128	147	79	346	199	92	177	60	37	65
6	27	74	78	128	392	492	127	83	196	61	35	57
7	221	54	63	66	164	508	80	75	106	59	51	51
8	201	47	71	60	108	183	65	71	174	80	53	48
9	860	46	1730	61	104	123	65	79	163	191	274	47
10	152	44	388	66	101	114	67	81	93	79	258	45
11	92	38	208	64	97	112	59	86	151	56	151	1050
12	89	30	168	114	103	118	45	82	522	45	277	764
13	69	28	121	170	150	118	46	79	1880	43	633	312
14	61	36	100	92	239	113	43	79	475	41	235	237
15	55	50	90	82	137	258	39	80	472	27	129	214
16	20	53	87	82	68	298	41	85	250	34	89	113
17	26	51	79	87	60	297	39	78	145	32	79	90
18	2240	43	76	71	55	819	37	76	142	39	74	570
19	2010	37	72	62	51	297	41	75	134	42	64	683
20	593	36	66	53	471	167	42	338	114	43	55	92
21	197	36	62	54	1570	138	34	318	102	46	45	59
22	147	34	54	51	1620	162	45	234	99	53	34	55
23	104	29	833	53	379	247	84	119	93	61	31	51
24	124	34	355	56	381	114	262	103	84	35	27	48
25	161	37	168	57	1290	100	96	748	79	24	31	47
26	75	34	121	62	1480	86	69	237	99	22	88	47
27	61	33	112	70	1520	83	62	218	105	24	165	48
28	63	35	86	74	1130	72	67	217	82	27	84	47
29	71	34	85	75	---	64	60	204	73	31	68	44
30	51	32	628	73	---	69	303	194	66	40	78	44
31	41	---	365	74	---	75	---	218	---	50	166	---
TOTAL	7938	1503	7219	2770	12044	6687	2758	4826	6552	1608	3491	5430
MEAN	256	50.1	233	89.4	430	216	91.9	156	218	51.9	113	181
MAX	2240	157	1730	196	1620	819	428	748	1880	191	633	1050
MIN	19	28	29	51	51	64	34	71	29	22	27	44
AC-FT	15750	2980	14320	5490	23890	13260	5470	9570	13000	3190	6920	10770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

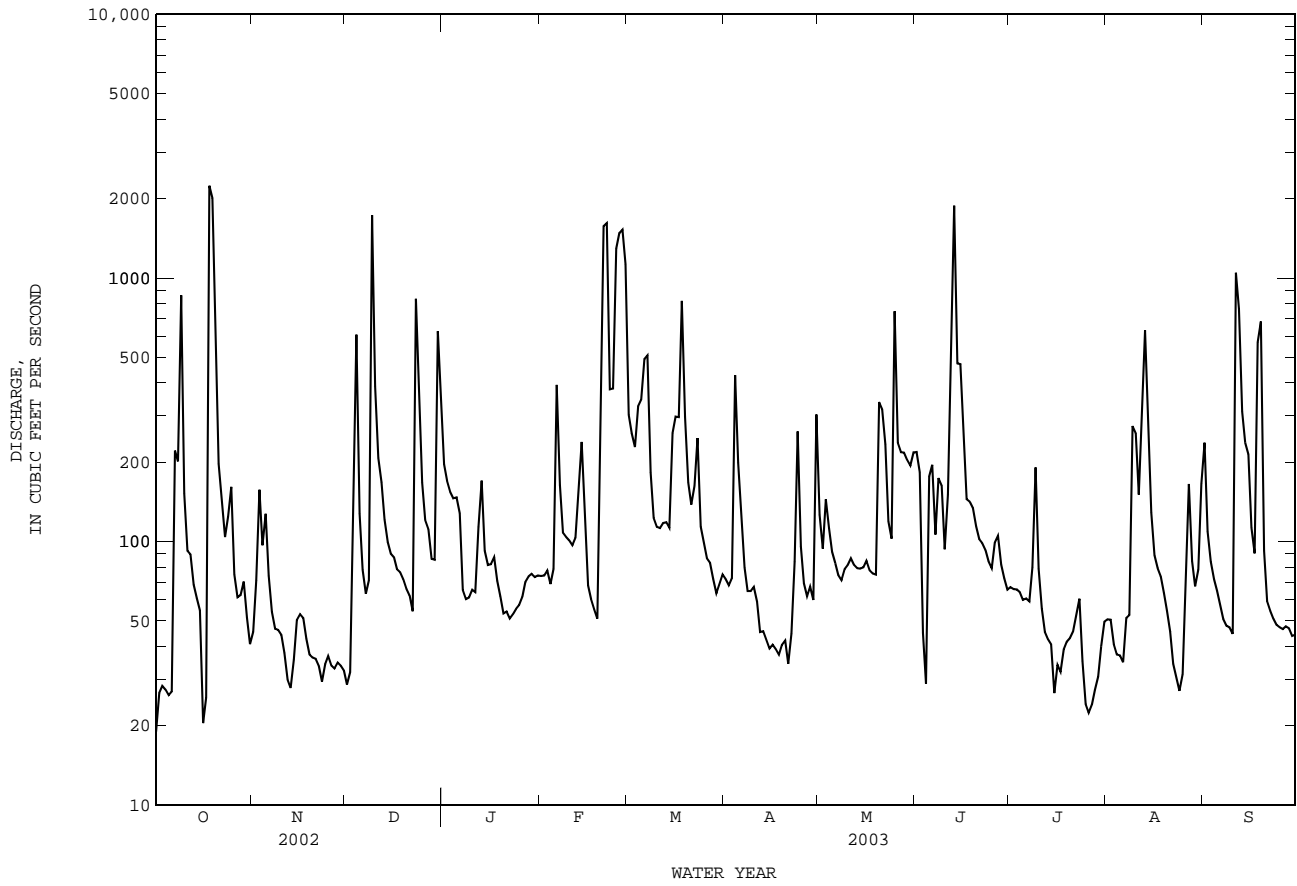
MEAN	387	430	433	311	579	946	668	1505	1102	213	103	88.6
MAX	4881	3878	6459	4067	4288	3655	5668	12540	9448	1654	557	216
(WY)	1982	1982	1992	1992	1997	1998	1990	1990	1989	1982	1995	1980
MIN	9.82	23.8	13.7	30.2	33.5	43.9	35.3	20.2	22.4	5.67	9.21	9.27
(WY)	1978	1980	1978	1978	1996	1986	1983	1996	1978	1978	1985	1984

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1977 - 2003

ANNUAL TOTAL	122732.7	62826	
ANNUAL MEAN	336	172	564
HIGHEST ANNUAL MEAN			2071
LOWEST ANNUAL MEAN			40.1
HIGHEST DAILY MEAN	5830	Mar 19	2240
LOWEST DAILY MEAN	2.1	Sep 26	19
ANNUAL SEVEN-DAY MINIMUM	3.3	Sep 24	29
MAXIMUM PEAK FLOW			8810
MAXIMUM PEAK STAGE			21.76
ANNUAL RUNOFF (AC-FT)	243400	124600	408400
10 PERCENT EXCEEDS	1260	341	1450
50 PERCENT EXCEEDS	80	79	57
90 PERCENT EXCEEDS	26	36	16

e Estimated

08048543 West Fork Trinity River at Beach Street, Fort Worth, TX--Continued



TRINITY RIVER BASIN

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 mi².

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

Water-quality records.--Chemical data: Oct. 1989 to Aug. 2002. Biochemical data: Oct. 1989 to Aug. 2002. Specific conductance: Oct. 1989 to Sept. 1990. pH: Oct. 1989 to Sept. 1990. Water temperature: Oct. 1989 to Sept. 1990. Dissolved oxygen: Oct. 1989 to Sept. 1990.

REVISED RECORDS.--WRD-TX-00-2: 2000 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 589.93 ft above NGVD of 1929 (Tarrant County Public Works Department reference mark). Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No flow at times. No known regulation or diversions.

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 downstream station, Village Creek at Kennedale (station 08048980). Flood of May 18, 1989, may have equalled, or slightly exceeded, the indicated known maximum stage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.02	8.0	0.08	85	4.4	2.5	0.11	2.2	0.00	31
2	0.00	0.01	0.01	2.9	0.08	48	5.1	0.77	0.05	1.2	0.00	6.7
3	0.00	2.8	28	1.3	0.11	29	5.3	25	0.02	2.5	0.00	2.0
4	0.00	0.67	78	0.83	0.06	24	49	5.0	0.02	3.7	0.00	0.15
5	0.00	6.4	3.6	0.86	0.14	17	13	3.2	50	3.4	0.00	0.02
6	0.00	0.04	0.02	0.05	51	12	6.2	2.5	52	3.2	0.00	0.00
7	0.00	0.00	0.00	0.08	7.9	10	4.9	1.7	14	2.8	0.00	0.00
8	0.00	0.00	0.00	0.02	3.2	9.1	4.0	1.1	12	2.3	0.00	0.00
9	45	0.00	425	0.01	2.3	7.6	3.6	0.48	9.5	1.8	7.1	0.00
10	3.0	0.00	84	0.01	1.8	6.9	3.1	0.47	3.9	1.7	16	0.00
11	0.00	0.01	16	0.00	1.6	6.6	3.1	0.33	2.6	1.4	3.5	80
12	0.00	0.19	5.6	15	1.9	7.2	3.4	0.10	132	0.42	28	92
13	0.00	0.16	2.8	13	1.8	6.4	3.1	0.22	296	0.36	69	18
14	0.00	0.02	0.57	3.3	12	5.7	2.6	4.4	109	0.87	18	25
15	0.00	0.34	0.03	1.9	6.9	5.2	2.3	7.1	80	0.43	10	19
16	0.00	0.19	0.01	1.8	3.9	5.0	1.7	3.8	30	0.16	3.1	4.5
17	0.00	0.07	0.02	0.07	2.6	5.0	1.8	2.0	11	0.05	0.83	1.7
18	281	0.03	0.01	0.14	2.4	121	1.2	0.94	6.5	0.01	0.04	145
19	248	0.07	0.61	0.21	2.3	68	2.5	0.79	4.4	0.00	0.01	e232
20	40	0.18	0.27	0.05	48	18	1.9	28	3.6	0.00	0.00	e27
21	2.9	0.30	0.00	0.05	347	9.8	1.4	27	3.0	0.00	0.00	5.1
22	10	0.25	0.00	0.03	622	16	1.1	20	2.2	0.00	0.00	3.0
23	5.2	0.08	81	0.02	85	52	1.5	4.4	1.8	0.00	0.00	1.7
24	0.17	0.05	69	0.02	29	18	123	3.2	1.1	0.00	0.00	0.22
25	2.0	0.04	8.4	0.02	23	11	11	92	0.43	0.00	0.00	0.23
26	0.05	1.0	2.8	0.04	28	7.8	3.9	18	38	0.00	0.00	0.29
27	0.00	0.31	1.2	0.06	128	6.5	2.4	5.9	15	0.00	5.0	0.11
28	0.00	0.03	0.32	0.07	170	5.8	1.5	3.5	4.8	0.00	1.8	0.04
29	0.00	0.04	0.06	0.10	---	5.2	0.79	1.9	2.9	0.00	0.09	0.04
30	0.00	0.02	49	0.05	---	4.6	2.7	0.60	2.3	0.00	0.02	0.08
31	0.00	---	57	0.18	---	4.8	---	0.19	---	0.00	0.02	---
TOTAL	637.32	13.30	913.35	50.17	1582.07	638.2	271.49	267.09	888.23	28.50	162.51	694.88
MEAN	20.6	0.44	29.5	1.62	56.5	20.6	9.05	8.62	29.6	0.92	5.24	23.2
MAX	281	6.4	425	15	622	121	123	92	296	3.7	69	232
MIN	0.00	0.00	0.00	0.00	0.06	4.6	0.79	0.10	0.02	0.00	0.00	0.00
AC-FT	1260	26	1810	100	3140	1270	539	530	1760	57	322	1380

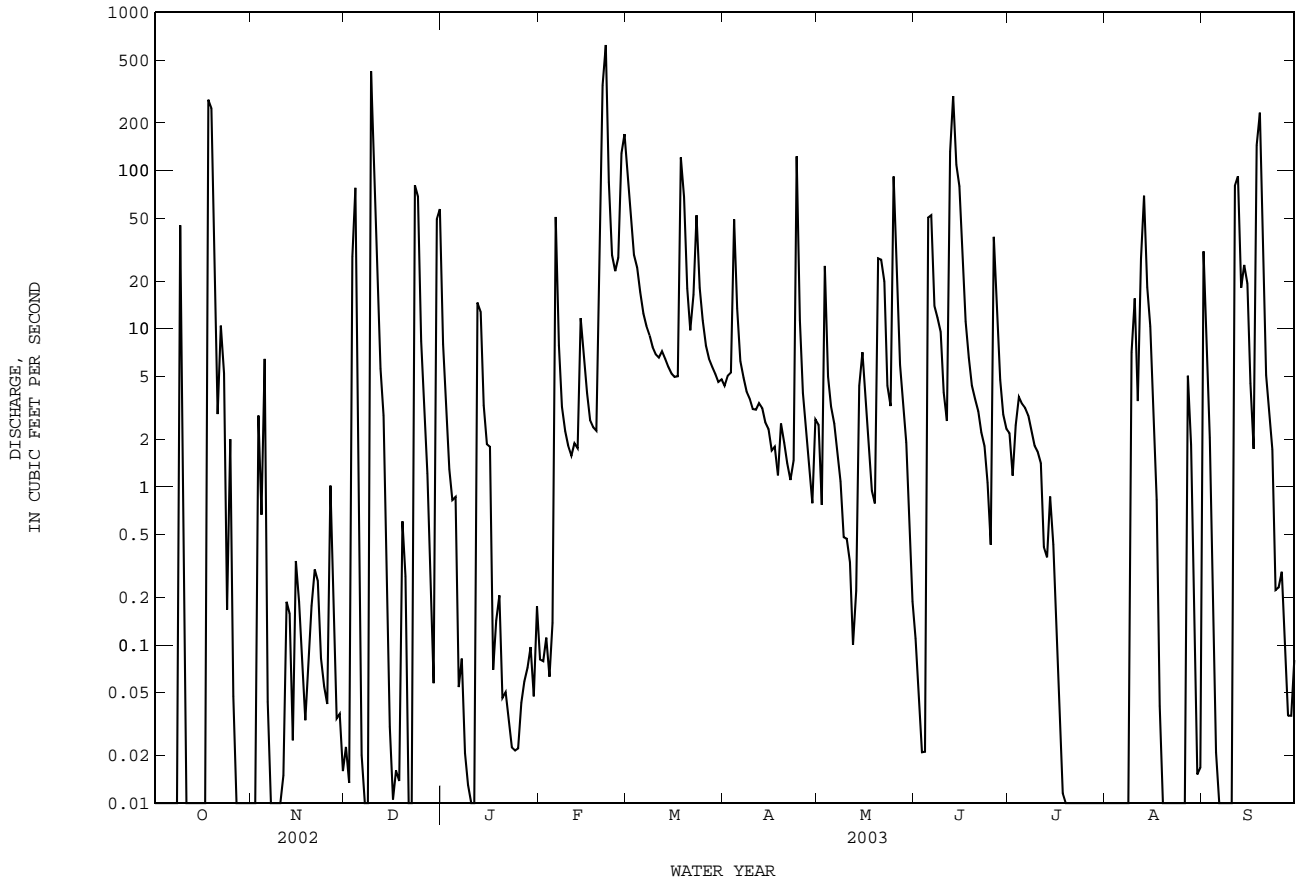
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	29.4	15.0	42.0	26.1	63.5	65.8	53.6	66.9	44.0	5.37	7.23	5.78		
MAX	240	52.1	367	117	165	197	233	339	296	14.3	37.7	23.2		
(WY)	1992	1995	1992	1992	1997	2002	1990	1990	2000	1993	2001	2003		
MIN	0.68	0.34	0.72	0.83	1.32	1.13	2.70	0.59	0.19	0.000	0.000	0.000		
(WY)	1990	2000	1991	1996	1996	1996	1996	1996	1998	1998	1998	2000		

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	20082.01		6147.11			
ANNUAL MEAN	55.0		16.8		35.2	
HIGHEST ANNUAL MEAN					92.6	
LOWEST ANNUAL MEAN					1.37	
HIGHEST DAILY MEAN	2790	Mar 19	622	Feb 22	7330	Jun 4 2000
LOWEST DAILY MEAN	0.00	Jul 23	0.00	Oct 1	0.00	Aug 18 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 23	0.00	Oct 1	0.00	Aug 25 1990
MAXIMUM PEAK FLOW			1490		11400	
MAXIMUM PEAK STAGE			7.57		21.96	
ANNUAL RUNOFF (AC-FT)	39830		12190		25530	
10 PERCENT EXCEEDS	69		42		46	
50 PERCENT EXCEEDS	3.0		1.8		3.3	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

08048970 Village Creek at Everman, TX--Continued



TRINITY RIVER BASIN

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 7.0 mi upstream from mouth.

DRAINAGE AREA.--143 mi².

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

Water-quality records.--Chemical data: Jan. 1964 to June 2002, Biochemical data: Jan. 1964 to June 2002.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Sept. 9, 1957, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. 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. 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, conservation pool storage 637,050 acre-ft) into Lake Arlington. Water is pumped from the lake to a generating plant of Texas Electric Service Company. Conservation pool storage is 38,785 acre-ft. 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. 3 was provided by the Texas Water Development Board and put into effect Oct. 1996.

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 2002 WATER YEAR.--Maximum contents, 48,740 acre-ft, Mar. 20, elevation, 555.02 ft; minimum contents, 29,240 acre-ft, Oct. 10, elevation, 544.82 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,180 acre-ft, June 13, elevation, 550.86 ft; minimum contents, 28,980 acre-ft, Aug. 9, elevation, 544.67 ft.

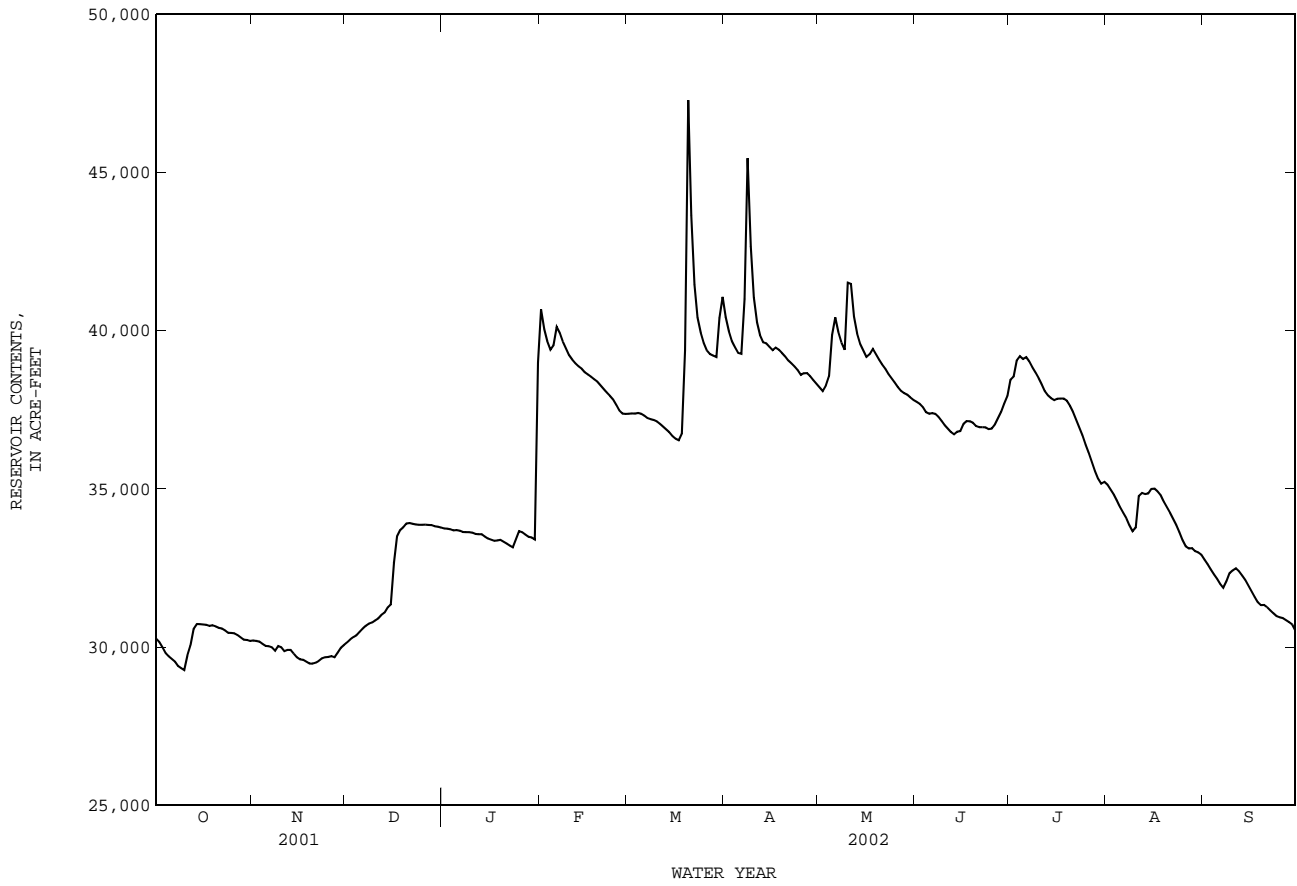
RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30270	30210	30140	33750	40670	37380	40440	38210	37750	38450	35130	32760
2	30160	30190	30240	33740	40050	37390	39990	38090	37690	38560	34980	32620
3	30000	30170	30310	33720	39670	37380	39670	38260	37590	39060	34820	32450
4	29810	30100	30370	33690	39400	37400	39470	38560	37430	39190	34630	32300
5	29710	30030	30480	33700	39540	37380	39300	39870	37380	39100	34420	32160
6	29630	30030	30580	33680	40120	37310	39270	40420	37400	39170	34250	31990
7	29540	29990	30670	33640	39920	37240	41000	39960	37370	39020	34080	31870
8	29400	29880	30740	33630	39650	37200	45450	39630	37280	38840	33850	32080
9	29330	30030	30780	33630	39430	37180	42660	39400	37150	38670	33660	32330
10	29270	29990	30840	33620	39220	37130	41050	41520	37020	38500	33780	32420
11	29740	29870	30910	33580	39080	37060	40260	41480	36900	38300	34780	32490
12	30050	29910	31020	33570	38970	36970	39860	40450	36790	38090	34870	32400
13	30580	29910	31090	33570	38870	36870	39630	39910	36720	37950	34840	32260
14	30730	29790	31250	33500	38800	36790	39600	39580	36810	37870	34860	32130
15	30720	29680	31350	33430	38680	36670	39490	39370	36830	37810	35000	31940
16	30710	29610	32670	33390	38610	36580	39390	39170	37060	37850	35010	31760
17	30700	29590	33500	33360	38540	36540	39470	39260	37140	37860	34920	31590
18	30670	29540	33700	33370	38460	36740	39400	39430	37140	37860	34800	31420
19	30690	29480	33790	33390	38390	36700	39300	39260	37090	37790	34590	31330
20	30650	29470	33910	33330	38280	47290	39190	39090	36980	37630	34420	31330
21	30610	29500	33920	33270	38160	43650	39060	38930	36950	37430	34240	31260
22	30590	29560	33900	33210	38050	41460	38970	38800	36950	37180	34050	31160
23	30530	29640	33870	33150	37950	40420	38870	38630	36940	36930	33850	31070
24	30450	29670	33860	33420	37830	39950	38760	38500	36890	36700	33630	30980
25	30440	29690	33860	33660	37660	39620	38610	38370	36900	36400	33380	30940
26	30440	29710	33870	33630	37480	39380	38650	38220	37030	36150	33180	30920
27	e30380	29680	33860	33550	37380	39260	38660	38100	37230	35860	33120	30860
28	e30310	29820	33850	33490	37370	39210	38570	38030	37440	35570	33130	30790
29	e30230	29970	33820	33460	---	39170	38440	37980	37700	35320	33030	30720
30	30220	30060	33810	33400	---	40400	38330	37890	37940	35170	32990	30530
31	30190	---	33780	38990	---	41070	---	37810	---	35220	32920	---
MEAN	30220	29830	32280	33690	38790	38630	39690	39100	37180	37600	34170	31700
MAX	30730	30210	33920	38990	40670	47290	45450	41520	37940	39190	35130	32760
MIN	29270	29470	30140	33150	37370	36540	38330	37810	36720	35170	32920	30530
(+)	545.35	545.28	547.33	550.18	549.25	551.33	549.75	549.48	549.55	548.11	546.86	545.54
(@)	-290	-130	+3720	+5210	-1620	+3700	-2740	-520	+130	-2720	-2300	-2390
CAL YR 2001	MAX 40800	MIN 27470	(@) +4550									
WTR YR 2002	MAX 47290	MIN 29270	(@) +50									

e Estimated

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

08049200 Lake Arlington at Arlington, TX--Continued



TRINITY RIVER BASIN

08049200 Lake Arlington at Arlington, TX--Continued

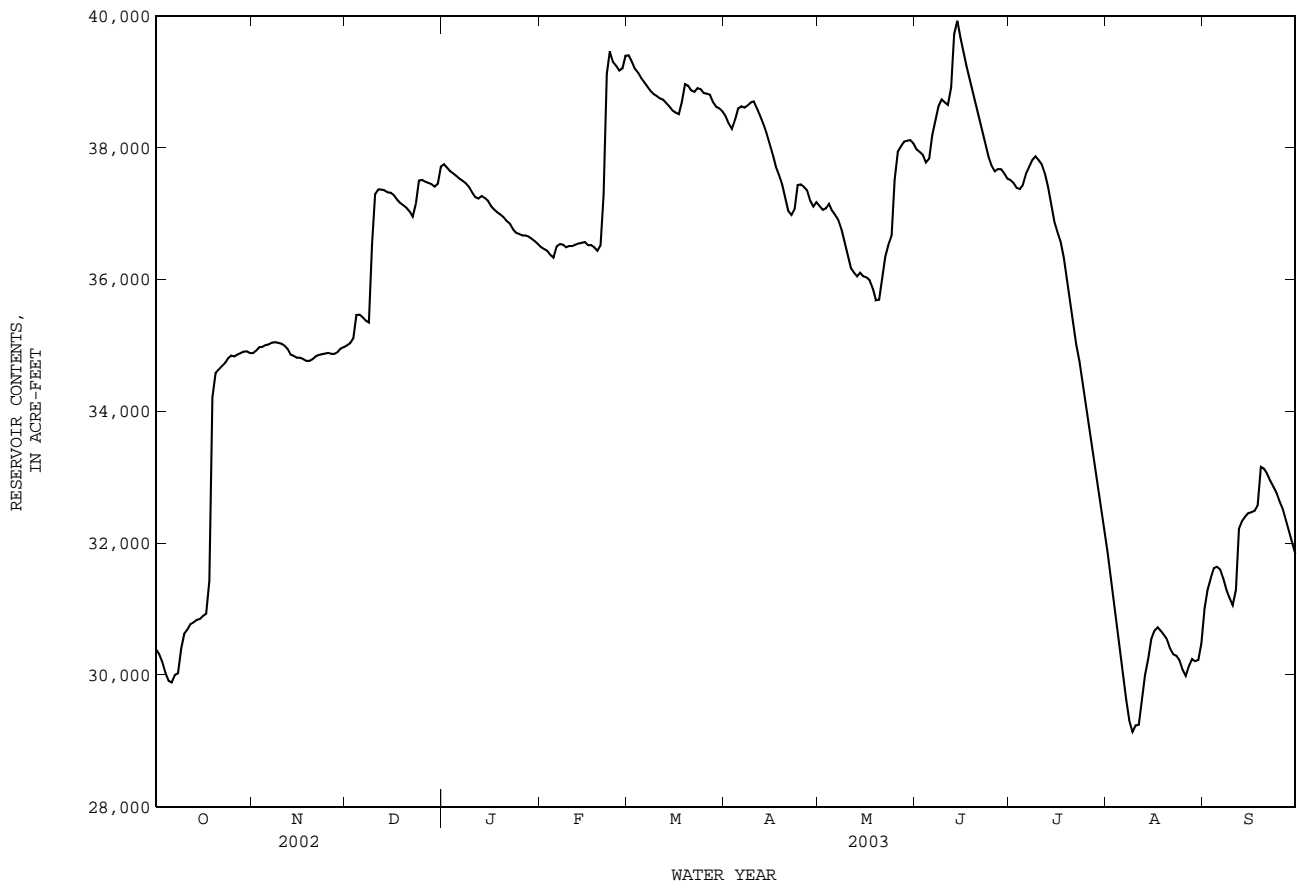
RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30390	34890	35000	37750	36490	39410	38480	37120	37980	37510	31860	31010
2	30320	34920	35040	37700	36460	39310	38370	37060	37940	37470	31470	31290
3	30200	34980	35110	37640	36440	39200	38290	37080	37890	37390	31100	31470
4	30030	34980	35470	37610	36380	39140	38430	37150	37780	37370	30730	31620
5	29910	35010	35470	37570	36330	39060	38600	37050	37840	37440	30370	31640
6	29890	35020	35430	37530	36500	39000	38630	36980	38190	37610	30000	31600
7	30000	35040	35380	37500	36540	38930	38610	36910	38410	37720	29610	31470
8	30020	35050	35350	37460	36530	38860	38640	36760	38630	37820	29310	31290
9	30400	35040	36550	37410	36490	38820	38690	36570	38730	37870	29140	31170
10	30620	35030	37300	37320	36510	38790	38710	36370	38690	37820	29240	31060
11	e30690	35000	37370	37250	e36510	38750	38600	36180	38650	37750	29250	31290
12	e30770	34950	37370	37230	e36530	38730	38490	36110	38910	37610	29620	32220
13	e30800	34860	37360	37270	e36550	38680	38370	36050	39730	37410	30000	32340
14	e30840	34840	37320	37240	e36560	38630	38240	36110	39930	37150	30250	32400
15	e30850	34820	37320	37200	36570	38570	38070	36050	39680	36890	30540	32460
16	30900	34810	37280	37120	36520	38540	37900	36030	39450	36720	30670	32470
17	30930	34790	37220	37070	36530	38510	37720	35990	39230	36580	30730	32490
18	31430	34770	37160	37020	36490	38700	37590	35870	39050	36340	30670	32570
19	34210	34770	37130	36990	36440	38970	37460	35690	38880	36000	30610	33160
20	34580	34790	37090	36950	36520	38940	37250	35700	38690	35670	30540	33130
21	34640	34840	37040	36890	37290	38870	37050	36000	38490	35340	30400	33050
22	34690	34860	36960	36850	39120	38850	36980	36360	38290	35010	30310	32950
23	34730	e34870	37160	36770	39460	38900	37070	36530	38080	34760	30290	32860
24	34810	e34880	37500	36710	39300	38890	37440	36660	37870	34460	30230	32770
25	34850	e34890	37510	36690	39250	38830	37450	37510	37720	34130	30080	32640
26	34840	34880	37490	36670	39180	38820	37410	37940	37640	33790	29990	32520
27	34870	34870	37470	36670	39210	38810	37360	38030	37680	33450	30130	32360
28	34880	34900	37450	36650	39400	38690	37200	38090	37680	33130	30240	32190
29	34910	34960	37410	36620	---	38620	37110	38110	37610	32820	30210	32010
30	34910	34980	37460	36580	---	38600	37180	38120	37530	32510	30230	31840
31	34890	---	37720	36540	---	38550	---	38070	---	32190	30480	---
MEAN	32280	34910	36770	37110	37220	38840	37910	36780	38430	35990	30270	32110
MAX	34910	35050	37720	37750	39460	39410	38710	38120	39930	37870	31860	33160
MIN	29890	34770	35000	36540	36330	38510	36980	35690	37530	32190	29140	31010
(+)	547.93	547.98	549.43	548.81	550.37	e549.87	549.15	549.61	549.33	546.46	545.51	546.27
(@)	+2440	+2490	+3240	+3610	+6470	-310	-3220	+2150	-5280	-3350	+1570	-390
CAL YR 2002	MAX 47290	MIN 29890	(@)	+3940								
WTR YR 2003	MAX 39930	MIN 29140	(@)	+1310								

e Estimated

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

08049200 Lake Arlington at Arlington, TX--Continued



TRINITY RIVER BASIN

08049500 West Fork Trinity River at Grand Prairie, TX

LOCATION.--Lat 32°47'55", long 97°01'46", Dallas County, Hydrologic Unit 12030102, on left bank median between bridges on Roy Orr Blvd, 2.0 mi upstream from Johnson Creek, and 7.2 mi upstream from Mountain Creek.

DRAINAGE AREA.--3,065 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1925 to current year.
Precipitation records: Oct. 2001 to Sept. 2002.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 405.42 ft above NGVD of 1929. Prior to Dec. 6, 1933, nonrecording gage at bridge on old channel 2,500 ft southeast of Belt Line Rd 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 5.0 mi downstream at different datum. Apr. 19 to Aug. 13, 1957, nonrecording gage at site 3.5 mi downstream and at datum 5.00 ft higher than present datum. Aug. 14, 1957 to Sept. 30, 1982, water-stage recorder at site 3.5 mi downstream and at datum 5.00 ft higher than present datum. Prior to Apr. 5, 2003, water-stage recorder at site 3.5 mi downstream (Belt Line Rd) at present datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since installation of gage in Apr. 1925, at least 10% of contributing drainage area has been regulated. 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.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	203	197	599	349	1290	322	e465	180	224	163	871
2	153	233	204	393	347	881	320	e294	182	222	160	490
3	153	332	320	351	352	791	362	e307	e174	237	158	263
4	158	279	1310	335	345	768	e637	e321	166	198	161	223
5	151	320	603	314	359	860	e755	e284	305	212	160	205
6	145	262	298	308	1060	904	e803	e259	652	271	157	187
7	630	232	247	311	778	963	e676	e246	366	224	155	178
8	553	249	248	294	465	806	e369	e247	366	341	159	177
9	1570	232	2910	293	405	492	e373	e256	518	323	177	168
10	1100	229	2100	290	394	443	e401	e257	308	310	510	163
11	319	226	689	273	382	426	e362	e251	446	223	313	1120
12	243	222	442	315	373	417	e323	e241	867	197	565	3690
13	226	211	385	468	369	441	e321	e228	e2510	185	1040	951
14	209	215	334	379	472	405	e312	e215	e1860	179	700	470
15	177	205	311	311	670	392	e298	193	e873	184	642	599
16	170	210	300	295	461	544	e300	195	862	184	300	373
17	175	213	296	303	399	551	e293	181	561	172	233	277
18	1850	219	283	311	387	959	e290	168	424	172	218	331
19	9280	213	276	317	377	1280	e293	171	376	172	205	1280
20	2880	210	268	317	571	543	e307	269	325	169	194	567
21	877	207	258	325	2560	432	e291	785	282	170	176	314
22	488	204	257	312	4190	411	e259	537	258	179	173	263
23	454	199	918	322	1850	541	e349	325	254	209	199	243
24	390	203	2040	367	1080	458	e785	230	248	208	172	226
25	433	206	659	351	1340	375	e414	2060	229	180	166	216
26	362	203	400	353	1780	364	e269	942	260	165	364	212
27	303	198	349	355	2220	361	e275	359	264	154	918	200
28	288	203	328	354	2020	352	e271	258	246	153	368	201
29	331	194	306	363	---	334	e261	228	217	157	235	200
30	298	195	659	355	---	324	e521	212	206	155	270	192
31	206	---	1710	353	---	329	---	194	---	157	632	---
TOTAL	24729	6727	19905	10587	26355	18437	11812	11178	14785	6286	10043	14850
MEAN	798	224	642	342	941	595	394	361	493	203	324	495
MAX	9280	332	2910	599	4190	1290	803	2060	2510	341	1040	3690
MIN	145	194	197	273	345	324	259	168	166	153	155	163
AC-FT	49050	13340	39480	21000	52280	36570	23430	22170	29330	12470	19920	29450

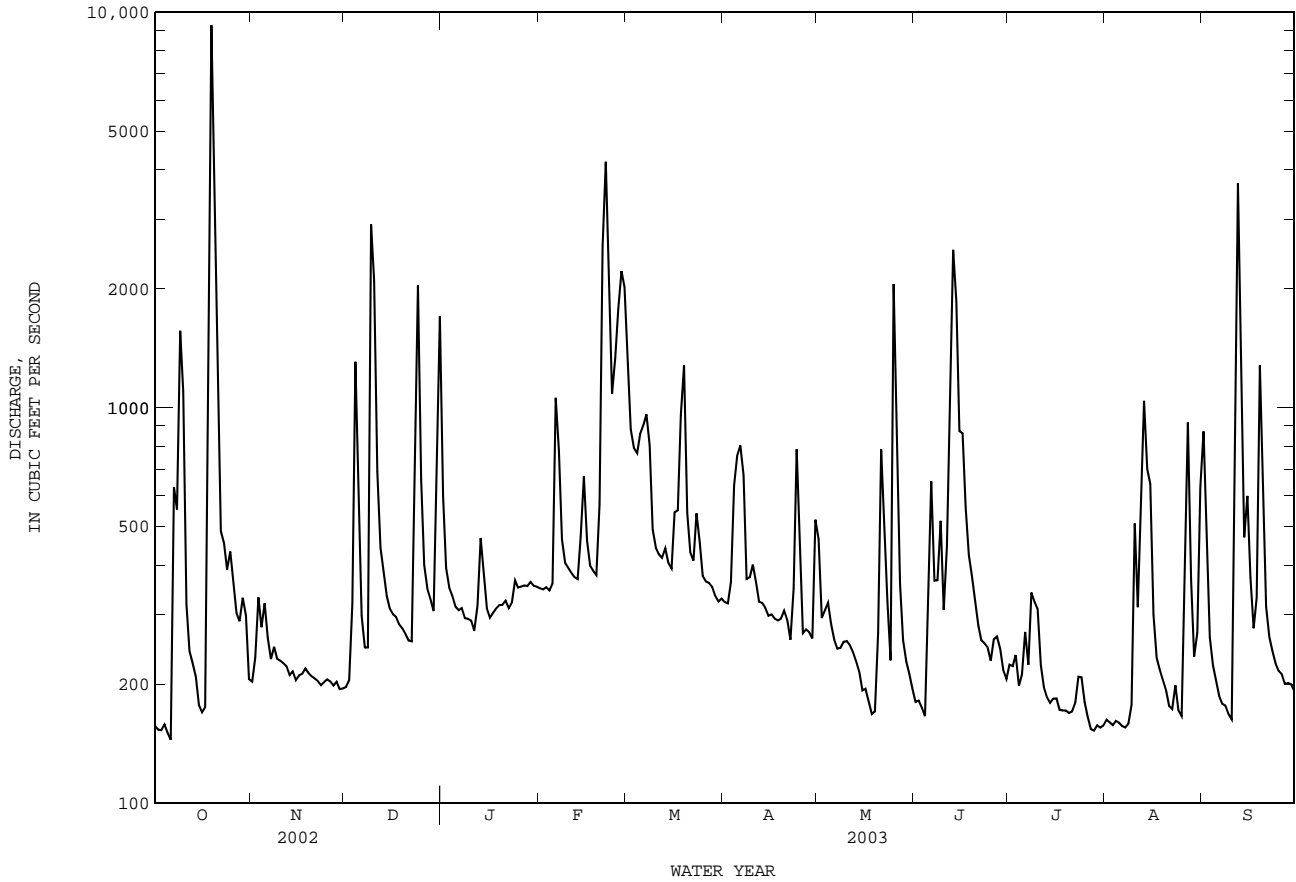
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

	504	454	491	455	689	857	857	1583	1067	391	250	328
MEAN	504	454	491	455	689	857	857	1583	1067	391	250	328
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	299641		175694		663	
ANNUAL MEAN	821		481		2629	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					79.3	
HIGHEST DAILY MEAN	13300	Mar 20	9280	Oct 19	48900	May 3 1990
LOWEST DAILY MEAN	145	Oct 6	145	Oct 6	4.5	Sep 7 1925
ANNUAL SEVEN-DAY MINIMUM	154	Sep 27	157	Jul 27	7.3	Jun 17 1925
MAXIMUM PEAK FLOW			10000		64400	
MAXIMUM PEAK STAGE			21.99		33.88	
ANNUAL RUNOFF (AC-FT)	594300		348500		480300	
10 PERCENT EXCEEDS	1970		879		1570	
50 PERCENT EXCEEDS	288		310		188	
90 PERCENT EXCEEDS	184		176		50	

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 Sept. 1992, Aug. 1993 to Apr. 2003, June 2003 to current year.
 pH: Oct. 1976 to Sept. 1992, Aug. 1993 to Apr. 2003, June 2003 to current year.
 WATER TEMPERATURE: Oct. 1966 to Sept. 1992, Aug. 1993 to Apr. 2003, June 2003 to current year.
 DISSOLVED OXYGEN: Oct. 1976 to Sept. 1992, Aug. 1993 to Apr. 2003, June 2003 to current year.

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

REMARKS.--Records from Oct. 1 to June 5 rated fair. Records after June 5 rated good. Interruption in the record was caused by malfunctions of the instrument, except for period from Apr. 4 to June 5, when site was out of operation. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years using the daily records of specific conductance and regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. 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/cm, Dec. 12, 1978; minimum, 108 microsiemens/cm, 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, 15.9 mg/L, Feb. 27, 2002; minimum, 0.0 mg/L, on several days during period of record.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,160 microsiemens/cm, Jan. 20; minimum, 171 microsiemens/cm, Oct. 19, Sept. 11.
 pH: Maximum, 8.5 units, Aug. 26; minimum, 6.8 units, Mar. 31.
 WATER TEMPERATURE: Maximum, 32.6°C, Aug. 7; minimum, 6.9°C, Feb. 26, 27.
 DISSOLVED OXYGEN: Maximum, 14.9 mg/L, June 4; minimum, 4.9 mg/L, Aug. 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	BOD, water, unfltrd 5 day, mg/L (00310)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	
														Sodium adsorp- tion ratio (00931)
DEC														
17...	1146	301	695	7.0	15.7	8.4	87	<2.0	200	54	67.4	7.64	62.1	
JAN														
09...	1313	296	785	7.6	15.3	11.1	115	--i	220	44	72.1	8.50	75.5	
MAR														
19...	1200	1360	553	7.5	17.5	7.5	81	4.2	190	47	64.3	6.88	37.5	
APR														
24...	1700	--	809	7.6	22.3	5.9	70	4.6	240	81	74.5	12.9	75.9	
JUL														
29...	1150	145	928	7.4	30.0	6.5	88	2.5	190	51	57.5	11.7	110	
AUG														
11...	1028	296	500	7.7	29.2	6.6	88	4.5	150	27	47.0	6.94	44.4	

08049500 West Fork Trinity River at Grand Prairie, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
DEC 17...	10.2	.05	.79	.84	1.06	1.01	3.08	--	--
JAN 09...	8.20	<.04	--	.80	.87	.85	2.61	--	--
MAR 19...	1.83	.09	.47	.56	.20	.19	.592	--	--
APR 24...	5.57	.09	.76	.85	.65	.59	1.82	18	15.0
JUL 29...	14.9	<.04	--	1.1	1.69	1.56	4.78	--	--
AUG 11...	3.03	.04	.69	.73	.30	.26	.806	--	--

Remark codes used in this report:
 < -- Less than

Null value qualifier codes used in this report:
 i -- Required sample type not received

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	828	794	810	688	615	652	949	872	906	760	532	657
2	794	721	753	713	645	682	985	870	912	796	679	732
3	774	721	750	689	630	665	985	647	884	860	738	789
4	795	774	782	659	547	591	823	571	700	941	779	853
5	839	787	815	589	531	561	688	556	626	999	811	895
6	840	810	824	628	588	604	797	671	740	1020	852	926
7	813	422	615	726	589	654	921	764	838	1020	836	916
8	649	503	533	777	709	740	947	776	872	1010	870	925
9	503	341	428	830	726	790	776	381	511	1070	896	968
10	447	378	409	875	776	834	497	420	463	1020	914	956
11	569	447	501	883	797	844	647	477	571	1040	927	980
12	651	569	619	827	753	796	720	597	657	1060	837	963
13	693	635	670	827	742	782	790	674	730	1040	861	955
14	741	660	707	871	789	827	828	719	765	936	816	871
15	723	676	705	888	792	833	855	752	795	979	822	903
16	716	673	697	901	821	860	878	773	823	1050	899	963
17	743	694	719	926	836	879	888	772	823	1080	920	986
18	746	200	578	922	815	865	896	791	839	1080	934	991
19	298	171	186	902	803	852	922	813	860	1120	946	1010
20	287	186	245	873	781	823	952	838	886	1160	963	1050
21	371	286	335	900	808	853	961	847	896	1090	954	1010
22	472	360	417	909	841	874	982	854	909	1070	954	1000
23	537	472	510	946	855	903	916	604	772	1100	733	893
24	535	505	517	960	900	919	609	493	541	862	732	790
25	595	497	558	971	879	925	701	540	623	879	751	809
26	541	472	508	990	881	924	773	616	683	907	786	842
27	591	526	565	947	874	905	830	699	756	916	771	844
28	658	590	623	998	893	948	882	745	808	876	757	800
29	636	577	607	995	922	951	896	777	830	850	754	801
30	649	583	614	987	902	943	937	593	804	905	791	850
31	663	606	631	---	---	---	722	509	581	918	820	860
MONTH	840	171	588	998	531	809	985	381	755	1160	532	896

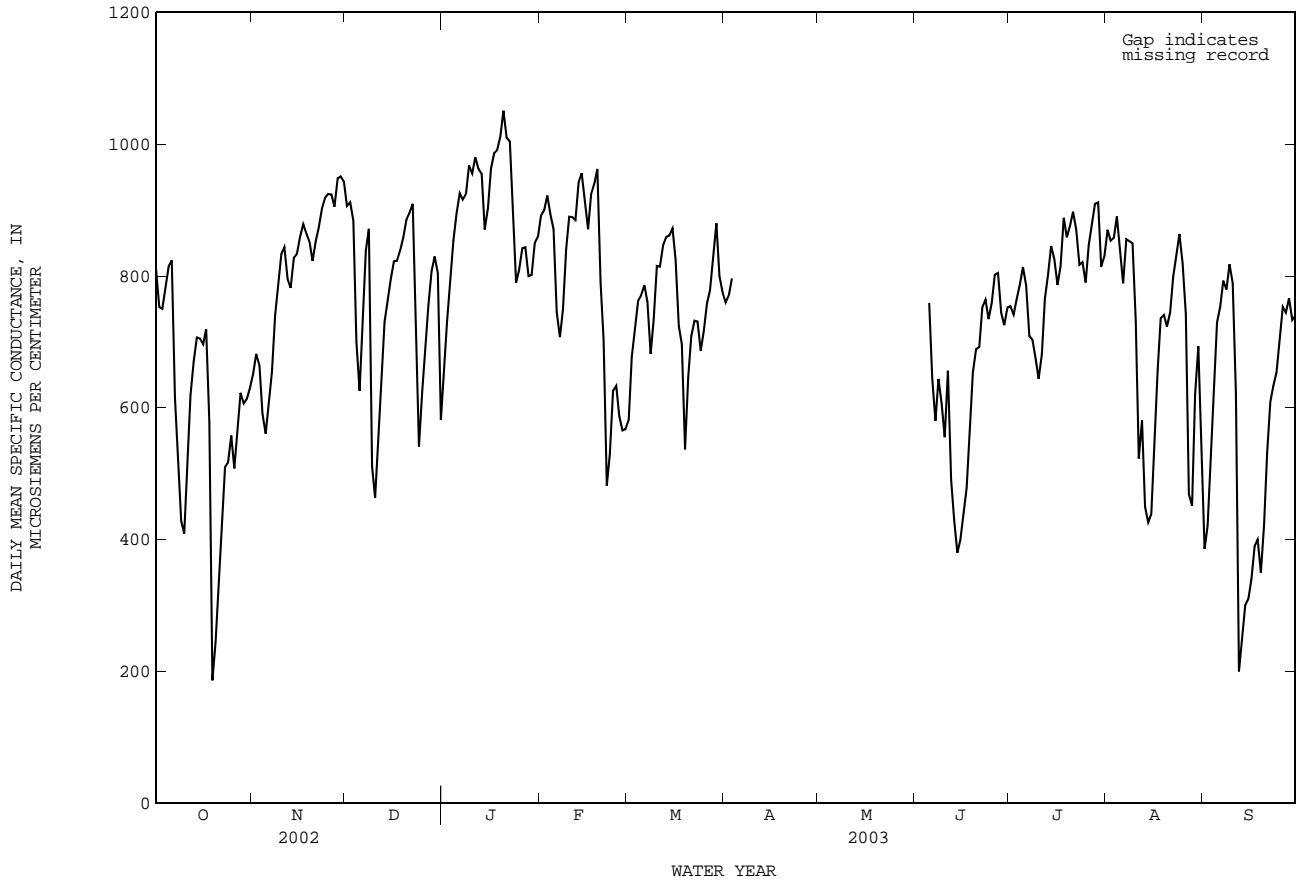
TRINITY RIVER BASIN

08049500 West Fork Trinity River at Grand Prairie, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	942	840	892	633	533	581	---	---	---	---	---	---
2	947	864	900	736	592	677	798	747	771	---	---	---
3	986	863	922	778	659	723	817	775	796	---	---	---
4	945	844	893	822	691	763	---	---	---	---	---	---
5	942	820	872	822	715	771	---	---	---	---	---	---
6	820	654	745	848	722	786	---	---	---	---	---	---
7	765	664	707	860	680	761	---	---	---	---	---	---
8	810	680	749	720	654	682	---	---	---	---	---	---
9	914	766	840	806	663	734	---	---	---	---	---	---
10	946	830	890	856	788	815	---	---	---	---	---	---
11	954	830	889	849	780	814	---	---	---	---	---	---
12	946	831	885	883	801	847	---	---	---	---	---	---
13	1020	869	942	914	821	859	---	---	---	---	---	---
14	1020	907	956	892	824	861	---	---	---	---	---	---
15	974	832	914	922	828	872	---	---	---	---	---	---
16	939	815	871	904	739	825	---	---	---	---	---	---
17	1010	860	924	756	697	724	---	---	---	---	---	---
18	1010	867	940	720	673	696	---	---	---	---	---	---
19	1030	892	962	724	554	537	---	---	---	---	---	---
20	1080	758	791	723	554	647	---	---	---	---	---	---
21	834	560	703	764	671	709	---	---	---	---	---	---
22	572	430	482	767	655	732	---	---	---	---	---	---
23	591	452	530	779	655	731	---	---	---	---	---	---
24	707	544	626	740	645	687	---	---	---	---	---	---
25	724	531	633	748	687	716	---	---	---	---	---	---
26	650	523	588	808	717	758	---	---	---	---	---	---
27	617	520	566	811	741	778	---	---	---	---	---	---
28	618	526	568	873	782	827	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	1080	430	792	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	777	723	754	895	852	870	461	298	386
2	---	---	---	754	729	742	895	838	854	485	334	420
3	---	---	---	808	699	765	884	824	858	577	485	520
4	---	---	---	804	771	788	936	843	890	707	572	635
5	806	712	759	847	763	813	876	803	834	762	707	730
6	779	521	645	859	714	785	811	773	789	777	720	754
7	658	507	580	735	670	709	898	804	856	815	745	793
8	706	584	644	751	640	703	890	840	853	797	756	780
9	706	540	606	757	639	675	863	826	850	842	768	818
10	613	522	556	783	566	644	859	506	732	826	755	789
11	757	589	656	705	633	681	598	487	523	823	171	621
12	709	362	491	798	705	765	635	468	581	---	---	---
13	---	---	---	834	749	803	566	335	450	---	---	---
14	---	---	---	894	788	846	485	362	426	---	---	---
15	---	---	---	850	790	826	494	401	438	---	---	---
16	467	407	439	817	764	786	639	469	534	---	---	---
17	524	410	478	842	797	815	698	638	658	---	---	---
18	654	508	578	932	840	888	763	698	736	---	---	---
19	709	607	654	930	837	859	798	687	741	---	---	---
20	714	661	689	905	840	876	739	691	723	483	350	423
21	718	658	692	936	864	898	790	702	745	613	483	531
22	797	712	752	915	840	870	882	709	799	663	576	609
23	809	713	764	840	807	817	913	765	830	666	596	633
24	758	700	735	872	736	821	932	765	864	688	632	654
25	795	736	759	833	732	790	835	803	819	731	688	703
26	841	772	802	881	803	847	869	190	742	782	718	753
27	845	765	805	943	845	881	742	248	469	757	726	744
28	788	699	744	957	880	909	569	345	451	794	720	766
29	755	683	725	954	864	912	690	569	620	750	715	733
30	815	691	752	874	794	814	752	465	693	770	685	740
31	---	---	---	870	811	830	777	364	571	---	---	---
MONTH	---	---	---	957	566	804	936	190	703	---	---	---

08049500 West Fork Trinity River at Grand Prairie, TX--Continued



PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

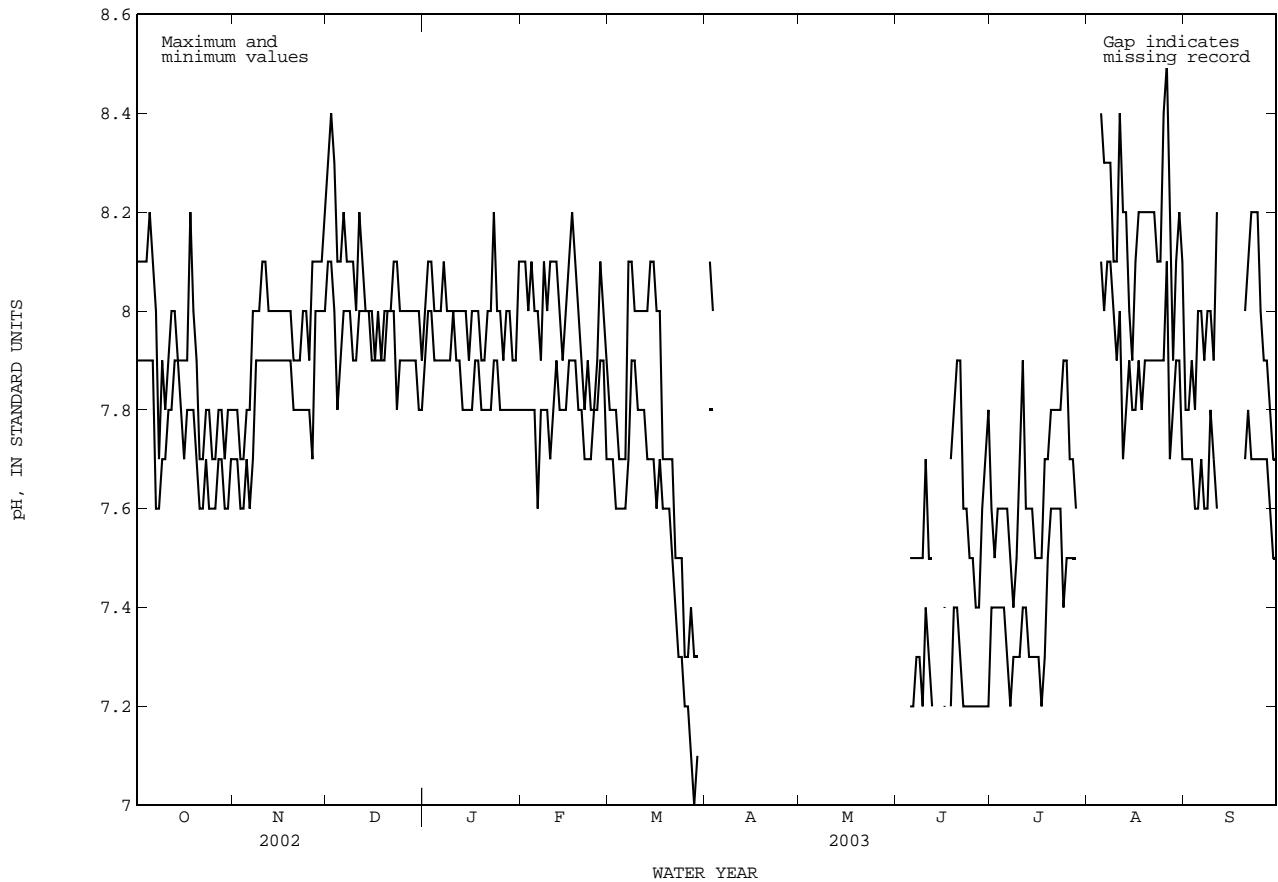
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	7.9	7.8	7.7	8.3	8.1	8.0	7.9	8.1	7.8	7.8	7.7
2	8.1	7.9	7.8	7.7	8.4	8.1	8.1	8.0	8.1	7.8	7.8	7.7
3	8.1	7.9	7.7	7.6	8.3	8.0	8.1	8.0	8.0	7.8	7.8	7.6
4	8.1	7.9	7.7	7.6	8.1	7.8	8.0	7.9	8.1	7.8	7.7	7.6
5	8.2	7.9	7.8	7.7	8.1	7.9	8.0	7.9	8.0	7.8	7.7	7.6
6	8.1	7.9	7.8	7.6	8.2	8.0	8.0	7.9	8.0	7.6	7.7	7.6
7	8.0	7.6	8.0	7.7	8.1	8.0	8.1	7.9	7.9	7.8	8.1	7.7
8	7.7	7.6	8.0	7.9	8.1	8.0	8.0	7.9	8.1	7.8	8.1	7.9
9	7.9	7.7	8.0	7.9	8.1	7.9	8.0	7.9	8.0	7.8	8.0	7.9
10	7.8	7.7	8.1	7.9	8.0	7.9	8.0	8.0	8.1	7.7	8.0	7.8
11	7.9	7.8	8.1	7.9	8.2	8.0	8.0	7.9	8.1	7.8	8.0	7.8
12	8.0	7.8	8.0	7.9	8.1	8.0	8.0	7.9	8.1	7.9	8.0	7.8
13	8.0	7.9	8.0	7.9	8.0	8.0	8.0	7.8	8.0	7.8	8.0	7.7
14	7.9	7.9	8.0	7.9	8.0	8.0	8.0	7.8	7.9	7.8	8.1	7.7
15	7.9	7.8	8.0	7.9	8.0	7.9	7.9	7.8	8.0	7.8	8.1	7.7
16	7.9	7.7	8.0	7.9	7.9	7.9	8.0	7.8	8.1	7.9	8.0	7.6
17	7.9	7.8	8.0	7.9	8.0	7.9	8.0	7.9	8.2	7.9	8.0	7.7
18	8.2	7.8	8.0	7.9	7.9	7.9	8.0	7.9	8.1	7.9	7.7	7.6
19	8.0	7.8	8.0	7.9	8.0	7.9	7.9	7.8	8.0	7.8	7.7	7.6
20	7.9	7.7	7.9	7.8	8.0	8.0	7.9	7.8	7.9	7.8	7.7	7.6
21	7.7	7.6	7.9	7.8	8.0	8.0	8.0	7.8	7.8	7.7	7.7	7.5
22	7.7	7.6	7.9	7.8	8.1	8.0	8.0	7.8	7.9	7.7	7.5	7.4
23	7.8	7.7	8.0	7.8	8.1	7.8	8.2	7.9	7.8	7.7	7.5	7.3
24	7.8	7.6	8.0	7.8	8.0	7.9	8.0	7.9	7.8	7.8	7.5	7.3
25	7.7	7.6	7.9	7.8	8.0	7.9	8.0	7.8	7.9	7.8	7.3	7.2
26	7.7	7.6	8.1	7.7	8.0	7.9	7.9	7.8	8.1	7.9	7.3	7.2
27	7.8	7.7	8.1	8.0	8.0	7.9	8.0	7.8	8.0	7.9	7.4	7.1
28	7.8	7.7	8.1	8.0	8.0	7.9	8.0	7.8	7.9	7.7	7.3	7.0
29	7.7	7.6	8.1	8.0	8.0	7.9	7.9	7.8	---	---	7.3	7.1
30	7.8	7.6	8.2	8.0	8.0	7.8	7.9	7.8	---	---	---	---
31	7.8	7.7	---	---	7.9	7.8	8.1	7.8	---	---	---	---
MONTH	8.2	7.6	8.2	7.6	8.4	7.8	8.2	7.8	8.2	7.6	---	---

TRINITY RIVER BASIN

08049500 West Fork Trinity River at Grand Prairie, TX--Continued

PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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

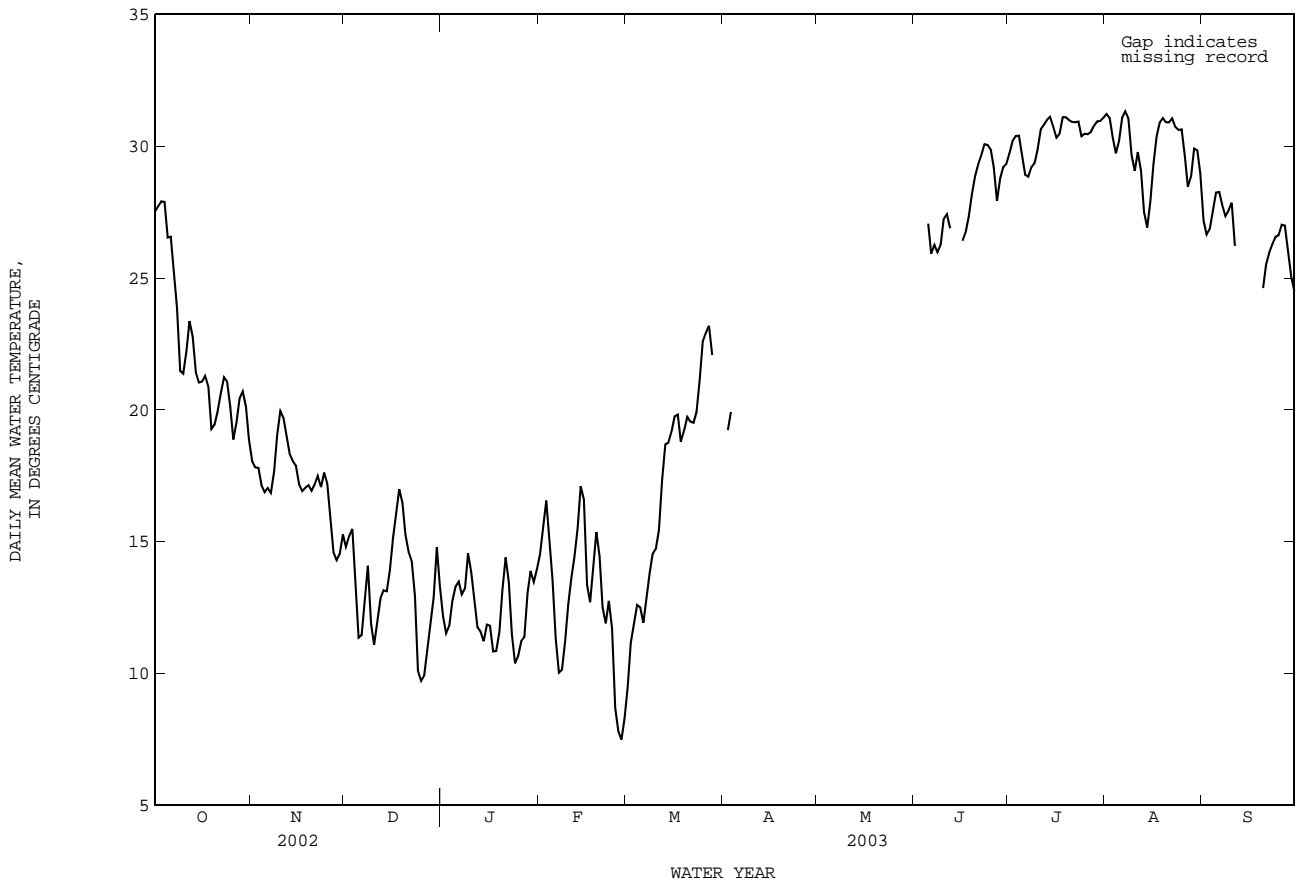


TRINITY RIVER BASIN

08049500 West Fork Trinity River at Grand Prairie, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	30.9	28.3	29.7	32.2	30.2	31.2	28.0	26.3	27.2
2	---	---	---	31.4	28.9	30.2	32.1	30.0	31.1	27.3	26.2	26.7
3	---	---	---	31.8	28.9	30.4	31.3	29.7	30.3	27.8	26.0	26.9
4	---	---	---	31.5	29.2	30.4	30.9	28.8	29.7	28.5	26.8	27.6
5	29.1	25.8	27.1	30.7	28.8	29.7	31.6	28.9	30.2	29.3	27.2	28.2
6	26.9	24.9	25.9	29.7	28.3	28.9	32.3	30.0	31.1	29.3	27.1	28.3
7	27.8	25.0	26.3	29.9	27.8	28.8	32.6	30.2	31.3	28.6	26.5	27.8
8	27.2	25.1	26.0	30.2	28.3	29.2	31.8	30.2	31.1	28.4	26.1	27.4
9	27.6	25.0	26.3	30.6	28.4	29.4	30.9	28.6	29.7	28.7	26.3	27.6
10	28.2	26.5	27.2	31.1	28.9	29.9	30.2	27.9	29.1	28.6	27.0	27.9
11	28.8	26.3	27.4	32.1	29.3	30.6	31.1	28.8	29.8	28.0	23.0	26.2
12	27.8	25.5	26.9	32.0	29.4	30.8	30.1	27.9	29.1	---	---	---
13	---	---	---	32.2	29.6	31.0	28.2	26.1	27.5	---	---	---
14	---	---	---	32.4	29.8	31.1	28.2	25.9	26.9	---	---	---
15	---	---	---	31.5	29.6	30.7	29.0	26.9	27.9	---	---	---
16	27.3	25.9	26.4	31.2	29.3	30.3	30.9	28.0	29.3	---	---	---
17	27.7	26.1	26.7	31.8	29.2	30.5	31.7	29.1	30.4	---	---	---
18	28.7	26.3	27.3	32.3	29.9	31.1	31.9	29.7	30.9	---	---	---
19	29.4	27.2	28.2	31.9	30.1	31.1	31.9	29.9	31.1	---	---	---
20	30.3	27.7	28.9	32.2	29.8	31.0	31.6	29.9	30.9	25.6	23.7	24.6
21	30.8	28.2	29.3	32.0	29.7	30.9	31.9	29.7	30.9	26.4	24.8	25.5
22	31.0	28.5	29.7	32.1	29.6	30.9	32.0	29.9	31.1	27.0	25.1	26.0
23	31.4	28.9	30.1	31.8	29.8	30.9	31.6	29.6	30.7	26.9	25.6	26.3
24	31.1	29.0	30.1	31.7	28.9	30.4	31.5	29.5	30.6	27.0	26.0	26.6
25	31.0	28.7	29.9	31.7	29.1	30.5	31.6	29.6	30.6	27.3	25.8	26.6
26	30.6	28.3	29.2	31.5	29.3	30.5	31.3	25.2	29.6	27.7	26.3	27.0
27	29.1	26.7	27.9	31.7	29.4	30.5	29.1	26.3	28.5	27.7	26.2	27.0
28	30.3	27.5	28.8	31.8	29.7	30.8	30.2	27.7	28.9	26.8	25.2	26.0
29	30.5	27.8	29.2	32.0	30.0	30.9	31.0	29.0	29.9	25.8	24.3	25.1
30	30.1	28.0	29.3	32.0	30.0	31.0	30.7	28.7	29.9	25.2	23.6	24.5
31	---	---	---	32.0	30.1	31.1	29.4	28.0	28.9	---	---	---
MONTH	---	---	---	32.4	27.8	30.4	32.6	25.2	29.9	---	---	---

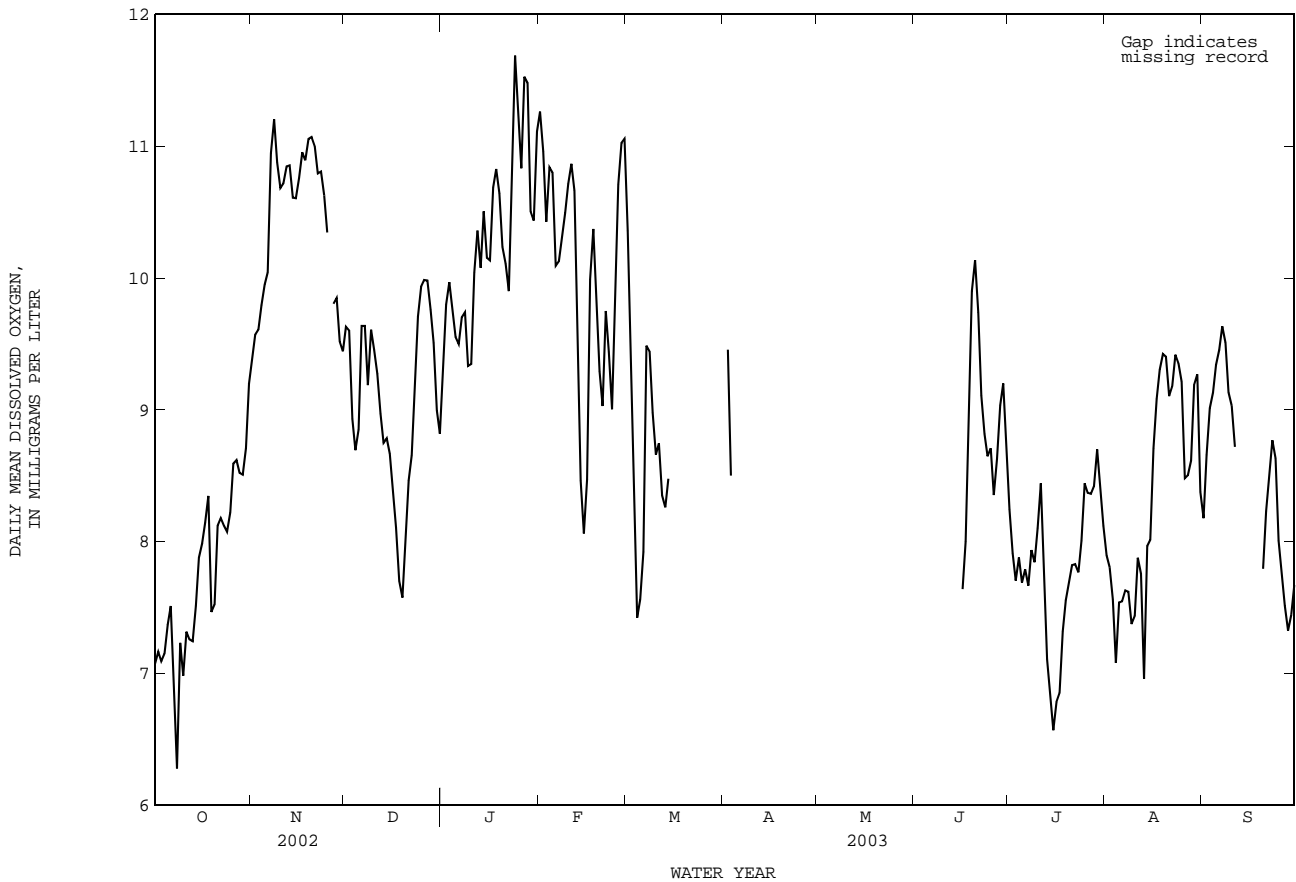


TRINITY RIVER BASIN

08049500 West Fork Trinity River at Grand Prairie, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	9.2	7.4	8.2	8.6	7.3	7.9	8.4	7.8	8.2
2	---	---	---	8.7	7.4	7.9	8.5	7.2	7.8	9.0	8.3	8.7
3	---	---	---	8.9	6.8	7.7	8.1	7.1	7.6	9.4	8.7	9.0
4	---	---	---	9.1	7.1	7.9	8.0	5.6	7.1	9.6	8.8	9.1
5	---	---	---	8.6	7.0	7.7	8.7	6.7	7.5	10.0	8.9	9.3
6	---	---	---	8.5	7.3	7.8	8.5	6.8	7.5	10.3	8.9	9.5
7	---	---	---	8.5	6.0	7.7	8.8	6.9	7.6	10.5	9.0	9.6
8	---	---	---	8.7	7.5	7.9	8.5	7.0	7.6	10.1	8.9	9.5
9	---	---	---	8.7	7.2	7.8	7.8	6.8	7.4	10.0	8.3	9.1
10	---	---	---	9.0	7.4	8.1	7.7	7.1	7.4	9.6	8.5	9.0
11	---	---	---	9.9	7.5	8.4	9.3	6.9	7.9	10.6	7.5	8.7
12	---	---	---	8.7	7.1	7.8	9.0	5.5	7.8	---	---	---
13	---	---	---	8.3	5.8	7.1	7.8	4.9	7.0	---	---	---
14	---	---	---	7.8	5.9	6.8	8.4	7.3	8.0	---	---	---
15	---	---	---	7.6	5.6	6.6	8.4	7.8	8.0	---	---	---
16	7.9	7.4	7.6	7.4	6.2	6.8	9.4	8.2	8.7	---	---	---
17	---	---	8.0	7.5	6.3	6.8	9.7	8.6	9.1	---	---	---
18	10.2	8.0	8.7	8.4	5.9	7.3	10.3	8.6	9.3	---	---	---
19	11.4	8.8	9.9	8.3	6.9	7.6	10.4	8.8	9.4	---	---	---
20	11.8	8.9	10.1	8.6	7.0	7.7	10.3	8.8	9.4	8.7	7.0	7.8
21	11.4	8.5	9.7	8.8	7.1	7.8	9.6	8.5	9.1	9.2	7.6	8.2
22	10.2	8.3	9.1	8.7	7.2	7.8	9.9	8.5	9.2	10.2	7.5	8.5
23	9.8	8.2	8.8	8.5	7.1	7.8	10.3	8.6	9.4	10.4	7.6	8.8
24	9.5	7.9	8.6	9.1	7.2	8.0	9.9	8.7	9.4	10.0	7.6	8.6
25	9.7	8.0	8.7	9.6	7.5	8.4	10.5	8.4	9.2	8.8	7.3	8.0
26	8.8	7.9	8.4	9.3	7.6	8.4	9.9	7.5	8.5	8.7	7.0	7.7
27	9.6	8.0	8.6	9.1	7.8	8.4	9.5	7.9	8.5	8.5	6.9	7.5
28	10.8	8.1	9.0	9.2	7.9	8.4	9.0	8.1	8.6	8.4	6.5	7.3
29	11.2	7.9	9.2	---	---	8.7	9.4	9.0	9.2	8.8	6.3	7.4
30	10.0	7.9	8.7	9.1	7.7	8.4	9.9	8.7	9.3	8.8	6.8	7.7
31	---	---	---	8.8	7.5	8.1	8.7	7.8	8.4	---	---	---
MONTH	---	---	---	---	---	7.8	10.5	4.9	8.3	---	---	---



THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08049580 Mountain Creek near Venus, TX

LOCATION.--Lat 32°29'27", long 97°07'22", Johnson County, Hydrologic Unit 12030102, on right bank on upstream 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1985 to Sept. 1987 (daily mean discharges), Oct. 1987 to Sept. 2001 (peaks above base discharge), Oct. 2001 to current year.

Water-quality records.--Chemical data: Dec. 1985 to Sept. 1993.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 580.49 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	5.6	0.01	18	0.40	0.57	0.05	0.36	0.00	0.00
2	0.00	0.00	0.00	1.2	0.02	8.0	0.44	0.43	0.00	0.16	0.00	0.00
3	0.00	0.00	0.00	0.48	0.03	7.3	0.47	0.30	0.00	0.07	0.00	0.00
4	0.00	0.00	0.00	0.30	0.02	10	0.95	0.21	0.00	0.02	0.00	0.00
5	0.00	0.00	0.00	0.17	0.02	4.9	1.1	0.15	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.12	0.41	2.6	0.96	0.12	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.09	1.3	1.8	0.72	0.11	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.08	0.54	1.4	0.53	0.08	0.00	0.00	0.00	0.00
9	0.00	0.00	196	0.06	0.41	1.1	0.34	0.05	0.00	0.00	0.00	0.00
10	0.00	0.00	48	0.05	0.28	0.99	0.32	0.02	0.00	0.00	0.00	0.00
11	0.00	0.00	9.1	0.03	0.20	0.92	0.46	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	2.3	0.05	0.16	1.0	0.63	0.00	124	0.00	0.00	2.2
13	0.00	0.00	0.91	0.14	0.17	1.0	0.75	0.00	414	0.00	0.00	1.7
14	0.00	0.00	0.39	0.30	0.28	0.94	0.80	0.00	93	0.00	0.00	0.29
15	0.00	0.00	0.26	0.18	0.65	0.89	0.81	0.00	23	0.00	0.00	0.05
16	0.00	0.00	0.22	0.12	0.56	0.83	0.76	0.00	12	0.00	0.00	0.00
17	0.00	0.00	0.15	0.07	0.35	0.81	0.60	0.00	3.3	0.00	0.00	0.00
18	0.00	0.00	0.11	0.05	0.28	1.3	0.59	0.00	1.7	0.00	0.00	13
19	25	0.00	0.07	0.04	0.21	2.0	0.58	0.00	0.94	0.00	0.00	25
20	4.7	0.00	0.03	0.05	1.4	1.4	0.51	0.00	0.55	0.00	0.00	1.0
21	0.38	0.00	0.01	0.05	400	0.94	0.40	0.00	0.34	0.00	0.00	0.16
22	0.04	0.00	0.00	0.03	438	0.87	0.31	0.00	0.20	0.00	0.00	0.03
23	0.00	0.00	0.05	0.01	21	1.2	0.69	0.00	0.10	0.00	0.00	0.00
24	0.00	0.00	3.5	98	4.2	1.5	48	0.00	0.05	0.00	0.00	0.00
25	0.00	0.00	2.0	0.00	396	1.2	6.2	87	0.00	0.00	0.00	0.00
26	0.00	0.00	0.69	0.00	2.9	0.94	1.7	20	126	0.00	0.00	0.00
27	0.00	0.00	0.36	0.00	98	0.82	0.89	3.5	31	0.00	0.00	0.00
28	0.00	0.00	0.20	0.01	81	0.62	0.51	1.3	4.4	0.00	0.00	0.00
29	0.00	0.00	0.14	0.01	---	0.35	0.35	0.65	1.5	0.00	0.00	0.00
30	0.00	0.00	101	0.01	---	0.34	0.77	0.31	0.74	0.00	0.00	0.00
31	0.00	---	50	0.01	---	0.36	---	0.13	---	0.00	0.00	---
TOTAL	30.12	0.00	415.49	107.31	1448.40	76.32	72.54	114.93	836.87	0.61	0.00	43.43
MEAN	0.97	0.000	13.4	3.46	51.7	2.46	2.42	3.71	27.9	0.020	0.000	1.45
MAX	25	0.00	196	98	438	18	48	87	414	0.36	0.00	25
MIN	0.00	0.00	0.00	0.00	0.01	0.34	0.31	0.00	0.00	0.00	0.00	0.00
AC-FT	60	0.00	824	213	2870	151	144	228	1660	1.2	0.00	86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003h, BY WATER YEAR (WY)

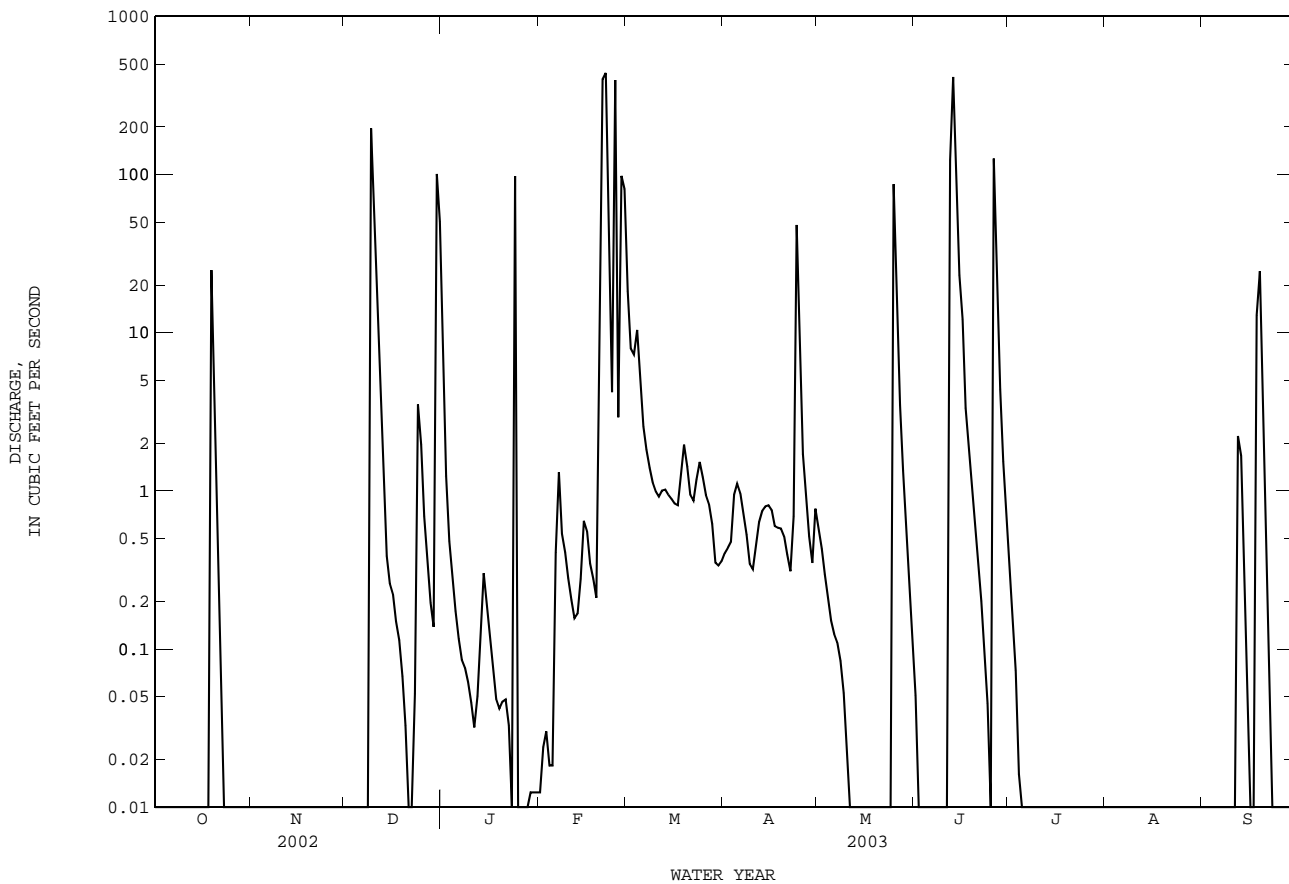
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003h
MEAN	12.5	8.48	31.1	10.7	31.8	19.6	22.3	21.7	16.7	1.00	2.83	3.35						
MAX	140	29.9	144	34.7	148	66.8	80.7	71.8	54.0	8.77	24.0	29.8						
(WY)	1992	1999	1992	1992	1997	1995	1997	1995	1995	1991	1991	1991						
MIN	0.000	0.000	0.000	0.005	0.074	0.032	0.010	0.041	0.000	0.000	0.000	0.000						
(WY)	1991	1994	1991	1994	1995	1996	1994	1998	1996	1993	1986	1987						

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1986 - 2003h

ANNUAL TOTAL	3863.75	3146.02	
ANNUAL MEAN	10.6	8.62	
HIGHEST ANNUAL MEAN			15.2
LOWEST ANNUAL MEAN			43.1
HIGHEST DAILY MEAN	711	Jan 31	438
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			2010
MAXIMUM PEAK STAGE			9.94
ANNUAL RUNOFF (AC-FT)	7660	6240	11040
10 PERCENT EXCEEDS	3.2	3.5	18
50 PERCENT EXCEEDS	0.00	0.02	0.01
90 PERCENT EXCEEDS	0.00	0.00	0.00

h See PERIOD OF RECORD paragraph.

08049580 Mountain Creek near Venus, TX--Continued



TRINITY RIVER BASIN

08049580 Mountain Creek near Venus, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Dec. 1985 to Sept. 1993, Jan. 2003 to current year.

BIOCHEMICAL DATA: Jan. 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 07...	1025	.15	475	--e	7.0	9.0	73	<2.3	200	86	71.8	4.29	20.8
MAR 04...	1100	28	684	7.4	8.6	9.1	81	<2.0	280	140	104	6.02	34.7
APR 24...	0915	133	1300	7.1	17.5	6.4	69	4.4	620	460	215	19.3	79.3
JUN 24...	1510	E.03	532	7.9	34.5	8.8	129	E3.4	220	73	78.0	5.01	23.9
Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, titr., field, mg/L (00452)	Bicarbonate, wat flt incrm, titr., field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 07...	.6	18	5.60	<1	135	111	98.3	10.9	.47	12.7	325	296	15
MAR 04...	.9	21	4.00	<1	177	145	158	15.4	.38	12.8	466	440	15
APR 24...	1	22	7.63	<1	193	159	498	55.9	.64	5.44	1040	979	41
JUN 24...	.7	19	6.62	<1	173	142	99.8	11.6	.5	21.6	362	332	12
Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, mg/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)
JAN 07...	.83	.040	.87	.08	.73	.80	.133	.11	.331	13.0	3	.37	4
MAR 04...	3.49	.478	3.96	<.04	--	.64	.052	.03	.086	8.6	3	E.25	E1
APR 24...	.44	.022	.46	.05	.66	.71	.164	.10	.322	9.1	3	<.30	2
JUN 24...	--	<.008	<.06	<.04	--	.78	.057	.02	.071	18.0	E1	.42	7
Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
JAN 07...	45	<.06	.05	<.8	.56	4.0	41	<.08	32.8	<.02	7.3	5.62	<3
MAR 04...	49	<.06	.04	E.5	.72	2.5	19	E.05	25.4	E.01	5.6	6.74	<3
APR 24...	77	<.06	E.03	<.8	1.32	5.1	16	<.08	64.4	<.02	5.5	5.61	<3
JUN 24...	49	<.06	.05	<.8	.57	3.2	12	.09	14.1	E.01	10.8	6.22	<3

TRINITY RIVER BASIN

91

08049580 Mountain Creek near Venus, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
JAN 07...	<.20	3	2.03
MAR 04...	M	4	3.83
APR 24...	<.20	3	5.88
JUN 24...	<.20	1	2.09

Remark codes used in this report:

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Null value qualifier codes used in this report:

e -- Required equipment not functional/avail

TRINITY RIVER BASIN

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 mi².

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

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 531.08 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.16	0.57	24	2.2	109	5.4	19	3.7	2.6	0.00	60
2	0.00	1.5	0.59	4.7	2.3	59	5.7	16	2.6	1.9	0.00	2.4
3	0.03	5.1	54	2.8	2.1	46	5.9	73	2.5	1.8	0.00	1.7
4	0.02	4.2	36	3.0	1.8	39	64	8.4	2.2	1.3	0.00	1.1
5	0.00	14	0.19	2.1	6.9	28	22	3.3	64	4.3	0.00	0.13
6	0.00	1.0	0.00	2.7	97	18	11	2.7	77	1.6	0.00	0.00
7	5.0	0.25	0.00	2.2	9.3	13	8.2	1.8	13	0.88	0.00	0.00
8	1.6	0.23	7.2	1.4	3.5	14	6.3	1.4	54	0.53	0.00	0.00
9	128	0.21	474	1.6	3.8	13	5.0	1.1	5.5	1.5	7.0	0.00
10	3.3	0.17	111	1.4	2.7	11	5.0	0.74	1.8	1.9	0.60	0.00
11	0.67	0.39	17	1.3	2.4	11	4.9	0.57	1.1	3.1	0.73	393
12	0.10	0.36	2.1	22	4.1	14	5.0	0.43	484	1.7	5.5	99
13	0.00	0.38	0.77	8.1	6.1	15	4.5	19	1130	1.2	4.9	6.8
14	0.00	0.59	0.26	4.7	28	11	3.9	3.5	221	1.5	4.6	103
15	0.00	0.58	0.11	2.0	7.7	9.4	4.2	50	138	1.4	3.3	26
16	0.00	0.49	0.11	2.0	3.1	8.4	3.7	2.9	45	1.6	0.50	4.7
17	0.00	0.46	0.04	1.3	2.5	8.6	3.4	1.3	35	0.80	0.00	3.3
18	558	0.65	0.09	1.4	2.4	98	3.7	0.87	21	0.23	0.00	1220
19	748	0.39	0.07	1.5	2.1	51	3.4	0.78	15	0.01	0.00	345
20	42	0.54	0.00	1.5	103	24	2.8	31	9.9	0.37	0.00	39
21	8.7	0.63	0.00	1.6	492	13	2.5	32	11	0.18	0.00	24
22	19	0.61	0.00	1.4	644	26	2.3	18	6.0	0.45	0.00	13
23	12	0.49	43	1.2	103	38	75	2.0	2.8	0.13	0.00	7.1
24	8.8	0.74	52	1.2	37	22	367	1.1	2.9	0.00	0.00	3.5
25	3.4	0.69	3.8	1.2	34	16	36	707	2.5	0.00	0.00	1.8
26	1.1	0.55	1.1	1.7	68	11	11	81	68	0.16	0.00	0.99
27	0.98	0.65	0.67	2.1	246	10	4.6	28	37	0.00	0.00	0.85
28	0.67	0.57	0.08	2.2	289	8.9	2.7	12	4.7	0.00	0.00	0.83
29	0.59	0.68	0.05	2.3	---	6.0	2.0	4.9	2.6	0.00	0.00	0.79
30	0.40	0.66	213	2.1	---	6.2	69	3.4	1.5	0.00	43	0.78
31	0.36	---	124	2.0	---	5.6	---	3.4	---	0.00	19	---
TOTAL	1542.78	37.92	1141.80	110.7	2206.0	763.1	750.1	1130.59	2465.3	31.14	89.13	2358.77
MEAN	49.8	1.26	36.8	3.57	78.8	24.6	25.0	36.5	82.2	1.00	2.88	78.6
MAX	748	14	474	24	644	109	367	707	1130	4.3	43	1220
MIN	0.00	0.16	0.00	1.2	1.8	5.6	2.0	0.43	1.1	0.00	0.00	0.00
AC-FT	3060	75	2260	220	4380	1510	1490	2240	4890	62	177	4680

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	18.4	9.94	20.3	9.01	26.6	31.1	38.0	50.8	31.1	4.91	3.62	7.90
MAX	272	164	326	64.5	173	184	174	378	300	57.1	55.9	78.6
(WY)	1992	2001	1992	1992	1997	1977	1990	1989	1986	1975	2001	2003
MIN	0.000	0.000	0.000	0.000	0.014	0.13	0.40	0.074	0.030	0.000	0.000	0.000
(WY)	1964	1961	1964	1981	1981	1963	1978	1962	1963	1964	1961	1971

SUMMARY STATISTICS

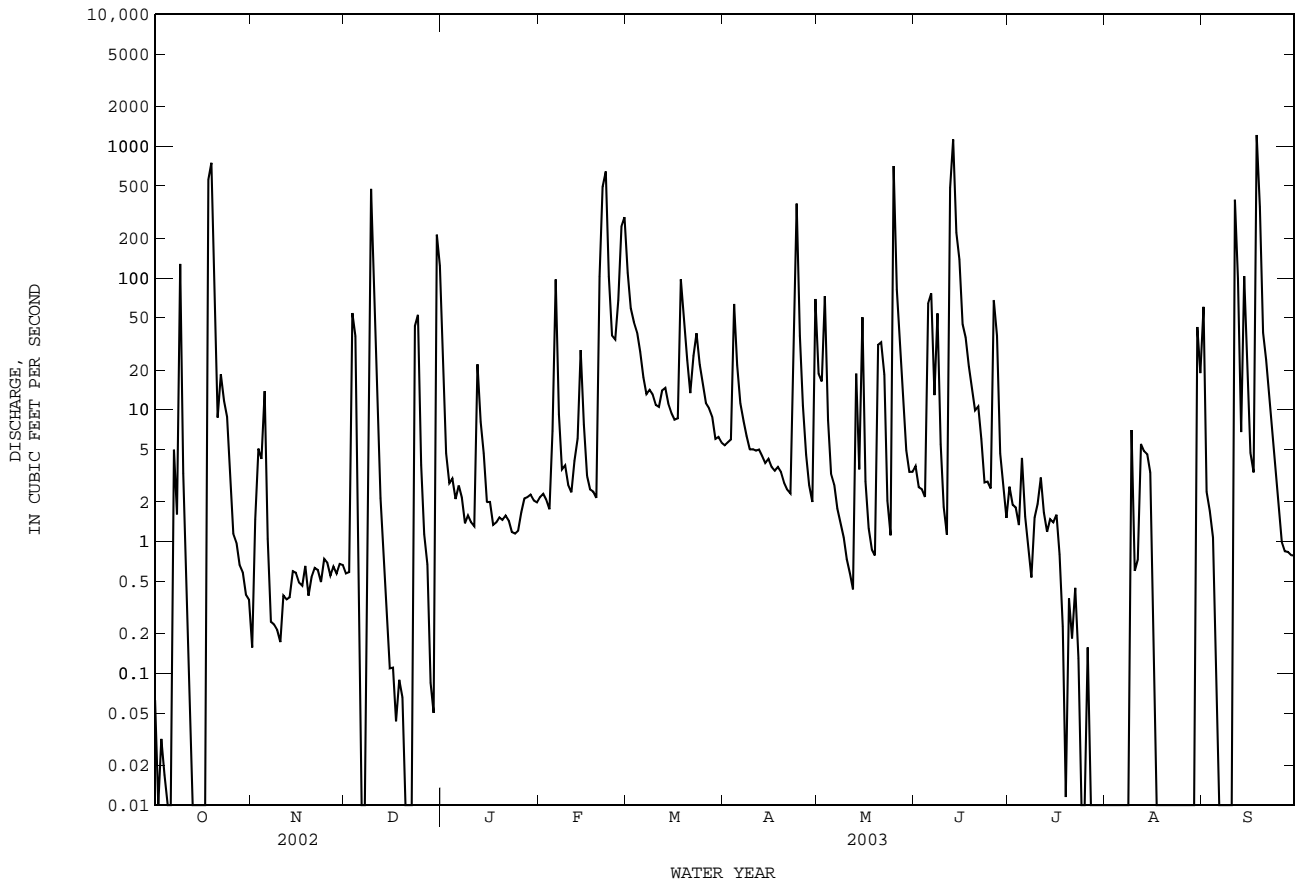
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1961 - 2003

ANNUAL TOTAL	17021.86	12627.33		
ANNUAL MEAN	46.6	34.6	20.9	
HIGHEST ANNUAL MEAN			82.2	1992
LOWEST ANNUAL MEAN			1.34	1978
HIGHEST DAILY MEAN	1880	Mar 30	7900	May 17 1989
LOWEST DAILY MEAN	0.00	Jan 12	0.00	Oct 1 1960
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 18	0.00	Jul 27 1960
MAXIMUM PEAK FLOW			6210	Sep 18 1989
MAXIMUM PEAK STAGE			27.17	Sep 18 1989
ANNUAL RUNOFF (AC-FT)	33760	25050	15150	
10 PERCENT EXCEEDS	66	62	16	
50 PERCENT EXCEEDS	1.1	2.5	0.30	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

08049700 Walnut Creek near Mansfield, TX--Continued



TRINITY RIVER BASIN

08049700 Walnut Creek near Mansfield, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Dec. 1985 to Sept. 1993, Jan. 2003 to current year.

BIOCHEMICAL DATA: Dec. 1985 to Sept. 1993, Jan. 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 07...	1215	E.62	952	7.1	8.5	8.5	72	<2.4	370	190	116	18.0	59.5
MAR 04...	1238	E28	773	7.4	9.4	9.8	89	<2.0	290	140	93.3	13.6	46.8
APR 24...	1145	E310	395	7.0	17.2	7.9	85	8.1	140	59	46.3	5.61	21.7
JUL 15...	1000	E1.2	1500	7.2	28.5	11.2	147	<2.0	600	370	188	31.2	112

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, titr., field, mg/L (00452)	Bicarbonate, wat flt incrm, titr., field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 07...	1	26	4.82	<1	210	173	233	46.4	.46	12.4	628	596	31
MAR 04...	1	26	4.96	1	183	152	170	43.6	.38	10.8	513	476	17
APR 24...	.8	24	8.53	<1	98	80	72.7	20.2	.41	6.40	260	233	556
JUL 15...	2	29	5.93	<1	282	232	450	91.7	.6	13.7	1090	1030	<10

Date	Nitrate, water, fltrd, mg/L as N (00618)	Nitrite, water, fltrd, mg/L as N (00613)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
JAN 07...	--	E.005	.25	E.02	.35	.038	.02	.074	6.5	2	E.23	E1	58
MAR 04...	.19	.076	.27	<.04	.45	.052	<.02	--	6.3	17	E.16	<2	53
APR 24...	.66	.054	.72	<.04	1.4	.161	.03	.092	22.2	6	E.18	<2	35
JUL 15...	--	<.008	.08	<.04	.33	.017	<.02	--	7.7	E1	.30	E2	93

Date	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
JAN 07...	<.06	E.03	<.8	1.38	1.8	<10	<.08	385	<.02	1.9	8.42	<3	<.20
MAR 04...	<.06	<.04	E.4	1.47	3.3	15	<.08	253	<.02	2.2	7.33	<3	<.20
APR 24...	<.06	E.02	<.8	.84	5.3	53	E.08	10.3	<.02	2.7	3.27	<3	<.20
JUL 15...	<.06	E.02	<.8	.83	2.7	<8	<.08	310	<.02	3.0	7.72	<3	<.20

TRINITY RIVER BASIN

95

08049700 Walnut Creek near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

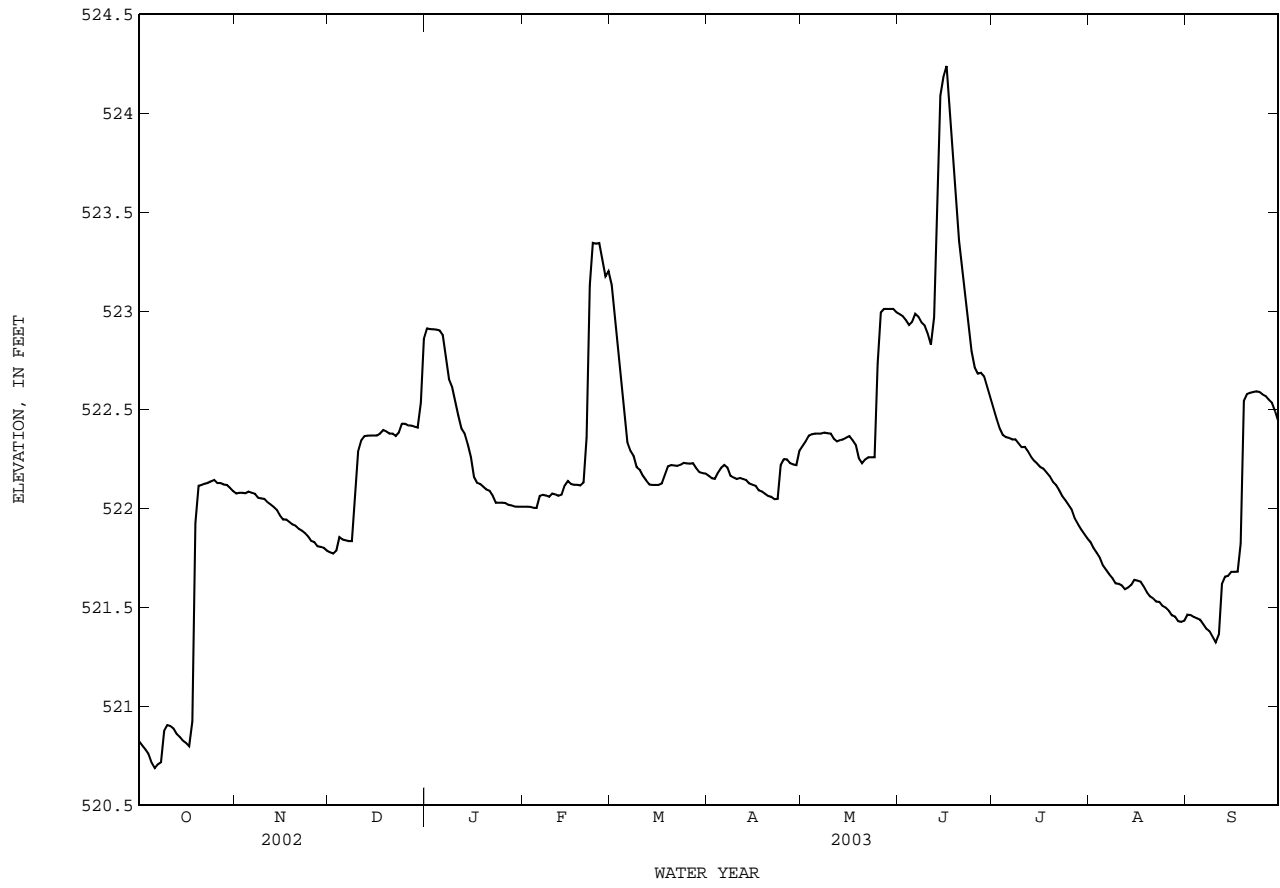
Date	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
JAN 07...	5	2.31
MAR 04...	3	2.45
APR 24...	3	1.13
JUL 15...	1	3.23

Remark codes used in this report:

< -- Less than

E -- Estimated value

08049800 Joe Pool Lake near Duncanville, TX--Continued



TRINITY RIVER BASIN

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Jan. 1986 to Sept. 1993, Jan. 2003 to current year.

BIOCHEMICAL DATA: Jan. 1986 to Sept. 1993, Jan. 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323819096584801 -- Joe Pool Lk Site AC

Date	Time	Reser- voir storage acre-ft (00054)	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	
JAN	07...	1322	183000	.76	1.00	473	8.2	10.5	9.9	89	E2k	E2k	160	62
JAN	07-07	1322	--	--	--	--	--	--	--	--	--	--	--	--
JAN	07...	1329	--	--	10.0	473	8.2	10.0	9.7	87	--	--	--	--
JAN	07...	1335	--	--	20.0	473	8.2	10.0	9.7	87	--	--	--	--
JAN	07...	1342	--	--	30.0	473	8.1	10.0	9.8	87	--	--	--	--
JAN	07...	1348	--	--	40.0	473	8.1	10.0	9.9	88	--	--	--	--
JAN	07...	1353	--	--	51.0	474	8.0	10.0	9.9	88	--	--	160	63
APR	24...	1140	179000	.91	1.00	502	8.1	20.0	10.3	116	E4k	E5k	160	54
APR	24-24	1140	--	--	--	--	--	--	--	--	--	--	--	--
APR	24...	1143	--	--	10.0	502	8.0	19.5	10.1	113	--	--	--	--
APR	24...	1148	--	--	20.0	502	8.0	19.5	10.1	113	--	--	--	--
APR	24...	1151	--	--	30.0	502	8.0	19.5	10.2	114	--	--	--	--
APR	24...	1154	--	--	40.0	502	8.0	19.5	10.2	114	--	--	--	--
APR	24...	1157	--	--	49.0	502	7.9	19.5	10.4	116	--	--	160	57
JUL	15...	1135	178000	1.04	1.00	476	8.1	30.5	8.2	110	<1	<1	150	66
JUL	15-15	1135	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	1145	--	--	10.0	475	8.1	30.5	8.3	111	--	--	--	--
JUL	15...	1155	--	--	20.0	476	8.0	30.0	7.9	105	--	--	--	--
JUL	15...	1205	--	--	30.0	494	7.0	26.5	E.5	--	--	--	--	--
JUL	15...	1215	--	--	40.0	494	6.9	25.0	E.5	--	--	--	--	--
JUL	15...	1225	--	--	49.0	495	6.9	24.0	E.6	--	--	--	170	56

323819096584801 -- Joe Pool Lk Site AC

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	
JAN	07...	54.9	5.58	30.1	1	28	7.48	<1	119	99	101	16.7	.50	3.5
JAN	07-07	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN	07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN	07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN	07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN	07...	55.2	5.61	30.8	1	28	7.86	<1	119	98	101	16.4	.50	3.5
APR	24...	54.8	5.43	30.9	1	28	8.51	<1	128	106	105	17.4	.45	2.6
APR	24-24	--	--	--	--	--	--	--	--	--	--	--	--	--
APR	24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR	24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR	24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR	24...	55.9	5.51	31.7	1	28	8.43	<1	129	106	105	17.2	.45	2.7
JUL	15...	51.1	5.88	33.4	1	31	8.75	<1	105	86	107	18.3	.5	3.0
JUL	15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	15...	59.5	5.61	31.1	1	27	8.28	<1	141	115	96.0	17.0	.5	5.6

TRINITY RIVER BASIN

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323819096584801 -- Joe Pool Lk Site AC

Date	Propanil, water, fltrd 0.7u GF (82679) ug/L	Propargite, water, fltrd 0.7u GF (82685) ug/L	Pronamide, water, fltrd 0.7u GF (82676) ug/L	Simazine, water, fltrd (04035) ug/L	Tebu-thiuron, water, fltrd 0.7u GF (82670) ug/L	Terbacil, water, fltrd 0.7u GF (82665) ug/L	Terbufos, water, fltrd 0.7u GF (82675) ug/L	Thiobencarb, water, fltrd 0.7u GF (82681) ug/L	Triallate, water, fltrd 0.7u GF (82678) ug/L	Tri-fluralin, water, fltrd 0.7u GF (82661) ug/L
JAN 07...	--	--	--	--	--	--	--	--	--	--
JAN 07-07	<.011	<.02	<.004	.296	.03	<.034	<.02	<.005	<.002	<.009
JAN 07...	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--
APR 24-24	<.011	<.02	<.004	.400	E.03	<.034	<.02	<.005	<.002	<.009
APR 24...	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--
JUL 15-15	<.011	<.02	<.004	.299	.03	<.034	<.02	<.005	<.002	<.009
JUL 15...	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--

323812096591701 -- Joe Pool Lk Site AR

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unf, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)
JAN 07...	1401	1.00	474	8.2	10.5	10.0	90
JAN 07...	1403	10.0	474	8.2	10.5	9.7	88
JAN 07...	1405	20.0	472	8.2	10.0	9.8	87
JAN 07...	1408	30.0	473	8.2	10.0	9.8	87
JAN 07...	1411	42.0	473	8.2	10.0	10.0	89
APR 24...	1205	1.00	503	8.1	20.0	10.2	115
APR 24...	1208	10.0	503	8.1	19.5	10.2	114
APR 24...	1211	20.0	503	8.1	19.5	10.2	114
APR 24...	1214	30.0	502	8.1	19.5	10.2	114
APR 24...	1216	40.0	502	8.1	19.5	10.4	116
JUL 15...	1247	1.00	475	8.1	30.5	8.4	113
JUL 15...	1250	10.0	475	8.1	30.0	8.3	110
JUL 15...	1252	20.0	480	7.7	29.0	6.7	88
JUL 15...	1254	30.0	491	7.1	26.0	E2.6	--
JUL 15...	1257	39.0	493	7.0	25.0	1.4	17

TRINITY RIVER BASIN

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323731097013901 -- Joe Pool Lk Site BC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat un ^f uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
07...	1426	.73	1.00	474	8.3	10.5	10.6	96	E7k	E7k	160	61	54.0
07...	1431	--	10.0	474	8.2	10.0	10.3	92	--	--	--	--	--
07...	1436	--	20.0	474	8.2	10.0	10.3	92	--	--	--	--	--
07...	1440	--	30.0	474	8.2	10.0	10.3	92	--	--	--	--	--
07...	1444	--	43.0	474	8.2	10.0	10.4	93	--	--	160	63	55.1
APR													
24...	1257	.88	1.00	505	8.1	20.0	10.2	115	E1k	E2k	160	55	56.2
24...	1301	--	10.0	505	8.1	20.0	10.2	115	--	--	--	--	--
24...	1306	--	20.0	505	8.1	19.5	10.0	112	--	--	--	--	--
24...	1310	--	30.0	505	7.9	19.5	9.4	105	--	--	--	--	--
24...	1314	--	42.0	507	7.7	19.0	8.2	91	--	--	160	56	56.6
JUL													
15...	1319	1.10	1.00	474	8.2	30.5	8.8	118	<1	<1	150	67	50.8
15...	1325	--	10.0	474	8.1	30.0	8.5	113	--	--	--	--	--
15...	1331	--	20.0	478	7.8	29.5	7.3	96	--	--	--	--	--
15...	1338	--	30.0	491	7.0	27.0	E.7	--	--	--	--	--	--
15...	1345	--	41.0	493	7.0	25.5	E.9	--	--	--	170	59	58.6

323731097013901 -- Joe Pool Lk Site BC

Date	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., mg/L (00452)	Bicar- bonate, wat flt incrm. titr., mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
JAN													
07...	5.52	29.3	1	28	7.79	<1	118	98	101	16.5	.49	3.4	276
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	5.60	30.2	1	28	7.52	<1	119	99	99.9	16.7	.49	3.4	278
APR													
24...	5.56	31.9	1	29	8.60	1	130	109	107	18.2	.45	2.1	296
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	5.57	33.1	1	29	8.57	<1	132	109	106	17.9	.45	3.2	297
JUL													
15...	5.89	33.5	1	31	8.72	<1	103	84	107	18.2	.5	3.1	278
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	5.70	31.7	1	28	8.34	<1	135	110	97.5	17.5	.5	5.3	292

323731097013901 -- Joe Pool Lk Site BC

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN									
07...	<.008	.14	<.04	--	.25	.004	<.02	<10	<2.0
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
07...	<.008	.14	<.04	--	.25	E.004	<.02	<10	E1.1
APR									
24...	E.005	.18	<.04	--	.33	E.003	<.02	<10	<2.0
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	E.007	.24	.06	.36	.42	.006	<.02	<10	E1.0
JUL									
15...	<.008	<.06	<.04	--	.30	E.003	<.02	<8	E.4
15...	--	--	--	--	--	--	--	--	--
15...	<.008	<.06	<.04	--	.30	<.004	<.02	E4	1.2
15...	<.008	<.06	<.04	--	.27	E.004	<.02	E6	102
15...	<.008	<.06	.13	.33	.46	E.003	<.02	195	454

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323646097005101 -- Joe Pool Lk Site CC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
JAN													
07...	1450	.55	1.00	476	8.3	10.5	10.6	96	<.008	.15	<.04	--	.25
07...	1453	--	10.0	476	8.3	10.0	10.4	93	--	--	--	--	--
07...	1456	--	20.0	476	8.2	9.5	10.5	93	--	--	--	--	--
07...	1458	--	30.0	477	8.2	9.5	10.5	93	--	--	--	--	--
07...	1501	--	40.0	477	8.2	9.5	10.5	93	--	--	--	--	--
07...	1504	--	47.0	477	8.2	9.5	10.5	93	<.008	.15	<.04	--	.25
APR													
24...	1333	--	1.00	503	8.0	19.5	9.9	111	E.007	.26	E.02	--	.34
24...	1335	--	10.0	503	8.0	19.5	9.9	111	--	--	--	--	--
24...	1337	--	20.0	503	8.0	19.0	9.8	108	--	--	--	--	--
24...	1340	--	30.0	503	8.0	19.0	9.8	108	--	--	--	--	--
24...	1343	--	40.0	503	8.0	19.0	9.8	108	--	--	--	--	--
24...	1347	--	45.0	503	8.0	19.0	10.2	113	E.006	.26	E.03	--	.37
JUL													
15...	1403	1.10	1.00	478	8.1	30.0	8.5	113	<.008	<.06	<.04	--	.27
15...	1411	--	10.0	478	8.1	30.0	8.4	112	--	--	--	--	--
15...	1419	--	20.0	481	7.8	29.0	7.8	102	--	--	--	--	--
15...	1425	--	30.0	489	7.2	27.5	3.5	45	<.008	<.06	<.04	--	.26
15...	1432	--	44.0	494	7.0	24.5	1.3	16	<.008	<.06	.30	.30	.60

323646097005101 -- Joe Pool Lk Site CC

Date	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN				
07...	E.003	<.02	<10	<2.0
07...	--	--	--	--
07...	--	--	--	--
07...	--	--	--	--
07...	--	--	--	--
07...	E.004	<.02	<10	4.1
APR				
24...	E.003	<.02	<10	E1.0
24...	--	--	--	--
24...	--	--	--	--
24...	--	--	--	--
24...	--	--	--	--
24...	E.004	<.02	<10	2.7
JUL				
15...	E.002	<.02	<8	.5
15...	--	--	--	--
15...	--	--	--	--
15...	E.003	<.02	E7	3.9
15...	E.004	<.02	581	612

323645097002001 -- Joe Pool Lk Site CR

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JAN							
07...	1512	1.00	475	8.3	10.5	10.6	96
07...	1514	10.0	476	8.3	10.0	10.7	96
07...	1516	20.0	476	8.2	10.0	10.7	96
07...	1519	30.0	476	8.2	10.0	10.7	96
07...	1522	37.0	476	8.3	10.0	10.7	96
APR							
24...	1410	1.00	503	8.0	20.0	10.1	114
24...	1412	10.0	503	8.0	20.0	10.1	114
24...	1415	20.0	503	8.0	19.5	10.2	114
24...	1418	30.0	503	8.0	19.5	10.4	116
24...	1421	36.0	503	8.0	19.5	10.7	119
JUL							
15...	1446	1.00	479	8.1	29.5	8.5	112
15...	1449	10.0	478	8.1	29.5	8.5	112
15...	1452	20.0	481	7.7	29.0	6.9	90
15...	1455	30.0	492	7.1	27.0	2.7	34
15...	1458	35.0	494	7.0	25.5	1.4	17

TRINITY RIVER BASIN

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323503097012201 -- Joe Pool Lk Site DC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
JAN													
07...	1538	.46	1.00	490	8.3	10.5	10.9	99	<.008	.23	<.04	--	.25
07...	1541	--	10.0	480	8.2	9.5	10.7	95	--	--	--	--	--
07...	1544	--	20.0	479	8.2	9.5	10.9	97	--	--	--	--	--
07...	1547	--	33.0	479	8.2	9.5	10.9	97	<.008	.17	<.04	--	.26
APR													
24...	1444	--	1.00	508	8.0	20.0	9.9	112	E.005	.28	<.04	--	.30
24...	1447	--	10.0	508	8.0	20.0	10.0	113	--	--	--	--	--
24...	1450	--	20.0	506	7.9	19.5	9.5	106	--	--	--	--	--
24...	1453	--	32.0	506	7.9	19.5	9.6	107	E.004	.28	E.02	--	.36
JUL													
15...	1518	.76	1.00	484	8.1	29.5	8.5	112	<.008	<.06	<.04	--	.26
15...	1523	--	10.0	482	8.0	29.0	8.3	108	<.008	<.06	<.04	--	.27
15...	1528	--	20.0	492	7.2	28.0	3.8	49	--	--	--	--	--
15...	1533	--	27.0	500	7.0	27.0	1.3	16	<.008	<.06	.12	.28	.40

323503097012201 -- Joe Pool Lk Site DC

Date	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN				
07...	E.003	<.02	<10	<2.0
07...	--	--	--	--
07...	--	--	--	--
07...	<.004	<.02	<10	<2.0
APR				
24...	E.003	<.02	<10	<2.0
24...	--	--	--	--
24...	--	--	--	--
24...	.005	<.02	<10	E1.0
JUL				
15...	E.003	<.02	<8	.6
15...	<.004	<.02	<8	1.2
15...	--	--	--	--
15...	E.003	<.02	104	433

323329097024101 -- Joe Pool Lk Site EC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
07...	1621	.15	1.00	600	8.2	9.5	11.0	98	180	210	170	55	57.8
07...	1633	--	9.00	600	8.1	9.0	10.2	89	--	--	170	60	59.0
APR													
24...	1519	.12	1.00	E665	7.8	22.0	9.1	--	220	150	190	60	66.5
24...	1524	--	8.00	655	7.8	21.5	9.3	108	--	--	200	76	71.0
JUL													
15...	1555	.18	1.00	518	7.8	30.0	7.2	96	E4k	E2k	170	61	58.3
15...	1601	--	8.00	516	7.5	29.5	5.7	75	--	--	170	58	57.5

08049800 Joe Pool Lake near Mansfield, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

323329097024101 -- Joe Pool Lk Site EC

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt, titr., field, mg/L (00452)	Bicarbonate, wat flt, titr., field, mg/L (00453)	Alkalinity, wat flt, inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
JAN													
07...	5.06	45.9	2	35	13.9	<1	135	112	124	24.3	.53	5.4	347
07...	5.09	45.7	2	35	14.0	<1	132	110	130	25.8	.57	5.5	354
APR													
24...	6.16	54.3	2	36	16.4	<1	160	133	143	28.1	.50	3.5	399
24...	6.51	65.2	2	38	21.1	<1	156	130	161	34.1	.51	3.5	441
JUL													
15...	5.74	35.9	1	30	10.3	<1	132	109	107	19.7	.5	5.2	307
15...	5.67	35.3	1	30	10.2	<1	133	109	106	19.4	.5	5.2	305

323329097024101 -- Joe Pool Lk Site EC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JAN										
07...	.79	.019	.81	<.04	--	.41	.029	E.01	<10	E1.6
07...	.70	.016	.72	<.04	--	.41	.025	E.01	E6	1.9
APR										
24...	.25	.011	.26	.10	.44	.54	.007	<.02	<10	4.0
24...	.30	.013	.31	.11	.51	.62	.008	<.02	<10	5.8
JUL										
15...	--	<.008	<.06	<.04	--	.28	.005	<.02	<8	2.5
15...	--	<.008	<.06	<.04	--	.31	.005	<.02	<8	79.1

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:

- k -- Counts outside acceptable range
- n -- Below the NDV

TRINITY RIVER BASIN

08049850 Mountain Creek above Duncanville, TX

LOCATION.--Lat 32°39'07", long 96°59'24", Dallas County, Hydrologic Unit 12030102, 0.6 mi downstream from Joe Pool Dam on Mountain Creek, 1.4 mi downstream from Walnut Creek, and 4.9 mi west of water towers in downtown Duncanville.

PERIOD OF RECORD.--

CHEMICAL DATA: Feb. 1987 to Aug. 1988, Jan. 2003 to current year.

BIOCHEMICAL DATA: Feb. 1987 to Aug. 1988, Jan. 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 08...	1310	50	480	8.0	10.0	13.8	122	--i	160	56	54.2	5.37	28.4
APR 25...	1015	E14	507	7.4	19.0	8.4	92	<2.0	170	65	59.8	5.87	32.7
JUL 15...	1300	.88	481	7.8	28.0	9.4	122	<2.0	160	68	56.0	6.01	35.2
Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. field, mg/L (00452)	Bicarbonate, wat flt incrm. field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 08...	1	27	7.97	<1	124	102	99.6	15.4	.45	3.19	303	276	<10
APR 25...	1	28	8.94	<1	132	110	106	17.2	.42	2.58	319	300	10
JUL 15...	1	30	8.82	<1	118	97	106	17.9	.5	3.59	307	292	11
Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Ammonia, water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)
JAN 08...	<.008	.18	<.04	.31	.006	<.02	4.3	2	.36	E1	44	<.06	.07
APR 25...	E.005	.24	E.02	.33	.009	<.02	4.8	2	E.19	E1	45	<.06	E.03
JUL 15...	<.008	<.06	<.04	.37	.006	<.02	5.4	3	E.21	E2	45	<.06	.05
Date	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium, natural, water, fltrd, ug/L (22703)
JAN 08...	<.8	.15	2.8	<10	<.08	.3	E.01n	9.4	3.88	<2	<1	3	1.29
APR 25...	1.6	.15	2.1	<10	<.08	.9	<.02	9.7	3.55	<3	<.20	1	1.46
JUL 15...	<.8	.19	1.8	E6	E.06	5.7	<.02	10.1	2.79	<3	<.20	1	1.23

Remark codes used in this report:

< -- Less than
E -- Estimated value

Value qualifier codes used in this report:

n -- Below the NDV

Null value qualifier codes used in this report:

i -- Required sample type not received

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--Oct. 1960 to Sept. 2002 (contents), Oct. 2002 to current year.
Water-quality records.--Chemical data: Oct. 1969 to Sept. 1985.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 21, 1960, nonrecording gage at powerplant at same datum. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 5,800 ft long, including a controlled spillway with six 34 x 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. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	467.0
Top of gates.....	458.0
Crest of spillway (sill of tainter gates).....	431.0

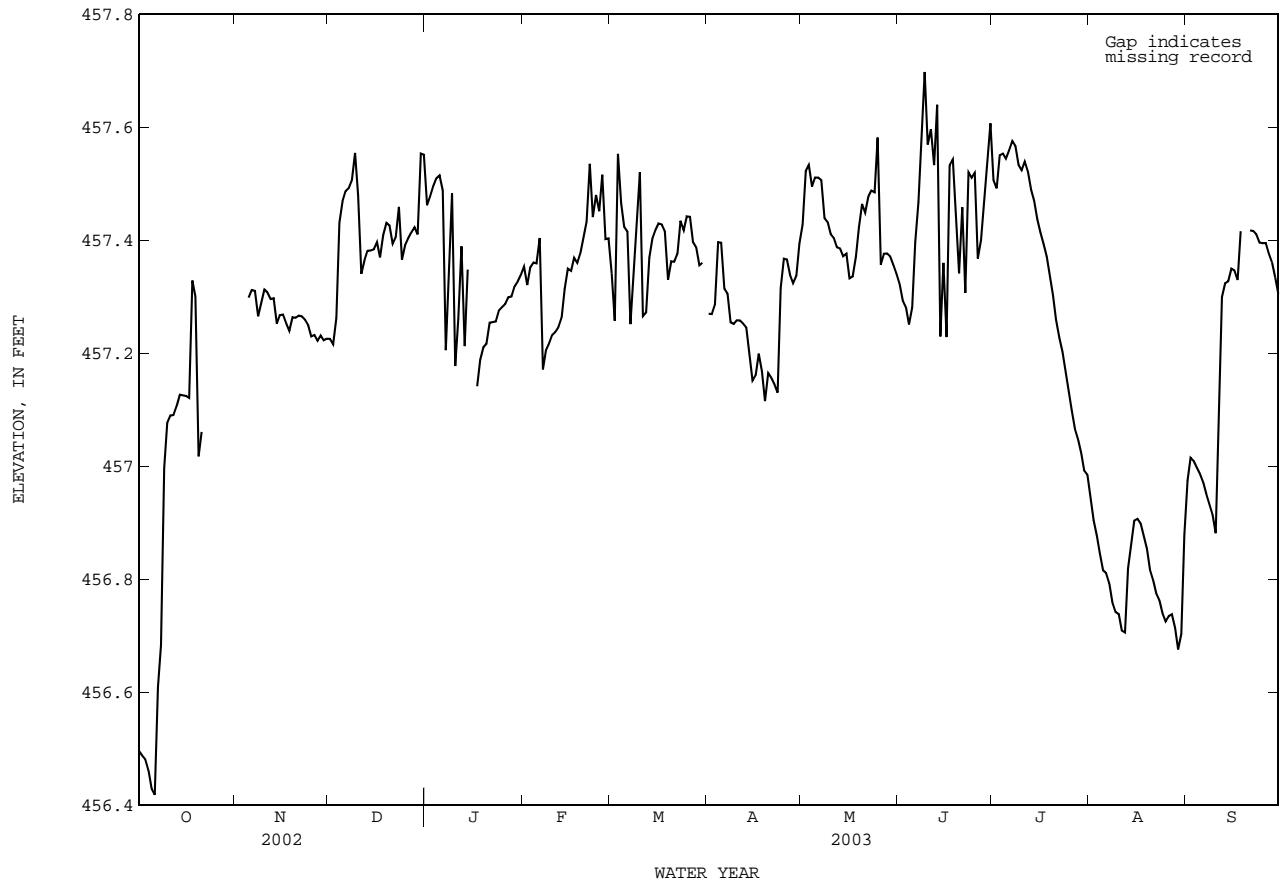
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 28,430 acre-ft, Mar. 13, 1995, elevation 458.82 ft; minimum contents, 14,120 acre-ft, Oct. 18, 1972, elevation, 453.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 457.92 ft, Oct. 18, June 13; minimum elevation, 456.40 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456.50	---	457.23	457.46	457.35	457.34	457.27	457.43	457.32	457.51	456.94	456.97
2	456.49	---	457.22	457.48	457.32	457.26	457.27	457.52	457.29	457.49	456.90	457.01
3	456.48	---	457.26	457.50	457.35	457.55	457.29	457.53	457.28	457.55	456.88	457.01
4	456.46	---	457.43	457.51	457.36	457.47	457.40	457.50	457.25	457.55	456.85	457.00
5	456.43	457.30	457.47	457.51	457.36	457.42	457.40	457.51	457.28	457.54	456.82	456.99
6	456.42	457.31	457.49	457.49	457.40	457.42	457.31	457.51	457.40	457.56	456.81	456.97
7	456.61	457.31	457.49	457.21	457.17	457.25	457.31	457.51	457.47	457.58	456.79	456.95
8	456.68	457.27	457.51	457.36	457.21	457.35	457.25	457.44	457.57	457.57	456.76	456.93
9	457.00	457.29	457.55	457.48	457.22	457.44	457.25	457.43	457.70	457.53	456.74	456.91
10	457.08	457.31	457.48	457.18	457.23	457.52	457.26	457.41	457.57	457.52	456.74	456.88
11	457.09	457.31	457.34	457.26	457.24	457.27	457.26	457.40	457.60	457.54	456.71	457.03
12	457.09	457.30	457.36	457.39	457.25	457.27	457.25	457.39	457.53	457.52	456.71	457.30
13	457.11	457.30	457.38	457.21	457.26	457.37	457.25	457.39	457.64	457.49	456.82	457.32
14	457.13	457.25	457.38	457.35	457.31	457.40	457.20	457.37	457.23	457.47	456.86	457.33
15	457.13	457.27	457.38	---	457.35	457.42	457.15	457.38	457.36	457.44	456.90	457.35
16	457.12	457.27	457.40	---	457.35	457.43	457.16	457.33	457.23	457.41	456.91	457.35
17	457.12	457.25	457.37	457.14	457.37	457.43	457.20	457.34	457.53	457.39	456.90	457.33
18	457.33	457.24	457.41	457.19	457.36	457.42	457.17	457.37	457.54	457.37	456.88	457.42
19	457.30	457.26	457.43	457.21	457.38	457.33	457.12	457.42	457.45	457.34	456.85	---
20	457.02	457.26	457.43	457.22	457.40	457.36	457.17	457.46	457.34	457.30	456.82	---
21	457.06	457.27	457.39	457.25	457.43	457.36	457.16	457.45	457.46	457.26	456.80	457.42
22	---	457.27	457.41	457.26	457.54	457.38	457.15	457.48	457.31	457.23	456.78	457.42
23	---	457.26	457.46	457.26	457.44	457.43	457.13	457.49	457.52	457.20	456.76	457.41
24	---	457.25	457.37	457.28	457.48	457.42	457.32	457.49	457.51	457.17	456.74	457.40
25	---	457.23	457.39	457.28	457.45	457.44	457.37	457.58	457.52	457.14	456.73	457.39
26	---	457.23	457.40	457.29	457.52	457.44	457.37	457.36	457.37	457.10	456.74	457.40
27	---	457.22	457.41	457.30	457.40	457.40	457.34	457.38	457.40	457.07	456.74	457.38
28	---	457.23	457.42	457.30	457.40	457.39	457.32	457.38	457.47	457.05	456.71	457.36
29	---	457.22	457.41	457.32	---	457.36	457.34	457.37	457.54	457.02	456.68	457.33
30	---	457.23	457.55	457.33	---	457.36	457.39	457.36	457.61	456.99	456.70	457.31
31	---	---	457.55	457.34	---	---	---	457.34	---	456.99	456.88	---
MEAN	---	---	457.41	---	457.35	---	457.26	457.43	457.44	457.35	456.80	---
MAX	---	---	457.55	---	457.54	---	457.40	457.58	457.70	457.58	456.94	---
MIN	---	---	457.22	---	457.17	---	457.12	457.33	457.23	456.99	456.68	---
CAL YR 2002	MAX	457.55	MIN	456.42								
WTR YR 2003	MAX	457.70	MIN	456.42								

08050050 Mountain Creek Lake near Grand Prairie, TX--Continued



TRINITY RIVER BASIN

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 Company bridge, 1.5 mi downstream from Mountain Creek Lake Dam, and 4.4 mi east of Grand Prairie.

DRAINAGE AREA.--298 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 404.31 ft above NGVD of 1929. Prior to Dec. 19, 1984, at datum 3.0 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct. 1960, at least 10% of contributing drainage area has been regulated. No known diversions. No flow at times

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	2.9	1.1	21	2.0	750	12	6.0	1.3	361	0.54	22
2	0.27	3.2	1.5	11	4.1	536	9.5	3.6	1.4	3.3	0.54	6.5
3	0.21	5.1	2.2	6.1	8.6	329	5.8	2.2	1.4	1.7	0.59	3.4
4	0.20	4.9	2.2	5.2	2.1	766	10	10	1.2	1.6	0.72	1.8
5	0.12	7.6	4.5	4.3	2.3	401	275	5.7	21	2.2	0.53	1.3
6	0.12	4.9	2.4	232	488	752	7.4	1.9	13	3.7	0.42	1.0
7	7.2	3.1	1.8	602	103	197	3.9	1.7	3.6	2.8	0.38	1.1
8	1.6	8.4	2.9	7.5	5.3	4.3	3.2	3.4	6.9	1.9	0.38	0.99
9	357	7.9	1120	85	4.1	3.8	3.4	4.3	5.8	2.8	0.68	0.95
10	4.3	3.5	337	601	3.6	68	3.2	5.2	382	4.1	1.1	0.81
11	0.77	1.7	51	4.0	3.1	493	2.6	2.3	13	1.8	0.71	352
12	0.44	1.2	8.0	244	2.9	5.4	2.5	1.2	610	0.99	0.99	1470
13	0.75	1.4	5.8	365	3.1	3.4	2.3	1.8	2600	1.1	1.8	8.2
14	0.48	3.9	4.4	4.9	7.7	3.3	2.4	1.9	1080	1.1	2.3	2.9
15	0.48	2.4	5.8	183	7.0	3.2	4.2	1.3	227	0.95	2.7	2.4
16	0.41	1.1	5.5	585	3.9	2.9	13	3.3	571	0.97	1.2	1.6
17	0.32	1.4	11	6.2	3.0	3.0	2.4	2.1	406	0.87	0.76	1.3
18	1440	6.0	15	3.9	3.2	349	1.7	1.2	917	0.69	0.49	780
19	7940	2.3	2.7	2.7	8.5	20	3.2	0.90	915	0.71	0.47	827
20	1060	1.3	2.1	3.5	142	6.1	2.3	279	847	0.92	0.47	10
21	14	1.5	9.3	3.8	670	3.1	1.6	13	244	1.2	0.45	5.8
22	8.6	1.3	3.5	2.3	1050	3.5	1.4	3.6	531	1.2	0.49	4.3
23	6.1	1.4	64	2.4	39	6.6	3.5	2.3	3.6	0.75	0.76	3.4
24	5.5	1.7	272	2.6	12	7.1	33	1.7	649	0.66	0.71	3.1
25	5.2	1.7	5.8	2.4	593	4.7	4.4	1760	91	0.59	0.68	3.1
26	4.6	1.3	3.7	2.3	400	2.7	2.3	108	386	0.60	1.4	2.8
27	3.8	1.2	3.1	2.2	772	6.4	1.6	6.8	3.5	0.65	4.8	2.7
28	3.3	1.2	2.7	4.0	762	4.4	2.4	3.6	1.7	0.55	1.7	2.7
29	3.6	1.2	4.1	3.8	---	2.6	1.8	2.5	1.3	0.52	0.92	2.4
30	2.7	1.2	386	2.0	---	2.6	14	1.8	1.3	0.46	1.2	2.4
31	2.8	---	712	2.1	---	2.6	---	1.5	---	0.57	17	---
TOTAL	10875.13	87.9	3072.9	3007.2	5105.5	4742.7	436.0	2243.80	10536.0	402.95	47.88	3527.95
MEAN	351	2.93	99.1	97.0	182	153	14.5	72.4	351	13.0	1.54	118
MAX	7940	8.4	1120	602	1050	766	275	1760	2600	361	17	1470
MIN	0.12	1.1	1.1	2.0	2.0	2.6	1.4	0.90	1.2	0.46	0.38	0.81
AC-FT	21570	174	6100	5960	10130	9410	865	4450	20900	799	95	7000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	74.3	65.5	106	103	172	231	212	281	151	32.5	8.83	25.2
MAX	785	1286	1102	1483	976	1104	1170	1941	1028	511	88.6	214
(WY)	1974	1992	1972	1992	2001	1977	1966	1969	1990	1989	1962	2001
MIN	0.22	0.30	0.26	0.11	0.17	0.30	0.91	0.68	0.50	0.21	0.16	0.36
(WY)	1989	1964	1976	1976	1964	1976	1987	1984	1971	1972	1972	1972

SUMMARY STATISTICS

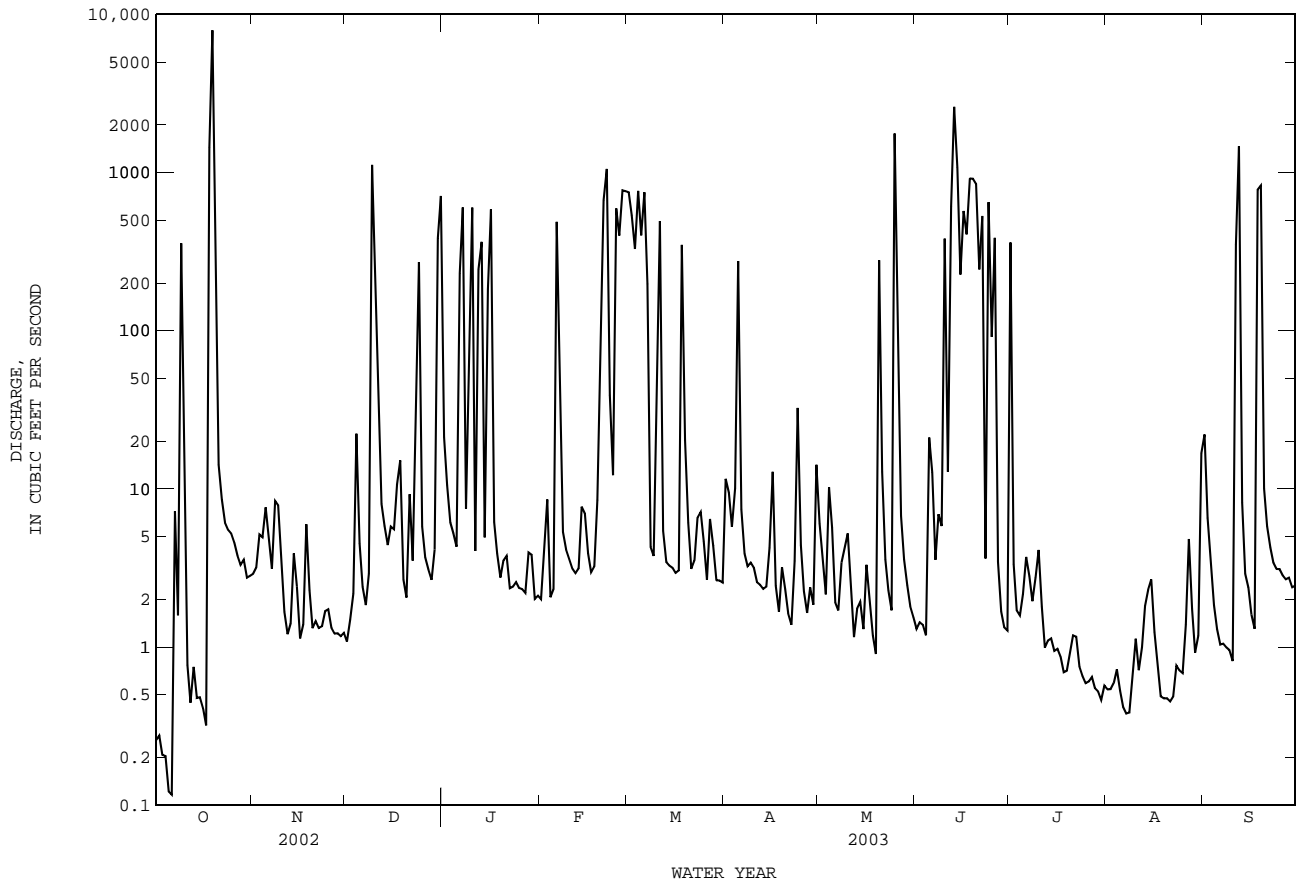
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1961 - 2003

ANNUAL TOTAL	76915.35	44085.91		
ANNUAL MEAN	211	121	122	1992
HIGHEST ANNUAL MEAN			506	1988
LOWEST ANNUAL MEAN			4.39	
HIGHEST DAILY MEAN	7940	Oct 19	24700	May 7 1969
LOWEST DAILY MEAN	0.12	Oct 5	0.00	Jan 25 1964
ANNUAL SEVEN-DAY MINIMUM	0.21	Sep 30	0.51	Aug 2 1983
MAXIMUM PEAK FLOW			10500	Oct 19 1976
MAXIMUM PEAK STAGE			21.67	Oct 19 1991
ANNUAL RUNOFF (AC-FT)	152600	87440	88030	
10 PERCENT EXCEEDS	667	386	138	
50 PERCENT EXCEEDS	2.5	3.2	1.3	
90 PERCENT EXCEEDS	1.0	0.71	0.35	

08050100 Mountain Creek at Grand Prairie, TX--Continued



TRINITY RIVER BASIN

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 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 700.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. No flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

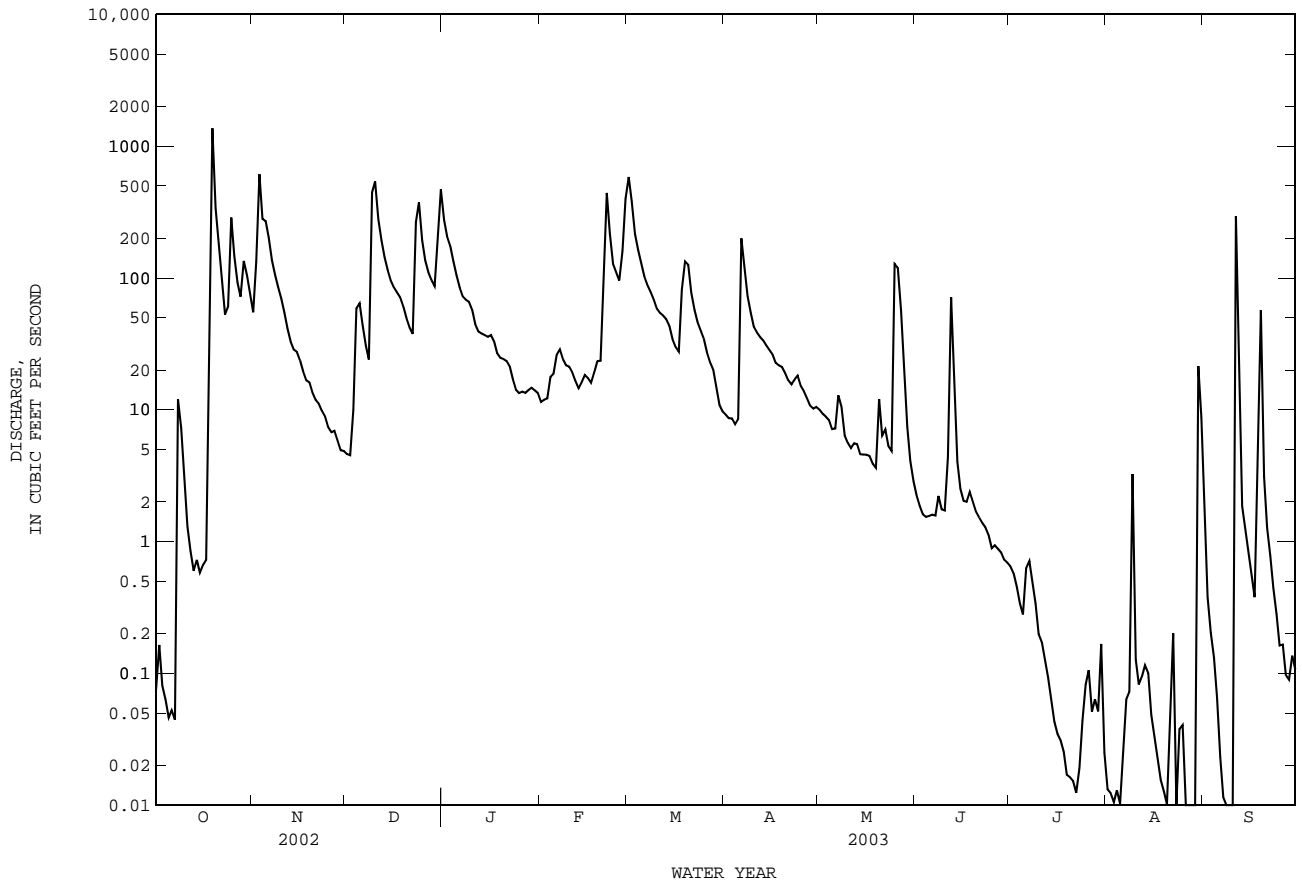
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	55	4.6	276	11	583	9.2	10	2.3	0.65	0.01	1.7
2	0.16	133	4.5	207	12	381	8.6	9.3	1.9	0.57	0.01	0.38
3	0.08	614	10	174	12	217	8.6	8.9	1.6	0.46	0.01	0.20
4	0.06	281	59	134	18	163	7.8	8.3	1.5	0.34	0.01	0.13
5	0.05	270	64	105	19	129	8.5	7.1	1.6	0.28	0.01	0.07
6	0.05	202	44	85	26	102	200	7.2	1.6	0.63	0.03	0.02
7	0.04	137	31	72	29	89	123	13	1.6	0.71	0.06	0.01
8	12	105	24	68	24	79	73	11	2.2	0.50	0.07	0.01
9	7.3	85	447	66	22	69	54	6.4	1.8	0.34	3.3	0.01
10	3.2	69	541	57	21	59	43	5.6	1.7	0.20	0.13	0.00
11	1.3	55	279	45	19	55	38	5.1	4.4	0.17	0.08	294
12	0.85	41	192	39	17	52	36	5.6	71	0.13	0.09	28
13	0.60	33	144	38	15	49	34	5.5	16	0.09	0.12	1.9
14	0.73	29	115	37	16	43	31	4.6	4.0	0.06	0.10	1.3
15	0.58	28	96	36	18	34	28	4.6	2.5	0.04	0.05	0.85
16	0.67	24	85	37	17	30	26	4.6	2.0	0.03	0.03	0.57
17	0.73	19	78	33	16	28	23	4.4	2.0	0.03	0.02	0.38
18	43	17	71	27	19	81	22	3.9	2.4	0.03	0.02	5.2
19	1370	16	61	25	23	134	21	3.6	2.0	0.02	0.01	57
20	339	13	50	24	24	126	19	12	1.7	0.02	0.01	3.1
21	195	12	42	23	85	77	17	6.4	1.5	0.02	0.06	1.3
22	102	11	38	21	442	57	16	7.1	1.4	0.01	0.20	0.78
23	53	9.8	266	17	218	46	17	5.3	1.3	0.02	0.01	0.44
24	61	8.9	375	14	129	40	18	4.9	1.1	0.04	0.04	0.28
25	287	7.4	193	13	110	35	15	128	0.89	0.08	0.04	0.16
26	146	6.7	136	14	96	27	14	119	0.94	0.11	0.00	0.17
27	92	6.9	111	13	160	23	12	57	0.88	0.05	0.01	0.10
28	72	5.8	96	14	397	20	11	21	0.83	0.06	0.00	0.09
29	135	4.9	87	15	---	15	10	7.4	0.73	0.05	0.00	0.14
30	105	4.9	207	14	---	11	11	4.1	0.69	0.17	21	0.11
31	76	---	471	13	---	9.7	---	2.9	---	0.03	8.8	---
TOTAL	3104.48	2304.3	4422.1	1756	2015	2863.7	954.7	503.8	136.06	5.94	34.33	398.40
MEAN	100	76.8	143	56.6	72.0	92.4	31.8	16.3	4.54	0.19	1.11	13.3
MAX	1370	614	541	276	442	583	200	128	71	0.71	21	294
MIN	0.04	4.9	4.5	13	11	9.7	7.8	2.9	0.69	0.01	0.00	0.00
AC-FT	6160	4570	8770	3480	4000	5680	1890	999	270	12	68	790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	54.8	78.0	131	84.3	171	186	150	258	123	15.8	3.48	28.8						
MAX	310	372	743	316	828	565	1063	1359	659	91.1	13.2	123						
(WY)	1994	2001	1992	1992	2001	1990	1990	1990	1989	1987	1996	1996						
MIN	0.098	0.28	2.25	0.46	0.52	6.54	2.76	0.73	2.61	0.19	0.000	0.031						
(WY)	2000	2000	2000	2000	2000	1986	2000	2000	1996	2003	2000	2000						

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
	Value	Date	Value	Date	Value	Date
ANNUAL TOTAL	32518.76		18498.81			
ANNUAL MEAN	89.1		50.7		107	
HIGHEST ANNUAL MEAN					277	
LOWEST ANNUAL MEAN					3.12	1990
HIGHEST DAILY MEAN	3190	Apr 7	1370	Oct 19	12500	May 2 1990
LOWEST DAILY MEAN	0.04	Oct 7	0.00	Aug 26	0.00	Aug 2 1988
ANNUAL SEVEN-DAY MINIMUM	0.07	Oct 1	0.01	Aug 23	0.00	Aug 2 1988
MAXIMUM PEAK FLOW			4080	Oct 19	24000	May 16 1989
MAXIMUM PEAK STAGE			12.49	Oct 19	25.33	May 16 1989
ANNUAL RUNOFF (AC-FT)	64500		36690		77240	
10 PERCENT EXCEEDS	197		134		208	
50 PERCENT EXCEEDS	6.7		12		9.1	
90 PERCENT EXCEEDS	0.28		0.05		0.52	

08050400 Elm Fork Trinity River at Gainesville, TX--Continued



TRINITY RIVER BASIN

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 mi².

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

Water-quality records.--Chemical data: Apr. 1993 to Sept. 1993. Biochemical data: Apr. 1993 to Sept. 1993.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 640.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. No known regulation or diversions. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.30	0.00	25	1.7	32	1.4	0.02	0.45	0.00	0.00	9.2
2	0.00	0.23	0.00	8.0	1.8	34	1.2	0.10	0.32	0.00	0.00	12
3	0.00	14	0.07	3.8	1.7	23	0.95	0.36	0.00	0.00	0.00	0.37
4	0.00	12	1.2	5.1	1.6	12	0.65	0.11	0.00	0.00	0.00	0.00
5	0.00	4.0	1.9	4.0	1.3	8.3	0.72	0.12	0.05	0.00	0.00	0.00
6	0.00	3.2	0.31	3.1	1.6	6.3	0.90	0.18	0.00	0.00	0.00	0.00
7	0.00	1.5	0.05	4.5	2.4	5.4	1.5	0.20	0.00	0.00	0.00	0.00
8	0.00	0.66	0.28	4.3	1.9	5.1	1.00	0.12	0.05	0.00	0.00	0.00
9	4.2	0.08	17	2.5	2.3	4.3	0.95	0.10	0.00	0.00	0.00	0.00
10	0.53	0.00	32	2.5	2.7	3.8	0.75	0.14	0.01	0.00	0.00	0.00
11	0.00	0.00	17	2.3	1.7	3.6	0.76	0.17	0.01	0.00	0.00	1.8
12	0.00	0.02	4.5	2.8	1.4	3.7	0.82	0.09	4.3	0.00	0.00	25
13	0.00	0.30	1.1	2.7	0.79	3.7	0.37	0.55	22	0.00	0.00	1.7
14	0.00	0.02	0.82	2.5	0.34	3.4	0.40	0.80	4.2	0.00	0.00	0.09
15	0.00	0.05	0.36	2.4	0.74	3.3	0.30	1.1	3.4	0.00	0.00	0.00
16	0.00	2.2	0.08	1.9	0.53	3.5	0.30	1.1	3.9	0.00	0.00	0.00
17	0.00	2.2	0.05	1.2	0.35	3.6	0.25	1.2	0.90	0.00	0.00	0.00
18	4.3	1.3	0.05	1.0	0.43	4.3	0.12	1.3	0.01	0.00	0.00	10
19	248	0.74	0.00	1.1	0.40	14	0.07	0.99	0.00	0.00	0.00	29
20	31	0.46	0.00	1.1	0.76	9.6	0.11	0.76	0.00	0.00	0.00	1.7
21	7.8	0.27	0.00	1.2	7.4	7.2	0.05	0.00	0.00	0.00	0.00	0.03
22	2.7	0.26	0.00	1.0	37	5.5	0.05	0.00	0.00	0.00	0.00	0.00
23	1.4	0.30	12	0.98	16	4.6	0.12	0.00	0.00	0.00	0.00	0.02
24	0.98	0.29	22	1.0	5.8	4.2	0.25	0.00	0.00	0.00	0.00	0.00
25	7.9	0.23	17	1.4	4.8	2.5	0.20	23	0.00	0.00	0.00	0.00
26	3.5	0.17	9.1	1.2	4.8	2.3	0.06	5.8	0.00	0.00	0.00	0.00
27	0.94	0.25	2.9	0.03	15	2.0	0.02	0.49	0.00	0.00	0.00	0.00
28	0.29	0.04	1.6	2.1	28	1.6	0.01	0.04	0.00	0.00	0.00	0.00
29	7.7	0.01	0.86	2.8	---	1.3	0.02	0.00	0.00	0.00	0.00	0.00
30	3.6	0.00	7.9	1.7	---	1.5	0.02	0.00	0.00	0.00	0.00	0.00
31	1.2	---	33	1.6	---	1.1	---	0.00	---	0.00	16	---
TOTAL	326.04	45.08	183.13	96.81	145.24	220.7	14.32	38.84	39.60	0.00	16.00	90.91
MEAN	10.5	1.50	5.91	3.12	5.19	7.12	0.48	1.25	1.32	0.00	0.52	3.03
MAX	248	14	33	25	37	34	1.5	23	22	0.00	16	29
MIN	0.00	0.00	0.00	0.03	0.34	1.1	0.01	0.00	0.00	0.00	0.00	0.00
AC-FT	647	89	363	192	288	438	28	77	79	0.00	32	180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	2002	2003	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	20.2	14.9	36.1	17.9	32.1	36.7	40.2	51.0	26.2	19.7	0.94	5.61								
MAX	135	66.3	326	73.1	121	107	259	168	193	293	6.76	32.0								
(WY)	1992	1997	1992	1992	2001	1998	1990	1989	1989	1994	1996	1992								
MIN	0.000	0.000	0.000	0.10	0.000	0.67	0.000	0.059	0.000	0.000	0.000	0.000								
(WY)	1988	1990	1999	2000	1999	1999	1999	1996	1996	1988	1986	1995								

SUMMARY STATISTICS

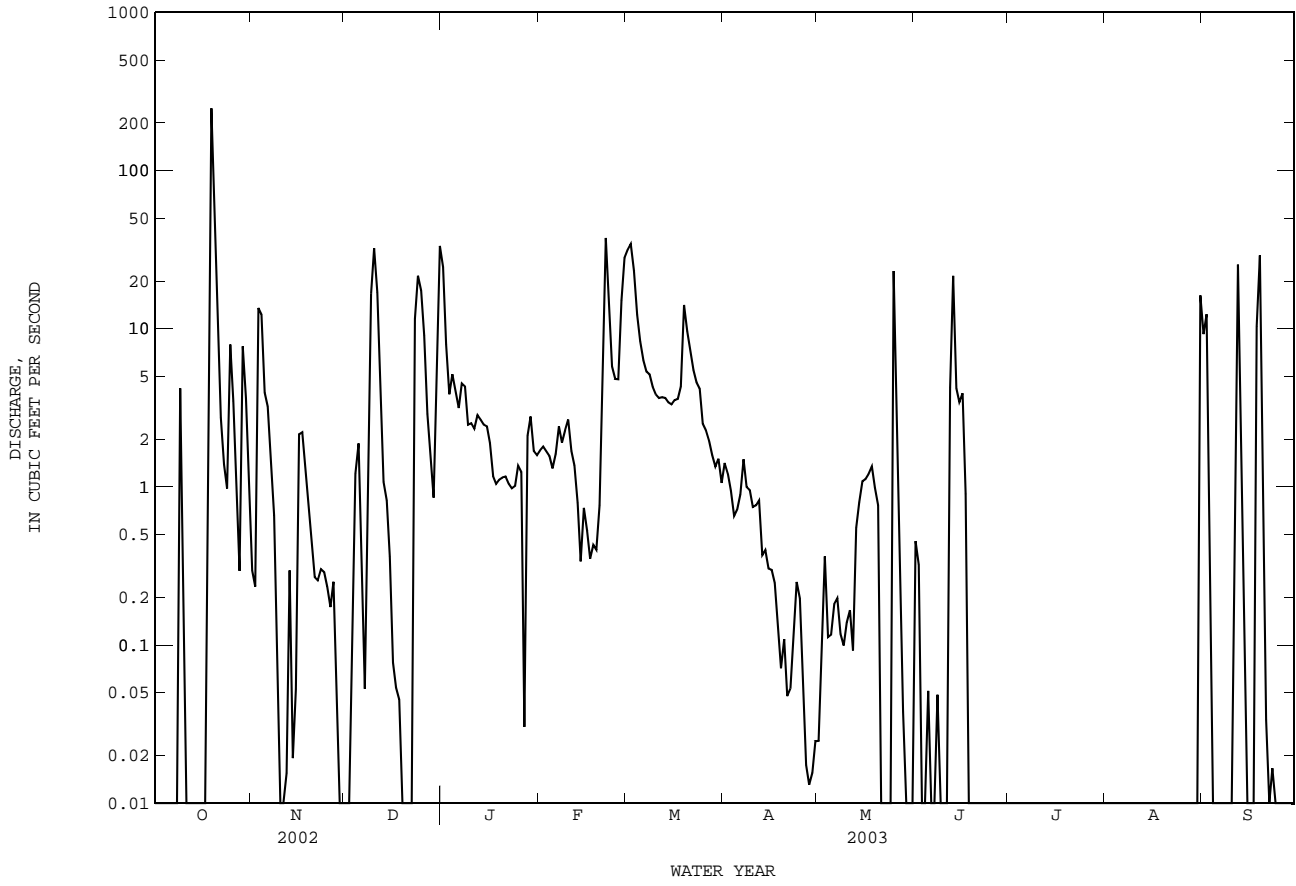
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1986 - 2003

ANNUAL TOTAL	5928.35	1216.67		
ANNUAL MEAN	16.2	3.33	25.1	
HIGHEST ANNUAL MEAN			72.7	1992
LOWEST ANNUAL MEAN			1.77	1999
HIGHEST DAILY MEAN	832	Mar 19	5410	Jul 11 1994
LOWEST DAILY MEAN	0.00	Jan 2	0.00	Oct 1 1985
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 12	0.00	Oct 1 1985
MAXIMUM PEAK FLOW			338	Oct 19 1994
MAXIMUM PEAK STAGE			11.54	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	11760	2410	18180	
10 PERCENT EXCEEDS	17	7.7	24	
50 PERCENT EXCEEDS	1.1	0.30	1.1	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

08050800 Timber Creek near Collinsville, TX--Continued



TRINITY RIVER BASIN

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, and 6.5 mi southeast from Post Office in Collinsville.

DRAINAGE AREA.--29.2 mi².

PERIOD OF RECORD.--Oct. 1992 to current year.

Water-quality records.--Chemical data: Oct. 1992 to Sept. 1995. Biochemical data: Oct. 1992 to Sept. 1995.

GAGE.--Water-stage recorder. Datum of gage is 621.08 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation or diversions. No flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.40	0.00	e9.8	0.08	246	0.06	0.00	0.04	0.00	0.00	0.00
2	0.00	0.37	0.00	e3.7	0.08	60	0.06	0.00	0.03	0.00	0.00	0.00
3	0.00	39	0.00	e1.8	0.07	17	0.05	0.00	0.02	0.00	0.00	0.00
4	0.00	13	0.00	1.1	0.05	8.5	0.05	0.00	0.02	0.00	0.00	0.00
5	0.00	5.1	0.00	0.84	0.05	0.00	0.04	0.00	0.03	0.00	0.00	0.00
6	0.00	2.8	0.00	0.61	0.12	3.3	0.03	0.00	0.01	0.00	0.00	0.00
7	0.00	0.72	0.00	0.47	0.13	2.4	0.02	0.00	0.00	0.00	0.00	0.00
8	0.00	0.24	0.00	0.39	0.34	1.9	0.01	0.00	0.01	0.00	0.00	0.00
9	0.00	0.10	8.6	0.37	0.20	1.4	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.07	39	0.33	0.14	1.1	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.04	e16	0.25	0.11	0.95	0.00	0.00	0.01	0.00	0.00	0.11
12	0.00	0.03	5.1	0.20	0.15	0.90	0.00	0.00	0.06	0.00	0.00	0.22
13	0.00	0.02	e2.5	0.16	0.14	1.0	0.00	0.00	1.2	0.00	0.00	0.21
14	0.00	0.01	e1.3	0.14	0.15	0.92	0.00	0.00	2.3	0.00	0.00	0.26
15	0.00	0.00	e0.87	0.13	0.13	0.92	0.00	0.00	8.4	0.00	0.00	0.24
16	0.00	0.00	0.66	0.15	0.10	0.72	0.00	0.00	1.1	0.00	0.00	0.18
17	0.00	0.00	0.45	0.14	0.12	0.62	0.00	0.00	0.35	0.00	0.00	0.04
18	0.00	0.00	0.65	0.13	0.11	0.76	0.00	0.00	0.19	0.00	0.00	0.06
19	305	0.00	0.53	0.11	0.10	6.2	0.00	0.00	0.11	0.00	0.00	0.07
20	18	0.00	e0.46	0.10	0.08	2.5	0.00	0.00	0.05	0.00	0.00	0.06
21	3.2	0.00	0.34	0.10	0.83	1.1	0.00	0.00	0.07	0.00	0.00	0.03
22	0.77	0.00	e0.32	0.08	26	0.67	0.00	0.00	0.08	0.00	0.00	0.02
23	0.23	0.00	e1.8	0.07	8.5	0.48	0.00	0.00	0.06	0.00	0.00	0.01
24	0.82	0.00	e13	0.07	2.0	0.41	0.00	0.00	0.05	0.00	0.00	0.00
25	28	0.00	e18	0.06	1.3	0.34	0.00	25	0.09	0.00	0.00	0.00
26	5.9	0.00	e5.0	0.06	2.0	0.24	0.00	11	0.08	0.00	0.00	0.00
27	1.3	0.00	e2.4	0.05	43	0.19	0.00	1.5	0.03	0.00	0.00	0.00
28	0.44	0.00	e1.3	0.06	146	0.14	0.00	0.38	0.00	0.00	0.00	0.00
29	4.6	0.00	0.78	0.05	---	0.11	0.00	0.15	0.00	0.00	0.00	0.00
30	3.5	0.00	148	0.06	---	0.10	0.00	0.09	0.00	0.00	0.00	0.00
31	0.94	---	e121	0.07	---	0.08	---	0.04	---	0.00	0.00	---
TOTAL	372.70	61.90	388.06	21.65	232.08	366.15	0.32	38.16	14.39	0.00	0.00	1.51
MEAN	12.0	2.06	12.5	0.70	8.29	11.8	0.011	1.23	0.48	0.000	0.000	0.050
MAX	305	39	148	9.8	146	246	0.06	25	8.4	0.00	0.00	0.26
MIN	0.00	0.00	0.00	0.05	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	739	123	770	43	460	726	0.6	76	29	0.00	0.00	3.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

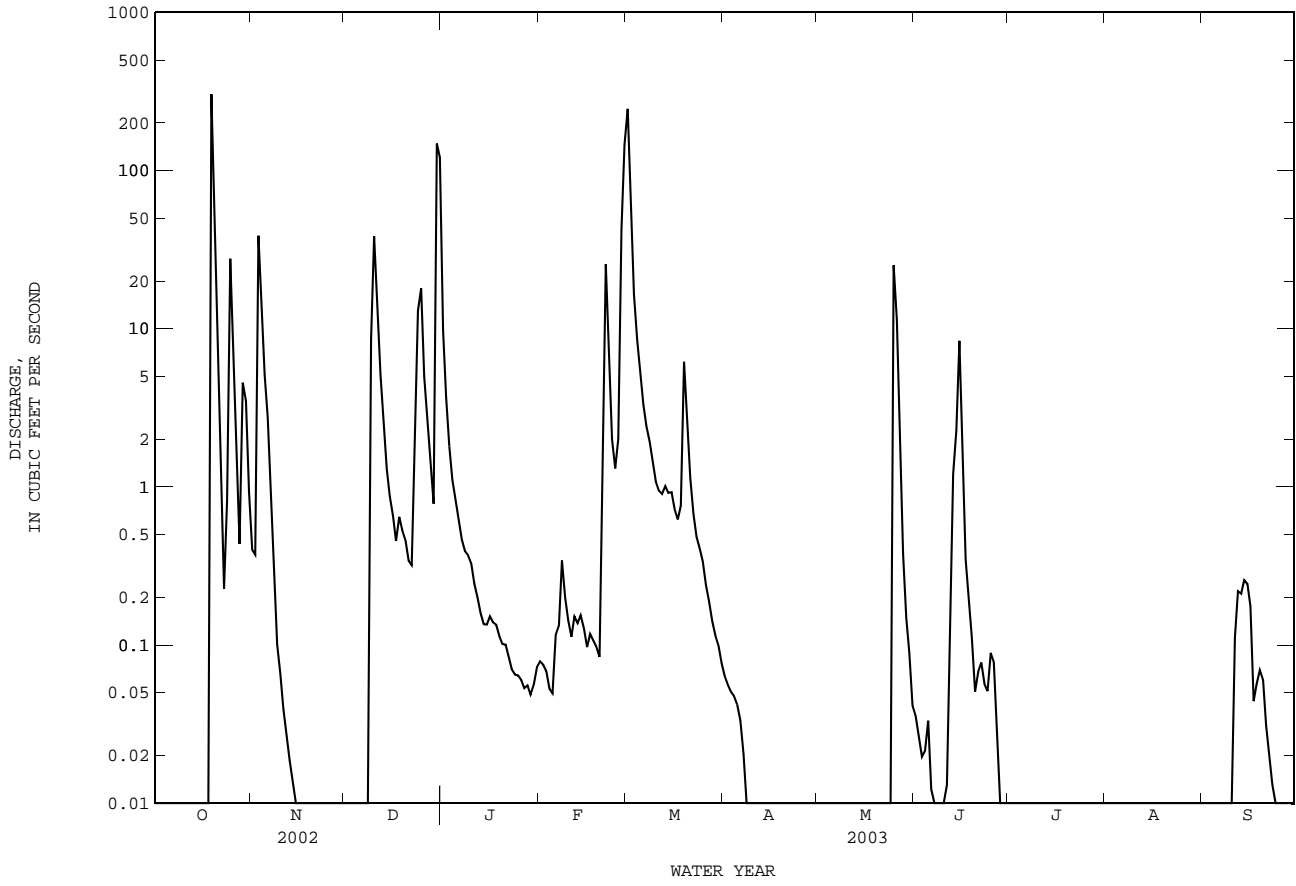
MEAN	16.8	35.8	22.5	16.4	30.9	39.1	23.4	19.1	5.16	4.12	0.56	1.76
MAX	107	204	66.0	108	118	111	66.5	86.5	28.3	36.7	4.72	9.54
(WY)	1994	1997	1998	1998	2001	2002	2002	1995	1993	1994	1994	1994
MIN	0.000	0.000	0.40	0.000	0.000	1.25	0.011	0.000	0.000	0.000	0.000	0.000
(WY)	1993	1996	2000	2000	1996	1999	2003	1996	1996	1993	1993	1997

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1993 - 2003

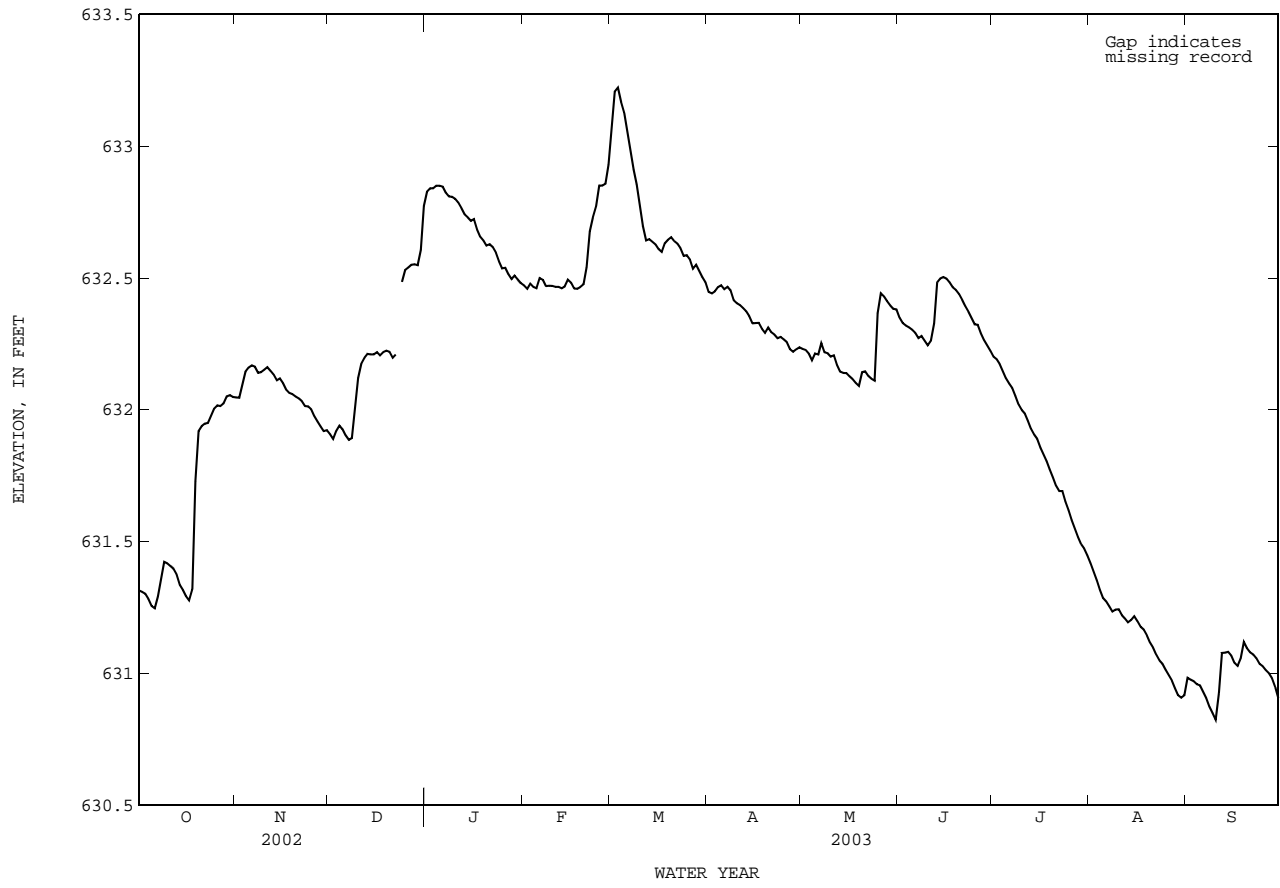
ANNUAL TOTAL	7862.05	1496.92		
ANNUAL MEAN	21.5	4.10	17.9	
HIGHEST ANNUAL MEAN			38.3	1997
LOWEST ANNUAL MEAN			1.88	1996
HIGHEST DAILY MEAN	1400	Mar 19	305	Oct 19 1993
LOWEST DAILY MEAN	0.00	Jun 3	0.00	Oct 1 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 22	0.00	Oct 1 1992
MAXIMUM PEAK FLOW			727	Oct 19 1993
MAXIMUM PEAK STAGE			13.59	Oct 19 1993
ANNUAL RUNOFF (AC-FT)	15590	2970	12960	
10 PERCENT EXCEEDS	15	2.6	9.1	
50 PERCENT EXCEEDS	0.40	0.02	0.03	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

e Estimated

08050840 Range Creek near Collinsville, TX--Continued



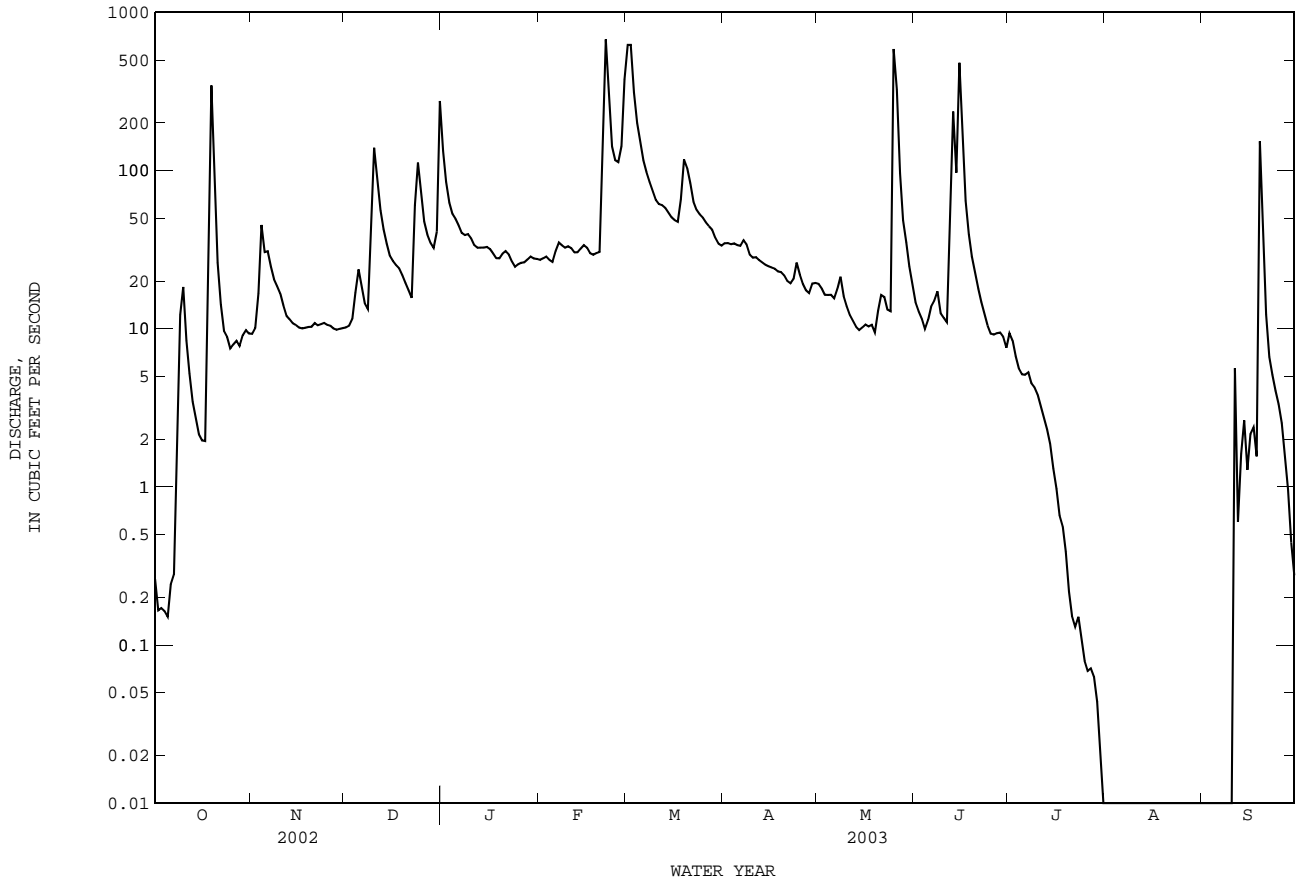
08051100 Ray Roberts Lake near Pilot Point, TX--Continued



08051500 Clear Creek near Sanger, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1981 - 2003z	
ANNUAL TOTAL	30252.59	13868.60	139	
ANNUAL MEAN	82.9	38.0	476	1982
HIGHEST ANNUAL MEAN			2.64	2000
LOWEST ANNUAL MEAN			39700	Oct 13 1981
HIGHEST DAILY MEAN	3780 Apr 8	675 Feb 22	0.00	Oct 12 1980
LOWEST DAILY MEAN	0.10 Sep 5	0.00 Jul 31	0.00	Aug 2 1981
ANNUAL SEVEN-DAY MINIMUM	0.13 Sep 1	0.00 Jul 31	104000	Oct 13 1981
MAXIMUM PEAK FLOW		1190 Jun 15	35.70	Oct 13 1981
MAXIMUM PEAK STAGE		11.46 Jun 15	100700	
ANNUAL RUNOFF (AC-FT)	60010	27510	245	
10 PERCENT EXCEEDS	93	73	22	
50 PERCENT EXCEEDS	11	16	0.01	
90 PERCENT EXCEEDS	0.30	0.00		

z Period of regulated streamflow.



THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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 Sept. 1996, Oct. 1997 to current year.
PESTICIDE DATA: May 1997 to current year.
SEDIMENT DATA: Feb. 1966 to May 1977, Oct. 1997 to Sept. 1999.

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/cm, Oct. 12, 1976; minimum daily, 182 microsiemens/cm, July 29, 1973.
WATER TEMPERATURE: Maximum daily, 39.0°C, June 8, 1969; minimum daily, 0.0°C, Jan. 9, 1970.
SEDIMENT CONCENTRATION: Maximum daily mean, 7,370 mg/L, May 12, 1972; minimum daily mean, 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 2002 TO SEPTEMBER 2003

Date	Time	Specif. conductance, unfltrd wat uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	
OCT	09...	0900	282	7.6	17.0	8.4	89	90	24.5	9.45	.72	.016	.74	<.04
NOV	07...	1000	474	8.1	9.9	10.9	97	189	31.4	15.4	--	E.007	.53	<.04
DEC	12...	1000	422	8.2	8.4	12.7	111	169	25.3	13.2	.58	.008	.59	<.04
JAN	16...	0915	582	8.1	5.7	12.1	97	261	38.9	22.0	--	<.008	.27	<.04
FEB	12...	0830	580	7.9	7.0	11.8	99	217	45.1	26.3	--	<.008	.05	<.04
MAR	11...	1300	519	7.8	12.1	9.4	88	212	33.5	16.8	--	E.006	.33	<.04
APR	09...	1000	567	8.0	12.7	9.8	93	219	42.5	28.6	--	<.008	<.06	<.04
MAY	09...	0915	553	7.9	25.2	7.3	91	190	42.0	32.7	--	<.008	.21	E.03
JUN	12...	1000	575	7.9	25.1	7.4	92	191	46.7	35.2	--	E.004	E.04	<.04
JUL	15...	0900	621	7.7	28.1	5.9	77	158	52.4	56.6	--	<.008	<.06	<.04

Date	Total nitrogen, water, unfltrd mg/L (00600)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, suspnd sediment total, mg/L (00689)	Suspended sediment concentration mg/L (80154)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	
OCT	09...	1.6	.82	.19	.09	.273	8.1	3.3	90	98
NOV	07...	.93	.41	.035	<.02	--	4.7	.8	79	91
DEC	12...	1.2	.57	.056	<.02	--	5.1	1.4	50	84
JAN	16...	.50	.23	.014	<.02	--	2.8	.3	74	95
FEB	12...	.23	.18	.008	<.02	--	2.3	.2	51	88
MAR	11...	.65	.33	.021	<.02	--	3.5	.5	42	98
APR	09...	--	.20	.011	<.02	--	2.5	.2	46	98
MAY	09...	.50	.29	.022	<.02	--	2.8	.7	40	100
JUN	12...	--	.38	.020	<.02	--	2.4	.4	46	91
JUL	15...	--	.29	.019	<.02	--	2.8	.4	40	91

Remark codes used in this report:
< -- Less than
E -- Estimated value

TRINITY RIVER BASIN

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 18.0 mi upstream from Lewisville Dam on the Elm Fork Trinity River.

DRAINAGE AREA.--75.5 mi².

PERIOD OF RECORD.--June 1956 to Sept. 1976, Oct. 1979 to current year.

Water-quality records.--Chemical data: Feb. 1966 to Sept. 1975. Specific conductance: Dec. 1966 to Sept. 1975. Water temperature: Feb. 1966 to Sept. 1975. Sediment data: Feb. 1966 to Sept. 1975.

REVISED RECORDS.--WRD TX-70-1: 1969.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 534.76 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are several small diversions above station for irrigation. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	1.2	1.1	282	0.41	286	2.7	6.0	6.4	0.07	0.00	0.00
2	0.02	0.65	1.3	127	0.22	156	3.0	5.7	6.5	0.58	0.00	0.00
3	0.05	41	1.7	68	0.39	89	2.7	4.7	5.1	1.3	0.00	0.00
4	0.03	37	2.8	22	0.36	50	3.9	3.6	4.4	3.6	0.00	0.00
5	0.05	12	2.9	8.9	0.46	25	5.1	2.6	4.0	3.4	0.00	0.00
6	0.34	5.6	2.7	5.6	1.4	14	5.5	1.9	4.2	1.4	0.00	0.00
7	1.4	2.0	3.6	3.8	2.8	10	5.3	1.6	3.9	0.78	0.00	0.00
8	6.2	0.73	2.8	2.6	2.6	8.3	5.3	0.99	4.7	0.44	0.00	0.00
9	15	0.24	170	2.2	2.0	6.9	5.1	0.49	5.0	0.14	0.00	0.00
10	23	0.06	272	1.7	1.9	5.1	4.8	0.15	4.3	0.24	0.00	0.00
11	7.6	0.00	80	1.0	2.1	4.9	5.3	0.11	3.7	3.3	0.00	0.22
12	3.4	0.00	27	0.32	1.9	4.4	5.7	0.04	5.8	3.3	0.00	1.6
13	1.4	0.00	8.8	0.00	1.6	1.6	5.9	0.02	14	1.2	0.00	1.1
14	1.0	0.00	3.2	0.00	2.1	0.71	6.4	0.02	44	0.12	0.00	0.56
15	1.2	0.00	1.3	0.00	2.6	0.48	7.1	0.06	183	0.00	0.00	0.42
16	1.2	0.00	0.68	0.00	2.8	1.2	7.2	0.41	37	0.00	0.00	0.47
17	1.2	0.02	0.37	0.01	2.8	2.2	6.0	0.57	18	0.00	0.00	0.67
18	37	0.08	0.19	0.00	2.1	2.8	5.2	0.32	11	0.00	0.00	0.54
19	1040	e0.36	0.03	0.00	1.8	9.9	7.2	0.03	8.6	0.00	0.00	0.64
20	526	e0.43	0.00	0.08	1.5	8.5	7.4	0.46	7.2	0.00	0.00	1.6
21	132	e0.54	0.00	0.42	64	5.3	6.0	0.64	6.0	0.00	0.00	1.1
22	69	0.72	0.00	0.33	398	3.3	5.4	0.42	5.2	0.00	0.00	0.68
23	27	1.6	433	0.30	118	2.4	6.8	0.15	2.6	0.00	0.00	0.62
24	13	1.7	820	0.18	43	1.4	9.5	0.22	0.60	0.00	0.00	0.64
25	114	1.3	251	0.08	32	2.0	9.4	108	0.11	0.00	0.00	0.46
26	32	1.5	121	0.04	34	1.6	8.6	69	0.06	0.00	0.00	0.43
27	5.9	1.6	55	0.03	212	1.7	6.2	22	1.6	0.00	0.00	0.27
28	2.2	1.3	21	0.08	392	3.4	5.9	15	1.4	0.00	0.00	0.11
29	47	1.2	9.7	0.23	---	4.1	4.3	13	0.78	0.00	0.00	0.09
30	17	1.3	229	0.44	---	3.5	4.7	8.2	0.39	0.00	0.00	0.12
31	3.8	---	917	0.79	---	3.0	---	4.5	---	0.00	0.00	---
TOTAL	2129.01	114.13	3439.17	528.13	1326.84	718.69	173.6	270.90	399.54	19.87	0.00	12.34
MEAN	68.7	3.80	111	17.0	47.4	23.2	5.79	8.74	13.3	0.64	0.000	0.41
MAX	1040	41	917	282	398	286	9.5	108	183	3.6	0.00	1.6
MIN	0.02	0.00	0.00	0.00	0.22	0.48	2.7	0.02	0.06	0.00	0.00	0.00
AC-FT	4220	226	6820	1050	2630	1430	344	537	792	39	0.00	24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003h, BY WATER YEAR (WY)

MEAN	56.1	60.6	52.6	26.4	66.6	60.7	67.8	113	46.1	17.5	2.09	28.1
MAX	641	530	398	208	400	362	677	897	286	540	28.5	258
(WY)	1982	1997	1992	1998	2001	2002	1957	1982	1989	1994	1966	1964
MIN	0.000	0.000	0.000	0.000	0.000	0.026	0.10	0.000	0.000	0.000	0.000	0.000
(WY)	1957	1959	1959	1959	1959	1963	1959	1959	1956	1956	1956	1956

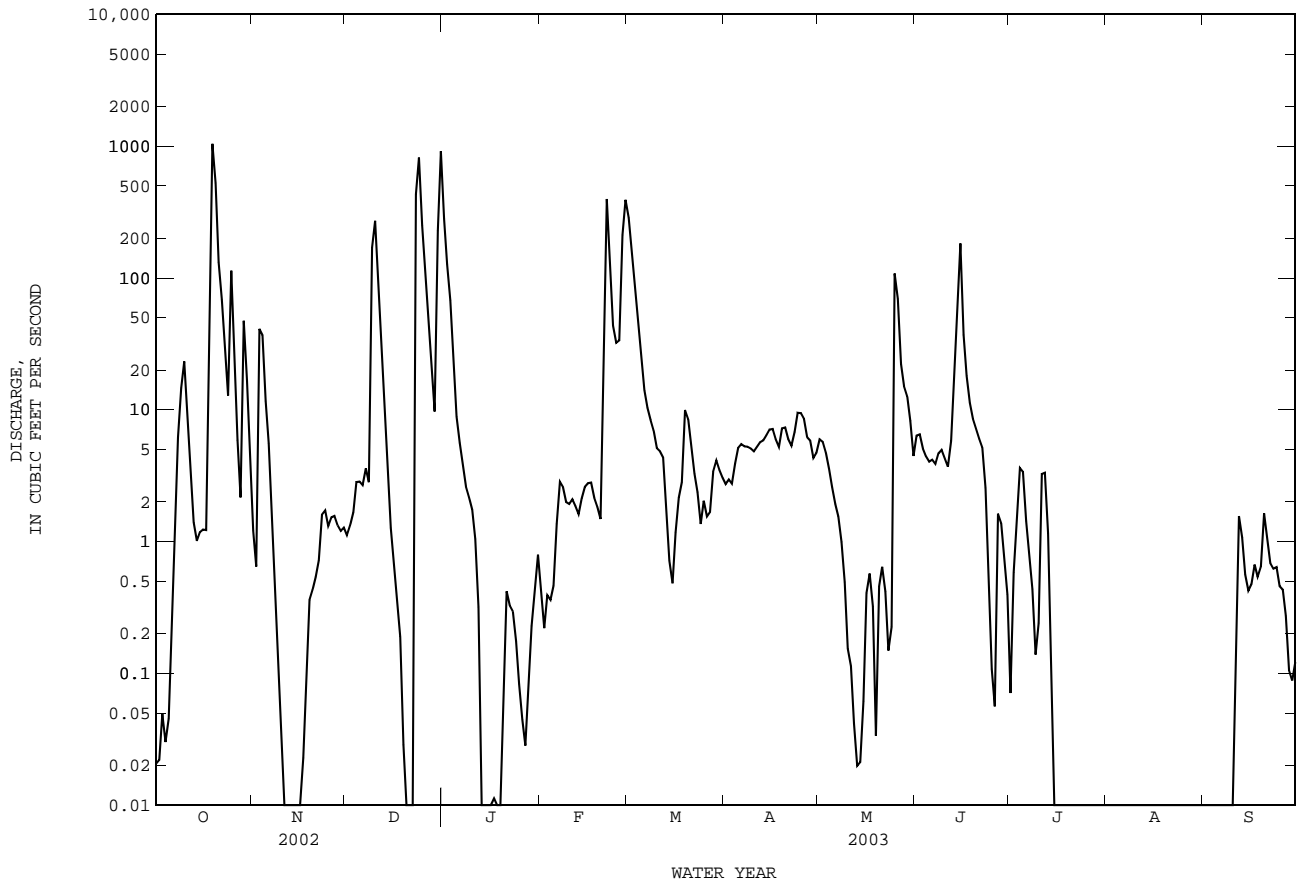
SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1956 - 2003h

ANNUAL TOTAL	26786.08	9132.22	
ANNUAL MEAN	73.4	25.0	49.9
HIGHEST ANNUAL MEAN			178
LOWEST ANNUAL MEAN			2.24
HIGHEST DAILY MEAN	3180	Mar 20	11600
LOWEST DAILY MEAN	0.00	Jul 12	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 11	0.00
MAXIMUM PEAK FLOW			1280
MAXIMUM PEAK STAGE			14.84
ANNUAL RUNOFF (AC-FT)	53130	18110	36120
10 PERCENT EXCEEDS	166	37	82
50 PERCENT EXCEEDS	1.4	1.4	0.63
90 PERCENT EXCEEDS	0.03	0.00	0.00

e Estimated

h See PERIOD OF RECORD paragraph.

08052700 Little Elm Creek near Aubrey, TX--Continued



TRINITY RIVER BASIN

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, 2.0 mi upstream from bridge on State Highway 121, 2.4 mi northeast of Lewisville, 12.0 mi upstream from Denton Creek, and 30.0 mi upstream from mouth.

DRAINAGE AREA.--1,660 mi².

PERIOD OF RECORD.--Nov. 1954 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 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 NGVD of 1929. Prior to May 17, 1955, nonrecording gage at site 4,000 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good. 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, 1954, 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 dam is owned by the U.S. Army Corps of Engineers. The lake was built for flood control and water conservation. The city of Dallas obtains most of its municipal water supply from this lake. 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. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	560.0
Crest of spillway.....	532.0
Lowest intakes to wet wells (invert).....	481.0
Invert of three broome-type gates.....	448.0

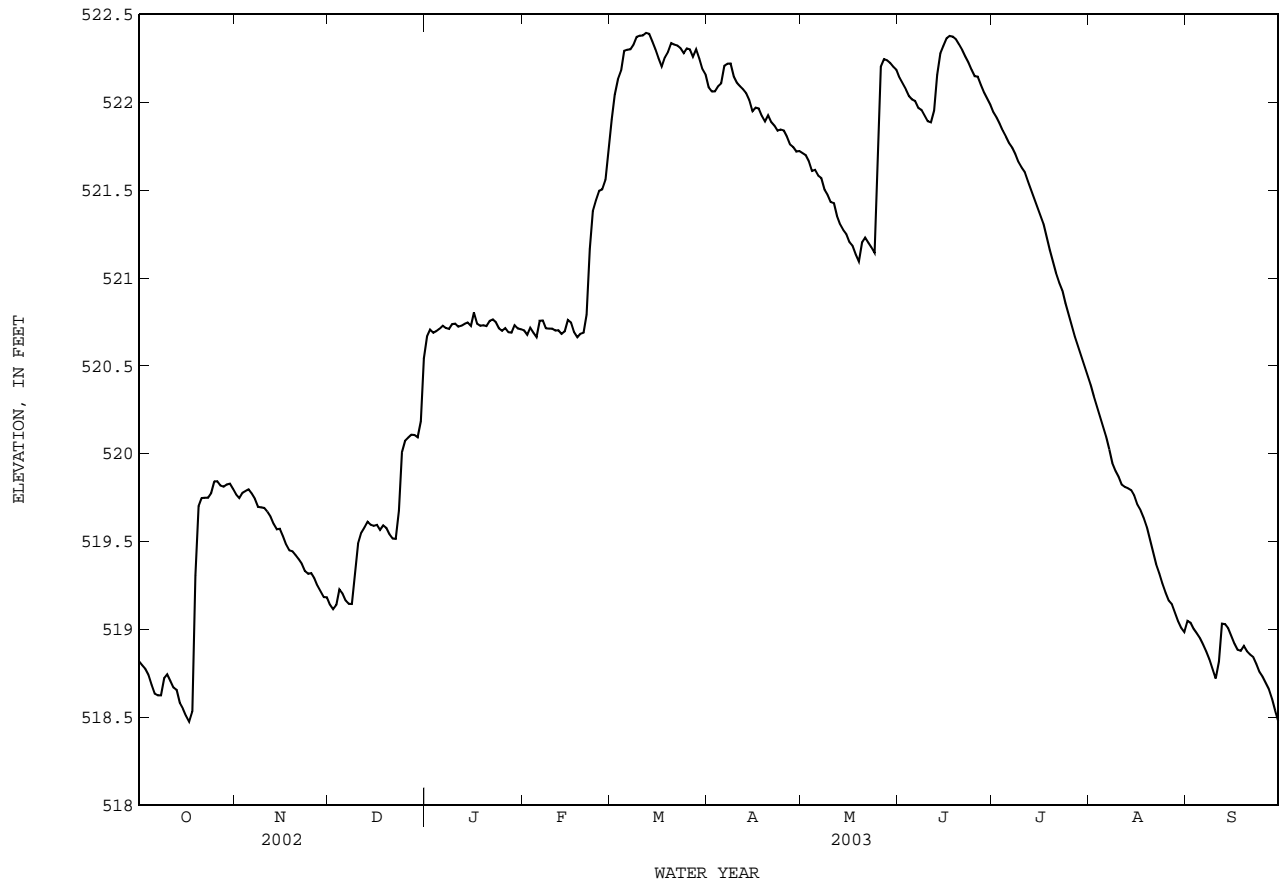
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,181,000 acre-ft, May 4, 1990, elevation, 536.73 ft; minimum since initial filling in 1957, 184,700 acre-ft, Sept. 28, 1980, elevation, 498.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 522.41 ft, Mar. 12, 13; minimum elevation, 518.42 ft, Oct. 18.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	518.82	519.77	519.14	520.67	520.70	521.90	522.09	521.71	522.14	521.94	520.39	519.05
2	518.80	519.75	519.11	520.71	520.68	522.04	522.06	521.70	522.11	521.91	520.33	519.04
3	518.78	519.78	519.14	520.69	520.72	522.13	522.06	521.67	522.07	521.88	520.27	519.00
4	518.74	519.79	519.23	520.70	520.69	522.18	522.09	521.61	522.04	521.84	520.22	518.98
5	518.68	519.80	519.20	520.71	520.66	522.29	522.11	521.62	522.02	521.81	520.16	518.95
6	518.64	519.77	519.16	520.73	520.76	522.30	522.21	521.58	522.01	521.77	520.10	518.91
7	518.62	519.74	519.15	520.72	520.76	522.30	522.22	521.57	521.97	521.74	520.02	518.88
8	518.62	519.70	519.15	520.71	520.71	522.33	522.22	521.50	521.96	521.71	519.95	518.83
9	518.72	519.69	519.32	520.74	520.71	522.37	522.15	521.47	521.92	521.66	519.90	518.78
10	518.74	519.69	519.49	520.74	520.71	522.38	522.11	521.43	521.89	521.63	519.87	518.72
11	518.71	519.67	519.55	520.72	520.70	522.38	522.09	521.43	521.89	521.60	519.82	518.82
12	518.67	519.64	519.58	520.73	520.70	522.40	522.07	521.35	521.95	521.55	519.81	519.03
13	518.66	519.60	519.61	520.74	520.68	522.39	522.05	521.30	522.16	521.50	519.80	519.03
14	518.58	519.57	519.60	520.75	520.70	522.35	522.01	521.27	522.28	521.46	519.79	519.01
15	518.55	519.57	519.59	520.73	520.76	522.30	521.95	521.25	522.32	521.41	519.76	518.96
16	518.51	519.53	519.59	520.80	520.75	522.25	521.97	521.20	522.36	521.35	519.71	518.92
17	518.47	519.48	519.57	520.74	520.69	522.20	521.97	521.18	522.38	521.31	519.68	518.88
18	518.53	519.45	519.59	520.73	520.66	522.25	521.92	521.13	522.37	521.23	519.64	518.88
19	519.31	519.44	519.58	520.73	520.68	522.29	521.89	521.09	522.36	521.16	519.58	518.91
20	519.70	519.42	519.54	520.73	520.69	522.34	521.93	521.20	522.33	521.09	519.51	518.88
21	519.75	519.40	519.52	520.76	520.79	522.33	521.89	521.23	522.30	521.03	519.44	518.86
22	519.75	519.37	519.52	520.76	521.17	522.32	521.87	521.20	522.26	520.97	519.37	518.84
23	519.75	519.33	519.68	520.75	521.38	522.31	521.84	521.17	522.23	520.93	519.32	518.80
24	519.78	519.32	520.01	520.71	521.44	522.28	521.85	521.14	522.19	520.86	519.26	518.76
25	519.84	519.32	520.07	520.70	521.50	522.31	521.84	521.74	522.15	520.79	519.21	518.73
26	519.84	519.29	520.09	520.71	521.50	522.30	521.81	522.20	522.15	520.73	519.16	518.69
27	519.82	519.25	520.11	520.69	521.56	522.26	521.76	522.25	522.10	520.67	519.14	518.66
28	519.81	519.22	520.11	520.69	521.72	522.30	521.75	522.24	522.06	520.61	519.09	518.61
29	519.83	519.18	520.09	520.73	---	522.25	521.72	522.22	522.02	520.55	519.05	518.54
30	519.83	519.18	520.18	520.71	---	522.19	521.72	522.20	521.99	520.50	519.01	518.48
31	519.80	---	520.54	520.71	---	522.16	---	522.18	---	520.45	518.98	---
MEAN	519.12	519.52	519.61	520.72	520.90	522.27	521.97	521.55	522.13	521.28	519.66	518.85
MAX	519.84	519.80	520.54	520.80	521.72	522.40	522.22	522.25	522.38	521.94	520.39	519.05
MIN	518.47	519.18	519.11	520.67	520.66	521.90	521.72	521.09	521.89	520.45	518.98	518.48
CAL YR 2002	MAX 525.49	MIN 516.32										
WTR YR 2003	MAX 522.40	MIN 518.47										

08052800 Lewisville Lake near Lewisville, TX--Continued



TRINITY RIVER BASIN

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 mi².

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 NGVD of 1929 (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.--No estimated daily discharges. Records good. Since Nov. 1954, at least 10% of contributing drainage area has been regulated. Most of low flow is used by the city of Dallas for municipal supply (see Elm Fork Trinity River near Carrollton, station 08055500).

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1950-54) prior to regulation, 402 ft³/s (291,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1949-54).--Maximum discharge, 21,700 ft³/s, Sept. 15, 1950, gage height, 30.75 ft; no flow June 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	241	189	127	200	173	326	264	363	407	531	456
2	155	242	190	166	197	167	326	273	383	413	532	366
3	303	263	186	164	196	275	295	323	405	402	518	346
4	304	242	186	167	198	522	280	325	360	373	458	353
5	303	252	146	173	202	754	280	323	345	354	424	351
6	302	242	148	204	232	1020	583	321	336	330	527	361
7	286	243	148	204	205	1020	283	344	335	334	871	379
8	241	240	148	202	203	1020	271	382	337	329	800	431
9	272	239	322	202	190	999	270	380	293	334	692	469
10	154	240	174	189	165	986	270	385	278	332	644	449
11	310	241	154	179	160	989	268	382	289	331	548	724
12	310	226	146	181	154	1020	268	380	483	330	494	643
13	296	215	139	183	151	1020	267	388	514	366	487	461
14	253	217	144	180	165	1010	266	386	305	401	453	416
15	232	218	157	180	154	1010	235	381	295	415	414	358
16	230	219	157	179	151	1010	199	382	293	445	376	355
17	227	218	157	179	152	682	197	381	305	585	409	354
18	526	221	246	180	152	203	198	351	303	838	444	398
19	1170	219	386	178	149	181	200	318	305	717	542	428
20	202	213	159	178	159	166	198	483	298	604	772	352
21	188	210	159	175	264	236	198	447	298	565	687	336
22	235	216	159	175	338	329	197	326	297	565	579	318
23	237	217	278	179	168	330	199	321	294	566	582	341
24	281	217	141	179	161	329	200	320	288	567	539	354
25	262	219	168	176	163	328	193	680	280	568	468	341
26	247	207	164	176	185	327	191	204	284	567	473	340
27	245	192	163	219	206	328	224	231	281	551	470	341
28	243	188	163	231	187	329	256	249	280	532	401	340
29	244	189	165	202	---	328	259	249	307	532	399	333
30	240	189	197	203	---	329	284	249	355	534	400	381
31	243	---	136	204	---	327	---	306	---	535	386	---
TOTAL	8794	6695	5575	5714	5207	17747	7681	10734	9789	14722	16320	11875
MEAN	284	223	180	184	186	572	256	346	326	475	526	396
MAX	1170	263	386	231	338	1020	583	680	514	838	871	724
MIN	53	188	136	127	149	166	191	204	278	329	376	318
AC-FT	17440	13280	11060	11330	10330	35200	15240	21290	19420	29200	32370	23550

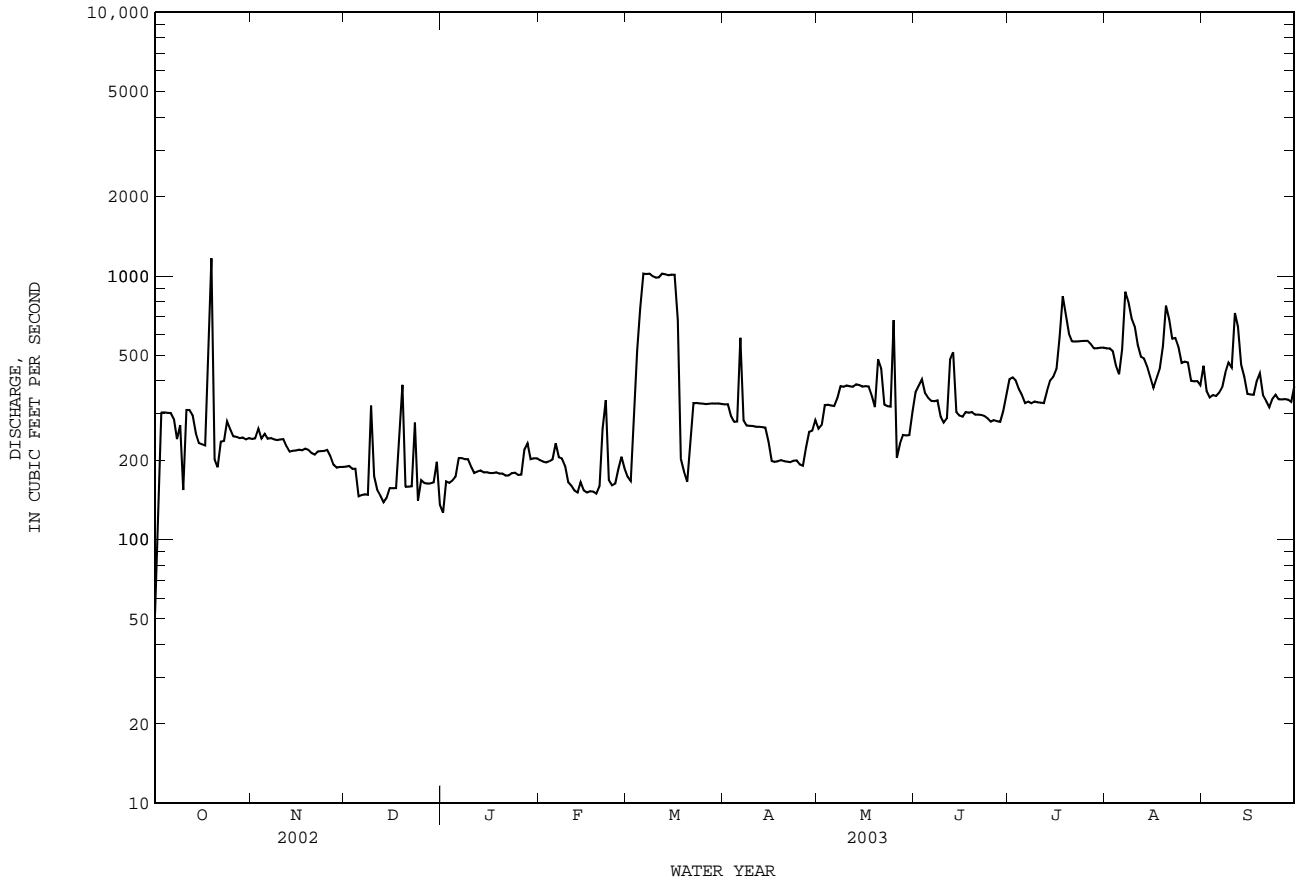
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003z, BY WATER YEAR (WY)

	407	617	633	506	605	900	866	1299	1292	799	481	341
MEAN	407	617	633	506	605	900	866	1299	1292	799	481	341
MAX	3628	6300	4681	5267	4611	4218	3939	8391	5222	4479	4101	2480
(WY)	1982	1982	1982	1992	1992	1997	2002	1990	1957	1989	1982	1962
MIN	23.1	37.4	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003z	
ANNUAL TOTAL	279200		120853		729	
ANNUAL MEAN	765		331		3062	
HIGHEST ANNUAL MEAN					1982	
LOWEST ANNUAL MEAN					94.2	
HIGHEST DAILY MEAN	4960	Apr 7	1170	Oct 19	19000	May 4 1990
LOWEST DAILY MEAN	53	Oct 1	53	Oct 1	0.00	Oct 20 1993
ANNUAL SEVEN-DAY MINIMUM	151	Dec 11	151	Dec 11	0.29	Nov 3 1983
MAXIMUM PEAK FLOW			1930		19600	
MAXIMUM PEAK STAGE			13.41		30.15	
ANNUAL RUNOFF (AC-FT)	553800		239700		528200	
10 PERCENT EXCEEDS	2700		557		2990	
50 PERCENT EXCEEDS	301		284		226	
90 PERCENT EXCEEDS	162		165		82	

z Period of regulated streamflow.



TRINITY RIVER BASIN

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 mi².

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 NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage, at least 10% of contributing drainage has been regulated. At times flow affected by discharge from floodwater-retarding structures controlling runoff from 197 mi² in the Denton Creek watershed. No known diversions. No flow at times most years.

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 residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 DAILY MEAN VALUES

Table with 13 columns: DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. Rows show daily discharge values and summary statistics (TOTAL, MEAN, MAX, MIN, AC-FT).

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

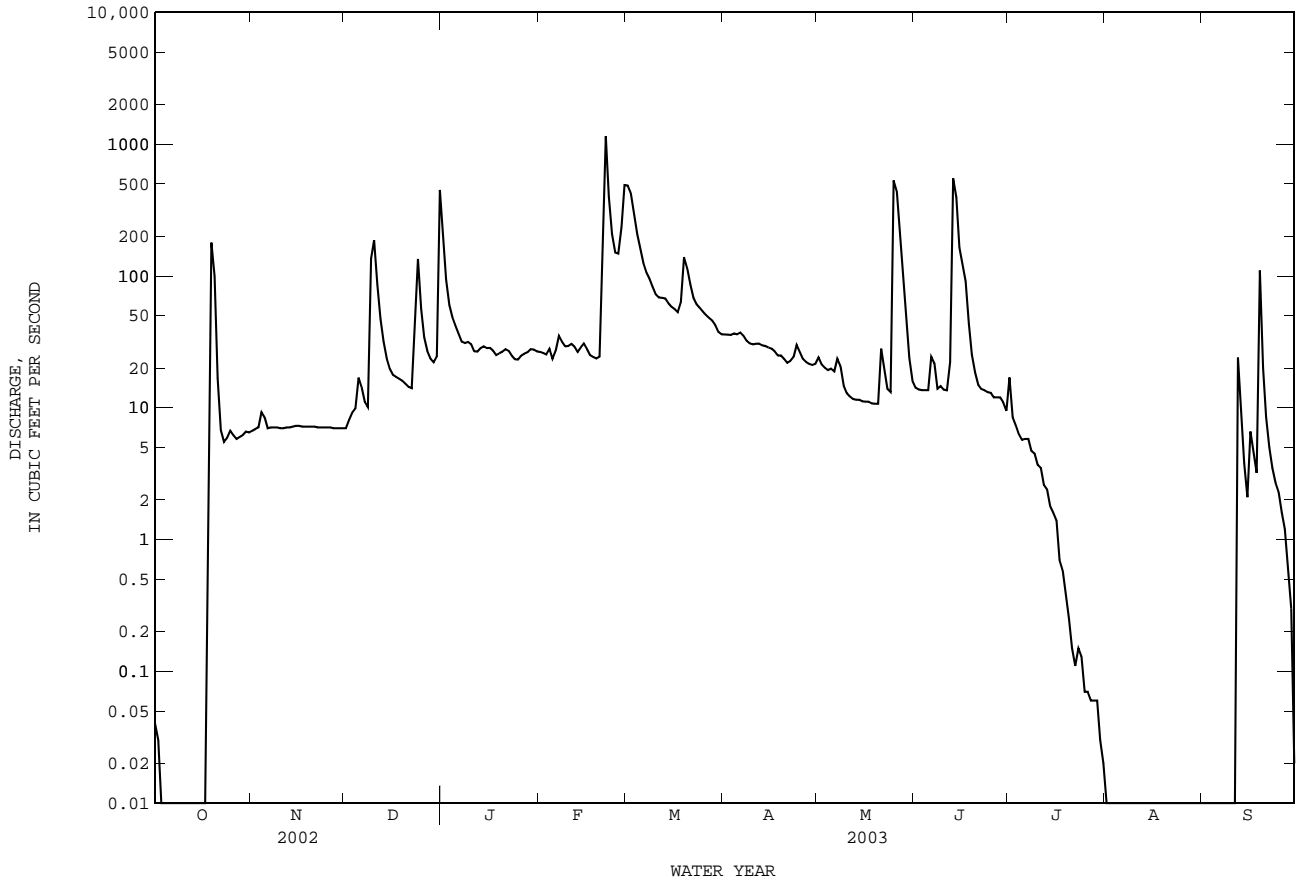
Table with 13 columns representing months (OCT to SEP) and 5 rows of statistics: MEAN, MAX, (WY), MIN, (WY).

SUMMARY STATISTICS

Summary statistics table comparing data for 2002 calendar year, 2003 water year, and water years 1950-2003 across various metrics like annual total, mean, highest/lowest values, and runoff.

e Estimated

08053500 Denton Creek near Justin, TX--Continued



TRINITY RIVER BASIN

08053500 Denton Creek near Justin, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	
Date	Time	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
Date	Time	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
Date	Time	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
Date	Time	Uranium natural water, fltrd, ug/L (22703)												
JAN 28...	1330	27	791	8.3	7.5	11.9	100	3.7	350	100	107	19.6	43.9	
APR 22...	1100	23	771	7.3	19.2	8.4	93	3.3	310	84	90.0	20.2	45.3	
JUN 10...	1406	14	586	7.9	26.1	8.1	103	<2.0	230	52	68.4	13.6	32.4	
JAN 28...	1	21	1.92	3	290	244	81.1	62.2	.24	9.67	490	473	<10	
APR 22...	1	24	2.84	2	269	224	85.0	63.0	.28	9.33	475	451	<10	
JUN 10...	.9	23	3.33	2	210	175	60.1	37.4	.3	8.72	347	329	17	
JAN 28...	--	<.008	.22	<.04	.17	.005	<.02	13.8	2	<.30	E1	100	<.06	
APR 22...	.10	.008	.11	<.04	.30	.012	<.02	4.7	E1	<.30	2	91	<.06	
JUN 10...	--	<.008	.07	<.04	.29	.018	<.02	4.9	3	<.30	2	98	<.06	
JAN 28...	E.02	<.8	.34	.9	<10	.16	17.7	--i	1.7	5.19	<3	<.20	2	
APR 22...	.06	<.8	.36	3.7	E6	<.08	11.9	<.02	2.1	3.90	<3	<.20	2	
JUN 10...	<.04	<.8	.32	5.7	E5	<.08	7.7	<.02	2.1	2.99	<3	<.20	M	
JAN 28...						4.47								
APR 22...						3.37								
JUN 10...						2.63								

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Null value qualifier codes used in this report:

- i -- Required sample type not received

THIS PAGE IS INTENTIONALLY 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, 1.5 mi east of Interstate Highway 35W, and 1.9 mi northwest of courthouse in downtown Roanoke.

DRAINAGE AREA.--75 mi².

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 28...	1130	15	601	8.1	7.0	11.6	96	<2.0	260	32	93.9	5.08	30.8
APR 22...	0930	E5.2	658	--e	18.5	7.9	86	<2.0	240	31	85.9	5.97	44.1
JUN 10...	1034	4.1	450	7.6	25.1	7.2	90	<2.0	140	6	50.9	3.88	36.1
Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, titr., field, mg/L (00452)	Bicarbonate, wat flt incrm, titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 28...	.8	21	1.54	1	270	223	40.7	33.3	.33	3.92	366	346	<10
APR 22...	1	28	2.64	2	250	208	38.6	59.9	.35	4.25	388	367	<10
JUN 10...	1	35	3.82	<1	167	138	27.8	32.8	.3	6.44	259	245	19
Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)
JAN 28...	E.004	.54	<.04	.15	E.003	<.02	2.4	3	<.30	<2	86	<.06	<.04
APR 22...	<.008	E.05	<.04	.20	.007	<.02	5.4	2	<.30	E1	160r	<.06	<.04
JUN 10...	<.008	.10	<.04	.31	.013	<.02	6.4	2	E.18	2	76	<.06	.04
Date	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
JAN 28...	<.8	.27	.8	<10	.56	7.6	--i	.7	4.59	<3	<.20	2	1.28
APR 22...	<.8	.29	2.3	<10	.25	10.0	<.02	1.3	3.60	<3	<.20	3	.85
JUN 10...	<.8	.28	1.6	<8	<.08	3.4	<.02	2.2	2.61	<3	<.20	M	.46

Remark codes used in this report:

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this report:

r -- Value verified by rerun, same method

Null value qualifier codes used in this report:

e -- Required equipment not functional/avail
i -- Required sample type not received

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--July 1952 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Grapevine Reservoir".
Precipitation records: Oct. 2001 to Sept. 2002.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 16, 1953, nonrecording gage at site 1,000 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in June 1952, and deliberate impoundment began July 3, 1952. The controlled outlet works consist of a 13.0-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 lake was built for flood control, navigation, and water conservation. The dam is owned by the U.S. Army Corps of Engineers. 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 mi² in the Denton Creek watershed. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	588.0
Crest of spillway.....	560.0
Lowest intake to wet wells (invert).....	500.5
Invert of two broome-type gates.....	475.0

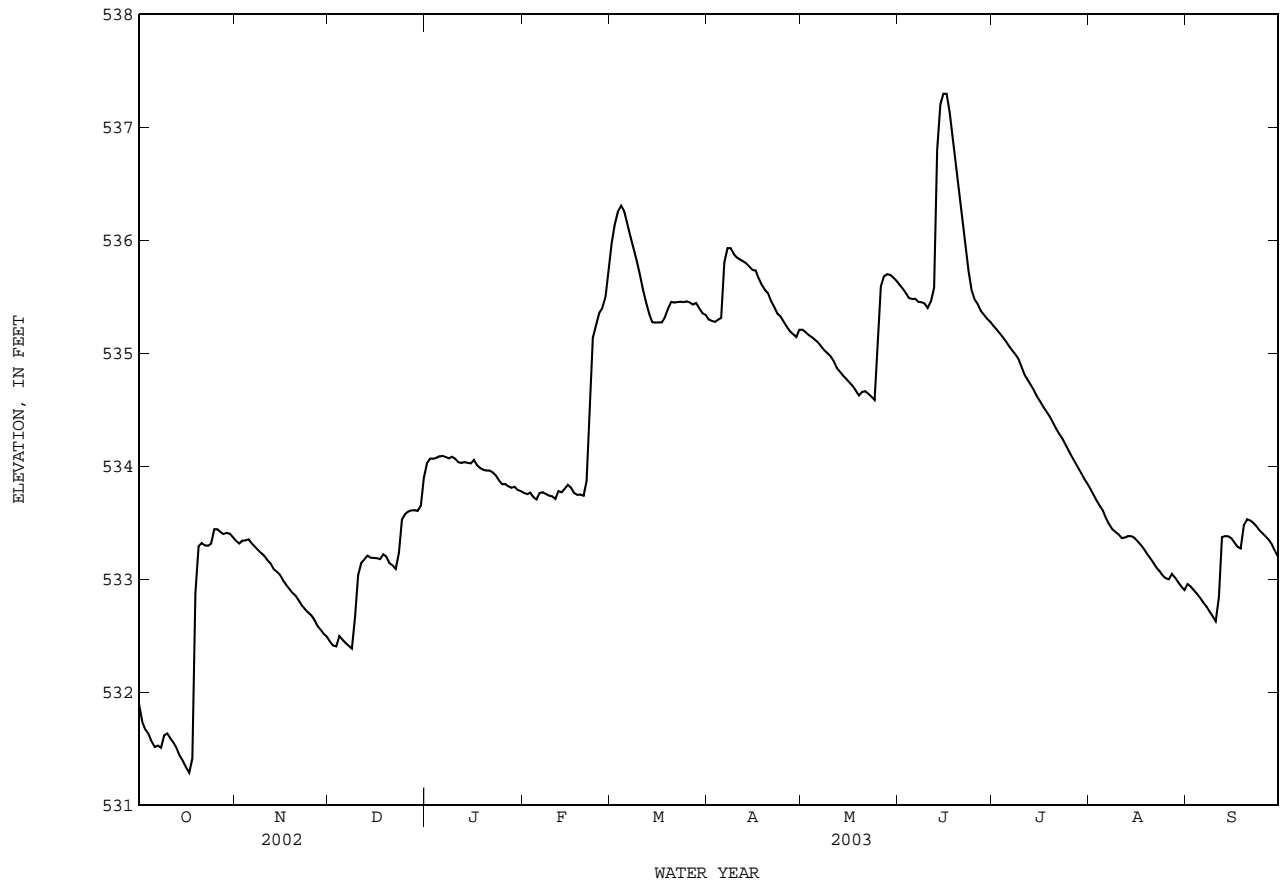
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 471,200 acre-ft, Nov. 1, 1981, elevation, 563.29 ft; minimum since lake first filled in 1957, 94,480 acre-ft, Feb. 26, 1979, elevation, 520.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 537.32 ft, June 16; minimum elevation, 531.22 ft, Oct. 18.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	531.89	533.34	532.45	534.03	533.76	535.98	535.30	535.21	535.61	535.24	533.80	532.96
2	531.74	533.32	532.41	534.07	533.75	536.14	535.29	535.19	535.57	535.21	533.75	532.94
3	531.67	533.34	532.40	534.07	533.77	536.26	535.28	535.16	535.53	535.18	533.69	532.90
4	531.63	533.34	532.50	534.07	533.73	536.31	535.30	535.14	535.49	535.14	533.65	532.87
5	531.56	533.35	532.46	534.09	533.71	536.26	535.31	535.12	535.48	535.10	533.61	532.84
6	531.51	533.32	532.44	534.09	533.76	536.15	535.81	535.09	535.48	535.06	533.54	532.79
7	531.53	533.29	532.41	534.08	533.77	536.03	535.93	535.06	535.45	535.02	533.48	532.76
8	531.51	533.26	532.39	534.07	533.75	535.93	535.93	535.02	535.45	534.99	533.44	532.72
9	531.62	533.23	532.67	534.08	533.74	535.82	535.88	535.00	535.44	534.95	533.42	532.67
10	531.63	533.21	533.04	534.07	533.73	535.70	535.85	534.97	535.40	534.88	533.40	532.63
11	531.59	533.17	533.15	534.04	533.71	535.57	535.83	534.93	535.46	534.81	533.37	532.84
12	531.55	533.14	533.18	534.03	533.78	535.45	535.82	534.87	535.58	534.76	533.37	533.37
13	531.50	533.09	533.21	534.04	533.77	535.35	535.80	534.83	536.80	534.72	533.38	533.38
14	531.44	533.07	533.19	534.03	533.80	535.28	535.77	534.80	537.20	534.67	533.38	533.38
15	531.39	533.04	533.19	534.03	533.83	535.27	535.74	534.77	537.30	534.61	533.37	533.36
16	531.33	532.99	533.19	534.06	533.81	535.27	535.73	534.74	537.30	534.57	533.34	533.32
17	531.29	532.95	533.18	534.01	533.76	535.27	535.66	534.71	537.13	534.52	533.31	533.29
18	531.41	532.92	533.22	533.98	533.75	535.32	535.60	534.67	536.92	534.48	533.27	533.27
19	532.88	532.88	533.20	533.97	533.75	535.39	535.56	534.63	536.70	534.44	533.23	533.48
20	533.29	532.85	533.14	533.96	533.74	535.45	535.53	534.66	536.46	534.39	533.19	533.53
21	533.32	532.81	533.12	533.96	533.87	535.45	535.46	534.67	536.21	534.34	533.15	533.52
22	533.30	532.77	533.09	533.95	534.63	535.45	535.41	534.64	535.97	534.29	533.11	533.50
23	533.30	532.74	533.23	533.92	535.14	535.46	535.35	534.62	535.73	534.25	533.07	533.47
24	533.32	532.70	533.53	533.87	535.25	535.45	535.32	534.59	535.56	534.19	533.04	533.43
25	533.44	532.68	533.58	533.84	535.36	535.46	535.28	535.10	535.47	534.14	533.01	533.41
26	533.44	532.64	533.60	533.84	535.40	535.45	535.23	535.59	535.44	534.09	533.00	533.38
27	533.42	532.59	533.61	533.82	535.50	535.43	535.19	535.68	535.37	534.04	533.05	533.35
28	533.40	532.55	533.61	533.81	535.75	535.45	535.17	535.70	535.34	533.99	533.01	533.31
29	533.41	532.52	533.60	533.82	---	535.40	535.14	535.69	535.31	533.94	532.98	533.25
30	533.40	532.49	533.65	533.79	---	535.36	535.21	535.67	535.28	533.89	532.94	533.20
31	533.37	---	533.90	533.78	---	535.34	---	535.64	---	533.85	532.90	---
MEAN	532.29	532.99	533.08	533.98	534.15	535.61	535.52	535.04	535.91	534.57	533.30	533.17
MAX	533.44	533.35	533.90	534.09	535.75	536.31	535.93	535.70	537.30	535.24	533.80	533.53
MIN	531.29	532.49	532.39	533.78	533.71	535.27	535.14	534.59	535.28	533.85	532.90	532.63
CAL YR 2002	MAX 539.47	MIN 528.81										
WTR YR 2003	MAX 537.30	MIN 531.29										

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.

PESTICIDE DATA: Sept. 1999 to current year.

REMARKS.--Pesticide samples are composited from discrete samples collected at the surface, middle, and bottom of the reservoir.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

325822097030401 -- Grapevine Lk Site AC

Date	Time	Reser- voir storage acre-ft (00054)	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	
JAN	28...	173000	.58	1.00	346	7.9	8.0	11.5	99	E3k	Elk	130	18	
JAN	28-28	1130	--	--	--	--	--	--	--	--	--	--	--	
28...	1134	--	--	10.0	346	7.9	8.0	11.4	98	--	--	--	--	
28...	1138	--	--	20.0	346	7.9	8.0	11.3	97	--	--	--	--	
28...	1142	--	--	30.0	346	7.8	8.0	11.3	97	--	--	--	--	
28...	1146	--	--	40.0	346	7.8	8.0	11.3	97	--	--	--	--	
28...	1150	--	--	50.0	346	7.8	8.0	11.2	96	--	--	--	--	
28...	1154	--	--	55.0	346	7.8	8.0	11.2	96	--	--	130	20	
APR	22...	1145	184000	.70	1.00	407	8.1	19.5	9.8	109	E2k	Elk	150	--
APR	22-22	1145	--	--	--	--	--	--	--	--	--	--	--	
22...	1150	--	--	10.0	408	8.0	19.0	9.4	103	--	--	--	--	
22...	1155	--	--	20.0	408	8.0	19.0	9.3	102	--	--	--	--	
22...	1200	--	--	30.0	408	8.0	18.5	9.3	101	--	--	--	--	
22...	1205	--	--	40.0	409	7.8	18.0	9.1	98	--	--	--	--	
22...	1210	--	--	54.0	409	7.7	18.0	8.7	94	--	--	150	--	
AUG	05...	1200	171000	.94	1.00	359	8.3	29.5	8.4	111	<1	<1	120	28
AUG	05-05	1200	--	--	--	--	--	--	--	--	--	--	--	
05...	1212	--	--	10.0	359	8.2	29.0	8.0	105	--	--	--	--	
05...	1224	--	--	20.0	368	7.5	28.0	5.4	69	--	--	--	--	
05...	1236	--	--	30.0	371	7.3	28.0	3.8	49	--	--	--	--	
05...	1240	--	--	40.0	386	7.0	26.5	1.0	13	--	--	--	--	
05...	1300	--	--	52.0	395	6.9	25.5	1.4	17	--	--	140	14	

325822097030401 -- Grapevine Lk Site AC

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., mg/L (00452)	Bicar- bonate, wat flt incrm. titr., mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	
JAN	42.5	5.53	21.1	.8	25	4.47	<1	135	112	31.5	23.0	.25	5.4	
JAN	28-28	--	--	--	--	--	--	--	--	--	--	--	--	
28...	--	--	--	--	--	--	--	--	--	--	--	--	--	
28...	--	--	--	--	--	--	--	--	--	--	--	--	--	
28...	--	--	--	--	--	--	--	--	--	--	--	--	--	
28...	--	--	--	--	--	--	--	--	--	--	--	--	--	
28...	43.0	5.65	22.2	.8	26	4.21	1	132	110	31.2	23.0	.26	5.3	
APR	22...	49.9	6.19	25.8	.9	27	4.58	--	--	35.0	26.2	.25	2.8	
APR	22-22	--	--	--	--	--	--	--	--	--	--	--	--	
22...	--	--	--	--	--	--	--	--	--	--	--	--	--	
22...	--	--	--	--	--	--	--	--	--	--	--	--	--	
22...	--	--	--	--	--	--	--	--	--	--	--	--	--	
22...	--	--	--	--	--	--	--	--	--	--	--	--	--	
22...	50.0	6.15	26.6	.9	27	4.57	--	--	34.7	26.2	.25	3.5		
AUG	05...	39.4	5.58	24.6	1	30	4.35	<1	114	94	32.4	28.0	.3	4.9
AUG	05-05	--	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
05...	45.9	6.07	23.9	.9	26	4.32	<1	153	126	24.7	27.3	.3	6.8	

08054500 Grapevine Lake near Grapevine, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

325822097030401 -- Grapevine Lk Site AC

Date	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF ug/L (82679)	Propargite, water, fltrd, 0.7u GF ug/L (82685)	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (82665)	Terbufos, water, fltrd, ug/L (82675)	Thiocarb, water, fltrd, ug/L (82681)	Triallate, water, fltrd, 0.7u GF ug/L (82678)	Tri-fluralin, water, fltrd, 0.7u GF ug/L (82661)
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28-28	Mn	<.010	<.011	<.02	<.004	.360	E.04	<.034	<.02	<.005	<.002	<.009
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22-22	Mn	<.010	<.011	<.02	<.004	.379	.02	<.034	<.02	<.005	<.002	<.009
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05-05	<.01	<.010	<.011	<.02	<.004	.224	<.02	<.034	<.02	<.005	<.002	<.009
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--

325751097033001 -- Grapevine Lk Site AR

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)
JAN 28...	1202	1.00	347	7.9	8.0	11.0	95
JAN 28...	1204	10.0	347	7.9	8.0	11.1	96
JAN 28...	1207	20.0	346	7.9	8.0	11.2	96
JAN 28...	1210	30.0	346	7.9	8.0	11.2	96
JAN 28...	1213	44.0	346	7.9	8.0	11.3	97
APR 22...	1221	1.00	407	8.2	19.5	9.8	109
APR 22...	1223	10.0	408	8.0	19.0	9.4	103
APR 22...	1226	20.0	408	8.0	18.5	9.2	100
APR 22...	1228	30.0	409	8.0	18.5	9.1	99
APR 22...	1230	44.0	409	7.9	18.0	9.1	98
AUG 05...	1318	1.00	363	8.1	29.0	7.6	99
AUG 05...	1321	10.0	363	8.1	29.0	7.3	95
AUG 05...	1325	20.0	367	7.8	28.5	6.4	83
AUG 05...	1328	30.0	372	7.5	27.5	4.8	61
AUG 05...	1332	42.0	391	7.1	26.0	1.1	14

TRINITY RIVER BASIN

08054500 Grapevine Lake near Grapevine, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

325930097053801 -- Grapevine Lk Site BC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat un f uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
28...	1237	.58	1.00	348	7.9	8.0	11.7	101	Elk	E5k	130	19	43.5
28...	1243	--	10.0	349	7.9	8.0	11.4	98	--	--	--	--	--
28...	1249	--	20.0	349	7.9	8.0	11.6	100	--	--	--	--	--
28...	1255	--	30.0	349	8.0	8.0	11.6	100	--	--	--	--	--
28...	1302	--	45.0	349	8.0	7.5	11.4	97	--	--	130	20	43.3
APR													
22...	1250	.67	1.00	407	8.2	19.5	9.5	105	Elk	<3	140	--	47.3
22...	1254	--	10.0	407	8.2	19.5	9.4	104	--	--	--	--	--
22...	1258	--	20.0	408	8.1	18.5	9.1	99	--	--	--	--	--
22...	1302	--	30.0	408	8.0	18.5	9.1	99	--	--	--	--	--
22...	1306	--	40.0	411	7.7	18.0	7.3	78	--	--	--	--	--
22...	1310	--	47.0	411	7.7	18.0	7.5	81	--	--	150	--	48.8
AUG													
05...	1353	.91	1.00	349	8.5	30.0	8.5	113	E2k	Elk	110	22	35.8
05...	1400	--	10.0	350	8.4	30.0	8.2	109	--	--	--	--	--
05...	1407	--	20.0	361	7.6	28.5	5.2	68	--	--	--	--	--
05...	1414	--	30.0	384	7.1	27.0	E.8	--	--	--	--	--	--
05...	1421	--	43.0	392	7.1	26.0	1.0	12	--	--	130	--	41.5

325930097053801 -- Grapevine Lk Site BC

Date	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt titr., field, mg/L (00452)	Bicar- bonate, wat flt titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
JAN													
28...	5.60	21.2	.8	25	4.21	1	136	113	31.5	23.0	.27	5.2	204
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	5.57	21.0	.8	25	4.47	1	133	111	31.3	22.9	.25	5.2	203
APR													
22...	5.82	24.3	.9	26	4.51	--	--	--	34.9	26.0	.27	2.7	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	5.85	25.8	.9	27	4.49	--	--	--	34.9	25.0	.27	4.4	--
AUG													
05...	5.51	23.3	1	30	4.18	<1	110	92	32.6	28.0	.3	5.0	189
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	5.63	24.7	1	29	4.45	<1	156	128	23.0	26.8	.3	7.2	213

325930097053801 -- Grapevine Lk Site BC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN											
28...	--	E.007	.45	<.04	--	.32	.008	<.02	--	<10	<2.0
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	E.007	.44	<.04	--	.30	.008	<.02	--	<10	E1.0
APR											
22...	.30	.008	.31	<.04	--	.37	.005	<.02	--	<10	1.7
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	.35	.022	.38	.12	.37	.49	.017	<.02	--	<10	7.3
AUG											
05...	--	<.008	<.06	<.04	--	.35	.005	<.02	--	<8	.9
05...	--	<.008	<.06	<.04	--	.33	.006	<.02	--	E7	64.9
05...	--	<.008	<.06	<.04	--	.33	E.003	<.02	--	<8	3.4
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	<.008	<.06	.66	.39	1.0	.122	.10	.304	480	999

08054500 Grapevine Lake near Grapevine, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

325933097081401 -- Grapevine Lk Site CC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)
JAN													
28...	1324	.43	1.00	351	8.0	8.0	12.1	104	--	E.007	.41	<.04	--
28...	1329	--	13.0	352	8.2	8.5	12.6	110	.39	.008	.40	<.04	--
APR													
22...	1335	.55	1.00	408	8.3	20.0	9.9	111	.24	.008	.25	<.04	--
22...	1344	--	12.0	409	8.2	20.0	10.1	113	.24	.008	.25	<.04	--
AUG													
05...	1442	--	1.00	350	8.0	30.0	6.8	91	--	<.008	<.06	<.04	--
05...	1447	--	12.0	352	7.7	29.5	5.5	73	--	<.008	<.06	.06	.35

325933097081401 -- Grapevine Lk Site CC

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN					
28...	.33	.007	<.02	<10	E1.0
28...	.33	.005	<.02	<10	<2.0
APR					
22...	.36	.007	<.02	<10	E1.4
22...	.34	.006	<.02	<10	E1.4
AUG					
05...	.35	E.004	<.02	<8	.7
05...	.41	E.004	<.02	<8	1.1

330106097094601 -- Grapevine Lk Site DC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)
JAN													
28...	1355	.34	1.00	378	8.2	7.5	13.5	115	.37	.010	.38	<.04	--
28...	1359	--	11.0	378	8.4	8.0	13.6	117	.37	.012	.38	<.04	--
APR													
22...	1400	.34	1.00	416	8.2	20.5	9.6	109	.18	.009	.18	<.04	--
22...	1406	--	12.0	415	8.2	20.5	9.6	109	.18	.010	.19	<.04	--
AUG													
05...	1508	--	1.00	348	8.6	31.0	9.4	128	--	<.008	<.06	<.04	--
05...	1513	--	10.0	353	7.7	30.0	5.6	75	--	<.008	<.06	.05	.40

330106097094601 -- Grapevine Lk Site DC

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN					
28...	.31	.007	<.02	<10	E1.5
28...	.32	.006	<.02	<10	E1.3
APR					
22...	.38	.008	<.02	<10	E1.4
22...	.39	.008	<.02	<10	E.9
AUG					
05...	.38	.006	<.02	E7	.7
05...	.45	.012	<.02	<8	8.8

TRINITY RIVER BASIN

08054500 Grapevine Lake near Grapevine, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

330207097103701 -- Grapevine Lk Site EC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat un f uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
28...	1432	.31	1.00	399	8.1	8.0	13.3	115	E3k	E2k	--	--	--
28...	1438	--	9.00	392	8.2	8.0	13.4	116	--	--	160	26	51.7
APR													
22...	1424	.34	1.00	413	8.2	20.0	9.4	105	E2k	E4k	140	--	48.1
22...	1432	--	11.0	413	8.1	20.0	9.0	101	--	--	140	--	47.1
AUG													
05...	1532	.30	1.00	347	8.6	32.0	9.9	136	<1	<1	110	23	34.0
05...	1539	--	8.00	348	8.4	31.0	9.1	123	--	--	100	15	31.6

330207097103701 -- Grapevine Lk Site EC

Date	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
JAN													
28...	--	--	--	--	--	2	162	136	--	--	.26	--	--
28...	6.32	25.0	.9	25	3.88	3	152	129	35.2	27.6	.26	4.7	234
APR													
22...	5.91	26.1	.9	27	4.49	--	--	--	35.2	26.5	.27	2.7	--
22...	5.87	24.7	.9	27	4.59	--	--	--	35.3	26.3	.27	2.9	--
AUG													
05...	6.05	26.0	1	33	4.58	E2	E102	87	32.7	29.4	.3	6.1	191
05...	5.56	27.1	1	35	4.73	E1	E103	86	33.2	29.0	.3	6.2	190

330207097103701 -- Grapevine Lk Site EC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L as P (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN									
28...	--	E.007	.47	<.04	.31	.006	<.02	--	--
28...	.44	.008	.45	<.04	.36	.007	<.02	<10	<2.0
APR									
22...	.23	.009	.24	E.03	.37	.006	<.02	<10	E1.4
22...	.24	.010	.25	E.04	.39	.008	<.02	<10	E1.4
AUG									
05...	--	<.008	<.06	<.04	.36	.006	<.02	<8	.7
05...	--	<.008	<.06	<.04	.36	.006	<.02	E5	3.1

Remark codes used in this report:

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range
n -- Below the NDV

Null value qualifier codes used in this report:

u -- Unable to determine-matrix interference

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08055000 Denton Creek near Grapevine, TX

LOCATION.--Lat 32°59'13", long 97°00'45", Denton County, Hydrologic Unit 12030104, on left bank at downstream side of 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1947 to June 1991, July 2003 to Sept. 2003. Monthly discharge only for some periods, published in WSP 1312.

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

GAGE.--Water-stage recorder. Datum of gage is 439.11 ft above NGVD of 1929. Oct. 1947 to June 1991, at site 0.1 mi upstream, at same datum. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since July 1952, at least 10% of contributing drainage area has been regulated. Flow regulated by Grapevine Lake, 4.1 mi upstream. Much of flow of Denton Creek is used by the City of Dallas for municipal supply (see station 08055500). The City of Grapevine diverts water from Denton Creek just downstream from Grapevine Dam, upstream from this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1948-52), 140 ft³/s (101,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1948-52).--Maximum discharge, 13,900 ft³/s, Feb. 26, 1948, gage height, 30.38 ft. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 was slightly higher than the flood in Apr. 1942, which reached a stage of 35.9 ft, from floodmarks, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	68	87
2	---	---	---	---	---	---	---	---	---	---	68	62
3	---	---	---	---	---	---	---	---	---	e69	68	60
4	---	---	---	---	---	---	---	---	---	69	67	60
5	---	---	---	---	---	---	---	---	---	70	67	60
6	---	---	---	---	---	---	---	---	---	70	68	59
7	---	---	---	---	---	---	---	---	---	68	68	59
8	---	---	---	---	---	---	---	---	---	70	68	59
9	---	---	---	---	---	---	---	---	---	70	72	60
10	---	---	---	---	---	---	---	---	---	70	69	60
11	---	---	---	---	---	---	---	---	---	69	72	239
12	---	---	---	---	---	---	---	---	---	69	72	80
13	---	---	---	---	---	---	---	---	---	69	75	66
14	---	---	---	---	---	---	---	---	---	68	71	67
15	---	---	---	---	---	---	---	---	---	67	62	65
16	---	---	---	---	---	---	---	---	---	67	62	64
17	---	---	---	---	---	---	---	---	---	67	61	64
18	---	---	---	---	---	---	---	---	---	68	59	85
19	---	---	---	---	---	---	---	---	---	67	59	66
20	---	---	---	---	---	---	---	---	---	68	59	64
21	---	---	---	---	---	---	---	---	---	68	58	64
22	---	---	---	---	---	---	---	---	---	68	58	64
23	---	---	---	---	---	---	---	---	---	68	59	64
24	---	---	---	---	---	---	---	---	---	68	59	64
25	---	---	---	---	---	---	---	---	---	68	59	64
26	---	---	---	---	---	---	---	---	---	68	72	64
27	---	---	---	---	---	---	---	---	---	68	62	63
28	---	---	---	---	---	---	---	---	---	68	61	64
29	---	---	---	---	---	---	---	---	---	68	60	64
30	---	---	---	---	---	---	---	---	---	68	61	64
31	---	---	---	---	---	---	---	---	---	69	61	---
TOTAL	---	---	---	---	---	---	---	---	---	---	2005	2125
MEAN	---	---	---	---	---	---	---	---	---	---	64.7	70.8
MAX	---	---	---	---	---	---	---	---	---	---	75	239
MIN	---	---	---	---	---	---	---	---	---	---	58	59
AC-FT	---	---	---	---	---	---	---	---	---	---	3980	4210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003hz, BY WATER YEAR (WY)

	78.0	124	161	133	103	117	206	269	380	292	220	93.8
MEAN	78.0	124	161	133	103	117	206	269	380	292	220	93.8
MAX	405	2174	1851	1704	870	896	878	2210	1768	1997	1818	1047
(WY)	1963	1982	1982	1982	1975	1970	1969	1990	1989	1989	1982	1962
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.29	2.14	0.000	0.000	0.000	0.000
(WY)	1953	1956	1954	1953	1953	1954	1956	1954	1953	1953	1953	1953

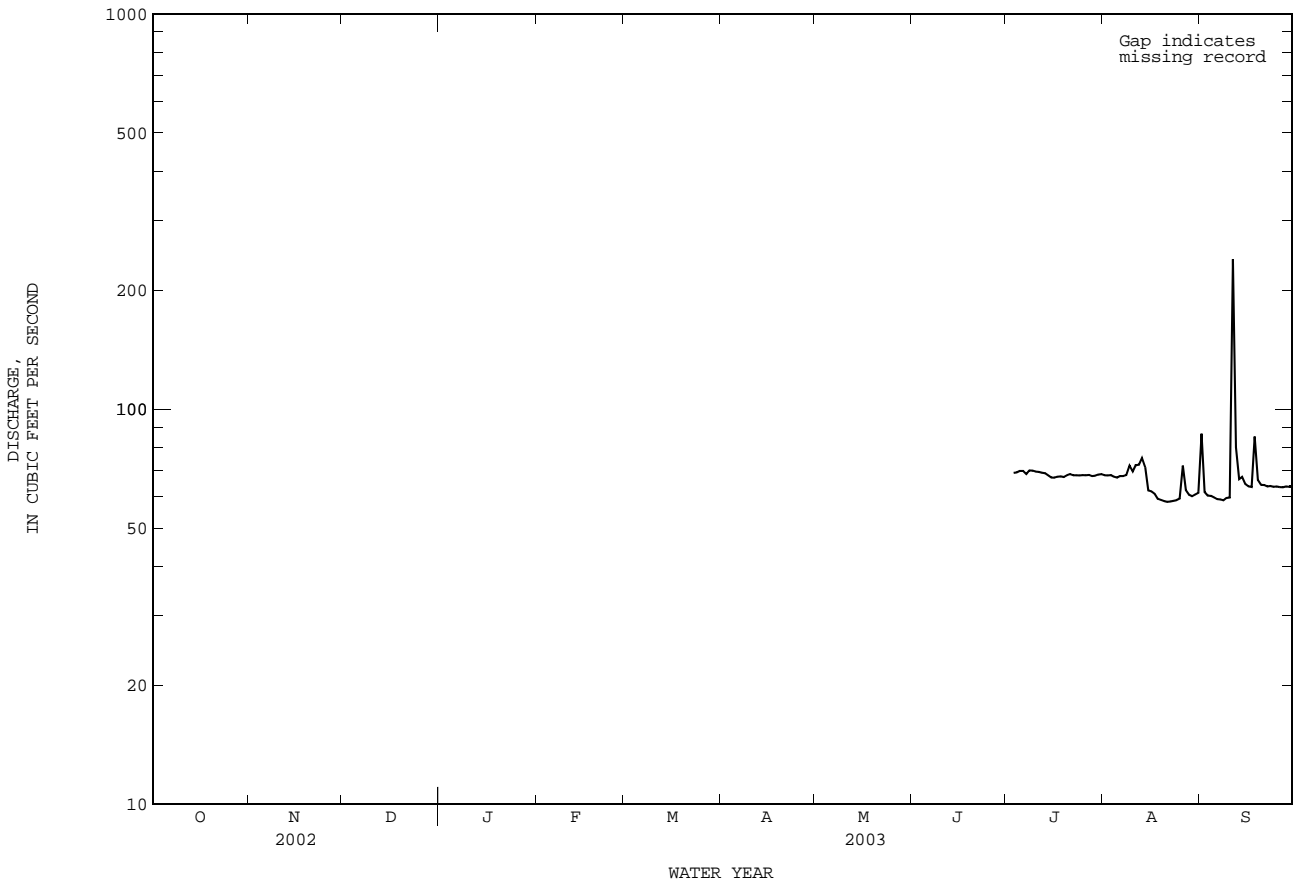
08055000 Denton Creek near Grapevine, TX--Continued

SUMMARY STATISTICS

WATER YEARS 1953 - 2003hz

ANNUAL MEAN	183	
HIGHEST ANNUAL MEAN	1023	1982
LOWEST ANNUAL MEAN	1.88	1954
HIGHEST DAILY MEAN	7790	Nov 2 1981
LOWEST DAILY MEAN	0.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1 1952
MAXIMUM PEAK FLOW	13900	Feb 26 1948
MAXIMUM PEAK STAGE	30.38	Feb 26 1948
ANNUAL RUNOFF (AC-FT)	132800	
10 PERCENT EXCEEDS	474	
50 PERCENT EXCEEDS	50	
90 PERCENT EXCEEDS	4.0	

e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated stream flow.



TRINITY RIVER BASIN

08055000 Denton Creek near Grapevine, TX

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)
JAN 28...	1310	99	390	8.4	4.0	14.6	112	130	20	42.8	5.58	21.3	.8
APR 23...	1300	189	414	7.4	18.0	8.5	92	140	22	48.2	5.77	23.8	.9
AUG 05...	1155	90	371	7.8	27.0	6.7	86	120	5	38.2	5.66	25.3	1
Date	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., mg/L (00452)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)
JAN 28...	25	4.44	<1	135	111	31.5	22.5	.26	5.06	215	202	11	.46
APR 23...	26	4.59	<1	149	122	34.3	24.9	.26	3.22	237	220	<10	.41
AUG 05...	31	4.52	<1	139	115	29.8	27.4	.3	5.73	221	206	<10	--
Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
JAN 28...	.008	.47	<.04	--	.30	.017	<.02	7.3	E1	E.16	E1	51	<.06
APR 23...	.024	.43	E.03	--	.40	.012	<.02	4.9	E2	<.30	E1	58	<.06
AUG 05...	<.008	<.06	.14	.41	.55	.025	<.02	6.8	3	<.30	4	49	<.06
Date	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 28...	<.04	<.8	.16	1.1	<10	<.08	1.0	<.02	2.1	3.02	<3	<.20	3
APR 23...	<.04	<.8	.20	2.5	<10	<.08	.8	<.02	2.2	1.67	<3	<.20	<1
AUG 05...	<.04	<.8	.27	.7	17	E.07	371	<.02	2.3	1.89	<3	<.20	1
Date	Uranium natural water, fltrd, ug/L (22703)												
JAN 28...	1.07												
APR 23...	1.33												
AUG 05...	.83												

Remark codes used in this report:

< -- Less than
E -- Estimated value

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08055500 Elm Fork Trinity River near Carrollton, TX

LOCATION.--Lat 32°57'57", long 96°56'39", Dallas County, Hydrologic Unit 12030103, at upstream side of bridge on Sandy Lake Road, 75 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 mi²

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".
Precipitation records: Oct. 2001 to Sept. 2002.

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 NGVD of 1929. 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 July 6, 1938, water-stage recorder at site 300 ft upstream and at present datum. July 7, 1938, to Apr. 14, 1939, nonrecording gage at site 9.3 mi downstream at datum 22.94 ft lower. Apr. 15, 1939 to Sept. 30, 1955, water-stage recorder at site 8.5 mi downstream at datum 22.94 ft lower. Oct. 1, 1955, to Sept. 30, 1987, water-stage recorder at site 300 ft upstream and at datum 2.00 ft higher. Oct. 1, 1987 to July 7, 1999, at site 300 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1954, at least 10% of contributing drainage area has been regulated. The city of Dallas diverts water from the pool at gage and from the river 14.0 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. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--47 years (water years 1908-54), 818 ft³/s (592,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1907-54).--Maximum gage height, about 19 ft, May 25, 1908, present site and datum, from information by local resident; estimated discharge, 145,000 ft³/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 ft³/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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	158	103	147	110	260	163	153	203	170	153	765
2	167	194	204	139	83	216	189	100	156	247	150	271
3	157	331	317	127	91	235	201	162	196	269	155	140
4	113	227	566	123	158	644	234	193	185	169	135	129
5	78	290	258	100	140	1170	424	151	278	174	83	147
6	150	233	228	88	498	1520	2110	102	344	100	116	127
7	465	203	192	147	267	1500	338	97	240	128	421	129
8	223	171	169	129	216	1520	169	159	306	111	496	151
9	923	193	1130	127	202	1510	193	147	193	122	371	205
10	140	197	410	120	159	1500	206	192	159	99	372	187
11	252	167	195	96	145	1450	188	124	288	92	255	1580
12	229	154	138	111	154	1380	186	149	1060	88	271	1580
13	241	134	120	154	154	1380	157	283	1810	83	288	433
14	220	129	103	111	225	1170	117	304	514	127	250	301
15	158	130	115	101	190	991	94	250	315	131	176	191
16	39	133	78	112	146	953	91	295	407	150	111	163
17	64	132	97	110	170	684	85	270	1010	222	114	150
18	1380	113	123	101	153	261	114	253	1020	492	111	580
19	4220	98	356	123	155	178	190	160	1070	423	156	704
20	420	106	97	85	214	152	182	589	1010	282	426	231
21	115	124	88	60	878	209	113	532	988	221	374	148
22	136	121	115	93	1250	331	142	318	941	222	239	e104
23	124	130	891	119	336	340	217	250	828	219	259	e101
24	243	104	416	97	211	226	256	221	526	196	214	108
25	315	122	206	89	235	220	120	2390	230	203	178	102
26	192	143	179	99	324	214	115	392	279	198	401	95
27	161	91	126	84	512	240	125	185	219	195	551	129
28	197	117	155	142	400	266	93	155	109	168	214	120
29	228	125	136	112	---	289	151	113	104	175	153	80
30	161	86	543	122	---	234	300	85	70	172	148	132
31	148	---	454	80	---	206	---	101	---	181	190	---
TOTAL	11815	4656	8308	3448	7776	21449	7263	8875	15058	5829	7531	9283
MEAN	381	155	268	111	278	692	242	286	502	188	243	309
MAX	4220	331	1130	154	1250	1520	2110	2390	1810	492	551	1580
MIN	39	86	78	60	83	152	85	85	70	83	83	80
AC-FT	23440	9240	16480	6840	15420	42540	14410	17600	29870	11560	14940	18410

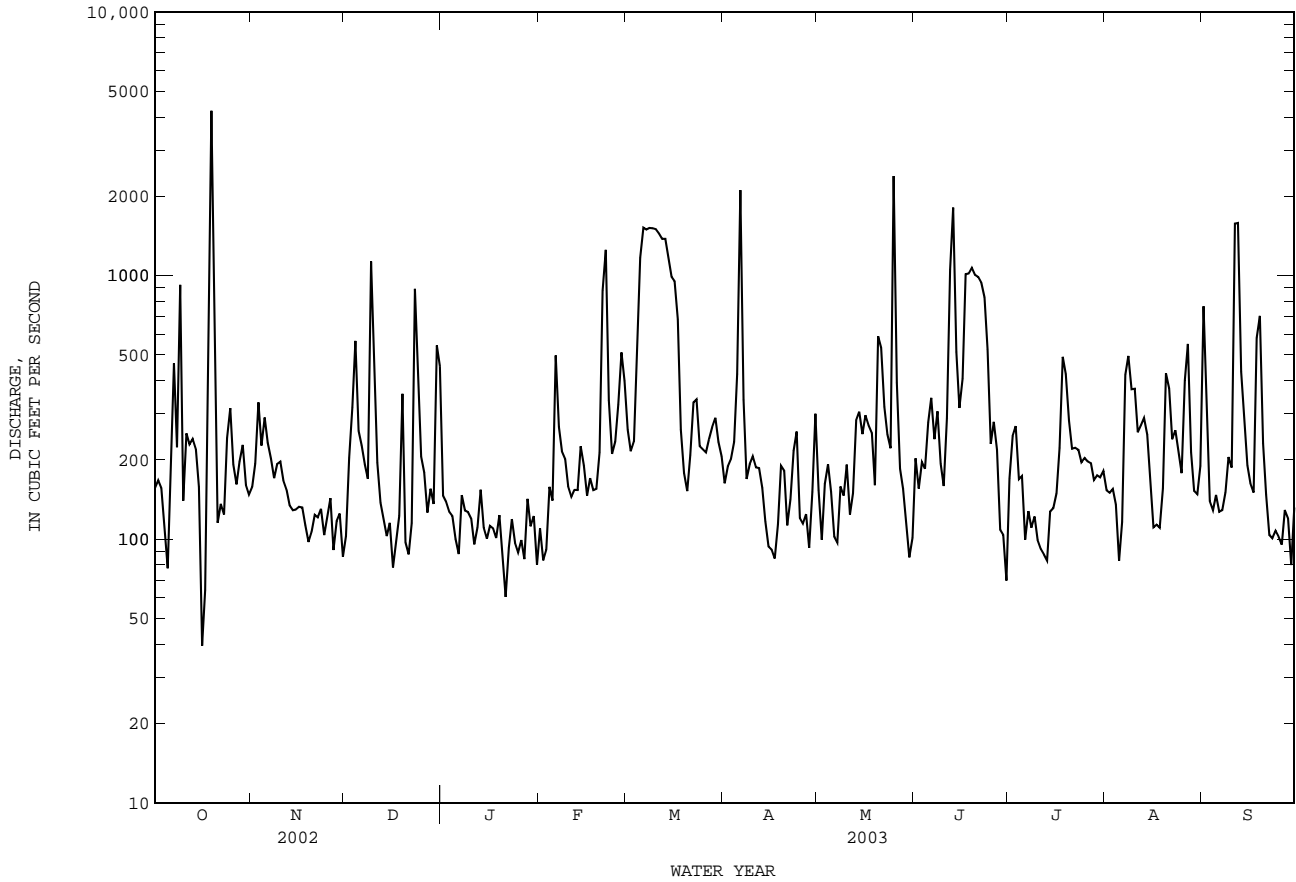
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003z, BY WATER YEAR (WY)

MEAN	407	704	788	599	734	1112	1110	1543	1547	881	502	287
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	0.78	0.80	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003z	
ANNUAL TOTAL	305799.86		111291		851	
ANNUAL MEAN	838		305		4289	
HIGHEST ANNUAL MEAN					1982	
LOWEST ANNUAL MEAN					76.0	
HIGHEST DAILY MEAN	6980	Apr 7	4220	Oct 19	25300	May 5 1990
LOWEST DAILY MEAN	0.00	Feb 15	39	Oct 16	0.00	Dec 2 1954
ANNUAL SEVEN-DAY MINIMUM	22	Feb 20	92	Jan 21	0.00	Jan 7 1959
MAXIMUM PEAK FLOW			6420		33000	
MAXIMUM PEAK STAGE			8.10		13.48	
ANNUAL RUNOFF (AC-FT)	606600		220700		616800	
10 PERCENT EXCEEDS	3620		611		3790	
50 PERCENT EXCEEDS	179		178		150	
90 PERCENT EXCEEDS	82		100		39	

e Estimated
z Period of regulated streamflow.



TRINITY RIVER BASIN

08056000 Elm Fork Trinity River at Frasier Dam, Dallas, TX

LOCATION.--Lat 32°50'31", long 96°53'23", Dallas County, Hydrologic Unit 12030103, on right bank of dam, 0.7 mi downstream of Spur 482, and 4.4 mi northeast of city hall in Irving, Texas.

DRAINAGE AREA.--2,557 mi².

PERIOD OF RECORD.--Apr. 1999 to current year (elevations only).

GAGE.--Water-stage recorder and a concrete weir. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily elevations, which are poor. Water elevation is regulated by a concrete weir at gage.

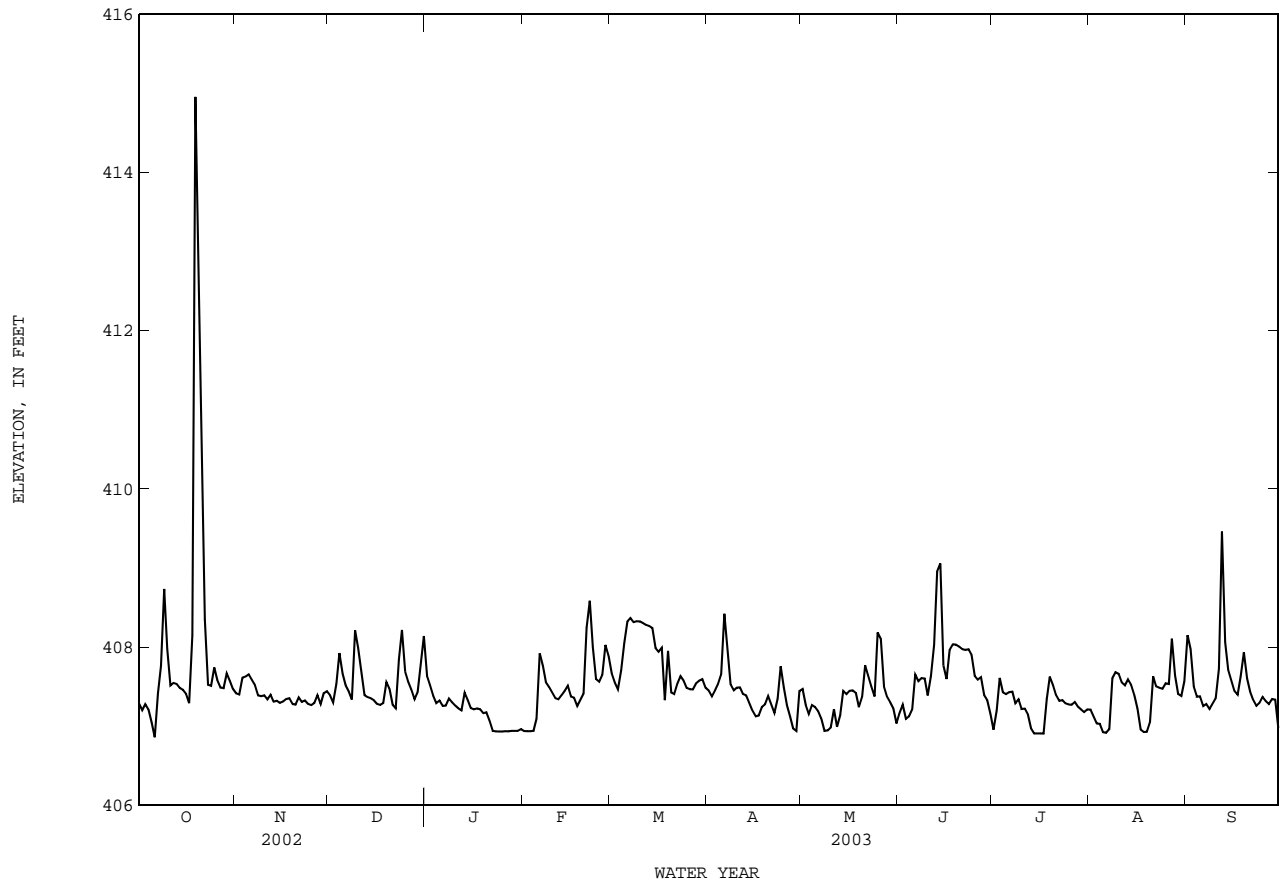
COOPERATION.--Maintained in cooperation with City of Dallas Water Utilities.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 415.90 ft, Oct. 19; minimum elevation, 406.83 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407.29	407.41	407.39	407.63	406.94	407.67	407.45	407.47	407.16	406.95	407.21	408.15
2	407.20	407.40	407.30	407.52	406.94	407.55	407.37	407.27	407.27	407.20	407.12	407.97
3	407.27	407.61	407.53	407.38	406.94	407.47	407.45	407.15	407.09	407.61	407.03	407.50
4	407.21	407.63	407.92	407.29	406.94	407.70	407.53	407.26	407.12	407.43	407.03	407.37
5	407.04	407.65	407.66	407.32	407.09	408.04	407.65	407.24	407.21	407.40	406.92	407.38
6	406.86	407.59	407.52	407.26	407.92	408.32	408.42	407.19	407.65	407.43	406.92	407.25
7	407.41	407.52	407.44	407.26	407.76	408.37	408.00	407.09	407.57	407.44	406.96	407.28
8	407.76	407.39	407.34	407.35	407.55	408.31	407.53	406.94	407.61	407.29	407.60	407.22
9	408.73	407.38	408.21	407.30	407.49	408.33	407.45	406.95	407.60	407.34	407.68	407.28
10	407.98	407.39	407.99	407.26	407.42	408.32	407.49	406.98	407.39	407.22	407.66	407.35
11	407.51	407.34	407.68	407.22	407.35	408.30	407.49	407.21	407.63	407.22	407.55	407.72
12	407.55	407.40	407.39	407.20	407.34	408.28	407.41	406.99	408.03	407.15	407.51	409.46
13	407.53	407.31	407.37	407.42	407.39	---	407.39	407.14	408.95	406.97	407.59	408.06
14	407.48	407.32	407.35	407.33	407.45	---	407.29	407.44	409.06	406.91	407.52	407.71
15	407.46	407.29	407.33	407.23	407.51	---	407.20	407.41	407.77	406.91	407.40	407.58
16	407.41	407.31	407.28	407.21	407.37	---	407.12	407.45	407.60	406.91	407.22	407.44
17	407.29	407.34	407.27	407.22	407.36	---	407.13	407.45	407.96	406.91	406.96	407.40
18	408.15	407.35	407.29	407.21	407.25	---	407.24	407.42	408.03	407.34	406.93	407.63
19	414.96	407.28	407.56	407.16	407.33	---	407.27	407.24	408.03	407.63	406.93	407.93
20	412.94	407.27	407.47	407.18	407.41	407.42	407.38	407.37	408.01	407.52	407.05	407.60
21	---	407.36	407.27	407.07	408.24	407.40	407.28	407.77	407.97	407.39	407.63	407.44
22	408.35	407.31	407.23	406.94	408.59	407.54	407.17	407.63	407.96	407.32	407.50	407.33
23	407.52	407.32	407.84	406.93	408.00	407.63	407.35	407.50	407.97	407.33	407.48	407.26
24	407.51	407.28	408.22	406.93	407.59	407.57	407.76	407.37	407.90	407.29	407.47	407.30
25	407.74	407.27	407.69	406.93	407.56	407.48	407.48	408.18	407.63	407.27	407.54	407.37
26	407.58	407.29	407.56	406.94	407.65	407.47	407.27	408.10	407.59	407.27	407.53	407.32
27	407.49	407.39	407.46	406.93	408.03	407.46	407.12	407.50	407.62	407.30	408.11	407.28
28	407.48	407.28	407.34	406.94	407.89	407.54	406.97	407.37	407.39	407.24	407.64	407.34
29	407.67	407.41	407.43	406.94	---	407.58	406.94	407.30	407.33	407.21	407.41	407.34
30	407.57	407.44	407.77	406.94	---	407.59	407.44	407.23	407.15	407.18	407.38	406.98
31	407.47	---	408.14	406.96	---	407.48	---	407.03	---	407.21	407.57	---
MEAN	408.06	407.38	407.56	407.17	407.51	407.82	407.40	407.34	407.71	407.25	407.36	407.54
MAX	414.96	407.65	408.22	407.63	408.59	408.37	408.42	408.18	409.06	407.63	408.11	409.46
MIN	406.86	407.27	407.23	406.93	406.94	407.33	406.94	406.94	407.09	406.91	406.92	406.98

08056000 Elm Fork Trinity River at Frasier Dam, Dallas, TX--Continued



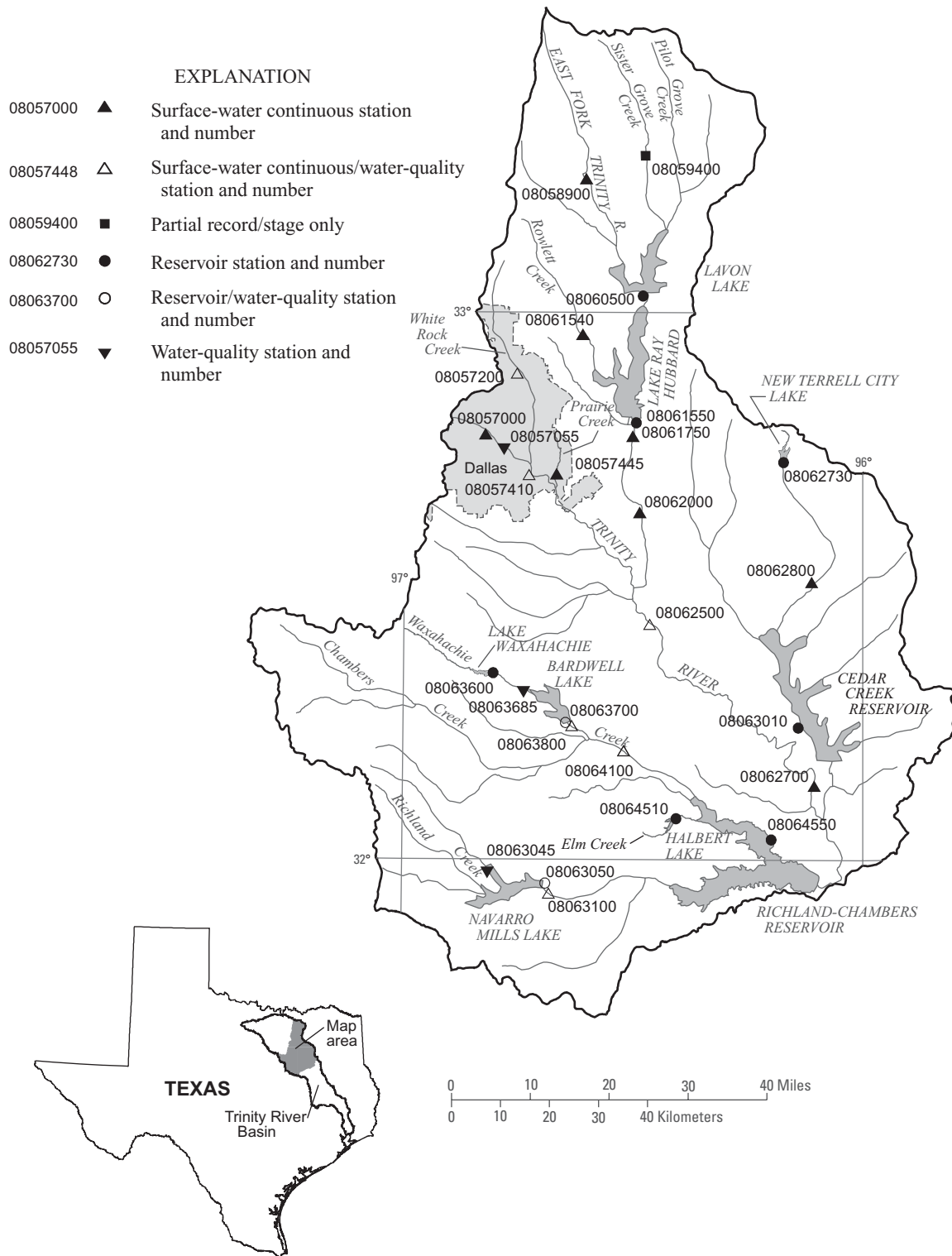


Figure 4.--Map showing location of gaging stations in the second section of the Trinity River Basin

08057000	Trinity River at Dallas, TX	156
08057055	Trinity River at Cedar Crest Boulevard, Dallas, TX	158
08057200	White Rock Creek at Greenville Avenue, Dallas, TX	166
08057410	Trinity River below Dallas, TX	172
08057445	Prairie Creek at U.S. Highway 175, Dallas, TX	178
08058900	East Fork Trinity River at McKinney, TX	180
08059400	Sister Grove Creek near Blue Ridge, TX	182
08060500	Lavon Lake near Lavon, TX	184
08061540	Rowlett Creek near Sachse, TX	186
08061550	Lake Ray Hubbard near Forney, TX	188
08061750	East Fork Trinity River near Forney, TX	190
08062000	East Fork Trinity River near Crandall, TX	182
08062500	Trinity River near Rosser, TX	194
08062700	Trinity River at Trinidad, TX	206
08062730	New Terrell City Lake near Terrell, TX	208
08062800	Cedar Creek near Kemp, TX	210
08063010	Cedar Creek Reservoir near Trinidad, TX	212
08063045	Richland Creek near Irene, TX	214
08063050	Navarro Mills Lake near Dawson, TX	216
08063100	Richland Creek near Dawson, TX	226
08063600	Lake Waxahachie near Waxahachie, TX	230
08063685	Waxahachie Creek near Waxahachie, TX	232
08063700	Bardwell Lake near Ennis, TX	234
08063800	Waxahachie Creek near Bardwell, TX	242
08064100	Chambers Creek near Rice, TX	246
08064510	Halbert Lake near Corsicana, TX	258
08064550	Richland-Chambers Reservoir near Kerens, TX	260

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 mi².

PERIOD OF RECORD.--Oct. 1898 to Dec. 1899 (gage heights only published in WSP 28 and 37), July 1903 to current year. Daily discharges are not available for all periods prior to 1931.
Precipitation records: Oct. 2001 to Sept. 2002

REVISED RECORDS.--WSP 850: 1903-06 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 368.02 ft above NGVD of 1929. Oct. 1, 1898, to Dec. 31, 1899, nonrecording gage at site 2.0 mi upstream at different datum. July 1, 1903, to July 20, 1930, nonrecording gage at present site and datum. July 21, 1930, to Sept. 30, 1932, nonrecording gage at site 6.0 mi downstream at datum 3.08 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1914, at least 10% of contributing drainage area as been regulated. 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.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--10 years (water years 1904-13), 1,047 ft³/s (758,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1903-13).--Maximum discharge, 184,000 ft³/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft³/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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	479	595	484	2110	561	3040	712	1540	753	820	466	3500
2	473	628	482	896	564	2080	677	1100	770	515	458	2400
3	473	882	655	783	571	1270	693	849	741	667	458	737
4	466	982	2290	710	558	1960	1070	871	741	556	466	576
5	441	945	1520	678	587	2110	1730	853	928	535	465	542
6	452	832	704	702	2210	2760	2610	798	1390	658	461	500
7	945	686	588	1280	1970	2750	2520	777	1080	656	457	483
8	1240	610	554	688	842	2250	1060	759	1080	601	566	476
9	3880	581	4330	640	723	1950	918	750	1220	577	631	467
10	3220	576	5650	1170	690	1830	919	741	1190	664	783	483
11	820	571	2160	610	644	2390	914	750	1310	643	718	1880
12	659	552	887	685	624	1770	862	740	2930	508	782	9030
13	619	520	749	1340	641	1700	844	930	8120	479	1480	5330
14	585	506	647	778	754	1700	814	934	10100	470	1360	1470
15	564	495	610	664	974	1410	777	864	3970	467	1020	1100
16	543	483	594	1220	742	1460	785	870	2360	461	627	900
17	496	492	572	619	649	1430	772	881	1650	464	521	780
18	2490	504	575	589	619	1910	789	838	2390	502	502	1640
19	20100	486	628	590	614	2340	783	787	2300	640	479	4480
20	17900	485	636	592	790	1050	831	1090	2220	597	466	1830
21	6390	490	526	597	3900	832	797	1860	1370	541	574	878
22	2440	479	511	575	7530	850	759	1360	1760	510	553	769
23	970	481	1400	567	5210	1050	839	1060	1070	507	527	702
24	824	480	4340	567	1690	999	1930	882	1460	520	529	682
25	1210	471	1650	564	1560	825	1190	5490	774	493	571	669
26	949	468	836	568	2320	778	843	6470	1140	486	681	658
27	709	488	715	579	3950	763	781	1800	746	485	2480	639
28	672	474	616	575	3870	780	773	953	606	472	1070	641
29	865	486	624	564	---	772	785	852	534	460	604	641
30	759	491	2040	562	---	766	1550	803	505	459	580	630
31	656	---	5350	561	---	728	---	766	---	459	1070	---
TOTAL	73289	17219	43923	23623	46357	48303	31327	40018	57208	16872	22405	45513
MEAN	2364	574	1417	762	1656	1558	1044	1291	1907	544	723	1517
MAX	20100	982	5650	2110	7530	3040	2610	6470	10100	820	2480	9030
MIN	441	468	482	561	558	728	677	740	505	459	457	467
AC-FT	145400	34150	87120	46860	91950	95810	62140	79380	113500	33470	44440	90280

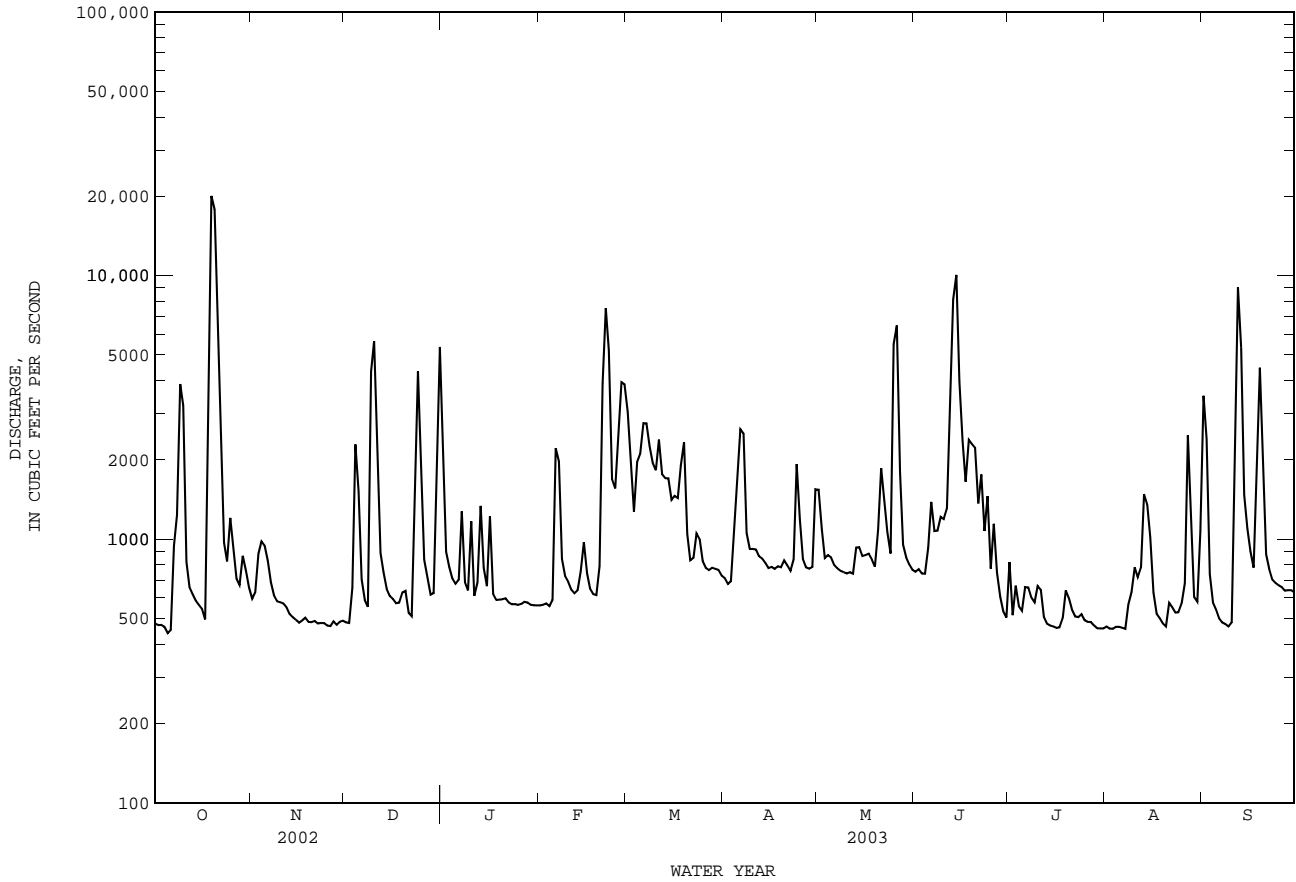
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003hz, BY WATER YEAR (WY)

MEAN	1195	1307	1477	1330	2038	2402	2576	3828	2963	1229	705	801
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003hz	
ANNUAL TOTAL	811441		466057		1818	
ANNUAL MEAN	2223		1277		7154	
HIGHEST ANNUAL MEAN					115	
LOWEST ANNUAL MEAN					103000	
HIGHEST DAILY MEAN	26100	Mar 20	20100	Oct 19	103000	Apr 26 1942
LOWEST DAILY MEAN	441	Oct 5	441	Oct 5	10	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	467	Sep 30	461	Jul 29	26	Apr 12 1935
MAXIMUM PEAK FLOW			27200		111000	
MAXIMUM PEAK STAGE			37.71		47.10	
ANNUAL RUNOFF (AC-FT)	1609000		924400		1317000	
10 PERCENT EXCEEDS	5720		2350		5200	
50 PERCENT EXCEEDS	661		759		442	
90 PERCENT EXCEEDS	481		484		114	

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.

PERIOD OF RECORD.--

CHEMICAL DATA: Feb. 1984 to Sept. 1993.
BIOCHEMICAL DATA: Feb. 1984 to Sept. 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.--Records good except those for dissolved oxygen, which are poor. 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. The computation of the selected constituent loads might include estimated discharge or specific conductance data. 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 Trinity River at Dallas (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/cm, Feb. 12, 1988; minimum, 93 microsiemens/cm, Oct. 20, 1984.
pH: Maximum, 9.0 units, June 27, 2000; minimum, 5.3 units, Feb. 1, 2002.
WATER TEMPERATURE: Maximum, 33.5°C, Aug. 12, 1987; minimum, 4.1°C, Dec. 27, 2000.
DISSOLVED OXYGEN: Maximum, 14.0 mg/L, Feb. 27, 2003; minimum, 0.0 mg/L, July 21, 1985.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 876 microsiemens/cm, Feb. 2; minimum, 142 microsiemens/cm, Sept. 10.
pH: Maximum, 8.4 units, Aug. 19, 20; minimum, 7.0 units, Oct. 7.
WATER TEMPERATURE: Maximum, 31.9°C, Aug. 7; minimum, 6.9°C, Feb. 27.
DISSOLVED OXYGEN: Maximum, 14.0 mg/L, Feb. 27; minimum, 3.4 mg/L, May 15.

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

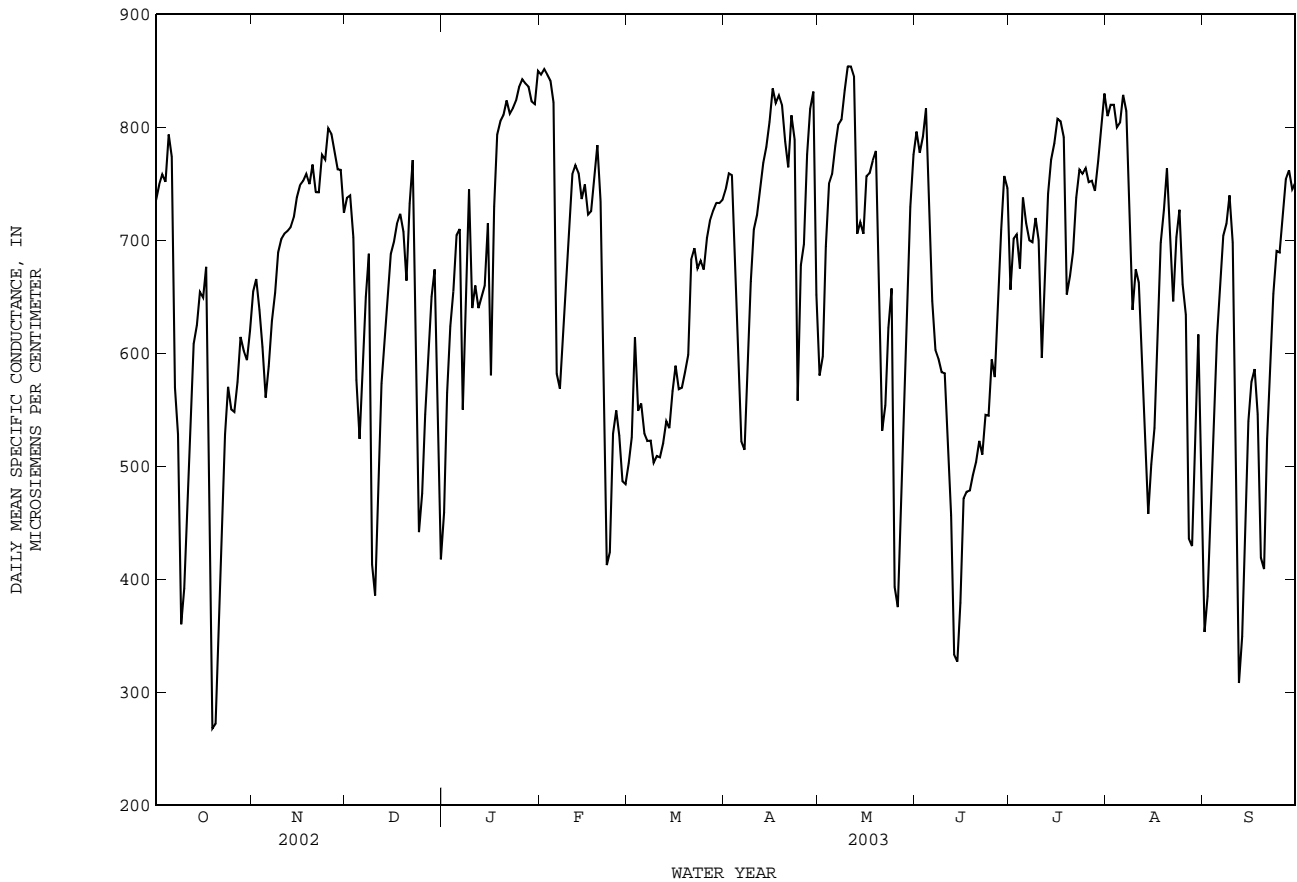
DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	757	716	736	674	631	655	766	717	738	502	413	459
2	772	717	749	685	650	666	759	728	740	596	499	565
3	781	732	758	655	601	639	761	568	703	648	584	624
4	783	725	752	631	565	606	612	521	576	681	647	655
5	805	769	794	574	548	561	578	504	524	732	681	704
6	830	485	774	622	553	588	632	538	586	---	---	---
7	747	201	570	641	616	629	679	627	650	---	---	---
8	594	467	528	672	631	654	717	553	688	741	551	671
9	467	298	360	711	668	689	553	347	413	760	---	745
10	421	380	392	725	675	701	448	341	386	---	---	---
11	523	418	480	727	685	706	534	438	480	---	---	---
12	586	509	552	728	697	708	590	534	573	---	---	---
13	636	553	608	731	691	711	645	581	612	---	---	---
14	653	596	625	732	709	720	672	632	653	---	---	---
15	689	616	654	762	721	738	706	661	688	728	700	715
16	670	627	649	757	731	749	725	678	699	736	531	580
17	700	657	677	762	731	753	726	704	715	789	575	730
18	703	195	534	777	744	759	744	712	723	809	781	794
19	288	211	268	764	735	750	739	646	708	831	780	805
20	304	256	272	778	752	767	702	632	664	837	794	811
21	388	297	348	771	726	743	759	698	733	846	799	824
22	476	388	439	763	726	743	---	---	---	823	801	812
23	550	473	528	789	762	776	760	271	652	831	801	817
24	595	545	570	787	751	771	508	271	442	840	803	824
25	572	533	550	811	781	799	514	431	476	854	819	836
26	560	534	548	818	778	794	557	514	546	857	829	842
27	593	534	575	818	743	779	619	619	595	854	827	839
28	642	585	614	787	744	763	675	618	650	858	820	836
29	628	574	602	781	736	762	683	666	674	837	813	823
30	616	574	594	741	709	724	677	221	546	847	802	821
31	633	609	620	---	---	---	443	364	418	869	837	850
MONTH	830	195	572	818	548	713	---	---	614	---	---	726

TRINITY RIVER BASIN

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	870	728	847	515	495	503	759	729	745	659	547	580
2	876	827	852	563	504	526	779	746	759	638	541	597
3	861	831	847	638	541	614	769	744	758	739	633	695
4	862	824	841	571	533	549	749	442	699	768	713	750
5	854	598	822	581	547	556	687	562	632	783	732	759
6	648	539	582	571	513	529	601	422	522	807	737	784
7	583	554	569	541	509	522	542	447	515	818	783	803
8	634	583	620	542	495	523	628	535	587	821	791	807
9	696	629	672	529	482	503	688	623	664	861	817	833
10	744	686	719	522	490	509	734	660	710	870	842	854
11	785	733	758	568	488	508	744	708	723	870	830	854
12	793	746	766	536	497	520	767	712	745	863	833	845
13	779	729	760	561	524	540	794	745	769	871	450	706
14	755	713	737	545	526	534	806	756	783	814	669	716
15	772	714	749	597	531	566	830	778	805	728	671	706
16	739	707	723	605	564	589	860	820	834	772	728	757
17	742	704	726	594	543	568	848	798	822	773	748	760
18	786	727	758	647	504	569	840	815	828	786	757	771
19	811	749	784	627	550	583	829	800	820	818	752	779
20	809	607	735	633	564	599	809	762	787	839	374	630
21	663	423	528	710	627	683	784	745	765	574	452	532
22	423	402	412	714	657	693	833	784	811	569	546	554
23	475	394	424	700	653	675	834	421	789	648	560	623
24	568	475	529	709	638	682	676	423	558	689	626	657
25	592	520	549	698	637	674	718	638	678	693	248	393
26	551	494	527	722	679	702	725	639	697	403	359	375
27	502	469	487	725	709	718	815	719	776	518	385	470
28	499	468	484	743	703	726	836	788	816	616	515	575
29	---	---	---	749	700	733	858	812	832	687	616	664
30	---	---	---	744	---	733	837	532	652	760	680	730
31	---	---	---	---	720	736	---	---	---	805	733	776
MONTH	876	394	672	---	---	602	860	421	729	871	248	688
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	811	785	796	762	377	656	---	---	---	624	217	353
2	791	756	778	789	542	701	---	---	---	413	366	385
3	808	778	792	787	611	705	---	---	---	512	410	472
4	829	805	817	731	617	675	---	---	---	581	506	556
5	838	434	721	767	703	738	812	795	804	640	581	615
6	751	601	646	744	671	715	846	807	829	696	613	658
7	656	573	603	739	672	700	825	804	815	719	687	704
8	634	563	595	730	670	698	804	635	747	747	693	715
9	631	527	583	734	706	720	648	626	638	747	726	740
10	637	326	582	717	547	700	751	638	674	747	142	698
11	591	444	526	684	404	596	749	573	663	762	254	580
12	579	283	457	725	634	682	630	560	593	366	254	308
13	384	283	333	775	718	741	623	444	534	409	310	349
14	346	316	327	782	763	771	518	427	458	480	409	458
15	426	328	379	795	777	786	526	465	502	569	480	540
16	485	426	471	824	794	808	565	504	534	601	550	575
17	497	457	477	821	795	805	658	560	616	612	544	586
18	483	472	478	803	739	791	728	653	698	667	275	546
19	502	477	492	739	631	652	766	688	727	531	330	419
20	511	499	504	680	642	669	784	747	764	455	---	409
21	540	501	522	720	664	690	777	630	699	551	455	524
22	584	489	510	755	720	738	677	625	646	622	537	584
23	566	513	546	778	751	763	723	673	703	671	621	653
24	621	510	545	771	750	759	739	702	727	713	654	691
25	635	519	595	774	749	764	749	623	661	722	659	689
26	697	500	579	781	735	752	678	453	634	749	694	724
27	658	557	632	769	737	753	530	353	436	778	730	754
28	747	640	709	757	729	744	451	410	429	778	745	762
29	784	729	757	790	739	770	579	451	520	769	721	745
30	769	722	746	818	784	800	656	534	617	766	736	751
31	---	---	---	---	---	---	622	434	506	---	---	---
MONTH	838	283	583	---	---	731	---	---	---	778	---	585



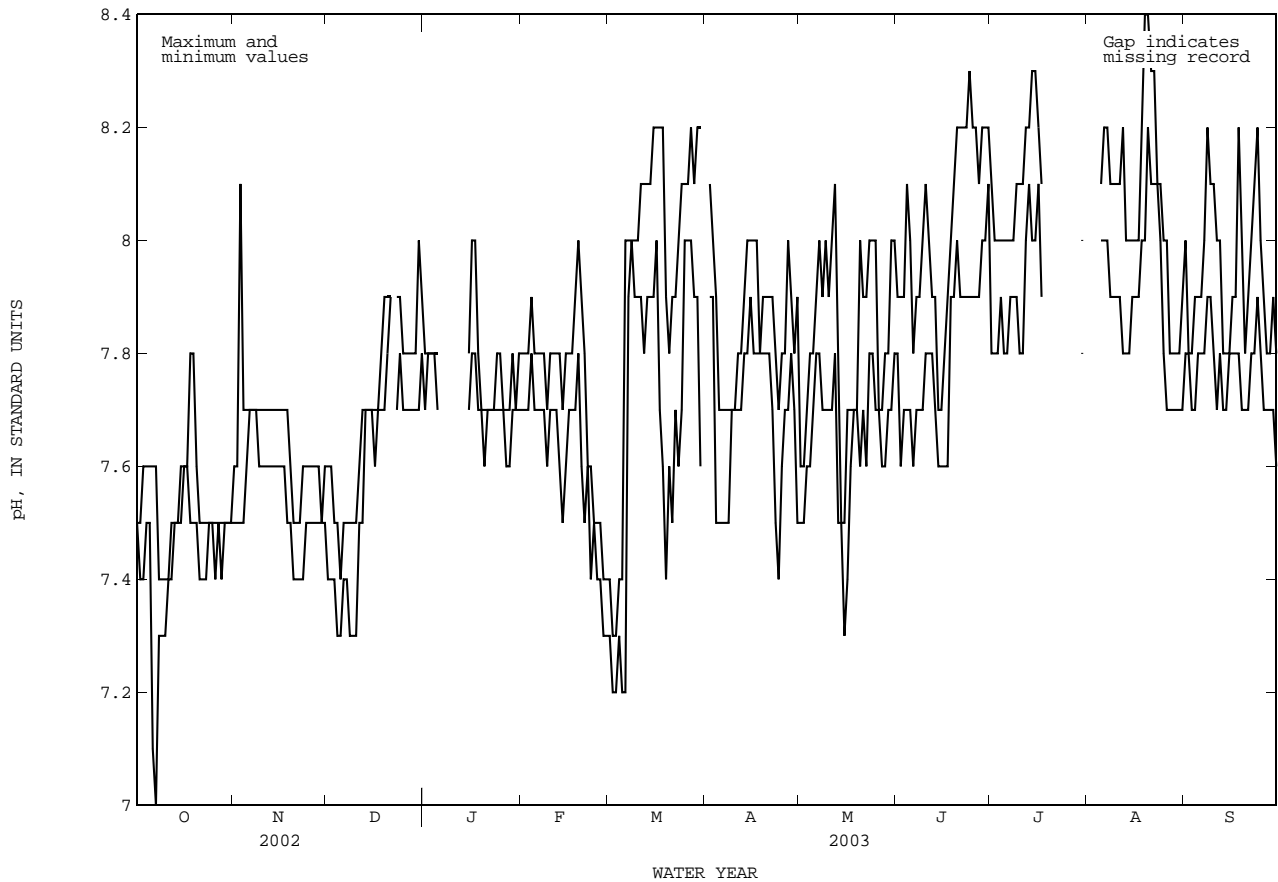
PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	7.5	7.6	7.5	7.6	7.4	7.8	7.7	7.8	7.7	7.4	7.3
2	7.5	7.4	7.6	7.5	7.6	7.4	7.8	7.8	7.8	7.7	7.3	7.2
3	7.6	7.4	8.1	7.5	7.5	7.4	7.8	7.8	7.8	7.7	7.3	7.2
4	7.6	7.5	7.7	7.5	7.5	7.3	7.8	7.8	7.9	7.8	7.4	7.3
5	7.6	7.5	7.7	7.6	7.4	7.3	7.8	7.7	7.8	7.7	7.4	7.2
6	7.6	7.1	7.7	7.7	7.5	7.4	---	---	7.8	7.7	8.0	7.2
7	7.6	7.0	7.7	7.7	7.5	7.4	---	---	7.8	7.7	8.0	7.9
8	7.4	7.3	7.7	7.7	7.5	7.3	---	---	7.8	7.7	8.0	8.0
9	7.4	7.3	7.7	7.6	7.5	7.3	---	---	7.7	7.6	8.0	7.9
10	7.4	7.3	7.7	7.6	7.5	7.3	---	---	7.8	7.7	8.0	7.9
11	7.4	7.4	7.7	7.6	7.6	7.5	---	---	7.8	7.7	8.1	7.9
12	7.5	7.4	7.7	7.6	7.7	7.5	---	---	7.8	7.7	8.1	7.8
13	7.5	7.5	7.7	7.6	7.7	7.7	---	---	7.8	7.6	8.1	7.9
14	7.5	7.5	7.7	7.6	7.7	7.7	---	---	7.7	7.5	8.1	7.9
15	7.6	7.5	7.7	7.6	7.7	7.7	7.8	7.7	7.8	7.6	8.2	7.9
16	7.6	7.6	7.7	7.6	7.7	7.6	8.0	7.8	7.8	7.7	8.2	8.0
17	7.6	7.6	7.7	7.6	7.7	7.7	8.0	7.8	7.8	7.7	8.2	7.7
18	7.8	7.5	7.7	7.5	7.8	7.7	7.8	7.7	7.9	7.7	8.2	7.6
19	7.8	7.5	7.6	7.5	7.9	7.7	7.7	7.7	8.0	7.8	7.9	7.4
20	7.6	7.5	7.5	7.4	7.9	7.8	7.7	7.6	7.9	7.6	7.8	7.6
21	7.5	7.4	7.5	7.4	7.9	7.9	7.7	7.7	7.8	7.5	7.9	7.5
22	7.5	7.4	7.5	7.4	---	---	7.7	7.7	7.6	7.6	7.9	7.7
23	7.5	7.4	7.6	7.4	7.9	7.7	7.7	7.7	7.6	7.4	8.0	7.6
24	7.5	7.5	7.6	7.5	7.9	7.8	7.8	7.7	7.5	7.5	8.1	7.7
25	7.5	7.5	7.6	7.5	7.8	7.7	7.8	7.7	7.5	7.4	8.1	8.0
26	7.5	7.4	7.6	7.5	7.8	7.7	7.7	7.7	7.5	7.4	8.1	8.0
27	7.5	7.5	7.6	7.5	7.8	7.7	7.7	7.6	7.4	7.3	8.2	8.0
28	7.5	7.4	7.6	7.5	7.8	7.7	7.7	7.6	7.4	7.3	8.1	7.9
29	7.5	7.5	7.5	7.5	7.8	7.7	7.8	7.7	---	---	8.2	7.9
30	7.5	7.5	7.6	7.5	8.0	7.7	7.7	7.7	---	---	8.2	7.6
31	7.5	7.5	---	---	7.9	7.8	7.8	7.7	---	---	---	---
MONTH	7.8	7.0	8.1	7.4	---	---	---	---	8.0	7.3	---	---

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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



TRINITY RIVER BASIN

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

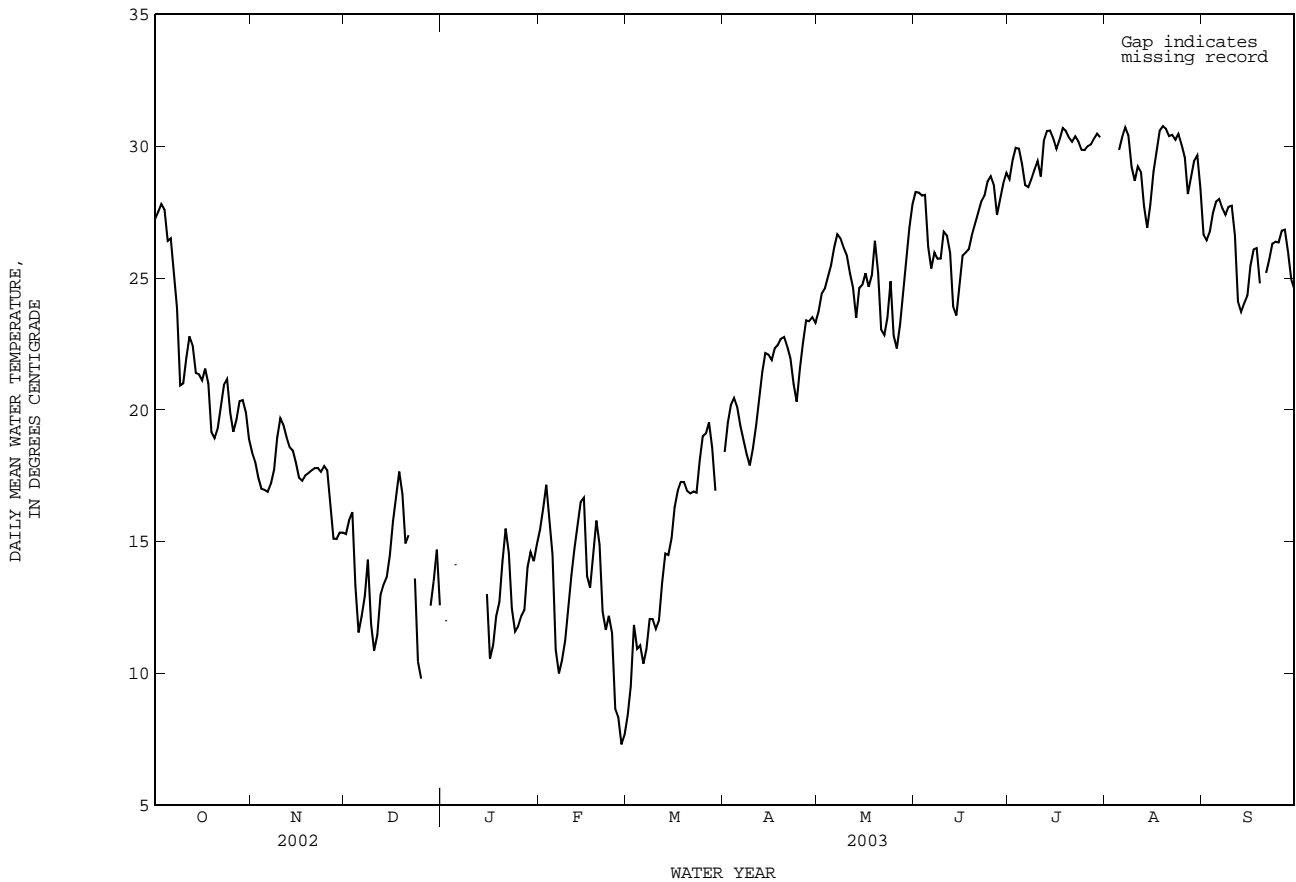
WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	28.1	26.7	27.2	18.6	17.9	18.4	16.3	14.6	15.3	12.8	---	---
2	28.3	26.9	27.5	18.4	17.8	18.0	17.1	14.7	15.8	12.4	11.6	12.0
3	28.8	27.2	27.8	17.9	15.0	17.4	16.7	14.5	16.1	13.1	---	---
4	28.3	26.7	27.6	17.2	16.8	17.0	14.7	12.1	13.3	14.1	---	---
5	27.2	25.7	26.4	17.4	16.6	17.0	12.1	11.1	11.6	14.9	13.6	14.1
6	27.8	25.8	26.5	17.4	16.3	16.9	12.8	11.6	12.2	---	---	---
7	26.5	23.7	25.3	17.8	16.5	17.2	13.3	12.5	12.9	---	---	---
8	24.6	22.6	23.9	18.4	17.1	17.7	15.1	13.2	14.3	---	11.3	---
9	22.6	20.1	20.9	19.8	18.1	18.9	13.8	10.7	11.9	16.2	---	---
10	21.3	20.9	21.0	20.4	19.3	19.7	11.4	10.5	10.9	---	---	---
11	22.8	21.3	22.0	20.0	19.1	19.4	12.3	10.7	11.5	---	---	---
12	23.5	22.1	22.8	19.6	18.5	19.0	13.5	12.3	13.0	---	---	---
13	23.4	21.5	22.4	19.3	18.3	18.6	13.8	12.9	13.4	---	---	---
14	22.1	20.9	21.4	19.3	17.8	18.5	14.3	13.2	13.7	13.6	---	---
15	22.3	20.9	21.4	18.7	17.5	18.0	15.4	13.5	14.5	13.2	12.8	13.0
16	21.9	20.5	21.1	18.2	16.9	17.4	16.5	14.8	15.8	13.4	9.5	10.6
17	22.7	20.9	21.6	18.5	16.4	17.3	17.5	16.2	16.7	12.4	9.5	11.1
18	22.1	19.2	21.0	18.3	16.8	17.5	18.1	17.0	17.7	13.1	11.6	12.2
19	19.3	19.0	19.2	18.8	16.8	17.6	17.5	15.3	16.8	14.0	11.8	12.7
20	19.1	18.8	18.9	18.6	16.5	17.7	15.5	14.3	14.9	15.7	12.9	14.2
21	19.7	19.0	19.3	18.5	17.2	17.8	16.0	14.8	15.2	16.3	14.9	15.5
22	20.6	19.7	20.1	18.7	17.2	17.8	---	---	---	15.1	13.4	14.6
23	21.2	20.6	21.0	18.6	16.9	17.6	14.7	11.3	13.6	13.4	11.6	12.5
24	21.4	20.8	21.2	19.0	16.8	17.9	11.5	9.8	10.4	12.2	11.1	11.6
25	20.8	19.2	19.9	18.4	17.0	17.7	10.3	9.4	9.8	12.2	11.4	11.8
26	19.3	19.0	19.2	17.0	15.3	16.3	10.9	---	---	12.9	11.6	12.2
27	20.0	19.1	19.6	15.6	14.6	15.1	12.1	---	---	13.4	11.4	12.4
28	20.7	19.8	20.3	16.3	13.9	15.1	13.4	11.8	12.6	15.0	13.0	14.0
29	20.7	20.1	20.4	16.1	14.7	15.3	14.0	13.0	13.5	14.7	14.3	14.6
30	20.3	19.6	19.9	16.2	14.7	15.3	15.6	13.8	14.7	14.6	13.9	14.3
31	19.6	18.5	18.9	---	---	---	13.8	12.2	12.6	15.9	14.2	14.9
MONTH	28.8	18.5	22.1	20.4	13.9	17.5	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	16.4	14.7	15.5	9.0	8.1	8.4	19.3	17.6	18.4	24.6	23.1	23.7
2	17.5	15.2	16.3	10.4	9.0	9.5	20.7	18.6	19.5	24.7	24.1	24.4
3	17.7	16.1	17.2	12.4	10.4	11.8	20.4	19.9	20.2	25.6	23.8	24.6
4	16.5	15.2	15.7	11.6	10.6	10.9	21.6	19.5	20.5	25.6	24.4	25.0
5	15.2	12.1	14.5	11.6	10.6	11.1	21.1	19.5	20.1	26.3	25.0	25.5
6	12.1	10.2	10.9	11.3	9.8	10.4	20.2	18.3	19.4	26.8	25.8	26.2
7	10.4	9.5	10.0	12.1	10.1	10.9	19.5	18.3	18.9	27.6	26.0	26.7
8	10.8	10.2	10.5	12.2	11.9	12.1	19.3	17.6	18.3	26.8	26.0	26.5
9	11.9	10.5	11.2	12.4	11.8	12.1	18.7	17.1	17.9	26.9	25.7	26.2
10	13.7	11.3	12.4	11.9	11.5	11.7	19.5	17.7	18.5	26.1	25.6	25.9
11	14.8	12.7	13.7	12.7	11.2	12.0	20.1	18.7	19.4	26.0	24.5	25.2
12	15.4	14.0	14.7	14.2	12.6	13.4	21.5	19.5	20.3	25.5	24.1	24.6
13	16.1	14.8	15.6	15.3	14.1	14.5	22.5	20.7	21.4	24.4	21.7	23.5
14	17.3	15.5	16.5	15.0	13.9	14.5	23.2	21.5	22.1	25.1	24.0	24.6
15	17.5	15.0	16.7	15.9	14.3	15.1	22.4	21.6	22.1	25.2	24.5	24.8
16	15.0	12.6	13.7	17.1	15.5	16.3	23.0	21.1	21.9	26.2	24.5	25.2
17	14.4	12.3	13.3	17.5	16.3	16.9	23.5	21.5	22.3	25.4	24.0	24.7
18	15.4	13.5	14.5	18.2	16.8	17.3	22.8	22.2	22.5	26.3	24.3	25.1
19	16.2	15.1	15.8	17.8	16.7	17.3	23.9	21.9	22.7	27.5	25.6	26.4
20	15.4	13.6	14.9	17.7	16.4	16.9	23.3	22.0	22.8	26.9	23.7	25.2
21	13.7	11.5	12.3	17.8	16.2	16.8	23.5	21.7	22.4	24.4	22.6	23.0
22	12.1	11.3	11.6	17.3	16.4	16.9	22.3	21.5	21.9	23.5	22.2	22.8
23	12.8	11.6	12.2	18.0	15.9	16.9	21.5	19.1	21.0	24.5	22.5	23.5
24	12.6	9.8	11.5	18.9	17.1	18.1	21.9	18.8	20.3	25.9	24.0	24.9
25	9.8	7.3	8.7	19.9	18.3	19.0	22.2	20.9	21.6	25.6	21.4	22.8
26	8.8	7.6	8.3	19.9	18.2	19.1	23.8	21.6	22.5	22.8	22.1	22.3
27	7.6	6.9	7.3	20.3	18.6	19.5	24.5	22.6	23.4	24.4	22.4	23.2
28	8.2	7.3	7.7	20.0	17.3	18.6	23.7	22.9	23.4	25.4	23.4	24.5
29	---	---	---	17.4	16.5	16.9	24.8	22.6	23.5	26.8	24.8	25.7
30	---	---	---	17.6	15.6	---	24.1	22.4	23.3	28.1	26.0	26.9
31	---	---	---	---	16.3	---	---	---	---	28.9	27.0	27.8
MONTH	17.7	6.9	13.0	---	8.1	---	24.8	17.1	21.1	28.9	21.4	24.9

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	29.2	27.7	28.3	29.1	27.7	28.8	---	---	---	28.4	25.5	26.6
2	28.9	27.9	28.2	30.6	28.7	29.5	---	---	---	26.7	26.0	26.4
3	29.3	27.4	28.1	30.6	29.4	29.9	---	---	---	27.4	26.1	26.8
4	29.0	27.6	28.2	30.6	29.3	29.9	---	---	---	28.1	27.1	27.5
5	27.6	24.2	26.2	29.8	28.7	29.3	31.2	29.0	29.9	28.8	27.4	27.9
6	26.0	24.7	25.4	28.8	28.1	28.5	31.6	29.5	30.3	28.9	27.5	28.0
7	26.9	24.9	26.0	29.4	27.9	28.4	31.9	29.9	30.7	28.6	27.0	27.7
8	26.9	24.6	25.7	29.4	28.3	28.8	30.7	30.1	30.4	28.4	26.7	27.4
9	26.8	24.6	25.7	30.0	28.5	29.1	30.2	28.3	29.2	28.7	27.0	27.7
10	27.2	26.2	26.8	30.4	27.8	29.4	29.4	27.9	28.7	28.6	27.3	27.7
11	27.8	25.1	26.6	30.5	26.1	28.9	30.1	28.5	29.2	28.0	24.1	26.6
12	27.5	24.1	26.0	31.1	29.5	30.2	29.4	28.3	29.0	24.8	23.7	24.1
13	24.7	23.3	23.9	31.6	30.0	30.6	29.0	27.7	27.7	24.4	23.4	23.7
14	24.3	23.2	23.6	31.7	29.9	30.6	27.4	26.3	26.9	24.4	23.8	24.0
15	26.0	24.1	24.7	31.1	29.7	30.3	28.5	27.2	27.8	25.3	23.6	24.3
16	26.3	25.4	25.9	30.9	29.3	29.9	30.1	28.2	29.0	26.1	24.8	25.5
17	26.4	25.5	26.0	31.3	29.5	30.2	30.9	29.2	29.9	26.9	25.5	26.1
18	26.8	25.5	26.1	31.8	30.0	30.7	31.5	29.9	30.6	26.9	24.8	26.1
19	27.4	26.0	26.6	31.0	29.9	30.6	31.6	30.1	30.8	25.3	24.4	24.8
20	27.9	26.3	27.0	31.0	29.6	30.3	31.6	30.1	30.7	---	23.7	---
21	28.4	26.6	27.5	30.6	29.6	30.2	31.1	30.0	30.4	25.7	24.8	25.2
22	28.9	27.0	27.9	31.4	29.9	30.4	31.1	29.9	30.4	26.5	25.2	25.7
23	29.0	27.2	28.1	30.9	29.5	30.2	30.9	29.8	30.2	27.0	25.9	26.3
24	29.8	27.5	28.7	30.9	29.1	29.9	31.1	30.0	30.5	26.9	26.0	26.4
25	29.6	28.0	28.9	30.7	29.2	29.9	30.8	29.0	30.1	27.1	25.8	26.4
26	29.5	27.8	28.5	31.0	29.2	30.0	30.2	28.4	29.6	27.5	26.2	26.8
27	28.0	26.6	27.4	31.0	29.4	30.1	28.7	27.4	28.2	27.6	26.2	26.8
28	28.9	27.1	28.0	31.5	29.5	30.3	29.5	28.2	28.8	26.8	25.2	26.0
29	29.5	27.9	28.6	31.6	29.8	30.5	30.3	28.8	29.4	25.7	24.4	25.0
30	29.8	28.5	29.0	31.3	29.7	30.3	30.1	29.0	29.7	25.4	23.9	24.6
31	---	---	---	---	---	---	29.3	28.1	28.4	---	---	---
MONTH	29.8	23.2	26.9	---	---	---	---	---	---	---	23.4	---



TRINITY RIVER BASIN

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

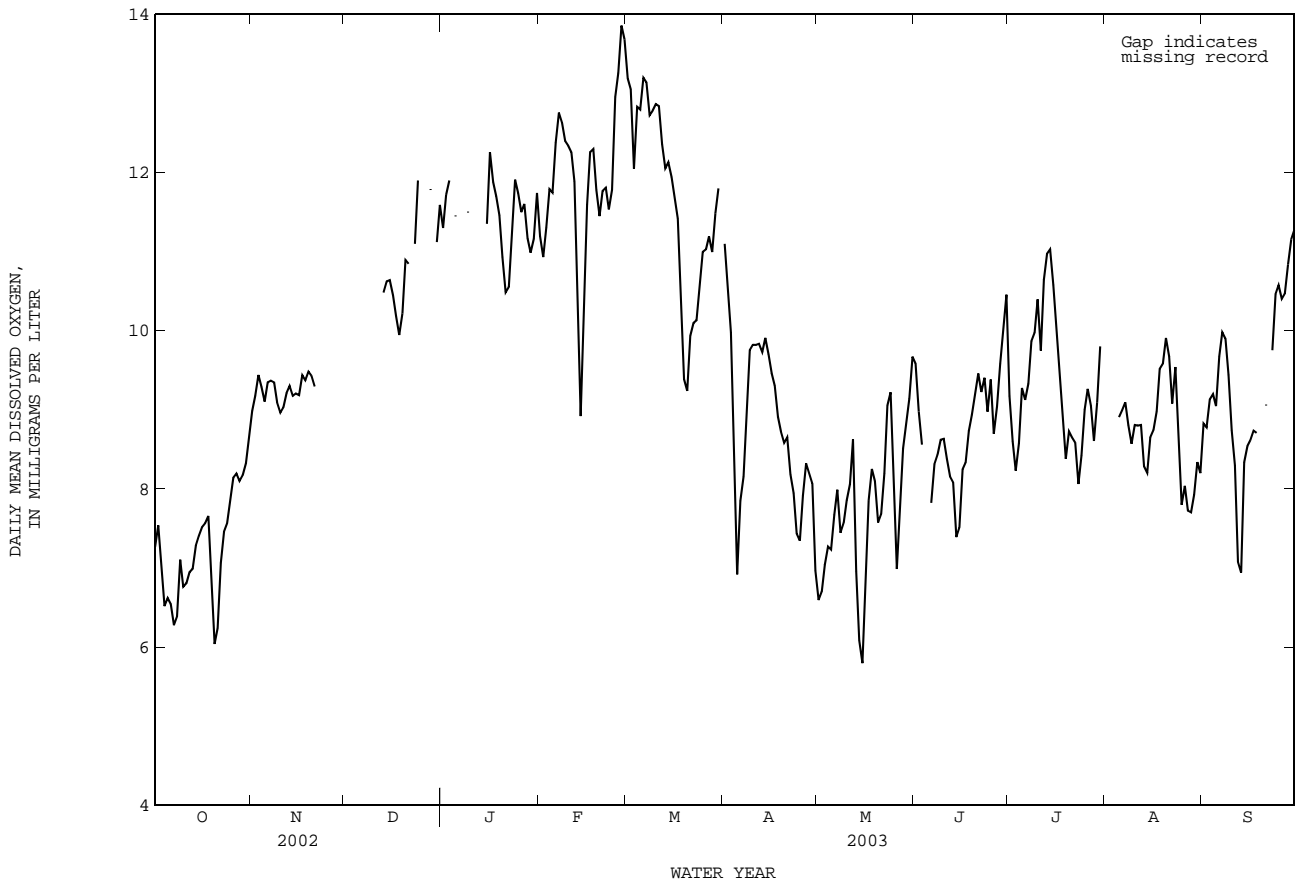
OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.6	5.5	7.3	9.1	8.9	9.0	---	---	---	11.5	11.0	11.3
2	8.1	6.9	7.5	9.3	9.0	9.2	---	---	---	12.0	11.5	11.7
3	7.5	6.4	7.0	10.3	8.9	9.4	---	---	---	12.0	11.7	11.9
4	7.0	6.2	6.5	9.6	8.8	9.3	---	---	---	---	---	---
5	7.1	6.3	6.6	9.3	8.9	9.1	---	---	---	11.7	11.2	11.5
6	7.0	5.9	6.5	9.5	9.2	9.3	---	---	---	---	---	---
7	6.6	6.0	6.3	9.5	9.2	9.4	---	---	---	---	---	---
8	6.7	6.2	6.4	9.5	9.2	9.3	---	---	---	---	---	---
9	7.4	6.7	7.1	9.2	9.0	9.1	---	---	---	11.8	11.2	11.5
10	6.9	6.7	6.8	9.1	8.8	9.0	---	---	---	---	---	---
11	6.9	6.7	6.8	9.3	8.8	9.0	---	---	---	---	---	---
12	7.0	6.9	6.9	9.5	9.0	9.2	---	---	---	---	---	---
13	7.2	6.8	7.0	9.5	9.0	9.3	10.7	10.4	10.5	---	---	---
14	7.4	7.2	7.3	9.6	9.0	9.2	10.8	10.1	10.6	---	---	---
15	7.5	7.3	7.4	9.5	9.0	9.2	10.8	10.6	10.6	11.7	11.1	11.4
16	7.6	7.4	7.5	9.6	8.9	9.2	10.7	10.3	10.4	12.7	11.1	12.3
17	7.7	7.4	7.6	9.8	9.1	9.4	10.3	10.1	10.2	12.5	11.6	11.9
18	8.1	7.4	7.7	9.7	9.1	9.4	10.1	9.8	9.9	11.8	11.6	11.7
19	7.6	6.2	6.8	9.9	9.2	9.5	10.9	9.8	10.2	11.7	11.2	11.5
20	6.2	5.9	6.0	9.8	9.1	9.4	11.1	10.7	10.9	11.2	10.7	10.9
21	6.8	5.8	6.2	9.7	9.0	9.3	11.1	10.6	10.8	10.7	10.2	10.5
22	7.3	6.8	7.1	---	---	---	---	---	---	10.9	10.3	10.6
23	7.6	7.2	7.5	---	---	---	11.8	10.5	11.1	11.7	10.8	11.2
24	7.7	7.4	7.6	---	---	---	12.1	11.6	11.9	12.3	11.6	11.9
25	8.0	7.6	7.9	---	---	---	---	---	---	12.2	11.4	11.7
26	8.3	8.0	8.1	---	---	---	---	---	---	11.7	11.0	11.5
27	8.3	8.1	8.2	---	---	---	---	---	---	12.1	10.9	11.6
28	8.2	7.9	8.1	---	---	---	12.0	11.7	11.8	11.9	10.5	11.2
29	8.3	8.0	8.2	---	---	---	---	---	---	11.4	10.2	11.0
30	8.4	8.1	8.3	---	---	---	11.5	10.6	11.1	11.7	10.6	11.2
31	8.9	8.4	8.6	---	---	---	11.7	11.2	11.6	12.3	11.3	11.7
MONTH	8.9	5.5	7.3	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	11.8	10.4	11.2	13.5	12.6	13.2	11.8	10.6	11.1	6.9	6.0	6.6
2	12.0	10.0	10.9	13.3	12.7	13.1	11.4	9.9	10.6	7.0	6.4	6.7
3	12.0	10.6	11.3	12.9	11.7	12.1	10.5	9.5	10	7.5	6.5	7.0
4	12.6	11.2	11.8	13.0	12.7	12.8	9.7	6.3	8.2	7.8	7.0	7.3
5	12.1	11.3	11.7	13.0	12.7	12.8	8.4	5.6	6.9	7.9	6.4	7.2
6	12.7	11.7	12.4	13.4	12.7	13.2	8.4	6.9	7.8	8.6	6.9	7.7
7	13.0	12.5	12.8	13.4	12.8	13.1	8.7	7.8	8.2	8.9	7.3	8.0
8	12.8	12.5	12.6	12.8	12.6	12.7	9.7	8.4	9.0	8.0	6.8	7.4
9	12.7	12.0	12.4	13.0	12.7	12.8	10.0	9.5	9.8	8.4	6.9	7.6
10	12.6	12.0	12.3	13.0	12.7	12.9	10.0	9.7	9.8	8.5	7.5	7.9
11	12.7	11.7	12.3	12.9	12.5	12.8	10.1	9.6	9.8	8.8	7.4	8.1
12	12.4	11.3	11.9	12.7	12.2	12.4	10.3	9.4	9.8	9.4	7.9	8.6
13	11.8	9.3	10.7	12.2	11.9	12.1	10.2	9.3	9.7	8.4	5.0	7.0
14	9.4	8.1	8.9	12.4	11.9	12.1	10.8	9.2	9.9	7.0	4.2	6.1
15	11.4	7.4	10.5	12.3	11.7	11.9	10.4	9.0	9.7	7.0	3.4	5.8
16	12.1	11.1	11.6	12.0	11.3	11.7	10.5	8.7	9.5	8.0	4.7	6.6
17	12.8	11.8	12.3	11.8	11.0	11.4	10.0	8.6	9.3	8.2	7.5	7.9
18	12.7	11.9	12.3	11.4	9.5	10.3	9.3	8.6	8.9	8.8	7.9	8.3
19	12.2	11.3	11.8	9.8	8.4	9.4	9.2	8.3	8.7	8.5	7.6	8.1
20	11.8	11.1	11.4	9.7	8.4	9.2	9.0	8.2	8.6	8.2	7.0	7.6
21	12.0	11.5	11.8	10.3	9.6	9.9	9.2	8.2	8.7	7.9	7.5	7.7
22	12.0	11.6	11.8	10.3	9.9	10.1	8.4	8.0	8.2	9.1	7.6	8.2
23	11.6	11.5	11.5	10.5	9.7	10.1	8.2	7.0	7.9	9.6	8.6	9.1
24	12.2	11.5	11.8	11.6	9.5	10.6	8.1	6.9	7.4	9.8	8.7	9.2
25	13.4	12.2	13.0	11.5	10.5	11.0	7.7	6.9	7.3	9.2	7.2	7.9
26	13.7	13.0	13.3	11.7	10.3	11.0	8.4	7.5	7.9	7.3	6.8	7.0
27	14.0	13.7	13.9	11.9	10.4	11.2	9.1	7.7	8.3	8.3	7.3	7.8
28	13.8	13.5	13.7	11.7	10.1	11.0	8.6	7.8	8.2	9.0	8.2	8.5
29	---	---	---	12.3	10.5	11.5	8.7	7.5	8.1	9.6	8.2	8.9
30	---	---	---	12.6	10.9	11.8	8.0	6.5	7.0	10.4	8.0	9.1
31	---	---	---	---	---	---	---	---	---	11.2	8.5	9.7
MONTH	14.0	7.4	11.9	---	---	---	11.8	5.6	8.8	11.2	3.4	7.8

08057055 Trinity River at Cedar Crest Boulevard, Dallas, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.8	8.1	9.6	10.7	8.1	9.2	---	---	---	9.5	8.2	8.8
2	9.7	8.3	9.0	9.3	9.3	8.6	---	---	---	9.0	8.6	8.8
3	9.9	7.8	8.6	8.6	8.0	8.2	---	---	---	9.5	8.8	9.1
4	---	---	---	9.3	7.9	8.6	---	---	---	9.6	8.8	9.2
5	---	---	---	9.7	9.0	9.3	9.7	8.3	8.9	9.9	8.3	9.0
6	8.1	7.5	7.8	9.4	8.6	9.1	9.9	8.3	9.0	10.5	9.1	9.7
7	8.8	7.9	8.3	10.0	8.9	9.3	10.1	8.4	9.1	11.0	9.4	10
8	8.8	8.1	8.4	10.6	9.5	9.9	9.5	7.8	8.8	10.4	9.4	9.9
9	9.0	8.2	8.6	10.7	9.5	10	9.1	8.1	8.6	10.2	8.9	9.4
10	8.9	8.3	8.6	11.3	8.9	10.4	9.2	8.5	8.8	9.7	7.3	8.7
11	8.7	7.5	8.4	10.8	8.6	9.8	---	8.6	8.8	8.8	7.5	8.3
12	8.8	7.3	8.2	11.8	9.8	10.6	9.9	6.9	8.8	7.8	6.7	7.1
13	8.4	7.5	8.1	11.8	10.4	11.0	8.8	7.8	8.3	7.9	6.4	6.9
14	7.7	6.8	7.4	12.0	10.2	11.0	8.7	7.7	8.2	8.6	7.9	8.3
15	8.2	7.0	7.5	11.2	9.9	10.6	8.9	8.5	8.7	8.7	8.4	8.5
16	8.5	7.9	8.2	10.4	9.5	9.9	9.0	8.5	8.7	8.9	8.2	8.6
17	8.6	8.1	8.3	9.8	9.1	9.4	9.8	8.4	9.0	9.3	8.4	8.7
18	9.1	8.5	8.7	9.3	8.0	8.9	10.3	8.9	9.5	9.3	8.1	8.7
19	9.4	8.6	8.9	9.3	7.6	8.4	10.6	8.8	9.6	8.9	---	---
20	9.8	8.7	9.2	9.4	8.1	8.7	11.0	9.2	9.9	8.7	---	---
21	10.3	8.8	9.5	9.2	8.2	8.7	10.3	9.0	9.7	9.5	8.7	9.1
22	9.8	8.7	9.2	9.0	8.3	8.6	9.7	8.2	9.1	10	9.2	---
23	10.2	8.8	9.4	8.6	7.5	8.1	10.8	7.7	9.5	10.8	9.0	9.8
24	9.5	8.5	9.0	9.5	7.5	8.4	9.7	6.4	8.6	11.7	9.6	10.5
25	10.5	8.5	9.4	9.6	8.5	9.0	9.3	4.8	7.8	11.7	9.8	10.6
26	9.6	7.8	8.7	10.4	8.4	9.3	8.5	7.3	8.0	11.2	9.8	10.4
27	9.9	8.2	9.0	9.5	7.8	9.1	7.9	7.5	7.7	11.3	10.0	10.5
28	10.7	8.7	9.6	9.6	7.3	8.6	7.8	7.6	7.7	11.5	10.3	10.8
29	11.3	8.8	10	11.1	5.8	9.1	8.3	7.7	7.9	11.9	10.6	11.2
30	11.6	9.3	10.5	10.4	9.4	9.8	8.7	8.1	8.3	11.8	10.7	11.3
31	---	---	---	---	---	---	8.5	7.7	8.2	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	11.9	---	---



TRINITY RIVER BASIN

08057200 White Rock Creek at Greenville Avenue, Dallas, TX

LOCATION.--Lat 32°53'21", long 96°45'23", Dallas County, Hydrologic Unit 12030105, on left bank 20 ft upstream from bridge on Greenville Avenue in Dallas, 1.1 mi downstream from Texas and New Orleans Railroad Co. bridge, 1.2 mi downstream from Cottonwood Creek, 2.9 mi upstream from White Rock Lake, and 8.2 mi northeast of Dallas County Courthouse.

DRAINAGE AREA.--66.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1961 to Sept. 1980, Apr. 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 400 ft above NGVD of 1929. Prior to Oct. 24, 1961, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for Apr. 25 to May 16, which are poor. No known regulation. Low flow is affected by diversions from small dams upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	59	30	128	53	120	28	151	28	71	5.2	2350
2	14	73	29	99	52	106	27	73	25	96	5.0	110
3	15	151	173	89	52	96	31	83	20	57	6.0	67
4	17	95	192	82	51	89	145	89	18	27	6.4	53
5	11	141	50	76	105	80	700	91	83	46	7.4	71
6	12	74	39	72	395	74	2490	93	65	40	4.8	42
7	94	59	37	68	126	71	141	95	34	35	3.5	34
8	69	54	53	68	78	65	95	86	72	22	23	30
9	957	47	704	67	72	62	86	92	46	20	72	26
10	88	41	162	63	49	61	83	87	29	101	51	26
11	59	37	95	61	42	54	76	87	119	34	51	1030
12	47	38	83	95	39	40	80	95	955	16	85	249
13	41	36	78	86	53	36	84	218	345	14	84	115
14	38	38	65	70	92	34	82	170	87	10	54	93
15	35	34	61	65	63	31	86	141	85	8.8	55	66
16	33	34	59	61	45	30	98	186	74	7.1	29	55
17	30	34	55	52	40	30	89	71	56	8.4	21	48
18	4760	31	56	51	39	206	125	59	58	8.8	16	3410
19	3460	31	52	53	38	72	147	54	40	10	9.6	190
20	148	32	54	54	172	61	132	508	35	7.9	7.9	75
21	98	32	51	56	625	43	137	116	30	5.2	7.5	56
22	77	31	49	47	471	44	148	73	30	5.2	45	48
23	66	32	458	46	135	46	250	48	25	4.5	72	41
24	146	32	162	44	106	38	349	44	20	6.9	22	37
25	130	31	103	48	107	35	168	3360	18	4.6	20	33
26	81	35	102	52	206	35	106	94	106	5.0	350	32
27	68	30	98	50	189	34	109	64	31	5.7	133	29
28	82	30	94	50	149	33	114	49	27	4.9	47	27
29	127	28	92	48	---	31	110	37	23	4.4	30	28
30	61	29	2330	51	---	23	311	33	20	5.6	26	20
31	48	---	217	55	---	27	---	39	---	6.4	74	---
TOTAL	10927	1449	5883	2007	3644	1807	6627	6486	2604	698.4	1423.3	8491
MEAN	352	48.3	190	64.7	130	58.3	221	209	86.8	22.5	45.9	283
MAX	4760	151	2330	128	625	206	2490	3360	955	101	350	3410
MIN	11	28	29	44	38	23	27	33	18	4.4	3.5	20
AC-FT	21670	2870	11670	3980	7230	3580	13140	12860	5170	1390	2820	16840

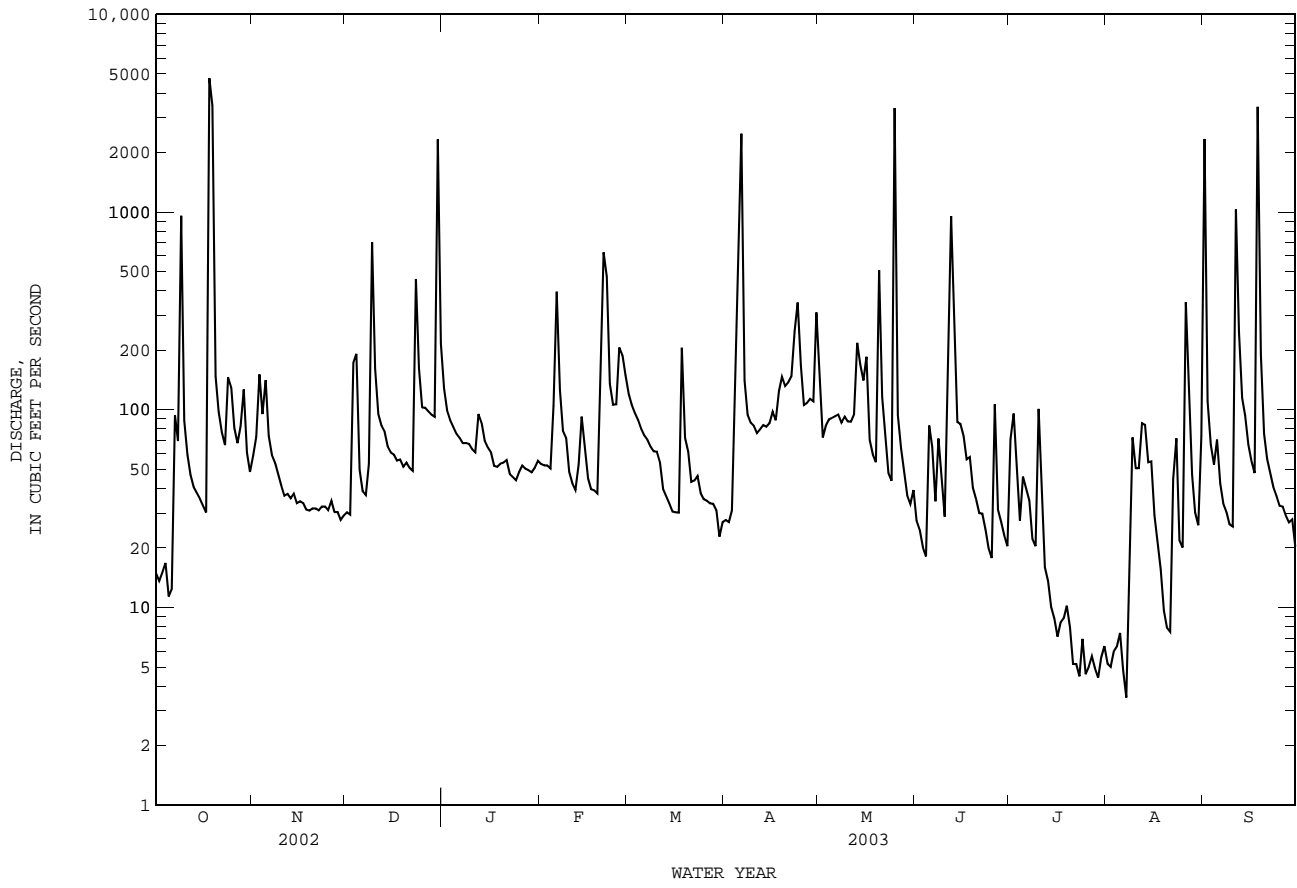
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003h, BY WATER YEAR (WY)

	97.7	70.2	102	62.2	101	118	125	158	93.6	37.4	26.4	63.9
MEAN	97.7	70.2	102	62.2	101	118	125	158	93.6	37.4	26.4	63.9
MAX	450	388	627	394	516	480	690	460	800	252	108	624
(WY)	1995	2001	1992	1998	2001	1995	1966	1990	1989	1962	1994	1964
MIN	0.83	2.96	4.35	5.85	6.19	12.0	16.6	15.8	7.25	0.78	1.26	0.92
(WY)	1964	1964	1964	1976	1967	1971	1971	1972	1980	1964	1963	1963

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003h	
ANNUAL TOTAL	58312.5		52046.7			
ANNUAL MEAN	160		143		88.7	
HIGHEST ANNUAL MEAN					201	
LOWEST ANNUAL MEAN					20.8	
HIGHEST DAILY MEAN	6730	Jan 31	4760	Oct 18	14700	Sep 21 1964
LOWEST DAILY MEAN	1.3	Aug 25	3.5	Aug 7	0.01	Jul 8 1970
ANNUAL SEVEN-DAY MINIMUM	3.0	Jul 31	5.1	Jul 23	0.21	Aug 21 1961
MAXIMUM PEAK FLOW			18800		39200	
MAXIMUM PEAK STAGE			88.11		90.59	
ANNUAL RUNOFF (AC-FT)	115700		103200		64240	
10 PERCENT EXCEEDS	175		162		125	
50 PERCENT EXCEEDS	39		54		22	
90 PERCENT EXCEEDS	13		17		4.4	

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.

PESTICIDE DATA: May 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Specif. conductivity, unfltrd wat uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	
OCT														
07...	1200	421	7.9	22.6	4.8	56	103	48.8	22.5	.73	.026	.76	<.04	
NOV														
06...	1000	514	7.9	12.6	11.0	104	171	53.8	22.2	1.69	.023	1.71	<.04	
DEC														
11...	0915	464	7.8	10.0	12.0	107	148	51.0	20.0	1.39	.017	1.41	<.04	
JAN														
13...	1030	578	8.0	7.1	12.1	100	188	72.2	27.9	1.72	.020	1.74	.07	
FEB														
10...	0920	567	7.9	8.0	11.9	102	174	64.4	25.9	1.54	.022	1.56	.07	
MAR														
11...	0800	643	7.7	12.4	10.6	100	182	82.5	35.1	1.91	.027	1.94	<.04	
24...	0930	590	8.0	16.4	9.8	102	--	--	--	1.59	.026	1.61	<.04	
APR														
08...	1530	484	7.9	14.8	10.0	99	152	51.6	22.7	1.65	.039	1.69	.06	
15...	1300	626	8.0	20.8	9.0	101	--	--	--	1.81	.034	1.84	<.04	
21...	0930	627	7.9	20.4	8.9	100	--	--	--	1.75	.038	1.78	<.04	
MAY														
07...	0910	543	7.9	26.3	7.9	99	138	64.7	34.5	1.45	.033	1.49	<.04	
14...	0845	526	7.8	23.2	7.9	94	--	--	--	.54	.021	.56	<.04	
21...	1000	267	7.8	19.6	8.7	96	--	--	--	.74	.036	.78	<.04	
JUN														
10...	0930	478	7.9	26.0	3.9	49	128	57.2	26.8	1.21	.023	1.23	<.04	
JUL														
01...	0845	513	7.9	28.2	8.4	109	--	--	--	1.20	.017	1.22	<.04	
16...	0900	521	8.5	29.1	8.2	108	126	67.1	35.3	1.35	.036	1.38	<.04	
AUG														
05...	0915	575	7.9	27.8	7.3	94	117	78.0	45.4	--	--	--	--	
SEP														
08...	1330	537	8.1	24.8	10.0	122	137	64.9	33.4	1.98	.017	2.00	<.04	
Date	Time	Total nitrogen, water, unfltrd mg/L (00600)	Organic nitrogen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, suspended sediment total, mg/L (00689)	Suspended sediment concentration, mg/L (80154)	Suspended sediment, sieve diameter <.063mm percent (70331)	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2,6-Diethyl-aniline, water, fltrd 0.7u GF ug/L (82660)	Acetochlor, water, fltrd, ug/L (49260)
OCT														
07...	1.9	--	1.1	.187	.04	.107	6.5	6.2	77	93	<.09	<.006	<.006	
NOV														
06...	2.1	--	.40	.150	.08	.254	3.3	.8	14	98	<.09	<.006	<.006	
DEC														
11...	1.9	--	.54	.144	.08	.236	3.6	1.4	16	100	<.09	<.006	<.006	
JAN														
13...	2.2	.43	.50	.116	.06	.178	3.5	1.6	86	89	<.09	<.006	<.006	
FEB														
10...	2.1	.44	.51	.142	.08	.251	3.0	1.4	34	100	<.09	<.006	<.006	
MAR														
11...	2.3	--	.41	.197	.12	.380	2.7	1.1	31	98	<.09	<.006	<.006	
24...	2.1	--	.53	.19	.13	.402	--	--	14	100	<.09	<.006	<.006	
APR														
08...	2.7	.92	.98	.19	.08	.242	3.5	5.0	62	100	<.09	<.006	<.006	
15...	2.5	--	.67	.23	.12	.377	--	--	75	78	<.09	<.006	<.006	
21...	2.5	--	.68	.23	.13	.392	--	--	66	91	<.09	<.006	<.006	
MAY														
07...	2.2	--	.68	.24	.16	.503	3.6	1.5	13	100	<.09	<.006	<.006	
14...	1.3	--	.74	.122	<.02	--	--	--	33	97	<.09	<.006	<.006	
21...	1.9	--	1.1	.20	<.02	--	--	--	80	100	E.03mc	<.006	<.006	
JUN														
10...	1.8	--	.61	.174	.07	.199	3.7	1.8	16	98	<.09mc	<.006	<.006	
JUL														
01...	1.8	--	.58	.21	.11	.325	--	--	10	98	<.09mc	<.006	<.006	
16...	2.2	--	.85	.26	.13	.405	4.3	2.1	6	97	--u	<.006	<.006	
AUG														
05...	--	--	--	--	--	--	4.5	1.7	19	95	--u	<.006	<.006	
SEP														
08...	2.5	--	.54	.30oc	.22	.665	3.4	1.4	10	98	<.09mc	<.006	<.006	

08057200 White Rock Creek at Greenville Avenue, Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd, 0.7u GF ug/L (82674)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin, water, fltrd, 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)
OCT 07...	<.004	<.005	.269	<.050	<.010	<.002	E.184	<.020	.020	<.006	<.018	<.003	E.044
NOV 06...	<.004	<.005	.120	<.050	<.010	<.002	E.078	<.020	<.013	<.006	<.018	<.003	E.030
DEC 11...	<.004	<.005	.458	<.050	<.010	<.002	E.027	<.020	E.005n	<.006	<.018	<.003	E.033
JAN 13...	<.004	<.005	.227	<.050	<.010	<.002	E.015	<.020	<.010	<.006	<.018	<.003	E.045
FEB 10...	<.004	<.005	1.01	<.050	<.010	<.002	E.015	<.020	.005	<.006	<.018	<.003	E.069
MAR 11...	<.004	<.005	.505	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.070
24...	<.004	<.005	1.04	<.050	<.010	<.002	E.017	<.020	<.005	<.006	<.018	<.003	E.108
APR 08...	1.20	<.005	2.90	<.050	<.010	<.002	E.235	<.020	<.005	<.006	<.018	<.003	E.132
15...	.159	<.005	.998	<.050	<.010	<.002	E.033	<.020	<.005	<.006	<.018	<.003	E.102
21...	.067	<.005	.978	<.050	<.010	<.002	E.015	<.020	<.005	<.006	<.018	<.003	E.139
MAY 07...	<.004	<.005	.579	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.077
14...	<.004	<.005	.585	<.050	<.010	<.002	E.083	<.020	<.005	<.006	<.018	<.003	E.106
21...	.011	<.005	.698	<.050	<.010	<.002	E.330	<.020	E.005n	<.006	<.018	<.003	E.082
JUN 10...	<.004	<.005	.333	<.050	<.010	<.002	E.017	<.020	<.005	<.006	<.018	<.003	E.079
JUL 01...	<.004	<.005	.277	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.063
16...	<.004	<.005	.251	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.045
AUG 05...	<.004	<.005	.282	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.074
SEP 08...	<.004	<.005	.196	<.050	<.010	<.002	<.041	<.020	E.004n	<.006	<.018	<.003	E.038
Date	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd, 0.7u GF ug/L (82677)	EPTC, water, fltrd, 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd, 0.7u GF ug/L (82663)	Etho-prop, water, fltrd, 0.7u GF ug/L (82672)	Fonofos, water, fltrd, ug/L (04095)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd, 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd, 0.7u GF ug/L (82671)
OCT 07...	.079	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.030	.017	<.006	<.002
NOV 06...	.088	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.023	.018	<.006	<.002
DEC 11...	.068	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.012n	<.006	<.002
JAN 13...	.021	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.010n	<.006	<.002
FEB 10...	.064	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.019n	E.011n	<.006	<.002
MAR 11...	.009	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.013	<.006	<.002
24...	.095	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	.120	.028	<.006	<.002
APR 08...	.254	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.013n	.476	<.006	<.002
15...	.094	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.132	<.006	<.002
21...	.045	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.112	<.006	<.002
MAY 07...	.037	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.048	<.006	<.002
14...	.045	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.034	<.006	<.004
21...	.563	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.022n	E.012n	<.006	<.002
JUN 10...	.053	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.019	<.006	<.002
JUL 01...	.041	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.012n	<.006	<.002
16...	.022	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.011n	<.006	<.002
AUG 05...	.013	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.009n	<.006	<.040
SEP 08...	.050	<.005	<.02	<.004	<.009	<.005	<.003	<.004	<.035	<.027	E.006n	<.006	<.002

TRINITY RIVER BASIN

08057200 White Rock Creek at Greenville Avenue, Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Naprop- amide, water, fltrd 0.7u GF (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF (82667)	Peb- ulate, water, fltrd 0.7u GF (82669)	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF (82679)	Propar- gite, water, fltrd 0.7u GF (82685)	Pron- amide, water, fltrd 0.7u GF (82676)	Sima- zine, water, fltrd, ug/L (04035)
OCT													
07...	<.007	<.003	<.010	<.006	<.004	.036	<.011	.02	<.010	<.011	<.02	<.004	.602
NOV													
06...	<.007	<.003	<.010	<.006	<.004	.043	<.011	E.01n	<.010	<.011	<.02	<.004	1.33
DEC													
11...	<.007	<.003	<.010	<.006	<.004	.036	<.011	E.01n	<.010	<.011	<.02	<.004	4.86
JAN													
13...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	1.05
FEB													
10...	<.007	<.003	<.010	<.006	<.004	.033	<.011	.02	<.010	<.011	<.02	<.004	.734
MAR													
11...	<.007	<.003	<.010	<.006	<.004	.050	<.011	E.01n	<.010	<.011	<.02	<.004	.671
24...	<.007	<.003	<.010	<.006	<.004	.052	<.011	.02	<.010	<.011	<.02	<.004	1.22
APR													
08...	<.007	<.003	<.010	<.006	<.004	.169	<.011	.02	<.010	<.011	<.02	.023	3.32
15...	<.007	<.003	<.010	<.006	<.004	.041	<.011	.02	<.010	<.011	<.02	E.009	.879
21...	<.007	<.003	<.010	<.006	<.004	.024	<.011	.02	<.010	<.011	<.02	<.007	.746
MAY													
07...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.270
14...	<.007	<.003	<.010	<.006	<.004	E.017n	<.011	.03	<.010	<.011	<.02	.015	.609
21...	<.007	<.003	<.010	<.006	<.004	.054	<.011	.02	<.010	<.011	<.02	<.025	.554
JUN													
10...	<.007	<.003	<.010	<.006	<.004	E.011n	<.011	.02	<.010	<.011	<.02	<.004	.125
JUL													
01...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.03	<.010	<.011	<.02	<.004	.074
16...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.069
AUG													
05...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.068
SEP													
08...	<.007	<.003	<.010	<.006	<.004	E.009t	<.011	.02	<.010	<.011	<.02	<.004	.056

08057200 White Rock Creek at Greenville Avenue, Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT						
07...	<.02	<.034	<.02	<.005	<.002	<.009
NOV						
06...	<.02	<.034	<.02	<.005	<.002	<.009
DEC						
11...	<.02	<.034	<.02	<.005	<.002	<.009
JAN						
13...	<.02	<.034	<.02	<.005	<.002	<.009
FEB						
10...	<.02	<.034	<.02	<.005	<.002	<.009
MAR						
11...	<.02	<.034	<.02	<.005	<.002	<.009
24...	<.02	<.034	<.02	<.005	<.002	<.009
APR						
08...	<.02	<.034	.03	<.005	<.002	<.009
15...	E.01n	<.034	<.02	<.005	<.002	<.009
21...	E.01n	<.034	<.02	<.005	<.002	<.009
MAY						
07...	<.02	<.034	<.02	<.005	<.002	<.009
14...	<.02	<.034	<.02	<.005	<.002	<.009
21...	<.02	<.034	<.02	<.005	<.002	<.009
JUN						
10...	<.02	<.034	<.02	<.005	<.002	<.009
JUL						
01...	<.02	<.034	<.02	<.005	<.002	<.009
16...	<.02	<.034	<.02	<.005	<.002	<.009
AUG						
05...	<.02	<.034	<.02	<.005	<.002	<.009
SEP						
08...	E.01t	<.034	<.02	<.005	<.002	<.009

Remark codes used in this report:

< -- Less than
E -- Estimated value

Value qualifier codes used in this report:

c -- See laboratory comment
m -- Highly var comp using method, ? prec
n -- Below the NDV
o -- Result determined by alternate method
t -- Below the long-term MDL

Null value qualifier codes used in this report:

u -- Unable to determine-matrix interference

TRINITY RIVER BASIN

08057410 Trinity River below Dallas, TX

LOCATION.--Lat 32°42'27", long 96°44'08", Dallas County, Hydrologic Unit 12030105, on left bank at downstream side of bridge on South Loop Highway 12, 1.0 mi downstream from White Rock Creek, 1.5 mi upstream from Fivemile Creek, 6.4 mi southeast of Dallas County courthouse in Dallas, and at mile 491.8.

DRAINAGE AREA.--6,278 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1956 to Sept. 1998, Oct. 2002 to current year.

REVISED RECORDS.--WDR TX-94-1: 1989.

GAGE.--Water-stage recorder. Datum of gage is 365.89 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Nov. 1956, at least 10% of contributing drainage area has been regulated. Several cities within the Dallas-Fort Worth metroplex divert water for municipal use and return it to the river as wastewater effluents above this station. Low flows are sustained by wastewater effluents.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 25, 1908, reached a stage of 41.1 ft, from information by U.S. Army Corps of Engineers, and is the highest since that date. Floods in 1866 and 1908 reached about the same stage at Dallas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e711	e901	568	3870	568	e3190	844	e1560	e765	1060	e480	3750
2	e691	e904	563	1540	565	e2510	758	e1140	e784	909	e471	3930
3	e677	e1180	824	1190	595	e1700	783	e879	e760	982	e471	1710
4	e672	e1400	2770	1060	593	e1740	e1160	e893	e746	827	e476	e957
5	e641	e1360	2400	986	566	e1960	e1810	e858	957	711	e476	e827
6	e644	e1240	1190	940	2630	e2560	e2680	e805	1700	923	e476	e748
7	e1190	e1040	883	1690	3000	3230	e2590	e792	1300	918	e471	e716
8	e1600	e914	760	1060	1340	2750	e1190	e775	1160	868	e568	e701
9	e3870	e860	4190	871	1040	2450	e991	e761	1450	838	e641	681
10	e4350	e823	6660	1550	993	2290	e981	e753	1360	886	e716	719
11	e1500	e813	3480	765	872	2790	e981	e753	1530	1130	e756	1630
12	e960	e787	1570	781	779	2260	e940	e753	2960	766	997	7360
13	e907	e726	1220	1820	800	2140	e950	1030	e8720	567	e1310	6750
14	e851	e702	1050	1160	1060	2160	e899	1000	10300	515	1680	2480
15	e808	e621	954	903	1370	1920	e879	878	5960	503	1460	1580
16	e786	539	941	1590	1100	1880	e868	e888	3110	490	980	1310
17	e689	519	865	885	839	1850	e838	e893	2110	512	688	1080
18	e1900	571	892	656	748	2460	e848	e846	2790	544	611	1580
19	e14700	604	912	658	729	3290	e868	e803	2720	894	550	5230
20	e17700	578	1010	671	925	1330	e879	1030	2640	861	529	3270
21	e9390	582	730	703	4040	1150	e848	2420	1900	725	753	1420
22	e4310	599	681	658	7780	1100	e817	1810	2190	636	788	1120
23	e1740	555	1480	677	7040	1390	e930	1170	1510	586	653	992
24	e1190	563	4730	539	e3980	1360	2430	927	1800	666	648	903
25	e1570	560	2690	629	e1320	1100	1620	6620	1240	542	880	888
26	e1460	564	1330	580	e2860	1040	848	8150	1540	533	841	865
27	e1110	554	1120	624	e3320	964	e801	3420	1230	514	2900	773
28	e1010	587	972	618	e3240	996	e792	e1350	910	494	1890	758
29	e1220	528	929	598	---	982	e805	918	694	e484	1030	757
30	e1170	571	2180	610	---	959	e1560	e822	595	e476	897	735
31	e999	---	6440	577	---	895	---	e784	---	e474	1550	---
TOTAL	81016	22745	56984	31459	54692	58396	34188	46481	67431	21834	27637	56220
MEAN	2613	758	1838	1015	1953	1884	1140	1499	2248	704	892	1874
MAX	17700	1400	6660	3870	7780	3290	2680	8150	10300	1130	2900	7360
MIN	641	519	563	539	565	895	758	753	595	474	471	681
AC-FT	160700	45110	113000	62400	108500	115800	67810	92200	133700	43310	54820	111500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003h, BY WATER YEAR (WY)

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003h														
MEAN	1734	1943	2060	1680	2198	2834	2802	4817	3720	1679	1051	1083	10220	14350	14010	15370	11750	11010	10010	29980	17720	9145	5963	7521	1982	1982	1992	1992	1992	1992	1997	1990	1989	1989	1982	1962	268	231	228	178	265	316	373	432	316	330	228	259	1964	1957	1957	1957	1957	1957	1959	1959	1961	1960	1964	1959	1959
MIN	268	231	228	178	265	316	373	432	316	330	228	259	1964	1957	1957	1957	1957	1957	1959	1959	1961	1960	1964	1959	1959	1964	1957	1957	1957	1957	1957	1959	1959	1961	1960	1964	1959	1959	1964	1959	1959	1961	1960	1964	1959	1959															

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 1957 - 2003h

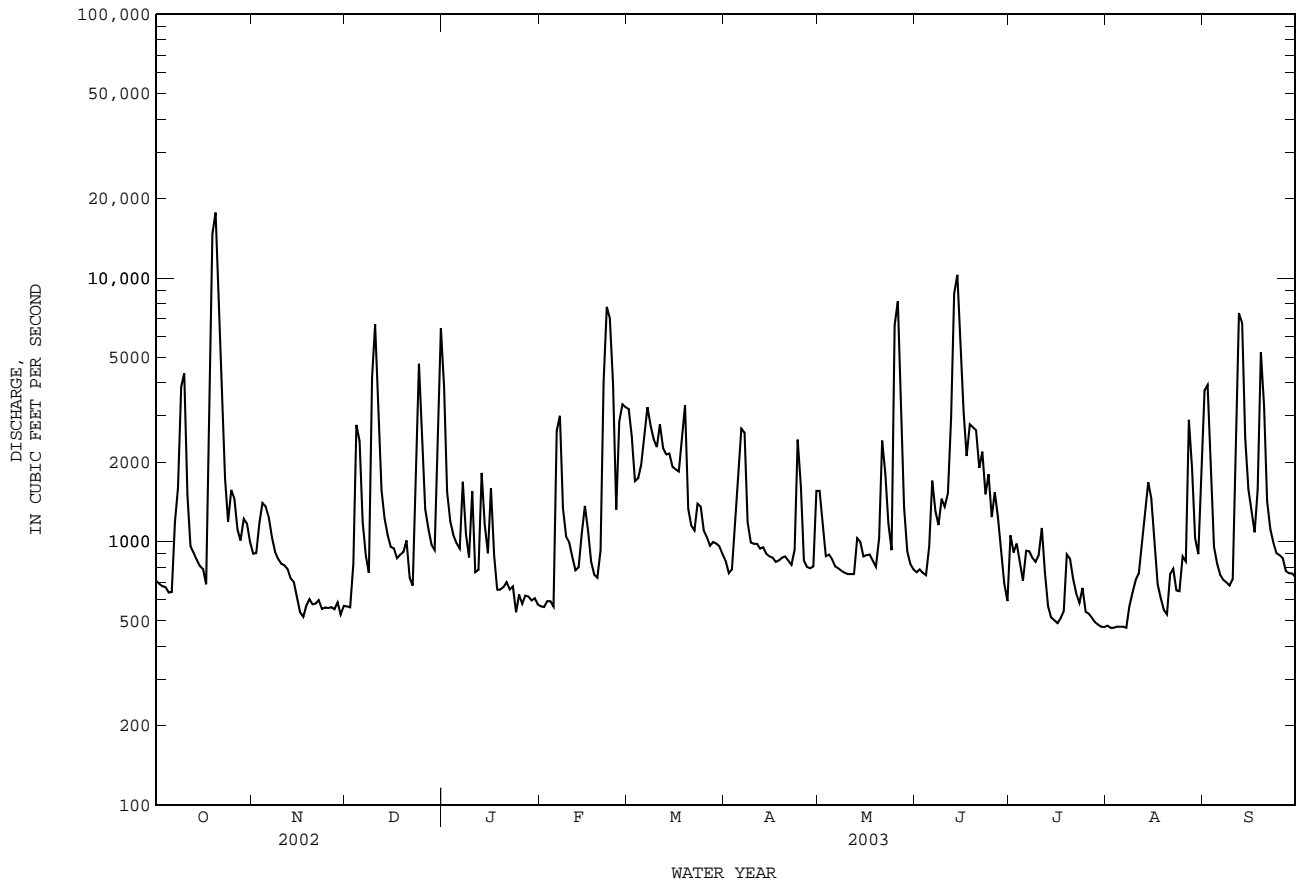
ANNUAL TOTAL	559083		
ANNUAL MEAN	1532		2259
HIGHEST ANNUAL MEAN			7319
LOWEST ANNUAL MEAN			383
HIGHEST DAILY MEAN	17700	Oct 20	79200
LOWEST DAILY MEAN	471	Aug 2	131
ANNUAL SEVEN-DAY MINIMUM	474	Aug 1	147
MAXIMUM PEAK FLOW	24800	Oct 19	87000
MAXIMUM PEAK STAGE	a27.52	Oct 19	34.79
ANNUAL RUNOFF (AC-FT)	1109000		1636000
10 PERCENT EXCEEDS	2920		6200
50 PERCENT EXCEEDS	927		748
90 PERCENT EXCEEDS	568		362

e Estimated

h See PERIOD OF RECORD paragraph.

a From floodmark.

08057410 Trinity River below Dallas, TX--Continued



TRINITY RIVER BASIN

08057410 Trinity River below Dallas, TX
(National Water-Quality Assessment Program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1967 to Sept. 1998, Oct. 2001 to current year.
BIOCHEMICAL DATA: Oct. 1967 to Sept. 1998, Oct. 2001 to current year.
PESTICIDE DATA: Oct. 1970 to July 1981, Oct. 1994 to Sept. 1998, Oct. 2001 to current year.
SEDIMENT DATA: Apr. 1972 to Apr. 1975, Oct. 1998 to current year.
Water-discharge records.--Nov. 1956 to Sept. 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1967 to Sept. 1992, Apr. 1993 to Sept. 1999.
pH: Jan. 1977 to Sept. 1992, Apr. 1993 to Sept. 1999.
WATER TEMPERATURE: Oct. 1967 to Sept. 1992, Apr. 1993 to Sept. 1999.
DISSOLVED OXYGEN: Jan. 1977 to Sept. 1992, Apr. 1993 to Sept. 1999.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,130 microsiemens/cm, Dec. 17, 1977; minimum, 112 microsiemens/cm, Oct. 20, 1984.
pH: Maximum, 8.8 units, Jan. 23, 1980; minimum, 6.5 units, Jan. 1, 2, 4, and 5, 1997.
WATER TEMPERATURES: Maximum, 35.0°C, Aug. 20, 25, 28, 31, 1972; minimum, 1.0°C, Jan. 29, 1968.
DISSOLVED OXYGEN: Maximum, 12.8 mg/L, Mar. 19, 1990; minimum, 0.0 mg/L, on many days during spring and summer of 1977-1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	pH, water, unfiltered, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Alkalinity, wat filt inc field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
08...	1100	535	7.4	24.2	6.5	79	89	59.8	48.6	5.61	.023	5.64	E.03
NOV													
05...	1000	546	7.6	17.0	9.0	95	120	66.5	40.0	4.89	.038	4.93	.04
DEC													
10...	1015	375	7.3	10.9	9.6	87	103	46.6	19.0	1.51	.027	1.54	.05
JAN													
15...	1030	678	7.5	13.3	9.9	95	139	90.0	52.3	6.55	.016	6.57	.07
FEB													
13...	0945	738	7.4	15.5	9.6	97	136	95.2	60.8	8.46	.025	8.48	.19
MAR													
13...	0900	551	7.4	14.4	9.1	90	130	66.8	39.3	3.81	.023	3.84	.13
26...	0920	678	7.6	18.9	8.7	94	--	--	--	16.5	.080	16.6	.14
APR													
08...	0930	552	7.6	18.1	8.3	88	124	72.3	37.5	3.83	.029	3.85	.11
16...	0915	793	7.5	21.2	8.4	97	--	--	--	9.97	.066	10.0	.67
21...	1215	749	7.6	22.3	9.6	112	--	--	--	8.03	.040	8.07	.06
MAY													
08...	1000	761	7.4	26.4	7.1	89	115	97.1	67.5	11.9	.012	11.9	<.04
14...	1215	703	7.5	24.9	6.1	75	--	--	--	8.24	.039	8.28	.06
21...	1500	563	7.7	23.4	7.9	94	--	--	--	4.33	.028	4.36	<.04
JUN													
11...	0915	438	7.4	25.9	7.3	91	90	55.5	31.1	3.59	.042	3.63	<.04
30...	0945	699	7.5	28.4	8.3	108	--	--	--	9.15	.040	9.19	<.04
JUL													
17...	0915	765	7.3	29.3	6.9	90	96	87.5	81.0	11.9	.031	12.0	<.04
AUG													
06...	0930	775	7.3	29.5	6.7	89	106	86.9	81.6	--	--	--	--
SEP													
08...	0930	689	7.5	26.8	9.1	115	92	80.4	68.6	10.2	.016	10.2d	<.04

08057410 Trinity River below Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Total nitrogen, water, unfltrd mg/L (00600)	Organic nitrogen, water, unfltrd mg/L (00605)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Orthophosphate, water, fltrd mg/L as P (00671)	Orthophosphate, water, fltrd mg/L (00660)	Organic carbon, water, fltrd mg/L (00681)	Organic carbon, suspnd sediment total, mg/L (00689)	Suspended sediment concentration mg/L (80154)	Suspnd. sediment, sieve diameter <.063mm (70331)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)
OCT 08...	7.2	--	1.5	1.02	.77	2.35	6.6	9.2	226	98	<.006	<.006	<.004
NOV 05...	5.7	.77	.81	.83	.73	2.23	5.3	2.5	46	98	<.006	<.006	<.004
DEC 10...	2.5	.96	1.0	.44	.20	.616	5.2	6.8	274	90	<.006	<.006	<.004
JAN 15...	7.5	.92	.98	1.21	1.15	3.51	6.2	1.2	15	100	<.006	<.006	<.004
FEB 13...	9.7	1.0	1.2	1.64	1.41	4.33	5.6	1.1	19	100	<.006	<.006	<.004
MAR 13...	4.7	.71	.84	.64	.55	1.68	4.7	1.4	78	96	<.006	<.006	<.020
26...	18	.99	1.1	1.25	2.85	8.74	--	--	25	98	<.006	<.006	<.004
APR 08...	4.9	.96	1.1	.80	.59	1.80	4.9	5.5	139	100	<.006	<.006	.011
16...	12	1.2	1.8	1.93	1.65	5.06	--	--	27	100	<.006	<.006	.010
21...	9.3	1.1	1.2	1.41	1.28	3.93	--	--	32	100	<.006	<.006	<.010
MAY 08...	13	--	1.2	--	2.02	6.18	5.6	2.9	44	100	<.006	<.006	<.004
14...	9.9	1.6	1.6	1.46	1.25	3.82	--	--	100	100	<.006	<.006	<.004
21...	5.2	--	.87	.84	.56	1.73	--	--	166	95	<.006	<.006	.008
JUN 11...	5.1	--	1.5	.95	.57	1.74	5.2	8.0	179	98	<.006	<.006	<.004
30...	10	--	1.0	1.89	1.67	5.13	--	--	42	99	<.006	<.006	<.004
JUL 17...	13	--	1.1	2.43	2.21	6.77	5.8	2.0	61	93	<.006	<.006	<.004
AUG 06...	--	--	--	--	--	--	6.1	1.4	45	99	<.006	<.006	<.004
SEP 08...	11	--	1.0	1.94oc	1.76d	5.41	5.3	1.4	26	100	<.006	<.006	<.004

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin, water, fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Diazi-non, water, fltrd, ug/L (39572)
OCT 08...	<.005	.400	<.050	<.010	<.002	E.078	<.020	<.005	<.006	<.018	<.003	E.060	.042
NOV 05...	<.005	.233	<.050	<.010	<.002	E.025	<.020	<.005	<.006	<.018	<.003	E.041	.064
DEC 10...	<.005	.258	<.050	<.010	<.002	E.047	<.020	<.005	<.006	<.018	<.003	E.023	.095
JAN 15...	<.005	.205	<.050	<.010	<.002	E.022	<.020	<.005	<.006	<.018	<.003	E.054	.020
FEB 13...	<.005	.340	<.050	<.010	<.002	E.012	<.020	<.005	<.006	<.018	<.003	E.046	.012
MAR 13...	<.005	.497	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.092	<.010
26...	<.005	.784	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.074	.017
APR 08...	<.005	1.95	<.050	<.010	<.002	E.102	<.020	<.005	<.006	<.018	<.003	E.131	.101
16...	<.005	.751	<.050	<.010	<.002	E.019	<.020	<.005	<.006	<.018	<.003	E.113	.051
21...	<.005	.728	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.093	.021
MAY 08...	<.005	.560	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.097	.007
14...	<.005	.452	<.050	<.010	<.002	E.105	<.020	<.005	<.006	<.018	<.003	E.072	.034
21...	<.005	.551	<.050	<.010	<.002	E.011	<.020	<.005	<.006	<.018	<.003	E.076	.022
JUN 11...	<.005	.343	<.050	<.010	<.002	E.041	<.020	<.005	<.006	<.018	<.003	E.050	.057
30...	<.005	.280	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.067	.012
JUL 17...	<.005	.297	<.050	<.010	<.002	E.023n	<.020	<.005	<.006	<.018	<.003	E.062	<.005
AUG 06...	<.005	.224	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.055	<.005
SEP 08...	<.005	.199	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.042	.011

TRINITY RIVER BASIN

08057410 Trinity River below Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)
OCT													
08...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.015	<.006	<.002	<.007
NOV													
05...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.011n	<.006	<.002	<.007
DEC													
10...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.012n	E.009n	<.006	<.002	<.007
JAN													
15...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.008n	<.006	<.010	<.007
FEB													
13...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.067	<.006	<.002	<.007
MAR													
13...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.015	<.006	<.002	<.007
26...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.013	<.006	<.002	<.007
APR													
08...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.096	<.006	<.002	<.007
16...	<.005	<.02	<.002	<.009	<.005	<.003	<.010	<.035	<.027	.056	<.006	<.002	<.007
21...	<.005	<.02	<.002	<.009	<.005	<.003	<.010	<.035	<.027	.040	<.006	<.002	<.007
MAY													
08...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.021	<.006	<.002	<.007
14...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.017n	.015	<.006	<.002	<.007
21...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.028	<.006	<.002	<.007
JUN													
11...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.020n	E.012n	<.006	<.002	<.007
30...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.013	<.006	<.002	<.007
JUL													
17...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.008n	<.006	<.002	<.007
AUG													
06...	<.005	<.02	<.002	<.009	<.005	<.003	<.010	<.035	<.027	E.012n	<.006	<.050	<.007
SEP													
08...	<.005	<.02	<.010	<.009	<.005	<.003	<.004	<.035	<.027	E.005t	<.006	<.002	<.007
Date	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Prepar- gite, water, fltrd 0.7u GF ug/L (82685)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)
OCT													
08...	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.613	.03
NOV													
05...	<.003	<.010	<.006	<.004	.030	<.011	E.01n	<.010	<.011	<.02	<.004	.793	.05
DEC													
10...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	1.87	.11
JAN													
15...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.646	.05
FEB													
13...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.433	.04
MAR													
13...	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.378	<.02
26...	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.442	<.02
APR													
08...	<.003	<.010	<.006	<.004	<.040	<.011	E.01n	<.010	<.011	<.02	.042	.999	<.02
16...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.007	.396	E.06
21...	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.437	.07
MAY													
08...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.266	.10
14...	<.003	<.010	<.006	<.010	E.009n	<.011	.02	<.010	<.011	<.02	<.004	.187	.28
21...	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.342	.20
JUN													
11...	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.117	.15
30...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.109	.13
JUL													
17...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.117	.05
AUG													
06...	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.077	.05
SEP													
08...	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.07	.007	.078	.03

TRINITY RIVER BASIN

177

08057410 Trinity River below Dallas, TX--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT					
08...	<.034	<.02	<.005	<.002	<.009
NOV					
05...	<.034	<.02	<.005	<.002	<.009
DEC					
10...	<.034	<.02	<.005	<.002	<.009
JAN					
15...	<.034	<.02	<.005	<.002	<.009
FEB					
13...	<.034	<.02	<.005	<.002	<.009
MAR					
13...	<.034	<.02	<.005	<.002	<.009
26...	<.034	<.02	<.005	<.002	<.009
APR					
08...	<.034	<.02	<.005	<.002	<.009
16...	<.034	<.02	<.005	<.002	<.009
21...	<.034	<.02	<.005	<.002	<.009
MAY					
08...	<.034	<.02	<.005	<.002	<.009
14...	<.034	<.02	<.005	<.002	<.009
21...	<.034	<.02	<.005	<.002	<.009
JUN					
11...	<.034	<.02	<.005	<.002	<.009
30...	<.034	<.02	<.005	<.002	<.009
JUL					
17...	<.034	<.02	<.005	<.002	<.009
AUG					
06...	<.034	<.02	<.005	<.002	<.009
SEP					
08...	<.034	<.02	<.005	<.002	<.009

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- n -- Below the NDV
- o -- Result determined by alternate method
- t -- Below the long-term MDL

TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--Oct. 1975 to Sept. 1980, Apr. 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 390.00 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.07	0.82	0.65	7.4	0.70	25	1.5	4.9	0.88	0.29	0.21	29
2	0.07	0.74	1.1	3.9	0.86	9.0	1.6	1.9	0.78	0.92	0.17	11
3	0.07	3.2	9.0	2.4	0.98	4.6	1.6	1.3	0.71	0.91	0.19	1.1
4	0.07	4.4	9.6	1.7	0.89	4.2	21	1.1	0.56	0.33	0.20	0.35
5	0.06	14	4.7	1.4	1.6	2.7	27	1.1	74	0.18	0.17	0.20
6	4.7	3.9	1.5	1.2	19	1.8	5.0	1.2	22	0.79	0.17	0.11
7	31	1.5	0.63	0.82	2.7	1.6	2.7	1.1	4.8	0.79	0.17	0.09
8	16	1.3	0.98	0.73	0.22	1.5	1.8	1.2	9.3	0.21	0.19	0.08
9	243	1.1	14	0.83	0.16	1.5	1.5	1.3	10	0.11	0.24	0.09
10	13	0.70	13	0.92	0.42	1.4	1.5	1.2	3.4	0.10	0.24	0.10
11	3.5	0.50	8.3	0.90	4.5	1.4	1.5	1.1	45	0.09	0.32	26
12	1.4	0.45	4.2	1.3	0.13	1.5	1.5	1.1	136	0.10	0.29	52
13	0.44	0.48	3.5	7.5	0.13	1.8	1.4	39	220	0.09	0.28	4.2
14	0.24	0.47	2.5	3.5	12	2.6	1.4	12	32	0.08	0.31	0.87
15	0.12	0.44	1.6	1.9	3.1	2.1	1.4	2.8	40	0.08	0.31	0.38
16	0.07	0.36	1.3	1.4	0.26	1.9	1.4	1.6	8.4	0.08	0.27	0.25
17	0.06	0.39	1.1	1.1	0.14	2.0	1.4	1.3	5.8	0.08	0.27	0.20
18	283	0.46	0.95	0.88	0.14	42	1.4	1.2	3.6	0.09	0.23	46
19	457	0.54	0.74	0.65	0.17	14	1.4	0.99	2.5	0.09	0.20	28
20	21	0.61	0.50	0.64	21	4.0	1.3	21	1.8	0.09	0.20	2.8
21	6.4	0.38	0.58	0.58	147	2.4	1.4	13	1.3	0.09	0.19	1.1
22	4.2	0.32	1.4	0.53	134	2.2	1.5	3.3	1.2	0.09	0.20	0.75
23	3.1	0.37	9.5	0.63	11	7.5	1.9	1.7	0.98	0.10	0.22	0.61
24	3.4	0.36	8.0	0.65	2.9	3.6	63	1.2	0.72	0.10	0.19	0.53
25	7.8	0.35	4.7	0.55	4.7	2.4	5.1	263	0.61	0.10	0.20	0.45
26	3.3	0.42	2.4	0.52	33	2.0	2.1	15	67	0.10	0.22	0.47
27	1.7	0.52	1.5	0.54	98	1.8	1.6	5.0	8.1	0.10	0.26	0.45
28	1.7	0.50	1.1	0.63	55	1.6	1.3	2.6	1.4	0.10	0.22	0.48
29	15	0.61	0.76	0.71	---	1.5	1.2	1.6	0.91	0.10	0.20	0.38
30	3.3	0.59	29	0.75	---	1.5	20	1.3	0.47	0.20	0.19	23
31	1.4	---	19	0.74	---	1.5	---	1.1	---	0.28	0.44	---
TOTAL	1126.17	40.78	157.79	47.90	554.70	154.6	178.4	407.19	704.22	6.86	7.16	231.04
MEAN	36.3	1.36	5.09	1.55	19.8	4.99	5.95	13.1	23.5	0.22	0.23	7.70
MAX	457	14	29	7.5	147	42	63	263	220	0.92	0.44	52
MIN	0.06	0.32	0.50	0.52	0.13	1.4	1.2	0.99	0.47	0.08	0.17	0.08
AC-FT	2230	81	313	95	1100	307	354	808	1400	14	14	458

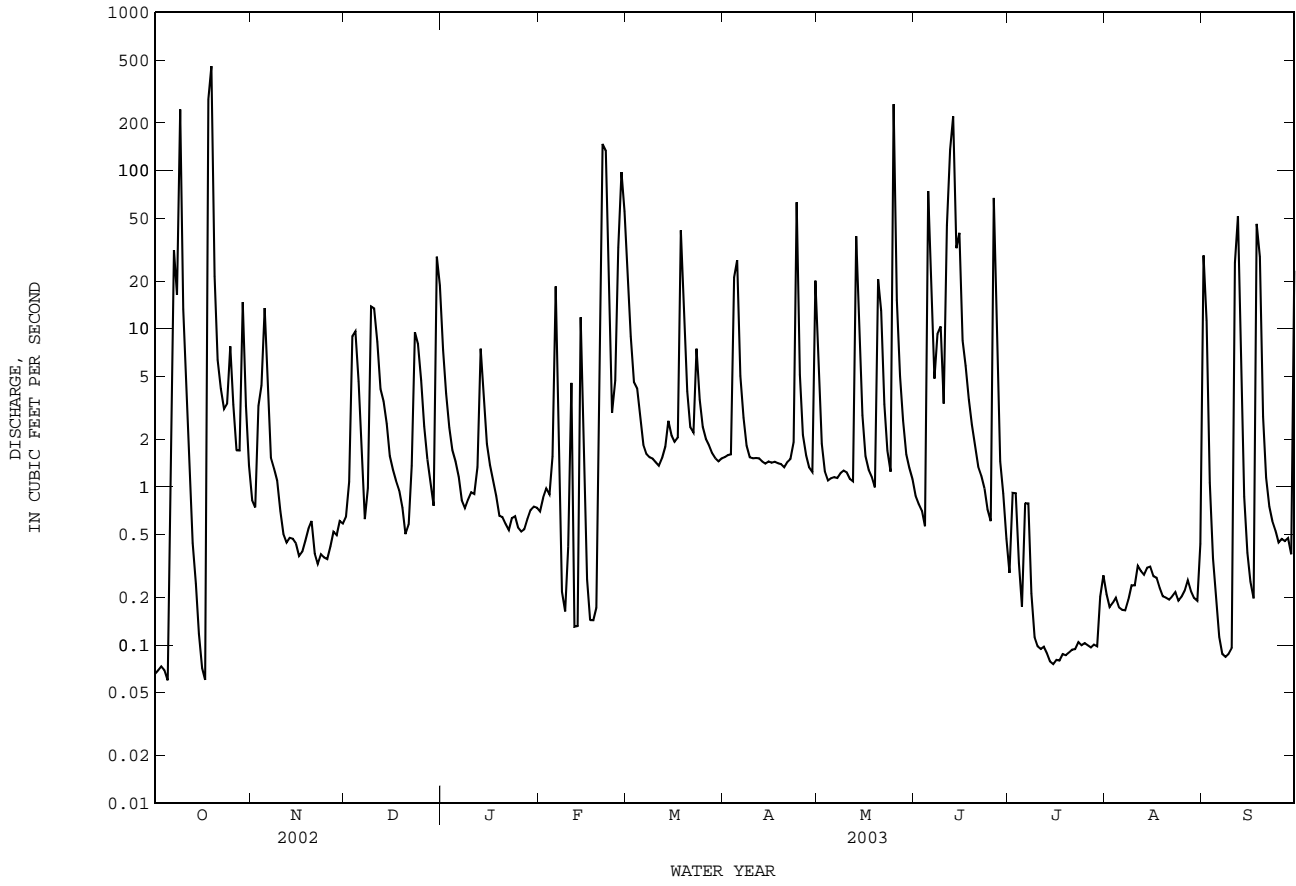
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003h, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	12.5	8.67	11.4	6.82	11.5	11.4	11.7	16.4	9.72	3.83	2.40	3.62																
MAX	46.3	43.1	40.2	19.8	41.6	27.0	42.2	72.4	51.1	24.9	15.3	10.4																
(WY)	1995	1995	1999	1990	1997	2001	1990	1989	2000	1994	2001	2001																
MIN	0.000	0.33	0.42	0.12	0.34	1.28	0.66	0.64	0.32	0.000	0.000	0.003																
(WY)	1976	1990	1978	1976	1976	1996	1978	1977	1978	1980	1980	2000																

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1976 - 2003h	
ANNUAL TOTAL	4629.21		3616.81			
ANNUAL MEAN	12.7		9.91		9.29	
HIGHEST ANNUAL MEAN					17.4	
LOWEST ANNUAL MEAN					1.61	
HIGHEST DAILY MEAN	457	Oct 19	457	Oct 19	1150	May 17 1989
LOWEST DAILY MEAN	0.03	Sep 7	0.06	Oct 5	0.00	Oct 1 1975
ANNUAL SEVEN-DAY MINIMUM	0.06	Sep 1	0.08	Jul 13	0.00	Oct 1 1975
MAXIMUM PEAK FLOW			1780		5660	
MAXIMUM PEAK STAGE			21.68		29.21	
ANNUAL RUNOFF (AC-FT)	9180		7170		6730	
10 PERCENT EXCEEDS	16		19		12	
50 PERCENT EXCEEDS	1.2		1.2		1.0	
90 PERCENT EXCEEDS	0.09		0.14		0.02	

h See PERIOD OF RECORD paragraph.

08057445 Prairie Creek at U.S. Highway 175, Dallas, TX--Continued



TRINITY RIVER BASIN

08058900 East Fork Trinity River at McKinney, TX

LOCATION.--Lat 33°14'40", long 96°36'30", Collin County, Hydrologic Unit 12030106, at downstream side of highway embankment near left end of main channel bridge on State Highways 5 and 121, 750 ft downstream from Honey Creek, 1.2 mi upstream from Southern Pacific Railway Co. bridge, 1.7 mi upstream from Clemons Creek, 3.3 mi north of McKinney, 26.1 mi upstream from Lavon Dam, and 86.5 mi upstream from mouth.

DRAINAGE AREA.--164 mi².

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

Water-quality records.--Chemical data: Oct. 1980 to Sept. 1982, Oct. 1985 to July 1987, Apr. 1993 to Sept. 1995. Biochemical data: Oct. 1980 to Sept. 1982, Oct. 1985 to July 1987, Apr. 1993 to Sept. 1995.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 528.74 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Oct. 1975, at least 10% of contributing drainage area has been regulated. Small diversions for irrigation above the station are made at times. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e32	16	391	31	379	37	22	e8.9	e3.3	0.00	e8.5
2	0.00	e33	16	196	30	264	36	22	e7.6	e2.9	0.00	e10
3	0.00	e38	16	129	30	182	36	21	e6.6	e2.5	0.00	e3.8
4	0.00	e71	66	107	28	144	37	21	e5.9	e2.1	0.00	e0.71
5	0.00	e125	105	93	27	118	38	21	e5.3	e1.6	0.00	e0.13
6	0.00	132	51	79	35	89	36	e20	e5.0	e1.2	0.00	e0.04
7	0.00	88	34	70	41	76	36	e18	e4.7	e0.78	0.00	e0.01
8	0.03	72	28	68	34	71	32	e17	e4.6	e0.36	0.00	e0.00
9	30	62	168	67	34	65	30	e15	e4.5	e0.25	0.00	e0.00
10	41	54	365	59	34	60	29	e14	e4.5	e0.22	0.00	0.00
11	23	e45	159	54	33	59	29	e13	e4.8	e0.20	0.00	e6.5
12	15	e43	85	53	31	58	29	e11	e11	e0.17	0.00	e10
13	7.9	e29	60	53	31	58	28	e10	41	e0.15	0.00	e7.0
14	3.6	e19	41	52	35	55	27	e8.6	27	e0.12	0.00	e4.8
15	1.1	e17	32	49	36	53	26	e7.2	167	e0.10	0.00	e2.5
16	0.40	e16	27	47	32	52	26	e5.8	42	e0.08	0.00	e1.4
17	0.18	e16	24	43	29	51	25	e4.4	28	e0.06	0.00	e0.82
18	24	e16	23	42	28	60	25	e3.7	23	e0.04	0.00	e0.56
19	1280	e15	21	40	28	116	25	e3.0	19	e0.03	0.00	e0.24
20	600	e16	18	39	29	68	25	e6.0	15	e0.02	0.00	e0.15
21	282	17	16	39	115	58	24	10	12	e0.02	0.00	e0.08
22	155	17	15	37	395	53	24	e10	e11	e0.02	0.00	e0.03
23	102	16	272	35	202	51	24	e8.7	e6.7	e0.03	0.00	e0.02
24	76	18	737	34	105	50	24	e9.0	e6.3	e0.02	0.00	e0.02
25	121	18	322	33	88	49	24	170	e5.8	e0.02	0.00	e0.01
26	89	17	214	33	89	48	23	66	e5.4	e0.01	0.00	e0.00
27	57	16	149	33	202	45	23	29	e5.0	e0.01	0.00	e0.00
28	39	16	111	33	402	42	22	19	e4.6	e0.01	e0.80	e0.00
29	64	16	90	33	---	39	23	15	e4.2	e0.01	e2.0	e0.00
30	59	16	541	32	---	37	23	13	e3.7	e0.00	e4.3	e0.00
31	e38	---	1030	32	---	37	---	e11	---	e0.00	e6.4	---
TOTAL	3108.21	1106	4852	2105	2234	2587	846	624.4	500.1	16.33	13.50	57.32
MEAN	100	36.9	157	67.9	79.8	83.5	28.2	20.1	16.7	0.53	0.44	1.91
MAX	1280	132	1030	391	402	379	38	170	167	3.3	6.4	10
MIN	0.00	15	15	32	27	37	22	3.0	3.7	0.00	0.00	0.00
AC-FT	6170	2190	9620	4180	4430	5130	1680	1240	992	32	27	114

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

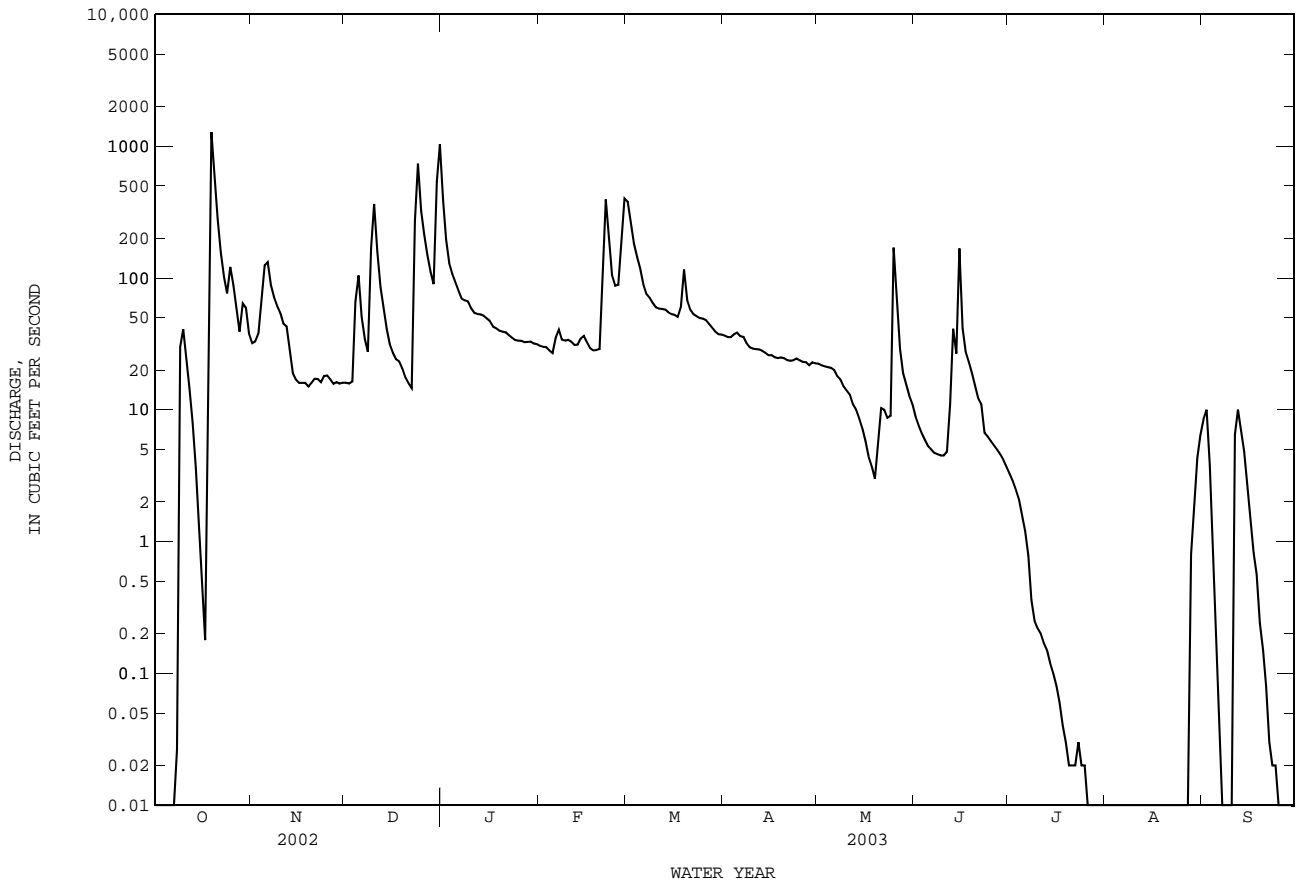
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	84.5	124	152	104	213	246	157	247	123	20.5	3.15	6.75																
MAX	1022	1120	1160	805	987	813	804	1704	737	213	19.0	64.0																
(WY)	1982	1995	1992	1998	2001	2002	1990	1982	1989	1994	1990	1994																
MIN	0.000	0.000	0.000	0.000	1.37	2.30	4.08	2.52	0.81	0.000	0.000	0.000																
(WY)	1978	1978	1978	1978	1976	1976	1980	1996	1996	1984	1980	1977																

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1976 - 2003

ANNUAL TOTAL	71622.87	18049.86		
ANNUAL MEAN	196	49.5	123	
HIGHEST ANNUAL MEAN			373	1982
LOWEST ANNUAL MEAN			4.65	1980
HIGHEST DAILY MEAN	7780	Mar 20	26800	May 13 1982
LOWEST DAILY MEAN	0.00	Jul 28	0.00	Aug 18 1976
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 28	0.00	Aug 18 1976
MAXIMUM PEAK FLOW			1680	Oct 19
MAXIMUM PEAK STAGE			17.24	Oct 19
ANNUAL RUNOFF (AC-FT)	142100	35800	89060	
10 PERCENT EXCEEDS	485	105	244	
50 PERCENT EXCEEDS	38	22	15	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

e Estimated

08058900 East Fork Trinity River at McKinney, TX--Continued



TRINITY RIVER BASIN

08059400 Sister Grove Creek near Blue Ridge, TX
(Flood hydrograph-partial record station)

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 mi².

PERIOD OF RECORD.--July 1975 to Sept. 2001 (daily mean discharge). Oct. 2001 to current year.(peaks above base discharge)
Water-quality records.--Chemical data: Nov. 1985 to June 1987, Oct. 1995 to Sept. 1999. Biochemical data: Nov. 1985 to Jun 1987, Oct. 1995 to Sept. 1999.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 526.29 ft above NGVD of 1929. Prior to June 29, 1988, at datum 10.00 ft higher at same site. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in July 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. These structures control runoff from 47.4 mi². Discharge may contain flow released from Lake Texoma and placed into channel 40 miles upstream from site. No flow at times.

AVERAGE DISCHARGE.--26 years (water years 1975-2001), 69.5 ft³/s (50,340 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s, May 13, 1982, gage height, 32.50 ft. Minimum discharge, no flow at times, most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 30.7 ft, present datum, probably occurred in July 1913, from information by the Texas Department of Transportation. The probable date is from published records for Sister Grove Creek near Princeton (station 08059500, discontinued) located 9.7 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 692 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 19	1500	949	21.16	Dec 31	0200	*986	*21.47

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08060500 Lavon Lake near Lavon, TX

LOCATION.--Lat 33°01'54", long 96°28'56", Collin County, Hydrologic Unit 12030106, in right abutment of spillway in dam on East Fork Trinity River, 3,850 ft upstream from St. Louis Southwestern Railway Lines bridge, 4,000 ft upstream from bridge on State Highway 78, 2.9 mi west of Lavon, and 55.9 mi upstream from mouth.

DRAINAGE AREA.--770 mi².

PERIOD OF RECORD.--Sept. 1953 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Lavon Reservoir".

Water-quality records.--Chemical data: Oct. 1969 to Sept. 1974, Oct. 1975 to Sept. 1982, Oct. 1995 to Sept. 1999. Biochemical data: Oct. 1969 to Sept. 1974, Oct. 1975 to Sept. 1982, Oct. 1995 to Sept. 1999.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Jan. 20, 1954, nonrecording gage in the approach channel at same datum. Satellite telemeter at station.

REMARKS.--Records good. 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 Sept. 14, 1953, and the dam was completed in Oct. 1953. Low-flow outlets consist of five 36-inch-diameter controlled sluice gates. Lake was designed for flood control and water conservation. Water for municipal supply can be released down to elevation 453.0 ft. Flow is affected at times by discharge from the flood-detention pools of 149 floodwater-retarding structures with a combined detention capacity of 69,170 acre-ft. These structures control runoff from 242 mi² in the East Fork Trinity River, Pilot Grove, and Sister Grove Creek drainage basins. The dam is owned by the U.S. Army Corps of Engineers. 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
Crest of spillway (sill of tainter gates).....	475.5
Lowest gated outlet (invert).....	453.0

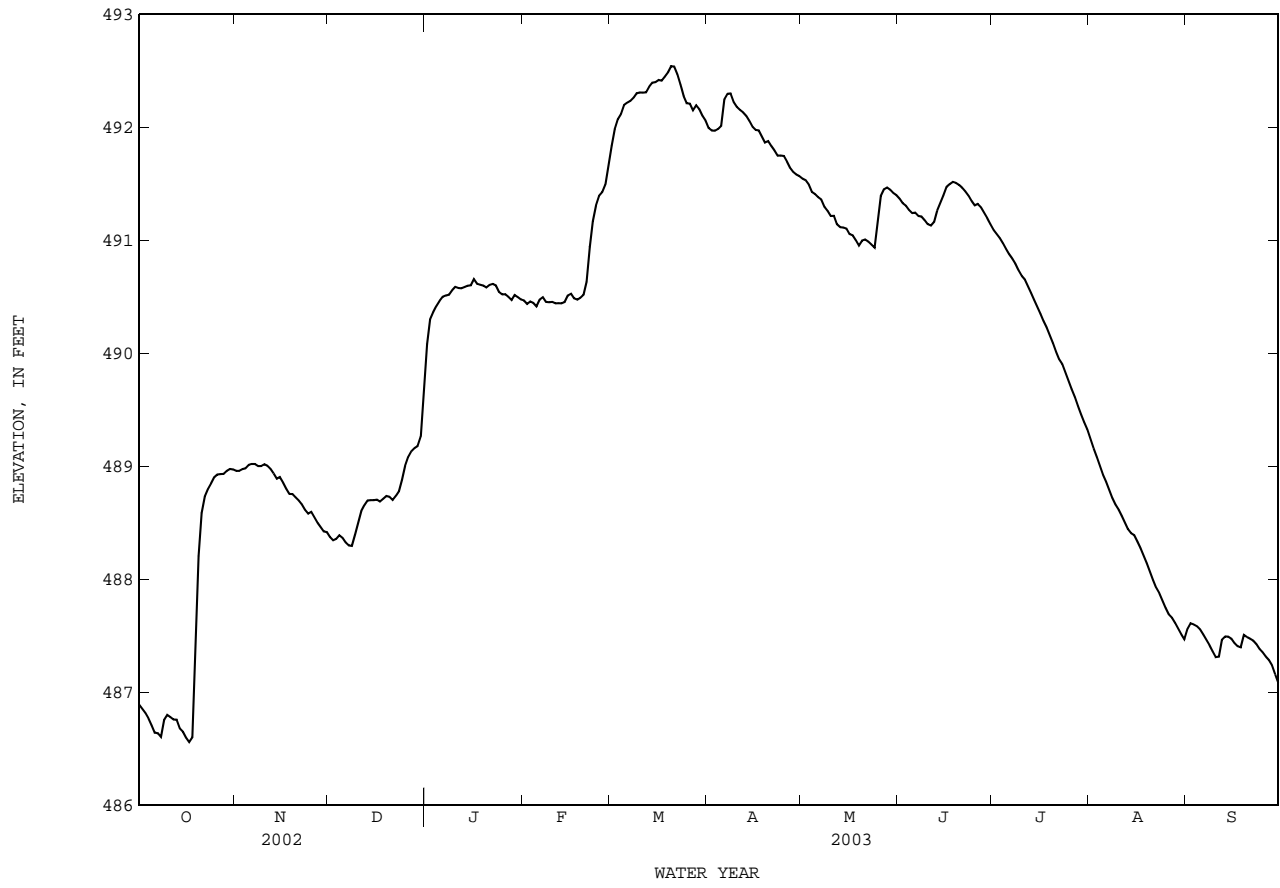
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 791,000 acre-ft, May 3, 1990, elevation, 504.93 ft; minimum since lake first filled in 1957, 80,150 acre-ft, Apr. 17, 1976, elevation, 465.96 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 492.55 ft, Mar. 20, 21; minimum elevation, 486.50 ft, Oct. 18.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	486.89	488.96	488.37	490.08	490.47	491.84	491.99	491.55	491.37	491.09	489.24	487.56
2	486.85	488.96	488.34	490.30	490.44	491.98	491.97	491.53	491.33	491.06	489.16	487.61
3	486.82	488.98	488.36	490.37	490.46	492.07	491.97	491.49	491.31	491.02	489.08	487.60
4	486.77	488.98	488.39	490.42	490.45	492.12	491.99	491.43	491.27	490.98	489.01	487.58
5	486.71	489.01	488.37	490.46	490.42	492.20	492.01	491.41	491.24	490.93	488.92	487.56
6	486.64	489.02	488.33	490.50	490.47	492.22	492.25	491.38	491.25	490.88	488.86	487.51
7	486.64	489.02	488.30	490.51	490.50	492.24	492.30	491.36	491.22	490.84	488.79	487.47
8	486.60	489.00	488.29	490.52	490.45	492.26	492.30	491.30	491.21	490.79	488.72	487.42
9	486.76	489.00	488.40	490.56	490.45	492.30	492.22	491.26	491.18	490.73	488.66	487.36
10	486.80	489.02	488.50	490.59	490.46	492.31	492.18	491.22	491.14	490.69	488.62	487.31
11	486.78	489.00	488.60	490.58	490.44	492.31	492.16	491.22	491.13	490.65	488.56	487.31
12	486.76	488.98	488.66	490.58	490.44	492.31	492.13	491.14	491.16	490.60	488.50	487.47
13	486.76	488.94	488.70	490.59	490.44	492.36	492.10	491.12	491.26	490.54	488.44	487.49
14	486.68	488.89	488.70	490.60	490.45	492.40	492.06	491.11	491.33	490.48	488.41	487.49
15	486.65	488.90	488.70	490.60	490.51	492.40	492.01	491.10	491.40	490.41	488.39	487.47
16	486.60	488.86	488.70	490.66	490.53	492.42	491.98	491.06	491.47	490.35	488.33	487.44
17	486.56	488.80	488.69	490.62	490.49	492.42	491.97	491.04	491.50	490.29	488.27	487.41
18	486.60	488.75	488.71	490.61	490.47	492.45	491.92	491.00	491.52	490.23	488.21	487.40
19	487.53	488.75	488.74	490.60	490.49	492.49	491.87	490.95	491.51	490.16	488.14	487.51
20	488.21	488.73	488.73	490.58	490.52	492.54	491.88	491.00	491.49	490.09	488.07	487.49
21	488.59	488.70	488.70	490.61	490.63	492.54	491.84	491.01	491.46	490.02	487.99	487.47
22	488.73	488.66	488.74	490.61	490.94	492.47	491.80	490.99	491.43	489.95	487.92	487.46
23	488.80	488.61	488.78	490.60	491.17	492.38	491.75	490.96	491.40	489.90	487.88	487.43
24	488.85	488.58	488.88	490.54	491.31	492.28	491.75	490.94	491.35	489.83	487.81	487.38
25	488.90	488.60	489.00	490.52	491.40	492.21	491.75	491.17	491.31	489.75	487.75	487.35
26	488.93	488.55	489.08	490.52	491.43	492.21	491.70	491.39	491.32	489.68	487.69	487.32
27	488.93	488.50	489.13	490.50	491.50	492.15	491.64	491.45	491.29	489.61	487.66	487.29
28	488.93	488.46	489.16	490.47	491.66	492.20	491.61	491.47	491.24	489.54	487.61	487.24
29	488.96	488.42	489.18	490.52	---	492.16	491.58	491.45	491.20	489.46	487.56	487.16
30	488.98	488.42	489.26	490.50	---	492.10	491.57	491.42	491.14	489.39	487.51	487.08
31	488.97	---	489.69	490.48	---	492.06	---	491.40	---	489.33	487.47	---
MEAN	487.55	488.80	488.72	490.52	490.69	492.27	491.94	491.24	491.31	490.30	488.30	487.42
MAX	488.98	489.02	489.69	490.66	491.66	492.54	492.30	491.55	491.52	491.09	489.24	487.61
MIN	486.56	488.42	488.29	490.08	490.42	491.84	491.57	490.94	491.13	489.33	487.47	487.08
CAL YR 2002	MAX 497.59	MIN 485.64										
WTR YR 2003	MAX 492.54	MIN 486.56										

08060500 Lavon Lake near Lavon, TX--Continued



TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--Mar. 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.00 ft above NGVD of 1929. Mar. 1968 to Aug. 25, 1993, at site on left bank 150 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	89	69	261	60	186	77	75	72	144	137	1600
2	48	100	73	206	60	144	76	71	71	92	97	138
3	46	180	148	173	61	124	79	71	67	67	97	81
4	47	109	354	155	63	120	207	70	70	57	81	77
5	49	180	83	141	75	116	418	69	223	56	52	97
6	50	104	75	127	472	109	2580	69	106	58	43	59
7	405	95	70	110	111	105	185	70	76	65	42	54
8	144	87	73	103	90	102	120	70	120	59	43	55
9	1560	82	1130	99	92	97	103	73	78	57	85	52
10	138	83	307	92	79	94	96	73	68	132	71	51
11	102	79	157	90	70	98	91	77	132	120	49	1250
12	88	77	132	106	67	97	89	76	849	49	59	547
13	78	77	128	121	77	100	86	211	411	46	59	178
14	72	75	109	92	118	93	83	113	542	56	72	124
15	69	76	102	86	88	92	81	72	930	58	64	92
16	67	76	98	86	71	91	78	87	264	58	51	82
17	63	75	95	83	68	91	75	97	165	55	49	74
18	2190	75	98	82	64	367	79	76	163	56	46	1040
19	5250	74	95	79	64	144	80	77	90	55	41	684
20	284	73	85	80	231	132	80	1130	84	54	38	114
21	125	73	81	76	939	110	73	149	76	55	37	95
22	107	68	76	69	859	109	71	97	72	55	77	87
23	108	70	541	68	183	112	94	78	68	81	94	78
24	221	70	190	69	141	100	308	69	67	54	42	70
25	162	71	120	70	136	102	82	2000	66	56	40	66
26	108	71	111	71	301	93	77	141	148	52	158	68
27	99	69	107	63	334	84	76	101	69	49	260	70
28	99	69	100	59	267	83	76	85	63	61	58	65
29	157	70	98	61	---	79	76	77	63	89	49	63
30	94	67	1500	58	---	79	284	77	60	127	47	57
31	85	---	1040	59	---	79	---	79	---	146	59	---
TOTAL	12156	2564	7445	3095	5241	3532	5980	5680	5333	2219	2197	7168
MEAN	392	85.5	240	99.8	187	114	199	183	178	71.6	70.9	239
MAX	5250	180	1500	261	939	367	2580	2000	930	146	260	1600
MIN	41	67	69	58	60	79	71	69	60	46	37	51
AC-FT	24110	5090	14770	6140	10400	7010	11860	11270	10580	4400	4360	14220

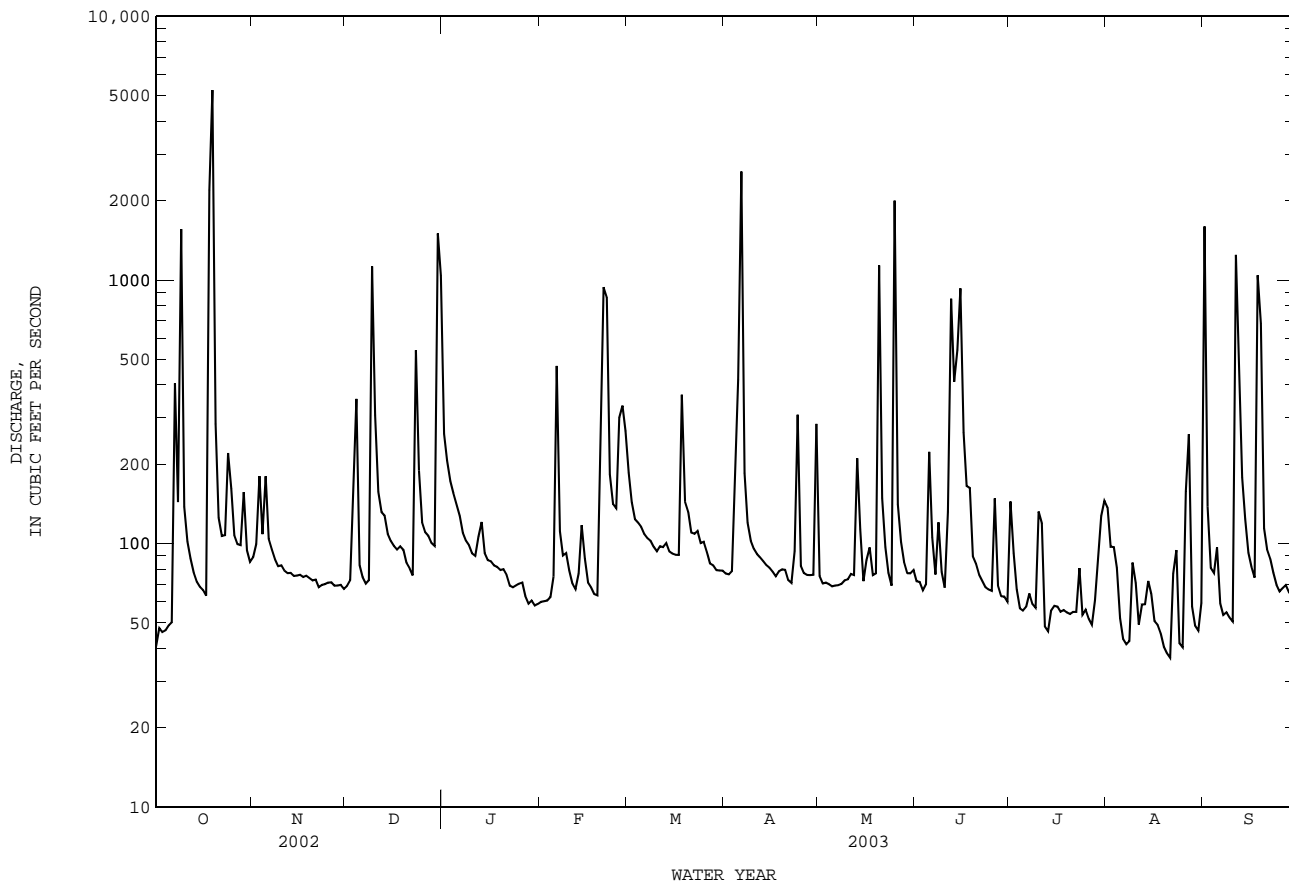
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	140	127	170	114	170	193	166	227	146	50.9	38.7	61.8
MEAN	140	127	170	114	170	193	166	227	146	50.9	38.7	61.8
MAX	610	586	898	617	680	484	573	1039	566	241	120	239
(WY)	1982	1995	1992	1998	2001	2002	1990	1982	1981	1994	2001	2003
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 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1968 - 2003

ANNUAL TOTAL	77434	62610	
ANNUAL MEAN	212	172	
HIGHEST ANNUAL MEAN			133
LOWEST ANNUAL MEAN			269
HIGHEST DAILY MEAN	5540	Mar 20	5250
LOWEST DAILY MEAN	36	Sep 5	37
ANNUAL SEVEN-DAY MINIMUM	39	Sep 1	47
MAXIMUM PEAK FLOW			11700
MAXIMUM PEAK STAGE			25.57
ANNUAL RUNOFF (AC-FT)	153600	124200	96700
10 PERCENT EXCEEDS	309	243	212
50 PERCENT EXCEEDS	81	82	51
90 PERCENT EXCEEDS	47	56	8.8

08061540 Rowlett Creek near Sachse, TX--Continued



TRINITY RIVER BASIN

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, 24.0 mi downstream from Lavon Dam, and 31.8 mi upstream from mouth.

DRAINAGE AREA.--1,071 mi².

PERIOD OF RECORD.--Jan. 1968 to Dec. 1993, Oct. 1996 to current year.
Water-quality records.--Chemical data: Oct. 1969 to Sept. 1979.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. 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 Sept. 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. Conservation pool storage is 490,000 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	450.0
Design flood.....	440.5
Top of conservation pool.....	438.8
Top of tainter gates.....	437.5
Crest of spillway (sill of tainter gates).....	409.5
Lowest gated outlet (invert).....	388.0

COOPERATION.--Capacity table No. 2 was provided by Forrest and Cotton, Consulting Engineers, for the city of Dallas, and put in use on Oct. 1, 1997.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 544,100 acre-ft, May 4, 1990, elevation, 437.81 ft; minimum contents since first appreciable filling, 311,800 acre-ft, Sept. 30, 2000, elevation, 430.26 ft; minimum elevation, 429.72 ft, Oct. 15, 2000, contents unknown.

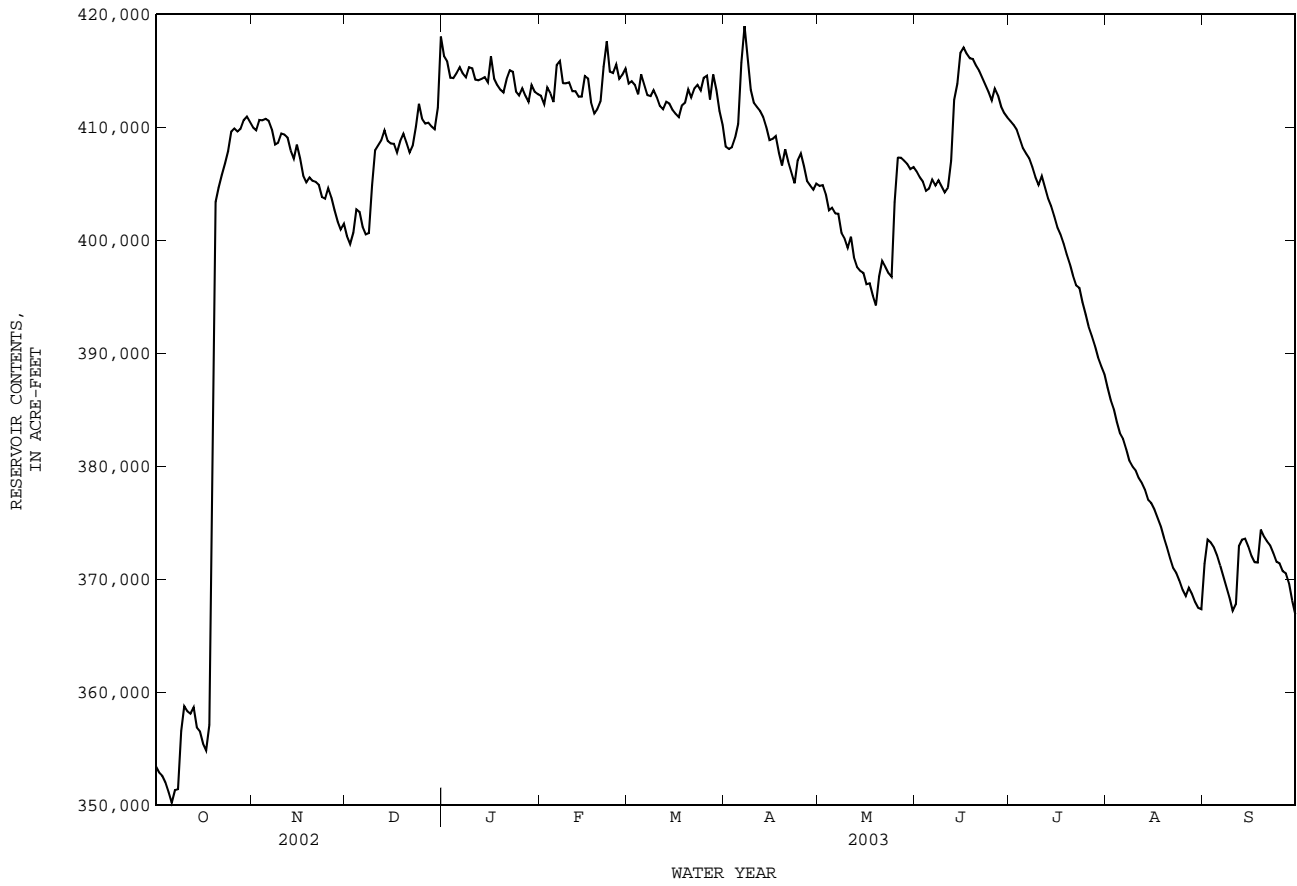
EXTREMES FOR CURRENT YEAR.--Maximum contents, 420,500 acre-ft, Apr. 7, elevation, 435.82 ft; minimum contents, 349,700 acre-ft, Oct. 6, elevation, 432.36 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353400	410000	400400	416300	412800	413900	408300	404800	406100	410600	387000	371400
2	352900	409700	399700	415900	412100	414100	408100	404900	405600	410200	385900	373500
3	352600	410700	400700	414400	413500	413800	408300	404100	405200	409800	385100	373200
4	352000	410600	402700	414400	413000	412900	409100	402700	404400	409000	383900	372800
5	351100	410800	402500	414800	412200	414700	410300	402900	404600	408200	382900	372100
6	350200	410600	401200	415300	415500	413700	415700	402400	405400	407700	382400	371200
7	351300	409800	400500	414800	415900	412900	419000	402400	404900	407200	381500	370200
8	351400	408500	400600	414400	413900	412800	416400	400600	405300	406500	380500	369300
9	356600	408600	404900	415300	413900	413300	413300	400100	404800	405600	380000	368400
10	358800	409500	408000	415200	414000	412700	412200	399300	404200	404900	379600	367200
11	358300	409400	408400	414200	413200	411900	411800	400300	404700	405700	379000	367800
12	358100	409100	408900	414200	413200	411600	411500	398500	407000	404700	378500	372900
13	358700	408000	409700	414300	412700	412300	410900	397600	412400	403700	377900	373500
14	356900	407200	408800	414500	412700	412100	410000	397300	413900	403000	377000	373600
15	356500	408500	408600	414000	414500	411600	408900	397100	416600	402100	376700	372900
16	355400	407300	408500	416300	414300	411200	409000	396100	417100	401100	376200	372100
17	354900	405700	407800	414300	412200	410900	409200	396200	416500	400500	375400	371500
18	357100	405100	408800	413800	411200	411900	407700	395100	416100	399700	374700	371500
19	391200	405600	409400	413300	411600	412200	406600	394200	416000	398800	373700	374400
20	403400	405300	408700	413100	412300	413400	408100	396800	415500	397900	372800	373800
21	404700	405200	407800	414300	415400	412700	407000	398200	415000	396900	371800	373300
22	405800	404900	408400	415100	417600	413400	406000	397600	414400	396000	371000	373000
23	406800	403900	410100	414900	414900	413800	405100	397100	413700	395800	370500	372300
24	407900	403700	412100	413200	414800	413300	407100	396800	413100	394500	369900	371500
25	409600	404600	410700	412800	415600	414400	407700	403400	412400	393400	369100	371400
26	409900	403800	410300	413500	414300	414600	406600	407300	413400	392300	368500	370700
27	409600	402700	410400	412800	414700	412500	405200	407300	412800	391500	369200	370500
28	409900	401700	410100	412300	415200	414700	404900	407100	411800	390700	368700	369600
29	410600	401000	409800	413700	---	413300	404500	406800	411300	389600	368000	368100
30	411000	401500	411700	413200	---	411500	405000	406300	410900	388900	367500	366900
31	410500	---	418000	412900	---	410200	---	406500	---	388200	367300	---
MEAN	376700	406800	407400	414200	413800	412800	409100	400900	410500	400500	375900	371400
MAX	411000	410800	418000	416300	417600	414700	419000	407300	417100	410600	387000	374400
MIN	350200	401000	399700	412300	411200	410200	404500	394200	404200	388200	367300	366900
(+)	435.36	434.94	435.71	435.47	435.58	435.35	435.11	435.18	435.38	434.30	433.27	433.25
(@)	+2400	-1000	+36500	+4500	-8200	+6000	-5000	+3200	-19400	-10200	-18200	-13600
CAL YR 2002	MAX 428000	MIN 350200	(@) +2700									
WTR YR 2003	MAX 419000	MIN 350200	(@) +12500									

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

08061550 Lake Ray Hubbard near Forney, TX--Continued



TRINITY RIVER BASIN

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 mi², of which 1,071 mi² 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 NGVD of 1929. 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 Sept. 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. 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. No known diversions.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	58	46	1220	61	1230	43	47	135	135	29	540
2	50	64	50	941	51	191	58	29	169	241	25	223
3	50	129	80	121	64	123	41	24	160	133	22	76
4	47	103	317	82	62	100	106	27	159	35	34	54
5	46	161	90	75	59	94	139	32	165	52	53	52
6	48	87	57	74	426	82	564	28	228	50	28	46
7	117	65	53	80	150	73	1390	27	185	57	36	55
8	82	60	52	49	90	65	2570	26	197	58	29	49
9	822	57	684	64	89	63	133	23	253	49	43	47
10	207	58	402	69	95	62	40	24	202	44	58	41
11	78	56	184	61	79	64	32	25	293	213	34	135
12	63	50	124	68	81	61	28	22	467	46	51	538
13	58	50	113	118	79	81	29	33	841	33	30	133
14	52	51	102	76	153	62	31	38	255	33	41	88
15	49	49	100	63	135	50	32	26	549	48	79	77
16	44	49	101	161	152	49	51	38	882	33	47	66
17	56	54	93	73	77	56	43	32	891	35	32	48
18	187	57	92	61	79	200	27	27	689	39	51	91
19	5350	63	85	57	85	176	26	25	115	20	34	435
20	759	51	82	58	106	107	30	99	102	18	42	79
21	258	47	83	61	1670	54	26	144	80	23	45	69
22	130	48	86	61	5130	360	20	36	83	32	41	63
23	103	45	228	70	2250	757	24	31	87	39	43	51
24	96	46	272	51	333	735	308	29	81	38	36	52
25	161	50	127	52	484	625	41	1530	101	35	46	49
26	86	51	102	67	766	87	29	459	256	24	74	42
27	72	65	98	67	802	50	29	216	203	32	172	54
28	75	55	92	58	1220	54	30	158	115	41	62	67
29	146	48	91	56	---	45	27	145	124	36	36	65
30	80	42	316	58	---	44	92	157	98	43	43	55
31	64	---	2550	73	---	56	---	147	---	50	45	---
TOTAL	9486	1869	6952	4245	14828	5856	6039	3704	8165	1765	1441	3440
MEAN	306	62.3	224	137	530	189	201	119	272	56.9	46.5	115
MAX	5350	161	2550	1220	5130	1230	2570	1530	891	241	172	540
MIN	44	42	46	49	51	44	20	22	80	18	22	41
AC-FT	18820	3710	13790	8420	29410	11620	11980	7350	16200	3500	2860	6820

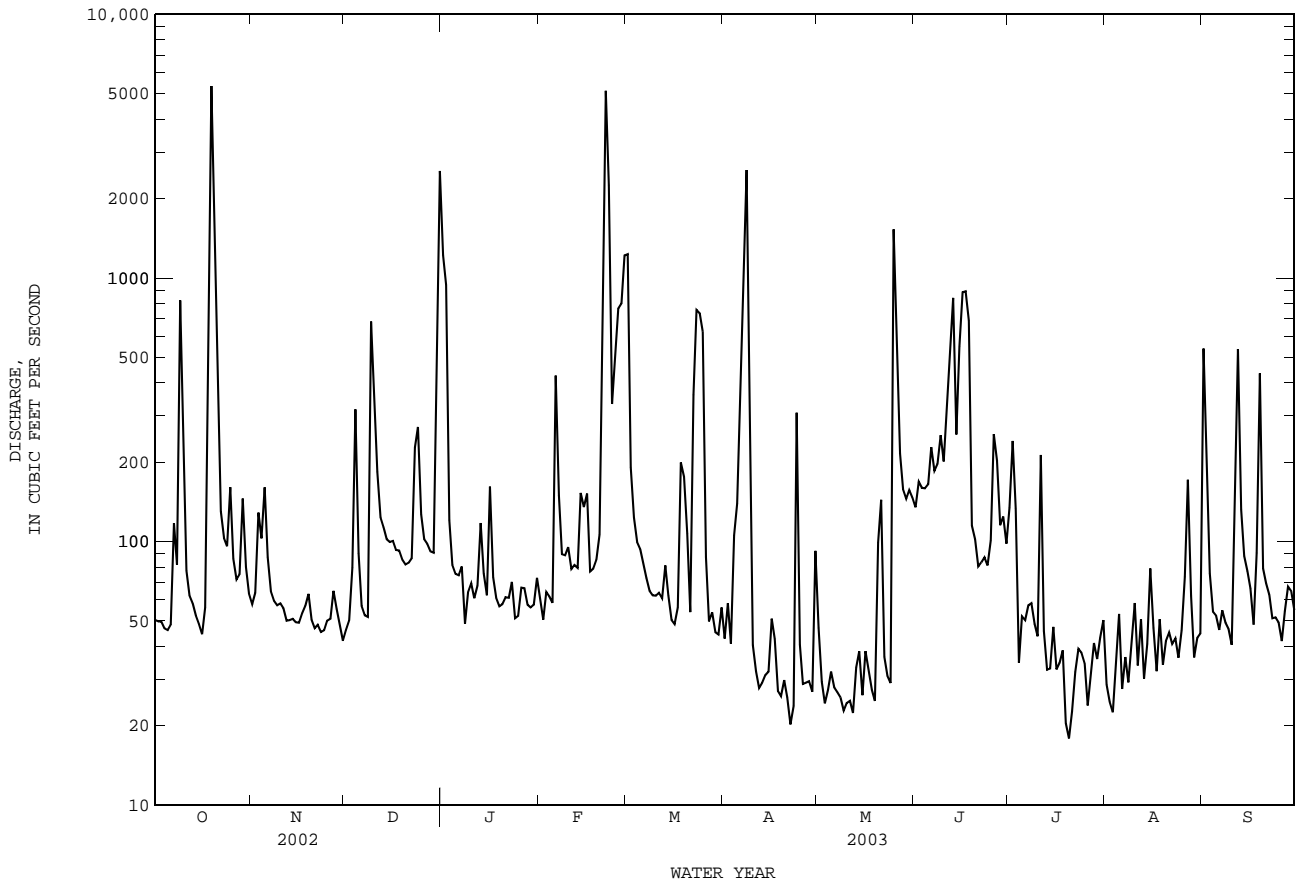
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

MEAN	365	498	615	610	898	1221	1175	1499	1034	374	123	182
MAX	3975	3076	3276	4826	4043	5918	6053	8008	5436	2207	1246	1583
(WY)	1974	1995	1992	1998	2001	2001	2002	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 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1973 - 2003

ANNUAL TOTAL	359199	67790		
ANNUAL MEAN	984	186		705
HIGHEST ANNUAL MEAN				1941
LOWEST ANNUAL MEAN				37.6
HIGHEST DAILY MEAN	10900	Mar 30	5350	Oct 19
LOWEST DAILY MEAN	41	Sep 28	18	Jul 20
ANNUAL SEVEN-DAY MINIMUM	47	Sep 12	25	May 6
MAXIMUM PEAK FLOW			9120	Oct 19
MAXIMUM PEAK STAGE			15.51	Oct 19
ANNUAL RUNOFF (AC-FT)	712500	134500		511000
10 PERCENT EXCEEDS	4300	323		2270
50 PERCENT EXCEEDS	70	63		63
90 PERCENT EXCEEDS	49	31		27

08061750 East Fork Trinity River near Forney, TX--Continued



TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--June 1949 to current year.

Water-quality records.--Chemical data: Jan. to Apr. 1964, May 1966 to Sept. 1981, June 1986 to Sept. 2000. Biochemical data: Jan. to Apr. 1964, May 1966 to Sept. 1981, June 1986 to Sept. 2000. Pesticide data: Mar. 1977 to July 1981. Sediment data: Apr. to Sept. 1964. Specific conductance: Oct. 1967 to Sept. 1981, May 1986 to Sept. 2000. pH: Mar. to Sept. 1977, May 1986 to Sept. 2000. Water temperature: Oct. 1967 to Sept. 1981, May 1986 to Sept. 2000. Dissolved oxygen: Mar. to Sept. 1977, May 1986 to Sept. 2000.

Precipitation records: Oct. 2001 to Sept. 2002.

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 NGVD of 1929. Prior to Feb. 21, 1983, at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since Sept. 1953, at least 10% of contributing drainage area has been regulated. 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 floodwater-retarding structures controlling runoff from a 39.2 mi² area above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--4 years (water years 1950-53) prior to regulation by Lavon Lake, 652 ft³/s (472,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1950-53).--Maximum discharge, 16,400 ft³/s May 2, 1953 (gage height, 19.87 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	119	88	2060	121	1850	114	166	85	125	101	431
2	89	115	91	1260	115	759	110	119	90	146	90	456
3	88	130	112	439	112	294	117	109	96	145	86	137
4	86	155	537	199	117	239	129	105	89	142	84	103
5	83	153	318	169	111	200	289	111	121	108	94	94
6	84	147	125	156	526	190	276	110	168	116	95	88
7	127	109	103	148	329	174	500	108	100	103	84	88
8	121	102	100	143	155	153	400	107	100	115	88	94
9	1240	101	1490	128	137	147	197	103	110	107	87	85
10	678	99	1620	132	146	141	136	105	89	104	98	86
11	163	98	858	128	144	137	116	103	137	162	106	95
12	117	94	463	128	133	141	109	105	305	157	90	744
13	103	89	270	171	129	135	106	165	2060	106	101	226
14	98	90	169	154	171	152	106	157	537	101	88	103
15	93	86	143	133	192	131	106	114	402	99	103	88
16	91	86	137	129	163	127	106	106	762	111	106	81
17	82	88	123	161	143	126	116	117	834	92	93	70
18	e286	94	109	118	120	247	112	109	783	102	86	64
19	e5640	95	107	116	122	406	102	105	308	95	93	300
20	e2790	98	105	116	145	183	104	124	149	86	85	119
21	e1300	90	109	117	1210	163	103	259	133	85	88	71
22	e566	89	104	115	3230	163	99	155	143	89	91	65
23	e330	88	232	114	3140	797	99	119	150	97	88	66
24	e247	87	488	113	1690	818	351	110	152	99	86	64
25	263	85	232	108	491	787	198	1330	153	91	99	63
26	218	88	151	112	914	290	120	1260	144	93	111	65
27	180	90	139	116	1480	136	111	250	91	84	279	64
28	162	99	127	116	1850	120	110	158	75	90	127	75
29	228	92	124	113	---	117	108	107	84	96	100	77
30	179	89	616	110	---	108	145	96	105	94	89	75
31	137	---	2490	115	---	112	---	91	---	124	91	---
TOTAL	15956	3045	11880	7437	17336	9543	4795	6283	8555	3364	3107	4237
MEAN	515	102	383	240	619	308	160	203	285	109	100	141
MAX	5640	155	2490	2060	3230	1850	500	1330	2060	162	279	744
MIN	82	85	88	108	111	108	99	91	75	84	84	63
AC-FT	31650	6040	23560	14750	34390	18930	9510	12460	16970	6670	6160	8400

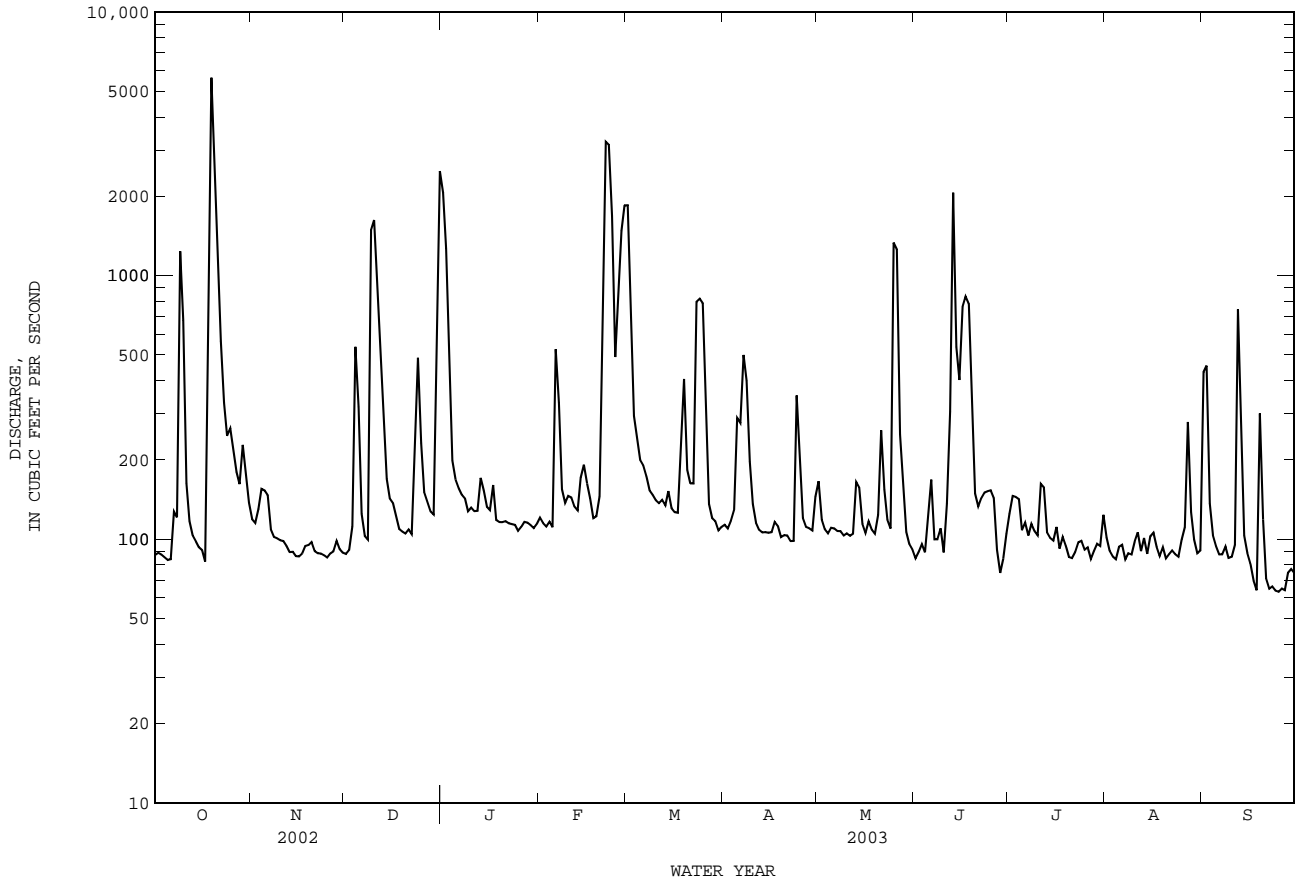
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003z, BY WATER YEAR (WY)

MEAN	378	466	689	609	859	1075	1165	1670	1009	407	157	200
MAX	4116	3293	4401	5039	4176	8028	6394	9586	5718	2026	1459	1560
(WY)	1974	1995	1972	1998	2001	2001	2002	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	0.000	0.000
(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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003z	
ANNUAL TOTAL	411818		95538		723	
ANNUAL MEAN	1128		262		2209	
HIGHEST ANNUAL MEAN					38.4	
LOWEST ANNUAL MEAN					48800	
HIGHEST DAILY MEAN	11500	Mar 31	5640	Oct 19	May 5	1990
LOWEST DAILY MEAN	63	Jun 19	63	Sep 25	0.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	65	Jun 19	65	Sep 21	0.00	Oct 1 1953
MAXIMUM PEAK FLOW			5650		59900	
MAXIMUM PEAK STAGE			9.05		27.17	
ANNUAL RUNOFF (AC-FT)	816800		189500		523700	
10 PERCENT EXCEEDS	5040		495		2150	
50 PERCENT EXCEEDS	118		116		100	
90 PERCENT EXCEEDS	80		87		22	

e Estimated
z Period of regulated streamflow.



TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX

LOCATION.--Lat 32°25'35", long 96°27'46", Ellis County, Hydrologic Unit 12030105, on right bank at downstream side of right pier of bridge on State Highway 34, 2.5 mi south of Rosser, 8.5 mi downstream from East Fork Trinity River, and at mile 451.4.

DRAINAGE AREA.--8,147 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to Sept. 1925, Oct. 1938 to current year. Monthly discharge only for some periods, published in WSP 1312.

Precipitation records: Oct. 2001 to Sept. 2002.

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 NGVD of 1929. Oct. 1938 to Sept. 1994 at present site and datum 5.00 ft higher. July 25, 1924, to Sept. 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.--No estimated daily discharges. Records fair. Since installation of gage in July 1924, at least 10% of contributing drainage area has been regulated. A levee system, constructed in 1916, extends several miles upstream and downstream from the station. At times flow may be affected at by discharge from flood-water retarding structures controlling runoff from 76.7 mi² 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	856	1420	795	11700	1020	8200	1230	2570	882	812	655	2460
2	874	1290	808	5280	1010	5820	1180	1920	848	1450	646	5780
3	799	1460	935	2840	1000	3690	1110	1340	850	1030	624	3250
4	806	2040	2390	2020	1010	3210	1200	1040	756	1140	613	1370
5	734	2110	3760	1750	973	3620	2580	1040	815	854	633	1030
6	687	2070	2100	1610	2160	3570	2770	1020	2370	894	658	916
7	1250	1680	1410	1780	4530	4270	5230	938	1970	1050	620	810
8	2030	1410	1160	2120	2700	3710	4290	885	1330	988	611	782
9	4210	1260	3810	1460	1640	3320	3110	835	1740	960	843	754
10	7160	1100	9630	1510	1510	2980	1370	791	1580	914	932	737
11	4030	1040	8050	1850	1390	3000	1190	758	1630	1200	1160	806
12	1680	942	3310	1200	1260	3300	1160	769	2590	1140	1010	5680
13	1360	991	2100	1780	1200	2740	1070	820	10200	805	1380	9630
14	1200	896	1780	2150	1410	2730	1040	1590	15800	703	2400	6320
15	1050	849	1540	1510	1940	2580	960	1170	12300	680	1700	2060
16	1000	858	1430	1500	1910	2250	912	1030	7210	681	1430	1660
17	930	839	1370	1950	1450	2340	902	1020	3990	700	925	1230
18	887	841	1310	1210	1240	2350	902	1000	3570	681	767	1040
19	11500	875	1260	1100	1160	4150	911	923	3580	785	734	4600
20	20200	836	1360	1100	1210	3180	894	938	3160	943	682	6160
21	20800	826	1270	1110	4410	1890	953	2340	2820	853	688	2400
22	16200	820	1110	1110	14600	1550	891	2630	2190	772	869	1310
23	6550	814	1360	1060	16500	2190	849	1760	2210	737	811	1070
24	2480	804	5220	1030	11300	2580	2500	1270	1710	735	780	924
25	2260	772	5680	987	4200	2340	2880	3450	2050	754	806	867
26	2580	803	2520	1020	4370	1980	1570	10400	1430	696	900	831
27	1960	787	1800	1020	6390	1490	1030	8600	2160	683	1910	808
28	1630	823	1560	1050	9770	1360	918	2610	1350	665	3110	761
29	1810	790	1380	1030	---	1380	905	1350	998	664	1390	760
30	2010	784	1690	1020	---	1340	1280	1100	861	639	904	749
31	1650	---	12500	1020	---	1310	---	976	---	673	1040	---
TOTAL	123173	32830	86398	58877	103263	90420	47787	58883	94950	26281	32231	67555
MEAN	3973	1094	2787	1899	3688	2917	1593	1899	3165	848	1040	2252
MAX	20800	2110	12500	11700	16500	8200	5230	10400	15800	1450	3110	9630
MIN	687	772	795	987	973	1310	849	758	756	639	611	737
AC-FT	244300	65120	171400	116800	204800	179300	94790	116800	188300	52130	63930	134000

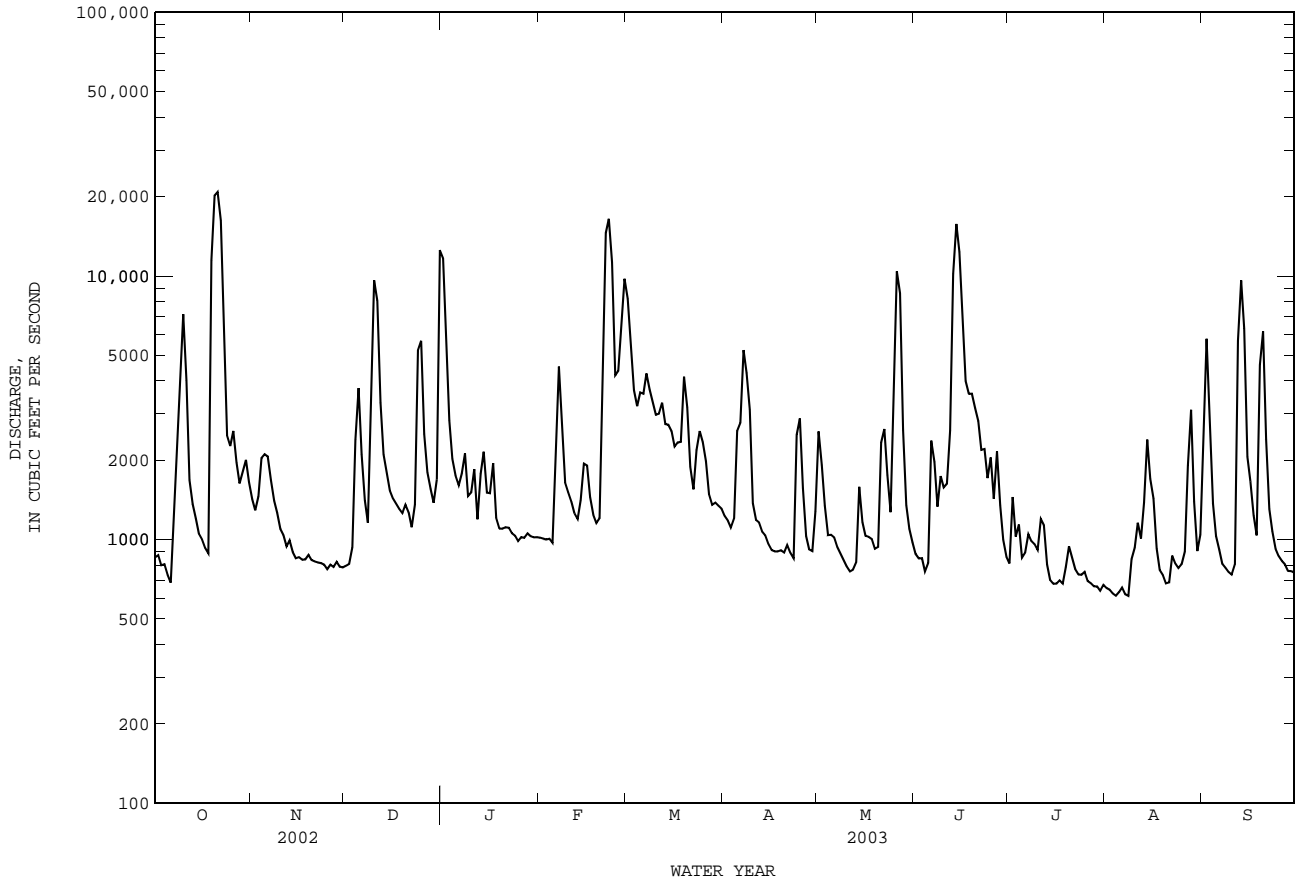
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003h, BY WATER YEAR (WY)

	1925	1925	1925	1925	1925	1925	1925	1925	1925	1925	1925	1925
MEAN	1889	2321	2840	2247	3455	4067	4619	6459	5102	1988	1105	1207
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	21.3	61.4	15.4	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003h	
ANNUAL TOTAL	1555130		822648		3136	
ANNUAL MEAN	4261		2254		9702	
HIGHEST ANNUAL MEAN					280	
LOWEST ANNUAL MEAN					133000	
HIGHEST DAILY MEAN	28700	Apr 13	20800	Oct 21	133000	Apr 23 1942
LOWEST DAILY MEAN	673	Sep 30	611	Aug 8	32	Oct 4 1924
ANNUAL SEVEN-DAY MINIMUM	761	Aug 3	629	Aug 2	32	Oct 14 1924
MAXIMUM PEAK FLOW			21500		150000	
MAXIMUM PEAK STAGE			29.35		41.55	
ANNUAL RUNOFF (AC-FT)	3085000		1632000		2272000	
10 PERCENT EXCEEDS	12800		4320		8770	
50 PERCENT EXCEEDS	1540		1270		962	
90 PERCENT EXCEEDS	832		771		246	

h See PERIOD OF RECORD paragraph.



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 July 1981.
 SEDIMENT DATA: Oct. 1963 to Sept. 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.--Records good except those for dissolved oxygen, which are poor. 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 records of specific conductance and regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. 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, 2,990 microsiemens/cm, Oct. 13, 1956; minimum, 122 microsiemens/cm, Sept. 30, 1981.
 pH: Maximum, 9.9 units, July 12, 1982; minimum, 6.5 units, Apr. 12, 2002.
 WATER TEMPERATURE: Maximum, 36.0°C, July 1, 1955; minimum, 1.0°C, on many days during winter months.
 DISSOLVED OXYGEN: Maximum, 13.6 mg/L, Feb. 18, 1996, Jan. 11, 25, 2001; minimum, 0.0 mg/L, on several days during 1979-81.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 792 microsiemens/cm, Feb. 5; minimum, 210 microsiemens/cm, Oct. 19.
 pH: Maximum, 8.6 units, June 2, 3, 4; minimum, 6.8 units, Oct. 21.
 WATER TEMPERATURE: Maximum, 32.2°C, July 18, 19, 22; minimum, 6.8°C, Feb. 28.
 DISSOLVED OXYGEN: Maximum, 12.7 mg/L, Dec. 14, 15; minimum, 1.8 mg/L, Aug. 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	
Date		Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, field, mg/L (00452)	Bicarbonate, wat flt incrm, field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue, water, fltrd, sum of constituents mg/L (70301)	Nitrate, water, fltrd, mg/L as N (00618)	Nitrite, water, fltrd, mg/L as N (00613)
DEC	18...	2	36	8.12	<1	164	135	81.6	52.0	.92	8.1	398	7.08	.040
JAN	16...	2	37	7.32	<1	159	132	86.2	51.8	.83	7.4	400	6.94	.025
MAR	27...	2	36	6.36	1	162	135	78.2	45.3	.83	5.8	369	5.18	.027
APR	25...	2	38	7.33	<1	129	106	63.0	40.7	.59	5.4	309	5.06	.064
JUN	18...	1	30	6.17	<1	133	109	56.0	29.8	.6	7.1	273	3.15	.021
AUG	06...	1	30	14.4	<1	121	100	89.6	81.1	1.6	9.4	401	10.6	.078

08062500 Trinity River near Rosser, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Ortho-phosphate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
DEC 18...	7.12	.12	.72	.83	1.17	1.02	3.14	--	--
JAN 16...	6.96	.08	.65	.73	1.11	1.06	3.27	--	--
MAR 27...	5.21	<.04	--	.60	.85	.84	2.57	--	--
APR 25...	5.12	.08	.55	.62	.81	.74	2.26	E10	E1.2
JUN 18...	3.17	E.02	--	.49	.47	.45	1.37	--	--
AUG 06...	10.6d	E.02n	--	.83	1.81	1.76d	5.41	--	--

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- d -- Diluted sample: method hi range exceeded
- n -- Below the NDV

Null value qualifier codes used in this report:

- i -- Required sample type not received

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	746	728	737	575	555	562	726	711	719	408	371	395
2	742	721	730	596	575	584	727	709	721	435	398	418
3	723	714	720	632	596	608	709	684	697	502	435	464
4	719	704	714	641	622	631	701	667	685	562	502	534
5	724	700	711	622	580	603	669	527	570	608	550	578
6	735	716	727	592	553	579	580	520	552	626	602	612
7	729	688	704	557	548	554	552	509	525	659	621	640
8	726	439	626	592	553	564	603	552	579	696	591	663
9	664	334	528	616	592	606	612	436	576	591	561	577
10	389	298	341	637	616	625	444	381	405	688	572	610
11	388	372	379	659	637	651	434	381	410	710	688	701
12	432	388	406	672	659	665	478	434	453	713	573	615
13	508	432	469	680	660	673	551	478	516	728	578	641
14	549	508	524	695	672	687	601	551	578	731	597	697
15	577	547	562	697	689	693	633	599	614	616	592	599
16	606	577	599	702	689	695	671	632	647	702	616	671
17	634	605	622	705	697	701	687	668	673	697	662	686
18	650	625	638	705	690	695	694	683	690	662	577	592
19	635	210	394	704	693	701	708	692	700	650	587	604
20	272	233	254	711	702	708	721	706	713	727	650	710
21	292	272	281	726	708	717	728	710	717	745	727	738
22	328	292	307	726	711	717	727	676	693	751	735	744
23	406	328	367	738	726	732	753	617	696	748	740	745
24	483	406	441	736	716	726	639	498	591	758	735	751
25	523	483	509	723	708	714	515	448	471	748	733	743
26	553	523	540	737	721	733	509	460	486	755	730	741
27	528	517	520	733	720	725	554	509	534	764	739	758
28	539	524	534	734	712	725	603	554	573	767	759	764
29	567	528	546	737	726	731	626	588	600	766	748	760
30	582	563	573	742	717	732	647	303	630	770	753	761
31	582	557	572	---	---	---	382	283	325	772	765	768
MONTH	746	210	535	742	548	668	753	283	592	772	371	654

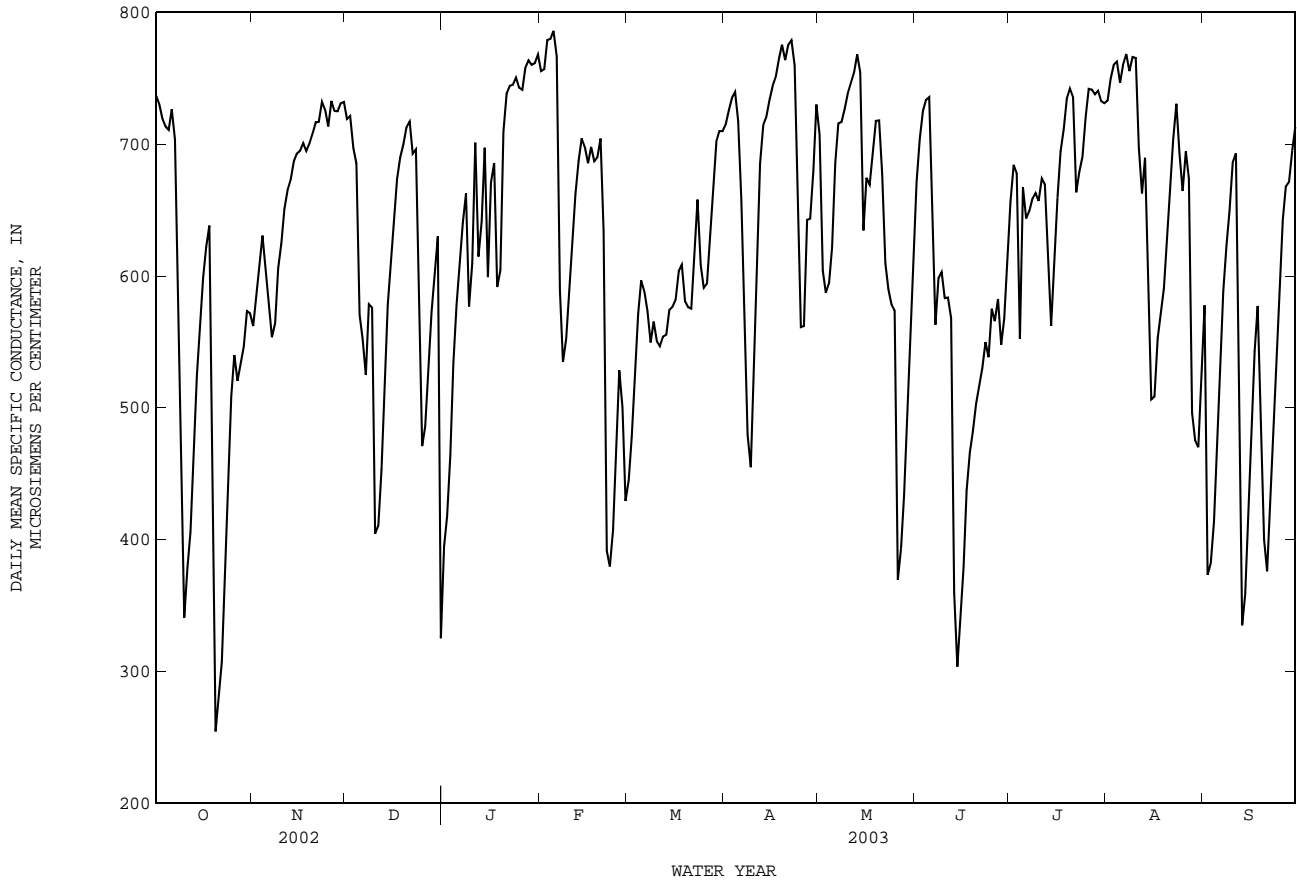
TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	768	747	756	460	431	445	---	---	---	758	636	707
2	774	746	757	504	460	478	731	711	726	719	557	604
3	785	773	779	542	504	529	752	719	735	625	576	587
4	783	770	780	620	540	571	750	726	740	614	574	594
5	792	782	786	621	575	597	752	681	718	650	589	622
6	789	747	767	598	568	588	689	635	657	701	650	686
7	747	528	589	609	547	574	663	462	547	719	701	716
8	541	529	535	560	545	550	506	461	479	724	707	717
9	567	538	552	584	545	565	490	439	455	741	708	727
10	617	567	595	561	537	550	594	490	549	746	730	738
11	662	617	631	567	529	547	667	594	630	750	743	746
12	688	642	662	574	539	554	710	667	685	760	749	754
13	706	667	688	575	541	556	723	708	715	774	760	768
14	710	700	704	581	569	574	727	715	721	773	737	755
15	709	688	698	582	572	577	740	727	734	745	518	635
16	705	676	686	596	576	582	752	732	744	715	556	675
17	709	685	698	616	596	604	757	742	751	682	660	669
18	706	674	687	620	596	608	776	754	765	710	681	693
19	702	671	690	601	535	581	779	768	776	726	708	718
20	731	684	704	591	563	576	779	754	764	724	713	718
21	716	494	634	591	561	575	780	771	775	734	584	678
22	494	347	391	634	591	612	780	777	779	684	572	610
23	387	363	379	696	615	658	778	714	760	602	571	590
24	435	383	407	618	599	608	724	644	690	589	566	578
25	518	435	476	602	580	591	691	492	561	646	389	574
26	556	508	528	614	580	594	621	523	562	411	289	370
27	522	448	500	662	612	633	660	621	643	406	376	393
28	448	422	429	688	653	668	660	638	643	464	401	434
29	---	---	---	710	688	702	705	641	680	540	464	505
30	---	---	---	---	---	---	751	702	730	602	540	568
31	---	---	---	---	---	---	---	---	---	649	602	623
MONTH	792	347	625	---	---	---	---	---	---	774	289	637
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	680	649	671	677	621	656	741	726	733	629	498	578
2	717	680	704	702	672	684	753	741	750	575	284	373
3	738	714	725	695	605	678	773	750	760	394	377	382
4	740	731	734	632	470	552	773	752	763	439	394	414
5	744	727	736	684	632	667	752	744	747	509	439	473
6	741	476	670	673	610	644	773	751	760	563	509	535
7	634	474	563	680	612	649	773	763	768	599	563	588
8	615	579	598	677	646	659	763	750	755	637	599	623
9	624	573	603	675	650	663	776	759	766	677	630	649
10	603	564	583	672	647	657	770	759	765	696	677	686
11	616	548	584	691	653	674	761	657	698	697	683	693
12	628	462	568	691	660	670	669	659	663	702	314	539
13	489	246	360	680	526	623	718	618	690	372	304	335
14	335	270	304	587	520	562	628	512	600	390	327	358
15	361	335	343	641	587	610	540	473	506	460	390	427
16	417	358	379	677	641	660	534	481	509	502	460	483
17	453	375	438	705	677	694	566	534	553	573	502	543
18	485	453	466	724	702	712	577	566	570	592	561	577
19	494	466	482	748	723	735	609	575	591	592	---	485
20	515	493	503	749	736	742	655	609	625	441	350	400
21	527	510	517	754	681	736	696	655	669	393	359	376
22	546	526	530	681	658	663	725	691	704	463	393	434
23	568	538	550	700	669	679	740	725	731	555	463	505
24	556	533	538	708	683	691	739	653	693	572	550	558
25	589	556	575	728	708	721	681	655	665	624	572	602
26	603	547	566	752	728	742	703	681	695	651	623	643
27	613	550	582	743	739	741	703	614	674	678	649	668
28	580	515	548	741	734	738	631	405	496	689	650	671
29	603	552	568	744	733	741	504	446	476	717	676	695
30	621	603	614	739	730	733	494	461	470	723	703	713
31	---	---	---	739	724	731	556	494	517	---	---	---
MONTH	744	246	553	754	470	681	776	405	657	723	---	534

08062500 Trinity River near Rosser, TX--Continued



PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

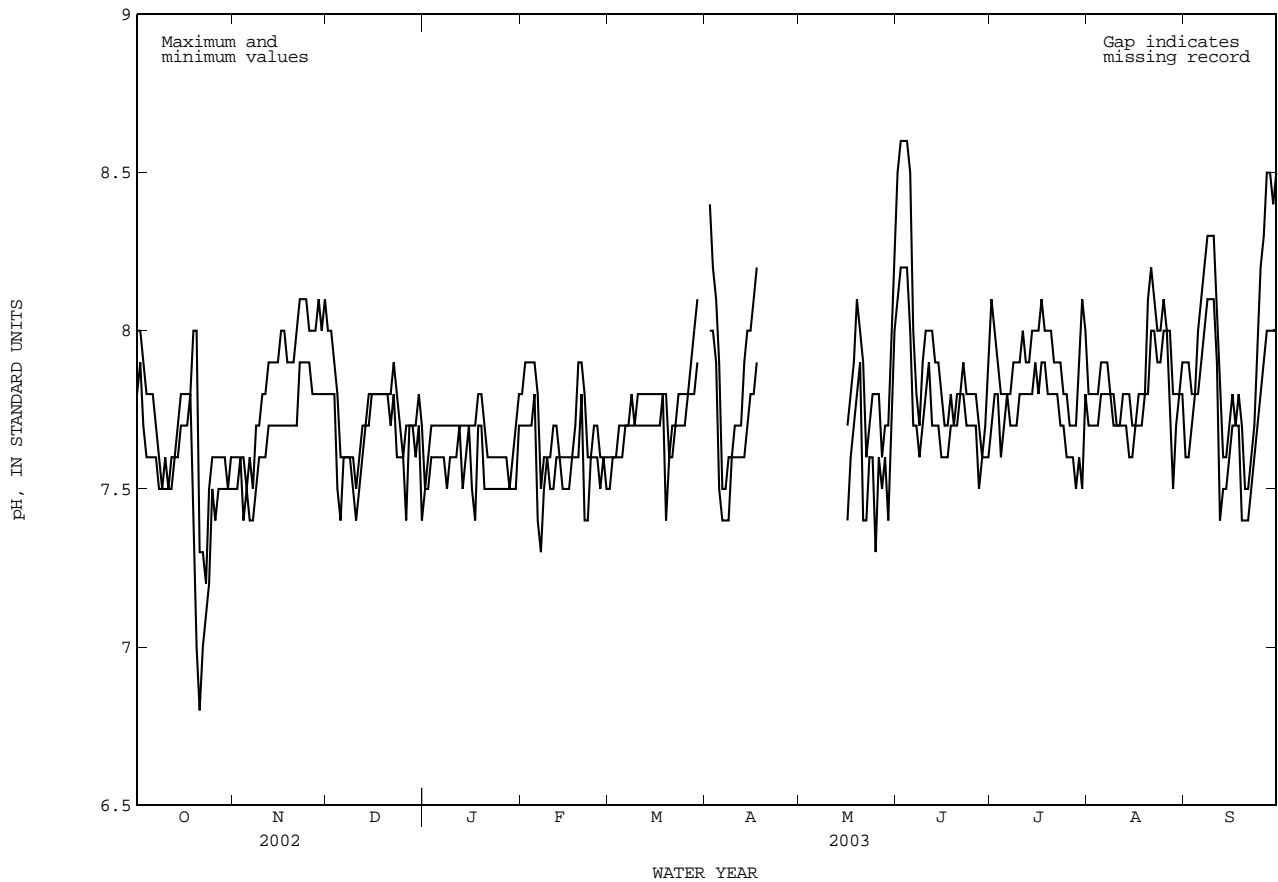
DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	7.8	7.6	7.5	8.0	7.8	7.5	7.5	7.8	7.7	7.6	7.5
2	8.0	7.9	7.6	7.5	8.0	7.8	7.6	7.5	7.9	7.7	7.6	7.6
3	7.9	7.7	7.6	7.6	7.9	7.8	7.7	7.6	7.9	7.7	7.6	7.6
4	7.8	7.6	7.6	7.4	7.8	7.5	7.7	7.6	7.9	7.7	7.7	7.6
5	7.8	7.6	7.5	7.5	7.6	7.4	7.7	7.6	7.9	7.8	7.7	7.6
6	7.8	7.6	7.6	7.4	7.6	7.6	7.7	7.6	7.8	7.4	7.7	7.7
7	7.7	7.6	7.5	7.4	7.6	7.6	7.7	7.6	7.5	7.3	7.7	7.7
8	7.6	7.5	7.7	7.5	7.6	7.6	7.7	7.5	7.6	7.5	7.8	7.7
9	7.5	7.5	7.7	7.6	7.6	7.5	7.7	7.6	7.6	7.6	7.7	7.7
10	7.6	7.5	7.8	7.6	7.5	7.4	7.7	7.6	7.6	7.5	7.8	7.7
11	7.5	7.5	7.8	7.6	7.6	7.5	7.7	7.6	7.7	7.5	7.8	7.7
12	7.6	7.5	7.9	7.7	7.7	7.6	7.7	7.7	7.7	7.6	7.8	7.7
13	7.6	7.6	7.9	7.7	7.7	7.7	7.7	7.5	7.6	7.6	7.8	7.7
14	7.7	7.6	7.9	7.7	7.8	7.7	7.7	7.6	7.6	7.5	7.8	7.7
15	7.8	7.7	7.9	7.7	7.8	7.8	7.7	7.7	7.6	7.5	7.8	7.7
16	7.8	7.7	8.0	7.7	7.8	7.8	7.7	7.5	7.6	7.5	7.8	7.7
17	7.8	7.7	8.0	7.7	7.8	7.8	7.7	7.4	7.6	7.6	7.8	7.7
18	7.8	7.8	7.9	7.7	7.8	7.8	7.8	7.7	7.7	7.6	7.8	7.8
19	8.0	7.5	7.9	7.7	7.8	7.8	7.8	7.7	7.9	7.6	7.8	7.4
20	8.0	7.0	7.9	7.7	7.8	7.8	7.7	7.5	7.9	7.8	7.6	7.6
21	7.3	6.8	8.0	7.7	7.8	7.7	7.6	7.5	7.8	7.4	7.7	7.6
22	7.3	7.0	8.1	7.9	7.9	7.8	7.6	7.5	7.6	7.4	7.7	7.7
23	7.2	7.1	8.1	7.9	7.8	7.6	7.6	7.5	7.6	7.6	7.8	7.7
24	7.5	7.2	8.1	7.9	7.7	7.6	7.6	7.5	7.7	7.6	7.8	7.7
25	7.6	7.5	8.0	7.9	7.6	7.6	7.6	7.5	7.7	7.6	7.8	7.7
26	7.6	7.4	8.0	7.8	7.7	7.4	7.6	7.5	7.6	7.5	7.8	7.8
27	7.6	7.5	8.0	7.8	7.7	7.7	7.6	7.5	7.6	7.6	7.9	7.8
28	7.6	7.5	8.1	7.8	7.7	7.7	7.5	7.5	7.6	7.5	8.0	7.8
29	7.6	7.5	8.0	7.8	7.7	7.6	7.6	7.5	---	---	8.1	7.9
30	7.5	7.5	8.1	7.8	7.8	7.7	7.7	7.5	---	---	---	---
31	7.6	7.5	---	---	7.7	7.4	7.8	7.7	---	---	---	---
MONTH	8.0	6.8	8.1	7.4	8.0	7.4	7.8	7.4	7.9	7.3	---	---

TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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



TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

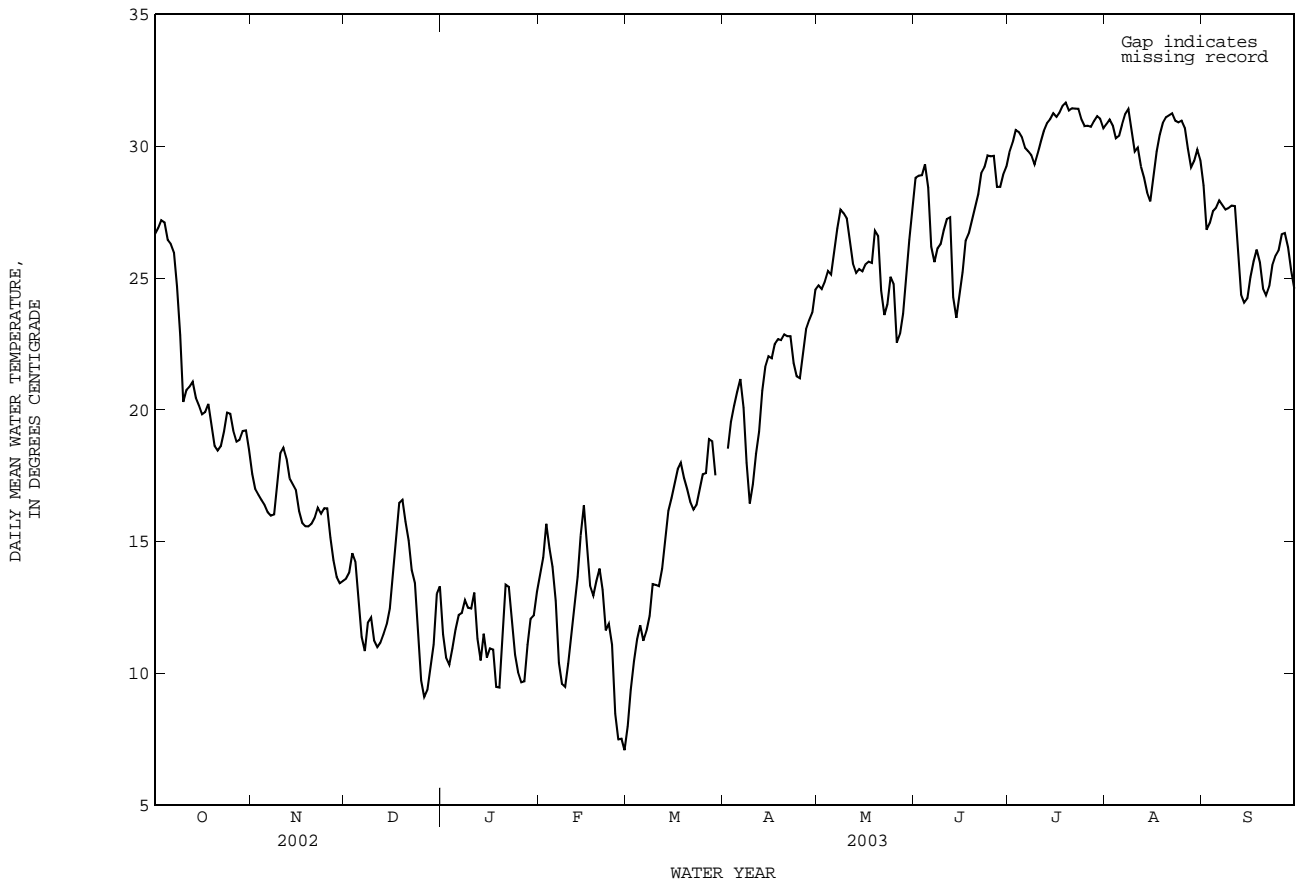
DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	27.2	26.1	26.7	18.0	17.3	17.6	13.8	13.2	13.6	12.3	11.0	11.5
2	27.4	26.5	26.9	17.3	16.8	17.0	14.4	13.1	13.8	11.0	10.3	10.6
3	27.7	26.7	27.2	16.8	16.7	16.8	14.9	14.3	14.6	10.8	9.9	10.3
4	27.5	26.6	27.1	16.8	16.3	16.6	14.5	14.0	14.2	11.4	10.4	10.9
5	27.0	25.9	26.4	16.7	16.2	16.4	14.0	12.2	12.8	12.2	11.3	11.7
6	26.9	25.8	26.3	16.3	15.8	16.1	12.2	10.9	11.4	12.4	12.1	12.2
7	26.6	25.5	26.0	16.1	15.7	16.0	11.3	10.5	10.8	12.6	12.1	12.3
8	25.5	23.7	24.7	16.5	15.7	16.0	12.3	11.3	11.9	13.2	12.3	12.8
9	24.1	20.5	22.8	17.9	16.5	17.2	12.4	11.7	12.1	12.8	12.2	12.5
10	21.0	19.7	20.3	18.8	17.9	18.4	11.8	10.8	11.3	12.9	12.3	12.5
11	21.0	20.5	20.8	18.9	18.4	18.6	11.2	10.8	11.0	13.4	12.5	13.1
12	21.3	20.6	20.9	18.5	17.7	18.1	11.4	11.0	11.2	12.5	10.3	11.3
13	21.3	20.8	21.1	17.8	17.1	17.4	11.7	11.3	11.5	11.6	10.0	10.5
14	20.8	20.2	20.5	17.6	16.8	17.2	12.2	11.5	11.9	11.9	10.9	11.5
15	20.5	19.8	20.2	17.4	16.6	17.0	13.0	12.1	12.4	10.9	10.4	10.6
16	20.2	19.4	19.8	16.6	15.8	16.2	14.7	13.0	13.8	11.2	10.4	10.9
17	20.6	19.3	19.9	16.2	15.2	15.7	15.9	14.7	15.1	11.2	10.5	10.9
18	20.5	20.0	20.2	16.0	15.2	15.6	16.9	15.9	16.5	10.5	9.2	9.5
19	20.4	18.8	19.5	16.1	15.0	15.6	16.9	16.3	16.6	9.9	9.0	9.5
20	18.8	18.5	18.6	16.2	15.1	15.7	16.3	15.5	15.8	12.5	9.8	11.3
21	18.5	18.4	18.5	16.5	15.2	15.9	15.5	14.7	15.0	14.1	12.5	13.4
22	18.8	18.5	18.6	16.7	15.8	16.3	14.7	13.4	13.9	13.7	12.6	13.3
23	19.7	18.8	19.2	16.5	15.5	16.1	13.7	12.0	13.4	12.6	11.1	12.0
24	20.1	19.7	19.9	16.8	15.7	16.3	12.0	10.5	11.6	11.1	10.2	10.7
25	20.1	19.6	19.9	16.7	15.7	16.3	10.5	9.4	9.7	10.2	9.7	10.0
26	19.6	18.9	19.2	15.7	14.8	15.1	9.4	8.9	9.1	9.9	9.3	9.7
27	18.9	18.7	18.8	14.8	14.0	14.3	9.9	9.0	9.4	10.3	9.0	9.7
28	19.1	18.7	18.9	14.0	13.2	13.7	10.7	9.9	10.2	11.7	10.3	11.1
29	19.5	19.0	19.2	13.7	13.1	13.4	11.8	10.7	11.1	12.4	11.6	12.1
30	19.5	19.0	19.2	13.8	13.1	13.5	14.0	11.8	13.0	12.5	11.9	12.2
31	19.1	18.0	18.5	---	---	---	13.8	12.3	13.3	13.7	12.5	13.1
MONTH	27.7	18.0	21.5	18.9	13.1	16.2	16.9	8.9	12.6	14.1	9.0	11.4
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.2	13.2	13.7	8.6	7.4	8.0	---	---	---	25.1	24.2	24.7
2	15.2	13.7	14.4	10.5	8.6	9.4	19.2	17.7	18.5	25.1	24.0	24.6
3	16.2	15.2	15.7	10.7	10.4	10.5	19.9	19.1	19.5	25.4	24.3	24.9
4	15.4	14.4	14.7	12.5	10.7	11.3	20.9	19.6	20.2	25.4	24.9	25.3
5	14.4	13.4	14.0	12.6	11.4	11.8	20.9	20.3	20.7	25.7	24.8	25.1
6	13.4	11.8	12.8	11.5	10.8	11.2	21.6	20.8	21.2	26.7	25.6	26.0
7	11.8	9.9	10.4	12.1	11.0	11.6	21.4	19.0	20.1	27.8	26.2	26.9
8	9.9	9.3	9.6	12.9	11.8	12.2	19.0	17.1	18.0	28.1	27.2	27.6
9	9.7	9.3	9.5	13.9	12.9	13.4	17.1	15.9	16.4	28.0	26.9	27.5
10	11.1	9.7	10.4	13.8	13.1	13.4	18.0	16.6	17.2	27.8	27.0	27.3
11	12.2	11.1	11.5	13.9	12.7	13.3	18.8	17.9	18.3	27.0	25.9	26.4
12	12.9	12.2	12.5	14.5	13.6	14.0	20.1	18.4	19.2	26.1	25.0	25.5
13	14.4	12.9	13.7	15.9	14.5	15.1	21.5	20.0	20.7	25.8	24.6	25.2
14	16.2	14.4	15.2	16.8	15.6	16.2	22.3	21.0	21.6	25.7	25.0	25.3
15	16.6	16.0	16.4	17.0	16.2	16.7	22.5	21.7	22.0	25.7	24.8	25.3
16	16.0	13.8	14.7	17.6	16.7	17.2	22.6	21.4	22.0	26.2	24.9	25.5
17	13.8	13.0	13.3	18.3	17.3	17.8	23.3	21.8	22.5	26.0	25.3	25.6
18	13.2	12.7	13.0	18.4	17.4	18.0	23.1	22.3	22.7	26.4	24.7	25.6
19	14.0	12.8	13.5	18.0	17.0	17.4	23.1	22.2	22.6	27.7	26.0	26.8
20	14.2	13.6	14.0	17.9	16.5	17.0	23.5	22.3	22.9	27.3	25.2	26.6
21	13.7	12.2	13.2	16.9	16.2	16.5	23.5	22.0	22.8	25.2	23.5	24.5
22	12.2	11.2	11.6	16.6	15.9	16.2	23.2	22.2	22.8	23.9	23.3	23.6
23	12.1	11.7	11.9	17.2	15.8	16.4	22.2	21.0	21.8	24.6	23.4	24.0
24	11.9	9.7	11.1	17.8	16.2	17.0	22.0	20.9	21.3	25.6	24.6	25.0
25	9.7	8.0	8.5	17.8	17.3	17.6	22.0	20.3	21.2	25.6	22.8	24.8
26	8.1	7.2	7.5	18.4	16.9	17.6	22.9	21.4	22.1	22.9	22.1	22.6
27	8.0	7.2	7.5	19.5	18.4	18.9	23.6	22.6	23.1	23.5	22.4	22.9
28	7.4	6.8	7.1	19.4	17.9	18.8	23.8	23.1	23.4	24.4	23.0	23.6
29	---	---	---	17.9	17.1	17.5	24.6	23.0	23.7	25.9	24.4	25.1
30	---	---	---	---	---	---	25.2	23.9	24.6	27.1	25.8	26.5
31	---	---	---	---	---	---	---	---	---	28.5	26.8	27.6
MONTH	16.6	6.8	12.2	---	---	---	---	---	---	28.5	22.1	25.4

TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	29.7	28.1	28.8	30.7	29.0	29.8	31.4	30.3	30.8	29.1	27.7	28.5
2	29.4	28.5	28.9	30.7	29.6	30.1	31.5	30.4	31.0	27.7	25.8	26.8
3	29.8	28.1	28.9	31.2	30.0	30.6	31.3	30.5	30.8	27.6	26.6	27.1
4	30.1	28.6	29.3	31.0	30.1	30.5	30.7	29.7	30.3	27.8	27.2	27.5
5	29.4	27.3	28.4	30.6	30.0	30.3	30.9	29.8	30.4	28.1	27.2	27.7
6	27.3	25.1	26.2	30.4	29.5	29.9	31.5	30.1	30.8	28.5	27.4	27.9
7	26.5	24.6	25.6	30.2	29.4	29.8	31.9	30.5	31.2	28.4	27.1	27.8
8	26.5	25.8	26.1	30.2	29.4	29.7	31.8	31.1	31.4	28.3	26.9	27.6
9	27.0	25.8	26.3	29.8	28.8	29.3	31.6	29.9	30.7	28.4	27.0	27.7
10	27.1	26.5	26.8	30.3	29.1	29.7	30.3	29.2	29.8	28.4	27.2	27.7
11	28.1	26.6	27.2	30.7	29.6	30.2	30.4	29.6	29.9	28.1	27.3	27.7
12	28.2	25.9	27.3	31.0	30.3	30.6	29.6	28.9	29.2	27.6	24.6	26.2
13	25.9	23.0	24.3	31.5	30.4	30.9	29.2	28.5	28.8	24.8	24.0	24.4
14	24.3	22.9	23.5	32.0	30.2	31.0	28.7	27.7	28.2	24.2	23.9	24.1
15	24.9	24.0	24.4	31.7	30.6	31.2	28.6	27.3	27.9	24.8	23.7	24.2
16	26.2	24.7	25.2	31.7	30.5	31.1	29.5	28.3	28.8	25.4	24.6	25.0
17	27.2	25.9	26.4	31.9	30.5	31.3	30.5	29.2	29.8	26.1	25.3	25.6
18	27.3	26.0	26.7	32.2	30.8	31.5	31.4	29.6	30.4	26.5	25.8	26.1
19	27.9	26.4	27.2	32.2	31.0	31.7	31.7	30.2	30.9	26.0	25.1	25.6
20	27.9	27.3	27.7	31.9	30.6	31.4	31.7	30.4	31.1	24.9	24.2	24.6
21	28.8	27.7	28.2	32.1	30.9	31.4	31.9	30.5	31.2	24.7	24.2	24.3
22	29.4	28.6	29.0	32.2	30.7	31.4	31.9	30.5	31.2	25.4	24.2	24.7
23	29.5	28.8	29.2	32.0	30.7	31.4	31.5	30.4	31.0	25.7	25.2	25.5
24	30.1	29.4	29.7	31.6	30.4	31.0	31.6	30.3	30.9	26.4	25.4	25.9
25	30.2	29.2	29.6	31.4	30.0	30.8	31.6	30.4	31.0	26.6	25.5	26.1
26	29.8	29.2	29.6	31.4	30.1	30.8	31.2	30.2	30.7	27.3	26.2	26.7
27	29.2	27.8	28.5	31.4	30.0	30.7	30.2	29.6	29.9	27.3	26.2	26.7
28	28.9	28.0	28.5	31.7	30.2	31.0	30.0	28.9	29.2	26.7	25.6	26.2
29	29.5	28.4	28.9	31.8	30.4	31.1	30.0	28.9	29.4	25.8	24.7	25.3
30	30.1	28.5	29.2	31.5	30.5	31.0	30.2	29.5	29.9	25.0	24.1	24.6
31	---	---	---	31.2	30.1	30.7	30.0	29.1	29.5	---	---	---
MONTH	30.2	22.9	27.5	32.2	28.8	30.7	31.9	27.3	30.2	29.1	23.7	26.2



TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

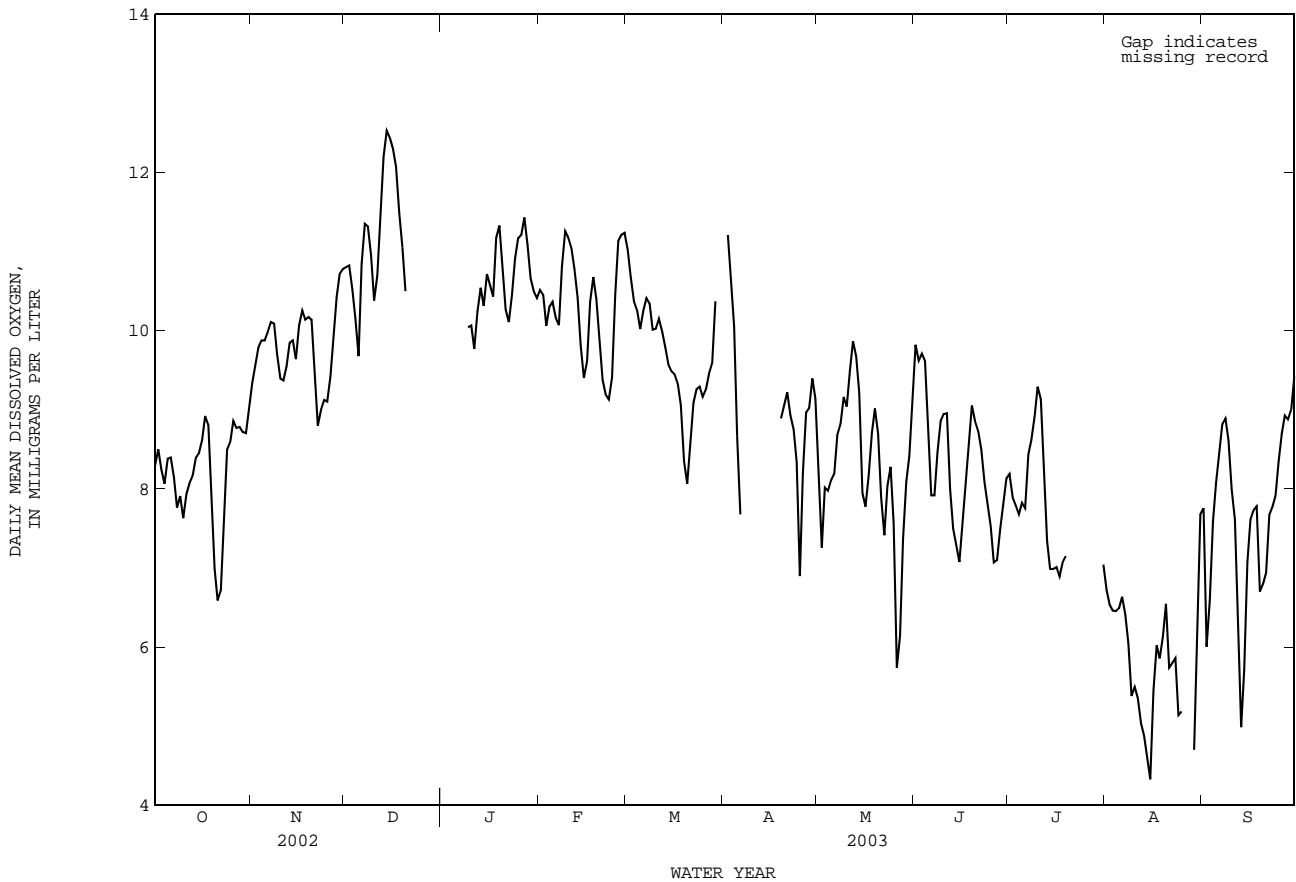
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.6	7.9	8.3	9.5	9.1	9.3	11.4	10.5	10.8	---	---	---
2	9.0	7.9	8.5	9.8	9.2	9.6	11.3	10.5	10.8	---	---	---
3	8.5	8.0	8.2	10.0	9.7	9.8	10.8	10.2	10.5	---	---	---
4	8.5	7.6	8.1	10.0	9.7	9.9	10.5	9.4	10.2	---	---	---
5	8.7	8.1	8.4	10.1	9.7	9.9	10.8	8.4	9.7	---	---	---
6	8.7	8.2	8.4	10.2	9.8	10	11.2	10.5	10.8	---	---	---
7	8.4	7.9	8.1	10.2	9.9	10.1	11.5	11.1	11.4	---	---	---
8	8.3	7.3	7.8	10.4	9.8	10.1	11.4	11.2	11.3	---	---	---
9	8.5	7.2	7.9	10.0	9.3	9.7	11.3	10.3	11.0	10.1	9.9	10.0
10	7.9	7.4	7.6	9.8	9.1	9.4	10.5	10.1	10.4	10.2	9.9	10.1
11	8.2	7.6	7.9	9.7	9.1	9.4	11.1	10.3	10.7	10.0	9.6	9.8
12	8.2	7.9	8.1	10.0	9.1	9.6	11.9	11.0	11.5	10.4	9.9	10.2
13	8.3	8.0	8.2	10.3	9.4	9.8	12.7	11.6	12.2	10.7	10.4	10.5
14	8.6	8.2	8.4	10.4	9.4	9.9	12.7	12.3	12.5	10.6	10.0	10.3
15	8.7	8.3	8.5	10.1	9.2	9.6	12.7	12.2	12.4	10.8	10.6	10.7
16	8.8	8.4	8.6	10.7	9.4	10.1	12.5	12.0	12.3	10.7	10.4	10.6
17	9.2	8.6	8.9	10.8	9.9	10.3	12.3	11.9	12.1	10.5	10.3	10.4
18	9.2	8.6	8.8	10.6	9.9	10.1	11.9	10.9	11.5	11.4	10.5	11.2
19	9.2	7.1	7.9	10.8	9.8	10.2	11.4	10.5	11.1	11.6	11.1	11.3
20	7.6	6.7	7.0	10.6	9.8	10.1	10.9	9.8	10.5	11.1	10.5	10.8
21	6.8	6.4	6.6	10.4	8.7	9.5	---	---	---	10.5	10.0	10.3
22	7.2	6.5	6.7	9.4	8.4	8.8	---	---	---	10.4	9.9	10.1
23	8.5	7.2	7.8	9.6	8.5	9.0	---	---	---	10.8	10.1	10.4
24	8.8	8.3	8.5	9.9	8.7	9.1	---	---	---	11.3	10.6	10.9
25	8.8	8.3	8.6	9.6	8.9	9.1	---	---	---	11.4	11.0	11.2
26	9.2	8.7	8.9	10.0	9.0	9.4	---	---	---	11.5	11.0	11.2
27	8.9	8.7	8.8	10.4	9.5	9.9	---	---	---	11.7	11.2	11.4
28	8.9	8.7	8.8	11.1	10.0	10.4	---	---	---	11.3	10.7	11.1
29	9.0	8.4	8.7	11.1	10.4	10.7	---	---	---	10.8	10.5	10.7
30	8.9	8.5	8.7	11.4	10.5	10.8	---	---	---	10.7	10.3	10.5
31	9.3	8.8	9.0	---	---	---	---	---	---	10.8	10.1	10.4
MONTH	9.3	6.4	8.2	11.4	8.4	9.8	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.9	10.1	10.5	11.2	10.8	11.0	---	---	---	9.4	6.6	8.1
2	11.0	10.1	10.5	10.8	10.5	10.7	12.2	10.3	11.2	7.7	6.8	7.3
3	10.7	9.5	10.1	10.5	10.3	10.4	11.4	10.1	10.7	8.4	7.6	8.0
4	10.9	9.7	10.3	10.4	9.9	10.3	10.8	9.5	10.1	8.1	7.9	8.0
5	10.9	10.0	10.4	10.2	9.8	10.0	9.8	7.6	8.7	8.5	7.8	8.1
6	10.5	9.8	10.2	10.4	10.1	10.3	7.9	7.2	7.7	8.6	7.9	8.2
7	10.6	9.7	10.1	10.6	10.2	10.4	---	---	---	9.6	8.0	8.7
8	11.1	10.6	10.8	10.4	10.1	10.3	---	---	---	9.6	8.2	8.8
9	11.4	11.1	11.3	10.1	9.9	10.0	---	---	---	10.2	8.3	9.2
10	11.3	11.0	11.2	10.2	9.9	10.0	---	---	---	9.7	8.3	9.0
11	11.3	10.9	11.0	10.2	10.1	10.2	---	---	---	10.8	8.5	9.5
12	11.0	10.6	10.8	10.1	9.9	10	---	---	---	10.6	9.1	9.9
13	10.6	10.1	10.4	10.0	9.7	9.8	---	---	---	10.3	8.8	9.7
14	10.1	9.5	9.8	9.7	9.5	9.6	---	---	---	9.9	8.6	9.2
15	9.5	9.3	9.4	9.6	9.4	9.5	---	---	---	9.3	7.1	7.9
16	10.0	9.4	9.6	9.6	9.3	9.4	---	---	---	8.3	7.3	7.8
17	10.7	10.0	10.4	9.5	9.2	9.3	---	---	---	8.6	7.8	8.2
18	11.0	10.4	10.7	9.3	8.9	9.1	---	---	---	9.2	8.3	8.7
19	10.7	10.1	10.4	9.1	7.5	8.3	9.8	8.1	8.9	9.9	8.3	9.0
20	10.1	9.7	9.8	8.3	7.8	8.1	10.1	8.2	9.1	9.2	8.3	8.7
21	9.7	8.8	9.4	8.9	8.3	8.6	10.1	8.4	9.2	8.7	6.8	7.9
22	9.3	8.9	9.2	9.2	8.9	9.1	9.3	8.5	8.9	7.8	6.9	7.4
23	9.2	9.1	9.1	9.4	9.2	9.3	9.1	8.4	8.8	8.4	7.8	8.0
24	9.9	9.1	9.4	9.4	9.2	9.3	8.7	7.9	8.3	8.6	7.9	8.3
25	10.9	9.9	10.5	9.3	9.0	9.2	8.0	5.8	6.9	8.5	5.6	7.6
26	11.3	10.9	11.1	9.3	9.2	9.3	8.9	7.5	8.2	6.1	4.9	5.7
27	11.3	11.1	11.2	9.8	9.2	9.5	9.3	8.6	9.0	6.8	5.8	6.1
28	11.4	11.1	11.2	10.1	8.9	9.6	9.2	8.7	9.0	7.8	6.8	7.4
29	---	---	---	11.0	9.7	10.4	10.3	8.7	9.4	8.3	7.8	8.1
30	---	---	---	---	---	---	10.1	8.2	9.1	9.0	7.9	8.4
31	---	---	---	---	---	---	---	---	---	10.1	8.5	9.2
MONTH	11.4	8.8	10.3	---	---	---	---	---	---	10.8	4.9	8.3

TRINITY RIVER BASIN

08062500 Trinity River near Rosser, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.9	8.9	9.8	8.7	7.9	8.2	7.2	6.3	6.7	8.4	6.8	7.8
2	10.4	8.9	9.6	8.2	7.6	7.9	6.9	6.2	6.5	6.8	5.7	6.0
3	10.8	8.7	9.7	8.1	7.5	7.8	6.7	6.2	6.5	7.0	6.2	6.6
4	10.6	8.6	9.6	8.0	7.2	7.7	6.8	6.1	6.5	7.9	7.0	7.6
5	9.7	7.8	8.6	8.3	7.2	7.8	6.8	6.1	6.5	8.4	7.7	8.1
6	8.3	7.3	7.9	8.0	7.5	7.8	7.0	6.3	6.6	8.9	8.1	8.5
7	8.3	7.4	7.9	8.9	8.0	8.4	6.7	6.1	6.4	9.4	8.3	8.8
8	8.7	8.1	8.5	9.0	7.9	8.6	6.3	5.8	6.0	9.4	8.4	8.9
9	9.2	8.6	8.9	9.3	8.3	8.9	5.8	4.3	5.4	9.0	8.2	8.6
10	9.1	8.7	8.9	9.7	8.8	9.3	5.7	5.2	5.5	8.4	7.6	8.0
11	9.2	7.8	9.0	9.4	8.8	9.1	5.6	4.7	5.4	7.8	7.3	7.6
12	9.0	7.1	8.0	9.7	7.5	8.3	5.4	1.8	5.0	7.6	4.7	6.1
13	8.0	6.7	7.5	7.8	7.0	7.3	5.0	4.6	4.9	5.2	4.9	5.0
14	7.4	7.1	7.3	7.6	6.5	7.0	6.7	3.7	4.6	6.5	5.0	5.7
15	7.3	6.6	7.1	7.4	6.7	7.0	5.0	3.7	4.3	7.5	6.5	7.1
16	8.0	7.3	7.6	7.8	6.5	7.0	5.9	5.0	5.5	7.7	7.5	7.6
17	8.3	7.7	8.1	7.2	6.6	6.9	6.6	5.8	6.0	7.8	7.6	7.7
18	9.3	8.2	8.6	7.6	6.6	7.1	6.5	4.9	5.9	8.2	7.6	7.8
19	9.2	8.9	9.1	7.6	6.7	7.2	6.6	5.3	6.1	---	5.6	6.7
20	9.1	8.7	8.9	---	---	---	7.0	6.2	6.5	---	---	6.8
21	8.9	8.5	8.7	---	---	---	6.7	4.6	5.7	7.3	6.6	6.9
22	8.7	8.3	8.5	---	---	---	6.6	4.7	5.8	7.9	7.3	7.7
23	8.5	7.9	8.1	---	---	---	6.3	5.4	5.9	8.0	7.7	7.8
24	7.9	7.7	7.8	---	---	---	5.8	4.7	5.1	8.3	7.5	7.9
25	7.8	7.4	7.5	---	---	---	6.0	4.6	5.2	9.1	7.7	8.3
26	7.4	5.3	7.1	---	---	---	---	---	---	9.6	7.9	8.7
27	7.3	6.7	7.1	---	---	---	---	---	---	10.0	8.0	8.9
28	7.8	7.1	7.5	---	---	---	---	---	---	10.0	7.9	8.9
29	8.2	7.5	7.8	---	---	---	5.1	3.6	4.7	10.0	8.1	9.0
30	8.6	7.8	8.1	---	---	---	8.4	4.1	6.3	10.6	8.4	9.4
31	---	---	---	7.5	6.5	7.0	8.6	6.7	7.7	---	---	---
MONTH	10.9	5.3	8.3	---	---	---	---	---	---	---	---	7.7



THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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, 8.0 mi upstream from Cedar Creek, and at mile 391.2.

DRAINAGE AREA.--8,538 mi², not including 1,007 mi² upstream from Cedar Creek Reservoir.

PERIOD OF RECORD.--Oct. 1964 to current year. Records of gage height collected in this vicinity for period Oct. 1913 to Sept. 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.

Water-quality records.--Chemical data: May 1966 to June 1994. Biochemical data: May 1966 to June 1994. Pesticide data: Nov. 1977 to June 1982. Sediment data: Nov. 1977 to June 1994. Specific conductance: Sept. 1967 to Sept. 1981, May 1986 to Sept. 2000. pH: Sept. 1967 to Oct. 1969, May 1986 to Sept. 2000. Water temperature: Sept. 1967 to Sept. 1981, May 1986 to Sept. 2000. Dissolved oxygen: Sept. 1967 to Oct. 1969, May 1986 to Sept. 2000.

REVISED RECORDS.--WDR TX-89-1: 1988. WDR TX-90-1: 1989.

GAGE.--Water-stage recorder. Datum of gage is 239.21 ft above NGVD of 1929. Prior to May 3, 1967, at site 0.9 mi upstream at datum 1.28 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges, Records good. Since installation of gage in Oct. 1964, at least 10% of contributing drainage area has been regulated.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1908, 49.8 ft, Apr. 25, 1942, and 48.3 ft, date unknown (present site and datum), from records of the National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	1670	780	15900	980	14700	1320	1410	957	1100	851	1360
2	942	1390	798	18300	979	13400	1210	2620	850	1080	833	3260
3	966	1270	827	14800	962	11400	1170	2010	806	1590	821	5530
4	915	1480	1440	9800	955	8470	1130	1360	843	1280	809	3310
5	918	2120	2960	5580	967	5850	1400	1030	745	1330	778	1540
6	878	2160	3630	3970	1290	5420	2730	1020	973	1110	793	1200
7	916	2060	2160	1870	3790	4920	3220	987	2350	1130	819	1090
8	1420	1680	1400	1970	4620	4700	5170	892	2020	1260	792	996
9	2120	1360	1830	2130	2820	4030	4490	827	1430	1250	785	958
10	4810	1200	6640	1500	1800	3520	3080	784	1840	1170	1010	932
11	6770	1120	10100	1640	1590	3180	1510	752	1690	1120	1110	950
12	4040	1070	8530	1820	1430	3280	1230	740	1830	1370	1310	1240
13	1840	980	4160	1230	1270	3370	1190	750	4330	1300	1190	6320
14	1560	1010	2390	1910	1830	3300	1090	869	12000	1020	1600	9140
15	1400	905	1940	2150	3790	3930	1040	1530	14900	906	2470	6470
16	1270	845	1610	1560	4710	3750	966	1170	15600	884	1860	2460
17	1210	852	1460	1600	4130	2730	892	1010	12400	880	1540	1810
18	1150	827	1360	1930	2810	2520	889	1010	7090	868	1120	1410
19	2220	822	1280	1230	1910	2780	878	986	4350	851	961	1270
20	10900	857	1230	1080	2420	4230	885	886	3820	960	921	4630
21	14100	827	1310	1070	6120	3220	871	969	3400	1100	868	5860
22	15600	814	1220	1080	16900	2060	927	2480	2910	1030	872	2660
23	16800	818	1680	1080	21200	1710	871	2600	2480	947	1040	1500
24	15300	816	5550	1040	22500	2420	831	1830	2300	916	1000	1280
25	7740	802	8390	1010	23400	2720	2880	1320	1960	918	968	1140
26	3240	794	7970	975	20900	2620	2930	4520	2150	928	997	1080
27	2750	799	4820	1000	15400	2300	1680	9540	1810	876	1090	1040
28	2070	793	2960	993	14800	1650	1060	8330	2200	860	2320	1010
29	1730	815	1690	1020	---	1470	905	3170	1540	839	3020	970
30	1920	795	1770	1000	---	1470	891	1410	1220	851	1600	959
31	2010	---	8700	991	---	1420	---	1100	---	849	1140	---
TOTAL	130301	33751	102585	103229	186273	132540	49336	59912	112794	32573	37288	73375
MEAN	4203	1125	3309	3330	6653	4275	1645	1933	3760	1051	1203	2446
MAX	16800	2160	10100	18300	23400	14700	5170	9540	15600	1590	3020	9140
MIN	796	793	780	975	955	1420	831	740	745	839	778	932
AC-FT	258500	66950	203500	204800	369500	262900	97860	118800	223700	64610	73960	145500

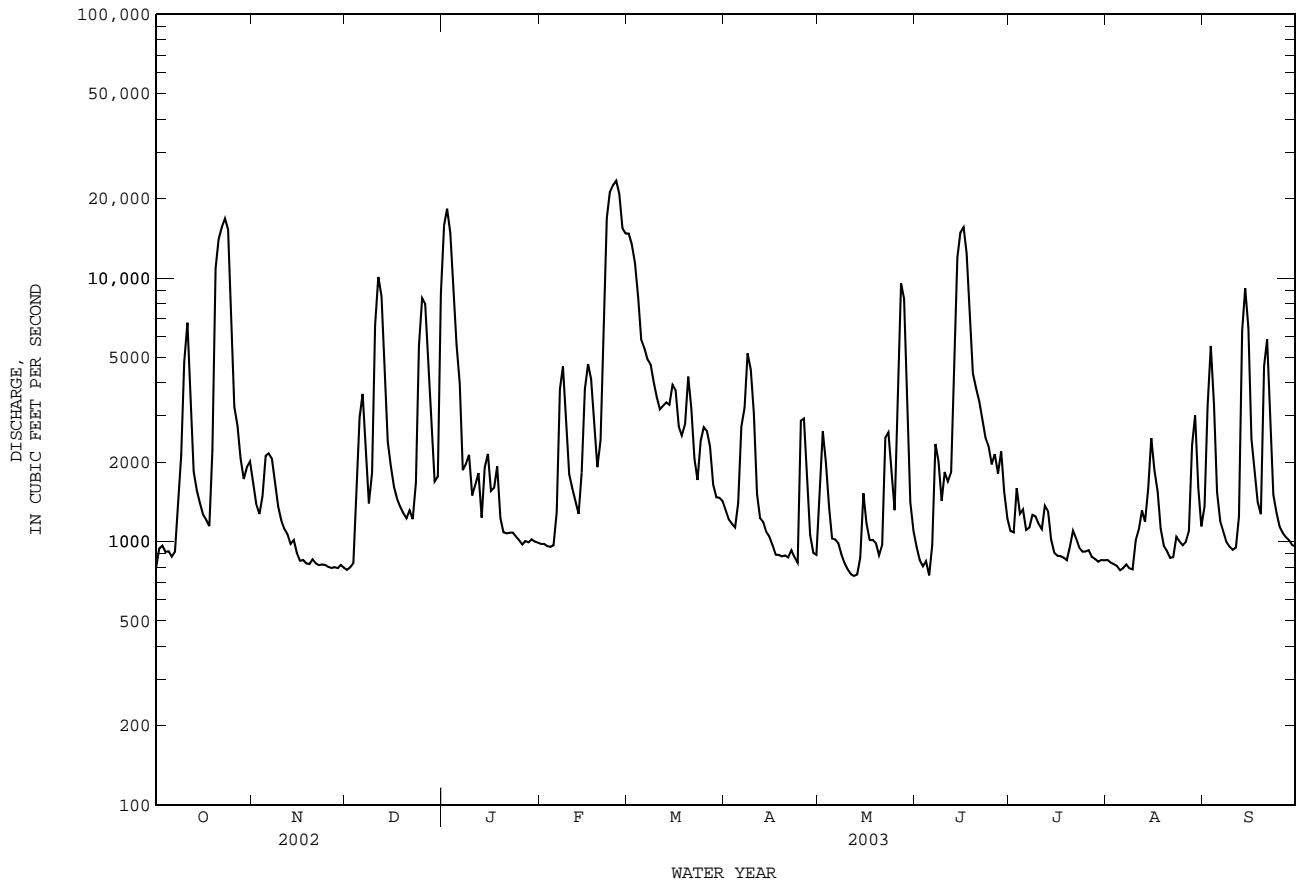
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003																				
MEAN	2624	3785	4850	3703	5437	6854	6128	8852	6216	2418	1349	1283	11390	20160	24320	20490	20550	28360	20550	47120	26790	11800	6886	3347	1974	1975	1992	1992	2001	1997	1990	1989	1982	1982	1974	417	403	460	415	424	542	798	693	526	394	394	448	1976	1967	1967	1967	1967	1967	1978	1971	1972	1972	1967	1972
MAX (WY)	1974	1975	1992	1992	2001	1997	1990	1989	1982	1982	1974	417	403	460	415	424	542	798	693	526	394	394	448	1976	1967	1967	1967	1967	1967	1978	1971	1972	1972	1967	1972																								
MIN (WY)	1976	1967	1967	1967	1967	1967	1978	1971	1972	1972	1967	1972																																															

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1965 - 2003

ANNUAL TOTAL	1819318	1053957	
ANNUAL MEAN	4984	2888	4452
HIGHEST ANNUAL MEAN			11400
LOWEST ANNUAL MEAN			854
HIGHEST DAILY MEAN	29500	Mar 25	23400
LOWEST DAILY MEAN	780	Dec 1	740
ANNUAL SEVEN-DAY MINIMUM	796	Nov 26	796
MAXIMUM PEAK FLOW			23600
MAXIMUM PEAK STAGE			30.62
ANNUAL RUNOFF (AC-FT)	3609000	2091000	3225000
10 PERCENT EXCEEDS	16700	6540	12400
50 PERCENT EXCEEDS	1560	1410	1310
90 PERCENT EXCEEDS	892	850	526

08062700 Trinity River at Trinidad, TX--Continued



TRINITY RIVER BASIN

08062730 New Terrell City Lake near Terrell, TX

LOCATION.--Lat 32°43'42", long 96°10'24", Kaufman County, Hydrologic Unit 12030107, on intake structure on Muddy Cedar Creek, approximately 1.0 mi northwest of Elmo, and 5.0 mi east of Terrell.

DRAINAGE AREA.--14.33 mi².

PERIOD OF RECORD.--Apr. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water data recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by an earthfill embankment 4,700 ft long. The dam was begun in Feb. 1955 and completed in Nov. of the same year. Deliberate impoundment began when the construction was completed but the lake did not fill until May, 1957. A 40 foot uncontrolled concrete weir spillway and chute are located near the left (east) end of the embankment. The emergency spillway is an earth trench cut through natural ground and is located at the right(west) end of the embankment. The dam was built by the city of Terrell to impound water for municipal use. Data regarding the dam are given in the following table:

	Elevation
	(feet)
Top of dam.....	514.2
Crest of spillway.....	508.8
Crest of emergency spillway.....	507.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,840 acre-ft, June 10, 2002, elevation, 507.31 ft; minimum contents, 3,800 acre-ft, Apr. 30, 2000, elevation, 497.29 ft.

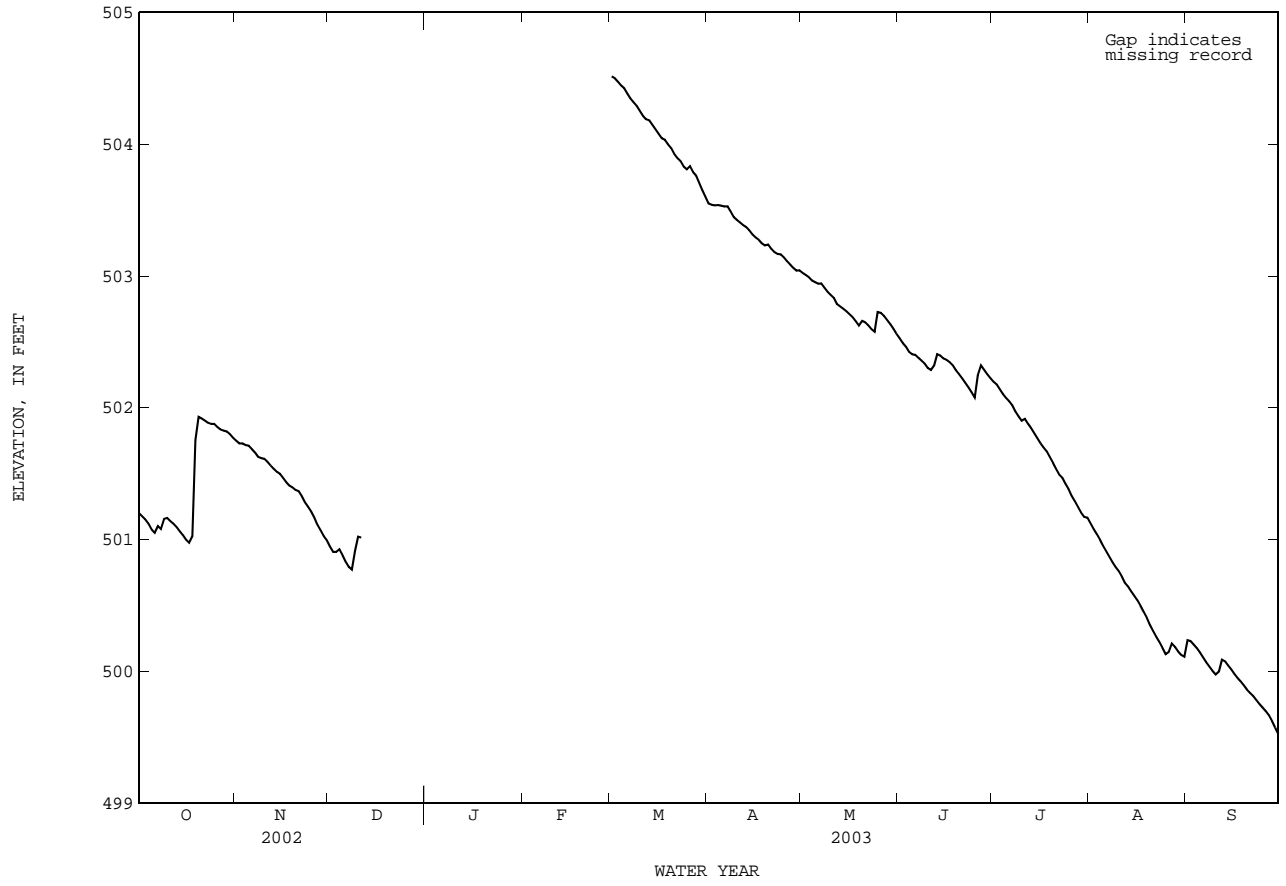
EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 504.53 ft, Feb. 28, Mar. 1; minimum elevation, 499.50 ft, Sept. 30.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501.20	501.75	500.95	---	---	504.52	503.55	503.02	502.53	502.20	501.12	500.24
2	501.18	501.73	500.91	---	---	504.50	503.54	503.01	502.49	502.18	501.08	500.23
3	501.15	501.73	500.91	---	---	504.47	503.54	502.99	502.46	502.14	501.04	500.20
4	501.12	501.72	500.93	---	---	504.45	503.54	502.97	502.43	502.10	501.00	500.18
5	501.08	501.71	500.88	---	---	504.43	503.53	502.95	502.41	502.08	500.95	500.14
6	501.05	501.69	500.83	---	---	504.38	503.53	502.94	502.40	502.05	500.91	500.11
7	501.10	501.66	500.79	---	---	504.35	503.53	502.94	502.38	502.02	500.87	500.07
8	501.08	501.63	500.77	---	---	504.32	503.49	502.91	502.36	501.97	500.83	500.04
9	501.16	501.62	500.92	---	---	504.29	503.45	502.88	502.34	501.94	500.79	500.00
10	501.16	501.61	501.02	---	---	504.25	503.43	502.86	502.30	501.90	500.76	499.98
11	501.14	501.59	501.01	---	---	504.22	503.41	502.83	502.29	501.92	500.72	500.00
12	501.12	501.56	---	---	---	504.19	503.39	502.79	502.32	501.88	500.67	500.09
13	501.10	501.54	---	---	---	504.18	503.37	502.77	502.41	501.85	500.64	500.08
14	501.06	501.51	---	---	---	504.15	503.35	502.75	502.40	501.81	500.61	500.04
15	501.03	501.50	---	---	---	504.11	503.32	502.73	502.37	501.77	500.57	500.01
16	501.00	501.47	---	---	---	504.08	503.29	502.71	502.36	501.73	500.54	499.98
17	500.98	501.44	---	---	---	504.05	503.28	502.69	502.35	501.70	500.50	499.95
18	501.02	501.41	---	---	---	504.03	503.25	502.66	502.32	501.67	500.45	499.92
19	501.75	501.40	---	---	---	504.00	503.23	502.63	502.29	501.63	500.41	499.89
20	501.93	501.38	---	---	---	503.97	503.24	502.66	502.26	501.58	500.35	499.86
21	501.92	501.37	---	---	---	503.93	503.21	502.65	502.22	501.54	500.31	499.84
22	501.90	501.33	---	---	---	503.89	503.18	502.63	502.19	501.49	500.26	499.81
23	501.89	501.28	---	---	---	503.87	503.17	502.60	502.15	501.47	500.22	499.78
24	501.88	501.25	---	---	---	503.83	503.17	502.58	502.12	501.42	500.18	499.75
25	501.88	501.21	---	---	---	503.81	503.14	502.73	502.08	501.38	500.13	499.73
26	501.85	501.17	---	---	---	503.83	503.11	502.72	502.25	501.33	500.15	499.70
27	501.84	501.11	---	---	---	503.79	503.09	502.70	502.32	501.29	500.21	499.67
28	501.83	501.07	---	---	---	503.76	503.06	502.67	502.29	501.25	500.19	499.62
29	501.82	501.03	---	---	---	503.70	503.04	502.64	502.26	501.20	500.15	499.57
30	501.80	500.99	---	---	---	503.65	503.04	502.60	502.22	501.17	500.12	499.53
31	501.77	---	---	---	---	503.60	---	502.56	---	501.17	500.11	---
MEAN	501.41	501.45	---	---	---	504.08	503.32	502.77	502.32	501.70	500.54	499.93
MAX	501.93	501.75	---	---	---	504.52	503.55	503.02	502.53	502.20	501.12	500.24
MIN	500.98	500.99	---	---	---	503.60	503.04	502.56	502.08	501.17	500.11	499.53

CAL YR 2002 MAX 506.06 MIN 500.77
WTR YR 2003 MAX 504.52 MIN 499.53

08062730 New Terrell City Lake near Terrell, TX--Continued



TRINITY RIVER BASIN

08062800 Cedar Creek near Kemp, TX

LOCATION.--Lat 32°30'18", long 96°06'57", Kaufman County, Hydrologic Unit 12030107, on left bank at downstream side of highway embankment at left end of right channel bridge on Farm Road 1836, 3.6 mi upstream from Williams Creek, 8.1 mi northeast of Kemp, and 51.5 mi upstream from mouth.

DRAINAGE AREA.--189 mi².

PERIOD OF RECORD.--Jan. 1963 to Sept. 1987, Oct. 2002 to current.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 341.48 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in January 1963, at least 10% of contributing drainage area has been regulated. At times flow is affected by discharge from floodwater-retarding structures controlling runoff from 55.9 mi².

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1889, about 20.5 ft in 1945, from information by Texas Department of Transportation and local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	9.3	0.15	4120	0.00	1040	12	1.5	12	33	5.0	0.00
2	e0.00	7.8	0.13	2030	0.00	298	8.9	1.3	7.5	29	1.4	0.00
3	e0.00	7.3	0.73	425	0.00	260	6.5	2.2	5.1	25	0.34	0.00
4	e0.00	7.0	.42	230	0.00	242	6.0	2.0	2.4	18	0.41	e0.00
5	e0.00	8.8	170	127	0.00	211	5.4	1.1	3.8	15	0.27	e0.00
6	e0.00	21	64	71	0.16	144	5.2	1.9	8.7	12	0.12	e6.0
7	e0.00	10	33	38	27	77	5.1	2.0	6.0	10	0.12	9.4
8	e0.00	5.0	19	24	32	51	4.9	1.2	5.0	8.4	0.00	8.9
9	e322	3.3	417	19	23	38	3.9	1.0	2.5	6.5	0.00	e6.0
10	e237	2.4	2410	15	21	30	3.2	0.42	0.91	6.8	0.00	e4.0
11	e39	1.9	1060	12	21	25	2.9	0.42	0.61	5.3	0.00	e3.5
12	e25	2.0	275	10	13	20	2.4	0.40	1.3	4.1	0.00	6.7
13	e16	0.85	231	9.3	7.7	91	2.9	0.27	3.3	2.6	0.00	7.1
14	e16	1.1	204	8.4	107	309	2.9	e0.15	38	0.91	0.00	5.3
15	e9.0	0.89	108	7.8	1580	152	2.0	0.07	75	0.22	0.00	13
16	e6.4	0.69	67	6.7	532	87	1.3	0.04	44	0.06	0.00	13
17	e6.5	0.82	50	5.1	151	57	0.91	0.02	18	0.00	0.00	11
18	6.5	0.76	37	4.4	69	43	0.81	0.06	18	0.00	0.00	7.6
19	803	0.26	27	3.9	40	41	1.3	0.00	11	0.00	0.00	5.4
20	2600	0.41	20	2.9	49	43	1.7	0.00	7.0	0.00	0.00	4.8
21	1560	0.26	16	2.3	1560	32	2.5	38	3.5	0.00	0.00	6.9
22	374	0.16	13	1.3	3860	26	2.9	15	1.2	0.00	0.00	6.5
23	228	0.02	130	0.66	3920	21	2.6	5.9	0.68	0.00	0.00	5.4
24	129	0.00	1800	0.13	1170	19	17	2.8	0.13	0.00	0.00	4.1
25	71	0.00	1420	0.07	361	18	29	387	0.00	1.9	0.00	2.9
26	41	0.00	261	0.00	416	17	8.0	2170	86	0.08	0.00	1.5
27	25	0.00	139	0.00	1310	35	4.1	298	611	0.00	0.00	0.85
28	19	0.00	90	0.00	2300	43	2.0	81	214	0.00	0.00	0.22
29	14	0.02	64	0.12	---	30	1.1	42	79	0.00	0.00	0.00
30	11	0.09	126	0.02	---	21	1.9	26	47	0.00	0.00	0.00
31	10	---	2790	0.00	---	17	---	17	---	0.00	0.00	---
TOTAL	6568.40	92.13	12084.01	7174.10	17569.86	3538	151.32	3098.75	1312.63	178.87	7.66	140.07
MEAN	212	3.07	390	231	627	114	5.04	100	43.8	5.77	0.25	4.67
MAX	2600	21	2790	4120	3920	1040	29	2170	611	33	5.0	13
MIN	0.00	0.00	0.13	0.00	0.00	17	0.81	0.00	0.00	0.00	0.00	0.00
AC-FT	13030	183	23970	14230	34850	7020	300	6150	2600	355	15	278

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003h, BY WATER YEAR (WY)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
MEAN	97.8	87.9	191	98.1	187	134	202	179	148	26.3	3.49	10.8									
MAX	664	989	1010	428	634	459	1435	845	831	366	57.2	58.2									
(WY)	1968	1975	1972	1980	1986	1970	1966	1969	1973	1971	1971	1976									
MIN	0.000	0.000	0.000	0.010	0.28	3.74	0.090	0.33	0.000	0.000	0.000	0.000									
(WY)	1964	1964	1964	1976	1976	1981	1981	1984	1964	1964	1963	1963									

SUMMARY STATISTICS

FOR 2003 WATER YEAR

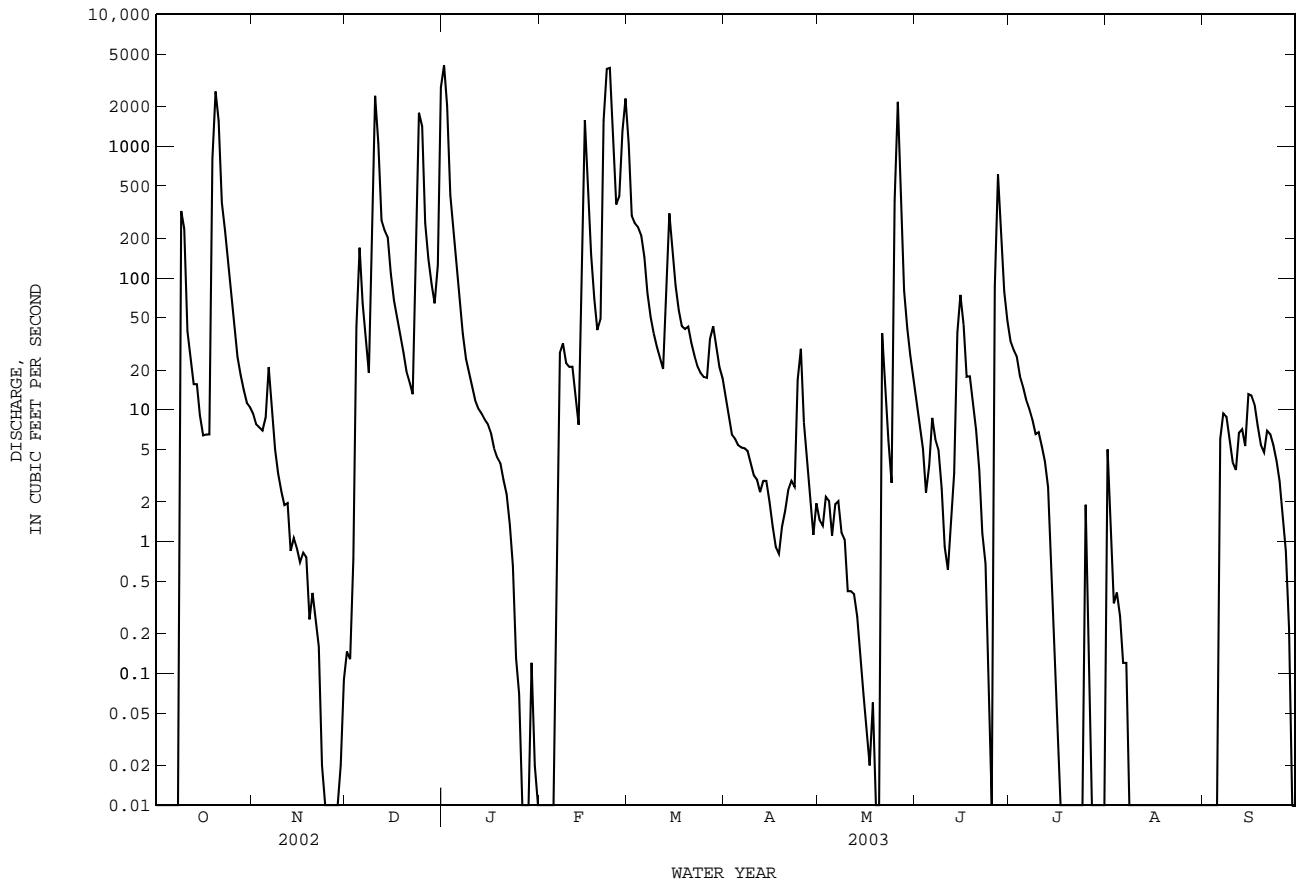
WATER YEARS 1963 - 2003h

ANNUAL TOTAL	51915.80		
ANNUAL MEAN	142	115	
HIGHEST ANNUAL MEAN		262	1986
LOWEST ANNUAL MEAN		18.4	1964
HIGHEST DAILY MEAN	4120	Jan 1	16500 Apr 26 1966
LOWEST DAILY MEAN	0.00	Oct 1	0.00 Mar 31 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00 Jun 4 1963
MAXIMUM PEAK FLOW	4900	Feb 22	29000 Apr 26 1966
MAXIMUM PEAK STAGE	14.00	Feb 22	16.80 Apr 26 1966
ANNUAL RUNOFF (AC-FT)	103000		83560
10 PERCENT EXCEEDS	233		167
50 PERCENT EXCEEDS	5.4		2.8
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

h See PERIOD OF RECORD paragraph.

08062800 Cedar Creek near Kemp, TX--Continued



TRINITY RIVER BASIN

08063010 Cedar Creek Reservoir near Trinidad, TX

LOCATION.--Lat 32°14'35", long 96°08'26", Henderson County, Hydrologic Unit 12030107, inside pumphouse on lower level, 1,000 ft north of spillway, 5.5 mi upstream from Joe B. Hogsett Dam on Cedar Creek, and 8.0 mi northwest of Trinidad.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--Jan. 1965 to current year.

Water-quality records.--Chemical data: Oct. 1969 to Sept. 1985. Biochemical data: Oct. 1969 to Sept. 1985.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 15, 1972, at unfinished pumphouse at same site and datum. May 16, 1972 to Sept. 8, 1975, at site 0.25 mi north and upstream from pumphouse at same datum. Satellite telemeter at station.

REMARKS.--Records poor. 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 2.0 mi long. Deliberate impoundment began July 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 Maba. Conservation pool storage is 637,050 acre-ft. 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
Crest of spillway (automatic gates).....	314.0
Crest of spillway (radial gates).....	302.0
Lowest gated outlet (invert).....	263.5

COOPERATION.--Records of diversions are 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 in effect Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 722,000 acre-ft, June 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 661,100 acre-ft, Feb. 25, elevation, 322.73 ft; minimum contents, 579,400 acre-ft, Sept. 30, elevation, 320.12 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

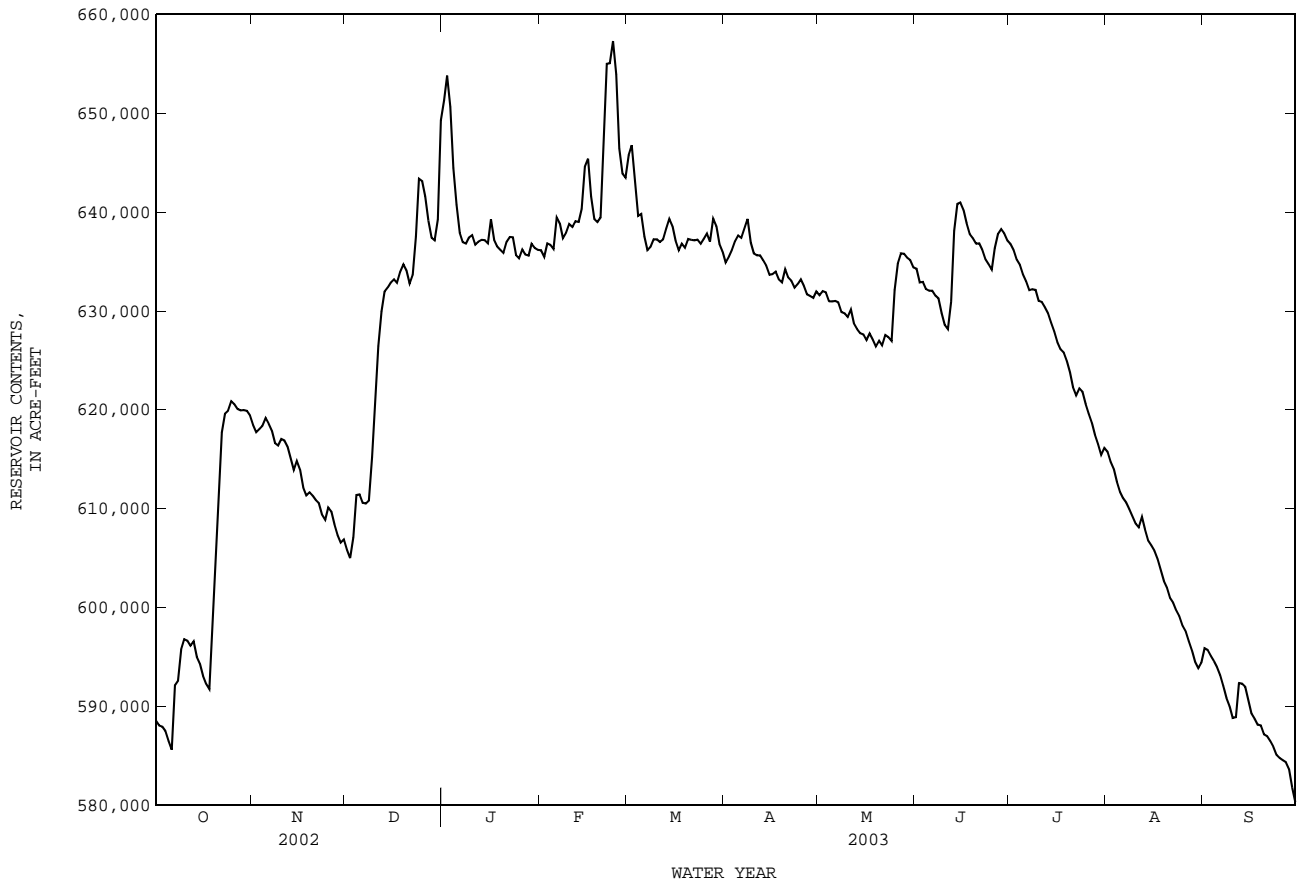
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	588500	618500	605900	651300	636200	645800	e634900	631600	634300	636800	615800	595900
2	588000	617700	605000	653800	635500	646800	635500	632000	632900	636200	614800	595700
3	587900	618100	607100	650700	636800	643200	636200	631900	632900	635200	614000	595100
4	587500	618400	611400	644500	636700	639600	637100	631000	632200	634700	612700	594600
5	586500	619200	611400	640700	636300	639800	637600	631000	632100	633700	611700	594000
6	585600	618600	610600	637900	639500	637500	637400	631000	632100	633000	611100	593200
7	592100	617900	610500	637000	638800	636200	638400	630900	631600	632100	610600	592100
8	592600	616600	610800	636800	637400	636500	639300	629900	631300	632200	610000	590900
9	595800	616400	615200	637400	637900	637200	636900	629700	629800	632100	609200	590000
10	596800	617000	621200	637700	638800	637300	635800	629400	628600	631000	608500	588800
11	596600	616900	626400	636700	638500	637000	635600	630100	628200	630900	608100	588900
12	596100	616300	630000	637000	639100	637200	635600	628700	630900	630400	609200	592400
13	596600	615100	632000	637200	639000	638300	635100	628100	638100	629800	607900	592300
14	595000	613900	632400	637200	640300	639300	634600	627700	640800	628800	606800	592000
15	594300	614800	632900	636800	644600	638600	633700	627600	641000	627900	606300	590600
16	593100	613900	633200	639300	645400	637100	633700	627100	640200	626800	605700	589300
17	592300	612100	632800	637200	641600	636100	634000	627700	638900	626100	604900	588700
18	591700	611400	634000	636500	639300	636800	633200	627100	637800	625800	603800	588100
19	598600	611600	634700	636200	e639000	636400	632900	626400	637400	625000	602700	588100
20	606400	611300	634100	635900	639400	637300	634200	627000	636800	623800	602000	587200
21	611900	610900	632800	637000	646800	637200	633400	626500	636800	622300	601000	587000
22	617700	610600	633600	637500	655000	637200	633000	627600	636200	621500	600500	586500
23	619600	609400	637500	637500	655100	637200	632400	627400	635200	622200	599700	585900
24	619900	608900	643400	635600	657300	636800	632700	627000	634700	621800	599100	585100
25	620900	610100	643100	635300	653900	637300	633200	632100	634200	620600	598100	584800
26	620600	609700	641600	636200	646500	637800	632600	634800	636400	619600	597500	584600
27	620100	608400	639100	635700	643900	637000	631700	635800	637800	618700	596600	584400
28	619900	607300	637400	635600	643500	639300	631500	635800	638300	617500	595600	583600
29	620000	606600	637100	636800	---	638600	631300	635400	637900	616500	594500	581800
30	619900	606900	639300	636400	---	e636800	632000	635100	637100	615400	593900	580300
31	619400	---	649300	636200	---	e636000	---	634400	---	616100	594400	---
MEAN	602300	613500	627900	638600	642200	638200	634500	630300	635100	626600	604700	589100
MAX	620900	619200	649300	653800	657300	646800	639300	635800	641000	636800	615800	595900
MIN	585600	606600	605000	635300	635500	636000	631300	626400	628200	615400	593900	580300
(+)	321.43	321.02	322.37	321.97	322.19	e321.96	321.83	321.91	322.00	321.32	320.61	320.15
(@)	+30000	-12500	+42400	-13100	+7300	-7500	-4000	+2400	+2700	-21000	-21700	-14100
CAL YR 2002	MAX 656000	MIN 585600	(@) +12700									
WTR YR 2003	MAX 657300	MIN 580300	(@) -9100									

e Estimated

(+) Elevation, in feet, at end of month.

(@) Change in contents, in acre-feet.

08063010 Cedar Creek Reservoir near Trinidad, TX--Continued



08063045 Richland Creek near Irene, TX

LOCATION.--Lat 31°58'37", long 96°48'52", Navarro County, Hydrologic Unit 12030108, at bridge on Farm Road 744, 0.3 mi northeast of intersection of Farm Road 744 and 1946, 2.4 mi upstream of Hackberry Creek, and 3.5 mi southeast of Irene.

DRAINAGE AREA.--69 mi².

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 14...	1325	11	461	8.0	10.5	12.0	107	<3.5	210	31	81.3	2.19	12.0
MAR 11...	1258	34	415	7.8	13.6	10.6	104	<2.0	200	19	76.1	1.82	9.12
APR 17...	1130	--	446	7.4	17.5	6.6	70	<2.0	210	25	80.4	2.44	13.1

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, field, mg/L (00452)	Bicarbonate, wat flt incrm, field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 14...	.4	11	1.15	1	218	181	29.6	10.1	.30	6.69	275	256	12
MAR 11...	.3	9	.92	1	215	178	22.8	9.12	.28	5.69	233	237	57
APR 17...	.4	12	1.40	2	223	186	24.8	11.7	.31	9.07	277	257	46

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
JAN 14...	--	E.005	1.01	<.04	.15	E.004	<.02	4.4	7	<.30	<2	55	<.06
MAR 11...	.93	.008	.94	<.04	.14	E.002	<.02	2.7	M	<.30	<2	50	<.06
APR 17...	.38	.010	.39	E.03	.27	.010	<.02	3.4	<2	<.30	E1	63	<.06

Date	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 14...	.08	<.8	.25	2.2	<10	<.08	9.8	<.02	.5	3.33	<3	<.20	4
MAR 11...	<.04	<.8	.25	.8	<10	<.08	4.8	<.02	.4	5.15	<3	<.20	<1
APR 17...	<.04	<.8	.46	.8	<10	<.08	30.5	<.02	.6	3.98	<3	<.20	1

Date	Uranium natural water, fltrd, ug/L (22703)
JAN 14...	1.54
MAR 11...	1.27
APR 17...	1.04

Remark codes used in this report:
 < -- Less than
 E -- Estimated value
 M -- Presence verified, not quantified

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08063050 Navarro Mills Lake near Dawson, TX

LOCATION.--Lat 31°57'27", long 96°41'21", Navarro County, Hydrologic Unit 12030108, in left abutment of spillway of Navarro Mills Dam on Richland Creek, 1.7 mi upstream from bridge on State Highway 31, 3.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 4.2 mi upstream from Post Oak Creek, 4.6 mi north of Dawson, and 63.9 mi upstream from mouth.

DRAINAGE AREA.--320 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--Aug. 1962 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Navarro Mills Reservoir".

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (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.--Records good. 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 Sept. 1963. Low-flow outlet works consist of two 36-inch-diameter gate-controlled conduits. Lake was built for flood control and water conservation. Flow is affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 26,160 acre-ft. These structures control runoff from 86.9 mi² in the Richland Creek drainage basin. The dam is owned by the U.S. Army Corps of Engineers. An unknown amount of water is diverted for municipal and industrial uses. 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
Crest of spillway.....	414.0
Lowest gated outlet (invert).....	400.0

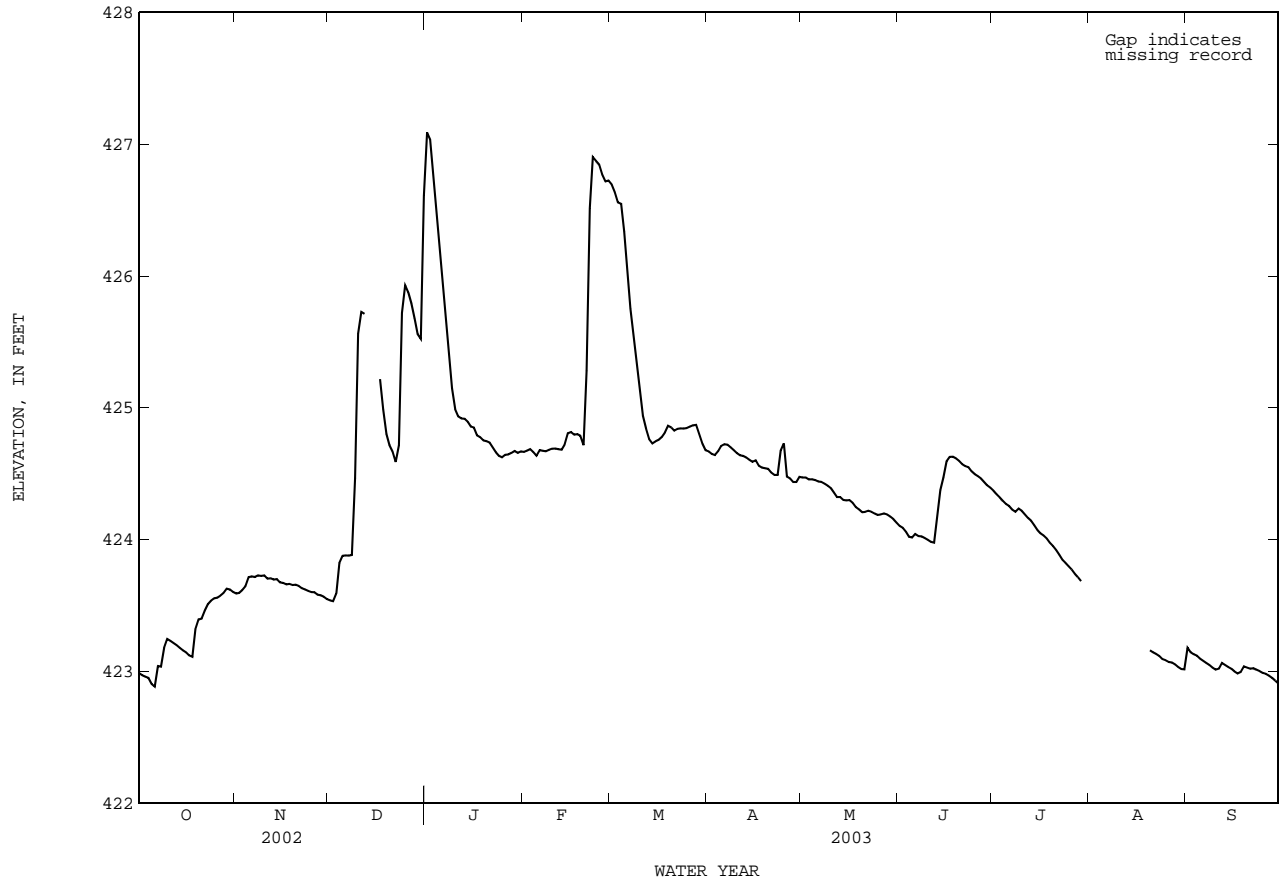
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 183,300 acre-ft, May 18, 1968, elevation, 440.36 ft; minimum since initial filling in May 1965, 32,490 acre-ft, Dec. 28, 1978, elevation, 418.89 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 427.25 ft, Jan. 1; minimum elevation, 422.84 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422.99	423.59	423.54	427.09	424.66	426.69	424.67	424.47	424.10	424.37	---	423.18
2	422.97	423.60	423.53	427.04	424.68	426.64	424.65	424.47	424.09	424.34	---	423.15
3	422.96	423.62	423.59	426.78	424.69	426.56	424.64	424.46	424.06	424.32	---	423.13
4	422.95	423.64	423.82	426.52	424.66	426.55	424.67	424.46	424.02	424.29	---	423.12
5	422.90	423.72	423.88	426.25	424.64	426.34	424.71	424.45	424.02	424.27	---	423.10
6	422.88	423.72	423.88	425.96	424.68	426.04	424.72	424.44	424.04	424.26	---	423.08
7	423.04	423.72	423.88	425.68	424.67	425.75	424.72	424.44	424.03	424.23	---	423.06
8	423.04	423.73	423.88	425.39	424.67	425.54	424.70	424.42	424.02	424.21	---	423.05
9	423.18	423.73	424.47	425.15	424.68	425.35	424.68	424.41	424.01	424.24	---	423.03
10	423.25	423.73	425.56	424.99	424.69	425.13	424.66	424.39	424.00	424.22	---	423.01
11	423.23	423.70	425.73	424.93	424.69	424.94	424.64	424.36	423.98	424.19	---	423.02
12	423.22	423.71	425.71	424.92	424.69	424.84	424.64	424.32	423.98	424.17	---	423.06
13	423.20	423.70	---	424.92	424.68	424.76	424.62	424.32	424.17	424.14	---	423.05
14	423.18	423.70	---	424.89	424.72	424.73	424.61	424.30	424.38	424.11	---	423.03
15	423.16	423.68	---	424.86	424.81	424.75	424.59	424.30	424.47	424.07	---	423.02
16	423.14	423.67	---	424.85	424.82	424.76	424.60	424.30	424.60	424.05	---	423.00
17	423.12	423.66	425.22	424.79	424.80	424.78	424.56	424.28	424.63	424.03	---	422.98
18	423.11	423.66	424.98	424.78	424.80	424.81	424.55	424.25	424.63	424.01	---	422.99
19	423.32	423.66	424.80	424.75	424.79	424.86	424.54	424.23	424.62	423.98	---	423.04
20	423.39	423.66	424.72	424.75	424.72	424.85	424.54	424.21	424.60	423.95	423.16	423.03
21	423.40	423.65	424.67	424.74	425.28	424.83	424.51	424.21	424.57	423.92	423.14	423.02
22	423.46	423.63	424.59	424.70	426.51	424.84	424.49	424.22	424.56	423.89	423.13	423.02
23	423.51	423.62	424.72	424.66	426.90	424.84	424.49	424.21	424.55	423.85	423.12	423.01
24	423.54	423.61	425.72	424.64	426.87	424.84	424.68	424.20	424.52	423.82	423.09	423.00
25	423.56	423.60	425.93	424.62	426.85	424.85	424.73	424.19	424.50	423.80	423.08	422.99
26	423.56	423.60	425.88	424.64	426.77	424.86	424.48	424.19	424.48	423.77	423.07	422.98
27	423.58	423.58	425.79	424.65	426.72	424.87	424.46	424.20	424.46	423.74	423.07	422.97
28	423.60	423.58	425.68	424.66	426.72	424.87	424.44	424.19	424.44	423.71	423.05	422.95
29	423.63	423.57	425.56	424.67	---	424.80	424.44	424.17	424.41	423.68	423.03	422.93
30	423.62	423.55	425.52	424.66	---	424.73	424.48	424.16	424.39	---	423.02	422.91
31	423.60	---	426.61	424.67	---	424.68	---	424.13	---	---	423.02	---
MEAN	423.27	423.65	---	425.18	425.25	425.22	424.60	424.30	424.31	---	---	423.03
MAX	423.63	423.73	---	427.09	426.90	426.69	424.73	424.47	424.63	---	---	423.18
MIN	422.88	423.55	---	424.62	424.64	424.68	424.44	424.13	423.98	---	---	422.91
CAL YR 2002	MAX 430.96	MIN 422.88										
WTR YR 2003	MAX 427.09	MIN 422.88										

08063050 Navarro Mills Lake near Dawson, TX--Continued



08063050 Navarro Mills Lake near Dawson, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1969 to Sept. 1982, Oct. 1999 to current year.

BIOCHEMICAL DATA: Oct. 1981 to Aug. 1982, Oct. 1999 to current year.

PESTICIDE DATA: Aug. 2000 to current year.

REMARKS.--Pesticide samples are composited from discrete samples collected at the surface, middle, and bottom of the reservoir.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

315730096412601 -- Navarro Mills Lk Site AC

Date	Time	Reser- voir storage acre-ft (00054)	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)
JAN													
14...	1235	59000	.27	1.00	293	7.9	10.0	11.1	99	E8k	E3k	120	38
JAN													
14-14	1235	--	--	--	--	--	--	--	--	--	--	--	--
14...	1248	--	--	10.0	294	7.9	9.5	10.9	94	--	--	--	--
14...	1301	--	--	20.0	294	7.9	9.5	11.0	97	--	--	--	--
14...	1315	--	--	27.0	294	7.9	9.5	11.2	99	--	--	120	23
APR													
16...	1359	57600	.34	1.00	364	8.1	20.0	9.2	103	E11k	E5k	150	28
APR													
16-16	1359	--	--	--	--	--	--	--	--	--	--	--	--
16...	1407	--	--	10.0	365	8.1	20.0	9.3	104	--	--	--	--
16...	1415	--	--	20.0	364	8.1	20.0	9.3	104	--	--	--	--
16...	1423	--	--	26.0	364	8.0	20.0	9.3	104	--	--	150	26
AUG													
14...	0858	50600	.49	1.00	293	7.5	28.0	4.8	61	E2k	<1	97	4
AUG													
14-14	0858	--	--	--	--	--	--	--	--	--	--	--	--
14...	0907	--	--	10.0	293	7.5	28.0	4.8	61	--	--	--	--
14...	0915	--	--	24.0	293	7.5	28.0	5.0	64	--	--	99	7

315730096412601 -- Navarro Mills Lk Site AC

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JAN													
14...	41.5	2.95	12.4	.5	18	3.50	<1	95	78	24.6	7.11	.33	6.5
JAN													
14-14	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	42.3	2.98	12.6	.5	18	3.63	<1	116	96	24.8	6.70	.37	6.5
APR													
16...	53.8	3.31	14.6	.5	17	3.38	<1	146	121	28.9	9.48	.30	.9
APR													
16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	53.6	3.29	14.5	.5	17	3.38	<1	148	123	29.3	9.37	.32	.9
AUG													
14...	33.7	3.22	17.8	.8	27	4.24	<1	114	94	30.8	10.7	.4	8.1
AUG													
14-14	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	34.4	3.28	17.4	.8	27	4.14	<1	113	93	30.8	10.8	.4	8.0

08063050 Navarro Mills Lake near Dawson, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

315730096412601 -- Navarro Mills Lk Site AC

Date	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF ug/L (82679)	Propargite, water, fltrd, 0.7u GF ug/L (82685)	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (82665)	Terbufos, water, fltrd, ug/L (82675)	Thio-bencarb, water, fltrd, ug/L (82681)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)	Tri-fluralin, water, fltrd, 0.7u GF ug/L (82661)
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 14-14 14...	<.01	<.010	<.011	<.02	<.004	.019	<.02	<.034	<.02	<.005	<.002	<.009
JAN 14... 14...	--	--	--	--	--	--	--	--	--	--	--	--
APR 16... 16...	--	--	--	--	--	--	--	--	--	--	--	--
APR 16-16 16... 16... 16...	<.01	<.010	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009
AUG 14... 14... 14...	--	--	--	--	--	--	--	--	--	--	--	--

315706096420201 -- Navarro Mills Lk Site AR

Date	Time	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)
JAN 14...	1436	1.00	294	7.8	10.0	10.8	97
JAN 14... 14...	1439	10.0	294	7.8	10.0	10.6	95
JAN 14... 14...	1443	22.0	292	7.9	9.5	10.9	96
APR 16... 16... 16...	1430	1.00	364	8.1	20.5	9.1	103
APR 16... 16... 16...	1433	10.0	364	8.1	20.0	8.9	100
APR 16... 16... 16...	1436	20.0	365	8.1	19.5	9.2	102
AUG 14... 14... 14...	0926	1.00	292	7.6	28.0	5.3	68
AUG 14... 14... 14...	0929	10.0	292	7.6	28.0	5.0	64
AUG 14... 14... 14...	0933	21.0	295	7.4	28.0	4.3	55

315710096431301 -- Navarro Mills Lk Site BC

Date	Time	Trans-parency Secchi disc, meters (00078)	Sam-pling depth, feet (00003)	Specif. conduc-tance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper-ature, water, deg C (00010)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	Fecal coli-form, M-FC 0.7u MF 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN 14... 14... 14...	1401	.24	1.00	296	7.9	9.5	11.0	97	E6k	E7k	120	19	43.3
JAN 14... 14... 14...	1410	--	10.0	295	7.9	9.5	11.0	97	--	--	--	--	--
JAN 14... 14... 14...	1417	--	25.0	307	7.9	9.0	11.0	96	--	--	120	23	44.9
APR 16... 16... 16... 16... 16...	1458	.49	1.00	365	8.1	20.0	9.0	101	E5k	E6k	150	22	53.2
APR 16... 16... 16... 16... 16...	1502	--	10.0	365	8.1	19.5	8.8	98	--	--	--	--	--
APR 16... 16... 16... 16... 16...	1507	--	20.0	366	7.9	18.5	8.0	87	--	--	--	--	--
APR 16... 16... 16... 16... 16...	1512	--	26.0	366	7.9	18.5	8.0	87	--	--	150	--	53.6
AUG 14... 14... 14...	0952	.27	1.00	289	7.8	28.0	5.8	74	E16k	<1	99	7	34.1
AUG 14... 14... 14...	0958	--	10.0	288	7.8	28.0	5.9	76	--	--	--	--	--
AUG 14... 14... 14...	1003	--	20.0	288	7.4	28.0	6.0	77	--	--	99	7	34.0

TRINITY RIVER BASIN

08063050 Navarro Mills Lake near Dawson, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

315710096431301 -- Navarro Mills Lk Site BC

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
JAN													
14...	2.98	12.5	.5	18	3.71	<1	123	102	24.9	6.69	.37	6.5	170
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	2.92	12.2	.5	17	3.42	<1	123	102	24.9	6.58	.36	7.0	173
APR													
16...	3.26	14.3	.5	17	3.25	1	150	125	29.3	9.93	.33	1.0	205
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	3.29	14.5	.5	17	3.28	--	--	--	29.5	9.39	.32	1.6	--
AUG													
14...	3.33	17.0	.7	26	4.10	<1	112	92	30.6	10.8	.4	8.0	163
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	3.32	17.0	.7	26	4.02	<1	112	92	30.7	11.0	.4	8.0	163

315710096431301 -- Navarro Mills Lk Site BC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JAN											
14...	1.68	.136	1.82	.04	.36	.40	.026	.02	.067	E6	E1.1
14...	--	--	--	--	--	--	--	--	--	--	--
14...	2.21	.128	2.34	E.03	--	.39	.029	.02	.061	<10	1.6
APR											
16...	3.45	.053	3.50	E.03	--	.40	.007	<.02	--	<10	<2.0
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
16...	3.33	.054	3.39	.06	.37	.42	.011	<.02	--	<10	2.7
AUG											
14...	--	E.005n	E.03n	<.04	--	.28	.005	<.02	--	<8	.5
14...	--	E.006n	E.04n	E.02n	--	.27	.005	<.02	--	<8	.6
14...	--	<.008	<.06	E.04n	--	.32	.007	<.02	--	<8	3.7

315642096444401 -- Navarro Mills Lk Site CC

Date	Time	Transparency Secchi disc, meters (00078)	Sampling depth, feet (00003)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u MF 100 mL (31625)	E coli, m-TEC MF, col/100 mL (31633)	Hardness, water, unfltrd, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
14...	1501	.18	1.00	300	7.9	9.5	11.6	103	E18k	E14k	120	22	44.3
14...	1507	--	10.0	301	7.9	9.0	11.4	100	--	--	--	--	--
14...	1513	--	16.0	301	7.9	9.0	11.6	101	--	--	120	23	43.5
APR													
16...	1533	.21	1.00	369	8.1	20.5	9.3	105	E3kv	E1k	150	25	54.1
16...	1538	--	10.0	370	8.1	20.5	9.3	105	--	--	--	--	--
16...	1543	--	15.0	370	8.1	20.5	9.6	109	--	--	150	22	54.0
AUG													
14...	1021	.18	1.00	282	7.9	27.5	6.4	81	<1	E2k	92	8	31.8
14...	1030	--	13.0	282	7.8	27.5	6.3	79	--	--	93	8	32.1

08063050 Navarro Mills Lake near Dawson, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

315642096444401 -- Navarro Mills Lk Site CC

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt titr., field, mg/L (00452)	Bicarbonate, wat flt titr., field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
JAN 14...	2.93	12.2	.5	17	3.52	<1	123	102	24.5	6.77	.36	6.9	172
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	2.87	11.6	.5	17	3.52	<1	119	99	24.4	6.66	.33	7.0	169
APR 16...	3.31	14.6	.5	17	3.34	1	149	124	29.6	9.53	.32	1.1	206
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	3.32	14.9	.5	17	3.43	1	153	127	29.7	9.49	.32	1.2	208
AUG 14...	3.17	17.3	.8	28	4.06	<1	103	85	31.1	10.9	.4	7.8	157
14...	3.19	17.5	.8	28	4.09	<1	104	86	30.9	10.9	.4	7.9	158

315642096444401 -- Navarro Mills Lk Site CC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JAN 14...	2.12	.139	2.26	<.04	.39	.030	.02	.064	E5	<2.0
14...	--	--	--	--	--	--	--	--	--	--
14...	2.18	.137	2.32	<.04	.39	.029	.02	.061	<10	<2.0
APR 16...	3.40	.039	3.44	<.04	.39	.007	<.02	--	<10	<2.0
16...	--	--	--	--	--	--	--	--	--	--
16...	3.37	.037	3.40	<.04	.36	.008	<.02	--	<10	<2.0
AUG 14...	--	<.008	<.06	<.04	.24	.008	<.02	--	28	.7
14...	--	<.008	<.06	E.03n	.28	.006	<.02	--	<8	1.5

315602096470001 -- Navarro Mills Lk Site DC

Date	Time	Transparency Secchi disc, meters (00078)	Sampling depth, feet (00003)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
JAN 14...	1544	--	1.00	322	8.0	8.5	12.6	109	2.48	.110	2.59	<.04	.39
14...	1549	--	4.00	328	8.0	8.5	12.0	104	--	--	--	--	--
APR 16...	1612	.12	1.00	369	8.1	21.0	9.4	107	3.36	.040	3.40	<.04	.39
16...	1617	--	5.00	370	8.1	21.5	10.1	116	--	--	--	--	--
AUG 14...	1056	.09	1.00	285	7.9	26.5	6.9	85	--	<.008	<.06	<.04	.26
14...	1100	--	4.00	--e	7.8	26.5	6.7	--	--	--	--	--	--

315602096470001 -- Navarro Mills Lk Site DC

Date	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JAN 14...	.028	.02	.055	<10	<2.0
14...	--	--	--	--	--
APR 16...	.008	<.02	--	<10	<2.0
16...	--	--	--	--	--
AUG 14...	.008	<.02	--	<8	E.3n
14...	--	--	--	--	--

TRINITY RIVER BASIN

08063050 Navarro Mills Lake near Dawson, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

315706096463201 -- Navarro Mills Lk Site EC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
JAN													
14...	1622	--	1.00	296	8.0	9.0	12.3	108	1.99	.124	2.12	<.04	.37
14...	1629	--	4.00	295	8.0	9.0	12.3	108	--	--	--	--	--
APR													
16...	1641	.12	1.00	369	8.1	21.5	9.8	113	3.39	.039	3.43	<.04	.40
16...	1645	--	4.00	369	8.1	21.5	9.6	111	--	--	--	--	--
AUG													
14...	1118	.12	1.00	286	8.1	26.5	6.8	84	--	<.008	<.06	<.04	.24
14...	1121	--	3.00	286	8.1	26.5	6.7	83	--	--	--	--	--

315706096463201 -- Navarro Mills Lk Site EC

Date	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN				
14...	.026	E.02	<10	E.8
14...	--	--	--	--
APR				
16...	.007	<.02	<10	<2.0
16...	--	--	--	--
AUG				
14...	.004	<.02	<8	E.3n
14...	--	--	--	--

Remark codes used in this report:
 < -- Less than
 E -- Estimated value

Value qualifier codes used in this report:
 k -- Counts outside acceptable range
 n -- Below the NDV
 v -- Analyte detected in laboratory blank

Null value qualifier codes used in this report:
 e -- Required equipment not functional/avail

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 367.52 ft above NGVD of 1929. Nov. 21, 1960, to Sept. 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. At times flow may be affected by discharge from floodwater-retarding structures controlling runoff from a 1.28 mi² area below Navarro Mills Lake and above this station. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years (water years 1961-63) prior to completion of Navarro Mills Lake, 181 ft³/s (131,100 acre-ft/yr)

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1961-63).--Maximum discharge, 25,500 ft³/s, July 3, 1961, gage height, 25.50 ft, from rating curve extended above 14,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, about 31 ft June 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.34	0.91	0.00	441	17	341	22	0.40	0.33	0.21	0.00	1.1
2	0.36	0.88	0.00	583	17	338	21	0.45	0.32	0.22	0.00	0.15
3	0.38	0.93	0.01	826	17	595	21	0.55	0.32	0.22	0.00	0.00
4	0.41	1.0	28	806	17	981	22	0.55	0.30	0.21	0.00	0.00
5	0.45	3.4	0.05	793	17	960	21	0.51	0.34	0.38	0.00	0.01
6	0.51	1.3	0.00	783	17	942	20	0.47	0.48	0.30	0.00	0.00
7	1.1	0.90	0.00	775	16	783	18	0.45	0.44	0.22	0.00	0.00
8	0.55	0.70	0.00	763	16	593	16	0.43	0.45	0.19	0.00	0.00
9	9.5	0.58	295	563	16	588	16	0.40	0.59	0.13	0.00	0.00
10	0.97	0.51	130	247	16	582	15	0.41	0.47	0.10	0.00	0.00
11	0.50	0.46	312	100	16	441	15	0.38	0.44	0.12	0.00	0.02
12	0.48	0.46	301	99	17	289	14	0.38	0.83	0.12	0.00	0.18
13	0.56	0.41	302	99	18	249	14	0.39	23	0.12	0.00	0.15
14	0.54	0.45	298	99	18	82	13	0.43	12	0.10	0.00	0.06
15	0.56	0.42	298	99	18	26	13	0.52	7.4	0.11	0.00	0.06
16	0.59	0.38	474	98	17	26	8.7	0.51	1.4	0.11	0.00	0.79
17	0.80	0.39	668	87	17	26	4.0	0.42	0.62	0.09	0.00	0.43
18	0.97	0.37	657	57	17	26	3.9	0.37	0.44	0.09	0.01	1.1
19	46	0.19	394	57	163	25	3.8	0.39	0.38	0.07	0.02	0.29
20	3.4	0.00	115	57	326	25	3.4	0.44	0.32	0.06	0.01	0.15
21	1.5	0.00	114	57	553	25	3.1	0.84	0.30	0.08	0.00	0.27
22	9.6	0.00	115	56	472	24	2.6	0.90	0.34	0.11	0.01	0.33
23	5.0	0.00	67	56	364	24	0.79	0.72	0.30	0.15	0.01	0.32
24	1.8	0.00	201	41	352	24	0.65	0.61	0.24	0.15	0.00	1.1
25	1.5	0.00	413	17	350	24	0.38	0.63	0.21	0.14	0.00	1.3
26	1.4	0.00	405	17	347	26	0.38	0.83	0.19	0.12	0.00	0.39
27	1.3	0.00	399	17	345	28	0.34	0.93	0.18	0.09	0.00	0.30
28	1.3	0.00	396	17	344	52	0.43	0.60	0.22	0.07	0.00	0.24
29	3.4	0.00	393	17	---	126	0.49	0.45	0.24	0.05	0.00	0.24
30	2.5	0.00	460	17	---	126	0.42	0.43	0.21	0.02	0.00	0.21
31	1.2	---	720	17	---	93	---	0.36	---	0.00	0.00	---
TOTAL	99.47	14.64	7955.06	7761	3920	8490	294.38	16.15	53.30	4.15	0.06	9.19
MEAN	3.21	0.49	257	250	140	274	9.81	0.52	1.78	0.13	0.002	0.31
MAX	46	3.4	720	826	553	981	22	0.93	23	0.38	0.02	1.3
MIN	0.34	0.00	0.00	17	16	24	0.34	0.36	0.18	0.00	0.00	0.00
AC-FT	197	29	15780	15390	7780	16840	584	32	106	8.2	0.1	18

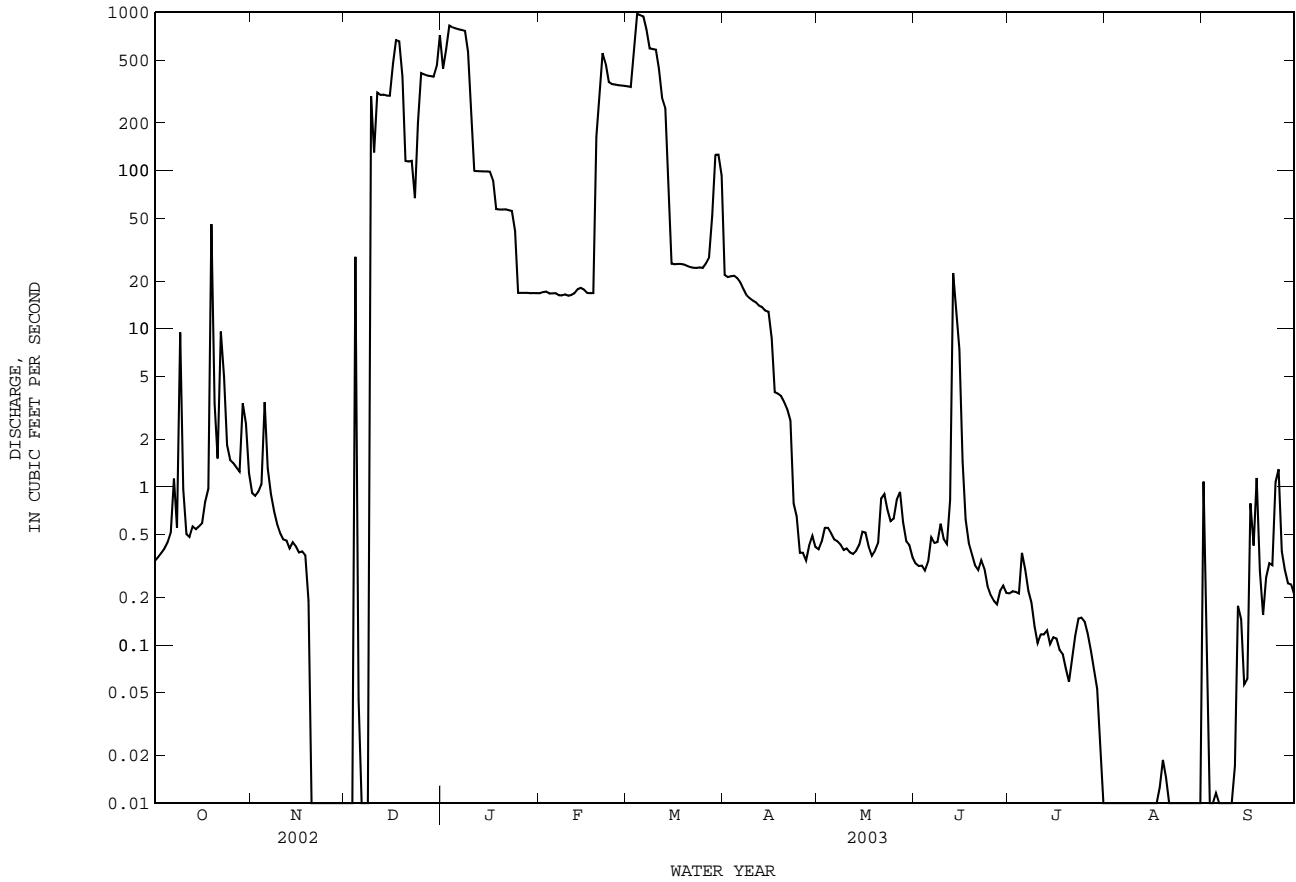
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003z, BY WATER YEAR (WY)

	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964
MEAN	44.5	138	160	203	198	218	220	256	319	91.7	25.1	18.9
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	0.000	0.000	0.000	0.058	0.066	0.22	0.023	0.019	0.000	0.000	0.002	0.005
(WY)	1964	1964	1964	1964	1964	1971	1964	1964	1964	1970	2003	1997

08063100 Richland Creek near Dawson, TX--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1964 - 2003z	
ANNUAL TOTAL	39109.04	28617.40	157	
ANNUAL MEAN	107	78.4	561	1968
HIGHEST ANNUAL MEAN			0.20	1964
LOWEST ANNUAL MEAN			2620	Aug 4 1995
HIGHEST DAILY MEAN	1720 Jan 1	981 Mar 4	0.00	Oct 1 1963
LOWEST DAILY MEAN	0.00 Aug 14	0.00 Nov 20	0.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00 Nov 20	0.00 Nov 20	3850	Nov 24 1974
MAXIMUM PEAK FLOW		1140 Dec 31	22.85	Nov 24 1974
MAXIMUM PEAK STAGE		13.59 Dec 31	113900	
ANNUAL RUNOFF (AC-FT)	77570	56760	644	
10 PERCENT EXCEEDS	299	344	1.8	
50 PERCENT EXCEEDS	1.6	0.60	0.04	
90 PERCENT EXCEEDS	0.12	0.00		

z Period of regulated streamflow.



TRINITY RIVER BASIN

08063100 Richland Creek near Dawson, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf field, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Hardness, water, unfltrd CaCO3 mg/L as (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	
Date	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. field, mg/L (00452)	Bicarbonate, wat flt incrm. field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Nitrate water, fltrd, mg/L as N (00618)	
Date	Nitrite + nitrate water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L as P (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	
Date	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	
Date													Uranium natural water, fltrd, ug/L (22703)	
JAN 14...	1530	99	301	7.7	10.5	12.2	108	120	15	41.8	2.96	12.2	.5	
APR 17...	1400	3.9	441	7.2	20.0	6.9	77	170	37	62.6	4.15	22.1	.7	
AUG 13...	1035	E.10	1590	7.7	24.0	7.9	96	340	130	108	17.3	222	5	
JAN 14...	18	3.53	<1	123	102	24.8	7.19	.35	6.25	185	167	42	1.50	
APR 17...	21	3.57	<1	167	138	38.6	17.3	.33	1.52	263	246	15	3.14	
AUG 13...	58	3.68	1	256	212	272	213	.6	14.9	1010	978	20	--	
JAN 14...	.116	1.62	E.03	.39	.027	.02	.058	7.4	4	E.29	4	47	<.06	
APR 17...	.039	3.17	<.04	.38	.011	<.02	--	5.1	M	E.25	E2	57	<.06	
AUG 13...	<.008	<.06	<.04	.42	.023	<.02	--	8.8	15	E.20n	5	102	<.06	
JAN 14...	<.04	<.8	.15	1.5	E6	<.08	2.7	<.02	.7	3.03	<3	<.20	2	
APR 17...	<.04	<.8	.24	1.5	<10	.22	16.0	<.02	.8	3.07	<3	<.20	M	
AUG 13...	<.04	<.8	.41	1.5	12	<.08	85.7	<.02	1.1	5.02	<3	<.20	1	
														Uranium natural water, fltrd, ug/L (22703)
														JAN 14... .86
														APR 17... 1.11
														AUG 13... 1.84

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:

- n -- Below the NDV

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08063600 Lake Waxahachie near Waxahachie, TX

LOCATION.--Lat 32°20'30", long 96°48'18", Ellis County, Hydrologic Unit 12030109, mounted on pump intake structure, approximately 10 mi south of Waxahachie and 22.0 mi northwest of Ennis.

DRAINAGE AREA.--30.0 mi².

PERIOD OF RECORD.--Apr. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 3,200 ft long. The dam was completed Dec. 1, 1956. A 300 ft wide spillway has been cut through natural ground. The dam was built by the city of Waxahachie to impound water for municipal use. There was no known diversion from the lake during the current water year. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam.....	543.0
Crest of spillway.....	531.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,380 acre-ft, Apr. 3, 1999, elevation, 531.96 ft; minimum contents, 10,620 acre-ft, Mar. 21, 2000, elevation, 526.88 ft.

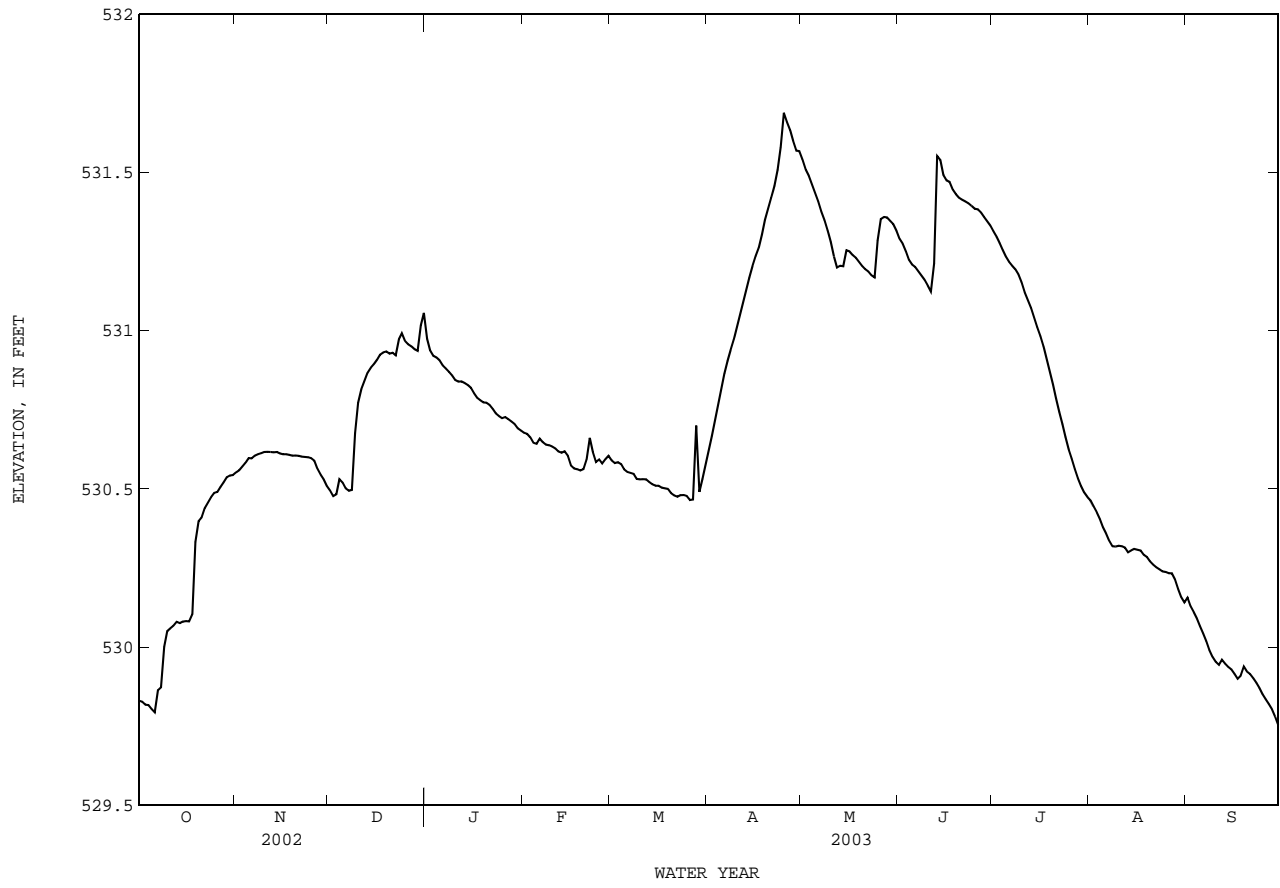
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 531.70 ft, Apr. 25; minimum elevation, 529.75 ft, Sept. 30.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	529.83	530.55	530.50	530.97	530.68	530.59	530.62	531.54	531.29	531.31	530.46	530.16
2	529.83	530.56	530.48	530.94	530.67	530.58	530.67	531.51	531.28	531.30	530.44	530.13
3	529.82	530.57	530.48	530.92	530.66	530.58	530.71	531.49	531.25	531.28	530.43	530.11
4	529.82	530.58	530.53	530.92	530.65	530.58	530.76	531.46	531.22	531.25	530.40	530.09
5	529.80	530.60	530.52	530.91	530.64	530.56	530.81	531.44	531.21	531.23	530.38	530.07
6	529.79	530.60	530.50	530.89	530.66	530.55	530.86	531.41	531.20	531.22	530.36	530.04
7	529.86	530.60	530.49	530.88	530.65	530.55	530.90	531.38	531.19	531.20	530.34	530.02
8	529.87	530.61	530.50	530.87	530.64	530.55	530.94	531.35	531.17	531.19	530.32	529.99
9	530.00	530.61	530.68	530.86	530.64	530.53	530.97	531.32	531.16	531.18	530.32	529.97
10	530.05	530.62	530.77	530.84	530.63	530.53	531.01	531.28	531.14	531.15	530.32	529.95
11	530.06	530.62	530.82	530.84	530.63	530.53	531.05	531.23	531.12	531.12	530.32	529.94
12	530.07	530.62	530.84	530.84	530.62	530.53	531.09	531.20	531.21	531.10	530.31	529.96
13	530.08	530.62	530.87	530.83	530.61	530.52	531.13	531.21	531.55	531.07	530.30	529.95
14	530.08	530.62	530.88	530.83	530.62	530.51	531.17	531.20	531.54	531.04	530.31	529.94
15	530.08	530.61	530.89	530.82	530.61	530.51	531.20	531.25	531.49	531.01	530.31	529.93
16	530.08	530.61	530.91	530.80	530.57	530.51	531.24	531.25	531.47	530.98	530.31	529.92
17	530.08	530.61	530.92	530.79	530.56	530.50	531.26	531.24	531.47	530.95	530.30	529.90
18	530.10	530.61	530.93	530.78	530.56	530.50	531.30	531.23	531.45	530.91	530.29	529.91
19	530.33	530.61	530.93	530.77	530.56	530.50	531.35	531.22	531.43	530.87	530.28	529.94
20	530.40	530.61	530.93	530.77	530.56	530.49	531.39	531.21	531.42	530.83	530.27	529.92
21	530.41	530.60	530.93	530.77	530.59	530.48	531.42	531.19	531.41	530.79	530.26	529.91
22	530.44	530.60	530.92	530.75	530.66	530.47	531.46	531.19	531.41	530.74	530.25	529.90
23	530.46	530.60	530.97	530.74	530.62	530.48	531.51	531.18	531.40	530.70	530.25	529.89
24	530.47	530.60	530.99	530.73	530.58	530.48	531.58	531.17	531.39	530.66	530.24	529.87
25	530.49	530.60	530.97	530.72	530.59	530.48	531.69	531.29	531.39	530.63	530.24	529.85
26	530.49	530.59	530.96	530.73	530.58	530.47	531.66	531.35	531.38	530.60	530.23	529.83
27	530.51	530.56	530.95	530.72	530.59	530.47	531.63	531.36	531.37	530.56	530.23	529.82
28	530.52	530.54	530.94	530.71	530.60	530.70	531.60	531.36	531.36	530.53	530.21	529.80
29	530.54	530.53	530.94	530.71	---	530.49	531.57	531.35	531.35	530.51	530.18	529.78
30	530.54	530.51	531.02	530.69	---	530.53	531.57	531.34	531.33	530.49	530.16	529.75
31	530.54	---	531.06	530.68	---	530.58	---	531.32	---	530.47	530.14	---
MEAN	530.18	530.59	530.81	530.81	530.62	530.53	531.20	531.31	531.34	530.93	530.30	529.94
MAX	530.54	530.62	531.06	530.97	530.68	530.70	531.69	531.54	531.55	531.31	530.46	530.16
MIN	529.79	530.51	530.48	530.68	530.56	530.47	530.62	531.17	531.12	530.47	530.14	529.75

CAL YR 2002 MAX 531.06 MIN 529.79
WTR YR 2003 MAX 531.69 MIN 529.75

08063600 Lake Waxahachie near Waxahachie, 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 mi².

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1980 to Aug. 1982, Oct. 1985 to June 1987, and Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1980 to Aug. 1982, Oct. 1985 to June 1987, and Oct. 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	
JAN	22...	1207	43	617	8.1	10.5	11.0	98	<2.0	230	26	88.4	2.42	38.2
MAR	13...	1419	98	582	7.7	16.6	9.9	103	<2.0	240	39	93.4	2.30	28.8
APR	09...	1045	31	692	7.4	14.0	6.6	65	3.5	250	36	97.5	2.56	50.4
AUG	07...	1020	8.1	989	7.8	27.2	7.1	91	<2.0	220	51	82.5	3.39	120
Date		Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN	22...	1	26	5.00	2	247	205	66.0	23.2	.36	6.66	377	362	<10
MAR	13...	.8	20	3.26	2	244	203	58.4	17.6	.32	5.94	345	340	25
APR	09...	1	30	5.70	2	261	218	88.8	24.1	.39	7.64	435	418	<10
AUG	07...	4	51	25.1	<1	206	170	207	68.5	.6	8.66	649	632	18
Date		Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, unfltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
JAN	22...	--	E.007	2.06	<.04	.26	.028	.02	.058	6.6	4	E.25	E1	76
MAR	13...	1.66	.009	1.67	<.04	.32	.015	<.02	--	3.8	3	E.17	<2	72
APR	09...	2.18	.012	2.19	<.04	.35	.050	.03	.089	7.0	E2	E.17	E1	77
AUG	07...	3.04	.011	3.05	<.04	.50	.081	.06	.187	8.0	10	E.27n	2	90
Date		Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
JAN	22...	<.06	.07	1.0	.45	1.6	E6	E.07	30.0	<.02	20.8	5.47	<3	<.20
MAR	13...	<.06	.13	E.5	.39	1.1	<10	.09	20.3	<.02	56.7	6.69	<3	<.20
APR	09...	<.06	.06	<.8	.55	1.4	E9	.09	28.5	<.02	16.6	4.65	<3	<.20
AUG	07...	<.06	.19	<.8	1.01	2.5	<8	.16	10.8	<.02	63.9	5.60	<3	<.20

08063685 Waxahachie Creek near Waxahachie, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
JAN 22...	5	1.25
MAR 13...	2	1.27
APR 09...	7	1.15
AUG 07...	8	.61

Remark codes used in this report:

< -- Less than
E -- Estimated value

Value qualifier codes used in this report:

n -- Below the NDV

TRINITY RIVER BASIN

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, 5.0 mi south of Ennis, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--Nov. 1965 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Bardwell Reservoir".

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (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.--Records fair. The lake is formed by a rolled earthfill dam 15,400 ft long, including a 350-ft 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-ft-diameter concrete conduit with two 5.0- by 10.0-ft sluice gates. The dam is owned by the U.S. Army Corps of Engineers. The lake was built for flood control and water conservation. 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 mi² in the Chambers Creek watershed. 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
Lowest gated outlet (invert).....	391.0

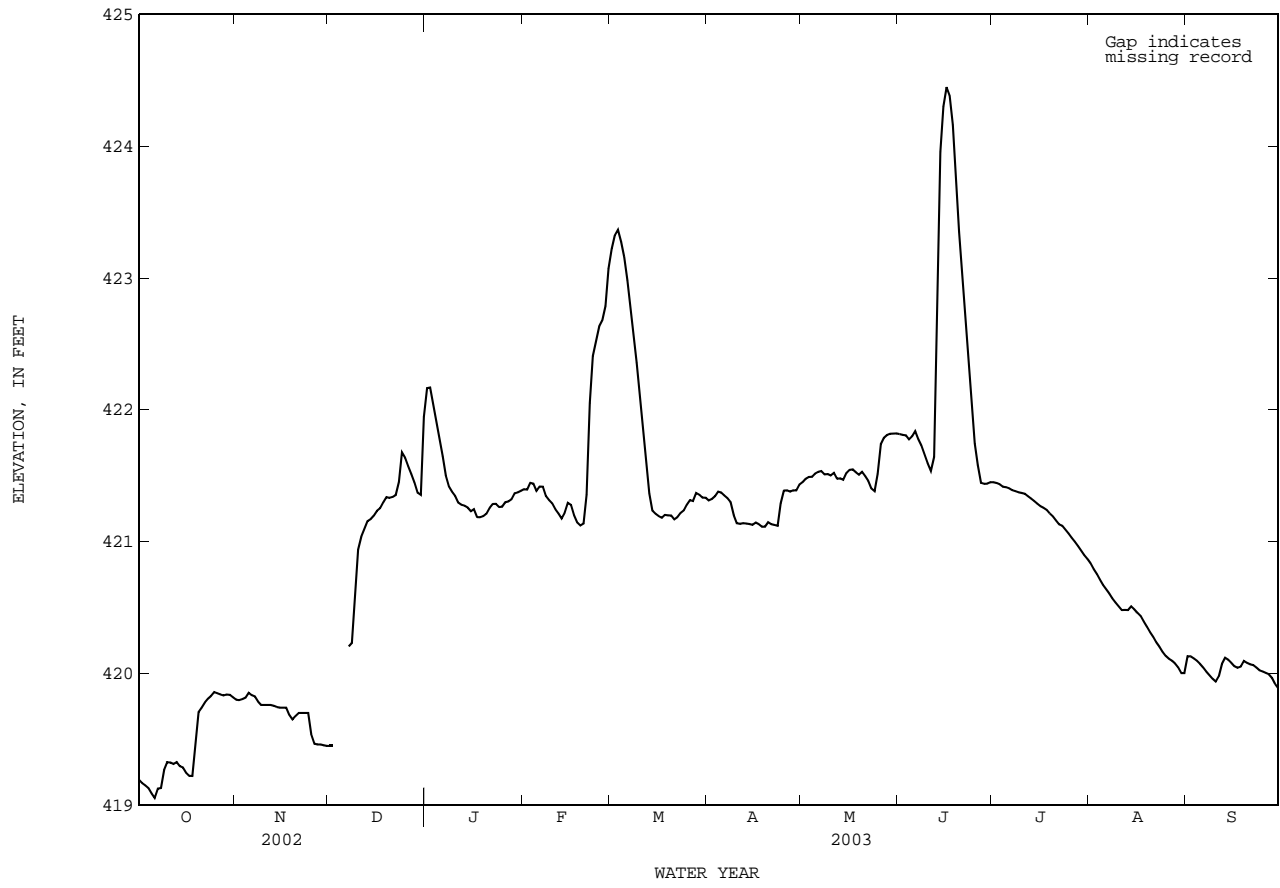
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 112,100 acre-ft, May 22, 1990, elevation, 434.54 ft; minimum contents since initial filling, 37,500 acre-ft, Dec. 8, 1999, elevation, 417.21 ft, Nov. 10, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 424.49 ft, June 16; minimum elevation, 419.02 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419.19	419.80	419.45	422.16	421.40	423.22	421.31	421.45	421.82	421.45	420.84	420.13
2	419.17	419.80	419.45	422.17	421.40	423.32	421.32	421.48	421.81	421.44	420.79	420.13
3	419.15	419.80	---	422.04	421.45	423.37	421.34	421.49	421.81	421.44	420.76	420.11
4	419.13	419.81	---	421.91	421.44	423.27	421.38	421.49	421.78	421.42	420.71	420.10
5	419.09	419.85	---	421.78	421.38	423.16	421.37	421.52	421.80	421.41	420.67	420.07
6	419.05	419.83	---	421.65	421.42	422.98	421.35	421.53	421.84	421.40	420.64	420.04
7	419.13	419.82	420.20	421.50	421.42	422.78	421.33	421.54	421.78	421.39	420.61	420.01
8	419.13	419.79	420.23	421.42	421.35	422.56	421.30	421.51	421.73	421.38	420.57	419.99
9	419.27	419.76	420.56	421.38	421.31	422.36	421.20	421.51	421.66	421.37	420.54	419.96
10	419.33	419.76	420.94	421.35	421.29	422.10	421.14	421.50	421.59	421.37	420.51	419.94
11	419.32	419.76	421.04	421.30	421.25	421.84	421.13	421.52	421.54	421.36	420.48	419.98
12	419.31	419.76	421.10	421.28	421.21	421.60	421.14	421.48	421.64	421.34	420.48	420.07
13	419.33	419.75	421.16	421.27	421.17	421.36	421.14	421.48	422.62	421.33	420.48	420.12
14	419.30	419.74	421.17	421.26	421.22	421.24	421.13	421.47	423.96	421.31	420.51	420.10
15	419.29	419.74	421.20	421.23	421.29	421.21	421.13	421.52	424.30	421.29	420.49	420.08
16	419.25	419.74	421.23	421.25	421.28	421.19	421.14	421.54	424.45	421.27	420.46	420.05
17	419.22	419.74	421.25	421.19	421.20	421.18	421.13	421.55	424.39	421.26	420.44	420.04
18	419.22	419.68	421.30	421.18	421.14	421.20	421.11	421.53	424.16	421.24	420.39	420.05
19	419.45	419.65	421.34	421.19	421.12	421.20	421.11	421.51	423.76	421.21	420.35	420.09
20	419.71	419.68	421.33	421.21	421.14	421.20	421.15	421.53	423.35	421.19	420.31	420.08
21	419.74	419.70	421.34	421.25	421.36	421.17	421.13	421.50	423.04	421.16	420.28	420.07
22	419.78	419.70	421.35	421.29	422.05	421.19	421.13	421.46	422.72	421.13	420.24	420.06
23	419.81	419.70	421.45	421.29	422.41	421.22	421.12	421.40	422.40	421.12	420.20	420.04
24	419.83	419.70	421.68	421.26	422.52	421.24	421.29	421.38	422.05	421.09	420.16	420.02
25	419.86	419.54	421.64	421.27	422.63	421.28	421.39	421.51	421.74	421.06	420.13	420.01
26	419.85	419.47	421.57	421.30	422.68	421.31	421.39	421.74	421.58	421.03	420.11	420.00
27	419.84	419.46	421.51	421.30	422.79	421.31	421.38	421.79	421.45	421.00	420.10	419.99
28	419.83	419.46	421.45	421.32	423.07	421.37	421.39	421.81	421.44	420.97	420.07	419.97
29	419.84	419.45	421.37	421.37	---	421.36	421.39	421.82	421.44	420.93	420.05	419.92
30	419.84	419.45	421.35	421.37	---	421.33	421.43	421.82	421.45	420.90	420.00	419.89
31	419.82	---	421.95	421.38	---	421.33	---	421.82	---	420.87	420.00	---
MEAN	419.45	419.70	---	421.42	421.62	421.82	421.25	421.55	422.37	421.23	420.40	420.04
MAX	419.86	419.85	---	422.17	423.07	423.37	421.43	421.82	424.45	421.45	420.84	420.13
MIN	419.05	419.45	---	421.18	421.12	421.17	421.11	421.38	421.44	420.87	420.00	419.89
CAL YR 2002	MAX 424.24	MIN 419.05										
WTR YR 2003	MAX 424.45	MIN 419.05										

08063700 Bardwell Lake near Ennis, TX--Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1998 to current year.

PESTICIDE DATA: July 1999 to current year.

REMARKS.--Pesticide samples are composited from discrete samples collected at the surface, middle, and bottom of the reservoir.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

321506096382601 -- Bardwell Lk Site AC

Date	Time	Reser- voir storage acre-ft (00054)	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF 100 mL (31625)	E coli, m-TEC MF, water, 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	
JAN	22...	1229	47500	.58	1.00	371	7.8	9.5	10.3	91	E8k	E6k	110	6
JAN	22-22	1229	--	--	--	--	--	--	--	--	--	--	--	--
	22...	1237	--	--	10.0	373	7.8	9.5	10.4	92	--	--	--	--
	22...	1245	--	--	20.0	374	7.8	9.5	10.5	93	--	--	--	--
	22...	1253	--	--	30.0	373	7.8	9.5	10.6	94	--	--	--	--
	22...	1301	--	--	37.0	374	7.7	9.5	10.6	94	--	--	120	7
APR	09...	1243	47200	.43	1.00	414	8.0	17.0	9.4	98	E9k	E8k	150	20
APR	09-09	1243	--	--	--	--	--	--	--	--	--	--	--	--
	09...	1255	--	--	10.0	414	8.0	17.0	9.5	99	--	--	--	--
	09...	1308	--	--	20.0	414	8.1	17.0	9.6	100	--	--	--	--
	09...	1322	--	--	30.0	414	8.1	17.0	9.6	100	--	--	--	--
	09...	1335	--	--	36.0	414	8.0	17.0	11.0	114	--	--	150	21
AUG	07...	1051	45300	.73	1.00	334	8.3	30.5	8.8	118	<1	<1	100	12
AUG	07-07	1051	--	--	--	--	--	--	--	--	--	--	--	--
	07...	1057	--	--	10.0	335	8.2	30.0	8.1	108	--	--	--	--
	07...	1103	--	--	20.0	339	7.3	29.0	4.8	63	--	--	--	--
	07...	1109	--	--	30.0	359	6.4	26.0	1.0	12	--	--	--	--
	07...	1115	--	--	35.0	374	6.3	25.0	1.4	17	--	--	130	--

321506096382601 -- Bardwell Lk Site AC

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	
JAN	41.9	2.46	28.6	1	34	4.41	1	130	109	43.2	17.4	.35	6.1	
JAN	22-22	--	--	--	--	--	--	--	--	--	--	--	--	
	22...	--	--	--	--	--	--	--	--	--	--	--	--	
	22...	--	--	--	--	--	--	--	--	--	--	--	--	
	22...	42.5	2.47	28.3	1	34	4.19	1	131	43.3	16.9	.35	5.9	
APR	09...	54.2	2.66	27.3	1	28	4.28	1	152	45.2	17.5	.34	5.9	
APR	09-09	--	--	--	--	--	--	--	--	--	--	--	--	
	09...	--	--	--	--	--	--	--	--	--	--	--	--	
	09...	--	--	--	--	--	--	--	--	--	--	--	--	
	09...	54.3	2.68	27.8	1	28	4.40	1	150	44.5	16.6	.35	5.9	
AUG	07...	35.6	3.04	28.2	1	36	5.77	<1	109	90	40.9	17.5	.4	8.2
AUG	07-07	--	--	--	--	--	--	--	--	--	--	--	--	
	07...	--	--	--	--	--	--	--	--	--	--	--	--	
	07...	--	--	--	--	--	--	--	--	--	--	--	--	
	07...	46.5	3.30	22.8	.9	27	5.72	<1	176	145	11.7	14.0	.3	14.9

08063700 Bardwell Lake near Ennis, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

321506096382601 -- Bardwell Lk Site AC

Date	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF ug/L (82679)	Propargite, water, fltrd, 0.7u GF ug/L (82685)	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (82665)	Terbufos, water, fltrd, ug/L (82675)	Thio-bencarb, water, fltrd, ug/L (82681)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd, 0.7u GF ug/L (82661)
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22-22 22...	.02	<.010	<.011	<.02	<.004	.091	.03	<.034	<.02	<.005	<.002	<.009
JAN 22... 22... 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--	--	--	--	--
APR 09-09 09... 09... 09...	E.01n	<.010	<.011	<.02	<.004	.070	.03	<.034	<.02	<.005	<.002	<.009
AUG 07... 07... 07... 07...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07-07 07... 07... 07... 07...	E.01n	<.010	<.011	<.02	<.004	.044	.02	<.034	<.02	<.005	<.002	<.009

321704096393501 -- Bardwell Lk Site BC

Date	Time	Transparency Secchi disc, meters (00078)	Sampling depth, feet (00003)	Specif. conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC col/100 mL (31625)	E coli, m-TEC MP, col/100 mL (31633)	Hardness, water, unfltrd, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN 22... 22... 22...	1320 1327 1335	.49 -- --	1.00 10.0 22.0	377 376 376	7.9 7.9 7.9	9.5 9.5 9.5	10.8 10.7 10.7	96 95 95	E6k -- --	E5k -- --	120 -- 120	9 -- 6	43.0 -- 42.8
APR 09... 09... 09...	1416 1421 1426	.37 -- --	1.00 10.0 20.0	412 412 412	8.1 8.1 8.1	16.5 16.5 16.5	9.7 9.8 10.6	100 101 109	E5k -- --	E10k -- --	150 -- 150	18 -- 16	54.1 -- 53.7
AUG 07... 07... 07...	1137 1145 1153	.52 -- --	1.00 10.0 21.0	336 338 345	8.2 7.8 7.2	30.0 29.0 28.5	8.0 6.4 2.2	106 83 28	<1 -- --	<1 -- --	100 -- 100	9 -- 4	35.2 -- 36.7

321704096393501 -- Bardwell Lk Site BC

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., mg/L (00452)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
JAN 22... 22... 22...	2.48 -- 2.46	28.4 -- 28.1	1 -- 1	33 -- 33	4.40 -- 4.37	1 -- 1	130 -- 133	109 -- 111	43.9 -- 43.8	17.2 -- 17.7	.37 -- .36	6.1 -- 6.0	213 -- 214
APR 09... 09... 09...	2.69 -- 2.67	27.4 -- 26.5	1 -- 1	28 -- 28	4.39 -- 4.30	1 -- 1	154 -- 154	129 -- 129	44.5 -- 44.5	16.5 -- 15.9	.35 -- .34	5.8 -- 5.9	237 -- 235
AUG 07... 07... 07...	3.10 -- 3.01	28.0 -- 26.3	1 -- 1	36 -- 34	5.90 -- 5.59	<1 -- <1	112 -- 122	93 -- 101	41.8 -- 38.8	17.5 -- 16.9	.4 -- .4	8.2 -- 7.5	195 -- 196

TRINITY RIVER BASIN

08063700 Bardwell Lake near Ennis, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

321704096393501 -- Bardwell Lk Site BC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN										
22...	--	E.006	.42	.07	.31	.38	.006	<.02	<10	E1.2
22...	--	--	--	--	--	--	--	--	--	--
22...	--	E.007	.42	.08	.31	.39	.007	<.02	<10	2.3
APR										
09...	.85	.031	.88	.08	.34	.42	.007	<.02	<10	E.8
09...	--	--	--	--	--	--	--	--	--	--
09...	.84	.033	.87	.07	.34	.42	.007	<.02	<10	E.8
AUG										
07...	--	<.008	<.06	<.04	--	.31	.005	<.02	<8	.6
07...	--	<.008	<.06	<.04	--	.31	.007	<.02	<8	1.6
07...	--	<.008	<.06	.11	.31	.42	.008	<.02	E6n	44.3

321830096404001 -- Bardwell Lk Site CC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)
JAN													
22...	1355	.21	1.00	379	7.9	10.0	10.8	97	--	E.006	.44	.06	.30
22...	1400	--	4.00	379	8.0	10.0	11.0	99	--	--	--	--	--
APR													
09...	1447	.21	1.00	414	8.1	16.0	10.8	110	.82	.030	.85	.06	.36
09...	1452	--	3.00	413	8.1	16.0	10.7	109	--	--	--	--	--
AUG													
07...	1215	.43	1.00	355	8.2	29.5	7.8	103	--	<.008	<.06	<.04	--
07...	1220	--	3.00	355	8.1	29.5	7.5	99	--	--	--	--	--

321830096404001 -- Bardwell Lk Site CC

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN					
22...	.36	.005	<.02	<10	E.9
22...	--	--	--	--	--
APR					
09...	.42	.007	<.02	<10	E.8
09...	--	--	--	--	--
AUG					
07...	.33	.006	<.02	<8	.4
07...	--	--	--	--	--

321758096412901 -- Bardwell Lk Site DC

Date	Time	Trans- parency Secchi disc, meters (00078)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
JAN													
22...	1417	.24	1.00	375	8.0	10.0	11.1	100	E2k	E4k	120	6	42.9
22...	1425	--	6.00	375	8.0	9.5	10.7	95	--	--	120	7	43.2
APR													
09...	1509	.24	1.00	420	8.1	16.5	10.3	106	E6k	E1k	150	16	54.9
09...	1515	--	5.00	419	8.1	16.5	10.3	106	--	--	150	16	55.3
AUG													
07...	1239	.34	1.00	343	8.2	30.5	8.1	108	<1	<1	97	11	33.6
07...	1247	--	5.00	359	8.2	30.5	7.9	106	--	--	98	7	34.1

08063700 Bardwell Lake near Ennis, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

321758096412901 -- Bardwell Lk Site DC

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt, titr., field, mg/L (00452)	Bicarbonate, wat flt, titr., field, mg/L (00453)	Alkalinity, wat flt, field, mg/L as CaCO3 (39086)	Sulfate, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of constituents mg/L (70301)
JAN													
22...	2.48	28.5	1	33	4.44	2	133	112	43.5	15.1	.38	6.0	212
22...	2.49	27.7	1	33	4.27	1	133	111	43.5	16.0	.35	6.1	212
APR													
09...	2.69	28.7	1	29	4.66	2	158	132	46.3	16.8	.35	5.9	243
09...	2.72	27.2	1	28	4.55	2	159	133	46.3	16.7	.34	5.8	243
AUG													
07...	3.04	30.3	1	39	6.07	<1	104	87	45.9	18.8	.4	8.1	197
07...	3.10	31.7	1	39	6.53	<1	110	92	50.7	20.2	.4	8.0	209

321758096412901 -- Bardwell Lk Site DC

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JAN										
22...	--	E.007	.42	.06	.31	.37	.006	<.02	<10	E1.4
22...	--	E.006	.41	.05	.31	.36	.006	<.02	E5	2.1
APR										
09...	.86	.026	.88	.07	.39	.46	.007	<.02	E6	1.7
09...	.84	.029	.87	.06	.35	.41	.007	<.02	<10	2.8
AUG										
07...	--	<.008	<.06	<.04	--	.32	.005	<.02	<8	.5
07...	--	<.008	E.04n	<.04	--	.32	.005	<.02	<8	.5

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- k -- Counts outside acceptable range
- n -- Below the NDV
- o -- Result determined by alternate method

TRINITY RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1963 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 360.18 ft above NGVD of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Oct. 2, 1998, at datum 10.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since Nov. 1965, at least 10% of contributing drainage area has been regulated. No flow at times. No known diversions.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.00	0.00	184	0.42	115	0.47	e0.09	e0.00	e0.15	e0.15	e0.15
2	0.16	0.00	0.00	250	0.45	114	0.46	e0.09	e0.00	e0.15	e0.15	e0.15
3	0.16	0.15	0.04	303	0.47	268	0.45	e0.09	e0.00	e0.15	e0.15	e0.15
4	0.15	0.17	0.06	299	70	392	e71	e0.09	e0.00	e0.15	e0.15	e0.15
5	0.15	0.18	0.00	296	118	386	e100	e0.09	e0.00	e0.15	e0.15	e0.15
6	0.17	0.09	0.00	293	120	380	e100	e0.09	e70	e0.15	e0.15	e0.15
7	0.18	0.00	0.00	233	120	413	e100	e0.09	99	e0.15	e0.15	e0.15
8	0.19	0.00	0.01	185	118	441	e100	e0.09	99	e0.15	e0.15	e0.15
9	0.21	0.14	1.2	135	118	448	e100	e0.09	99	e0.15	e0.15	e0.15
10	0.12	0.23	0.47	98	119	441	74	e0.09	99	e0.15	e0.15	e0.15
11	0.04	0.15	0.17	98	118	440	e11	e0.09	99	e0.15	e0.15	e0.15
12	0.00	0.13	0.02	98	118	442	e0.09	e0.09	99	e0.15	e0.15	e0.15
13	0.00	0.11	0.00	98	118	382	e0.09	e0.09	100	e0.15	e0.15	e0.15
14	0.00	0.13	0.00	99	120	191	e0.09	e0.09	101	e0.15	e0.15	e0.15
15	0.00	0.14	0.00	98	119	102	e0.09	e0.09	101	e0.15	e0.15	e0.15
16	0.00	0.10	0.00	97	119	102	e0.09	e0.09	e245	e0.15	e0.15	e0.15
17	0.00	0.07	0.00	62	119	103	e0.09	e0.09	e500	e0.15	e0.15	e0.15
18	0.07	0.09	0.00	0.64	119	104	e0.09	e0.09	e640	e0.15	e0.15	e0.15
19	0.30	0.02	0.00	0.49	119	104	e0.09	e0.09	e720	e0.15	e0.15	e0.15
20	0.25	0.01	0.00	0.45	118	106	e0.09	e0.09	e600	e0.15	e0.15	e0.15
21	0.21	0.00	0.00	0.40	121	68	e0.09	e70	e500	e0.15	e0.15	0.16
22	0.41	0.00	0.00	0.39	120	1.4	e0.09	99	e500	e0.15	e0.15	0.15
23	0.18	0.00	0.40	0.37	117	0.54	e0.09	e78	e500	e0.15	e0.15	0.15
24	0.16	0.00	118	0.54	116	0.47	e0.09	e0.00	503	e0.15	e0.15	0.14
25	0.15	0.00	189	0.60	116	0.63	e0.09	e0.00	455	e0.15	e0.15	0.14
26	0.00	0.00	186	0.65	115	0.56	e0.09	e0.00	423	e0.15	e0.15	0.14
27	0.00	0.00	186	0.43	115	0.53	e0.09	e0.00	338	e0.15	e0.15	0.13
28	0.00	0.00	183	0.41	115	0.50	e0.09	e0.00	e22	e0.15	e0.15	0.13
29	0.00	0.00	182	0.43	---	0.48	e0.09	e0.00	e0.15	e0.15	e0.15	0.12
30	0.00	0.00	183	0.41	---	0.47	e0.09	e0.00	e0.15	e0.15	e0.15	0.12
31	0.00	---	184	0.42	---	e0.45	---	e0.00	---	e0.15	e0.15	---
TOTAL	3.42	1.91	1413.37	2932.63	2906.34	5548.03	659.09	248.80	6912.30	4.65	4.65	4.38
MEAN	0.11	0.064	45.6	94.6	104	179	22.0	8.03	230	0.15	0.15	0.15
MAX	0.41	0.23	189	303	121	448	100	99	720	0.15	0.15	0.16
MIN	0.00	0.00	0.00	0.37	0.42	0.45	0.09	0.00	0.00	0.15	0.15	0.12
AC-FT	6.8	3.8	2800	5820	5760	11000	1310	493	13710	9.2	9.2	8.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

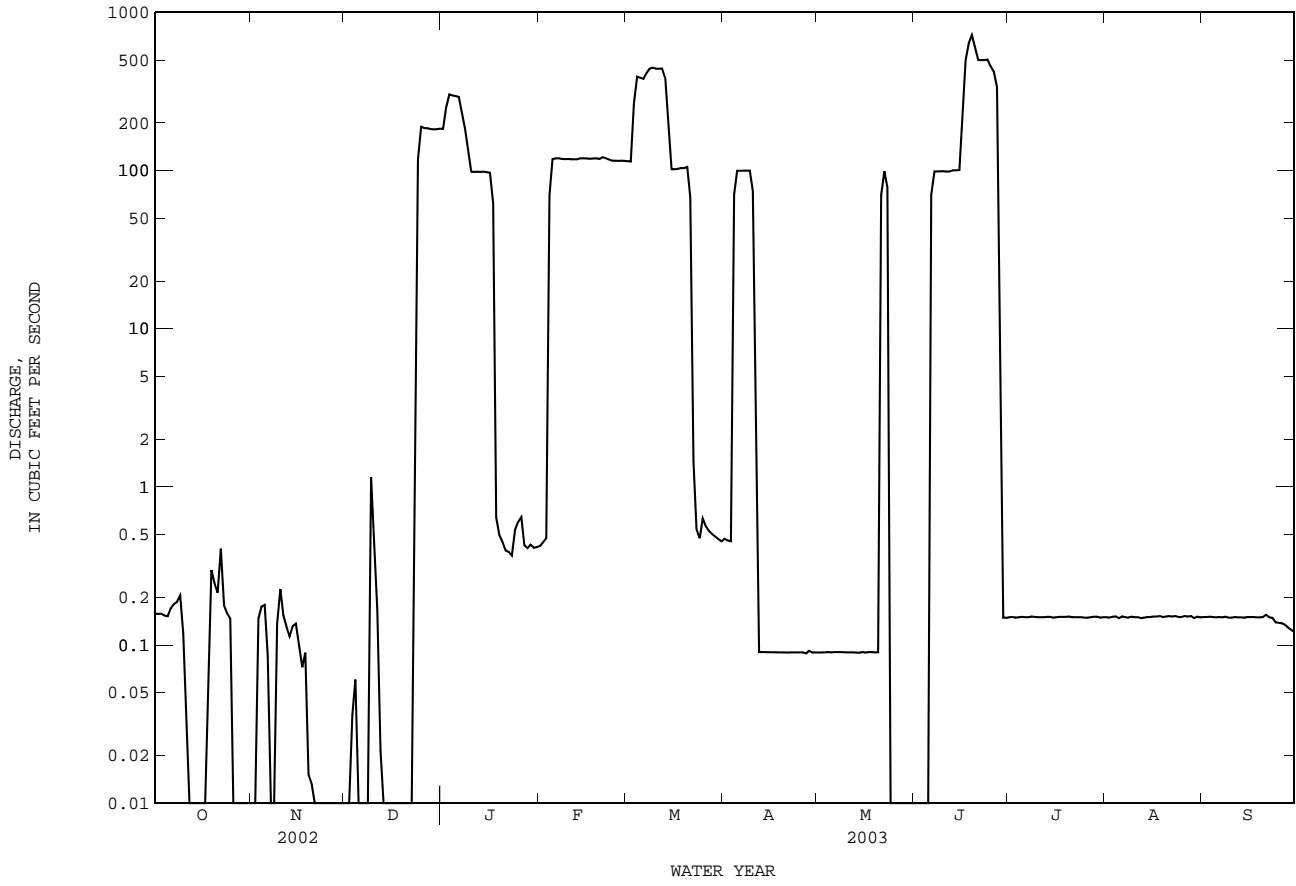
	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964
MEAN	18.4	72.8	86.7	124	114	162	126	155	181	24.1	4.19	5.69
MAX	299	723	603	921	605	710	590	827	773	370	71.8	178
(WY)	1974	1992	1999	1998	1992	1997	1977	1973	1989	1981	1973	1976
MIN	0.000	0.000	0.018	0.022	0.022	0.024	0.11	0.11	0.001	0.000	0.000	0.000
(WY)	1964	1964	1990	1967	1967	1967	1996	1996	1996	1966	1964	1966

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1964 - 2003

ANNUAL TOTAL	20925.00	20639.57	
ANNUAL MEAN	57.3	56.5	89.2
HIGHEST ANNUAL MEAN			318
LOWEST ANNUAL MEAN			0.063
HIGHEST DAILY MEAN	848	Jan 1	e720 Jun 19
LOWEST DAILY MEAN	0.00	Aug 16	0.00 Oct 12
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 16	0.00 Oct 26
MAXIMUM PEAK FLOW			e720 Jun 19
MAXIMUM PEAK STAGE			unknown Jun 19
ANNUAL RUNOFF (AC-FT)	41500	40940	64610
10 PERCENT EXCEEDS	183	183	279
50 PERCENT EXCEEDS	0.22	0.15	1.0
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated
aa Adjusted to present datum.

08063800 Waxahachie Creek near Bardwell, TX--Continued



TRINITY RIVER BASIN

08063800 Waxahachie Creek near Bardwell, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1980 to Sept. 1982, Oct. 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN 22...	1440	44	412	8.3	10.5	11.3	101	--i	130	14	45.6	2.98	30.6
APR 09...	1230	59	418	7.8	16.5	7.6	78	--i	150	20	54.0	2.68	27.3
AUG 07...	1203	E11	439	7.7	28.5	8.2	108	<2.0	140	--	50.1	3.96	34.4
Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat tit inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
JAN 22...	1	34	4.26	<1	137	113	53.3	19.6	.39	5.46	240	231	<10
APR 09...	1	28	4.30	2	150	127	46.4	16.2	.35	5.67	254	237	21
AUG 07...	1	34	4.89	<1	175	144	42.4	22.1	.4	10.5	277	255	11
Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)
JAN 22...	.34	.013	.35	.06	.35	.42	.020	E.01	--	5.7	2	.35	2
APR 09...	.85	.027	.88	.06	.34	.40	.009	<.02	--	5.7	E1	E.24	2
AUG 07...	--	<.008	.11	<.04	--	.42	.050	.03	.080	7.2	E2n	E.23n	8
Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
JAN 22...	64	<.06	E.03	.9	.23	1.1	<10	.17	7.4	<.02	7.5	3.88	<3
APR 09...	69	<.06	E.03	<.8	.19	1.2	<10	<.08	1.9	E.01	8.4	3.35	<3
AUG 07...	65	<.06	E.02n	<.8	.26	1.7	E5n	.11	14.8	<.02	6.3	3.55	<3

08063800 Waxahachie Creek near Bardwell, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
JAN 22...	<.20	4	1.07
APR 09...	<.20	1	.97
AUG 07...	<.20	Mn	.64

Remark codes used in this report:

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this report:

n -- Below the NDV

Null value qualifier codes used in this report:

i -- Required sample type not received

TRINITY RIVER BASIN

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 mi².

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 NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Oct. 1984, at least 10% of contributing drainage area has been regulated. At times flow is affected by discharge from floodwater-retarding structures in the drainage basin above this station. No flow at times. No known diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood information for the next downstream station, Chambers Creek near Corsicana, station (08064500) 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.52	12	16	906	43	1010	52	33	16	15	e0.68	1.8
2	0.43	11	17	465	42	572	52	29	13	14	e0.65	46
3	0.36	11	18	434	42	562	50	28	12	12	e0.63	56
4	0.29	11	21	385	56	1080	73	25	11	12	e0.61	21
5	0.23	13	25	366	e89	891	155	23	8.9	11	e0.59	12
6	0.19	13	27	353	117	704	135	22	17	11	e0.56	7.4
7	0.27	13	19	306	126	649	122	22	106	9.7	e0.54	4.7
8	0.24	13	16	222	125	650	115	19	110	10	e1.0	3.5
9	0.33	12	624	193	119	616	109	17	111	11	e1.1	2.7
10	1.1	12	1930	136	119	592	106	16	111	8.9	e2.1	1.9
11	14	11	568	127	120	575	45	15	113	6.8	e1.4	1.7
12	8.4	10	240	124	117	562	40	14	140	5.5	e1.1	2.6
13	3.9	8.4	136	130	115	e480	38	31	1670	4.5	e1.7	15
14	3.1	9.5	85	138	169	e505	36	85	2230	3.5	e2.6	29
15	2.5	13	59	132	259	e414	35	85	744	2.9	e3.8	15
16	2.8	14	50	129	154	e329	35	77	813	2.5	e2.5	11
17	2.0	15	45	121	124	e259	35	78	872	2.2	e1.9	8.2
18	1.5	15	40	57	110	e193	34	35	782	2.0	e1.3	5.6
19	34	15	37	52	105	223	34	21	884	e1.7	e1.3	5.6
20	122	15	32	51	106	203	34	16	727	e1.6	e0.91	17
21	59	16	29	51	1080	176	34	23	510	e1.3	e0.85	13
22	43	15	27	50	3730	95	34	112	491	e1.1	e0.79	14
23	50	15	150	47	3230	e76	32	104	479	e0.97	e1.2	10
24	49	16	751	44	898	e90	33	21	468	0.96	e1.0	4.4
25	35	16	368	43	526	e85	189	23	375	e0.89	e0.59	2.9
26	25	16	254	45	430	e104	105	76	222	e0.85	e0.20	2.2
27	19	16	213	47	646	72	58	96	158	e0.82	e0.19	1.6
28	16	15	189	47	1710	64	40	99	20	e0.79	e23	1.2
29	15	15	176	47	---	59	32	60	16	e0.76	13	0.87
30	13	16	196	47	---	54	33	33	15	e0.73	4.6	0.71
31	12	---	2180	45	---	52	---	21	---	e0.70	2.1	---
TOTAL	534.16	402.9	8538	5340	14507	11996	1925	1359	12244.9	157.67	74.49	318.58
MEAN	17.2	13.4	275	172	518	387	64.2	43.8	408	5.09	2.40	10.6
MAX	122	16	2180	906	3730	1080	189	112	2230	15	23	56
MIN	0.19	8.4	16	43	42	52	32	14	8.9	0.70	0.19	0.71
AC-FT	1060	799	16940	10590	28770	23790	3820	2700	24290	313	148	632

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

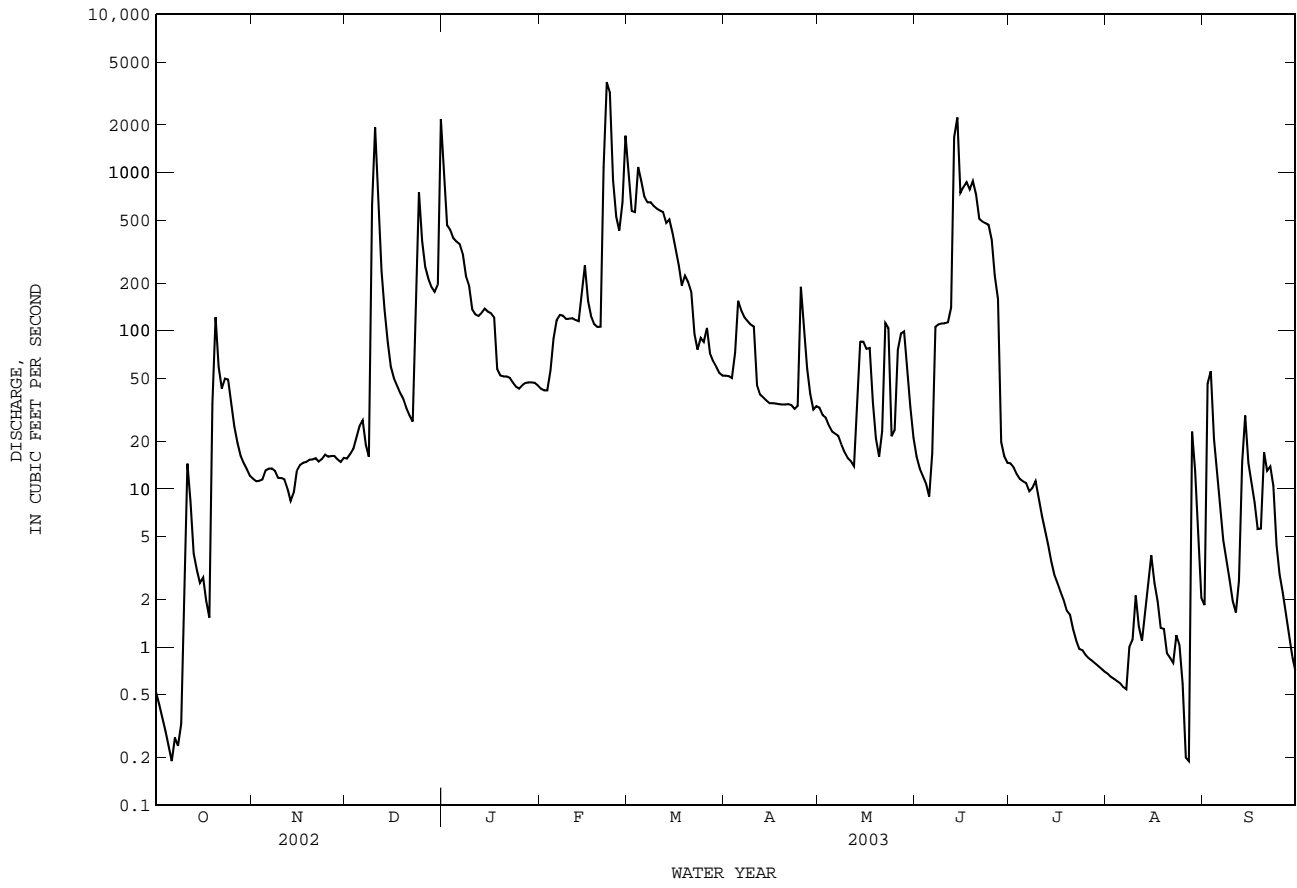
MEAN	289	338	880	547	792	809	531	666	613	45.8	30.5	23.9
MAX	1499	2002	3579	2393	2450	2497	2218	2932	2560	194	185	149
(WY)	1986	1999	1992	1998	1997	2001	1995	1989	1986	1989	1995	1991
MIN	0.000	0.000	1.45	4.66	5.16	6.35	12.2	1.34	0.051	0.081	0.000	0.000
(WY)	1989	2000	1989	1996	1996	1996	1996	1996	1996	1988	1988	1985

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1984 - 2003

ANNUAL TOTAL	79524.02		57397.70				
ANNUAL MEAN	218		157		462		
HIGHEST ANNUAL MEAN					1263		
LOWEST ANNUAL MEAN					12.9		
HIGHEST DAILY MEAN	4490	Feb 7	3730	Feb 22	22700	Dec 21	1991
LOWEST DAILY MEAN	0.03	Sep 29	0.19	Oct 6	0.00	Aug 6	1985
ANNUAL SEVEN-DAY MINIMUM	0.04	Sep 24	0.27	Oct 3	0.00	Aug 6	1985
MAXIMUM PEAK FLOW			4190		43400		
MAXIMUM PEAK STAGE			25.15		32.57		
ANNUAL RUNOFF (AC-FT)	157700		113800		334800		
10 PERCENT EXCEEDS	604		484		1160		
50 PERCENT EXCEEDS	45		32		42		
90 PERCENT EXCEEDS	0.13		1.1		0.09		

e Estimated

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.
 PESTICIDE DATA: Feb. 2000 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1983 to Dec. 1993 (local observer), Jan. 1994 to Sept. 2003 (discontinued).
 WATER TEMPERATURE: Oct. 1983 to Dec. 1993 (local observer), Jan. 1994 to Sept. 2003 (discontinued).

INSTRUMENTATION.--Water-quality monitor since Jan. 1994.

REMARKS.--Records good. Interruptions in the record were due to 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 relations 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, 2,510 microsiemens/cm, Nov. 21, 1988; minimum, 100 microsiemens/cm, 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, 1,860 microsiemens/cm, Oct. 11; minimum, 162 microsiemens/cm, June 13.
 WATER TEMPERATURE: Maximum, 31.8°C, July 29, Aug. 1; minimum, 4.4°C, Feb. 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
NOV													
04...	1000	--	596	7.5	13.8	6.9	76	--	--	--	--	--	--
DEC													
09...	1000	--	715	7.7	8.2	10.1	86	--	--	--	--	--	--
12...	1330	226	417	7.7	9.0	11.2	97	E5.1	150	43	55.1	3.08	20.1
JAN													
14...	1130	--	437	8.1	8.2	12.0	102	--	--	--	--	--	--
FEB													
11...	1000	--	436	8.1	8.5	11.8	101	--	--	--	--	--	--
MAR													
06...	1310	693	436	8.1	8.8	12.2	105	2.3	170	32	64.9	2.85	23.6
12...	1030	--	419	7.8	11.4	9.4	87	--	--	--	--	--	--
27...	1000	--	560	8.1	18.5	8.9	97	--	--	--	--	--	--
APR													
07...	1200	--	460	8.1	18.7	9.6	104	--	--	--	--	--	--
15...	1000	--	610	7.8	21.3	6.8	77	--	--	--	--	--	--
22...	0930	--	601	7.8	21.0	6.7	76	--	--	--	--	--	--
22...	1000	34	601	7.8	21.0	6.7	76	<2.0	220	19	79.9	4.18	40.5
MAY													
06...	0930	--	436	7.7	25.4	5.1	64	--	--	--	--	--	--
13...	0945	--	836	7.7	23.3	4.8	57	--	--	--	--	--	--
20...	0915	--	554	7.4	26.2	5.9	73	--	--	--	--	--	--
JUN													
09...	1015	--	421	7.9	24.8	6.1	74	--	--	--	--	--	--
JUL													
01...	1230	--	564	7.6	28.3	6.4	83	--	--	--	--	--	--
08...	1130	8.7	580	7.4	28.0	5.4	70	<2.0	190	37	68.1	4.45	47.3
24...	0930	--	--	--	--	--	--	--	--	--	--	--	--
30...	1315	E1.8	1020	7.4	30.0	4.8	65	E5.3	300	88	107	7.57	102
AUG													
06...	1033	E2.0	1200	7.4	28.0	5.2	68	<2.0	330	100	116	10.1	124

TRINITY RIVER BASIN

249

08064100 Chambers Creek near Rice, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm, field, mg/L (00452)	Bicarbonate, wat flt incrm, field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue water, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)
NOV 04...	--	--	--	--	--	152	95.8	32.5	--	--	--	--	--
DEC 09...	--	--	--	--	--	218	82.0	45.2	--	--	--	--	--
12...	.7	22	4.50	<1	131	108	56.3	12.0	.44	9.32	260	239	476
JAN 14...	--	--	--	--	--	146	45.3	16.2	--	--	--	--	--
FEB 11...	--	--	--	--	--	139	49.1	17.9	--	--	--	--	--
MAR 06...	.8	22	3.70	1	171	142	47.1	14.0	.33	7.51	279	260	103
12...	--	--	--	--	--	131	45.3	16.3	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07...	--	--	--	--	--	152	49.4	19.4	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	1	29	2.97	2	237	198	71.1	34.8	.40	5.03	364	359	45
MAY 06...	--	--	--	--	--	174	80.4	35.8	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 09...	--	--	--	--	--	115	52.6	20.9	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	2	35	4.29	<1	184	152	65.1	41.2	.4	10.2	350	332	43
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	3	--	<.16	<1	257	212	140	105	.5	11.3	625	--	14
AUG 06...	3	44	5.28	<1	278	229	182	133	.5	11.0	757	718	23

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Total nitrogen, water, unfltrd mg/L (00600)	Organic nitrogen, water, unfltrd mg/L (00605)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)
NOV 04...	--	E.006	.64	<.04	1.4	--	--	--	.79	.108	--	<.02	--
DEC 09...	--	E.005	.15	<.04	.76	--	--	--	.61	.109	--	<.02	--
12...	2.55	.325	2.88	.08	--	--	.71	.79	--	--	.105	.06	.193
JAN 14...	.86	.008	.87	E.03	1.3	--	--	--	.43	.058	--	<.02	--
FEB 11...	.62	.012	.63	.09	1.1	.43	--	--	.51	.045	--	<.02	--
MAR 06...	2.26	.189	2.45	E.03	--	--	.49	--	--	--	.019	E.01	--
12...	1.09	.058	1.15	E.03	1.8	--	--	--	.61	.076	--	<.02	--
27...	--	E.004	.71	<.04	1.1	--	--	--	.39	.043	--	<.02	--
APR 07...	.67	.023	.69	E.02	1.2	--	--	--	.50	.059	--	<.02	--
15...	--	E.004	.37	<.04	.84	--	--	--	.47	.060	--	<.02	--
22...	--	<.008	.32	<.04	.75	--	--	--	.43	.077	--	<.02	--
22...	--	<.008	.31	<.04	--	--	--	.28	--	--	.008	<.02	--
MAY 06...	--	E.004	.41	<.04	1.1	--	--	--	.73	.103	--	<.02	--
13...	--	E.004	.21	<.04	.90	--	--	--	.68	.107	--	<.02	--
20...	.96	.041	1.00	<.04	2.0	--	--	--	1.0	.143	--	<.02	--
JUN 09...	.52	.014	.53	<.04	1.3	--	--	--	.74	.096	--	<.02	--
JUL 01...	--	<.008	<.06	<.04	--	--	--	--	.71	.075	--	<.02	--
08...	--	<.008	<.06	<.04	--	--	--	.30	--	--	E.02	<.02	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	<.008	<.06	<.04	--	--	--	.39	--	--	<.04	<.02	--
AUG 06...	--	<.008	<.06	<.04	--	--	--	.29	--	--	<.04	<.02	--

TRINITY RIVER BASIN

08064100 Chambers Creek near Rice, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Organic carbon, water, unfltrd mg/L (00680)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, suspd sediment total, mg/L (00689)	Suspended sediment concentration mg/L (80154)	Suspnd. sediment, sieve diameter <.063mm percent (70331)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)
NOV													
04...	--	6.7	2.6	69	99	--	--	--	--	--	--	--	--
DEC													
09...	--	6.3	3.9	132	82	--	--	--	--	--	--	--	--
12...	23.2	--	--	--	--	E1	.37	6	46	<.06	.30	<.8	.43
JAN													
14...	--	3.5	1.6	47	97	--	--	--	--	--	--	--	--
FEB													
11...	--	3.3	1.4	41	99	--	--	--	--	--	--	--	--
MAR													
06...	6.8	--	--	--	--	M	.53	2	54	<.06	.07	<.8	.28
12...	--	3.8	2.8	78	100	--	--	--	--	--	--	--	--
27...	--	--	--	64	98	--	--	--	--	--	--	--	--
APR													
07...	--	3.4	1.9	59	91	--	--	--	--	--	--	--	--
15...	--	--	--	53	100	--	--	--	--	--	--	--	--
22...	--	--	--	109	92	--	--	--	--	--	--	--	--
22...	4.2	--	--	--	--	<2	E.19	E2	68	<.06	<.04	<.8	.35
MAY													
06...	--	3.8	3.0	133	74	--	--	--	--	--	--	--	--
13...	--	--	--	96	99	--	--	--	--	--	--	--	--
20...	--	--	--	103	100	--	--	--	--	--	--	--	--
JUN													
09...	--	3.5	4.0	47	96	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	90	100	--	--	--	--	--	--	--	--
08...	6.1	--	--	--	--	<2	E.23n	3	78	<.06	.05	<.8	.25
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	8.9	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	9.5	--	--	--	--	E1n	E.19n	--	113	<.06	E.02n	<.8	.60

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium, natural water, fltrd, ug/L (22703)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	Aceto-chlor, water, fltrd, ug/L (49260)
NOV													
04...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
DEC													
09...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
12...	5.0	10	E.05	5.5	E.01	3.4	5.47	<3	<.20	3	1.45	--	--
JAN													
14...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
FEB													
11...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
MAR													
06...	1.4	<10	<.08	3.0	E.01	6.7	4.58	<3	<.20	M	1.47	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
27...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
APR													
07...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
15...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
22...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
22...	1.1	<10	<.08	4.1	<.02	2.2	4.56	<3	<.20	1	1.57	--	--
MAY													
06...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
13...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
20...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
JUN													
09...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	<.006	<.006
08...	1.4	<8	<.08	5.1	<.02	3.6	3.56	<3	<.20	2	1.23	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	<8	--	106	--	--	--	--	--	--	--	--	--
AUG													
06...	1.4	14	E.05n	209	--	3.6	5.75	--	<.20	2	1.73	--	--

TRINITY RIVER BASIN

08064100 Chambers Creek near Rice, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Naprop- amide, water, fltrd 0.7u GF (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF (82667)	Peb- ulate, water, fltrd 0.7u GF (82669)	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate water, fltrd 0.7u GF (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF (82679)	Prepar- gite, water, fltrd 0.7u GF (82685)	Pron- amide, water, fltrd 0.7u GF (82676)	Sima- zine, water, fltrd, ug/L (04035)
NOV 04...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.03	<.010	<.011	<.02	<.004	<.005
DEC 09...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	<.005
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.054
FEB 11...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.071
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.048
27...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	<.005
APR 07...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.046
15...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	Mn	<.010	<.011	<.02	<.004	.007
22...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	Mn	<.010	<.011	<.02	<.004	.006
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.011
13...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	Mn	<.010	<.011	<.02	<.004	.013
20...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.035	.015
JUN 09...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.02	<.010	<.011	<.02	<.004	.064
JUL 01...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.007
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tebu- thiuron water, fltrd 0.7u GF (82670)	Terba- cil, water, fltrd 0.7u GF (82665)	Terbu- fos, water, fltrd 0.7u GF (82675)	Thio- bencarb water, fltrd 0.7u GF (82681)	Tri- allate, water, fltrd 0.7u GF (82678)	Tri- flur- alin, water, fltrd 0.7u GF (82661)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)
NOV 04...	.06	<.034	<.02	<.005	<.002	<.009	--
DEC 09...	.05	<.034	<.02	<.005	<.002	<.009	--
12...	--	--	--	--	--	--	--
JAN 14...	.02	<.034	<.02	<.005	<.002	<.009	--
FEB 11...	E.04	<.034	<.02	<.005	<.002	<.009	--
MAR 06...	--	--	--	--	--	--	--
12...	<.02	<.034	<.02	<.005	<.002	<.009	--
27...	<.02	<.034	<.02	<.005	<.002	<.009	--
APR 07...	E.02n	<.034	<.02	<.005	<.002	<.009	--
15...	<.02	<.034	<.02	<.005	<.002	<.009	--
22...	<.02	<.034	<.02	<.005	<.002	<.009	--
22...	--	--	--	--	--	--	--
MAY 06...	E.01n	<.034	<.02	<.005	<.002	<.009	--
13...	E.01n	<.034	<.02	<.005	<.002	<.009	--
20...	E.01n	<.034	<.02	<.005	<.002	<.009	--
JUN 09...	.03	<.034	<.02	<.005	<.002	<.009	--
JUL 01...	<.02	<.034	<.02	<.005	<.002	<.009	--
08...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	.4d
30...	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--

Remark codes used in this report:
 < -- Less than
 E -- Estimated value
 M -- Presence verified, not quantified

Value qualifier codes used in this report:
 d -- Diluted sample: method hi range exceeded
 n -- Below the NDV

TRINITY RIVER BASIN

08064100 Chambers Creek near Rice, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

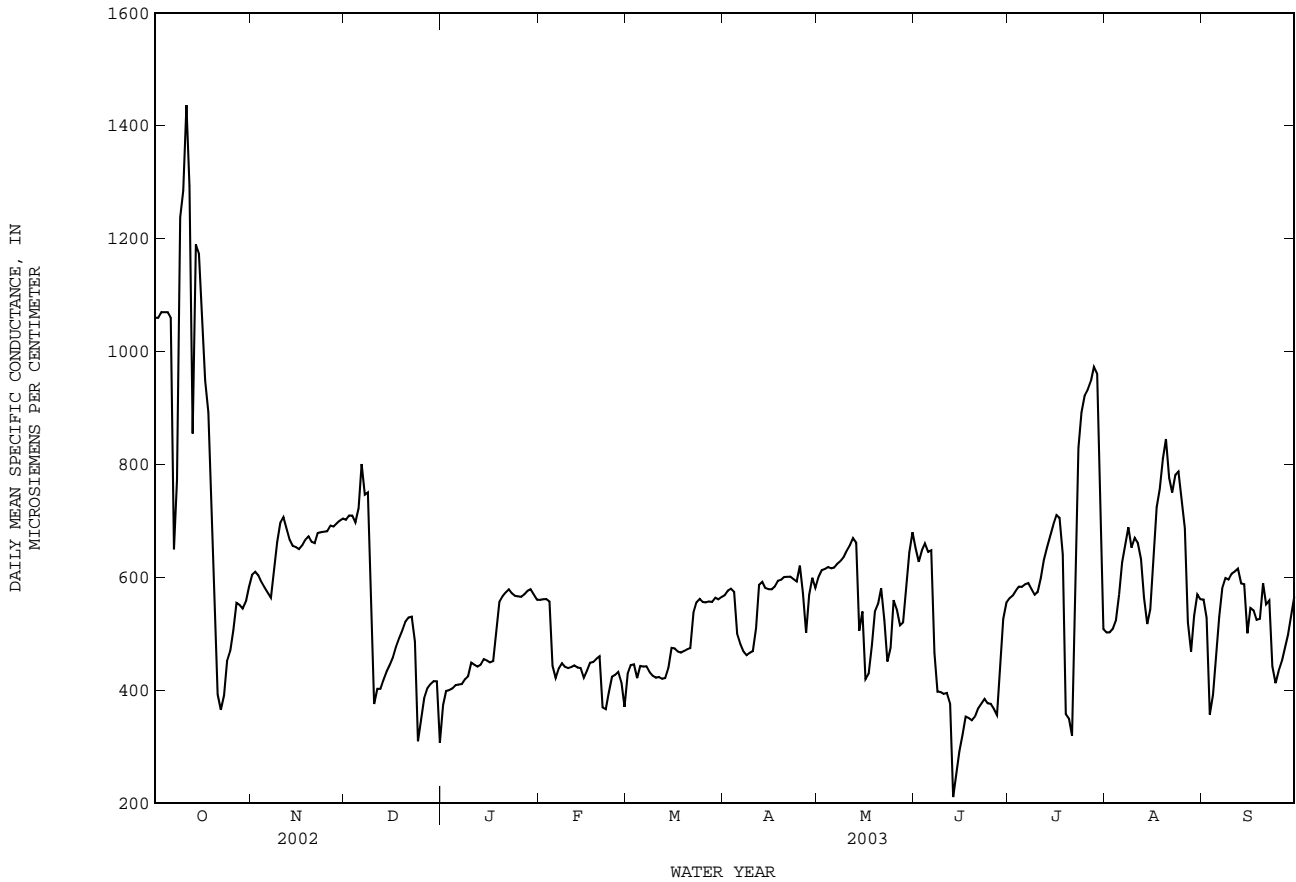
DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	611	597	605	705	700	702	391	322	374
2	---	---	---	612	607	610	716	701	710	405	391	399
3	---	---	---	607	599	604	726	680	710	402	399	401
4	---	---	---	599	582	592	736	684	698	407	400	404
5	---	---	---	586	573	582	748	647	723	412	407	410
6	---	---	---	575	571	573	848	726	801	412	409	411
7	---	---	---	575	550	564	767	735	747	423	409	412
8	874	748	773	641	575	614	767	736	751	423	418	420
9	1400	749	1240	686	641	663	736	290	522	449	420	425
10	1860	798	1280	705	686	698	435	313	376	451	448	450
11	1860	934	1440	712	699	707	435	395	403	448	444	446
12	1830	887	1290	699	673	686	412	397	403	444	442	442
13	1040	792	855	673	660	667	426	412	419	451	443	446
14	1240	1040	1190	660	652	656	440	426	434	458	451	455
15	1230	1120	1170	657	651	654	453	440	445	456	451	453
16	1120	979	1040	655	647	650	468	453	459	451	449	450
17	979	909	949	666	651	657	486	468	477	455	451	452
18	909	854	893	672	663	667	503	448	493	549	454	507
19	854	345	731	676	669	673	516	501	507	562	549	557
20	687	302	526	675	653	663	525	516	522	568	562	566
21	466	345	393	672	653	661	532	524	530	578	568	574
22	386	342	366	682	672	679	535	530	531	581	577	579
23	432	371	391	683	679	681	536	255	487	577	570	572
24	506	419	452	684	679	681	461	225	310	570	564	568
25	480	456	470	687	680	682	361	332	350	570	564	567
26	543	469	507	694	687	692	402	361	386	569	565	566
27	562	543	555	693	689	690	407	402	404	576	566	570
28	562	543	552	699	693	696	416	407	412	578	575	576
29	552	543	545	703	695	701	418	415	417	583	577	579
30	567	552	558	708	700	705	420	402	416	579	562	570
31	597	567	583	---	---	---	402	270	308	562	560	561
MONTH	---	---	---	712	550	655	848	225	511	583	322	489
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	563	559	561	438	411	430	575	564	569	605	594	601
2	563	561	562	451	438	445	580	575	577	623	601	613
3	565	560	562	457	415	447	582	578	580	622	610	615
4	564	538	558	430	411	422	641	568	575	625	613	619
5	538	415	444	452	429	444	673	480	501	624	612	616
6	429	417	422	445	440	442	492	477	483	620	614	618
7	449	429	440	449	439	443	477	464	469	626	620	624
8	452	445	448	439	429	433	464	461	463	634	623	629
9	445	439	442	429	424	426	470	463	467	644	627	636
10	441	439	440	425	421	423	473	467	470	654	641	647
11	444	439	442	427	421	424	575	470	510	661	654	658
12	447	441	444	423	420	421	593	575	587	679	661	670
13	442	439	441	435	420	422	595	590	593	675	637	662
14	457	421	440	464	433	440	594	573	582	637	364	506
15	457	379	423	479	464	476	585	575	580	---	---	---
16	443	429	435	483	469	475	583	574	579	---	---	---
17	452	441	449	471	468	469	592	578	584	---	---	---
18	452	450	451	471	464	467	600	588	594	---	---	---
19	458	452	456	473	468	470	600	579	596	---	---	---
20	464	456	461	475	471	473	605	598	601	566	548	554
21	459	251	370	483	472	475	605	598	601	593	566	581
22	432	303	367	561	483	538	604	598	602	907	450	525
23	432	386	397	563	550	556	604	589	597	455	449	452
24	431	412	425	565	556	562	597	591	593	510	455	476
25	434	425	428	565	552	557	812	528	621	640	495	560
26	438	431	433	563	554	556	812	473	573	647	476	544
27	441	338	414	563	555	558	537	486	502	588	444	515
28	417	331	371	563	550	557	590	537	569	593	485	521
29	---	---	---	568	561	564	605	590	600	619	559	586
30	---	---	---	564	558	562	597	557	582	670	619	644
31	---	---	---	568	559	566	---	---	---	683	670	680
MONTH	565	251	447	568	411	482	812	461	560	---	---	---

TRINITY RIVER BASIN

08064100 Chambers Creek near Rice, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	679	624	652	568	558	563	524	491	503	566	556	561
2	639	619	628	573	565	568	---	---	---	567	432	529
3	661	639	648	586	568	577	---	---	---	432	301	358
4	670	645	661	595	577	584	---	---	---	420	382	392
5	662	633	646	593	576	584	---	---	---	490	420	462
6	657	637	648	593	581	588	---	---	---	570	490	531
7	678	400	467	600	586	590	---	---	---	588	570	581
8	400	397	398	600	538	580	---	---	---	604	588	599
9	399	396	397	581	553	570	---	---	---	607	592	597
10	397	392	394	586	559	574	---	---	---	618	593	607
11	398	391	396	616	570	599	---	---	---	622	604	611
12	392	343	377	638	616	631	---	---	---	635	593	616
13	428	162	211	666	634	654	---	---	---	637	558	590
14	303	174	252	688	651	673	---	---	---	688	525	588
15	306	269	292	704	679	693	---	---	---	525	491	502
16	344	306	322	720	700	710	---	---	---	556	518	546
17	363	343	354	733	671	706	---	---	---	551	534	542
18	354	345	351	705	370	641	---	---	---	534	519	525
19	350	343	347	390	340	358	---	---	---	---	---	---
20	362	347	354	---	---	---	---	---	---	---	---	---
21	374	360	369	---	---	---	---	---	---	559	547	552
22	387	371	377	---	---	---	---	---	---	620	473	560
23	390	378	385	---	---	---	---	---	---	504	408	443
24	391	367	378	916	881	892	---	---	---	416	409	413
25	380	371	376	932	916	922	---	---	---	445	416	434
26	379	359	368	938	923	932	---	---	---	458	442	452
27	383	350	357	956	938	948	---	---	---	497	452	475
28	488	383	434	986	954	973	---	---	---	527	488	499
29	548	488	527	1010	750	961	1200	621	532	543	527	534
30	561	547	556	973	523	679	621	556	570	577	543	566
31	---	---	---	529	497	509	566	557	562	---	---	---
MONTH	679	162	431	---	---	---	---	---	---	---	---	---

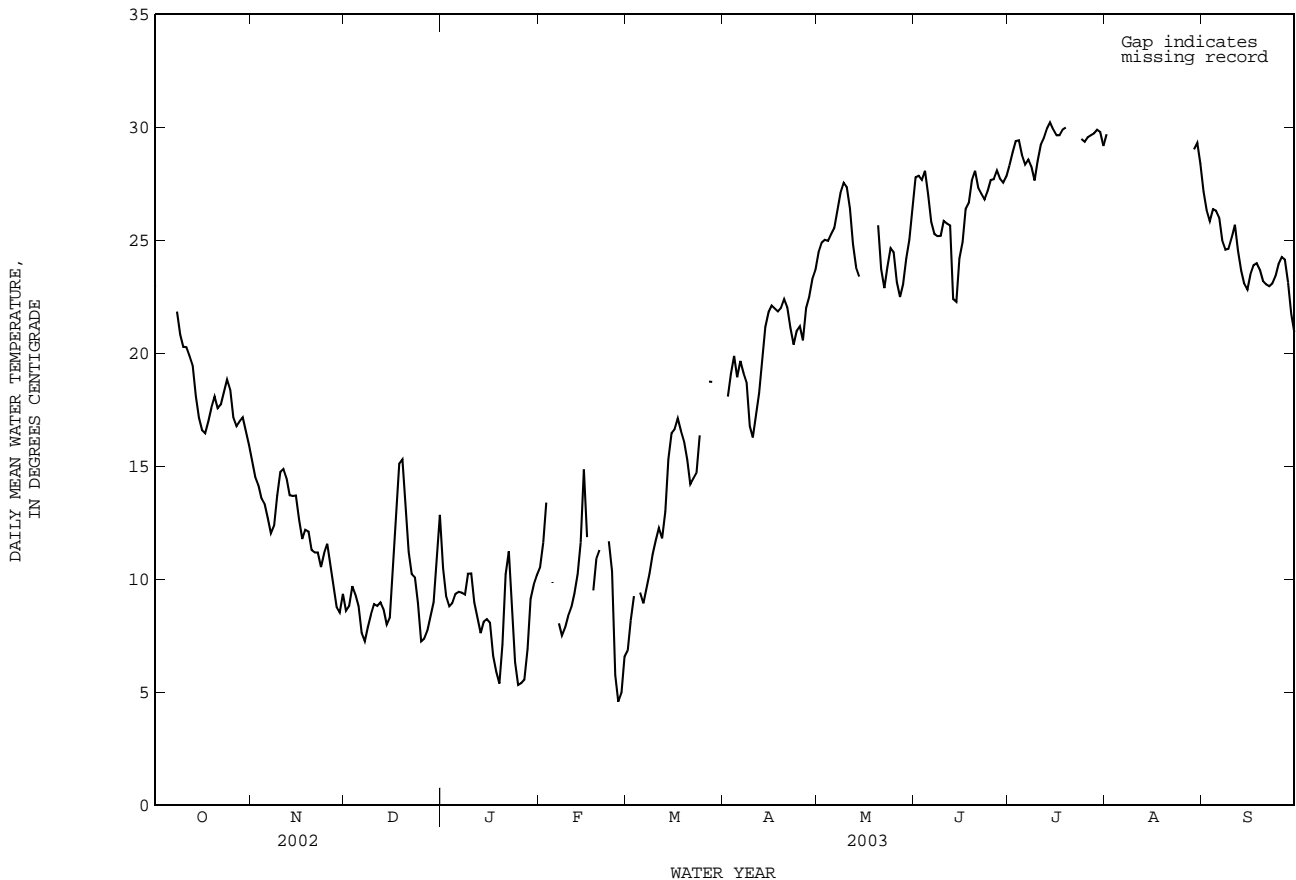


TRINITY RIVER BASIN

08064100 Chambers Creek near Rice, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	28.6	27.0	27.8	29.3	27.7	28.3	31.8	28.0	29.7	27.8	26.7	27.2
2	28.1	27.5	27.9	29.9	28.1	28.9	---	---	---	27.1	25.6	26.4
3	29.0	26.6	27.7	30.5	28.5	29.4	---	---	---	26.6	25.2	25.9
4	29.0	27.2	28.1	30.2	28.7	29.4	---	---	---	26.8	25.9	26.4
5	28.3	26.2	27.0	29.5	28.5	28.8	---	---	---	26.8	25.6	26.3
6	26.3	25.2	25.8	29.0	27.7	28.4	---	---	---	26.6	25.3	26.0
7	26.0	24.1	25.3	29.6	27.7	28.6	---	---	---	25.6	24.0	25.0
8	25.7	24.6	25.2	29.0	27.6	28.3	---	---	---	25.2	23.6	24.6
9	26.1	24.5	25.2	28.5	26.9	27.7	---	---	---	25.5	23.7	24.6
10	26.3	25.5	25.9	29.7	27.6	28.5	---	---	---	26.1	24.3	25.1
11	26.3	25.4	25.7	30.2	28.3	29.2	---	---	---	27.1	25.1	25.7
12	26.4	24.9	25.7	30.6	28.4	29.5	---	---	---	25.2	23.7	24.5
13	25.3	21.5	22.4	31.2	28.8	30.0	---	---	---	24.5	22.8	23.7
14	23.9	21.8	22.3	31.4	29.1	30.2	---	---	---	23.5	22.7	23.1
15	25.0	23.3	24.2	30.7	28.9	29.9	---	---	---	23.5	22.0	22.8
16	26.2	24.2	24.9	30.6	28.8	29.6	---	---	---	24.0	23.0	23.5
17	26.5	26.2	26.4	30.9	28.6	29.7	---	---	---	24.7	23.2	23.9
18	27.9	26.3	26.7	31.2	28.8	29.9	---	---	---	24.2	23.7	24.0
19	28.7	27.0	27.7	31.1	29.0	30.0	---	---	---	24.0	23.2	23.7
20	28.7	27.6	28.1	---	---	---	---	---	---	23.5	22.6	23.2
21	28.2	26.9	27.3	---	---	---	---	---	---	23.4	22.8	23.1
22	27.9	26.4	27.1	---	---	---	---	---	---	23.5	22.3	23.0
23	27.7	25.8	26.8	---	---	---	---	---	---	23.5	22.6	23.1
24	28.2	26.0	27.2	31.0	28.3	29.5	---	---	---	24.1	22.8	23.4
25	28.6	26.6	27.7	30.8	28.2	29.4	---	---	---	24.6	23.2	24.0
26	28.1	27.2	27.7	31.2	28.2	29.6	---	---	---	24.8	23.8	24.3
27	28.5	27.7	28.1	31.4	28.2	29.7	---	---	---	25.1	23.2	24.2
28	28.5	26.9	27.7	31.6	28.2	29.7	---	---	---	24.0	22.2	23.1
29	28.2	26.7	27.6	31.8	28.2	29.9	29.6	28.4	29.0	22.6	20.8	21.7
30	28.6	27.4	27.8	31.3	28.6	29.8	29.9	28.7	29.3	21.9	19.9	20.9
31	---	---	---	30.5	28.1	29.2	29.2	27.8	28.4	---	---	---
MONTH	29.0	21.5	26.5	---	---	---	---	---	---	27.8	19.9	24.2



THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08064510 Halbert Lake near Corsicana, TX

LOCATION.--Lat 32°04'36", long 96°24'20", Navarro County, Hydrologic Unit 12030109, on fishing pier approximately 1,000 ft upstream of dam on left bank, 4.0 mi southeast of Corsicana.

DRAINAGE AREA.--12.0 mi².

PERIOD OF RECORD.--Apr. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 2,780 ft long. The dam was completed and storage began in 1921. An uncontrolled concrete chute spillway 175 ft long is located to the left (west) embankment. The dam was built by the city of Corsicana to impound water for municipal use. There was no known diversion from the lake during the current water year. Data regarding the dam are given in the following table:

	Elevation
	(feet)
Top of dam.....	375.0
Crest of spillway.....	368.0

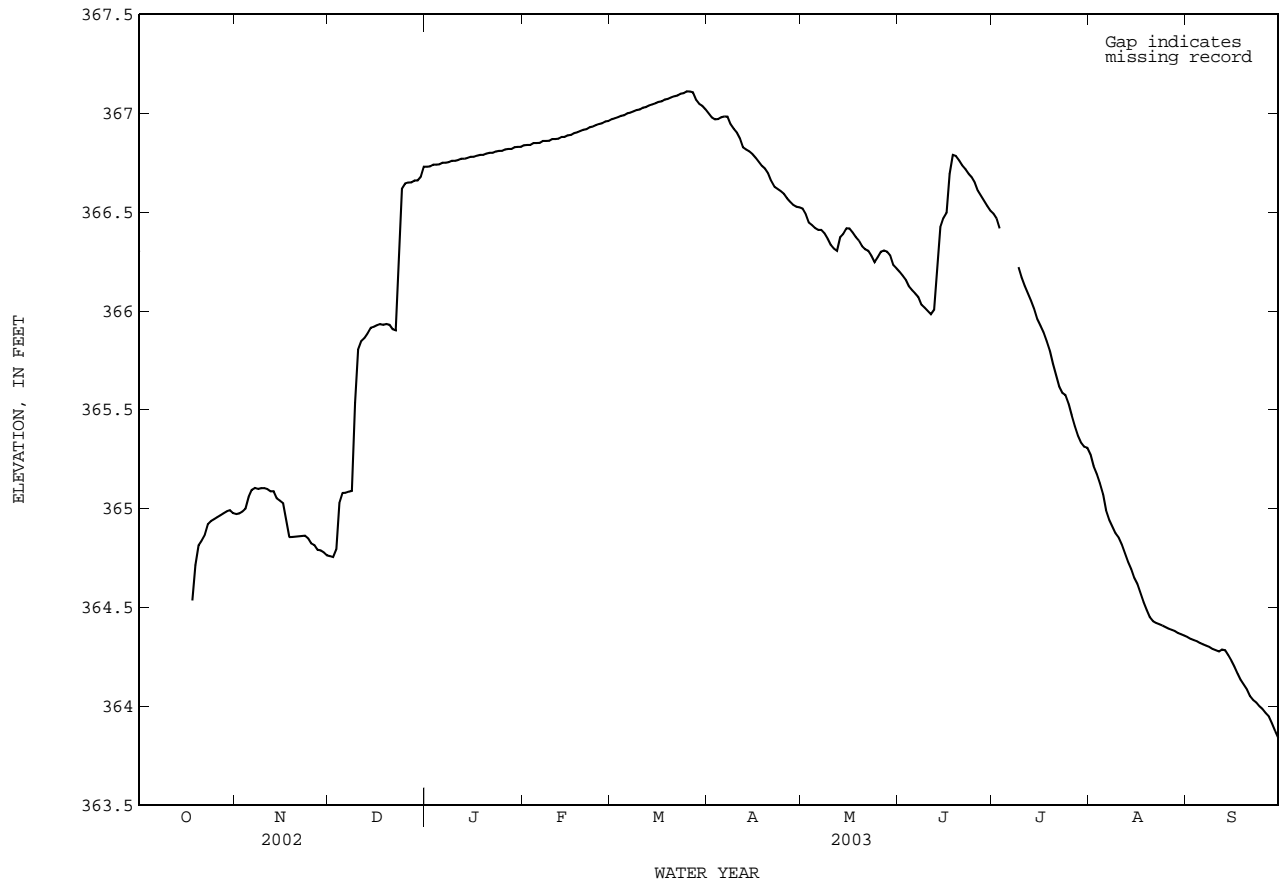
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,530 acre-ft, Apr. 8, 2002, elevation, 367.12 ft; maximum elevation, 367.12 ft, Apr. 8, 2002, Mar. 25, 27, 2003; minimum contents, 2,670 acre-ft, Feb. 17, 18, 2000, elevation, 361.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 367.12 ft, Mar. 25, 27; minimum elevation, 363.82 ft, Sept. 30.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	364.97	364.76	366.73	366.84	366.97	367.00	366.52	366.20	366.49	365.27	364.35
2	---	364.98	364.75	366.73	366.84	366.97	366.98	366.49	366.18	366.47	365.22	364.34
3	---	364.99	364.79	366.74	366.84	366.98	366.97	366.45	366.16	366.42	365.18	364.34
4	---	365.00	365.03	366.74	366.85	366.99	366.97	366.43	366.12	---	365.13	364.33
5	---	365.06	365.08	366.74	366.85	366.99	366.98	366.42	366.11	---	365.07	364.32
6	---	365.09	365.08	366.75	366.85	367.00	366.98	366.41	366.09	---	364.99	364.31
7	---	365.10	365.09	366.75	366.86	367.00	366.98	366.41	366.07	---	364.94	364.31
8	---	365.10	365.09	366.75	366.86	367.01	366.95	366.39	366.03	---	364.91	364.30
9	---	365.10	365.54	366.76	366.86	367.02	366.92	366.37	366.02	366.22	364.88	364.29
10	---	365.10	365.81	366.76	366.87	367.02	366.90	366.33	366.00	366.17	364.85	364.28
11	---	365.10	365.85	366.76	366.87	367.03	366.87	366.32	365.98	366.13	364.82	364.28
12	---	365.09	365.86	366.77	366.87	367.03	366.83	366.30	366.01	366.09	364.78	364.29
13	---	365.09	365.89	366.77	366.88	367.04	366.82	366.37	366.23	366.05	364.73	364.28
14	---	365.05	365.91	366.77	366.88	367.04	366.81	366.39	366.42	366.01	364.69	364.26
15	---	365.04	365.92	366.78	366.89	367.05	366.79	366.42	366.47	365.96	364.65	364.23
16	---	365.03	365.93	366.78	366.89	367.06	366.78	366.42	366.50	365.93	364.62	364.20
17	---	364.94	365.93	366.79	366.90	367.06	366.75	366.40	366.69	365.89	364.57	364.17
18	364.54	364.86	365.93	366.79	366.90	367.07	366.73	366.37	366.79	365.85	364.53	364.13
19	364.71	364.86	365.93	366.79	366.91	367.07	366.72	366.36	366.78	365.80	364.49	364.11
20	364.81	364.86	365.93	366.80	366.92	367.08	366.70	366.33	366.76	365.73	364.45	364.08
21	364.84	364.86	365.91	366.80	366.92	367.09	366.66	366.31	366.74	365.68	364.43	364.05
22	364.87	364.86	365.90	366.80	366.93	367.09	366.63	366.30	366.72	365.62	364.42	364.03
23	364.92	364.86	366.24	366.81	366.93	367.10	366.62	366.28	366.69	365.59	364.41	364.02
24	364.94	364.85	366.62	366.81	366.94	367.10	366.61	366.25	366.68	365.57	364.41	364.00
25	364.95	364.82	366.65	366.81	366.95	367.11	366.59	366.27	366.65	365.53	364.40	363.99
26	364.96	364.82	366.65	366.82	366.95	367.11	366.57	366.30	366.61	365.47	364.39	363.97
27	364.97	364.79	366.65	366.82	366.96	367.11	366.55	366.31	366.58	365.42	364.39	363.95
28	364.98	364.79	366.66	366.82	366.96	367.07	366.54	366.30	366.56	365.37	364.38	363.91
29	364.99	364.78	366.66	366.83	---	367.05	366.53	366.28	366.53	365.33	364.37	363.87
30	364.99	364.76	366.68	366.83	---	367.04	366.52	366.23	366.51	365.31	364.36	363.84
31	364.98	---	366.73	366.83	---	367.02	---	366.22	---	365.31	364.36	---
MEAN	---	364.95	365.85	366.78	366.89	367.04	366.77	366.35	366.40	---	364.68	364.16
MAX	---	365.10	366.73	366.83	366.96	367.11	367.00	366.52	366.79	---	365.27	364.35
MIN	---	364.76	364.75	366.73	366.84	366.97	366.52	366.22	365.98	---	364.36	363.84
CAL YR 2002	MAX	367.12	MIN	364.54								
WTR YR 2003	MAX	367.11	MIN	363.84								

08064510 Halbert Lake near Corsicana, TX--Continued



08064550 Richland-Chambers Reservoir near Kerens, TX

LOCATION.--Lat 32°02'25", long 96°12'23", Navarro County, Hydrologic Unit 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 mi².

PERIOD OF RECORD.--Nov. 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. The reservoir is formed by a rolled earthfill dam 31,000 ft long. Deliberate impoundment of water began July 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 mi² above the dam is controlled by Bardwell and Navarro Mills Lakes. Conservation pool storage is 1,136,600 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	330.0
Top of gates.....	317.3
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.

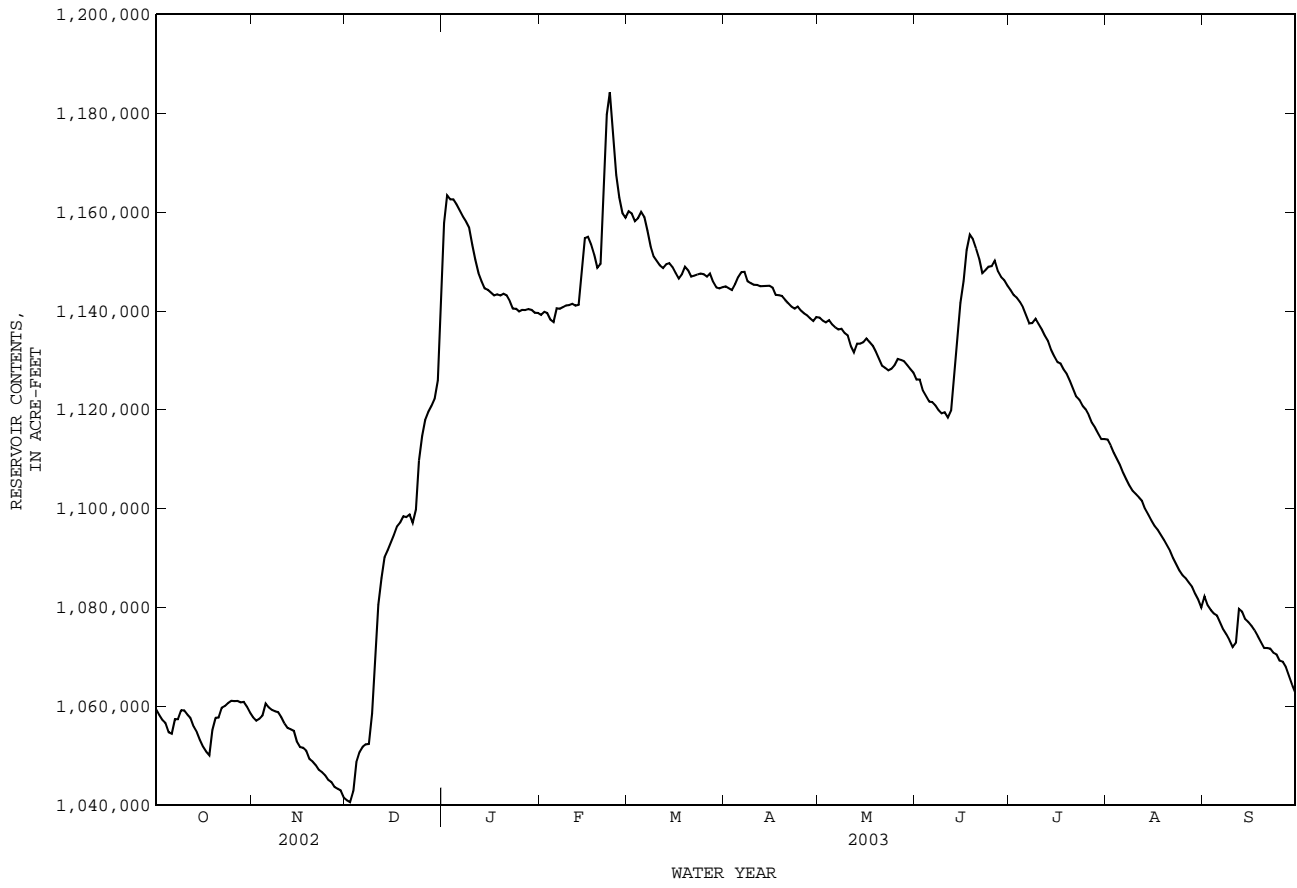
EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,192,000 acre-ft, Feb. 23, elevation, 316.32 ft; minimum contents, 1,039,000 acre-ft, Dec. 3, elevation, 312.62 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1059000	1058000	1041000	1158000	1139000	1160000	1145000	1139000	1126000	1144000	1114000	1082000
2	1058000	1057000	1041000	1163000	1140000	1160000	1145000	1138000	1126000	1143000	1113000	1080000
3	1057000	1057000	1043000	1163000	1140000	1158000	1144000	1138000	1124000	1143000	1111000	1080000
4	1057000	1058000	1049000	1163000	1138000	1159000	1145000	1138000	1123000	1142000	1110000	1079000
5	1055000	1061000	1051000	1162000	1138000	1160000	1147000	1137000	1122000	1141000	1109000	1078000
6	1054000	1060000	1052000	1160000	1141000	1159000	1148000	1137000	1122000	1139000	1107000	1077000
7	1057000	1059000	1052000	1159000	1140000	1156000	1148000	1136000	1121000	1138000	1106000	1076000
8	1057000	1059000	1052000	1158000	1141000	1153000	1146000	1136000	1120000	1138000	1105000	1075000
9	1059000	1059000	1059000	1157000	1141000	1151000	1146000	1136000	1119000	1138000	1104000	1073000
10	1059000	1058000	1070000	1153000	1141000	1150000	1145000	1135000	1120000	1137000	1103000	1072000
11	1058000	1057000	1081000	1150000	1141000	1149000	1145000	1133000	1118000	1136000	1102000	1073000
12	1058000	1056000	1086000	1148000	1141000	1149000	1145000	1132000	1120000	1135000	1102000	1080000
13	1056000	1055000	1090000	1146000	1141000	1149000	1145000	1133000	1127000	1134000	1100000	1079000
14	1055000	1055000	1092000	1145000	1147000	1150000	1145000	1133000	1134000	1132000	1099000	1078000
15	1053000	1053000	1093000	1144000	1155000	1149000	1145000	1134000	1142000	1131000	1098000	1077000
16	1052000	1052000	1095000	1144000	1155000	1148000	1145000	1134000	1146000	1130000	1097000	1076000
17	1051000	1052000	1096000	1143000	1153000	1147000	1143000	1134000	1152000	1129000	1096000	1075000
18	1050000	1051000	1097000	1143000	1151000	1147000	1143000	1133000	1155000	1128000	1095000	1074000
19	1055000	1049000	1098000	1143000	1149000	1149000	1143000	1132000	1155000	1127000	1094000	1073000
20	1058000	1049000	1098000	1143000	1150000	1148000	1142000	1130000	1153000	1126000	1093000	1072000
21	1058000	1048000	1099000	1143000	1164000	1147000	1142000	1129000	1151000	1124000	1091000	1072000
22	1060000	1047000	1097000	1142000	1180000	1147000	1141000	1128000	1148000	1123000	1090000	1072000
23	1060000	1047000	1100000	1140000	1184000	1147000	1140000	1128000	1148000	1122000	1089000	1071000
24	1061000	1046000	1110000	1140000	1176000	1148000	1141000	1128000	1149000	1121000	1087000	1070000
25	1061000	1045000	1115000	1140000	1168000	1147000	1140000	1129000	1149000	1120000	1087000	1069000
26	1061000	1045000	1118000	1140000	1163000	1147000	1140000	1130000	1150000	1119000	1086000	1069000
27	1061000	1044000	1120000	1140000	1160000	1148000	1139000	1130000	1148000	1117000	1085000	1068000
28	1061000	1043000	1121000	1140000	1159000	1146000	1139000	1130000	1147000	1116000	1084000	1066000
29	1061000	1043000	1122000	1140000	---	1145000	1138000	1129000	1146000	1115000	1083000	1064000
30	1060000	1041000	1126000	1140000	---	1145000	1139000	1128000	1145000	1114000	1082000	1063000
31	1059000	---	1144000	1140000	---	1145000	---	1128000	---	1114000	1080000	---
MEAN	1057000	1052000	1087000	1148000	1151000	1150000	1143000	1133000	1137000	1130000	1097000	1074000
MAX	1061000	1061000	1144000	1163000	1184000	1160000	1148000	1139000	1155000	1144000	1114000	1082000
MIN	1050000	1041000	1041000	1140000	1138000	1145000	1138000	1128000	1118000	1114000	1080000	1063000
(+)	313.10	312.67	315.17	315.07	315.54	315.20	315.05	314.78	315.21	314.45	313.62	313.20
(@)	0	-18000	+103000	-4000	+19000	-14000	-6000	-11000	+17000	-31000	-34000	-17000
CAL YR 2002	MAX 1162000	MIN 1041000	(@) -13000									
WTR YR 2003	MAX 1184000	MIN 1041000	(@) +4000									

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

08064550 Richland-Chambers Reservoir near Kerens, TX--Continued



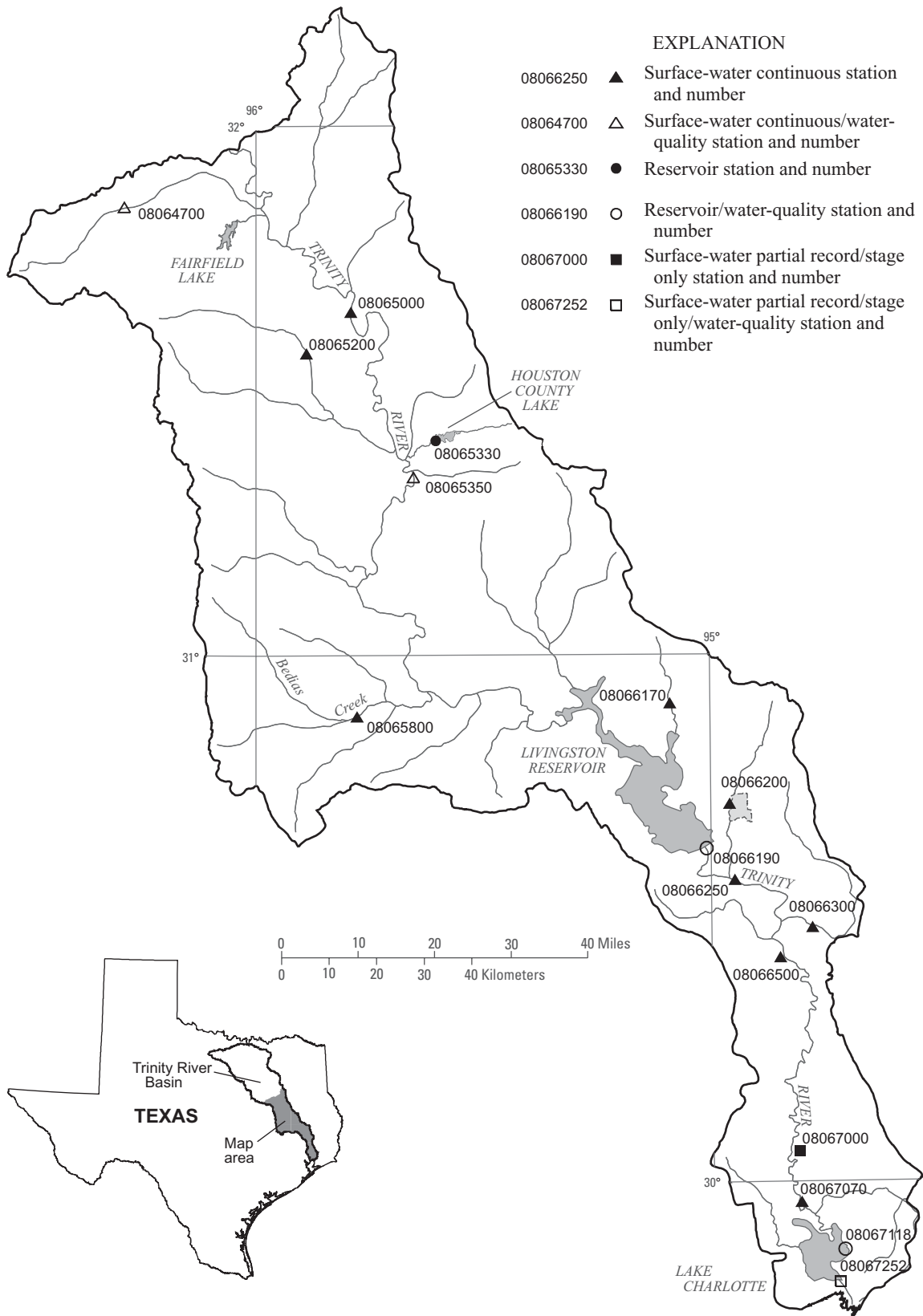


Figure 5.--Map showing location of gaging stations in the third section of the Trinity River Basin

08064700	Tehuacana Creek near Streetman, TX	264
08065000	Trinity River near Oakwood, TX	268
08065200	Upper Keechi Creek near Oakwood, TX	270
08065330	Houston County Lake near Crockett, TX	272
08065350	Trinity River near Crockett, TX	274
08065800	Bedias Creek near Madisonville, TX	286
08066170	Kickapoo Creek near Onalaska, TX	288
08066190	Livingston Reservoir near Goodrich, TX	290
08066200	Long King Creek at Livingston, TX	300
08066250	Trinity River near Goodrich, TX	302
08066300	Menard Creek near Rye, TX	304
08066500	Trinity River at Romayor, TX	306
08067000	Trinity River at Liberty, TX	308
08067070	CWA Canal near Dayton, TX	310
08067118	Lake Charlotte near Anahuac, TX	312
08067252	Trinity River at Wallisville, TX	318

TRINITY RIVER BASIN

08064700 Tehuacana Creek near Streetman, TX

LOCATION.--Lat 31°50'54", long 96°17'23", Freestone County, Hydrologic Unit 12030201, on downstream side at right end of bridge on U.S. Hwy 75, 2.8 mi southeast of Streetman, 3.1 mi downstream from Burlington Northern and Santa Fe Railroad Co. bridge, 3.8 mi upstream from Caney Creek, and 25.0 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 287.58 ft above NGVD of 1929. From Dec. 14, 1993 to Aug. 14, 2001, at site 0.2 mi upstream at datum 7.45 ft lower. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Sept. 1932 reached a stage of about 24 ft at site and datum 0.2 mi downstream from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.64	3.4	0.54	588	2.9	37	3.9	1.5	1.1	0.22	0.08	0.01
2	0.64	2.8	0.42	52	3.0	24	3.9	1.5	1.1	0.19	0.07	0.01
3	0.62	2.6	272	23	3.2	194	3.8	1.4	1.0	0.16	0.06	0.01
4	0.61	5.0	1920	13	2.9	837	4.0	1.4	1.3	0.16	0.05	0.00
5	0.58	393	195	9.3	2.8	113	4.4	1.4	1.5	0.15	0.02	e0.00
6	0.63	44	22	7.6	3.7	47	4.7	1.4	1.4	0.16	0.01	0.00
7	1.3	5.6	6.1	6.2	4.1	31	4.1	1.2	1.2	0.15	0.01	0.00
8	1.2	1.7	2.7	3.7	3.8	19	3.5	1.1	1.2	0.17	0.00	0.00
9	1.4	1.0	1630	3.0	4.5	14	3.1	1.1	1.2	0.20	0.00	0.00
10	1.6	0.72	913	2.7	4.2	12	2.8	1.1	1.2	0.17	0.00	0.00
11	1.5	0.61	85	2.5	3.8	10	2.6	1.1	1.2	0.16	0.00	1.1
12	1.4	0.49	28	2.4	3.7	9.5	2.5	1.0	1.9	0.15	0.00	286
13	1.3	0.39	176	2.7	2.6	9.5	2.4	1.0	48	0.14	0.00	38
14	1.3	0.35	48	2.7	1830	9.1	2.3	1.1	201	0.14	0.00	7.4
15	1.2	0.36	15	2.8	4780	8.4	2.1	1.6	157	0.13	0.00	2.0
16	1.2	0.35	6.8	2.7	291	7.8	2.2	1.9	103	0.12	0.00	1.1
17	1.2	0.33	3.2	2.4	42	7.5	2.3	1.4	61	0.11	0.00	0.69
18	1.1	0.28	1.9	2.3	23	7.5	2.5	1.2	69	0.11	0.00	0.50
19	3.7	0.22	1.4	2.2	15	7.6	2.1	1.1	5.4	0.10	0.00	0.40
20	27	0.18	1.1	2.4	475	7.2	2.2	1.1	1.8	0.09	0.00	0.31
21	7.2	0.17	0.87	2.6	6960	6.6	2.0	1.1	1.0	0.08	0.00	0.28
22	5.9	0.17	0.72	2.8	5680	6.4	2.0	1.1	0.68	0.06	0.00	0.25
23	42	0.14	1.3	2.5	458	6.4	1.9	1.2	0.50	0.13	0.00	0.21
24	10	0.12	265	2.3	76	6.3	1.9	1.2	0.43	0.17	0.00	0.16
25	5.3	0.12	81	2.2	53	5.4	1.9	1.2	0.36	0.16	0.00	0.12
26	4.2	0.21	17	2.4	49	4.7	1.7	1.4	0.37	0.16	0.00	0.09
27	3.3	0.19	5.8	2.4	111	4.6	1.5	1.7	0.35	0.15	0.00	0.10
28	3.3	0.68	2.9	2.5	67	4.4	1.5	1.6	0.28	0.12	0.00	0.08
29	3.2	1.2	1.8	2.7	---	4.1	1.4	1.3	0.22	0.09	0.00	0.06
30	4.0	0.70	85	2.7	---	3.9	1.4	1.2	0.22	0.08	0.00	0.05
31	4.7	---	4700	2.8	---	e3.7	---	1.2	---	0.09	0.00	---
TOTAL	143.22	467.08	10489.55	761.5	20955.2	1468.6	78.6	39.8	665.91	4.27	0.30	338.93
MEAN	4.62	15.6	338	24.6	748	47.4	2.62	1.28	22.2	0.14	0.010	11.3
MAX	42	393	4700	588	6960	837	4.7	1.9	201	0.22	0.08	286
MIN	0.58	0.12	0.42	2.2	2.6	3.7	1.4	1.0	0.22	0.06	0.00	0.00
AC-FT	284	926	20810	1510	41560	2910	156	79	1320	8.5	0.6	672

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

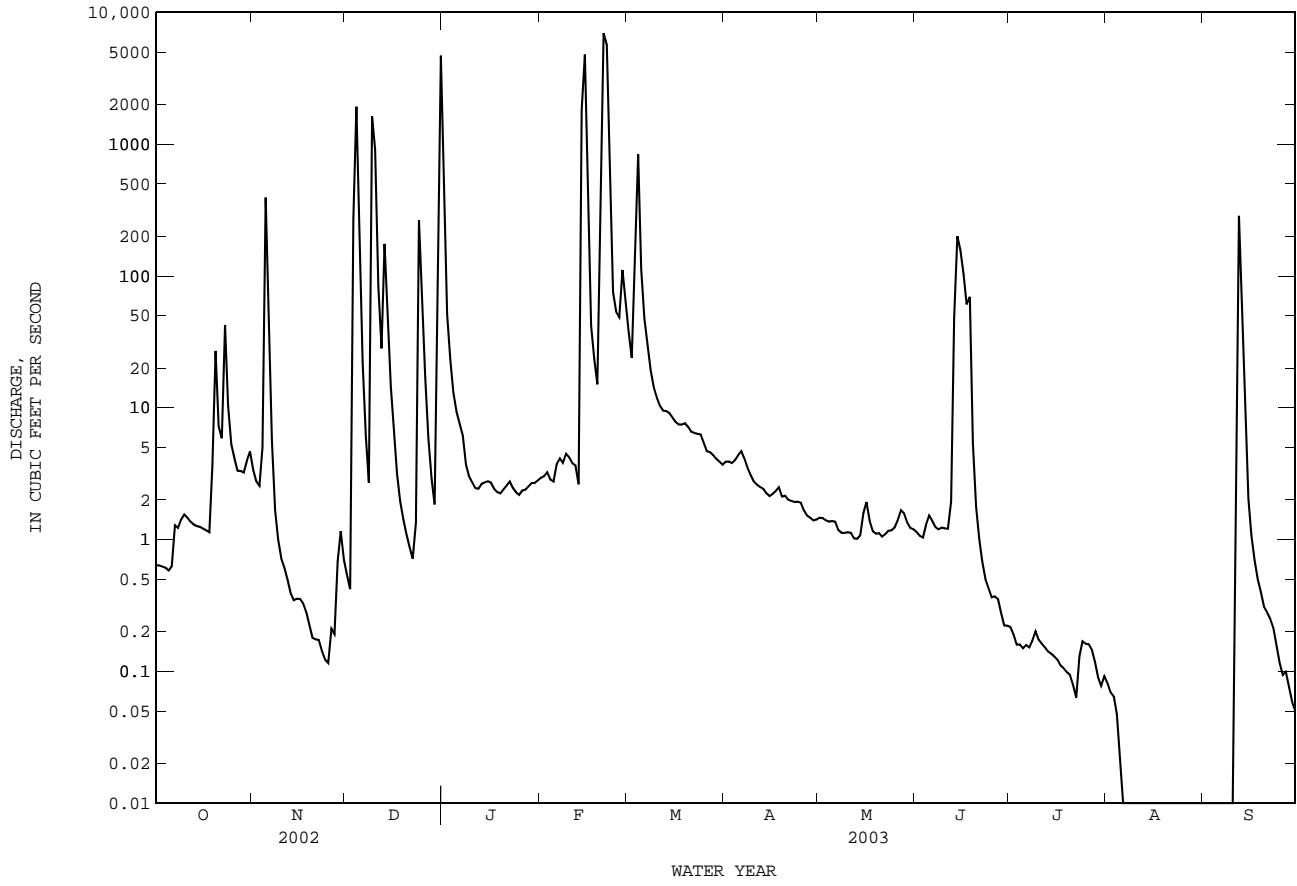
	MEAN	MAX	MIN	(WY)
MEAN	52.5	62.3	150	80.6
MAX	379	399	1013	381
MIN	0.000	0.000	0.000	0.12
(WY)	1974	1999	1992	1998
(WY)	1981	1981	2000	1971

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1968 - 2003

ANNUAL TOTAL	17946.07	35412.96	
ANNUAL MEAN	49.2	97.0	87.0
HIGHEST ANNUAL MEAN			274
LOWEST ANNUAL MEAN			3.52
HIGHEST DAILY MEAN	4700	Dec 31	6960
LOWEST DAILY MEAN	0.00	Aug 22	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 22	0.00
MAXIMUM PEAK FLOW			9220
MAXIMUM PEAK STAGE			24.01
ANNUAL RUNOFF (AC-FT)	35600	70240	63020
10 PERCENT EXCEEDS	34	48	54
50 PERCENT EXCEEDS	2.4	1.5	1.6
90 PERCENT EXCEEDS	0.00	0.02	0.00

e Estimated
g At site and datum then in use.

08064700 Tehuacana Creek near Streetman, TX--Continued



TRINITY RIVER BASIN

08064700 Tehuacana Creek near Streetman, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
 CHEMICAL DATA: Feb. 1968 to Sept. 1985, Oct. 1990 to current year.
 BIOCHEMICAL DATA: Oct. 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	
DEC	12...	1130	26	197	7.4	10.0	10.7	94	<2.1	62	17	16.4	5.18	10.4
MAR	06...	1100	47	223	7.3	8.9	11.1	96	2.5	74	17	19.8	5.91	16.0
APR	23...	1230	3.1	1470	7.4	20.5	6.3	71	<2.0	390	130	96.6	36.8	154
JUN	12...	1349	1.8	1770	7.6	28.3	8.2	109	--	460	180	107	45.8	216
JUL	24...	1210	.45	499	7.1	31.0	6.8	94	E4.1	140	30	35.9	12.7	41.7
JUL	08...	1300	.20	961	7.3	29.0	5.3	70	7.3	260	81	64.1	24.1	90.2
JUL	30...	1435	.09	1600	7.5	31.0	5.4	75	<2.0	440	230	102	45.3	171

Date	Sodium adsorption ratio (00931)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, inc tit field, mg/L as CaCO3 (39086)	Sulfate, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue, water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	
DEC	12...	.6	25	4.86	<1	56	46	21.1	8.93	<.17	8.62	127	104	54
MAR	06...	.8	31	3.30	<1	69	56	23.9	13.3	.12	8.70	150	125	61
APR	23...	3	46	5.40	<1	317	260	213	195	.42	12.7	933	870	<10
JUN	12...	4	50	5.21	3	332	276	244	258	.5	13.5	1100	1060	10
JUL	24...	2	38	6.64	<1	137	112	53.3	47.9	.2	13.9	300	280	15
JUL	08...	2	42	6.29	<1	218	179	107	125	.3	12.5	570	538	406
JUL	30...	4	--	<.16	<1	258	213	195	254	.5	14.6	980	--	18

Date	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitrogen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phosphorus, water, fltrd, mg/L (00666)	Orthophosphate, water, fltrd, mg/L as P (00671)	Orthophosphate, water, fltrd, mg/L (00660)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	
DEC	12...	E.006	.17	E.02	--	.61	.099	.08	.233	13.5	7	E.17	2	30
MAR	06...	<.008	.09	E.02	--	.63	.041	.03	.080	12.4	6	E.23	<2	33
APR	23...	<.008	<.06	<.04	--	.30	.04	<.02	--	6.8	M	<.30	E1	119
JUN	12...	<.008	<.06	<.04	--	.35	.018	<.02	--	7.2	E1	<.30	<2	116
JUL	24...	<.008	<.06	<.04	--	.68	.067	.04	.107	14.5	2	E.19	2	60
JUL	08...	E.006	.19	.06	.60	.66	.04	.02	.055	34.0	--	--	--	--
JUL	30...	<.008	<.06	<.04	--	.61	.04	<.02	--	9.1	--	--	--	--

Date	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	
DEC	12...	<.06	.05	<.8	.46	3.7	.15	43.6	E.01	E.3	3.04	<3	<.20	
MAR	06...	<.06	.05	<.8	.40	1.7	.08	39.7	E.01	.5	2.70	<3	<.20	
APR	23...	<.06	<.04	<.8	1.19	2.1	10	<.08	741	<.02	.7	3.79	<3	<.20
JUN	12...	<.06	E.03	<.8	.61	3.1	E6	<.08	247	<.02	1.1	3.53	<3	<.20
JUL	24...	<.06	<.04	<.8	.25	3.6	38	<.08	51.7	<.02	.9	4.82	<3	<.20
JUL	08...	--	--	--	--	--	15	--	352	--	--	--	--	
JUL	30...	--	--	--	--	--	E7n	--	112	--	--	--	--	

08064700 Tehuacana Creek near Streetman, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
DEC		
12...	3	.29
MAR		
06...	1	.44
APR		
23...	1	4.00
JUN		
12...	2	4.43
24...	1	.81
JUL		
08...	--	--
30...	--	--

Remark codes used in this report:

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this report:

n -- Below the NDV

TRINITY RIVER BASIN

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, 6.0 mi northeast of Oakwood, and at mile 313.4.

DRAINAGE AREA.--12,833 mi².

PERIOD OF RECORD.--Oct. 1923 to Sept. 1924 (monthly discharge only), Oct. 1924 to current year. Records of Jan. 1905 to Sept. 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 Sept. 1981. Specific conductance: Dec. 1976 to Sept. 1981. Water temperature: Dec. 1976 to Sept. 1981. Suspended sediment data: Dec. 1976 to Sept. 1981.

REVISED RECORDS.--WSP 1442: 1934. WSP 1922: Drainage area. WDR TX-81-1: 1980 (M,m).

GAGE.--Water-stage recorder. Datum of gage is 175.06 ft above NGVD of 1929. Prior to July 1932, nonrecording gage at site 1.5 mi downstream at datum 1.06 ft lower. July 15, 1932, to Oct. 7, 1934, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in water year 1924, at least 10% of contributing drainage area has been regulated. The Industrial Generating Co. at Fairfield makes a minor diversion from the river at a site about 34 mi upstream. The diversion to Fairfield Lake (capacity 50,600 acre-ft) 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 ft³/s) and was the highest since that date, from information in local newspapers. Flood of June 4, 1908, reached a stage of 52.2 ft, present site and datum, from information by the National Weather Service (discharge, about 164,000 ft³/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	801	2190	e1300	10400	1370	32300	1710	1110	1550	1520	965	1340
2	783	2060	e1350	13700	1350	29800	1660	1180	1230	1250	845	1140
3	803	1830	e1500	15900	1340	26800	1590	2070	1100	1140	818	2000
4	912	1920	2950	17400	1340	24000	1540	2320	1030	1360	783	4180
5	906	2690	3940	17700	1320	21300	1560	1820	1000	1440	751	4090
6	870	2860	4900	15100	1410	17800	1780	1360	975	1330	733	2430
7	1030	3140	5130	10200	1610	13600	3030	1200	936	1240	716	1440
8	1020	2670	3720	6310	2930	10900	3610	1180	1700	1110	733	1160
9	1150	2240	2590	4560	4600	9340	4700	1130	2130	1200	735	1050
10	1860	1890	3000	4330	4040	7580	5060	1070	1740	1300	706	960
11	3330	1660	6480	3960	2770	6310	4190	1010	1610	1230	768	936
12	5590	1520	9740	3710	2140	5650	2710	967	1790	1180	987	1090
13	5270	1400	e10600	3920	1940	5120	1820	929	2110	1220	1120	1430
14	3120	1330	e9000	3310	1910	4820	1580	938	4060	1400	1190	4040
15	1810	1280	e6000	2680	4010	4600	1480	964	8610	1180	1220	7020
16	1470	1260	e3000	2540	7620	4900	1400	1330	11600	968	1930	7260
17	1290	e1200	2470	2170	9120	4970	1350	1510	13100	889	2030	4600
18	1180	1140	2150	1880	9450	4320	1260	1320	13700	871	1640	2470
19	1270	1140	2150	2110	7500	3340	1210	1210	12400	874	1270	1820
20	1740	e1130	1890	1870	6260	3100	1200	1210	9170	846	969	1440
21	6540	1120	1740	1550	10200	3920	1180	1140	6900	849	850	3320
22	10200	1130	1680	1480	17700	4030	1170	1070	5870	990	798	5290
23	12100	1110	2260	1450	20500	3000	1180	1670	4900	2340	753	4040
24	13100	1090	3890	1450	22400	2300	1190	2530	3250	1970	830	2150
25	13800	1100	5970	1430	25000	2330	1130	2220	2690	1400	916	1390
26	12600	1150	8320	1420	28400	2830	1790	1740	2240	1240	870	1190
27	7720	1170	8810	1370	32100	2860	3070	2760	2760	1090	850	1060
28	4510	e1200	7140	1370	33200	2750	2420	6800	3110	982	935	994
29	e2810	e1250	4710	1370	---	2230	1610	8220	2680	899	1340	952
30	2130	e1280	3230	1380	---	1900	1210	5920	2050	844	2570	908
31	2060	---	6640	1390	---	1790	---	2860	---	970	2130	---
TOTAL	123775	48150	138250	159410	263530	270490	60390	62758	127991	37122	33751	73190
MEAN	3993	1605	4460	5142	9412	8725	2013	2024	4266	1197	1089	2440
MAX	13800	3140	10600	17700	33200	32300	5060	8220	13700	2340	2570	7260
MIN	783	1090	1300	1370	1320	1790	1130	929	936	844	706	908
AC-FT	245500	95510	274200	316200	522700	536500	119800	124500	253900	73630	66950	145200

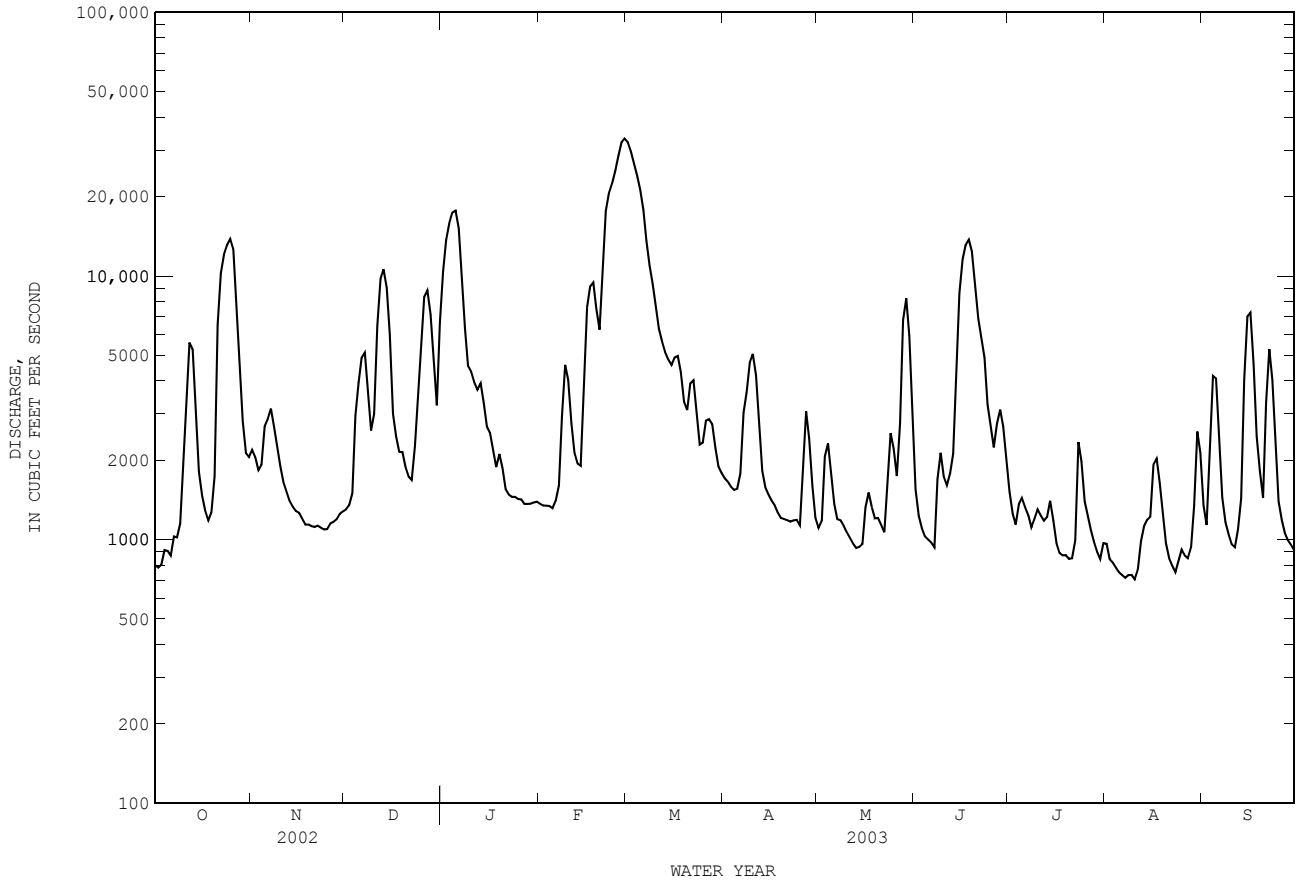
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

	1925	1925	1926	1940	1925	1925	1925	1925	1925	1925	1925	1930
MEAN	2462	3620	5215	5267	6514	7883	7787	11280	7737	2700	1257	1472
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	2052491		1398807		5258	
ANNUAL MEAN	5623		3832		15240	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					1925	
HIGHEST DAILY MEAN	26300	Mar 31	33200	Feb 28	153000	Apr 29 1942
LOWEST DAILY MEAN	783	Oct 2	706	Aug 10	28	Nov 1 1924
ANNUAL SEVEN-DAY MINIMUM	828	Sep 28	735	Aug 5	38	Aug 19 1925
MAXIMUM PEAK FLOW			33400		153000	
MAXIMUM PEAK STAGE			40.09		51.64	
ANNUAL RUNOFF (AC-FT)	4071000		2775000		3809000	
10 PERCENT EXCEEDS	18500		9240		14900	
50 PERCENT EXCEEDS	2200		1790		1520	
90 PERCENT EXCEEDS	1010		946		312	

e Estimated



TRINITY RIVER BASIN

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, 2.0 mi southwest of Oakwood, 11 mi upstream from Buffalo Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--150 mi².

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

Water-quality records.--Chemical data: June 1962 to Apr. 1964, Nov. 1967 to Sept. 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.11 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	5.1	11	1030	27	154	28	12	3.4	2.5	3.1	2.2
2	0.07	3.9	9.4	617	27	113	28	12	3.0	2.0	4.4	2.7
3	0.08	8.8	55	238	26	132	31	13	2.8	2.0	4.8	4.7
4	0.08	46	286	91	26	266	31	12	2.6	1.8	3.9	4.6
5	0.06	159	844	68	24	413	31	13	5.1	1.6	3.4	10
6	0.06	179	634	56	36	370	42	13	4.9	1.6	2.7	8.1
7	23	123	237	47	58	134	219	13	4.5	1.5	1.9	4.4
8	14	29	63	41	47	97	99	12	4.7	1.4	1.8	2.6
9	19	15	78	41	38	81	51	10	4.2	1.6	1.7	1.8
10	3.0	10	180	38	36	70	38	9.8	3.9	1.5	1.6	1.3
11	1.7	7.5	292	34	32	63	32	8.1	3.4	4.6	1.6	4.4
12	1.8	5.8	275	35	29	60	29	6.9	6.3	19	1.7	37
13	1.7	4.9	189	47	28	62	26	6.2	15	75	1.9	87
14	1.4	4.6	273	46	40	64	24	5.9	60	16	2.3	35
15	1.0	4.6	298	41	119	59	22	5.8	40	5.1	3.8	12
16	1.0	4.6	82	37	185	53	21	7.1	37	2.9	3.9	6.9
17	0.92	4.8	54	33	94	48	19	18	45	2.0	3.3	4.9
18	0.88	4.8	45	30	49	59	17	16	31	1.3	3.1	3.7
19	5.4	4.7	37	29	39	90	17	9.4	14	1.2	1.6	2.9
20	35	5.6	29	29	136	67	18	7.1	8.4	1.4	1.8	3.3
21	36	5.7	25	30	1380	52	17	6.2	6.6	1.0	1.4	3.0
22	22	6.5	22	29	2870	44	16	6.0	5.3	0.80	1.3	3.7
23	49	5.4	60	26	1220	45	17	6.1	4.5	109	1.4	3.6
24	46	6.0	289	23	651	45	19	5.9	3.9	111	1.6	3.2
25	16	6.1	1070	23	312	42	19	5.4	4.6	46	1.3	2.9
26	9.3	28	591	29	221	47	16	5.3	4.0	15	1.00	2.6
27	7.2	42	213	34	231	45	14	5.8	3.7	7.8	0.92	2.1
28	6.8	40	80	31	229	41	12	7.0	3.5	5.6	1.3	1.7
29	6.6	21	60	31	---	36	12	6.6	3.1	4.5	1.0	1.5
30	5.8	14	80	29	---	31	12	5.1	2.6	3.7	0.88	1.3
31	7.5	---	436	28	---	29	---	4.1	---	3.2	0.85	---
TOTAL	322.80	805.4	6897.4	2941	8210	2912	977	273.8	341.0	453.60	67.25	265.1
MEAN	10.4	26.8	222	94.9	293	93.9	32.6	8.83	11.4	14.6	2.17	8.84
MAX	49	179	1070	1030	2870	413	219	18	60	111	4.8	87
MIN	0.06	3.9	9.4	23	24	29	12	4.1	2.6	0.80	0.85	1.3
AC-FT	640	1600	13680	5830	16280	5780	1940	543	676	900	133	526
CFSM	0.07	0.18	1.48	0.63	1.95	0.63	0.22	0.06	0.08	0.10	0.01	0.06
IN.	0.08	0.20	1.71	0.73	2.04	0.72	0.24	0.07	0.08	0.11	0.02	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	42.6	371	1974	0.000	1964
	54.2	513	1975	0.000	1964
	113	878	1992	0.36	1964
	107	614	1999	4.03	1964
	126	425	1997	8.28	1964
	125	461	1973	8.79	1996
	112	574	1966	8.41	1971
	133	1413	1965	1.82	1972
	64.4	517	1976	0.48	1963
	12.7	128	1981	0.000	1964
	5.30	54.5	1979	0.000	1963
	13.8	246	1974	0.000	1963

SUMMARY STATISTICS

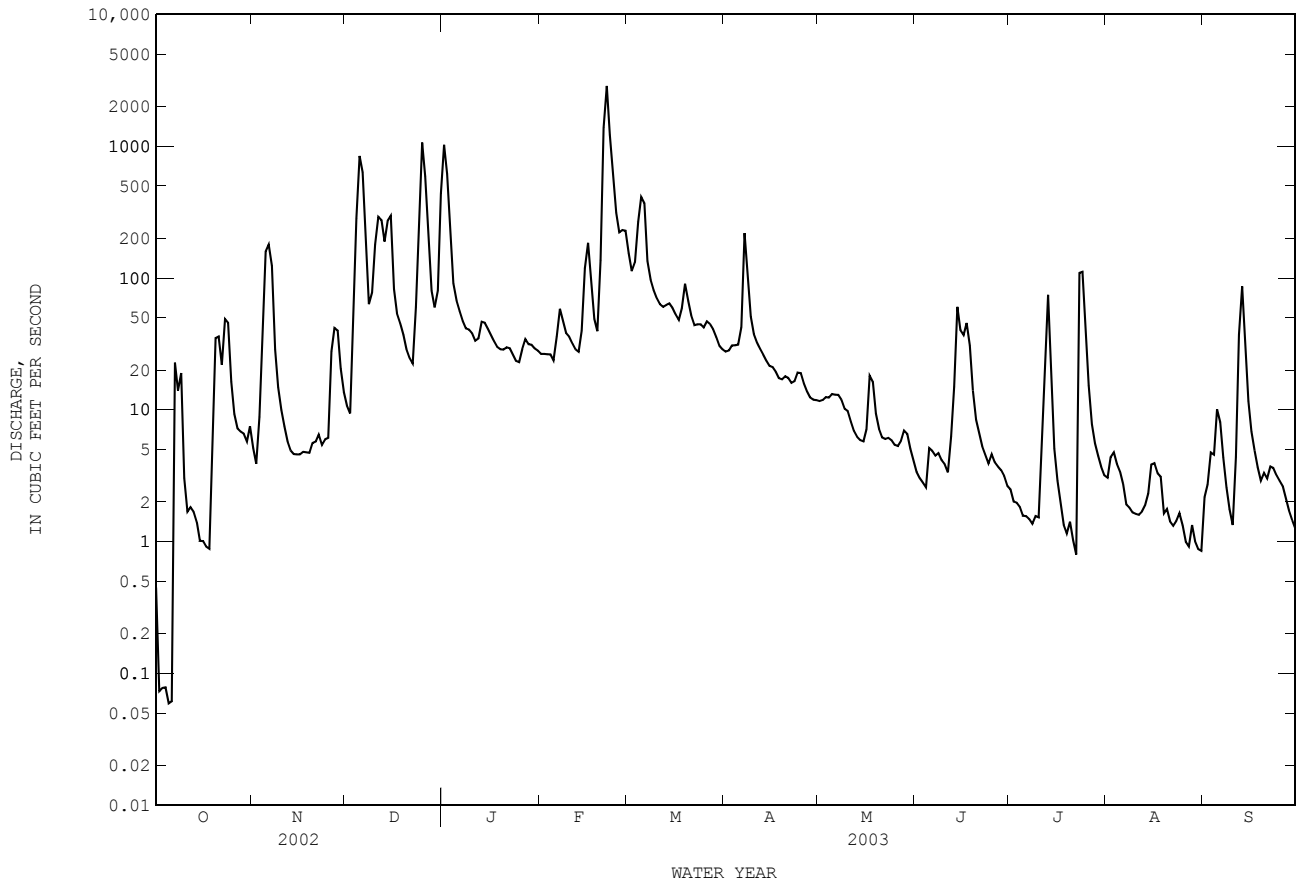
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1962 - 2003

ANNUAL TOTAL	18951.39	24466.35	
ANNUAL MEAN	51.9	67.0	76.0
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			4.52
HIGHEST DAILY MEAN	1070	Dec 25	2870
LOWEST DAILY MEAN	0.00	Aug 14	0.06
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 14	1.0
MAXIMUM PEAK FLOW			3810
MAXIMUM PEAK STAGE			13.91
ANNUAL RUNOFF (AC-FT)	37590		48530
ANNUAL RUNOFF (CFSM)	0.35		0.45
ANNUAL RUNOFF (INCHES)	4.70		6.07
10 PERCENT EXCEEDS	157		133
50 PERCENT EXCEEDS	16		14
90 PERCENT EXCEEDS	0.04		1.6
			0.08

08065200 Upper Keechi Creek near Oakwood, TX--Continued



TRINITY RIVER BASIN

08065330 Houston County Lake near Crockett, TX

LOCATION.--Lat 31°24'24", long 95°36'06", Houston County, Hydrologic Unit 12030201, at Houston County Water Control and Improvement District No. 1 pump station on Little Elkhart Creek, 10 miles northwest of Crockett.

DRAINAGE AREA.--49 mi².

PERIOD OF RECORD.--May 1999 to Sept. 2002 (mean daily contents). Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. Interruptions in the record were due to malfunction of the instrument. The lake is formed by a rolled earthfill dam 1,250 ft long, including a 500-ft uncontrolled spillway. Deliberate impoundment began in Nov. 1966. The uncontrolled spillway is an excavated channel cut through natural ground and located at the right end of the dam. The low-flow outlet consists of an 18-inch concrete pressure pipe through the dam with valve on the upstream side. Water is used for municipal and industrial purposes in the area. There are no known diversions. The dam is owned by the Houston County WC&ID No. 1. In 2000, levels were used to determine elevations from NGVD of 1929. The reference elevation was found to differ from the TWDB published value by -0.60 ft. Data regarding the dam use the datum from TWDB Report 126 and are given in the following table:

	Elevation
	(feet)
Top of dam.....	277.0
Crest of uncontrolled spillway.....	265.0
Lowest gated outlet.....	234.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 23,450 acre-ft, June 8, 2001, elevation, 264.87 ft; minimum contents, 15,540 acre-ft, Oct. 15, 2000, elevation, 258.21 ft.

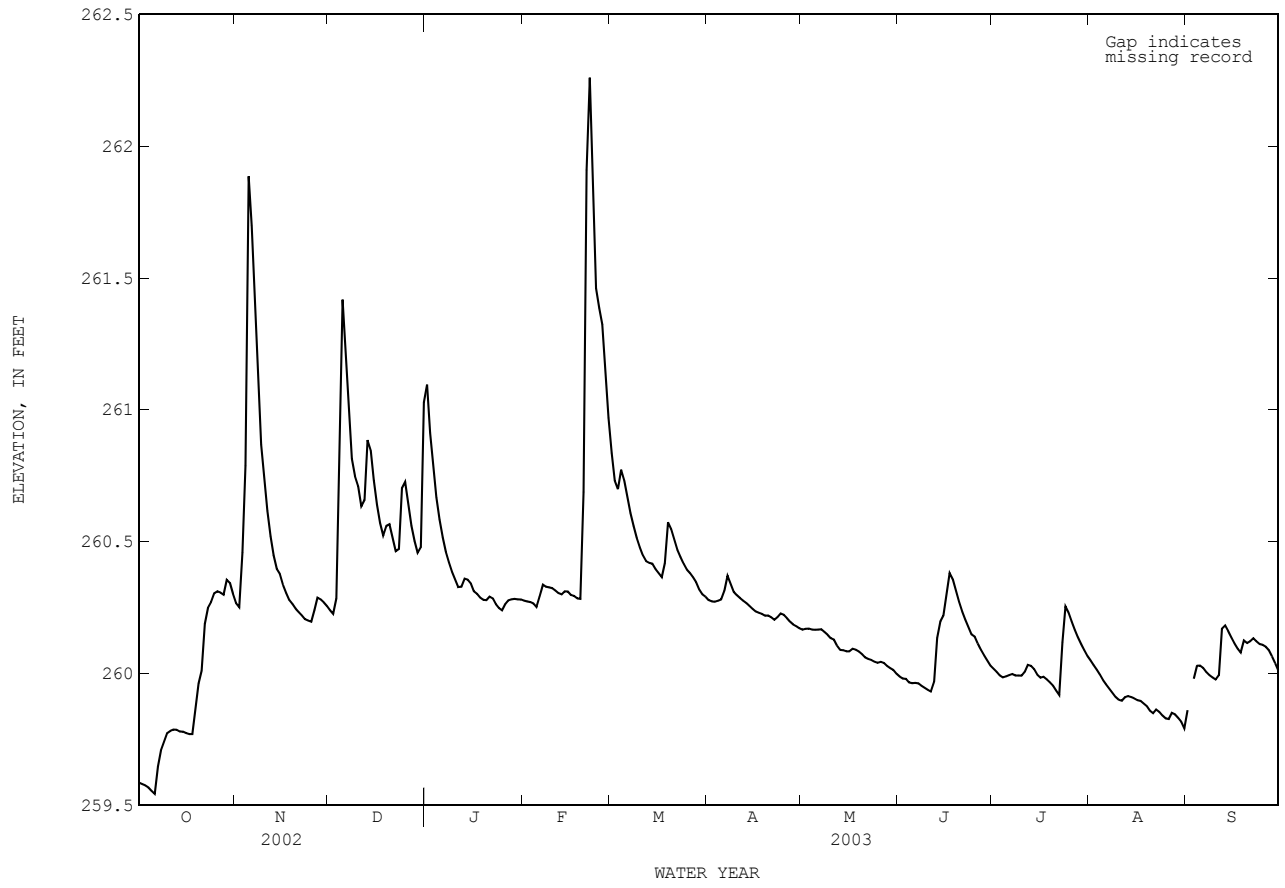
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 262.36 ft, Feb. 22; minimum elevation, 259.53 ft, Oct. 6.

ELEVATION, IN FEET (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259.58	260.27	260.24	261.10	260.28	260.84	260.28	260.17	259.99	260.02	260.05	259.86
2	259.58	260.25	260.23	260.91	260.27	260.73	260.27	260.17	259.98	260.01	260.03	---
3	259.57	260.46	260.28	260.78	260.27	260.70	260.27	260.17	259.98	259.99	260.01	259.98
4	259.57	260.79	261.02	260.67	260.27	260.77	260.28	260.17	259.97	259.98	260.00	260.03
5	259.55	261.89	261.42	260.58	260.25	260.73	260.28	260.17	259.96	259.99	259.97	260.03
6	259.54	261.70	261.20	260.52	260.29	260.67	260.31	260.17	259.96	259.99	259.96	260.02
7	259.65	261.33	260.98	260.46	260.34	260.61	260.37	260.17	259.96	260.00	259.94	260.01
8	259.71	261.06	260.81	260.42	260.33	260.56	260.34	260.16	259.95	259.99	259.93	259.99
9	259.74	260.87	260.75	260.39	260.33	260.52	260.31	260.15	259.95	259.99	259.91	259.98
10	259.77	260.73	260.71	260.36	260.32	260.48	260.30	260.13	259.94	259.99	259.90	259.98
11	259.78	260.62	260.63	260.33	260.31	260.45	260.29	260.13	259.93	260.01	259.90	259.99
12	259.79	260.52	260.66	260.33	260.30	260.43	260.28	260.11	259.97	260.03	259.91	260.17
13	259.79	260.45	260.88	260.36	260.30	260.42	260.27	260.09	260.13	260.03	259.91	260.18
14	259.78	260.40	260.85	260.36	260.31	260.42	260.26	260.09	260.20	260.02	259.91	260.16
15	259.78	260.38	260.73	260.34	260.31	260.40	260.24	260.08	260.22	259.99	259.91	260.14
16	259.77	260.34	260.64	260.31	260.30	260.38	260.24	260.08	260.30	259.98	259.90	260.11
17	259.77	260.30	260.57	260.30	260.29	260.37	260.23	260.09	260.38	259.99	259.90	260.09
18	259.77	260.28	260.52	260.29	260.28	260.42	260.23	260.09	260.36	259.98	259.89	260.08
19	259.87	260.26	260.56	260.28	260.28	260.57	260.22	260.08	260.31	259.97	259.88	260.12
20	259.96	260.25	260.57	260.28	260.69	260.55	260.22	260.07	260.27	259.95	259.86	260.12
21	260.01	260.23	260.51	260.29	261.91	260.51	260.21	260.06	260.23	259.94	259.85	260.12
22	260.19	260.22	260.46	260.28	262.26	260.47	260.20	260.05	260.20	259.92	259.86	260.13
23	260.25	260.21	260.47	260.26	261.86	260.44	260.21	260.05	260.18	260.12	259.85	260.12
24	260.27	260.20	260.70	260.25	261.46	260.42	260.23	260.04	260.15	260.25	259.84	260.11
25	260.30	260.20	260.73	260.24	261.39	260.39	260.22	260.04	260.14	260.23	259.83	260.11
26	260.31	260.24	260.64	260.26	261.32	260.38	260.21	260.04	260.11	260.20	259.83	260.10
27	260.31	260.29	260.56	260.28	261.14	260.37	260.20	260.04	260.09	260.16	259.85	260.09
28	260.30	260.28	260.50	260.28	260.97	260.35	260.19	260.03	260.07	260.14	259.84	260.06
29	260.35	260.27	260.46	260.28	---	260.32	260.18	260.02	260.05	260.11	259.83	260.04
30	260.34	260.26	260.48	260.28	---	260.30	260.17	260.01	260.03	260.09	259.82	260.01
31	260.30	---	261.03	260.28	---	260.29	---	260.00	---	260.07	259.79	---
MEAN	259.91	260.52	260.67	260.40	260.67	260.49	260.25	260.09	260.10	260.04	259.90	---
MAX	260.35	261.89	261.42	261.10	262.26	260.84	260.37	260.17	260.38	260.25	260.05	---
MIN	259.54	260.20	260.23	260.24	260.25	260.29	260.17	260.00	259.93	259.92	259.79	---

CAL YR 2002 MAX 261.89 MIN 259.54
WTR YR 2003 MAX 262.26 MIN 259.54

08065330 Houston County Lake near Crockett, TX--Continued



TRINITY RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 141.15 ft above NGVD of 1929. 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.--No estimated daily discharges. Records fair. Since installation of gage in water year 1964, at least 10% of contributing drainage area has been regulated. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

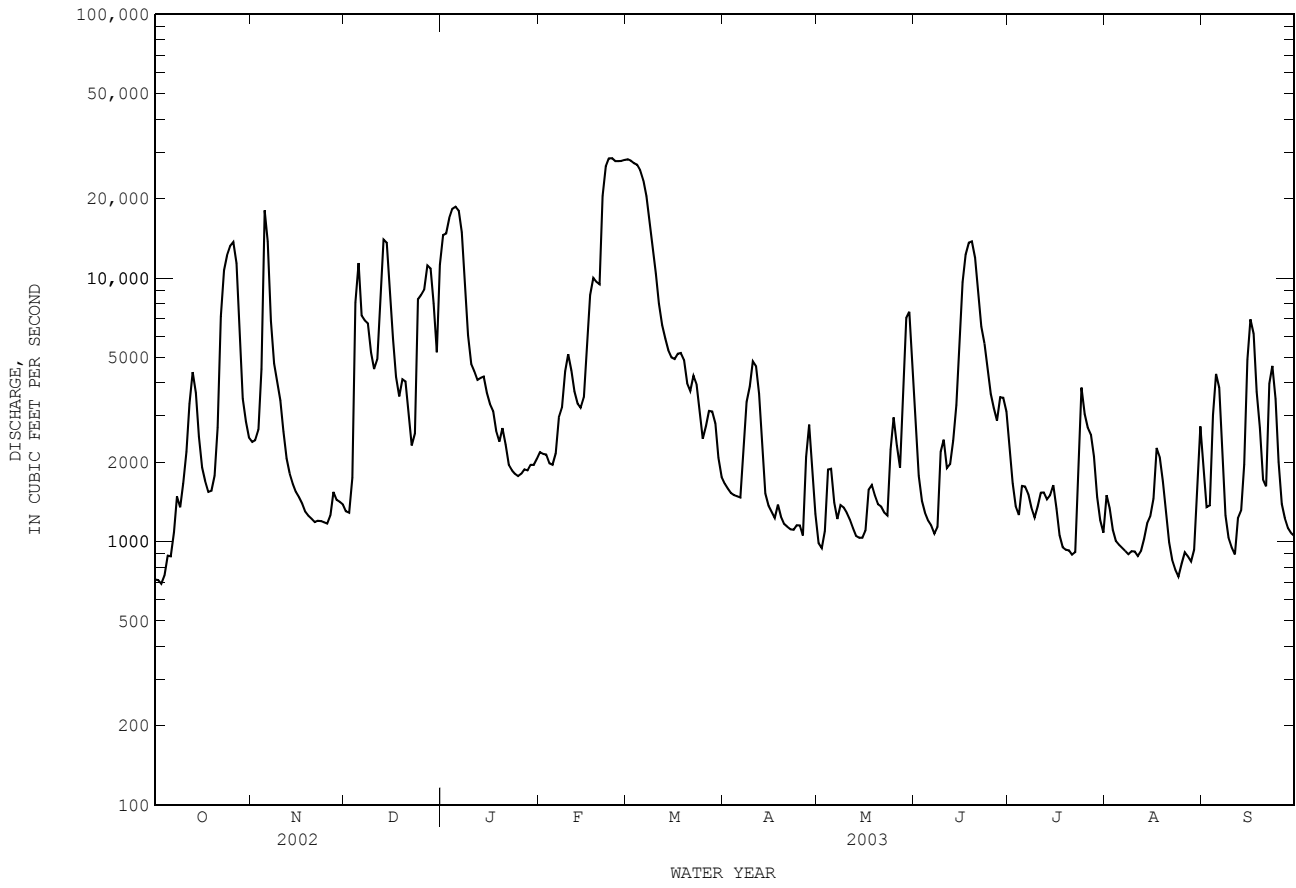
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	718	2390	1300	14500	2180	28200	1660	986	2990	2300	1500	1960
2	714	2430	1290	14700	2150	27900	1590	944	1770	1670	1340	1350
3	691	2660	1750	16900	2140	27300	1530	1090	1430	1360	1110	1370
4	743	4520	8070	18300	1980	26900	1500	1880	1290	1260	1010	3020
5	884	18100	11400	18600	1960	25600	1480	1890	1200	1630	973	4330
6	879	13800	7200	18000	2160	23400	1470	1400	1150	1620	948	3840
7	1080	6870	6900	14900	2960	20400	2210	1220	1070	1520	920	2310
8	1490	4730	6730	9950	3220	16400	3390	1380	1140	1350	896	1260
9	1350	4050	5210	6070	4430	13100	3880	1350	2190	1230	920	1040
10	1670	3430	4510	4730	5140	10400	4830	1290	2440	1360	917	951
11	2190	2620	4920	4440	4460	7990	4630	1210	1900	1530	882	894
12	3340	2070	8800	4110	3710	6630	3640	1130	1970	1540	922	1230
13	4390	1820	14000	4180	3340	5890	2280	1050	2410	1450	1020	1310
14	3670	1660	13600	4230	3220	5320	1520	1030	3290	1500	1170	1960
15	2500	1540	9470	3670	3530	5000	1370	1030	5510	1640	1250	4900
16	1910	1470	5890	3330	5870	4930	1300	1100	9660	1330	1460	6970
17	1700	1390	4210	3130	8610	5160	1230	1570	12300	1060	2270	6150
18	1540	1300	3550	2630	10000	5200	1380	1640	13600	951	2100	3700
19	1560	1250	4130	2400	9680	4890	1240	1500	13800	931	1690	2700
20	1780	1220	4050	2690	9470	3980	1170	1380	11900	926	1310	1720
21	2710	1190	3110	2330	20500	3730	1140	1360	8690	892	991	1620
22	7150	1200	2320	1950	26500	4260	1110	1290	6530	912	853	3970
23	10700	1200	2570	1870	28400	3960	1110	1260	5630	1850	782	4640
24	12200	1180	8300	1810	28500	3150	1150	2240	4550	3840	738	3480
25	13200	1170	8640	1770	27800	2460	1150	2960	3640	3050	825	2000
26	13700	1260	9050	1810	27800	2740	1050	2320	3210	2710	911	1390
27	11400	1540	11200	1880	27800	3130	2100	1910	2880	2550	879	1230
28	5990	1440	10900	1860	28100	3120	2780	4070	3530	2100	841	1130
29	3490	1420	8000	1960	---	2800	1870	7050	3510	1480	931	1080
30	2850	1380	5230	1950	---	2080	1270	7440	3120	1210	1660	1050
31	2480	---	11200	2060	---	1760	---	4960	---	1080	2740	---
TOTAL	120669	92300	207500	192710	305610	307780	58030	62930	138300	49832	36759	74555
MEAN	3893	3077	6694	6216	10910	9928	1934	2030	4610	1607	1186	2485
MAX	13700	18100	14000	18600	28500	28200	4830	7440	13800	3840	2740	6970
MIN	691	1170	1290	1770	1960	1760	1050	944	1070	892	738	894
AC-FT	239300	183100	411600	382200	606200	610500	115100	124800	274300	98840	72910	147900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	3178	5503	7571	6537	8214	10440	8935	12610	9180	3268	1775	1812
MAX	16840	26110	35440	33620	30490	39700	25960	62100	29570	15030	7188	6932
(WY)	1974	1975	1992	1992	1992	2001	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	2128165		1646975			
ANNUAL MEAN	5831		4512		6688	
HIGHEST ANNUAL MEAN					16810	
LOWEST ANNUAL MEAN					1352	
HIGHEST DAILY MEAN	24000	Apr 1	28500	Feb 24	109000	May 10 1990
LOWEST DAILY MEAN	691	Oct 3	691	Oct 3	278	Aug 12 1964
ANNUAL SEVEN-DAY MINIMUM	755	Sep 29	816	Oct 1	293	Aug 10 1964
MAXIMUM PEAK FLOW			28900	Feb 24	109000	May 10 1990
MAXIMUM PEAK STAGE			34.05	Feb 24	48.54	May 10 1990
ANNUAL RUNOFF (AC-FT)	4221000		3267000		4845000	
10 PERCENT EXCEEDS	18000		11400		19000	
50 PERCENT EXCEEDS	2620		2180		2440	
90 PERCENT EXCEEDS	1060		1040		772	

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 July 1981.
 SEDIMENT DATA: Nov. 1972 to Sept. 1977.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Feb. 1964 to current year.
 pH: Mar. 1975 to current year.
 WATER TEMPERATURE: Feb. 1964 to Sept. 1971, Mar. 1975 to current year.
 DISSOLVED OXYGEN: Mar. 1975 to current year.
 SUSPENDED-SEDIMENT DISCHARGE: July 1972 to Sept. 1977.

INSTRUMENTATION.--Water-quality monitor since Mar. 1975.

REMARKS.--Records fair. 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 years using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. 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/cm, Sept. 22, 1964; minimum, 89 microsiemens/cm, June 8, 2001.
 pH: Maximum, 9.6 units, Aug. 11-12, 1981; minimum, 5.9 units, Aug. 12, 1977.
 WATER TEMPERATURE: Maximum, 37.0°C, July 4, 1970, Sept. 4, 1978; minimum, 1.0°C, Jan. 17, 1978, Nov. 24, 1984.
 DISSOLVED OXYGEN: Maximum, 19.3 mg/L, Feb. 10, 1981; minimum, 0.0 mg/L, Apr. 20, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 722 microsiemens/cm, Aug. 15; minimum, 101 microsiemens/cm, Nov. 5.
 pH: Maximum, 8.6 units, Aug. 14, 15; minimum, 7.0 units, Dec. 6, 10, 11.
 WATER TEMPERATURE: Maximum, 32.8°C, July 20, 21, 22, 30; minimum, 6.9°C, Feb. 27, 28.
 DISSOLVED OXYGEN: Maximum, 14.4 mg/L, Dec. 2, Jan. 28; minimum, 2.8 mg/L, July 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	BOD, water, unfltrd 5 day, mg/L (00310)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	
Date		Sodium, water, fltrd, mg/L (00930)	Sodium adsorption ratio (00931)	Potassium, water, fltrd, mg/L (00935)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue, water, fltrd, sum of constituents mg/L (70301)	Nitrate, water, fltrd, mg/L as N (00618)	Nitrite, water, fltrd, mg/L as N (00613)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Ammonia, water, fltrd, mg/L as N (00608)
NOV														
20...	1205	1240		598	8.1	14.9	760	10.2	101	2.7	170	59	58.8	6.24
FEB														
04...	0915	2030		691	7.9	12.5	769	11.2	104	2.6	180	68	58.6	7.39
APR														
30...	1452	1230		610	7.5	22.0	755	6.6	76	1.0	160	48	54.1	5.84
JUN														
23...	1138	5620		405	7.8	28.8	766	6.8	88	1.6	140	39	47.4	4.33
AUG														
04...	1842	983		631	7.9	31.6	765	7.5	102	1.7	180	72	59.4	7.10

TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)
NOV 20...	--	.42	.67	.66	2.01
FEB 04...	--	.53	.79	.80	2.45
APR 30...	--	.58	.64	<.02	--
JUN 23...	--	.51	.22	.20	.601
AUG 04...	1.3	1.4	.56	.55	1.69

Remark codes used in this report:
< -- Less than

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	528	493	510	638	617	627	222	148	179
2	592	511	553	529	459	520	645	630	636	286	222	250
3	637	592	613	459	356	395	651	535	611	308	238	284
4	640	613	630	383	177	302	538	212	293	280	256	266
5	616	605	609	177	101	124	250	197	211	288	280	283
6	635	613	622	263	140	193	380	250	326	294	288	291
7	645	607	632	397	263	351	391	341	373	293	280	286
8	646	602	618	415	391	403	396	340	366	310	280	299
9	625	589	605	430	388	404	437	396	426	327	310	319
10	633	573	607	493	430	463	435	408	420	343	327	329
11	658	633	644	527	493	516	448	405	422	426	343	398
12	690	653	679	530	520	525	450	306	373	445	426	440
13	657	454	581	531	518	525	382	307	346	444	439	441
14	454	342	362	532	521	529	346	316	334	452	440	443
15	409	357	380	524	514	519	353	342	348	459	429	443
16	424	406	416	527	520	523	353	343	348	429	420	424
17	426	413	420	555	525	541	352	343	346	496	421	468
18	427	413	420	575	555	567	374	349	358	608	496	537
19	427	418	423	587	573	581	380	335	365	612	539	580
20	450	426	436	607	584	597	350	315	326	627	539	578
21	522	437	470	622	605	615	409	322	367	634	627	631
22	568	385	518	629	620	624	468	409	441	630	555	583
23	385	277	291	636	629	633	496	429	482	573	549	555
24	310	288	300	650	635	643	429	223	286	606	573	592
25	323	310	315	649	645	647	315	209	244	612	606	610
26	351	323	336	659	643	649	481	298	390	618	585	610
27	377	351	365	657	621	638	360	283	307	585	550	558
28	416	376	393	621	591	602	410	360	391	578	551	558
29	407	377	395	605	595	599	388	332	354	626	578	610
30	448	394	415	620	598	611	332	236	317	633	625	629
31	493	448	473	---	---	---	250	160	193	639	633	636
MONTH	---	---	---	659	101	512	651	160	375	639	148	455

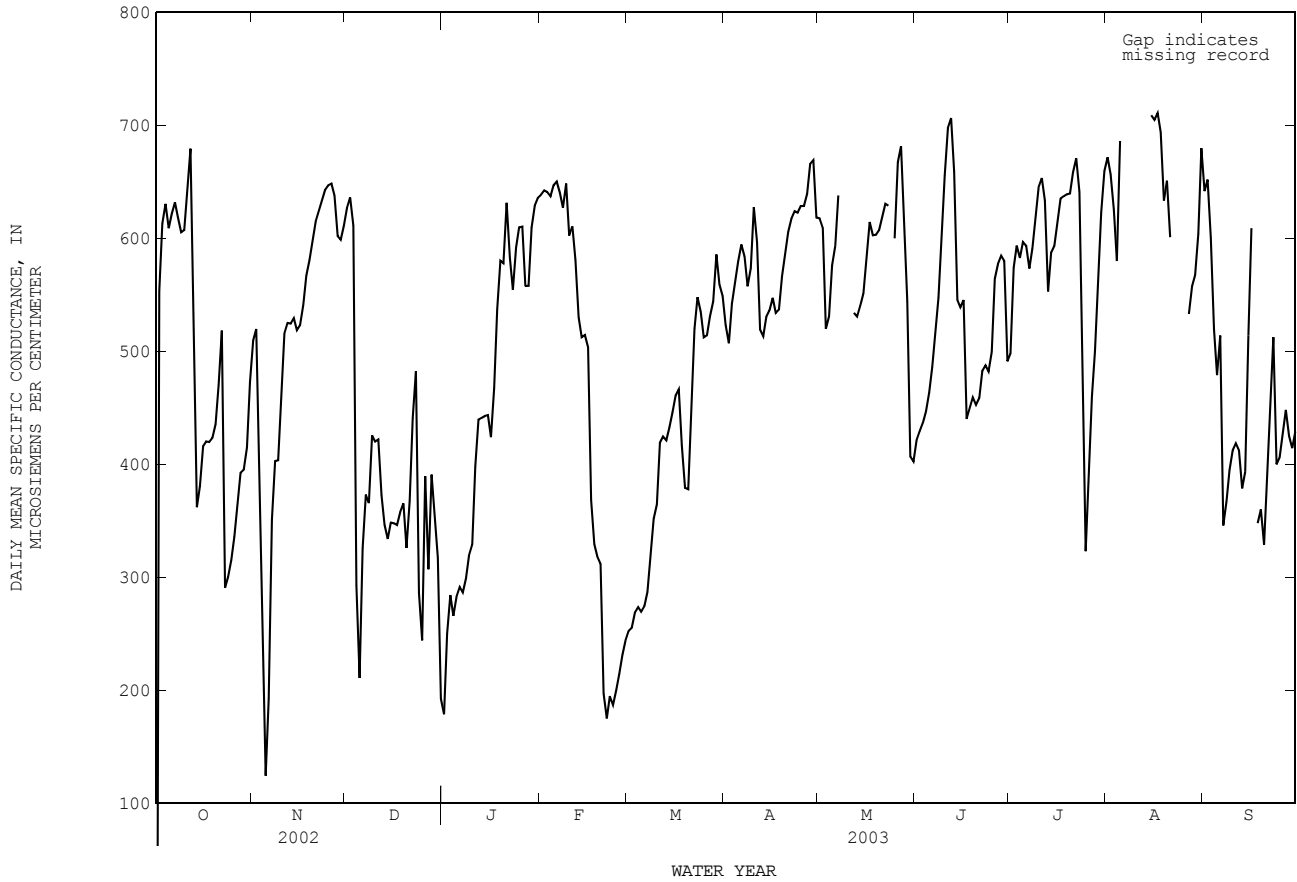
TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	641	637	639	254	248	253	540	493	523	636	608	618
2	645	640	642	260	253	255	528	490	507	638	557	609
3	643	639	641	275	260	269	551	528	542	557	507	520
4	643	635	637	278	269	274	575	551	562	541	521	531
5	651	643	647	283	255	270	589	575	580	592	539	576
6	653	646	650	283	261	274	599	588	594	624	576	593
7	650	631	640	306	278	287	592	565	584	647	624	638
8	636	622	627	328	306	318	594	510	558	---	---	---
9	671	635	648	361	328	352	609	521	574	---	---	---
10	680	502	603	393	355	364	641	609	628	---	---	---
11	654	564	611	443	393	419	621	560	597	---	---	---
12	654	523	581	441	417	425	560	492	519	540	524	534
13	541	518	530	425	415	421	527	502	513	535	527	531
14	518	509	512	436	425	432	532	527	531	545	533	540
15	520	511	514	460	428	446	545	532	536	564	533	552
16	530	454	504	463	458	461	549	544	547	605	560	580
17	457	318	368	472	461	466	544	527	534	620	605	614
18	345	316	329	468	380	417	549	528	537	617	587	603
19	331	310	318	401	351	379	581	549	566	611	589	603
20	344	230	312	395	352	378	599	581	588	612	603	607
21	230	161	197	502	393	438	610	599	606	629	609	619
22	199	161	175	541	502	520	625	608	617	633	625	631
23	211	186	195	555	541	548	631	619	624	631	622	629
24	191	184	187	544	525	535	633	615	623	---	---	---
25	208	191	200	525	502	512	634	623	629	637	577	600
26	222	208	214	522	511	514	638	620	629	683	637	667
27	238	222	232	540	522	531	654	625	639	691	659	682
28	250	238	244	563	531	544	676	651	666	659	579	614
29	---	---	---	604	563	586	677	648	669	617	370	544
30	---	---	---	584	553	559	648	604	618	424	370	407
31	---	---	---	555	547	549	---	---	---	412	397	402
MONTH	680	161	450	604	248	419	677	490	581	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	429	407	421	540	483	498	684	656	672	674	625	642
2	433	424	429	588	540	574	659	648	657	663	636	652
3	442	433	437	601	584	594	648	572	626	636	586	601
4	453	437	447	586	576	583	661	524	580	595	445	520
5	476	453	464	612	586	597	702	661	686	544	448	479
6	499	476	486	612	573	594	---	---	---	570	397	514
7	534	499	516	586	564	573	---	---	---	397	331	346
8	562	534	548	608	583	591	---	---	---	380	354	367
9	627	562	594	627	608	618	---	---	---	406	380	395
10	682	627	656	652	627	645	---	---	---	419	406	412
11	706	682	698	664	638	653	---	---	---	424	409	419
12	715	691	706	646	595	633	---	---	---	419	396	413
13	698	555	659	595	534	553	---	---	---	396	351	379
14	583	520	546	607	568	587	---	---	---	467	344	393
15	567	515	539	609	569	593	722	701	709	583	460	514
16	577	504	545	640	585	614	710	701	705	631	539	609
17	504	417	440	642	626	635	720	707	711	---	---	---
18	458	430	450	647	626	637	721	638	694	353	343	348
19	461	457	459	648	629	639	653	627	633	366	353	360
20	461	447	453	646	632	640	671	613	651	363	304	329
21	465	453	459	670	642	659	613	593	601	400	363	385
22	488	465	483	677	661	671	---	---	---	503	400	451
23	494	477	488	688	598	641	---	---	---	569	422	513
24	490	477	482	617	401	503	---	---	---	422	392	400
25	513	490	500	401	308	323	---	---	---	415	401	406
26	583	513	564	442	340	400	---	---	---	444	415	429
27	584	572	577	480	442	460	547	519	533	452	441	448
28	589	577	585	526	480	500	565	547	558	441	413	425
29	601	514	580	592	526	561	580	562	567	419	412	414
30	514	483	491	647	592	623	646	580	604	439	419	429
31	---	---	---	674	647	660	697	646	680	---	---	---
MONTH	715	407	523	688	308	582	---	---	---	---	---	---

08065350 Trinity River near Crockett, TX--Continued



PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

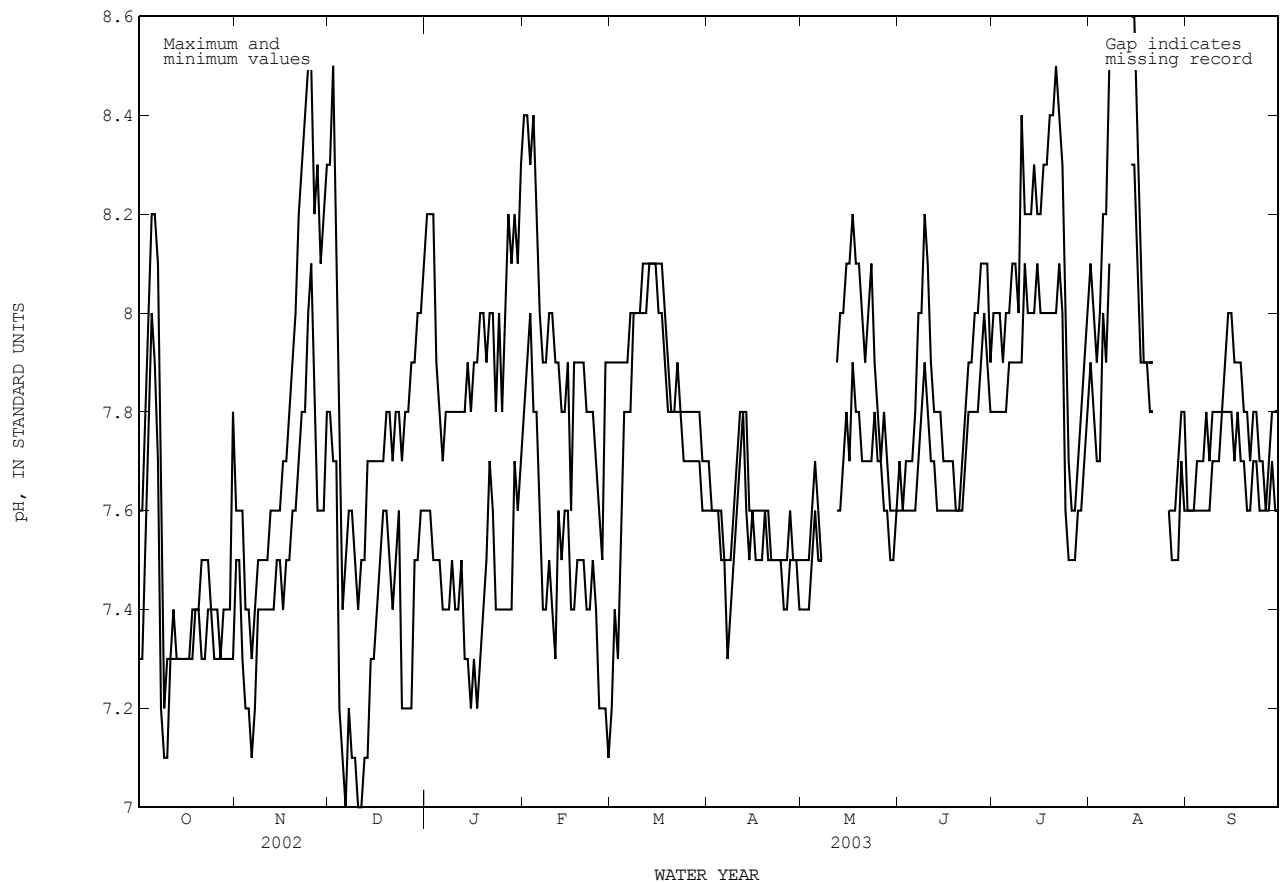
DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.6	7.3	7.6	7.5	8.3	7.8	8.2	7.6	8.4	7.8	7.9	7.2
2	7.6	7.3	7.6	7.5	8.5	7.7	8.2	7.6	8.4	7.9	7.9	7.4
3	7.8	7.5	7.6	7.3	8.3	7.7	8.2	7.5	8.3	8.0	7.9	7.3
4	8.0	7.7	7.4	7.2	7.9	7.2	7.9	7.5	8.4	7.8	7.9	7.5
5	8.2	8.0	7.4	7.2	7.4	7.1	7.8	7.5	8.2	7.8	7.9	7.8
6	8.2	7.9	7.3	7.1	7.5	7.0	7.7	7.4	8.0	7.6	7.9	7.8
7	8.1	7.7	7.4	7.2	7.6	7.2	7.8	7.4	7.9	7.4	8.0	7.8
8	7.8	7.2	7.5	7.4	7.6	7.1	7.8	7.4	7.9	7.4	8.0	8.0
9	7.2	7.1	7.5	7.4	7.5	7.1	7.8	7.5	8.0	7.5	8.0	8.0
10	7.3	7.1	7.5	7.4	7.4	7.0	7.8	7.4	8.0	7.4	8.0	8.0
11	7.3	7.3	7.5	7.4	7.5	7.0	7.8	7.4	7.9	7.3	8.1	8.0
12	7.4	7.3	7.6	7.4	7.5	7.1	7.8	7.5	7.9	7.6	8.1	8.0
13	7.3	7.3	7.6	7.4	7.7	7.1	7.8	7.3	7.8	7.5	8.1	8.1
14	7.3	7.3	7.6	7.5	7.7	7.3	7.9	7.3	7.8	7.6	8.1	8.1
15	7.3	7.3	7.6	7.5	7.7	7.3	7.8	7.2	7.9	7.6	8.1	8.1
16	7.3	7.3	7.7	7.4	7.7	7.4	7.9	7.3	7.6	7.4	8.1	8.0
17	7.3	7.3	7.7	7.5	7.7	7.5	7.9	7.2	7.9	7.4	8.1	8.0
18	7.4	7.3	7.8	7.5	7.7	7.6	8.0	7.3	7.9	7.5	8.0	7.9
19	7.4	7.4	7.9	7.6	7.8	7.6	8.0	7.4	7.9	7.5	7.9	7.8
20	7.4	7.4	8.0	7.6	7.8	7.5	7.9	7.5	7.9	7.5	7.8	7.8
21	7.5	7.3	8.2	7.7	7.7	7.4	8.0	7.7	7.8	7.4	7.8	7.8
22	7.5	7.3	8.3	7.8	7.8	7.5	8.0	7.6	7.8	7.4	7.9	7.8
23	7.5	7.4	8.4	7.8	7.8	7.6	7.8	7.4	7.8	7.5	7.8	7.8
24	7.4	7.4	8.5	8.0	7.7	7.2	8.0	7.4	7.7	7.4	7.8	7.7
25	7.4	7.3	8.5	8.1	7.8	7.2	7.8	7.4	7.6	7.2	7.8	7.7
26	7.4	7.3	8.2	7.9	7.8	7.2	8.0	7.4	7.5	7.2	7.8	7.7
27	7.3	7.3	8.3	7.6	7.9	7.2	8.2	7.4	7.9	7.2	7.8	7.7
28	7.4	7.3	8.1	7.6	7.9	7.5	8.1	7.4	7.9	7.1	7.8	7.7
29	7.4	7.3	8.2	7.6	8.0	7.5	8.2	7.7	---	---	7.8	7.7
30	7.4	7.3	8.3	7.8	8.0	7.6	8.1	7.6	---	---	7.7	7.6
31	7.8	7.3	---	---	8.1	7.6	8.3	7.7	---	---	7.7	7.6
MONTH	8.2	7.1	8.5	7.1	8.5	7.0	8.3	7.2	8.4	7.1	8.1	7.2

TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

PH, WH, FIELD, IN (STANDARD UNITS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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



TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

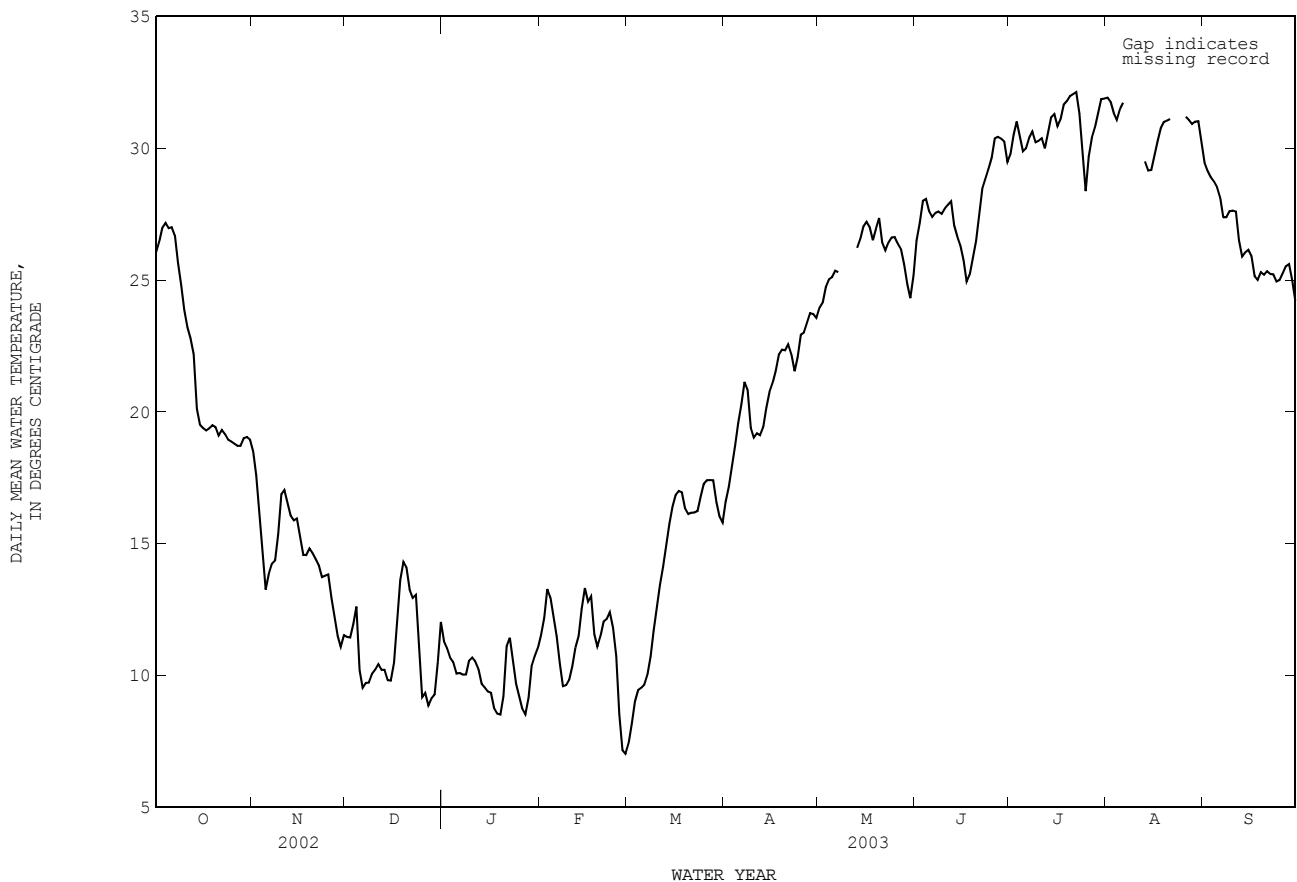
DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.5	25.7	26.0	18.7	18.0	18.5	11.8	11.1	11.5	11.8	10.8	11.3
2	27.0	26.1	26.5	18.0	16.6	17.6	11.9	10.9	11.4	11.4	10.7	11.0
3	27.7	26.5	27.0	16.7	15.8	16.1	12.7	11.5	12.0	10.9	10.4	10.7
4	27.7	26.8	27.2	15.8	13.4	14.8	13.8	11.5	12.6	10.8	10.2	10.5
5	27.4	26.5	27.0	13.8	12.7	13.3	11.5	9.4	10.2	10.2	9.9	10.1
6	27.3	26.6	27.0	14.3	13.3	13.8	9.9	9.1	9.5	10.3	9.9	10.1
7	27.0	26.2	26.7	14.7	13.9	14.2	9.8	9.6	9.7	10.2	9.8	10.0
8	26.5	25.1	25.7	14.7	14.0	14.4	9.9	9.6	9.7	10.2	9.8	10.0
9	25.1	24.4	24.8	16.0	14.6	15.3	10.1	9.9	10.1	11.0	10.2	10.6
10	24.4	23.5	23.9	17.5	16.0	16.9	10.4	10.1	10.2	10.8	10.5	10.7
11	23.5	22.9	23.2	17.2	16.8	17.0	10.6	10.2	10.4	10.6	10.4	10.5
12	23.1	22.5	22.8	16.9	16.0	16.5	10.5	10.0	10.2	10.4	9.9	10.2
13	22.8	21.2	22.2	16.6	15.6	16.1	10.4	10.0	10.2	9.9	9.5	9.7
14	21.2	19.5	20.1	16.2	15.4	15.9	10.0	9.6	9.8	9.8	9.4	9.5
15	20.0	19.1	19.5	16.4	15.6	16.0	10.0	9.5	9.8	9.5	9.3	9.4
16	20.0	18.9	19.4	15.7	14.8	15.3	11.0	10.0	10.5	9.7	9.0	9.3
17	20.0	18.6	19.3	15.1	14.2	14.6	12.7	11.0	11.9	9.0	8.5	8.7
18	19.8	18.8	19.4	15.1	14.0	14.6	14.2	12.7	13.6	8.9	8.2	8.5
19	19.7	19.4	19.5	15.4	14.2	14.8	14.6	14.0	14.3	8.9	8.2	8.5
20	19.6	19.2	19.4	15.2	14.1	14.6	14.4	13.5	14.1	10.1	8.5	9.2
21	19.2	19.0	19.1	14.9	13.8	14.4	13.5	13.0	13.3	11.8	10.1	11.1
22	19.7	19.1	19.3	14.6	13.7	14.2	13.2	12.6	12.9	11.8	11.2	11.4
23	19.6	19.1	19.2	14.2	13.2	13.7	13.2	12.7	13.1	11.2	10.1	10.6
24	19.1	18.9	18.9	14.3	13.1	13.8	12.7	9.8	11.4	10.1	9.3	9.7
25	18.9	18.8	18.9	14.2	13.5	13.8	9.8	8.7	9.2	9.5	9.0	9.2
26	18.9	18.7	18.8	13.5	12.5	12.9	9.7	8.9	9.3	9.0	8.4	8.7
27	18.8	18.6	18.7	12.5	11.9	12.2	9.1	8.6	8.9	8.9	8.1	8.5
28	18.8	18.6	18.7	11.9	11.2	11.5	9.4	8.7	9.1	9.8	8.7	9.2
29	19.3	18.8	19.0	11.3	10.6	11.1	9.7	9.0	9.3	10.8	9.8	10.3
30	19.5	18.6	19.0	12.0	11.2	11.5	11.8	9.7	10.5	10.9	10.6	10.7
31	19.2	18.7	18.9	---	---	---	12.4	11.8	12.0	11.7	10.6	11.1
MONTH	27.7	18.6	21.8	18.7	10.6	14.6	14.6	8.6	11.0	11.8	8.1	10.0
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.2	10.9	11.5	7.7	7.2	7.4	17.3	15.8	16.6	24.7	23.4	24.0
2	12.8	11.6	12.2	8.6	7.7	8.2	17.9	16.4	17.2	24.8	23.6	24.2
3	13.7	12.8	13.3	9.4	8.6	9.0	18.4	17.4	18.0	25.6	24.1	24.7
4	13.4	12.5	12.9	9.5	9.4	9.4	19.2	18.3	18.7	25.2	24.9	25.0
5	12.7	11.8	12.2	9.6	9.5	9.5	20.4	18.9	19.6	25.4	24.8	25.1
6	11.8	11.0	11.5	9.9	9.4	9.7	20.7	19.9	20.3	25.6	25.2	25.4
7	11.0	9.8	10.4	10.4	9.7	10.0	22.0	20.4	21.1	25.7	25.2	25.3
8	9.8	9.4	9.6	11.2	10.4	10.7	21.5	20.0	20.8	---	---	---
9	9.9	9.5	9.6	12.3	11.2	11.7	20.0	19.0	19.4	---	---	---
10	10.1	9.6	9.8	13.0	12.1	12.5	19.4	18.6	19.0	---	---	---
11	10.9	9.9	10.4	14.0	12.8	13.4	19.6	18.8	19.2	---	---	---
12	11.4	10.8	11.1	14.4	13.9	14.1	19.4	18.7	19.1	---	---	---
13	12.0	11.2	11.5	15.6	14.4	14.9	20.2	18.8	19.4	27.0	25.6	26.2
14	13.2	12.0	12.5	16.4	15.1	15.7	21.0	19.4	20.2	27.3	25.8	26.5
15	13.5	13.1	13.3	17.0	15.8	16.4	21.5	20.2	20.8	27.7	26.5	27.0
16	13.1	12.4	12.8	17.2	16.5	16.8	21.9	20.5	21.1	27.9	26.7	27.2
17	13.4	12.7	13.0	17.4	16.6	17.0	22.4	20.7	21.6	27.6	26.5	27.0
18	12.8	11.0	11.6	17.3	16.2	16.9	23.0	21.5	22.2	27.5	25.7	26.5
19	11.4	10.8	11.1	16.9	15.9	16.3	22.6	22.1	22.4	28.1	26.0	26.9
20	11.8	11.4	11.5	16.7	15.8	16.1	22.8	22.0	22.3	27.8	27.0	27.4
21	12.3	11.8	12.0	16.7	15.6	16.2	23.6	21.6	22.6	27.0	26.1	26.4
22	12.4	11.9	12.1	16.4	16.0	16.2	22.8	21.8	22.2	27.0	25.4	26.1
23	12.8	12.1	12.4	16.8	15.7	16.2	21.8	21.3	21.5	27.4	25.5	26.4
24	12.6	11.5	11.8	17.5	16.1	16.8	23.1	21.2	22.1	27.1	26.0	26.6
25	11.5	9.8	10.7	17.6	17.0	17.3	23.9	22.0	22.9	27.0	26.4	26.6
26	9.8	7.6	8.5	17.5	17.3	17.4	24.0	22.0	23.0	26.9	26.1	26.4
27	7.6	6.9	7.2	18.0	16.8	17.4	24.2	22.4	23.4	26.7	25.8	26.2
28	7.2	6.9	7.0	17.7	16.8	17.4	24.3	23.4	23.7	26.0	25.3	25.6
29	---	---	---	16.9	16.1	16.6	24.3	23.3	23.7	25.4	24.0	24.8
30	---	---	---	16.6	15.5	16.0	24.3	23.0	23.6	25.0	23.7	24.3
31	---	---	---	16.7	15.5	15.8	---	---	---	25.9	24.5	25.2
MONTH	13.7	6.9	11.2	18.0	7.2	14.2	24.3	15.8	20.9	---	---	---

TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	27.4	25.8	26.5	30.8	28.9	29.8	32.7	31.1	31.9	29.7	29.2	29.5
2	27.7	26.7	27.2	31.5	29.7	30.5	32.6	31.1	31.8	29.6	28.8	29.1
3	29.0	27.1	28.0	31.8	30.3	31.0	31.8	30.8	31.3	29.3	28.5	28.9
4	28.5	27.7	28.1	31.1	30.1	30.4	31.9	30.2	31.1	29.2	28.3	28.7
5	28.0	27.3	27.6	30.3	29.5	29.9	32.3	30.9	31.5	28.9	28.1	28.5
6	28.0	27.0	27.4	30.6	29.6	30.0	32.6	31.0	31.7	28.6	27.5	28.1
7	28.5	26.6	27.5	31.2	29.7	30.4	---	---	---	28.0	26.8	27.4
8	28.1	26.9	27.6	31.2	30.0	30.6	---	---	---	28.2	26.7	27.4
9	28.1	26.9	27.5	30.6	29.9	30.2	---	---	---	28.5	26.7	27.6
10	28.0	27.5	27.7	31.4	29.4	30.3	---	---	---	28.4	27.0	27.6
11	28.7	27.3	27.9	30.8	29.8	30.4	---	---	---	27.9	27.1	27.6
12	28.8	27.5	28.0	30.9	29.2	30.0	---	---	---	27.2	25.9	26.5
13	27.5	26.5	27.1	31.8	29.5	30.6	30.0	28.7	29.5	26.5	25.2	25.9
14	27.3	26.2	26.6	32.2	30.2	31.2	29.8	28.5	29.2	26.9	25.2	26.0
15	26.8	25.9	26.3	31.5	30.6	31.3	30.0	28.4	29.2	26.5	25.9	26.1
16	26.0	25.4	25.7	31.3	30.3	30.8	30.9	28.8	29.7	26.3	25.4	25.9
17	25.4	24.7	24.9	32.2	30.3	31.1	31.2	29.6	30.3	25.4	24.8	25.1
18	25.7	24.8	25.2	32.6	30.8	31.7	31.5	30.1	30.8	25.2	24.8	25.0
19	26.3	25.4	25.8	32.4	31.0	31.8	31.7	30.4	31.0	25.8	25.0	25.3
20	27.0	26.1	26.5	32.8	31.2	32.0	31.8	30.4	31.0	25.7	24.7	25.2
21	28.1	26.8	27.4	32.8	31.2	32.1	32.1	30.3	31.1	25.6	25.1	25.3
22	29.1	28.0	28.5	32.8	31.5	32.1	---	---	---	25.7	24.9	25.2
23	29.2	28.5	28.8	32.4	30.1	31.3	---	---	---	25.4	25.0	25.2
24	29.6	29.0	29.2	30.8	28.5	29.8	---	---	---	25.2	24.7	24.9
25	30.5	29.0	29.7	29.3	27.4	28.4	---	---	---	25.6	24.5	25.0
26	30.9	29.9	30.4	30.6	29.0	29.7	32.1	30.4	31.2	25.6	25.0	25.3
27	31.0	30.0	30.4	31.4	29.6	30.4	31.7	30.5	31.1	26.4	24.8	25.5
28	31.0	29.9	30.4	31.8	29.9	30.8	31.9	30.1	30.9	26.3	24.9	25.6
29	30.9	29.6	30.3	32.3	30.4	31.3	31.8	30.2	31.0	25.6	24.3	25.0
30	30.1	29.1	29.5	32.8	31.0	31.9	31.7	30.4	31.0	24.8	23.5	24.2
31	---	---	---	32.6	31.2	31.9	30.8	29.7	30.3	---	---	---
MONTH	31.0	24.7	27.8	32.8	27.4	30.8	---	---	---	29.7	23.5	26.4



TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

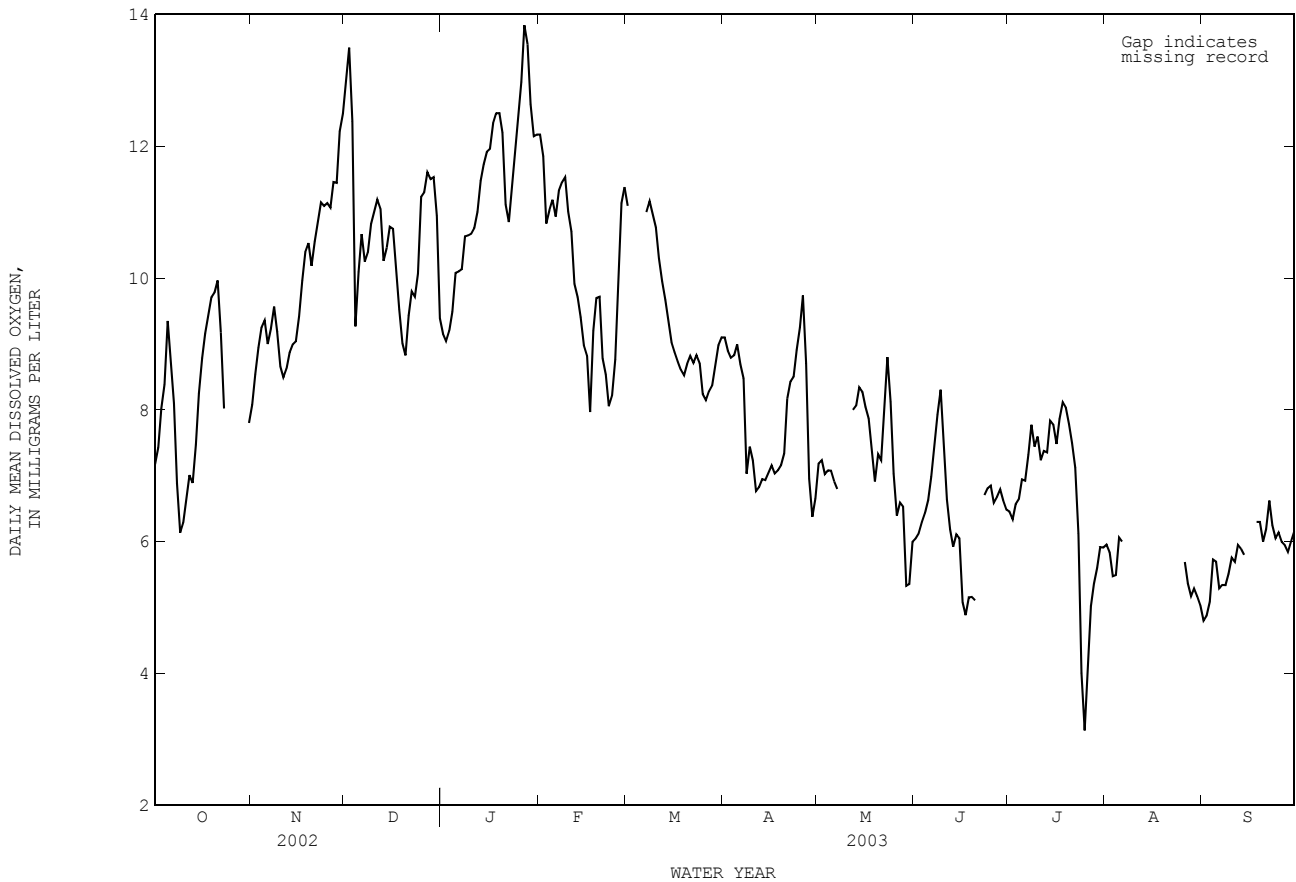
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.8	6.9	7.2	8.4	7.8	8.1	13.9	12.0	13.0	9.4	8.9	9.2
2	8.2	6.9	7.4	9.1	8.3	8.5	14.4	12.8	13.5	9.3	8.8	9.0
3	9.0	7.5	8.0	9.1	8.8	8.9	13.3	10.6	12.4	9.4	9.0	9.2
4	9.1	7.8	8.4	9.7	8.8	9.2	10.6	8.9	9.3	10.0	9.0	9.5
5	10.2	8.6	9.3	9.7	8.9	9.4	10.8	9.2	10.1	10.2	10.0	10.1
6	9.3	8.0	8.7	9.1	8.9	9.0	11.1	10.3	10.7	10.3	9.9	10.1
7	8.8	7.4	8.1	9.6	9.0	9.2	10.4	10.0	10.2	10.5	9.9	10.1
8	7.8	6.3	6.9	9.7	9.3	9.6	10.6	10.1	10.4	10.8	10.4	10.6
9	6.5	5.8	6.1	9.5	9.0	9.2	11.0	10.5	10.8	10.8	10.5	10.6
10	6.6	5.9	6.3	9.0	8.4	8.7	11.0	10.8	11.0	10.8	10.6	10.7
11	6.8	6.6	6.6	8.6	8.4	8.5	11.5	10.9	11.2	10.9	10.6	10.8
12	7.2	6.7	7.0	8.8	8.5	8.6	11.3	10.8	11.1	11.3	10.8	11.0
13	7.1	6.7	6.9	9.0	8.8	8.9	10.8	10.0	10.3	11.7	11.2	11.5
14	8.0	6.9	7.5	9.2	8.9	9.0	10.6	10.2	10.5	11.8	11.6	11.7
15	8.7	8.0	8.3	9.2	8.9	9.0	10.9	10.6	10.8	12.0	11.8	11.9
16	9.0	8.7	8.8	9.7	9.1	9.4	10.9	10.5	10.7	12.2	11.7	12.0
17	9.3	9.0	9.2	10.2	9.7	10	10.5	9.9	10.2	12.6	12.2	12.3
18	9.6	9.2	9.5	10.7	10.2	10.4	10.0	9.2	9.5	12.8	12.3	12.5
19	9.8	9.5	9.7	10.9	10.2	10.5	9.3	8.7	9.0	12.6	12.3	12.5
20	9.9	9.7	9.8	10.7	9.8	10.2	9.1	8.6	8.8	12.6	11.7	12.2
21	10.2	9.9	10	11.2	10.0	10.6	9.8	9.0	9.4	11.7	10.8	11.1
22	10.2	7.7	9.2	11.6	10.3	10.9	10.0	9.7	9.8	11.0	10.7	10.8
23	8.3	7.6	8.0	11.8	10.6	11.1	9.8	9.4	9.7	11.7	11.0	11.3
24	---	---	---	11.7	10.7	11.1	10.7	9.8	10.1	12.0	11.6	11.8
25	---	---	---	11.7	10.6	11.1	11.5	10.7	11.2	12.8	12.0	12.3
26	---	---	---	11.4	10.8	11.1	11.6	11.1	11.3	13.3	12.7	13.0
27	---	---	---	12.0	10.8	11.5	11.7	11.4	11.6	14.3	13.3	13.8
28	---	---	---	11.8	11.0	11.4	11.8	11.2	11.5	14.4	13.1	13.5
29	---	---	---	12.9	11.6	12.2	11.7	11.4	11.5	13.3	12.2	12.6
30	---	---	---	13.2	11.9	12.5	11.4	10.1	10.9	12.5	11.9	12.2
31	8.1	7.6	7.8	---	---	---	10.1	9.0	9.4	12.7	11.8	12.2
MONTH	---	---	---	13.2	7.8	9.9	14.4	8.6	10.6	14.4	8.8	11.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.8	11.8	12.2	11.4	10.8	11.1	9.3	8.9	9.1	7.3	7.1	7.2
2	12.5	11.3	11.8	---	---	---	9.0	8.8	8.9	7.4	7.0	7.2
3	11.3	10.4	10.8	---	---	---	8.9	8.7	8.8	7.2	6.8	7.0
4	11.8	10.4	11.0	---	---	---	9.2	8.6	8.8	7.3	7.0	7.1
5	11.5	10.9	11.2	---	---	---	9.8	8.4	9.0	7.2	7.0	7.1
6	11.3	10.7	10.9	---	---	---	9.2	8.4	8.7	7.1	6.8	6.9
7	11.8	10.8	11.3	11.1	10.9	11.0	9.4	7.8	8.5	7.1	6.7	6.8
8	11.7	11.1	11.5	11.3	11.0	11.2	8.0	6.3	7.0	---	---	---
9	11.7	11.3	11.5	11.2	10.8	11.0	7.8	7.0	7.4	---	---	---
10	11.3	10.7	11.0	10.9	10.6	10.8	7.5	6.9	7.2	---	---	---
11	11.2	10.3	10.7	10.6	10.0	10.3	6.9	6.7	6.8	---	---	---
12	10.3	9.6	9.9	10.0	9.9	10	7.0	6.7	6.8	8.6	7.4	8.0
13	9.8	9.6	9.7	9.9	9.5	9.7	7.0	6.9	6.9	9.0	7.3	8.1
14	9.6	9.1	9.4	9.5	9.2	9.3	7.0	6.9	6.9	9.3	7.5	8.3
15	9.4	8.8	9.0	9.2	8.8	9.0	7.2	6.9	7.0	9.2	7.5	8.3
16	9.1	8.0	8.8	8.9	8.8	8.9	7.2	7.0	7.2	8.9	7.2	8.0
17	8.3	7.6	8.0	8.9	8.6	8.7	7.2	6.9	7.0	8.7	7.0	7.9
18	9.8	8.1	9.2	8.7	8.5	8.6	7.3	6.9	7.1	8.2	6.6	7.4
19	9.8	9.6	9.7	8.7	8.3	8.5	7.4	7.0	7.2	7.9	6.0	6.9
20	9.8	9.3	9.7	8.9	8.3	8.7	8.1	6.8	7.3	8.1	6.7	7.3
21	9.3	8.5	8.8	9.0	8.6	8.8	9.2	7.3	8.2	7.9	6.7	7.2
22	8.7	8.4	8.5	8.8	8.6	8.7	8.9	7.9	8.4	9.0	7.1	8.0
23	8.4	7.9	8.1	8.9	8.8	8.8	9.4	7.9	8.5	9.8	8.0	8.8
24	8.4	8.0	8.2	8.8	8.6	8.7	10.1	7.9	8.9	8.8	7.5	8.1
25	9.2	8.4	8.8	8.6	8.1	8.2	10.8	8.0	9.2	7.5	6.5	7.0
26	10.8	9.2	10.1	8.2	8.1	8.1	11.2	8.6	9.7	6.6	6.2	6.4
27	11.4	10.8	11.1	8.3	8.2	8.3	9.4	7.8	8.7	6.9	6.4	6.6
28	11.5	11.2	11.4	8.5	8.3	8.4	7.8	6.4	7.0	6.6	6.3	6.5
29	---	---	---	8.8	8.5	8.7	6.6	6.0	6.4	6.3	4.7	5.3
30	---	---	---	9.1	8.8	9.0	7.1	6.4	6.7	5.8	4.8	5.4
31	---	---	---	9.2	9.1	9.1	---	---	---	6.2	5.8	6.0
MONTH	12.8	7.6	10.1	---	---	---	11.2	6.0	7.8	---	---	---

TRINITY RIVER BASIN

08065350 Trinity River near Crockett, TX--Continued

OXYGEN DISSOLVED, IN (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.1	6.0	6.0	6.7	6.2	6.5	6.6	5.5	6.0	4.9	4.7	4.8
2	6.3	6.0	6.1	6.7	6.0	6.3	6.4	5.3	5.8	5.0	4.8	4.9
3	6.4	6.2	6.3	6.9	6.4	6.6	6.0	5.0	5.5	5.2	5.0	5.1
4	6.7	6.2	6.4	7.1	6.3	6.7	6.3	4.8	5.5	6.3	5.2	5.7
5	7.0	6.4	6.6	7.5	6.6	6.9	6.9	5.4	6.1	6.3	5.1	5.7
6	7.4	6.7	7.0	7.3	6.6	6.9	6.8	5.5	6.0	5.5	5.1	5.3
7	8.2	6.9	7.5	8.1	6.7	7.3	---	---	---	5.4	5.2	5.3
8	8.6	7.3	7.9	8.5	7.2	7.8	---	---	---	5.4	5.3	5.3
9	9.3	7.6	8.3	7.8	7.1	7.4	---	---	---	5.7	5.4	5.5
10	8.4	6.8	7.5	8.6	6.8	7.6	---	---	---	5.9	5.6	5.8
11	7.0	6.4	6.6	7.7	7.0	7.2	---	---	---	6.0	5.6	5.7
12	6.5	6.0	6.2	8.1	6.9	7.4	---	---	---	6.0	5.8	5.9
13	6.1	5.7	5.9	8.3	6.7	7.4	---	---	---	6.0	5.6	5.9
14	6.3	6.0	6.1	8.9	6.9	7.8	---	---	---	6.1	5.5	5.8
15	6.3	5.6	6.1	8.2	7.3	7.8	---	---	---	---	---	---
16	5.6	4.7	5.1	8.0	7.0	7.5	---	---	---	---	---	---
17	5.1	4.7	4.9	9.2	7.0	7.9	---	---	---	---	---	---
18	5.2	5.1	5.2	9.4	7.2	8.1	---	---	---	6.4	6.2	6.3
19	5.3	5.0	5.2	9.3	7.1	8.0	---	---	---	6.5	5.9	6.3
20	5.3	5.0	5.1	9.0	6.9	7.8	---	---	---	6.2	5.7	6.0
21	---	---	---	8.8	6.5	7.5	---	---	---	6.4	5.9	6.2
22	---	---	---	8.1	6.3	7.1	---	---	---	6.9	6.3	6.6
23	6.8	6.6	6.7	6.9	5.4	6.1	---	---	---	6.5	5.9	6.2
24	7.0	6.6	6.8	5.4	3.2	4.0	---	---	---	6.3	5.7	6.1
25	6.9	6.8	6.8	3.5	2.8	3.1	---	---	---	6.3	6.0	6.1
26	6.8	6.5	6.6	4.6	3.5	4.1	6.0	5.4	5.7	6.2	5.7	6.0
27	6.8	6.5	6.7	5.3	4.6	5.0	5.6	5.0	5.4	6.2	5.7	5.9
28	6.9	6.7	6.8	5.6	5.2	5.4	5.6	4.9	5.2	6.0	5.7	5.8
29	6.8	6.4	6.6	6.2	5.2	5.6	5.8	5.0	5.3	6.4	5.7	6.0
30	6.6	6.3	6.5	6.6	5.4	5.9	5.4	5.0	5.2	6.4	5.9	6.2
31	---	---	---	6.6	5.5	5.9	5.3	4.9	5.0	---	---	---
MONTH	---	---	---	9.4	2.8	6.7	---	---	---	---	---	---



THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

08065800 Bedias Creek near Madisonville, TX

LOCATION.--Lat 30°53'05", long 95°46'40", Madison-Walker County line, Hydrologic Unit 12030202, on right bank at downstream side of bridge on U.S. Highways 75 and 190, 0.5 mi upstream from Interstate Highway 45, 1.5 mi downstream from Caney Creek, and 9.5 mi southeast of Madisonville.

DRAINAGE AREA.--321 mi².

PERIOD OF RECORD.--Oct. 1967 to current year.

Water-quality records.--Chemical data: July 1962 to Apr. 1964, Jan. 1968 to Sept. 1974, Oct. 1984 to Sept. 1987. Biochemical data: Sept. 1970 to Sept. 1974, Apr. 1985 to June 1988, Apr. 1993 to Sept. 1995. Pesticide data: Apr. 1985 to Apr. 1988. Suspended sediment data: Oct. 1984 to Sept. 1986. Specific conductance: Oct. 1984 to Sept. 1987. Water temperature: Oct. 1984 to Sept. 1987.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 150.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records 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. These structures control runoff from 2.71 mi² 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

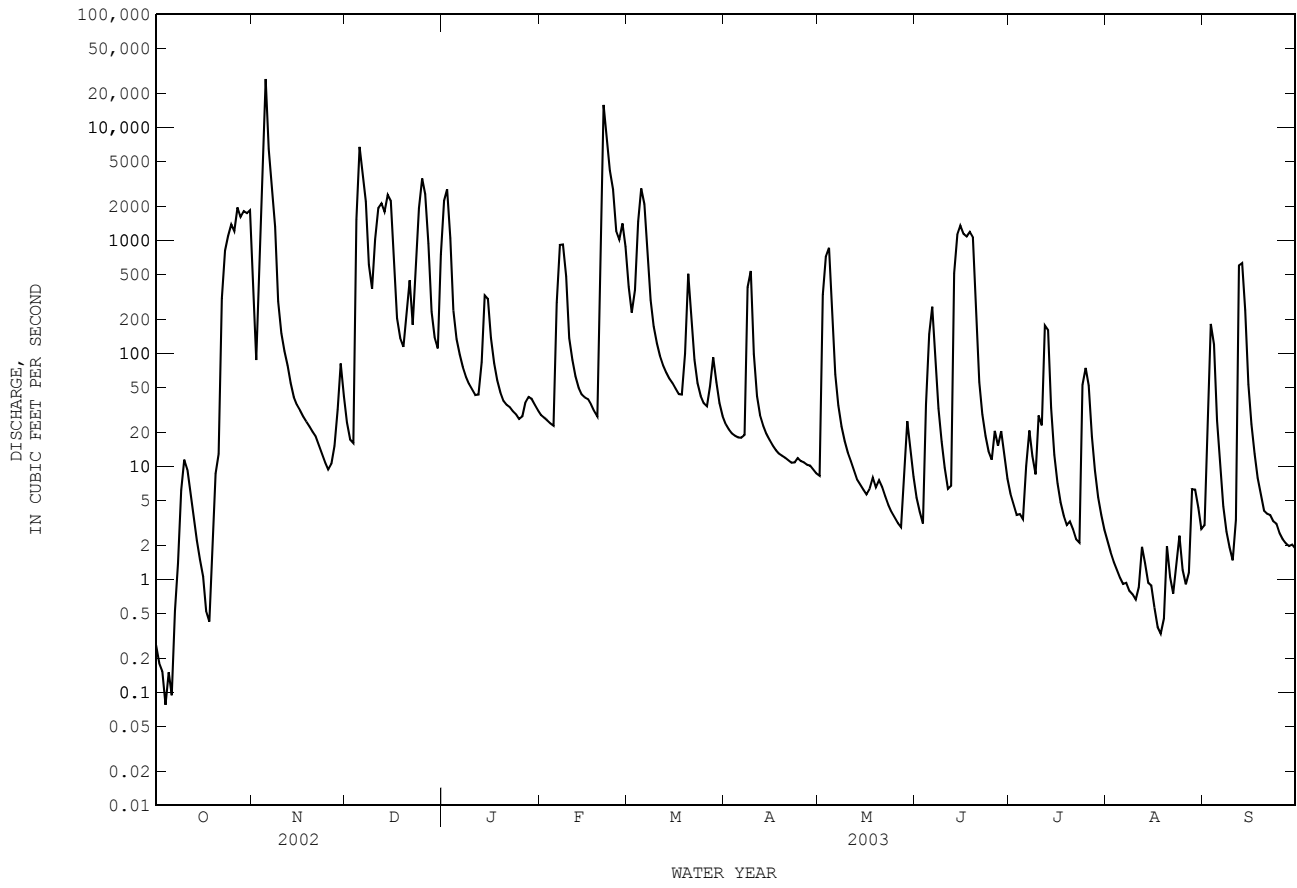
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	435	24	2250	28	386	24	8.2	5.3	5.7	2.2	3.0
2	0.18	87	17	2830	27	229	21	329	4.0	4.6	1.7	23
3	0.15	373	16	1050	25	363	20	716	3.1	3.7	1.4	182
4	0.08	3150	1530	241	24	1470	19	858	35	3.8	1.2	120
5	0.15	26800	6730	134	23	2880	18	235	148	3.4	1.0	25
6	0.09	6450	3770	97	280	2090	18	65	258	10	0.91	9.6
7	0.53	3130	2210	76	912	720	19	35	85	21	0.93	4.4
8	1.4	1320	608	62	919	295	385	23	32	12	0.79	2.6
9	6.1	288	372	54	481	173	535	17	16	8.5	0.74	1.9
10	11	150	1020	48	137	123	99	13	9.7	28	0.66	1.5
11	9.3	105	1940	43	87	95	42	11	6.3	23	0.85	3.4
12	5.9	78	2130	43	63	79	28	9.2	6.7	177	1.9	598
13	3.5	55	1800	83	50	67	23	7.6	513	161	1.4	628
14	2.2	41	2530	326	43	60	19	6.9	1130	33	0.93	242
15	1.5	35	2240	303	41	54	17	6.2	1350	13	0.88	53
16	1.1	31	618	137	39	49	15	5.6	1140	7.1	0.56	24
17	0.52	28	204	82	35	44	14	6.3	1080	4.8	0.38	13
18	0.42	25	136	58	31	43	13	8.0	1190	3.6	0.33	7.9
19	2.0	22	114	45	27	99	12	6.5	1070	3.0	0.45	5.6
20	8.6	20	209	38	1480	507	12	7.5	219	3.3	2.0	4.0
21	13	18	443	35	15800	223	11	6.6	56	2.8	1.0	3.8
22	305	16	179	33	7580	88	11	5.4	29	2.3	0.75	3.7
23	813	13	608	31	4170	55	11	4.5	19	2.1	1.3	3.3
24	1090	11	1930	29	2830	42	12	3.9	14	52	2.4	3.1
25	1390	9.4	3530	26	1210	36	11	3.5	11	74	1.2	2.6
26	1210	11	2560	28	1020	34	11	3.1	21	52	0.90	2.3
27	1960	15	938	37	1410	51	10	2.9	15	18	1.1	2.1
28	1610	32	233	41	878	92	10	7.3	20	9.1	6.3	2.0
29	1810	81	139	40	---	55	9.4	25	13	5.3	6.2	2.0
30	1750	42	110	35	---	36	8.6	15	7.8	3.7	4.3	1.9
31	1850	---	752	31	---	28	---	8.1	---	2.7	2.8	---
TOTAL	13855.98	42871.4	39640	8366	39650	10566	1458.0	2459.3	8506.9	753.5	49.46	1978.7
MEAN	447	1429	1279	270	1416	341	48.6	79.3	284	24.3	1.60	66.0
MAX	1960	26800	6730	2830	15800	2880	535	858	1350	177	6.3	628
MIN	0.08	9.4	16	26	23	28	8.6	2.9	3.1	2.1	0.33	1.5
AC-FT	27480	85040	78630	16590	78650	20960	2890	4880	16870	1490	98	3920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	208	210	289	313	330	287	226	286	269	25.2	24.7	90.0
MAX	3021	1495	1279	2015	1580	1353	1333	1046	1745	260	266	1551
(WY)	1985	2001	2003	1991	1992	2001	1969	1969	1968	1979	1995	1974
MIN	0.000	0.025	0.22	1.99	3.84	3.13	2.30	2.10	0.43	0.013	0.000	0.000
(WY)	1979	1989	1968	1971	2000	1971	1981	2002	1998	1977	1969	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	117328.29		170155.24			
ANNUAL MEAN	321		466		212	
HIGHEST ANNUAL MEAN					530	
LOWEST ANNUAL MEAN					32.6	
HIGHEST DAILY MEAN	26800	Nov 5	26800	Nov 5	26800	Nov 5 2002
LOWEST DAILY MEAN	0.02	Sep 25	0.08	Oct 4	0.00	Aug 31 1968
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 30	0.21	Oct 1	0.00	Aug 31 1968
MAXIMUM PEAK FLOW			39600	Nov 5	39600	Nov 5 2002
MAXIMUM PEAK STAGE			25.83	Nov 5	25.83	Nov 5 2002
ANNUAL RUNOFF (AC-FT)	232700		337500		153800	
10 PERCENT EXCEEDS	776		1210		430	
50 PERCENT EXCEEDS	13		27		9.1	
90 PERCENT EXCEEDS	1.4		1.8		0.09	

08065800 Bedias Creek near Madisonville, TX--Continued



TRINITY RIVER BASIN

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 mi².

PERIOD OF RECORD.--Dec. 1965 to current year.

Water-quality records.--Chemical data: Dec. 1963 to Sept. 1974. Biochemical data: Oct. 1969 to Sept. 1974.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 139.85 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent that enters the creek upstream from this station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.54	4.6	43	112	10	23	1.2	0.65	0.63	1.2	0.82	2.8
2	0.51	5.7	41	45	8.6	18	1.3	1.6	0.65	0.96	0.81	204
3	0.48	471	50	25	8.1	699	1.7	1.8	0.62	0.89	0.77	17
4	0.67	2620	401	18	6.9	334	1.7	1.2	0.73	1.1	0.64	18
5	0.95	3550	221	15	7.1	128	1.3	1.0	0.75	1.3	0.60	3.6
6	1.0	296	99	13	33	383	1.2	0.99	0.77	1.1	0.58	1.6
7	0.91	164	75	11	45	68	1.3	0.98	0.73	0.95	0.55	0.93
8	0.62	117	61	10	18	35	1.0	0.96	0.78	1.4	0.51	0.63
9	0.93	97	79	10	16	24	0.88	0.90	0.74	1.2	0.51	0.48
10	1.2	85	118	12	22	17	0.82	1.0	0.73	1.2	0.52	0.42
11	1.2	76	77	10	16	14	0.84	0.92	0.97	17	1.4	0.43
12	1.0	67	1220	13	11	9.7	0.86	48	17	21	1.5	72
13	0.93	58	544	21	10	9.4	0.83	21	128	3.7	0.80	16
14	1.1	55	154	15	10	e10	0.78	2.6	114	1.8	1.0	3.2
15	0.84	52	90	14	12	e10	0.75	1.3	24	1.2	0.72	1.4
16	0.81	48	65	12	11	e7.5	0.77	0.88	13	1.0	0.60	0.97
17	0.79	45	48	11	9.0	e10	0.84	0.67	20	0.97	0.55	0.81
18	0.72	43	37	10	8.1	e10	0.82	0.53	13	0.89	0.60	0.58
19	1.6	41	100	9.8	8.0	9.5	0.86	0.48	4.7	0.85	0.57	0.46
20	22	39	64	9.7	692	4.0	1.4	0.43	2.4	0.78	0.54	0.44
21	5.4	38	31	9.9	1790	2.4	2.2	0.43	1.6	0.76	0.57	0.67
22	49	36	22	8.7	819	2.0	1.1	0.43	1.3	0.74	0.85	1.3
23	30	35	118	6.9	125	1.8	3.1	0.47	1.2	8.8	0.82	1.1
24	16	34	896	6.5	56	1.7	2.5	0.46	1.1	17	0.72	0.57
25	187	54	110	7.0	39	1.7	2.0	0.50	1.0	3.5	0.74	0.51
26	89	64	48	11	61	2.1	0.92	0.68	1.1	1.8	1.0	0.43
27	27	76	27	16	62	2.1	0.71	0.74	1.3	1.3	1.1	0.39
28	22	54	18	13	33	1.8	0.79	0.62	1.1	1.3	1.2	0.37
29	347	47	14	12	---	1.5	0.66	0.85	1.0	1.1	0.76	0.31
30	30	48	103	15	---	1.3	0.60	0.61	1.1	0.97	0.64	0.30
31	8.5	---	1230	11	---	1.2	---	0.68	---	0.89	1.8	---
TOTAL	849.70	8420.3	6204	513.5	3946.8	1842.7	35.73	94.36	356.00	98.65	24.79	351.71
MEAN	27.4	281	200	16.6	141	59.4	1.19	3.04	11.9	3.18	0.80	11.7
MAX	347	3550	1230	112	1790	699	3.1	48	128	21	1.8	204
MIN	0.48	4.6	14	6.5	6.9	1.2	0.60	0.43	0.62	0.74	0.51	0.31
AC-FT	1690	16700	12310	1020	7830	3650	71	187	706	196	49	698
CFSM	0.48	4.92	3.51	0.29	2.47	1.04	0.02	0.05	0.21	0.06	0.01	0.21
IN.	0.55	5.50	4.05	0.34	2.58	1.20	0.02	0.06	0.23	0.06	0.02	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	67.7	45.7	60.6	76.9	73.8	65.3	52.6	54.9	54.3	10.3	6.38	11.2
MAX	1891	416	200	320	288	236	270	202	365	100	51.4	107
(WY)	1995	1999	2003	1974	1992	1990	1979	1982	1973	1989	1975	1973
MIN	0.31	0.82	1.67	1.17	1.00	0.76	1.13	0.86	0.31	0.083	0.25	0.37
(WY)	1988	1991	2000	2000	2000	1971	1971	1988	1971	1971	2000	1989

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

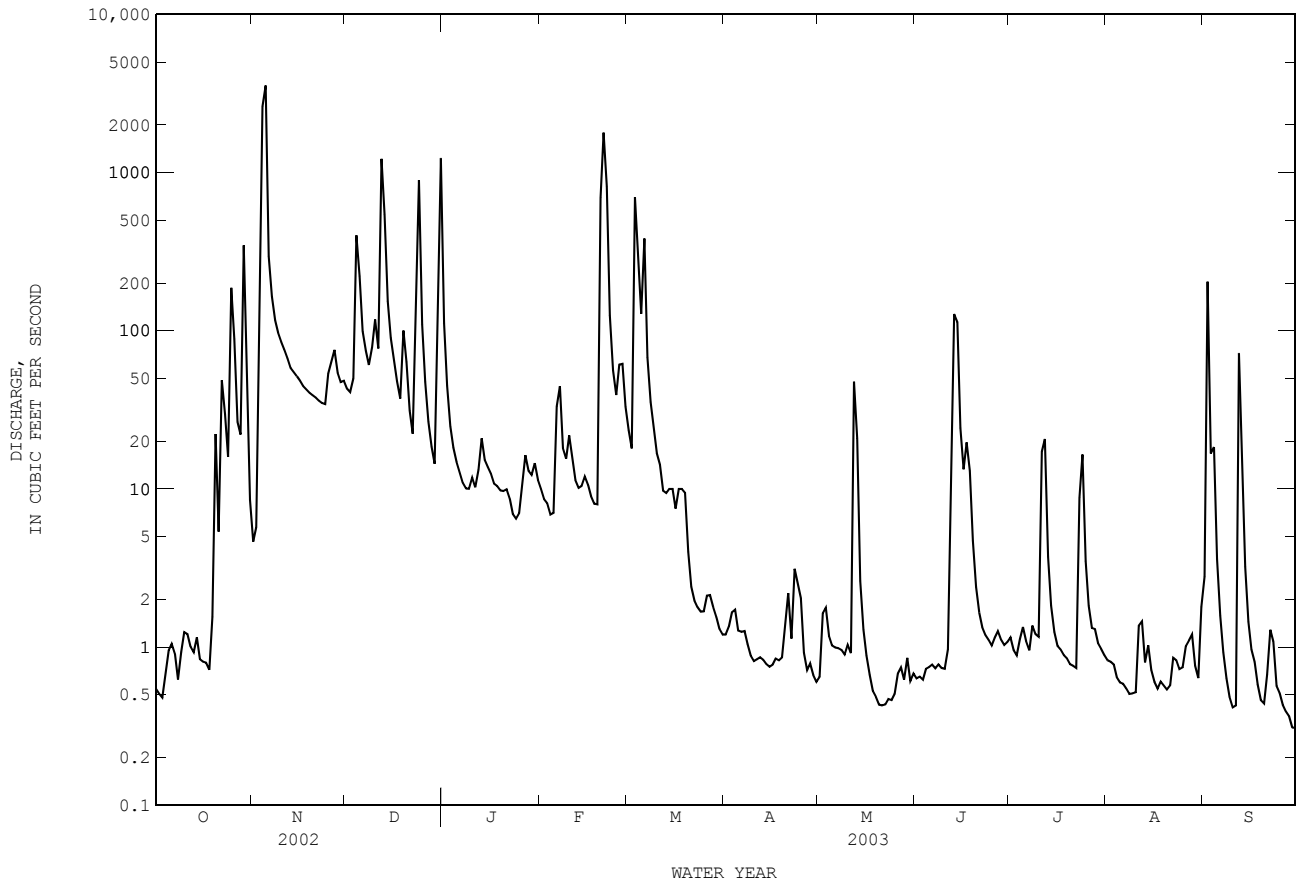
FOR 2003 WATER YEAR

WATER YEARS 1966 - 2003

ANNUAL TOTAL	19399.15	22738.24	
ANNUAL MEAN	53.1	62.3	48.1
HIGHEST ANNUAL MEAN			223
LOWEST ANNUAL MEAN			1.53
HIGHEST DAILY MEAN	3550	Nov 5	38800
LOWEST DAILY MEAN	0.48	Sep 2	0.02
ANNUAL SEVEN-DAY MINIMUM	0.53	Aug 31	0.02
MAXIMUM PEAK FLOW			9750
MAXIMUM PEAK STAGE			21.43
ANNUAL RUNOFF (AC-FT)	38480	45100	34840
ANNUAL RUNOFF (CFSM)	0.93	1.09	0.84
ANNUAL RUNOFF (INCHES)	12.66	14.84	11.46
10 PERCENT EXCEEDS	76	87	60
50 PERCENT EXCEEDS	2.1	2.1	3.3
90 PERCENT EXCEEDS	0.75	0.60	0.50

e Estimated

08066170 Kickapoo Creek near Onalaska, TX--Continued



TRINITY RIVER BASIN

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, 7.0 mi southwest of Livingston, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Sept. 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Trinity River Authority). Prior to Feb. 26, 1969, temporary nonrecording gages at site about 200 ft upstream and at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records fair. The reservoir is formed by an earthfill dam 14,400 ft long. The dam was completed Sept. 29, 1968, and deliberate impoundment began June 26, 1969. The reservoir is operated for industrial water supply in the Houston metropolitan area. The spillway has twelve 40 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. These structures control runoff from 617 mi² in the Richland, Chambers, Tehuacana, and Bedias Creeks drainage basins. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	145.0
Design flood.....	135.0
Top of tainter gates.....	134.0
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.

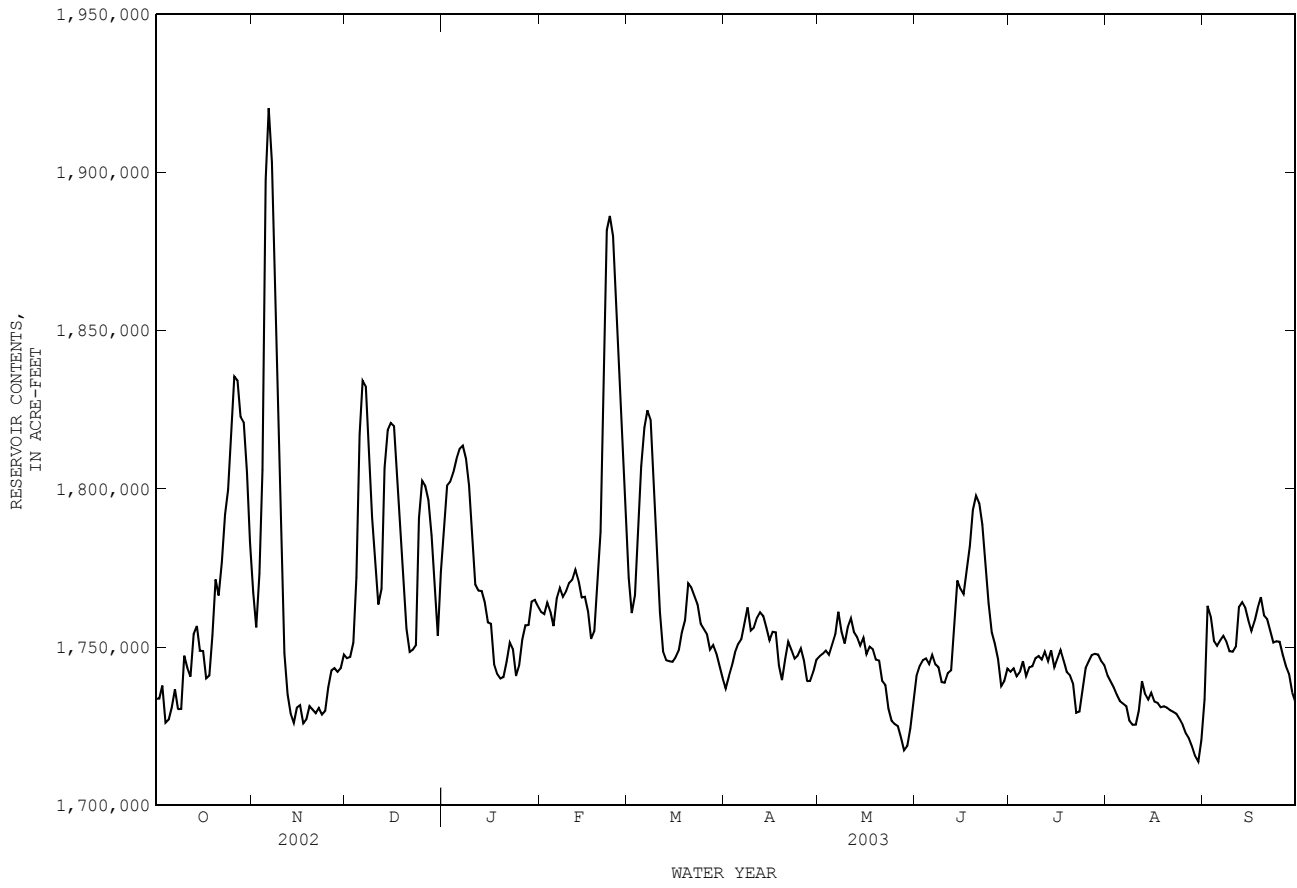
EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,923,000 acre-ft, Nov. 6, elevation 133.10 ft; minimum contents, 1,708,000 acre-ft, Aug. 30, elevation, 130.58 ft.

RESERVOIR STORAGE, IN (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1734000	1767000	1746000	1788000	1761000	1772000	1737000	1747000	1741000	1742000	1741000	1733000
2	1734000	1756000	1747000	1801000	1760000	1761000	1741000	1748000	1744000	1743000	1739000	1763000
3	1738000	1773000	1751000	1802000	1764000	1766000	1744000	1749000	1746000	1741000	1737000	1760000
4	1726000	1806000	1772000	1805000	1761000	1789000	1748000	1748000	1746000	1742000	1735000	1752000
5	1727000	1898000	1817000	1810000	1757000	1807000	1751000	1751000	1745000	1746000	1733000	1750000
6	1731000	1920000	1834000	1813000	1765000	1819000	1753000	1754000	1748000	1741000	1732000	1752000
7	1737000	1903000	1832000	1814000	1769000	1825000	1758000	1761000	1744000	1744000	1731000	1754000
8	1730000	1858000	1816000	1810000	1766000	1822000	1763000	1755000	1744000	1744000	1727000	1752000
9	1730000	1807000	1791000	1801000	1768000	1806000	1755000	1751000	1739000	1747000	1725000	1749000
10	1747000	1774000	1779000	1785000	1770000	1783000	1756000	1756000	1739000	1747000	1725000	1749000
11	1743000	1748000	1763000	1770000	1771000	1761000	1759000	1759000	1742000	1746000	1730000	1750000
12	1741000	1735000	1768000	1768000	1774000	1749000	1761000	1755000	1743000	1749000	1739000	1763000
13	1754000	1729000	1807000	1768000	1771000	1746000	1760000	1753000	1757000	1746000	1735000	1764000
14	1757000	1726000	1819000	1764000	1766000	1745000	1756000	1750000	1771000	1749000	1733000	1762000
15	1749000	1731000	1821000	1758000	1766000	1745000	1752000	1753000	1768000	1744000	1736000	1758000
16	1749000	1732000	1820000	1757000	1761000	1747000	1755000	1748000	1767000	1746000	1733000	1755000
17	1740000	1726000	1805000	1745000	1753000	1749000	1755000	1750000	1774000	1749000	1732000	1758000
18	1741000	1727000	1786000	1741000	1755000	1755000	1744000	1749000	1782000	1746000	1731000	1762000
19	1754000	1731000	1772000	1740000	1769000	1759000	1740000	1746000	1793000	1742000	1731000	1766000
20	1771000	1730000	1756000	1740000	1786000	1770000	1746000	1746000	1798000	1741000	1731000	1760000
21	1766000	1729000	1748000	1745000	1838000	1769000	1752000	1739000	1795000	1738000	1730000	1759000
22	1777000	1731000	1749000	1751000	1882000	1766000	1749000	1738000	1789000	1729000	1730000	1755000
23	1792000	1729000	1751000	1749000	1886000	1764000	1746000	1731000	1775000	1730000	1729000	1751000
24	1800000	1730000	1791000	1741000	1880000	1757000	1747000	1727000	1764000	1737000	1727000	1752000
25	1817000	1737000	1803000	1744000	1857000	1756000	1750000	1726000	1755000	1743000	1725000	1752000
26	1836000	1743000	1801000	1752000	1837000	1754000	1746000	1725000	1751000	1745000	1723000	1748000
27	1834000	1743000	1796000	1757000	1815000	1749000	1739000	1721000	1746000	1747000	1721000	1744000
28	1823000	1742000	1785000	1757000	1792000	1751000	1739000	1717000	1738000	1748000	1719000	1741000
29	1821000	1743000	1768000	1764000	---	1748000	1742000	1719000	1739000	1748000	1716000	1736000
30	1805000	1748000	1754000	1765000	---	1744000	1746000	1724000	1743000	1746000	1714000	1733000
31	1783000	---	1774000	1763000	---	1740000	---	1732000	---	1744000	1721000	---
TOTAL	54687000	52952000	55322000	54868000	50100000	54774000	52490000	54028000	52726000	54050000	53611000	52583000
MEAN	1764000	1765000	1785000	1770000	1789000	1767000	1750000	1743000	1758000	1744000	1729000	1753000
MAX	1836000	1920000	1834000	1814000	1886000	1825000	1763000	1761000	1798000	1749000	1741000	1766000
MIN	1726000	1726000	1746000	1740000	1753000	1740000	1737000	1717000	1738000	1729000	1714000	1733000
(+)	131.49	131.07	131.38	131.25	131.59	130.98	131.05	130.88	131.01	131.03	130.74	130.89
(@)	+50000	-35000	+26000	-11000	+29000	-52000	+6000	-14000	+11000	+1000	-23000	+12000
CAL YR 2002	MAX 1920000	MIN 1724000	(@) -58000									
WTR YR 2003	MAX 1920000	MIN 1714000	(@) 0									

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

08066190 Livingston Reservoir near Goodrich, TX--Continued



TRINITY RIVER BASIN

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 2002 TO SEPTEMBER 2003

303807095011101 -- Livingston Res Site AC

Date	Time	Reser- voir storage acre-ft (00054)	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)
JAN													
29...	1227	1760000	1.00	280	7.9	11.5	764	9.3	86	86	22	29.0	3.25
29...	1232	--	10.0	280	7.8	11.0	764	9.4	85	--	--	--	--
29...	1235	--	20.0	280	7.8	11.0	764	9.6	87	--	--	--	--
29...	1237	--	30.0	280	7.8	11.0	764	9.6	87	--	--	--	--
29...	1239	--	40.0	280	7.8	11.0	764	9.6	87	--	--	--	--
29...	1242	--	50.0	280	7.8	10.5	764	9.6	86	--	--	--	--
29...	1245	--	60.0	280	7.8	10.5	764	9.6	86	--	--	--	--
29...	1248	--	70.0	280	7.8	10.0	764	9.6	85	86	23	29.3	3.24
AUG													
27...	1258	1720000	1.00	320	9.0	32.0	765	6.3	86	120	33	38.7	4.62
27...	1310	--	10.0	320	8.8	30.5	765	5.7	76	--	--	--	--
27...	1313	--	20.0	325	8.4	30.0	765	3.9	51	--	--	--	--
27...	1316	--	30.0	325	8.0	30.0	765	2.8	37	--	--	--	--
27...	1325	--	40.0	330	7.6	29.5	765	1.4	18	--	--	--	--
27...	1332	--	50.0	330	7.4	28.0	765	1.4	18	--	--	--	--
27...	1336	--	60.0	315	7.3	26.5	765	1.4	17	--	--	--	--
27...	1339	--	66.0	320	7.2	26.0	765	1.4	17	120	6	42.0	4.20

303807095011101 -- Livingston Res Site AC

Date	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
JAN													
29...	17.0	.8	29	4.36	64	29.6	19.5	.25	8.2	155	<.008	1.03	<.04
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	16.7	.8	28	4.36	63	29.5	18.6	.24	8.2	153	<.008	1.04	<.04
AUG													
27...	24.9	1	31	5.12	83	38.8	27.3	.3	5.1	195	<.008	<.06	<.04
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	<.008	.14	<.04
27...	--	--	--	--	--	--	--	--	--	--	<.008	<.06	.38
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	17.6	.7	23	4.35	116	16.8	18.6	.2	14.3	196	<.008	<.06	1.74d

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

303807095011101 -- Livingston Res Site AC

Date	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN							
29...	--	.37	.11	.11	.331	33	E1.3
29...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
29...	--	.39	.12	.10	.322	30	3.4
AUG							
27...	--	.40	.09	.07	.221	27	1.0
27...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
27...	--	.40	.12	.11	.328	<8	.8
27...	.39	.77	.38	.33	1.02	253	500
27...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
27...	.68	2.4	1.51	1.37d	4.21	1100	1250

303821095005001 -- Livingston Res Site AL

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JAN								
29...	1303	1.00	280	7.9	12.0	764	9.6	89
29...	1306	10.0	280	7.9	11.5	764	9.7	89
29...	1308	20.0	280	7.9	11.0	764	9.7	88
29...	1311	30.0	280	7.9	11.0	764	9.7	88
29...	1314	40.0	280	7.8	11.0	764	9.7	88
29...	1316	47.0	280	7.8	10.5	764	9.6	86
AUG								
27...	1359	1.00	320	9.2	31.0	765	7.8	105
27...	1410	10.0	320	9.1	30.0	765	6.9	91
27...	1412	20.0	325	8.6	29.5	765	4.7	62
27...	1415	30.0	325	8.4	29.5	765	4.0	52
27...	1418	40.0	330	7.6	29.0	765	1.6	21
27...	1420	45.0	330	7.5	29.0	765	1.4	18

303935095055401 -- Livingston Res Site BC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JAN								
29...	1142	1.00	280	7.9	12.0	764	9.5	88
29...	1145	10.0	280	7.9	11.5	764	9.6	88
29...	1147	20.0	280	7.9	11.0	764	9.7	88
29...	1152	30.0	280	7.8	11.0	764	9.7	88
29...	1155	40.0	280	7.8	10.5	764	9.6	86
29...	1157	50.0	280	7.8	10.0	764	9.5	84
AUG								
27...	1224	1.00	335	9.1	32.0	765	7.1	97
27...	1226	10.0	335	8.7	31.0	765	5.0	67
27...	1229	20.0	335	8.3	30.5	765	3.6	48
27...	1231	30.0	335	7.7	30.0	765	1.6	21
27...	1233	40.0	340	7.6	29.5	765	1.3	17
27...	1236	48.0	345	7.4	28.5	765	1.3	17

TRINITY RIVER BASIN

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

304144095073001 -- Livingston Res Site CC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JAN								
29...	1118	1.00	275	7.9	12.0	764	9.5	88
29...	1120	10.0	275	7.9	11.5	764	9.6	88
29...	1123	20.0	275	7.9	11.0	764	9.7	88
29...	1125	30.0	275	7.9	10.5	764	9.7	87
29...	1127	40.0	275	7.9	10.5	764	9.8	88
29...	1130	50.0	275	7.8	10.0	764	9.6	85
AUG								
27...	1158	1.00	340	8.9	31.5	765	6.1	83
27...	1200	10.0	340	8.8	31.4	765	5.0	68
27...	1202	20.0	345	8.6	30.0	765	4.3	57
27...	1205	30.0	350	7.8	30.0	765	1.5	20
27...	1208	40.0	350	7.8	30.0	765	1.3	17
27...	1210	47.0	365	7.5	29.0	765	1.3	17

304521095075501 -- Livingston Res Site DC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)
JAN													
29...	1030	1.00	280	7.9	11.0	764	10.2	92	--	<.008	1.03	<.04	--
29...	1035	10.0	280	7.9	10.5	764	9.9	89	--	--	--	--	--
29...	1038	20.0	280	7.8	10.5	764	9.9	89	--	--	--	--	--
29...	1041	30.0	280	7.8	10.0	764	9.9	88	--	--	--	--	--
29...	1045	40.0	280	7.9	10.0	764	9.9	88	--	--	--	--	--
29...	1051	50.0	300	7.9	9.5	764	9.8	86	.90	.012	.91	.10	.38
AUG													
27...	1059	1.00	335	9.0	30.5	765	6.4	85	--	<.008	<.06	<.04	--
27...	1107	10.0	340	8.8	30.5	765	5.4	72	--	--	--	--	--
27...	1112	20.0	340	8.7	30.5	765	5.0	67	--	<.008	<.06	<.04	--
27...	1120	30.0	340	8.7	30.5	765	4.1	55	--	--	--	--	--
27...	1125	40.0	400	7.9	30.0	765	1.5	20	--	--	--	--	--
27...	1130	45.0	395	7.7	29.5	765	1.4	18	--	<.008	<.06	.93	.56

304521095075501 -- Livingston Res Site DC

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN						
29...	.38	.12	.10	.319	31	E1.3
29...	--	--	--	--	--	--
29...	--	--	--	--	--	--
29...	--	--	--	--	--	--
29...	--	--	--	--	--	--
29...	.48	.11	.10	.304	20	15.5
AUG						
27...	.41	.13	.10	.304	<8	.6
27...	--	--	--	--	--	--
27...	.42	.13	.10	.322	<8	1.3
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	1.5	.65	.59	1.81	167	1040

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

304453095064901 -- Livingston Res Site DL

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved percent of sat- uration (00301)
JAN								
29...	1003	1.00	285	7.9	11.0	764	9.6	87
29...	1006	10.0	285	7.9	11.0	764	9.7	88
29...	1008	16.0	285	7.9	11.0	764	9.8	89
AUG								
27...	1035	1.00	335	9.0	30.0	765	6.6	87
27...	1038	10.0	335	8.6	30.0	765	4.4	58
27...	1040	16.0	340	8.1	30.0	765	3.2	42

304659095052001 -- Livingston Res Site EC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
JAN													
29...	0932	1.00	275	7.8	10.0	764	9.8	87	E.007	.99	<.04	--	.39
29...	0939	10.0	275	7.8	10.0	764	9.7	86	--	--	--	--	--
29...	0941	20.0	275	7.8	10.0	764	9.7	86	--	--	--	--	--
29...	0944	26.0	275	7.8	10.0	764	9.7	86	E.007	.96	E.03	--	.41
AUG													
27...	1010	1.00	335	8.9	30.5	765	6.1	81	<.008	<.06	<.04	--	.42
27...	1012	10.0	335	9.0	30.5	765	6.1	81	--	--	--	--	--
27...	1015	20.0	335	8.9	30.5	765	5.6	75	--	--	--	--	--
27...	1018	23.0	340	8.4	30.0	765	3.1	41	.019	<.06	.06	.43	.48

304659095052001 -- Livingston Res Site EC

Date	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN					
29...	.12	.10	.316	39	E1.3
29...	--	--	--	--	--
29...	--	--	--	--	--
29...	.13	.10	.313	38	2.8
AUG					
27...	.12	.11	.328	<8	.6
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	.16	.14	.429	<8	5.3

304843095104001 -- Livingston Res Site FC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved percent of sat- uration (00301)
JAN								
29...	1447	1.00	325	8.0	11.0	764	10.0	90
29...	1450	10.0	325	8.0	10.5	764	10.0	89
29...	1453	20.0	325	8.0	10.5	764	10.1	90
29...	1455	30.0	340	8.0	10.0	764	10.1	89
29...	1458	40.0	355	8.0	9.5	764	9.9	86
29...	1500	50.0	355	7.9	9.5	764	9.8	86
AUG								
27...	1521	1.00	415	9.2	32.0	765	6.7	92
27...	1525	10.0	425	8.8	30.5	765	3.4	45
27...	1528	20.0	415	8.7	30.5	765	2.7	36
27...	1531	30.0	425	8.6	31.0	765	2.1	28
27...	1534	40.0	440	8.4	30.5	765	1.4	19
27...	1537	45.0	440	8.4	30.5	765	1.4	19

TRINITY RIVER BASIN

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

305411095144901 -- Livingston Res Site GC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN													
30...	0946	1.00	390	8.1	10.0	766	10.2	90	130	43	42.4	5.10	26.9
30...	0951	10.0	390	8.1	10.0	766	10.1	89	--	--	--	--	--
30...	0954	20.0	390	8.1	10.0	766	10.1	89	--	--	--	--	--
30...	0956	30.0	390	8.1	10.0	766	10.1	89	--	--	--	--	--
30...	0959	35.0	390	8.1	10.0	766	10.0	88	130	42	42.2	5.08	26.8
AUG													
28...	1053	1.00	530	8.8	31.5	765	6.2	84	150	42	48.6	5.85	47.4
28...	1104	10.0	530	8.5	30.0	765	4.0	53	--	--	--	--	--
28...	1112	20.0	510	8.7	30.0	765	4.2	55	--	--	--	--	--
28...	1120	30.0	500	8.6	30.0	765	4.1	54	--	--	--	--	--
28...	1124	32.0	500	8.6	30.0	765	4.0	53	140	37	47.5	5.30	42.2

305411095144901 -- Livingston Res Site GC

Date	Time	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
JAN														
30...	1	31	4.46	84	50.0	27.7	.31	9.5	224	1.48	.009	1.49	<.04	
30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
30...	1	31	4.48	84	49.4	27.8	.31	9.6	223	1.46	.009	1.47	E.03	
AUG														
28...	2	40	7.13	104	60.1	54.0	.6	10.1	300	.56	.135	.70	E.03n	
28...	--	--	--	--	--	--	--	--	--	.63	.122	.75	.10	
28...	--	--	--	--	--	--	--	--	--	.53	.066	.60	E.04n	
28...	--	--	--	--	--	--	--	--	--	--	--	--	--	
28...	2	38	6.84	103	54.2	47.4	.6	8.9	277	.36	.040	.40	.05	

305411095144901 -- Livingston Res Site GC

Date	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN							
30...	--	.37	.14	.14	.417	E7	1.8
30...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
30...	--	.39	.15	.14	.426	13	12.1
AUG							
28...	--	.69	.26	.23	.696	<8	1.5
28...	.57	.67	.30	.26	.791	<8	1.4
28...	--	.56	.30	.27	.813	<8	.9
28...	--	--	--	--	--	--	--
28...	.46	.51	.29	.27	.819	<8	11.8

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

305447095161401 -- Livingston Res Site HC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Organic nitro- gen, water, fltrd, mg/L (00607)
JAN													
30...	0856	1.00	260	7.7	9.5	766	9.8	85	.65	.023	.67	.07	.43
30...	0900	10.0	280	7.8	9.5	766	9.6	84	--	--	--	--	--
30...	0904	20.0	280	7.8	10.0	766	9.8	86	--	--	--	--	--
30...	0906	30.0	325	7.9	10.0	766	9.9	87	--	--	--	--	--
30...	0909	35.0	325	8.0	10.0	766	9.9	87	1.24	.012	1.26	E.03	--
AUG													
28...	0915	10.0	520	8.4	30.5	765	3.1	41	--	--	--	--	--
28...	1150	1.00	520	8.6	31.0	765	4.7	63	.89	.118	1.01	<.04	--
28...	1202	20.0	520	8.4	30.5	765	3.0	40	--	--	--	--	--
28...	1206	30.0	515	8.4	30.5	765	3.1	41	--	--	--	--	--
28...	1210	33.0	515	8.4	30.5	765	2.9	39	.19	.107	.30	.11	.54

305447095161401 -- Livingston Res Site HC

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN						
30...	.50	.08	.07	.224	72	5.1
30...	--	--	--	--	--	--
30...	--	--	--	--	--	--
30...	--	--	--	--	--	--
30...	.39	.14	.12	.359	41	5.8
AUG						
28...	--	--	--	--	--	--
28...	.55	.27	.24	.724	8	1.1
28...	--	--	--	--	--	--
28...	--	--	--	--	--	--
28...	.65	.22	.20	.616	<8	67.0

305135095193601 -- Livingston Res Site IC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
JAN								
30...	1028	1.00	540	8.0	10.0	766	9.7	86
30...	1031	10.0	545	8.0	10.0	764	9.7	86
30...	1033	20.0	545	7.9	10.0	766	9.9	87
30...	1035	30.0	545	7.9	10.0	766	9.8	86
30...	1038	39.0	540	7.9	10.0	766	9.8	86
AUG								
28...	1012	1.00	685	8.7	31.5	765	7.6	103
28...	1015	10.0	680	8.2	31.0	765	4.7	63
28...	1017	20.0	695	7.7	30.5	765	3.3	44
28...	1020	30.0	700	7.5	31.0	765	2.3	31
28...	1023	36.0	700	7.5	30.5	765	2.3	31

TRINITY RIVER BASIN

08066190 Livingston Reservoir near Goodrich, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

305135095235401 -- Livingston Res Site JC

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)
JAN													
30...	1110	1.00	580	7.9	10.5	766	9.5	85	180	70	59.2	7.02	48.5
30...	1115	10.0	580	7.9	10.5	766	9.5	85	--	--	--	--	--
30...	1117	20.0	585	7.9	10.5	766	9.6	86	--	--	--	--	--
30...	1119	30.0	585	7.9	10.5	766	9.6	86	--	--	--	--	--
30...	1121	33.0	585	7.9	10.5	766	9.6	86	180	68	59.1	7.03	49.3
AUG													
28...	0853	1.00	720	8.8	39.0	765	8.4	129	170	56	58.7	6.82	73.3
28...	0915	10.0	705	8.8	31.0	765	7.6	102	--	--	--	--	--
28...	0921	20.0	720	8.4	30.5	765	5.4	72	--	--	--	--	--
28...	0929	30.0	725	8.2	30.5	765	4.1	55	--	--	--	--	--
28...	0943	33.0	725	8.1	30.5	765	4.0	53	170	59	59.0	6.65	70.6

305135095235401 -- Livingston Res Site JC

Date	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, sum of consti- tuents mg/L (70301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)
JAN													
30...	2	36	5.96	107	77.0	51.1	.57	11.6	345	4.10	.013	4.12	E.02
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	2	37	6.07	108	77.4	51.5	.58	11.6	348	4.17	.012	4.19	.04
AUG													
28...	2	46	9.60	119	84.2	79.0	1.2	10.2	416	4.51	.131	4.64	.07
28...	--	--	--	--	--	--	--	--	--	4.50	.147	4.65	.09
28...	--	--	--	--	--	--	--	--	--	4.42	.186	4.61d	.05
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	2	45	9.52	116	83.9	78.5	1.1	10.5	413	4.75	.236	4.98	E.04n

305135095235401 -- Livingston Res Site JC

Date	Organic nitro- gen, water, fltrd, mg/L (00607)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN							
30...	--	.41	.51	.51	1.55	E5	40.9
30...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--
30...	.45	.49	.53	.51	1.57	<10	41.4
AUG							
28...	.66	.73	.52	.49	1.49	<8	E.4n
28...	.73	.81	.56	.51	1.58	<8	.7
28...	.62	.68	.60	.56	1.73	<8	.9
28...	--	--	--	--	--	--	--
28...	--	.62	.56	.53	1.61	<8	7.6

Remark codes used in this report:

< -- Less than
E -- Estimated value

Value qualifier codes used in this report:

d -- Diluted sample: method hi range exceeded
n -- Below the NDV

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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, 2.0 mi west of Livingston, 2.0 mi upstream from Choates Creek, and 14.8 mi upstream from mouth.

DRAINAGE AREA.--141 mi².

PERIOD OF RECORD.--Jan. 1963 to current year.

Water-quality records.--Chemical data: Jan. 1963 to Sept. 1972. Specific conductance: Jan. 1963 to Sept. 1972. Water temperature: Jan. 1963 to Sept. 1972.

GAGE.--Water-stage recorder. Datum of gage is 100.12 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, about 41 ft in May 1929.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	34	24	505	40	85	23	9.0	2.5	8.0	3.0	123
2	2.4	26	23	169	38	70	22	12	2.4	7.2	2.8	253
3	2.6	1210	26	102	38	353	22	12	2.4	7.2	2.7	121
4	2.7	4650	100	78	36	874	24	11	2.4	6.8	2.5	35
5	2.5	6210	336	66	34	231	25	10	3.4	166	2.3	49
6	5.6	577	89	59	43	166	24	9.6	15	66	2.1	30
7	12	169	54	52	135	116	24	9.1	8.2	35	1.9	15
8	9.9	101	43	48	67	84	21	8.3	4.4	20	1.7	10
9	6.9	75	41	47	52	69	18	7.6	3.1	16	1.6	8.2
10	15	63	73	44	55	58	17	7.1	2.6	19	1.7	7.1
11	17	53	63	40	50	51	17	6.7	2.6	27	8.9	28
12	8.2	43	1690	52	43	47	17	6.3	45	103	15	796
13	5.2	38	2870	88	40	46	16	44	553	29	11	387
14	4.3	37	303	66	39	82	15	27	836	34	8.0	60
15	3.7	34	144	53	43	54	16	13	324	22	6.1	30
16	3.4	32	99	48	42	45	15	9.2	274	15	4.4	20
17	3.1	30	78	42	36	40	14	7.2	687	11	3.6	16
18	3.2	29	66	38	34	40	13	5.7	77	8.4	2.9	14
19	15	27	59	37	33	135	13	5.1	42	7.1	2.7	12
20	185	27	54	37	55	68	18	4.8	26	6.3	2.3	11
21	111	26	46	38	4410	43	31	4.5	18	5.6	2.2	13
22	381	26	43	37	2730	36	20	4.5	15	5.0	4.0	17
23	250	25	90	34	359	33	27	4.2	13	11	3.8	15
24	126	25	819	31	212	31	21	3.8	10	21	3.0	12
25	955	26	221	31	129	30	17	3.7	29	11	2.8	10
26	683	29	104	49	118	29	13	3.5	19	7.0	3.9	9.5
27	e217	35	72	112	161	30	11	5.0	51	5.8	3.1	12
28	e152	33	59	65	112	29	9.8	3.5	25	4.8	2.8	8.9
29	e1780	28	53	56	---	27	9.6	3.3	13	4.0	2.8	7.3
30	e124	26	87	50	---	25	9.5	3.1	9.1	3.5	2.5	6.6
31	62	---	2540	43	---	23	---	2.7	---	3.2	15	---
TOTAL	5151.0	13744	10369	2217	9184	3050	542.9	266.5	3115.1	695.9	133.1	2136.6
MEAN	166	458	334	71.5	328	98.4	18.1	8.60	104	22.4	4.29	71.2
MAX	1780	6210	2870	505	4410	874	31	44	836	166	15	796
MIN	2.3	25	23	31	33	23	9.5	2.7	2.4	3.2	1.6	6.6
AC-FT	10220	27260	20570	4400	18220	6050	1080	529	6180	1380	264	4240
CFSM	1.18	3.25	2.37	0.51	2.33	0.70	0.13	0.06	0.74	0.16	0.03	0.51
IN.	1.36	3.63	2.74	0.58	2.42	0.80	0.14	0.07	0.82	0.18	0.04	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

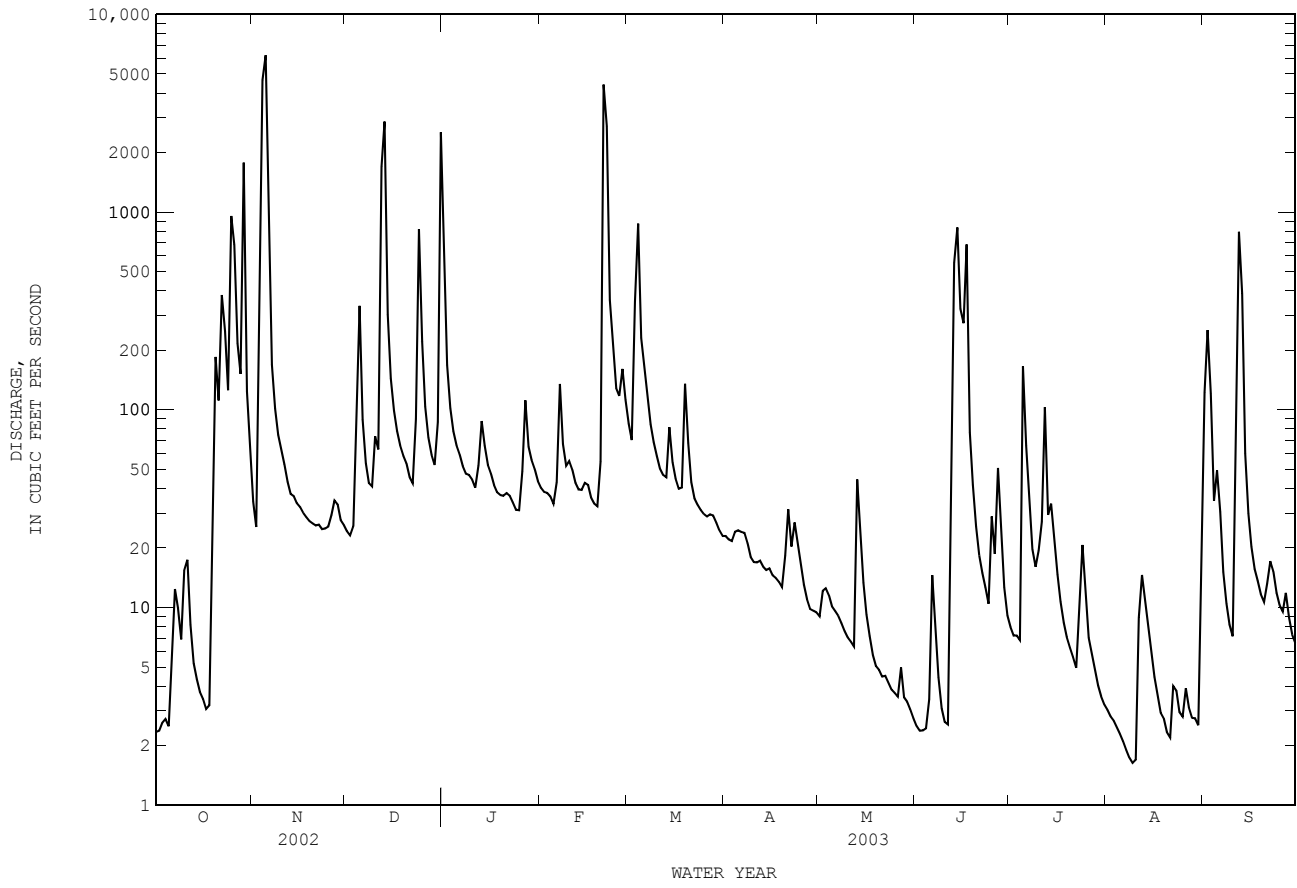
	70.6	107	166	190	177	159	132	125	144	33.0	16.1	30.8
MEAN	70.6	107	166	190	177	159	132	125	144	33.0	16.1	30.8
MAX	1342	920	626	1026	629	640	844	662	869	493	191	288
(WY)	1995	1999	1995	1998	1992	1990	1979	1969	1989	1989	1983	1996
MIN	0.18	0.92	2.83	2.79	5.53	3.75	4.06	2.58	0.72	0.000	0.000	0.15
(WY)	1966	1989	1971	1971	1971	1971	1971	1963	1971	1971	1971	1967

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1963 - 2003

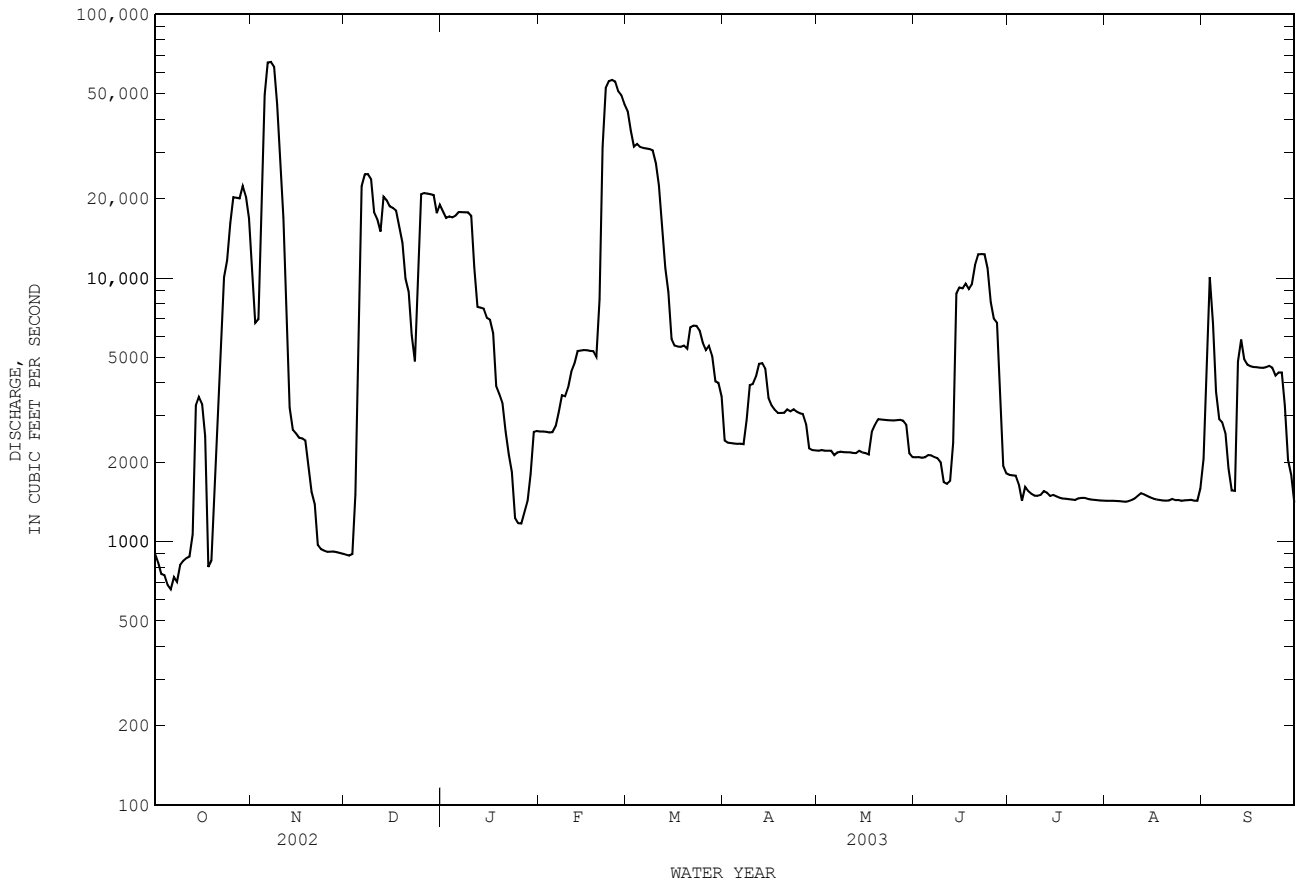
ANNUAL TOTAL	37962.97	50605.1	
ANNUAL MEAN	104	139	
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			318
HIGHEST DAILY MEAN	6210 Nov 5	6210 Nov 5	12.3 1970
LOWEST DAILY MEAN	0.97 Aug 13	1.6 Aug 9	30100 Oct 17 1994
ANNUAL SEVEN-DAY MINIMUM	1.4 Jul 23	2.0 Aug 4	0.00 Aug 5 1965
MAXIMUM PEAK FLOW		8820 Nov 5	0.00 Jun 28 1971
MAXIMUM PEAK STAGE		19.06 Nov 5	50900 Oct 17 1994
ANNUAL RUNOFF (AC-FT)	75300	100400	30.49 Oct 17 1994
ANNUAL RUNOFF (CFSM)	0.74	0.98	82220
ANNUAL RUNOFF (INCHES)	10.02	13.35	0.80
10 PERCENT EXCEEDS	107	167	10.94
50 PERCENT EXCEEDS	17	27	155
90 PERCENT EXCEEDS	1.9	3.2	14
			1.1

e Estimated

08066200 Long King Creek at Livingston, TX--Continued



08066250 Trinity River near Goodrich, TX--Continued



TRINITY RIVER BASIN

08066300 Menard Creek near Rye, TX

LOCATION.--Lat 30°28'53", long 94°46'47", 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 6.0 mi upstream from mouth.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--Dec. 1965 to current year.

Water-quality records.--Chemical data: Aug. 1950 to Aug. 1994.

REVISED RECORD.--WRD-TX-99-2: 1999 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.32 ft above NGVD of 1929. Sept. 1974 to Aug. 1976, wire-weight gage read twice daily. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in water year 1966, at least 10% of contributing drainage area has been regulated. 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 Sept. 1961 reached a stage of about 34.0 ft, from information by local resident. Flood of May 1929 may have been equalled or exceeded by other floods during the period 1929-65.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	303	78	694	147	222	59	38	18	33	18	94
2	15	134	76	1270	132	187	57	39	18	31	17	98
3	15	467	79	949	123	176	56	40	18	29	16	84
4	15	1860	135	486	117	246	55	40	17	28	15	82
5	15	3070	192	296	113	291	55	38	30	33	15	85
6	16	2490	218	247	182	466	55	38	59	44	14	99
7	15	1600	242	215	318	404	55	36	125	43	14	64
8	15	1010	162	191	296	240	54	35	59	57	13	47
9	16	529	129	176	287	180	51	33	38	61	13	36
10	17	295	126	167	258	151	49	32	29	46	13	32
11	17	233	126	156	207	135	46	30	26	48	38	30
12	18	192	298	157	174	120	44	31	27	42	94	69
13	18	161	938	191	154	115	43	33	120	34	88	177
14	18	143	699	226	143	107	42	30	729	31	98	307
15	18	131	1070	239	163	102	41	29	681	29	108	325
16	16	119	744	194	197	96	41	28	573	28	61	113
17	16	112	356	167	178	91	40	28	295	27	39	72
18	15	106	258	152	159	97	39	27	121	26	31	58
19	18	100	229	140	136	140	38	26	88	24	26	51
20	21	97	224	134	127	165	41	25	68	23	24	47
21	21	93	198	130	290	177	44	24	58	22	22	50
22	100	89	177	128	671	119	64	23	52	21	21	53
23	106	86	162	124	1280	96	107	22	46	21	21	58
24	245	83	230	117	1350	88	111	22	43	22	20	54
25	421	82	271	111	770	83	117	22	49	26	20	47
26	355	83	416	113	390	79	78	21	51	31	19	42
27	361	84	565	121	292	77	60	20	47	24	19	39
28	403	86	302	136	248	75	50	20	40	22	31	36
29	689	84	213	160	---	72	44	20	37	20	58	33
30	457	83	192	166	---	67	41	20	34	20	39	31
31	414	---	704	162	---	62	---	19	---	19	74	---
TOTAL	3902	14005	9809	7915	8902	4726	1677	889	3596	965	1099	2413
MEAN	126	467	316	255	318	152	55.9	28.7	120	31.1	35.5	80.4
MAX	689	3070	1070	1270	1350	466	117	40	729	61	108	325
MIN	15	82	76	111	113	62	38	19	17	19	13	30
AC-FT	7740	27780	19460	15700	17660	9370	3330	1760	7130	1910	2180	4790

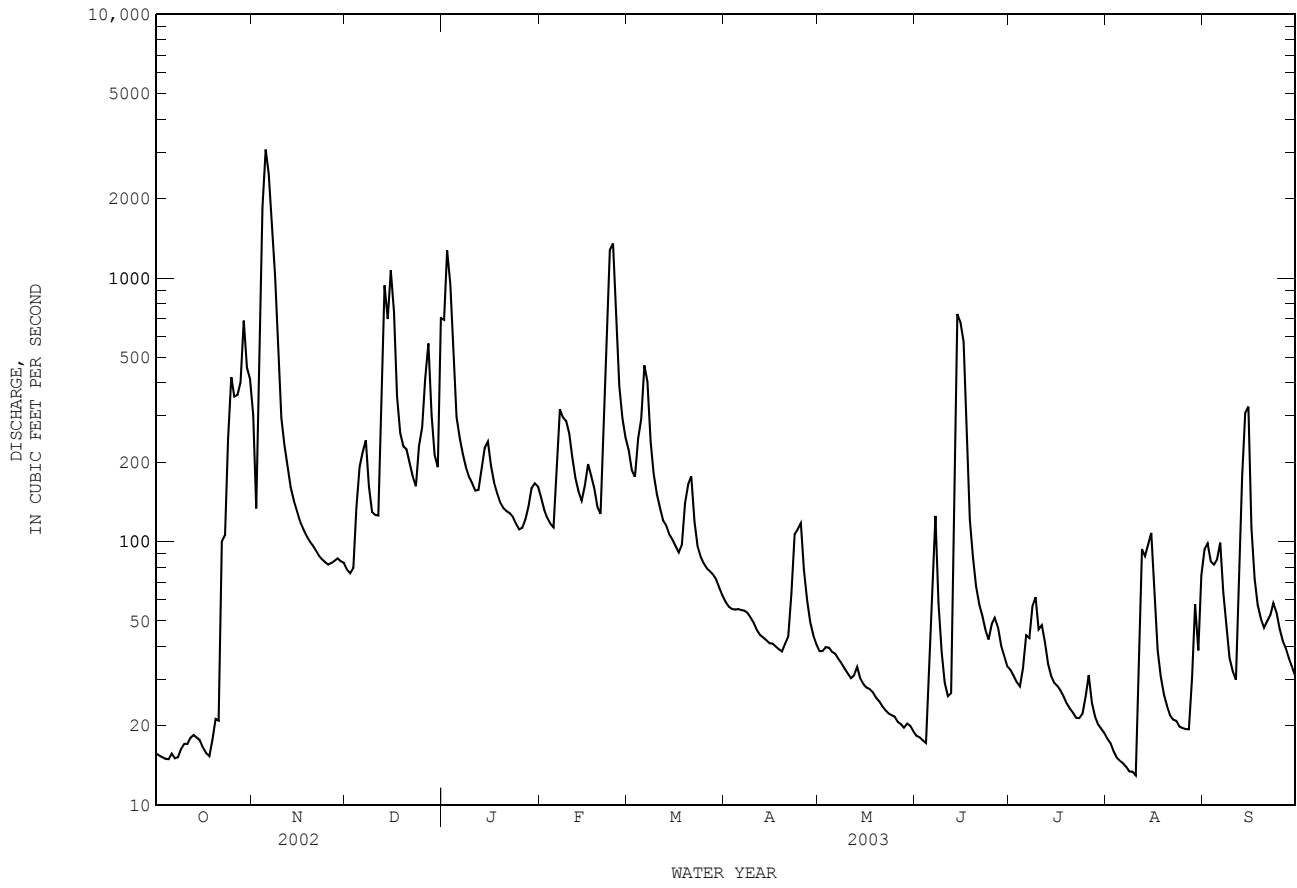
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.5	104	168	210	218	183	173	172	144	60.6	43.1	49.4
MAX	1092	595	503	777	727	528	977	757	788	464	354	192
(WY)	1995	1999	2002	1974	1992	1997	1979	1983	1986	1989	1983	1983
MIN	3.42	3.55	8.05	14.6	14.0	13.5	9.77	20.4	8.72	4.52	5.47	4.43
(WY)	1968	1968	1968	1971	1971	1971	1971	2002	1971	1971	1967	1967

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1966 - 2003

ANNUAL TOTAL	40778	59898										
ANNUAL MEAN	112	164								134		
HIGHEST ANNUAL MEAN										279		1975
LOWEST ANNUAL MEAN										14.7		1971
HIGHEST DAILY MEAN	3070									12000	Oct 18	1994
LOWEST DAILY MEAN	12				Nov 5					13	Aug 8	1967
ANNUAL SEVEN-DAY MINIMUM	14				Jun 14					14	Aug 4	1967
MAXIMUM PEAK FLOW					Jun 9					3930	Nov 5	1999
MAXIMUM PEAK STAGE										23.76	Nov 5	1999
ANNUAL RUNOFF (AC-FT)	80880									14200	Apr 5	1999
10 PERCENT EXCEEDS	226									31.41	Apr 5	1999
50 PERCENT EXCEEDS	43									97360		
90 PERCENT EXCEEDS	15									284		
										48		
										14		

08066300 Menard Creek near Rye, TX--Continued



TRINITY RIVER BASIN

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 mi².

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 Sept. 1951, Oct. 1953 to Sept. 1995. Biochemical data: Feb. 1968 to Sept. 1995. Pesticide data: Feb. 1968 to July 1981, Aug. 1983 to Sept. 1995. Sediment data: Mar. 1959 to Sept. 1995. Suspended sediment data: Oct. 1954 to Sept. 1955, Oct. 1968 to Sept. 1971. Specific conductance: Oct. 1941 to Sept. 1942, Jan. 1944 to Sept. 1951, Oct. 1953 to Sept. 1994. Water temperature: Oct. 1941 to Sept. 1950, Oct. 1953 to Sept. 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 NGVD of 1929. 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 (Sept. 15, 1975, to June 16, 1977) at present site and at datum 10.00 ft higher than current datum. Satellite telemeter at station.

REMARKS.--Records fair. Since installation of gage in water year 1924, at least 10% of contributing drainage area has been regulated.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	16500	1170	23500	2490	54900	e2010	1860	2000	2010	1350	2340
2	1020	10300	1160	21500	2470	48300	1970	1870	2010	1990	1340	3210
3	985	8140	1170	21700	2460	40300	1950	1870	2020	1970	1340	10200
4	918	24800	1330	20900	2440	39800	1940	1870	2030	1950	1340	9360
5	901	54900	3930	20600	2430	39100	1940	1880	2080	1540	1340	5740
6	895	74200	23300	21300	2580	38500	1940	1850	2160	1500	1340	4050
7	915	77600	30400	21300	2950	38300	1940	1820	2170	1480	1340	3820
8	953	76700	30900	21200	3370	37900	2040	1860	2130	1440	1330	3680
9	929	66800	30400	21100	3380	37600	3100	1870	2100	1430	1330	3030
10	958	44000	23300	20800	3400	34500	3290	1880	1880	1420	1360	2530
11	947	27400	20600	15100	3980	28600	3380	1900	1770	1430	1410	2450
12	957	12300	18200	8510	4140	21200	4080	1900	1840	1430	1500	4470
13	958	4480	25100	7910	4780	13400	4200	1910	2100	1450	1520	7380
14	2590	2920	26100	7850	4880	9890	4170	1940	8030	1390	1490	6510
15	3900	2690	24300	7620	4920	6360	3080	1940	11500	1380	1490	6050
16	3970	2560	23500	6650	4970	4980	2710	1950	11200	1380	1450	5720
17	3780	2470	22600	6620	4920	4840	2750	1970	11100	1370	1420	5550
18	1790	2430	19700	4310	4880	4850	2540	2180	10800	1360	1400	5480
19	1140	2190	17400	3470	4580	4940	2540	2460	10500	1350	1400	5450
20	1410	1790	12300	3330	6250	4970	2560	2580	12100	1350	1400	5420
21	3950	1680	10500	2740	27600	6290	2650	2630	13800	1340	1370	5450
22	5860	1370	7160	2240	e58200	6740	2610	2640	14000	1340	1390	5490
23	11400	1230	5070	2080	e67000	6690	e2700	2660	14000	1360	1400	5470
24	13500	1200	8600	1610	e67200	6550	2670	2670	13300	1380	1400	5330
25	18800	1200	23500	1460	66700	5690	2650	2670	9930	1370	1380	5070
26	24600	1200	26000	1460	63800	5350	2590	2680	7950	1370	1390	5280
27	25000	1210	26000	1490	61500	5040	2500	2660	7710	1360	1420	4660
28	24800	1200	25600	1640	58500	5170	1990	2660	5570	1350	1460	3170
29	28600	1190	25300	1740	---	3700	1870	2660	2540	1350	1450	2760
30	27700	1190	22600	2390	---	e3430	1860	2230	2050	1350	1430	2360
31	23300	---	23200	2510	---	e3380	---	2020	---	1350	1720	---
TOTAL	238566	527840	560390	306630	546770	571260	78220	67540	192370	45540	43700	147480
MEAN	7696	17590	18080	9891	19530	18430	2607	2179	6412	1469	1410	4916
MAX	28600	77600	30900	23500	67200	54900	4200	2680	14000	2010	1720	10200
MIN	895	1190	1160	1460	2430	3380	1860	1820	1770	1340	1330	2340
AC-FT	473200	1047000	1112000	608200	1085000	1133000	155100	134000	381600	90330	86680	292500

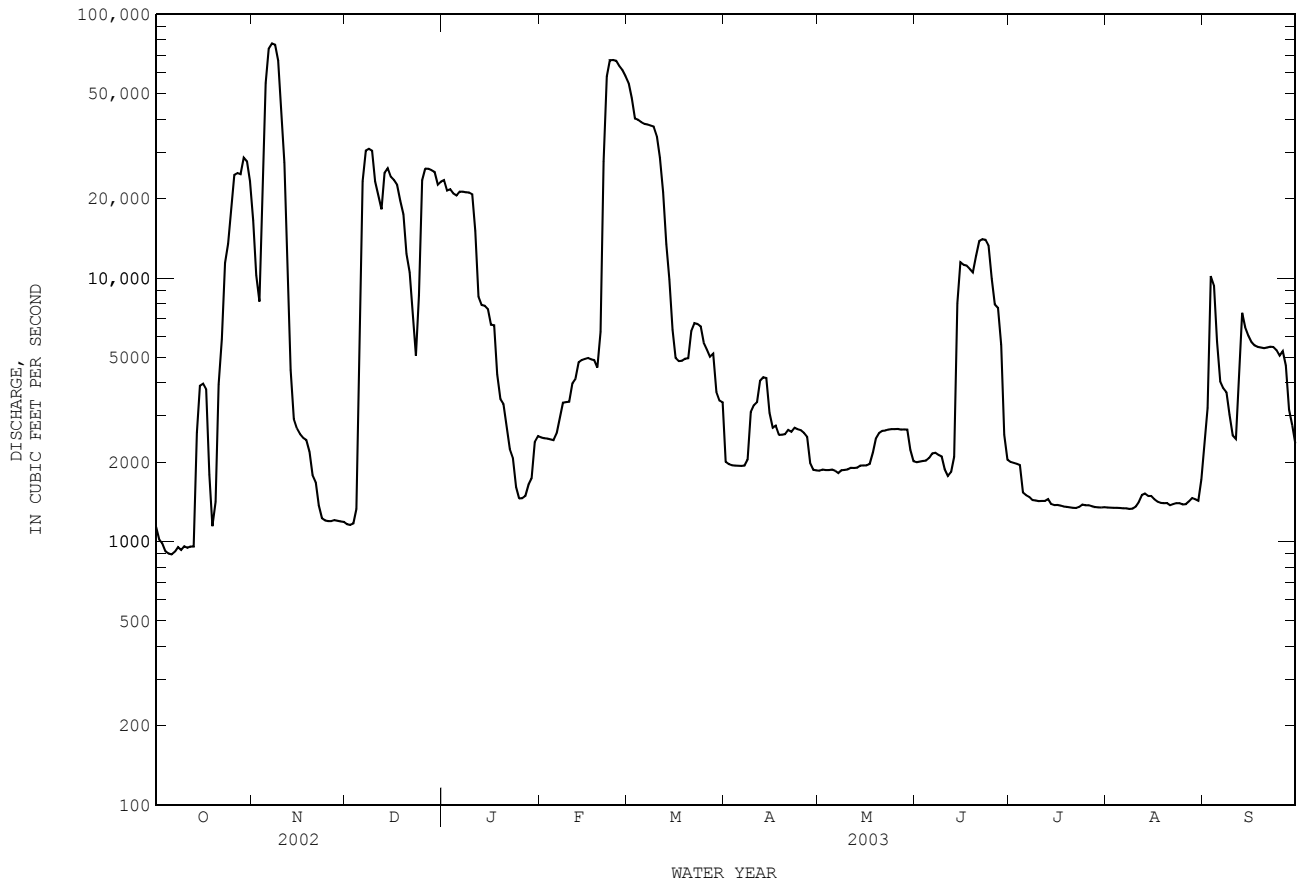
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

	3398	5693	8185	9540	10120	11930	10940	14990	11420	4419	1872	2127
MEAN	3398	5693	8185	9540	10120	11930	10940	14990	11420	4419	1872	2127
MAX	25380	31160	43240	51740	44510	53570	65710	62000	45120	28480	10140	14850
(WY)	1974	1999	1941	1992	1992	2001	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	3450946		3326306			
ANNUAL MEAN	9455		9113			
HIGHEST ANNUAL MEAN					7882	
LOWEST ANNUAL MEAN					20630	1992
HIGHEST DAILY MEAN	77600	Nov 7	77600	Nov 7	730	1971
LOWEST DAILY MEAN	895	Oct 6	895	Oct 6	117000	Oct 19 1994
ANNUAL SEVEN-DAY MINIMUM	924	Oct 4	924	Oct 4	104	Aug 23 1956
MAXIMUM PEAK FLOW			78100		106	Aug 20 1956
MAXIMUM PEAK STAGE			37.38		122000	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	6845000		6598000		45.80	May 9 1942
10 PERCENT EXCEEDS	24400		25200		22600	
50 PERCENT EXCEEDS	3950		2670		2720	
90 PERCENT EXCEEDS	1230		1350		580	

e Estimated

08066500 Trinity River at Romayor, TX--Continued



TRINITY RIVER BASIN

08067000 Trinity River at Liberty, TX
(Partial-record Station)

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 mi².

PERIOD OF RECORD.--Oct. 1938 to Sept. 1940 (gage heights, discharge measurements, and some records of daily discharge), Oct. 1940 to current year (daily mean discharges above 10,000 ft³/s). 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 Sept. 1972. Biochemical data: Oct. 1970 to Sept. 1972. Pesticide data: May 1971 to Sept. 1972.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.22 ft below NGVD of 1929; unadjusted for land-surface subsidence. Prior to Mar. 13, 1973, nonrecording gage at site at same datum. Satellite telemeter at station.

REMARKS.--Records good. Discharges for current year were computed using stage-discharge relation. 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. Since installation of gage in water year 1941, at least 10% of contributing drainage area has been regulated. Many diversions above station for municipal supplies, industrial uses, and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 135,000 ft³/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, 63,700 ft³/s, Nov. 10, gage height, 28.76 ft; minimum discharge not determined (affected by tides); minimum gage height, 4.50 ft, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	25600	---	22100	---	48700	---	---	---	---	---	---
2	---	19800	---	21500	---	46400	---	---	---	---	---	---
3	---	15100	---	20200	---	42500	---	---	---	---	---	---
4	---	16000	---	19700	---	39000	---	---	---	---	---	---
5	---	28400	---	19200	---	36700	---	---	---	---	---	---
6	---	37300	11500	18900	---	35100	---	---	---	---	---	---
7	---	42300	18300	19000	---	34200	---	---	---	---	---	---
8	---	49900	23400	18800	---	33600	---	---	---	---	---	---
9	---	55400	24400	18600	---	33200	---	---	---	---	---	---
10	---	56600	23900	18500	---	32500	---	---	---	---	---	---
11	---	47400	20800	18000	---	30800	---	---	---	---	---	---
12	---	35500	19000	14300	---	27000	---	---	---	---	---	---
13	---	24500	19600	11000	---	21800	---	---	---	---	---	---
14	---	16200	23200	---	---	e17000	---	---	---	---	---	---
15	---	12200	23400	---	---	e12100	---	---	---	---	---	---
16	---	---	22300	---	---	e10600	---	---	---	---	---	---
17	---	---	21600	---	---	---	---	---	---	---	---	---
18	---	---	20400	---	---	---	---	---	---	---	---	---
19	---	---	18400	---	---	---	---	---	---	---	---	---
20	---	---	16200	---	---	---	---	---	---	---	---	---
21	---	---	13300	---	11500	---	---	---	10700	---	---	---
22	---	---	11600	---	27200	---	---	---	11600	---	---	---
23	---	---	---	---	35300	---	---	---	11900	---	---	---
24	11200	---	---	---	41000	---	---	---	11900	---	---	---
25	14800	---	12800	---	45000	---	---	---	11100	---	---	---
26	20000	---	18700	---	47900	---	---	---	---	---	---	---
27	24100	---	21000	---	49500	---	---	---	---	---	---	---
28	25300	---	21400	---	49700	---	---	---	---	---	---	---
29	30200	---	21500	---	---	---	---	---	---	---	---	---
30	31700	---	21400	---	---	---	---	---	---	---	---	---
31	29700	---	20900	---	---	---	---	---	---	---	---	---

e Estimated

THIS PAGE IS INTENTIONALLY BLANK

TRINITY RIVER BASIN

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, 2.0 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".

GAGE.--Water-stage recorder. Datum of gage not determined. Satellite telemeter at station.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

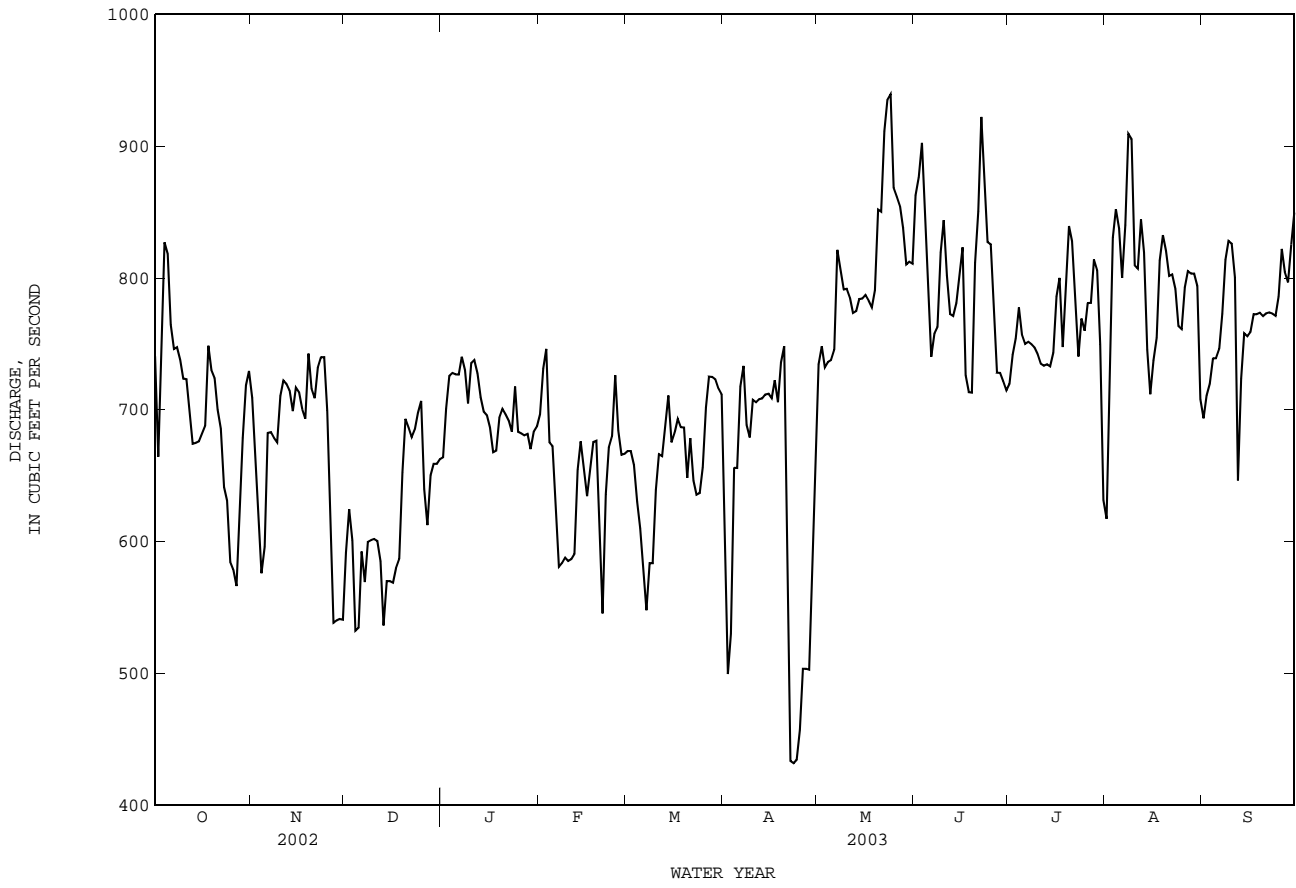
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	741	709	592	664	697	669	592	735	863	720	617	693
2	664	665	625	701	731	669	499	748	876	742	735	711
3	740	619	601	726	746	658	530	732	903	754	831	720
4	827	576	532	728	675	630	656	736	860	778	852	739
5	818	596	535	727	673	610	656	738	795	757	838	739
6	764	682	593	727	621	575	718	746	740	750	800	746
7	746	683	569	740	581	548	733	821	758	752	840	773
8	748	679	600	730	584	584	688	806	763	750	909	814
9	738	675	601	705	588	584	679	791	820	747	906	828
10	724	710	602	736	585	639	708	792	844	742	810	826
11	723	722	600	738	587	666	706	785	802	735	807	801
12	699	720	585	728	591	665	708	774	773	733	844	646
13	674	715	536	709	654	688	709	775	771	735	819	724
14	675	699	570	699	676	711	712	784	781	733	746	758
15	676	717	570	696	657	675	712	784	802	743	712	756
16	682	713	569	687	634	682	709	787	823	786	737	759
17	688	700	580	668	656	693	722	783	726	800	755	773
18	749	693	587	669	676	687	706	778	713	748	813	773
19	730	743	653	694	676	687	736	791	713	797	833	774
20	724	716	693	701	596	648	748	852	811	839	821	771
21	700	709	686	697	545	679	606	850	851	828	802	773
22	686	732	679	692	636	646	434	911	922	782	803	774
23	641	740	685	683	671	636	432	935	879	740	792	773
24	631	740	698	718	680	637	434	940	827	769	764	771
25	585	699	707	683	726	656	457	869	826	760	761	786
26	579	614	640	682	684	702	503	862	776	781	793	822
27	566	538	613	681	666	725	503	855	728	781	805	805
28	621	540	650	682	666	725	503	838	728	814	803	797
29	679	541	659	670	---	723	584	810	722	806	803	825
30	719	541	659	684	---	716	674	812	715	750	794	850
31	729	---	662	688	---	712	---	811	---	631	708	---
TOTAL	21666	20126	19131	21733	18158	20525	18757	25031	23911	23583	24653	23100
MEAN	699	671	617	701	648	662	625	807	797	761	795	770
MAX	827	743	707	740	746	725	748	940	922	839	909	850
MIN	566	538	532	664	545	548	432	732	713	631	617	646
AC-FT	42970	39920	37950	43110	36020	40710	37200	49650	47430	46780	48900	45820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2003, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	507	482	464	470	475	491	520	550	580	594	575	545	545	545	545	545	545	545	545	545	545	545	545	545
MAX	757	734	718	710	716	729	779	831	973	888	875	814	814	814	814	814	814	814	814	814	814	814	814	814
(WY)	2000	2000	2000	1999	1999	2002	2002	1998	1998	1998	1999	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	226	236	219	233	226	235	275	273	303	293	237	251	251	251	251	251	251	251	251	251	251	251	251	
(WY)	1985	1985	1983	1983	1983	1985	1982	1986	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1981 - 2003
ANNUAL TOTAL	271781	260374	
ANNUAL MEAN	745	713	526
HIGHEST ANNUAL MEAN			764
LOWEST ANNUAL MEAN			259
HIGHEST DAILY MEAN	905	940	1080
LOWEST DAILY MEAN	532	432	52
ANNUAL SEVEN-DAY MINIMUM	567	467	167
MAXIMUM PEAK FLOW		1030	1220
MAXIMUM PEAK STAGE		2.96	3.07
ANNUAL RUNOFF (AC-FT)	539100	516500	381300
10 PERCENT EXCEEDS	858	821	774
50 PERCENT EXCEEDS	738	719	538
90 PERCENT EXCEEDS	629	587	259

08067070 CWA Canal near Dayton, TX--Continued



TRINITY RIVER BASIN

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 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--Dec. 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.81 ft below NGVD of 1929. 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 elevation, 12.96 ft, Nov. 11; minimum elevation not determined.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.29	12.01	6.85	11.12	6.83	12.68	<6.81	7.33	<6.81	7.72	<6.81	9.08
2	7.39	11.88	6.84	11.15	6.83	12.67	<6.81	7.24	6.83	7.37	<6.81	9.02
3	7.55	11.87	6.84	11.13	6.88	12.64	<6.81	7.11	6.89	7.30	<6.81	8.45
4	7.47	11.54	7.53	11.10	6.82	12.59	6.85	7.11	6.84	7.20	<6.81	8.13
5	7.49	11.51	7.58	11.08	6.82	12.45	6.92	7.57	6.82	7.05	<6.81	8.21
6	7.34	11.64	7.16	11.00	6.94	12.28	6.94	7.66	6.85	7.09	<6.81	8.17
7	7.18	11.84	7.74	10.93	6.83	12.13	7.18	7.69	6.81	7.35	<6.81	7.87
8	7.02	12.29	8.70	10.90	6.82	12.05	6.91	7.67	<6.81	7.45	<6.81	7.58
9	7.29	12.72	9.68	10.87	6.87	11.99	<6.81	7.90	<6.81	7.31	<6.81	7.44
10	7.44	12.89	10.42	10.85	7.04	11.92	<6.81	8.04	6.84	7.25	<6.81	7.52
11	7.19	12.94	10.81	10.79	6.87	11.89	<6.81	7.93	7.03	7.05	<6.81	7.50
12	7.12	12.81	11.10	10.72	7.04	11.84	<6.81	7.35	7.17	6.92	6.82	7.80
13	7.00	12.54	11.24	10.33	7.05	11.85	<6.81	7.02	7.04	6.94	7.00	7.84
14	6.87	12.03	11.17	9.74	7.27	11.62	<6.81	7.27	7.39	7.19	7.33	7.88
15	6.87	11.48	11.19	9.21	7.55	11.17	6.97	7.36	7.30	7.94	7.52	7.89
16	6.88	10.62	11.25	8.88	7.40	10.60	7.26	7.30	7.52	8.42	7.67	7.90
17	7.10	9.74	11.26	8.47	6.94	9.88	7.12	7.28	7.80	8.08	7.83	7.97
18	7.30	9.05	11.27	8.08	7.04	9.31	6.82	6.84	8.02	7.53	7.90	8.03
19	7.63	8.50	11.25	7.79	7.34	8.90	7.05	6.81	8.24	7.00	7.91	7.99
20	7.41	7.95	11.09	7.39	7.33	8.66	7.19	<6.81	8.32	6.81	7.89	7.80
21	7.05	7.43	10.79	7.05	7.77	8.25	6.97	<6.81	8.39	<6.81	7.86	8.03
22	7.21	6.93	10.35	6.87	8.65	7.88	6.86	<6.81	8.59	<6.81	7.86	8.12
23	7.62	6.84	9.76	6.86	9.71	7.75	7.00	<6.81	8.83	<6.81	7.85	7.86
24	8.25	6.84	9.25	6.85	10.68	7.76	7.47	<6.81	9.01	<6.81	7.86	7.84
25	9.27	6.84	8.66	6.83	11.46	7.78	7.48	<6.81	9.15	<6.81	7.89	7.85
26	10.14	6.85	8.75	6.83	12.20	7.75	6.94	6.82	9.06	<6.81	7.94	7.82
27	10.95	6.85	9.39	6.83	12.59	7.56	6.86	<6.81	8.69	<6.81	7.97	7.76
28	11.42	6.85	9.99	6.83	12.66	7.72	7.07	<6.81	8.33	<6.81	8.00	7.58
29	11.80	6.85	10.42	6.90	---	7.35	7.14	<6.81	8.08	<6.81	8.05	7.46
30	11.97	6.85	10.76	6.83	---	6.86	7.23	<6.81	7.86	<6.81	8.15	7.53
31	12.04	---	11.10	6.83	---	<6.81	---	6.82	---	<6.81	8.60	---
MAX	12.04	12.94	11.27	11.15	12.66	12.68	7.48	8.04	9.15	8.42	8.60	9.08

< 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 June 1995.

REMARKS.--Records good. Interruption in the record was due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 4,560 microsiemens/cm, Nov. 17, 1997; minimum recorded, 46 microsiemens/cm, Oct. 20, 1994.

WATER TEMPERATURES: Maximum, 40.5°C, July 13, 2001; minimum, 1.6°C, Jan. 24, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 663 microsiemens/cm, July 23; minimum, 185 microsiemens/cm, Nov. 1.

WATER TEMPERATURE: Maximum, 35.1°C, Aug. 8; minimum, 1.6°C, Jan. 24.

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	322	312	317	220	185	211	357	345	350	365	362	364
2	317	307	313	216	205	211	356	341	349	364	335	347
3	307	296	304	---	---	---	350	277	309	356	340	348
4	321	297	310	---	---	---	467	281	363	356	344	347
5	330	309	318	223	206	215	346	324	333	353	346	351
6	357	312	325	224	194	211	342	325	335	354	341	348
7	371	330	353	236	194	215	342	311	330	341	334	336
8	351	334	340	243	188	217	315	304	309	342	338	340
9	337	317	325	272	186	239	326	303	315	342	338	340
10	331	305	314	306	257	290	328	322	326	341	335	338
11	339	311	322	321	298	314	331	327	328	340	336	338
12	342	316	331	324	319	322	330	316	324	337	334	335
13	321	300	308	320	316	317	324	319	322	337	333	335
14	325	311	317	325	312	317	330	324	326	336	333	334
15	329	315	320	312	306	307	330	325	328	340	335	337
16	330	316	323	309	306	307	325	282	296	348	329	340
17	334	322	328	313	308	310	296	283	287	345	332	335
18	344	326	331	345	310	320	301	287	297	334	324	329
19	361	337	344	326	319	322	301	293	298	338	326	330
20	358	332	348	333	319	323	307	300	305	347	329	336
21	356	338	348	333	318	323	310	305	306	331	319	324
22	358	333	345	331	315	319	305	301	302	335	319	323
23	351	332	344	340	329	334	306	294	302	350	324	334
24	348	330	340	346	323	336	317	295	307	376	338	352
25	343	290	310	338	324	330	312	298	304	366	338	350
26	293	277	283	369	329	338	317	312	314	342	288	319
27	---	---	---	343	334	338	325	317	321	370	300	333
28	---	---	---	365	343	354	336	321	328	475	266	358
29	---	---	---	370	357	362	341	334	336	393	312	339
30	---	---	---	371	343	357	349	341	347	388	304	312
31	---	---	---	---	---	---	363	342	348	387	309	342
MONTH	---	---	---	---	---	---	467	277	321	475	266	339

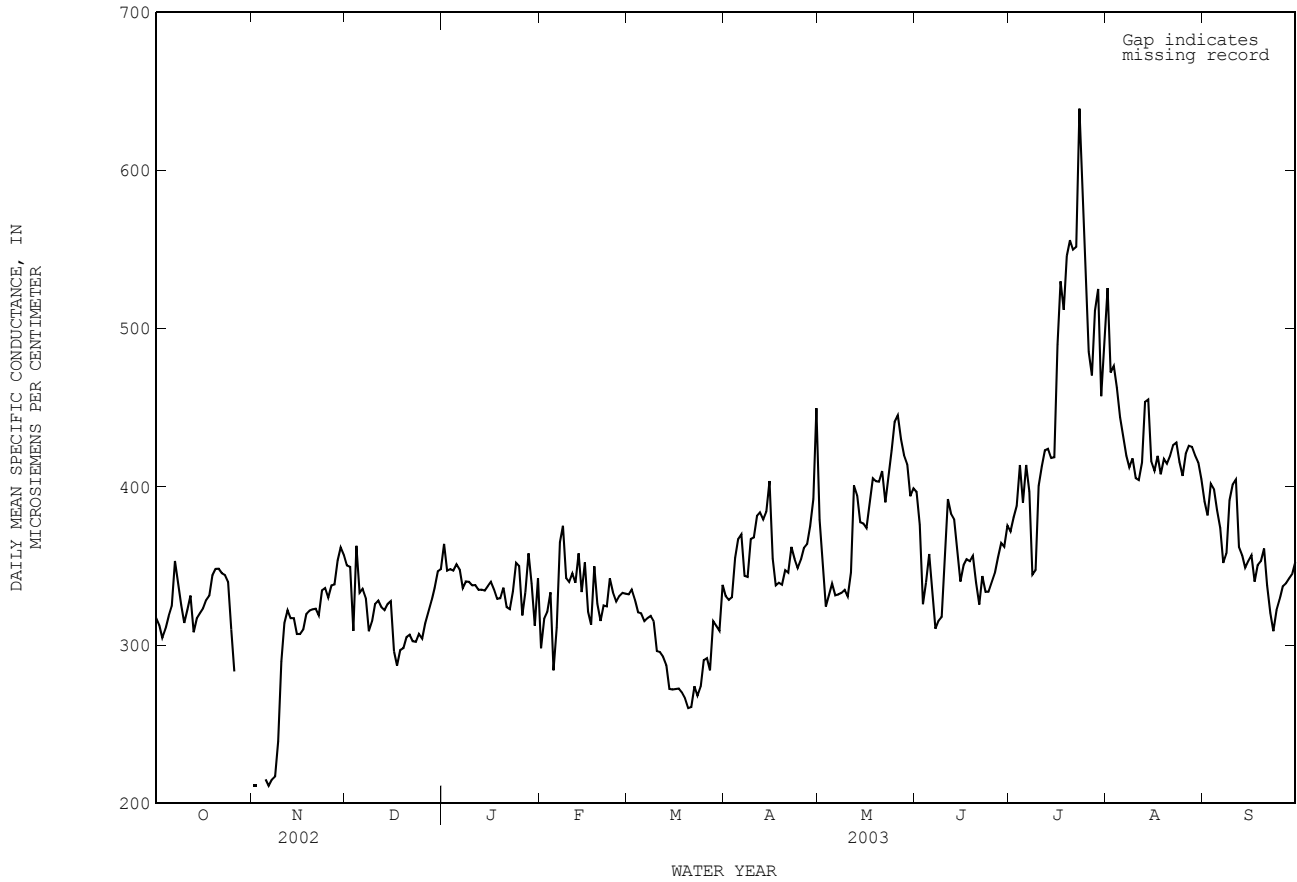
TRINITY RIVER BASIN

08067118 Lake Charlotte near Anahuac, TX--Continued

SPECIFIC CONDUCTANCE, IN US/CM @ 25c, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	362	266	298	333	330	332	456	298	331	438	332	379
2	347	292	317	338	333	335	370	310	329	368	325	351
3	351	309	321	339	313	329	359	314	330	336	320	324
4	360	301	333	323	317	321	390	317	355	409	313	332
5	325	266	284	322	317	320	394	342	367	409	313	339
6	333	287	311	324	310	315	402	340	370	364	312	331
7	451	324	365	319	314	317	359	334	344	351	316	332
8	425	325	375	320	316	318	365	333	343	363	313	333
9	385	329	342	320	309	315	417	340	367	372	322	335
10	370	325	340	318	290	296	387	358	368	355	315	331
11	364	326	345	297	290	296	410	360	382	363	321	346
12	378	320	339	296	287	293	412	367	384	427	363	401
13	426	337	358	299	269	287	398	361	379	419	373	395
14	343	325	334	275	270	272	398	375	384	414	358	378
15	390	302	352	275	270	272	452	317	404	428	324	377
16	434	301	321	276	268	272	465	307	355	430	329	374
17	341	305	313	277	268	272	352	314	338	397	379	389
18	414	312	350	279	258	270	351	331	339	412	390	405
19	349	313	326	281	259	266	347	332	338	418	389	404
20	329	290	315	264	255	260	359	341	347	434	385	403
21	481	281	325	265	258	261	360	334	346	463	390	410
22	362	285	324	285	261	274	378	345	362	405	377	390
23	345	338	342	280	259	268	386	344	354	416	398	407
24	340	330	333	283	269	274	357	336	349	434	416	423
25	331	323	328	326	270	290	377	329	354	447	434	441
26	334	329	331	306	281	292	377	345	361	458	432	445
27	334	332	333	309	284	284	372	355	364	437	389	430
28	334	330	332	343	281	315	524	364	375	451	396	420
29	---	---	---	329	295	312	524	356	392	424	388	414
30	---	---	---	336	293	309	528	371	450	422	375	394
31	---	---	---	354	317	338	---	---	---	420	375	399
MONTH	481	266	332	354	255	296	528	298	362	463	312	382
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	413	374	397	389	361	372	535	494	526	459	367	391
2	412	304	376	397	367	381	523	445	472	394	373	382
3	346	305	326	419	373	388	490	445	476	416	393	402
4	359	324	339	435	368	414	490	443	463	408	390	398
5	378	335	358	440	368	390	467	415	444	398	375	385
6	366	291	334	472	366	414	452	401	432	387	357	374
7	328	291	310	471	349	397	455	405	420	371	338	352
8	336	306	315	357	336	344	447	380	412	389	346	358
9	336	304	318	386	336	347	456	383	418	409	362	392
10	432	314	351	436	360	401	429	385	406	427	386	402
11	444	373	392	447	372	413	414	395	404	434	386	405
12	407	355	383	436	409	423	426	403	415	414	341	362
13	394	345	379	444	402	424	477	416	454	374	344	357
14	381	332	361	444	406	418	467	450	455	355	344	349
15	364	330	340	430	406	419	450	398	416	366	346	353
16	388	342	350	541	429	490	438	392	410	363	353	357
17	388	343	354	604	509	530	428	403	420	360	312	340
18	378	341	353	524	500	512	417	400	408	367	326	350
19	362	345	356	570	524	546	429	408	418	381	344	353
20	350	324	339	570	551	556	438	405	415	366	356	361
21	343	317	326	582	510	550	429	408	420	364	325	338
22	350	338	344	663	517	552	435	416	426	328	304	320
23	344	321	334	663	623	639	433	416	428	324	291	309
24	341	324	334	623	527	582	431	397	416	347	305	322
25	346	334	340	565	489	534	415	399	407	347	320	329
26	352	339	345	521	423	485	431	407	421	348	327	337
27	360	344	355	508	440	470	430	422	426	343	334	339
28	372	359	365	524	499	511	430	421	425	347	337	342
29	368	357	362	535	462	525	426	411	420	352	329	345
30	389	361	375	469	446	457	421	405	415	357	349	352
31	---	---	---	525	456	491	527	354	405	---	---	---
MONTH	444	291	350	663	336	464	535	354	429	459	291	359

08067118 Lake Charlotte near Anahuac, TX--Continued



WATER TEMPERATURE, IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	29.8	25.9	27.4	20.3	19.7	20.0	17.0	9.6	13.2	13.6	12.2	12.9
2	29.1	26.5	28.0	19.8	18.4	18.9	17.1	9.3	13.7	13.2	11.7	12.1
3	27.9	25.9	27.1	18.4	18.2	18.3	18.0	15.8	16.8	11.7	11.0	11.4
4	30.8	25.9	27.9	18.0	17.2	17.5	18.6	13.6	16.6	12.6	11.3	11.8
5	32.0	28.0	29.6	17.6	16.6	17.1	13.6	8.6	10.8	12.9	11.6	12.2
6	32.0	28.5	30.1	17.3	16.5	16.9	11.1	7.0	9.0	13.6	12.1	12.8
7	29.9	26.8	28.4	16.5	16.1	16.3	10.7	8.6	9.3	13.2	12.2	12.7
8	27.6	24.5	26.0	17.6	16.5	16.9	11.3	10.4	10.8	13.7	12.1	12.8
9	25.9	24.4	24.8	18.6	16.7	17.3	11.3	10.3	11.0	13.9	12.4	13.3
10	24.4	21.6	23.5	19.4	18.4	18.9	11.2	10.0	10.5	13.7	12.6	13.0
11	23.2	20.4	21.7	19.3	18.7	18.9	11.5	11.0	11.3	12.8	11.3	11.8
12	25.2	19.9	22.3	18.8	17.9	18.2	11.4	11.0	11.2	11.3	9.8	10.6
13	24.8	21.7	23.4	18.1	17.1	17.3	12.1	10.9	11.5	10.3	9.1	9.6
14	22.6	18.3	20.3	17.7	16.9	17.4	11.9	11.2	11.5	9.9	9.1	9.4
15	22.3	16.5	19.2	17.6	16.6	17.3	12.6	11.7	12.1	9.4	8.8	9.2
16	24.4	15.9	20.1	16.6	14.8	15.6	13.7	12.3	12.9	11.2	9.2	9.9
17	22.8	18.4	20.5	15.9	14.0	14.9	15.3	13.4	14.2	9.2	6.7	7.8
18	24.1	18.8	21.5	17.3	14.6	15.9	15.1	14.6	14.8	9.1	6.3	7.7
19	23.0	21.0	21.9	16.9	15.9	16.6	16.6	15.0	15.8	10.8	6.5	8.7
20	23.4	20.2	21.5	17.8	15.2	16.4	15.0	13.7	14.2	14.5	10.5	12.4
21	22.1	19.6	20.9	17.9	14.0	16.1	14.4	13.5	14.1	17.9	13.8	15.7
22	19.7	18.9	19.4	18.2	14.2	16.0	14.8	13.9	14.3	16.8	10.6	14.3
23	20.6	18.9	19.7	18.2	11.2	14.9	17.0	14.8	15.7	12.5	5.8	8.9
24	20.8	20.0	20.3	18.8	12.6	15.8	16.8	11.8	14.4	12.3	1.6	6.6
25	21.3	20.3	20.7	20.1	15.5	17.5	11.8	9.3	10.6	11.1	5.9	8.0
26	21.1	20.8	21.0	17.1	11.5	14.8	11.3	9.6	10.1	7.9	6.1	7.0
27	---	---	---	11.8	8.9	10.4	10.7	9.7	10.2	11.9	7.2	9.1
28	---	---	---	17.2	7.2	11.6	11.6	10.5	10.9	14.9	10.0	12.5
29	---	---	---	16.4	7.5	12.1	13.7	11.5	12.3	16.8	14.0	15.3
30	---	---	---	18.8	13.9	15.9	14.9	13.6	14.1	14.7	12.7	13.4
31	20.5	20.2	20.4	---	---	---	14.8	13.6	14.4	17.5	12.2	14.4
MONTH	---	---	---	20.3	7.2	16.4	18.6	7.0	12.7	17.9	1.6	11.2

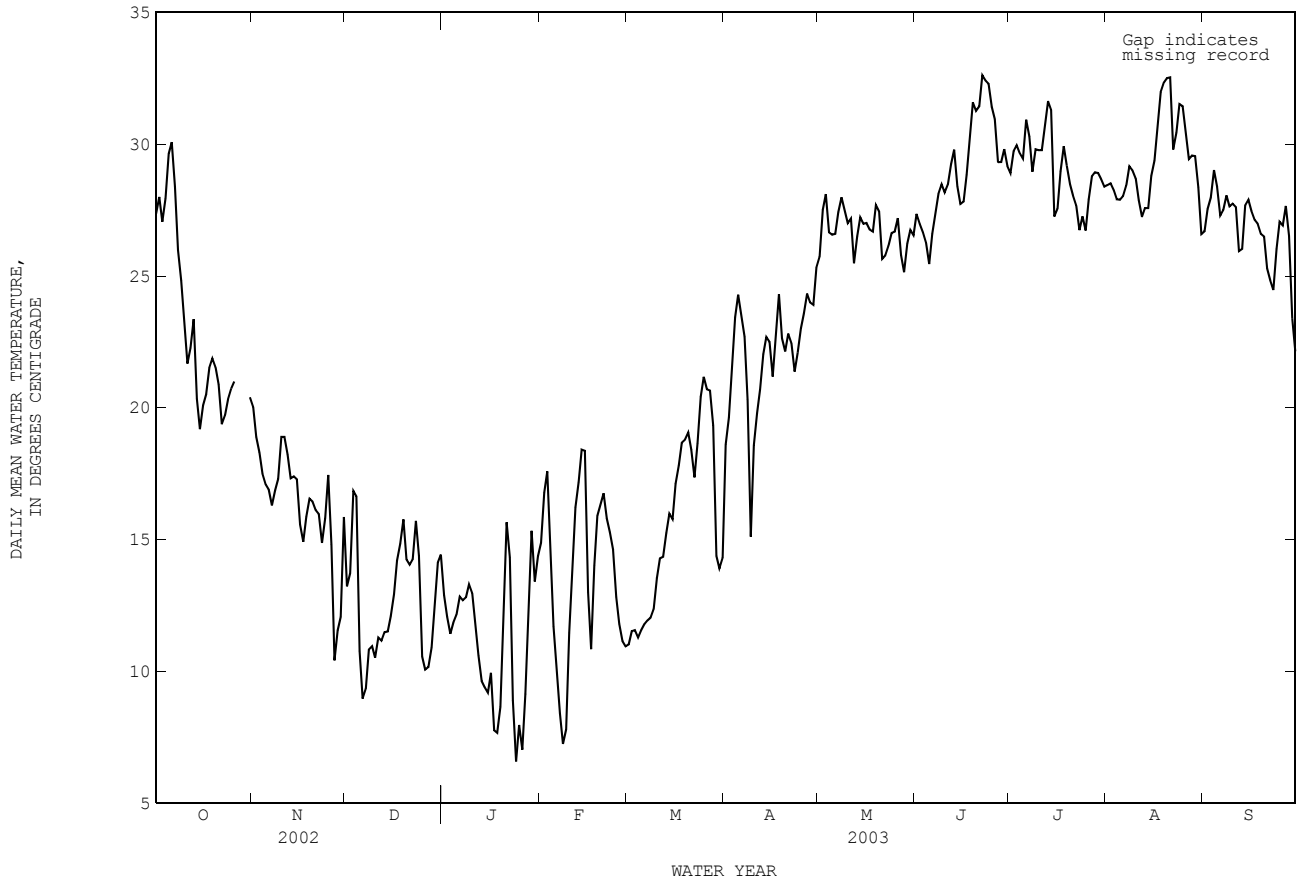
TRINITY RIVER BASIN

08067118 Lake Charlotte near Anahuac, TX--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.1	12.2	14.9	11.3	10.8	11.0	23.1	14.6	18.6	27.4	24.4	25.7
2	20.2	13.4	16.8	11.9	11.3	11.5	22.4	17.4	19.6	29.8	25.4	27.5
3	18.9	15.7	17.6	11.9	11.3	11.6	25.1	18.2	21.4	30.0	26.4	28.1
4	16.9	10.8	14.2	11.4	11.2	11.3	26.6	20.9	23.4	28.3	25.7	26.7
5	13.2	10.6	11.7	11.9	11.3	11.6	25.9	23.1	24.3	28.5	25.2	26.6
6	10.6	9.5	10.2	12.1	11.6	11.8	24.7	22.9	23.5	27.5	25.7	26.6
7	9.5	7.2	8.4	12.1	11.8	11.9	22.9	22.2	22.7	29.6	25.7	27.4
8	8.2	6.3	7.2	12.1	11.9	12.0	22.2	16.1	20.3	30.1	26.6	28.0
9	8.8	7.0	7.8	12.8	12.1	12.4	20.8	10.4	15.1	29.1	26.3	27.5
10	14.8	8.8	11.5	14.4	12.7	13.5	28.4	10.3	18.6	28.7	25.6	27.0
11	16.2	10.6	13.6	14.9	13.8	14.3	22.8	17.1	19.8	28.8	26.5	27.2
12	19.1	13.9	16.2	14.8	13.9	14.3	24.5	16.6	20.7	26.5	24.4	25.5
13	18.0	16.0	17.2	16.3	14.4	15.3	24.8	19.2	22.0	30.3	23.7	26.5
14	20.0	17.2	18.4	16.3	15.8	16.0	24.7	20.7	22.7	29.8	25.2	27.2
15	19.0	16.7	18.4	16.1	15.5	15.8	24.2	21.0	22.5	28.9	25.7	27.0
16	16.7	9.5	13.0	17.7	16.1	17.1	22.5	20.8	21.2	28.8	25.4	27.0
17	15.0	7.1	10.8	18.8	17.3	17.8	25.4	20.5	22.8	28.5	25.3	26.8
18	16.9	10.8	14.0	19.6	18.0	18.7	26.1	22.7	24.3	29.6	23.5	26.7
19	17.5	14.2	15.9	20.1	17.6	18.8	24.0	21.9	22.6	30.0	25.5	27.7
20	17.1	15.7	16.3	20.5	17.9	19.1	22.5	21.9	22.1	29.1	25.9	27.5
21	17.5	16.1	16.8	20.4	17.0	18.4	24.8	21.1	22.8	29.4	23.1	25.6
22	16.6	14.9	15.8	18.4	16.6	17.4	23.8	21.3	22.5	29.6	22.3	25.8
23	16.1	13.9	15.3	22.2	15.5	18.6	22.2	20.6	21.4	29.8	22.8	26.1
24	15.2	14.2	14.6	22.1	18.6	20.4	23.1	21.3	22.1	29.2	23.8	26.6
25	14.4	11.9	12.8	23.0	19.8	21.2	24.7	22.0	23.0	29.0	24.6	26.7
26	12.4	11.4	11.8	21.9	19.8	20.7	27.4	21.0	23.6	29.1	25.5	27.2
27	11.5	10.8	11.1	23.0	18.7	20.7	26.5	22.4	24.3	27.6	24.2	25.8
28	11.1	10.8	11.0	20.6	16.9	19.3	25.2	22.8	24.0	28.7	21.7	25.1
29	---	---	---	16.9	12.7	14.4	25.0	22.6	23.9	29.5	22.7	26.2
30	---	---	---	17.3	10.2	13.9	27.4	23.0	25.3	29.2	24.7	26.8
31	---	---	---	19.8	11.8	14.3	---	---	---	29.0	24.3	26.5
MONTH	20.2	6.3	13.7	23.0	10.2	15.6	28.4	10.3	22.0	30.3	21.7	26.7
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	29.7	25.0	27.4	29.6	28.0	28.9	31.5	26.6	28.5	27.3	26.2	26.7
2	29.6	25.0	27.0	32.8	26.9	29.7	31.4	26.4	28.5	28.9	26.7	27.5
3	29.5	24.4	26.7	31.5	29.2	30.0	30.6	26.6	28.3	30.4	26.5	28.0
4	28.1	25.2	26.3	31.5	28.1	29.6	30.4	26.3	27.9	30.6	27.8	29.0
5	26.6	24.1	25.5	31.3	27.9	29.4	29.8	26.3	27.9	29.8	27.4	28.4
6	29.6	24.4	26.6	33.6	28.5	30.9	30.0	26.3	28.0	29.2	25.4	27.3
7	30.2	24.7	27.3	31.9	29.2	30.3	31.5	26.3	28.4	30.0	24.4	27.5
8	31.2	25.4	28.1	30.3	27.3	29.0	35.1	25.9	29.2	30.8	25.3	28.1
9	32.4	25.0	28.5	32.5	27.4	29.8	32.9	26.5	29.0	29.4	25.5	27.6
10	29.4	26.8	28.2	30.8	29.2	29.8	31.1	26.5	28.7	28.4	27.2	27.7
11	30.6	26.6	28.5	31.3	28.0	29.8	29.3	26.2	27.9	29.5	26.4	27.6
12	31.6	27.1	29.3	34.1	27.5	30.7	31.0	24.9	27.2	27.3	25.2	25.9
13	33.1	26.9	29.8	33.5	29.2	31.6	29.2	25.4	27.6	27.9	24.1	26.0
14	31.4	26.7	28.4	33.7	29.2	31.3	28.3	26.7	27.6	29.6	26.0	27.7
15	29.1	26.7	27.7	29.7	26.5	27.3	30.5	27.1	28.8	28.7	26.8	27.9
16	29.2	26.4	27.8	29.4	26.2	27.6	30.8	28.1	29.4	29.0	26.6	27.5
17	31.3	27.1	28.8	31.4	26.7	29.0	34.0	28.8	30.6	28.1	26.0	27.1
18	32.6	28.1	30.4	31.3	28.6	29.9	34.0	30.5	32.0	27.7	26.3	27.0
19	33.0	30.3	31.6	31.0	27.7	29.2	33.7	31.5	32.3	27.9	25.6	26.6
20	32.4	30.3	31.3	30.7	26.6	28.5	34.5	31.2	32.5	27.3	25.6	26.5
21	33.4	29.7	31.4	30.6	26.2	28.1	34.0	31.3	32.5	26.6	24.6	25.3
22	34.1	31.4	32.6	29.7	26.1	27.7	32.0	28.7	29.8	26.1	23.8	24.8
23	33.4	31.6	32.4	27.6	26.1	26.7	32.6	28.8	30.4	26.4	22.8	24.5
24	33.5	31.3	32.3	30.1	25.4	27.3	34.0	29.4	31.5	27.8	24.7	26.0
25	32.4	30.9	31.4	28.4	24.8	26.7	32.5	30.3	31.4	28.5	25.6	27.1
26	32.2	29.9	31.0	31.3	24.9	27.9	31.1	29.2	30.4	27.9	25.9	26.9
27	31.1	27.9	29.3	32.1	26.2	28.8	29.9	28.9	29.4	29.5	25.5	27.7
28	31.7	26.6	29.3	32.3	26.5	28.9	31.1	28.2	29.6	28.3	24.9	26.5
29	31.1	27.7	29.8	32.5	26.6	28.9	30.5	28.7	29.6	25.0	21.6	23.4
30	30.8	26.9	29.2	31.3	26.9	28.7	29.8	27.3	28.4	23.8	20.4	22.1
31	---	---	---	29.8	26.8	28.4	27.4	25.8	26.6	---	---	---
MONTH	34.1	24.1	29.1	34.1	24.8	29.0	35.1	24.9	29.4	30.8	20.4	26.7

08067118 Lake Charlotte near Anahuac, TX--Continued



TRINITY RIVER BASIN

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 Highway 10 from the Interstate overpass over Farm Road 563, 2.0 miles below Wallisville and 3.9 river miles from mouth.

DRAINAGE AREA.--17,796 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--Oct. 1994 to current year.

GAGE.--Water-stage recorders. Datum of gage is NGVD of 1929. Prior to Mar. 1999 at site 2.3 mi upstream. Satellite telemeter at station.

REMARKS.--Records good. 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 elevation, 7.70 ft, Oct. 22, 1994; minimum elevation, -1.64 ft, Nov. 2 and 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (upstream), 4.67 ft, July 15; minimum elevation (upstream), -1.21 ft, Apr. 9. Maximum elevation (downstream), 4.66 ft, July 15; minimum elevation (downstream), -1.26 ft, Apr. 9.

ELEVATION (UPSTREAM), IN FT (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.02	0.75	3.62	3.27	1.12	-0.51	2.41	1.95	0.94	-0.18	4.01	3.63
2	2.35	0.86	3.60	3.27	1.21	0.10	2.43	1.97	1.12	0.18	3.95	3.73
3	2.32	1.31	4.07	3.36	1.68	0.03	2.16	1.94	1.24	0.30	3.93	3.69
4	2.03	1.31	3.45	2.82	2.10	0.83	2.36	2.07	0.44	-0.71	3.97	3.70
5	2.11	1.47	3.53	3.07	0.84	0.26	2.37	2.00	1.37	0.30	3.77	3.54
6	1.81	1.11	3.32	2.93	1.47	0.41	2.25	1.93	1.43	-0.10	3.59	3.34
7	1.56	0.81	3.56	3.12	2.07	1.47	2.36	1.90	0.10	-0.74	3.51	3.27
8	1.87	0.80	3.92	3.45	2.36	2.07	2.18	1.84	1.08	-0.19	3.43	3.15
9	2.26	1.34	4.13	3.92	1.95	---	2.10	1.88	1.44	0.45	3.34	3.18
10	2.29	0.49	4.29	4.04	2.23	1.74	2.10	1.73	1.04	0.06	3.42	3.02
11	1.76	0.35	4.35	4.14	---	---	2.15	1.74	1.35	-0.05	3.36	3.04
12	1.98	0.53	4.20	3.87	---	---	2.14	1.79	1.32	0.36	3.32	2.99
13	1.62	-0.15	3.95	3.60	2.43	2.12	2.00	1.54	1.68	0.40	3.31	2.80
14	1.49	-0.04	3.71	3.14	2.33	1.99	1.86	1.06	1.73	0.39	3.23	2.70
15	1.41	0.19	3.21	2.21	2.53	2.26	1.46	0.80	1.93	0.71	2.86	2.25
16	1.66	0.17	2.24	1.45	2.62	2.32	1.73	0.42	0.93	-0.20	2.56	1.87
17	1.75	0.97	1.62	1.19	2.79	2.23	0.42	0.07	0.81	-0.25	2.24	1.46
18	2.47	0.99	1.70	1.21	2.87	2.38	0.94	0.29	1.08	0.33	2.25	1.27
19	2.62	1.21	1.35	0.35	2.94	2.23	0.89	-0.09	1.43	0.55	2.56	1.42
20	1.93	0.89	1.04	0.07	2.28	1.89	1.02	0.09	1.35	0.45	1.86	0.83
21	1.67	0.46	1.06	-0.14	2.19	1.83	0.83	0.07	2.37	0.87	1.07	0.51
22	1.84	0.91	0.93	-0.22	2.18	1.41	0.58	-0.58	2.26	1.63	1.12	0.25
23	2.20	1.29	1.17	0.05	2.10	1.56	-0.38	-0.98	2.61	1.75	1.26	0.28
24	2.55	1.61	1.48	0.06	1.84	0.27	0.68	-0.54	2.65	2.27	1.45	0.46
25	3.14	2.43	1.32	-0.04	0.96	0.15	0.71	-0.18	3.22	2.55	1.44	0.48
26	3.01	2.36	0.86	-0.53	1.61	0.96	0.64	-0.46	3.70	3.18	1.25	0.29
27	3.45	2.85	-0.04	-0.56	1.85	1.61	1.18	-0.37	3.81	3.56	2.04	0.35
28	3.61	2.88	0.70	-0.13	1.92	1.60	1.36	0.19	3.91	3.69	2.12	0.24
29	3.85	3.29	0.93	0.21	2.46	1.83	1.22	-0.02	---	---	0.24	-0.40
30	3.82	3.39	1.20	0.08	3.28	2.17	0.86	-0.58	---	---	---	-0.50
31	3.65	3.36	---	---	3.06	2.18	0.98	-0.13	---	---	---	---
MONTH	3.85	-0.15	4.35	-0.56	---	---	2.43	-0.98	3.91	-0.74	---	---

TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

ELEVATION (UPSTREAM), IN FT (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	2.12	1.08	1.16	-0.14	1.68	0.88	1.21	0.01	3.44	3.16
2	1.01	0.36	1.79	0.56	1.94	0.07	1.90	0.33	1.19	0.22	3.20	0.80
3	1.15	0.21	1.77	0.47	1.60	0.16	1.78	0.34	1.19	0.48	1.99	0.71
4	1.57	0.56	2.57	0.57	1.36	-0.07	1.58	0.42	1.11	0.39	1.96	0.81
5	1.40	0.41	2.56	1.44	1.65	0.06	1.56	0.55	1.23	0.18	2.05	0.81
6	2.31	0.53	2.34	1.15	1.58	0.28	1.93	0.94	1.17	0.12	2.03	0.67
7	1.62	0.47	2.28	1.23	0.91	-0.26	2.04	1.16	1.10	-0.70	1.74	0.54
8	0.90	-0.64	2.85	1.18	0.69	-0.16	1.94	0.52	0.56	-0.72	1.76	0.48
9	-0.12	-1.21	2.87	1.68	1.20	0.27	1.81	0.49	1.19	-0.63	2.01	0.58
10	1.24	-0.50	2.69	1.85	1.67	0.57	1.82	0.34	1.37	-0.28	2.13	1.03
11	0.99	-0.29	2.17	0.78	2.02	0.62	1.54	0.21	1.13	-0.10	1.82	0.99
12	1.03	-0.15	1.10	0.16	2.03	0.54	1.59	0.06	1.17	0.55	2.52	1.35
13	0.90	-0.01	1.61	0.67	1.73	0.12	2.04	0.08	1.52	1.17	1.84	1.28
14	1.08	0.29	2.15	1.08	1.84	0.79	2.77	0.53	1.78	1.52	1.80	1.00
15	1.37	0.83	1.88	0.76	1.50	0.28	4.67	1.95	1.88	1.78	1.89	0.93
16	1.76	1.05	2.20	0.61	1.78	0.42	2.84	1.50	2.07	1.88	2.00	1.29
17	1.24	0.54	1.46	0.04	1.79	0.66	1.54	0.66	2.11	1.99	2.19	1.34
18	1.39	0.14	1.41	-0.49	1.83	0.82	1.30	0.18	2.11	2.01	2.37	1.10
19	2.12	0.91	1.48	-0.08	1.67	0.87	0.99	0.39	2.09	2.04	2.09	0.94
20	1.71	0.43	0.92	-0.14	1.66	0.87	1.00	0.55	2.08	1.96	1.98	1.04
21	1.42	-0.12	0.74	-0.64	1.81	1.07	0.90	0.43	2.06	1.91	2.72	1.09
22	1.57	0.05	0.90	-0.47	1.93	1.41	1.14	0.21	2.03	1.99	1.90	0.77
23	2.42	0.60	1.16	-0.12	1.91	1.45	0.92	-0.53	2.05	1.83	1.85	0.71
24	2.41	1.29	1.26	0.15	2.13	1.48	0.63	-0.60	2.06	2.01	2.07	1.04
25	1.95	0.63	1.25	0.61	2.27	1.44	1.05	-0.50	2.10	2.00	2.11	1.16
26	1.31	0.07	1.22	0.23	2.06	1.13	1.28	-0.22	2.13	2.10	2.04	1.34
27	1.36	0.58	0.67	0.06	1.88	0.88	1.08	-0.22	2.19	2.10	1.96	1.02
28	1.63	1.08	1.11	0.00	1.77	0.63	1.27	-0.14	2.23	2.16	1.91	0.50
29	1.65	1.11	0.99	0.22	1.80	0.81	1.45	-0.05	2.31	2.14	1.94	1.00
30	2.02	1.11	1.50	0.13	2.43	0.65	1.29	0.12	2.46	2.30	2.11	0.80
31	---	---	1.27	0.27	---	---	1.13	-0.09	3.28	2.46	---	---
MONTH	---	---	2.87	-0.64	2.43	-0.26	4.67	-0.60	3.28	-0.72	3.44	0.48

ELEVATION (DOWNSTREAM), IN FT (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.01	0.75	3.41	2.98	---	---	2.33	1.89	1.05	-0.08	3.87	3.46
2	2.32	0.84	3.37	3.02	---	---	2.38	1.91	1.21	0.28	3.83	3.68
3	2.31	1.06	3.90	3.12	---	---	2.11	1.87	1.33	0.40	3.79	3.64
4	2.03	1.15	3.24	2.63	---	---	2.29	2.02	0.56	-0.60	3.87	3.54
5	2.14	1.35	3.29	2.84	---	---	2.31	1.96	1.47	0.42	3.68	3.44
6	1.82	0.95	3.11	2.68	---	---	2.19	1.81	1.54	0.00	3.52	3.17
7	1.56	0.53	3.36	2.86	---	---	2.29	1.78	0.23	-0.61	3.45	3.24
8	1.94	0.71	---	---	---	---	2.03	1.55	1.17	-0.07	3.34	3.06
9	2.29	1.18	---	---	---	---	2.09	1.74	1.53	0.55	3.30	3.08
10	2.31	0.21	---	---	---	---	2.04	1.55	1.12	0.15	3.31	2.81
11	1.76	0.15	---	---	---	---	2.11	1.72	1.39	0.06	3.28	2.96
12	1.99	0.43	---	---	---	---	2.11	1.74	1.36	0.35	3.22	2.90
13	1.62	-0.25	---	---	---	---	1.97	1.46	1.64	0.31	3.23	2.67
14	1.52	-0.06	---	---	2.31	1.92	1.88	1.11	1.81	0.46	3.15	2.55
15	1.40	0.18	---	---	2.51	2.16	1.50	0.86	2.00	0.75	2.80	2.08
16	1.63	0.16	---	---	2.64	2.20	1.79	0.51	0.97	-0.15	2.46	1.79
17	1.74	0.96	---	---	2.89	2.19	0.51	0.17	0.81	-0.20	2.23	1.47
18	2.43	0.97	---	---	2.93	2.43	1.03	0.39	1.11	0.41	2.32	1.31
19	2.59	1.19	---	---	2.91	2.23	0.98	0.02	1.51	0.63	2.61	1.46
20	1.91	0.85	---	---	2.33	1.86	1.12	0.20	1.43	0.53	1.92	0.89
21	1.65	0.43	---	---	2.16	1.82	0.94	0.16	2.41	0.94	1.13	0.58
22	1.81	0.87	---	---	2.17	1.43	0.69	-0.45	2.29	1.52	1.19	0.33
23	2.13	1.23	---	---	2.16	1.60	-0.22	-0.82	2.58	1.63	1.33	0.35
24	2.44	1.51	---	---	1.91	0.33	0.82	-0.37	2.57	2.09	1.51	0.50
25	2.97	2.23	---	---	0.96	0.23	0.83	-0.05	3.10	2.47	1.51	0.54
26	2.85	2.11	---	---	1.56	0.96	0.75	-0.33	3.55	3.09	1.31	0.34
27	3.24	2.59	---	---	1.82	1.56	1.28	-0.24	3.73	3.48	2.12	0.42
28	3.42	2.64	---	---	1.90	1.54	1.46	0.30	3.79	3.48	2.19	0.31
29	3.64	3.12	---	---	2.43	1.74	1.33	0.08	---	---	0.31	-0.31
30	3.57	3.12	---	---	3.26	2.02	0.97	-0.45	---	---	---	-0.40
31	3.37	2.98	---	---	3.00	2.08	1.09	-0.03	---	---	---	---
MONTH	3.64	-0.25	---	---	---	---	2.38	-0.82	3.79	-0.61	---	---

TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

ELEVATION (DOWNSTREAM), IN FT (NGVD), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	2.07	1.01	1.15	-0.13	1.67	0.88	1.17	0.00	2.58	0.70
2	0.91	0.27	1.75	0.54	1.92	0.07	1.88	0.34	1.16	0.21	2.02	0.70
3	1.04	0.12	1.72	0.45	1.58	0.16	1.78	0.35	1.16	0.45	1.89	0.60
4	1.46	0.45	2.51	0.54	1.36	-0.07	1.57	0.42	1.08	0.36	1.84	0.71
5	1.29	0.32	2.52	1.40	1.66	0.07	1.53	0.54	1.21	0.15	1.92	0.71
6	2.20	0.43	2.31	1.12	1.58	0.29	1.89	0.93	1.15	0.11	1.91	0.57
7	1.52	0.38	2.23	1.20	0.90	-0.23	2.02	1.14	1.07	-0.72	1.64	0.44
8	0.78	-0.73	2.81	1.16	0.69	-0.15	1.92	0.49	0.54	-0.74	1.66	0.40
9	-0.21	-1.26	2.82	1.64	1.19	0.28	1.78	0.48	1.14	-0.65	1.91	0.50
10	1.14	-0.56	2.66	1.82	1.67	0.58	1.80	0.31	1.33	-0.30	2.03	0.93
11	0.90	-0.38	2.13	0.76	2.00	0.63	1.51	0.18	1.36	-0.14	1.72	0.90
12	0.92	-0.26	1.07	0.16	2.02	0.55	1.56	0.05	1.17	-0.47	2.41	1.26
13	0.78	-0.12	1.57	0.66	2.13	0.14	2.00	0.07	1.58	-0.31	1.74	1.14
14	0.96	0.17	2.12	1.06	1.82	0.11	2.74	0.52	1.24	0.38	1.69	0.84
15	1.26	0.73	1.86	0.74	1.48	0.27	4.66	1.92	1.81	-0.06	1.78	0.77
16	1.65	0.93	2.16	0.59	1.75	0.39	2.80	1.46	1.84	0.83	1.88	1.16
17	1.12	0.43	1.45	0.03	1.76	0.59	1.49	0.63	1.30	0.40	2.08	1.22
18	1.28	0.03	1.38	-0.48	1.78	0.77	1.26	0.16	1.27	0.17	2.26	0.97
19	2.01	0.81	1.44	-0.08	1.59	0.81	0.95	0.36	1.23	-0.02	1.97	0.82
20	1.59	0.31	0.90	-0.14	1.61	0.83	0.98	0.53	1.38	-0.01	1.86	0.92
21	1.31	-0.22	0.73	-0.64	1.74	1.01	0.89	0.42	1.35	-0.46	2.60	0.99
22	1.46	-0.05	0.89	-0.46	1.86	1.34	1.13	0.19	0.98	-0.39	1.77	0.64
23	2.29	0.49	1.15	-0.12	1.84	1.38	0.90	-0.56	1.28	-0.31	1.71	0.59
24	2.30	1.17	1.25	0.15	2.06	1.40	0.61	-0.61	1.45	-0.13	1.94	0.91
25	1.81	0.51	1.23	0.60	2.20	1.36	1.03	-0.52	1.49	-0.12	1.99	1.03
26	1.19	-0.03	1.22	0.24	2.02	1.06	1.24	-0.23	1.53	0.19	1.93	1.22
27	1.24	0.46	0.68	0.07	1.85	0.87	1.04	-0.24	1.71	0.18	1.84	0.88
28	1.53	0.97	1.12	0.02	1.75	0.60	1.22	-0.16	1.57	0.45	1.78	0.37
29	1.55	1.00	1.00	0.24	1.77	0.79	1.40	-0.07	1.71	0.63	1.83	0.87
30	1.90	1.00	1.50	0.14	2.41	0.65	1.25	0.10	2.50	0.72	2.00	0.69
31	---	---	1.27	0.28	---	---	1.08	-0.11	3.29	2.11	---	---
MONTH	---	---	2.82	-0.64	2.41	-0.23	4.66	-0.61	3.29	-0.74	2.60	0.37

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 July 1995. A second water-quality monitor was installed on downstream side of dam Mar. 19, 1999.

REMARKS:--Records good. Missing record due to malfunctions of instrumentation. Gage was relocated to permanent location after dam and lock were completed on Mar. 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 (UPSTREAM): Maximum, 21,300 microsiemens/cm, Oct. 9, 1999; minimum, 109 microsiemens/cm, Apr. 5-6, 1999.
 WATER TEMPERATURE (UPSTREAM): Maximum, 34.9°C, July 22, 2001; minimum, 6.4°C, Jan. 3, 2001.
 SPECIFIC CONDUCTANCE (DOWNSTREAM): Maximum 34,500 microsiemens/cm, Dec. 3, 1999; minimum, 125 microsiemens/cm, Apr. 6, 1999.
 WATER TEMPERATURE (DOWNSTREAM): Maximum, 34.4°C, Aug. 10, 1999; minimum, 9.1°C, Jan. 5, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 8,980 microsiemens/cm, July 15; minimum, 193 microsiemens/cm, Dec. 14.
 WATER TEMPERATURE: Maximum, 33.5°C, Aug. 8; minimum, 9.4°C, Jan. 19, Feb. 10.
 SPECIFIC CONDUCTANCE: Maximum, 9,650 microsiemens/cm, Aug. 31; minimum, 182 microsiemens/cm, Sept. 15.
 WATER TEMPERATURE: Maximum, 34.1°C, Aug. 21; minimum, 9.4°C, Jan. 19, Feb. 10.

SPECIFIC CONDUCTANCE (UPSTREAM), IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	235	219	224	320	296	308	430	424	426	291	270	282
2	243	235	240	341	320	333	431	428	429	270	249	254
3	265	242	251	343	339	341	438	429	432	269	251	262
4	362	264	292	340	334	337	436	409	425	272	268	269
5	410	300	351	335	307	324	409	375	391	276	272	273
6	355	280	292	356	308	329	375	344	361	281	276	278
7	304	277	286	386	356	374	---	---	---	285	281	283
8	281	277	279	400	386	392	---	---	---	287	285	286
9	632	279	443	412	400	406	---	---	---	289	287	288
10	429	308	362	422	412	417	---	---	---	292	289	290
11	482	303	354	427	422	425	---	---	---	294	291	292
12	486	303	395	428	425	426	---	---	---	295	291	294
13	481	317	387	426	424	425	---	---	---	291	288	290
14	494	314	391	426	421	423	218	193	204	290	288	288
15	498	330	390	421	412	416	241	205	222	290	288	289
16	348	322	334	412	406	408	254	211	234	290	285	287
17	386	348	373	407	404	406	269	210	240	291	288	290
18	381	370	374	406	404	405	282	237	260	293	290	291
19	377	372	374	407	405	406	284	269	277	300	293	295
20	375	371	374	410	407	408	281	279	280	304	292	297
21	376	373	374	413	409	411	282	281	282	304	294	300
22	376	370	372	414	410	412	282	280	281	304	296	300
23	374	281	342	414	412	413	280	276	278	310	300	304
24	281	224	243	414	404	409	276	275	275	314	306	311
25	280	238	258	407	403	405	278	276	277	324	311	314
26	286	275	281	408	404	407	279	278	279	324	316	319
27	304	284	295	424	407	413	287	279	283	324	316	319
28	315	298	305	428	418	422	290	287	288	326	318	321
29	316	290	310	443	425	429	294	290	292	333	316	322
30	290	285	288	428	422	424	295	294	294	327	305	313
31	296	283	288	---	---	---	295	291	293	330	306	316
MONTH	632	219	327	443	296	395	---	---	---	333	249	294

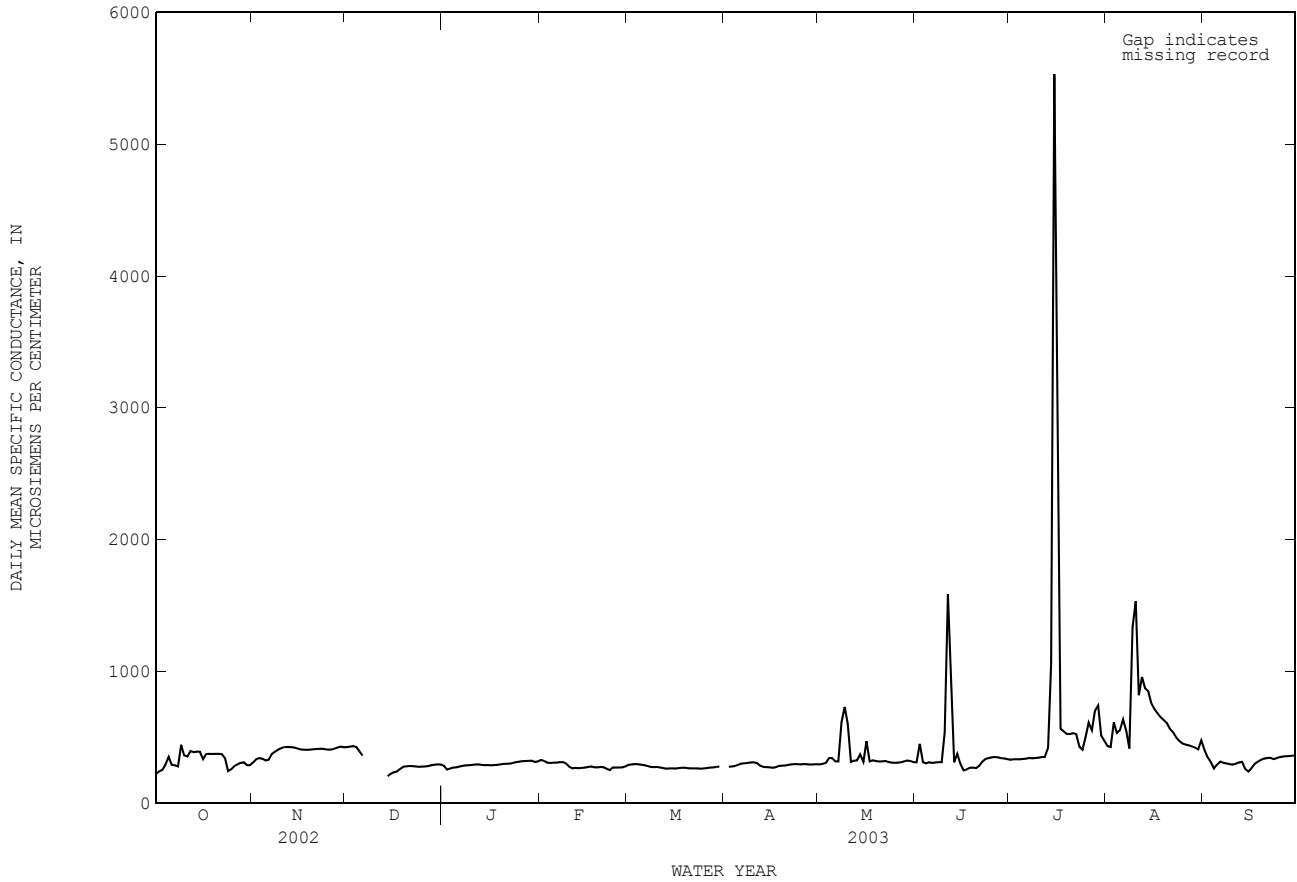
TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

SPECIFIC CONDUCTANCE (UPSTREAM), IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	333	322	327	293	284	290	---	---	---	295	291	294
2	329	313	320	295	293	294	278	275	276	301	294	298
3	314	302	307	297	295	296	281	277	278	309	301	306
4	313	303	305	296	293	295	284	281	281	392	309	343
5	315	305	307	294	289	292	298	284	291	401	318	341
6	315	306	308	289	284	288	302	297	300	333	315	317
7	326	307	311	284	280	282	304	301	302	318	314	316
8	315	309	312	280	271	275	307	302	305	1470	311	615
9	311	292	300	276	271	273	313	306	309	2200	316	730
10	292	264	277	277	273	275	314	308	310	3120	314	600
11	269	258	264	273	268	271	310	297	304	322	309	312
12	270	266	268	268	265	266	297	277	284	325	321	323
13	266	263	265	265	255	262	279	272	275	326	323	325
14	270	265	267	265	262	264	275	272	273	631	322	371
15	271	269	270	266	260	264	275	270	272	328	308	314
16	281	271	274	265	260	262	271	268	269	971	310	469
17	282	277	279	268	265	266	279	269	273	330	311	316
18	277	270	273	271	266	268	287	277	282	345	313	324
19	273	271	272	271	267	269	287	283	284	325	317	320
20	276	273	275	268	262	265	289	283	286	320	312	316
21	275	270	273	266	262	264	294	286	290	320	312	317
22	277	232	260	266	262	264	297	292	295	322	317	319
23	270	243	250	265	262	263	298	294	296	317	310	312
24	276	261	271	267	260	262	296	294	295	313	305	308
25	275	266	271	267	261	264	298	292	294	309	302	306
26	276	266	271	281	264	266	299	296	297	311	304	307
27	274	270	272	280	266	270	298	292	295	315	305	310
28	284	274	278	280	267	271	294	292	293	322	310	315
29	---	---	---	279	270	275	296	292	294	327	318	323
30	---	---	---	280	278	279	297	293	295	326	311	319
31	---	---	---	---	---	---	---	---	---	314	306	311
MONTH	333	232	283	---	---	---	---	---	---	3120	291	355
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	330	303	310	331	325	329	745	378	432	437	351	404
2	962	304	449	336	331	333	678	376	427	356	341	348
3	336	297	312	334	331	333	1130	417	613	346	277	312
4	309	296	301	334	331	333	927	402	534	284	230	263
5	358	296	310	337	333	336	1160	402	555	316	225	292
6	308	301	305	343	335	338	1010	428	634	317	309	315
7	313	305	309	353	340	342	1210	378	547	309	303	306
8	314	305	311	343	336	340	663	377	414	309	294	302
9	314	306	311	345	340	343	2780	381	1340	303	292	297
10	1230	312	539	350	343	346	3660	471	1530	295	289	292
11	3500	317	1580	354	347	350	958	703	819	304	295	299
12	3980	316	934	360	347	350	1070	883	957	317	302	309
13	329	305	310	641	345	418	997	792	873	322	287	314
14	744	311	375	2840	349	1060	876	815	849	287	249	261
15	311	288	299	8980	1430	5530	815	718	759	282	196	239
16	298	208	249	3530	642	2500	723	702	714	284	230	264
17	269	228	255	642	485	565	702	661	681	311	284	296
18	274	260	268	633	516	545	664	641	651	320	309	313
19	278	263	271	559	487	525	649	612	629	338	320	328
20	276	255	267	549	494	525	623	593	607	343	329	337
21	298	273	283	564	489	531	596	538	561	346	341	343
22	333	298	314	672	445	524	545	520	537	348	339	344
23	347	326	334	445	391	426	520	481	497	339	331	334
24	348	339	342	482	382	406	487	460	472	347	336	340
25	351	343	348	775	395	506	466	441	452	354	344	349
26	352	349	351	1080	408	612	448	441	444	359	349	354
27	354	340	348	1050	407	554	441	433	438	362	352	356
28	345	338	341	1360	398	701	437	426	430	361	352	357
29	341	337	340	1760	389	742	428	414	422	365	356	360
30	339	327	334	931	386	513	414	405	409	366	359	362
31	---	---	---	704	382	472	587	402	476	---	---	---
MONTH	3980	208	387	8980	325	701	3660	376	636	437	196	320

08067252 Trinity River at Wallisville, TX--Continued



WATER TEMPERATURE (UPSTREAM), IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	27.1	26.2	26.5	20.7	20.1	20.4	14.8	14.2	14.5	13.1	12.8	12.9
2	27.3	26.7	26.9	20.1	19.2	19.6	14.9	14.1	14.5	12.9	12.1	12.5
3	27.3	26.7	27.0	19.2	18.7	18.9	15.0	14.3	14.7	12.1	11.6	11.8
4	28.5	26.9	27.5	18.7	17.8	18.3	15.1	14.7	14.9	11.8	11.4	11.6
5	28.4	27.5	27.8	17.8	16.8	17.2	14.7	13.4	14.1	12.0	11.4	11.7
6	29.0	27.7	28.2	17.5	16.6	17.1	13.4	12.3	12.8	12.3	11.8	12.1
7	28.7	27.9	28.1	17.7	17.2	17.5	---	---	---	12.4	12.0	12.2
8	28.4	27.5	27.8	17.4	16.9	17.2	---	---	---	12.2	11.7	11.9
9	27.7	26.8	27.2	18.1	17.3	17.7	---	---	---	12.3	11.7	12.0
10	27.0	26.0	26.7	18.8	18.1	18.5	---	---	---	12.6	12.2	12.4
11	26.7	25.6	26.2	18.9	18.6	18.8	---	---	---	12.3	11.7	12.1
12	27.5	24.0	25.5	18.8	18.1	18.4	---	---	---	11.7	10.9	11.3
13	25.6	24.7	25.2	18.1	17.6	17.9	---	---	---	10.9	10.4	10.6
14	24.7	23.1	23.9	17.6	17.4	17.5	---	---	---	10.4	10.2	10.3
15	23.8	22.7	23.3	17.5	17.0	17.3	---	---	---	10.3	10.2	10.2
16	23.9	22.4	23.2	17.0	16.2	16.6	---	---	---	10.7	10.2	10.5
17	23.0	21.4	22.3	16.2	15.5	15.8	---	---	---	10.4	10.0	10.2
18	21.6	21.0	21.4	15.8	15.4	15.6	---	---	---	10.0	9.6	9.8
19	21.9	21.4	21.6	16.3	15.7	16.0	14.7	14.4	14.6	10.0	9.4	9.7
20	22.3	21.7	22.0	16.5	16.0	16.3	14.5	13.8	14.2	11.1	10.0	10.4
21	22.1	21.8	21.9	16.5	16.0	16.3	13.8	13.4	13.6	12.2	11.1	11.5
22	22.0	21.6	21.8	16.4	15.9	16.2	13.7	13.3	13.5	12.9	12.2	12.6
23	21.7	20.3	20.9	16.2	15.8	16.0	14.6	13.7	14.1	12.8	12.1	12.5
24	20.4	19.9	20.2	16.3	15.6	16.0	14.6	13.7	14.3	12.3	11.6	11.9
25	21.0	20.3	20.7	16.5	16.0	16.2	13.7	12.3	12.9	11.6	11.2	11.4
26	21.1	21.0	21.0	16.3	15.8	16.1	12.3	11.6	11.7	11.4	10.3	10.8
27	21.3	21.1	21.2	15.8	14.5	15.1	11.8	11.4	11.6	10.3	9.6	10.0
28	21.3	21.2	21.2	14.7	14.2	14.4	12.1	11.6	11.8	10.6	9.9	10.2
29	21.6	21.2	21.4	14.5	14.0	14.2	12.4	11.8	12.1	11.2	10.5	10.9
30	21.7	21.2	21.4	15.1	14.3	14.7	13.1	12.4	12.8	11.9	10.9	11.5
31	21.3	20.7	21.1	---	---	---	13.4	13.1	13.2	12.8	11.8	12.2
MONTH	29.0	19.9	23.9	20.7	14.0	16.9	---	---	---	13.1	9.4	11.3

TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

WATER TEMPERATURE (UPSTREAM), IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.6	12.7	13.3	11.4	11.0	11.2	---	---	---	25.9	24.1	24.5
2	14.4	13.6	14.0	11.8	11.4	11.6	16.9	16.1	16.5	26.4	24.7	25.1
3	14.9	14.2	14.5	11.8	11.6	11.7	18.4	16.9	17.6	26.6	25.0	25.7
4	14.4	13.9	14.2	11.6	11.4	11.5	19.3	18.0	18.6	25.9	25.5	25.8
5	14.2	13.9	14.0	11.8	11.6	11.7	20.2	18.6	19.4	26.5	25.7	26.1
6	13.9	13.0	13.6	11.8	11.7	11.7	20.2	19.5	20.0	26.5	25.9	26.3
7	13.0	11.2	12.0	12.3	11.6	11.9	20.8	20.2	20.6	27.3	26.0	26.5
8	11.2	10.2	10.7	12.8	12.2	12.5	21.4	20.6	21.0	27.6	26.2	26.9
9	10.2	9.6	9.9	13.4	12.7	13.0	20.6	19.4	20.1	27.4	26.9	27.2
10	10.2	9.4	9.8	13.9	13.3	13.6	21.6	18.8	19.6	27.4	26.6	27.0
11	10.9	10.0	10.5	14.4	13.7	14.0	19.7	18.8	19.2	27.7	26.7	27.0
12	12.3	10.9	11.5	14.9	14.3	14.6	19.0	18.6	18.8	27.5	26.9	27.2
13	12.9	12.1	12.4	15.1	14.7	14.9	19.3	18.4	18.9	27.3	26.5	26.8
14	14.0	12.9	13.3	15.7	14.6	15.1	20.5	19.2	19.8	27.6	26.7	27.1
15	14.2	13.8	14.0	16.2	15.4	15.8	21.4	20.4	21.0	28.0	26.9	27.4
16	14.2	13.1	13.8	16.4	16.1	16.3	21.3	21.1	21.2	28.1	27.3	27.7
17	13.1	12.1	12.5	17.0	16.2	16.5	23.2	20.9	21.6	28.8	27.6	28.0
18	12.1	11.6	11.8	17.1	16.8	16.9	23.4	21.7	22.3	28.5	27.4	27.8
19	12.7	11.8	12.2	16.9	16.6	16.7	22.6	22.1	22.3	29.0	27.5	28.2
20	13.4	12.7	13.1	16.8	16.2	16.6	22.7	22.2	22.5	29.8	27.8	28.6
21	13.8	13.3	13.5	17.0	16.4	16.7	24.8	22.3	22.9	29.5	28.2	28.7
22	13.9	11.9	13.1	16.7	16.2	16.4	22.8	22.2	22.4	30.6	28.0	28.7
23	12.8	12.0	12.5	16.3	15.8	16.0	22.2	21.8	22.1	30.2	28.0	28.9
24	12.8	12.5	12.6	16.4	15.6	16.0	22.3	21.6	22.0	29.7	28.1	28.5
25	12.6	12.1	12.2	17.2	16.3	16.7	22.2	21.5	21.8	28.8	27.7	28.3
26	12.1	11.3	11.6	17.9	17.1	17.5	23.6	22.0	22.6	29.3	28.0	28.5
27	11.3	11.0	11.1	18.3	17.6	17.9	23.5	22.3	22.9	28.7	28.0	28.3
28	11.0	10.9	11.0	18.2	17.4	17.7	24.8	23.0	23.6	29.4	27.6	28.2
29	---	---	---	17.4	15.9	16.6	24.9	23.5	24.0	29.4	27.6	28.2
30	---	---	---	15.6	15.1	15.3	25.2	23.9	24.4	28.8	27.8	28.1
31	---	---	---	---	---	---	---	---	---	29.1	27.8	28.3
MONTH	14.9	9.4	12.5	---	---	---	---	---	---	30.2	24.1	27.4
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	29.0	27.9	28.4	30.2	29.3	29.5	32.2	31.2	31.7	29.7	29.3	29.5
2	29.6	28.2	28.8	30.4	29.5	29.8	32.6	31.4	31.8	29.6	28.5	29.3
3	29.7	28.5	29.0	30.4	29.8	29.9	32.5	31.0	31.9	28.6	27.9	28.3
4	29.6	28.4	28.6	30.3	29.6	29.9	32.5	31.4	32.0	28.8	28.2	28.5
5	28.8	28.3	28.5	30.3	29.6	29.8	32.4	31.1	31.8	29.2	28.2	28.8
6	29.9	28.3	28.8	30.3	29.8	30.1	32.2	31.2	31.6	28.6	28.0	28.3
7	30.8	28.6	29.3	30.3	29.9	30.0	33.0	31.1	32.0	28.4	27.9	28.2
8	30.8	28.7	29.5	30.7	29.6	29.9	33.5	31.8	32.6	29.3	28.1	28.4
9	30.7	28.8	29.5	30.8	29.6	29.9	32.6	31.5	32.2	28.9	28.1	28.4
10	29.9	29.3	29.7	30.0	29.5	29.8	32.2	31.5	31.9	28.6	28.2	28.4
11	30.2	28.9	29.5	30.3	29.5	29.8	32.2	29.9	31.2	28.6	28.0	28.2
12	30.3	29.2	29.6	30.4	29.5	29.8	32.2	29.3	30.6	28.1	27.8	28.0
13	29.8	29.3	29.6	30.8	29.5	30.0	31.5	30.7	31.0	28.1	26.5	27.5
14	30.2	28.9	29.5	30.6	29.8	30.1	30.8	30.3	30.5	27.4	26.1	26.6
15	29.7	29.0	29.4	30.2	27.1	28.3	31.6	30.0	30.8	27.4	26.6	26.8
16	29.0	26.0	27.0	30.1	27.4	29.0	31.2	30.5	30.7	27.9	26.8	27.4
17	27.3	26.1	26.7	31.6	28.9	29.5	32.3	30.2	30.7	28.3	27.7	28.0
18	27.6	26.9	27.3	31.8	29.3	30.1	31.4	30.4	30.7	28.1	27.9	28.0
19	28.3	27.5	27.8	31.4	30.4	30.8	31.6	30.4	30.8	28.0	27.4	27.7
20	28.9	28.1	28.5	31.7	30.6	31.0	31.4	30.4	30.8	27.9	27.6	27.7
21	29.5	28.8	29.1	31.8	30.8	31.2	31.6	30.6	31.0	27.6	27.1	27.3
22	29.6	29.0	29.4	31.8	30.7	31.1	31.2	30.3	30.8	27.1	26.4	26.7
23	29.6	29.2	29.4	31.3	30.7	31.0	31.8	30.6	31.1	26.8	26.0	26.4
24	30.0	29.1	29.4	31.4	30.7	31.1	32.1	30.8	31.2	27.2	26.5	26.9
25	29.5	29.1	29.3	31.2	30.5	30.8	31.9	30.9	31.3	27.5	26.9	27.2
26	29.1	28.8	29.0	31.5	29.9	30.6	31.3	30.8	31.1	27.6	27.3	27.4
27	29.1	28.8	28.9	31.6	30.5	30.9	31.1	30.8	30.9	27.7	27.4	27.5
28	29.3	28.5	28.9	31.6	30.9	31.2	30.9	30.4	30.7	27.5	26.8	27.2
29	29.5	28.8	29.2	31.7	31.0	31.3	30.6	30.3	30.5	27.0	26.5	26.7
30	30.8	29.3	29.6	32.4	31.3	31.6	30.5	29.9	30.2	26.5	25.8	26.2
31	---	---	---	32.2	31.3	31.6	29.9	29.0	29.3	---	---	---
MONTH	30.8	26.0	28.9	32.4	27.1	30.3	33.5	29.0	31.1	29.7	25.8	27.7

TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

SPECIFIC CONDUCTANCE (DOWNSTREAM), IN US/CM @ 25C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	368	361	365	317	307	313	305	300	302	298	297	298
2	368	357	363	318	316	317	309	302	305	303	298	300
3	358	346	352	320	317	318	310	305	307	310	303	306
4	350	346	348	318	312	316	311	307	309	403	310	344
5	351	349	350	312	308	311	324	311	317	507	318	364
6	353	351	351	308	301	306	335	322	329	349	319	324
7	---	---	---	301	297	299	336	329	332	327	318	322
8	---	---	---	298	289	292	339	330	334	1460	318	613
9	358	356	357	294	289	291	346	336	339	4700	324	1030
10	357	317	340	294	291	292	347	332	339	4080	324	816
11	319	311	316	291	286	289	347	331	337	357	320	325
12	---	---	---	287	284	285	334	309	320	333	328	331
13	---	---	---	284	274	281	315	299	307	334	329	331
14	305	302	303	286	281	284	307	298	303	655	329	395
15	307	304	305	290	286	288	304	296	300	337	316	324
16	309	306	308	300	289	293	304	298	300	999	319	498
17	310	304	306	304	295	299	308	295	300	357	319	327
18	307	297	298	305	297	301	313	304	307	362	321	335
19	301	294	297	306	299	303	317	306	310	347	324	330
20	301	296	298	306	294	299	314	309	311	332	323	326
21	301	297	299	303	293	298	321	309	314	331	323	326
22	299	281	292	299	291	295	323	312	318	333	329	331
23	293	265	272	297	290	293	323	313	317	329	324	326
24	299	281	291	295	286	290	315	308	312	326	320	322
25	299	290	294	295	287	290	316	306	310	322	318	320
26	300	290	295	300	291	293	316	304	308	324	318	320
27	298	294	296	301	293	297	313	305	310	329	323	325
28	307	298	303	317	297	300	313	304	308	336	329	332
29	---	---	---	304	294	297	314	304	308	344	335	340
30	---	---	---	302	297	300	312	302	308	345	335	340
31	---	---	---	---	---	---	---	---	---	340	332	336
MONTH	---	---	---	---	---	---	347	295	314	4700	297	382
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	344	327	335	331	327	330	423	385	401	5690	327	2730
2	791	330	454	339	329	332	444	385	415	338	326	332
3	441	326	355	338	331	332	684	439	525	326	256	290
4	346	327	333	342	330	333	871	441	570	256	203	235
5	349	324	332	345	332	337	1350	441	729	302	200	274
6	340	326	331	353	336	340	887	511	628	306	290	300
7	332	327	330	359	341	345	731	385	529	309	288	303
8	335	330	332	350	340	342	463	383	408	304	301	303
9	336	328	334	355	342	345	1760	390	1020	301	287	292
10	948	334	553	352	345	349	3250	422	1590	288	280	283
11	2950	376	1430	368	350	356	2530	463	1460	289	281	285
12	2830	368	1090	364	350	355	2180	952	1330	298	289	293
13	469	334	362	523	350	398	2360	959	1070	303	266	297
14	5740	418	2010	6320	354	1650	1050	1020	1030	266	234	241
15	418	323	341	8890	1860	6380	5440	1040	1400	243	182	212
16	324	294	307	8120	854	3920	5760	1060	2990	221	187	205
17	297	284	290	854	564	599	1430	1070	1110	262	221	239
18	291	283	286	602	526	559	1230	1150	1170	277	262	270
19	294	287	290	565	510	543	1490	1190	1220	293	277	284
20	293	287	290	535	501	517	1820	1220	1300	313	293	302
21	299	291	295	553	504	533	1720	1270	1330	316	312	314
22	308	298	303	728	463	546	1420	1360	1390	316	311	314
23	313	308	310	465	399	436	2460	1410	1630	311	302	306
24	319	312	316	431	390	405	3020	1490	1840	311	305	307
25	322	318	320	627	400	457	3660	1530	2300	315	310	312
26	325	320	322	854	416	571	3710	1560	2290	323	313	319
27	329	323	325	601	417	479	4420	1690	2730	325	310	321
28	332	322	329	758	411	535	3790	1720	2470	310	297	302
29	334	313	331	780	399	499	4190	1790	2840	308	302	305
30	338	313	332	498	394	434	7490	1830	2870	306	301	304
31	---	---	---	625	387	453	9650	5690	7910	---	---	---
MONTH	5740	283	452	8890	327	775	9650	383	1630	5690	182	369

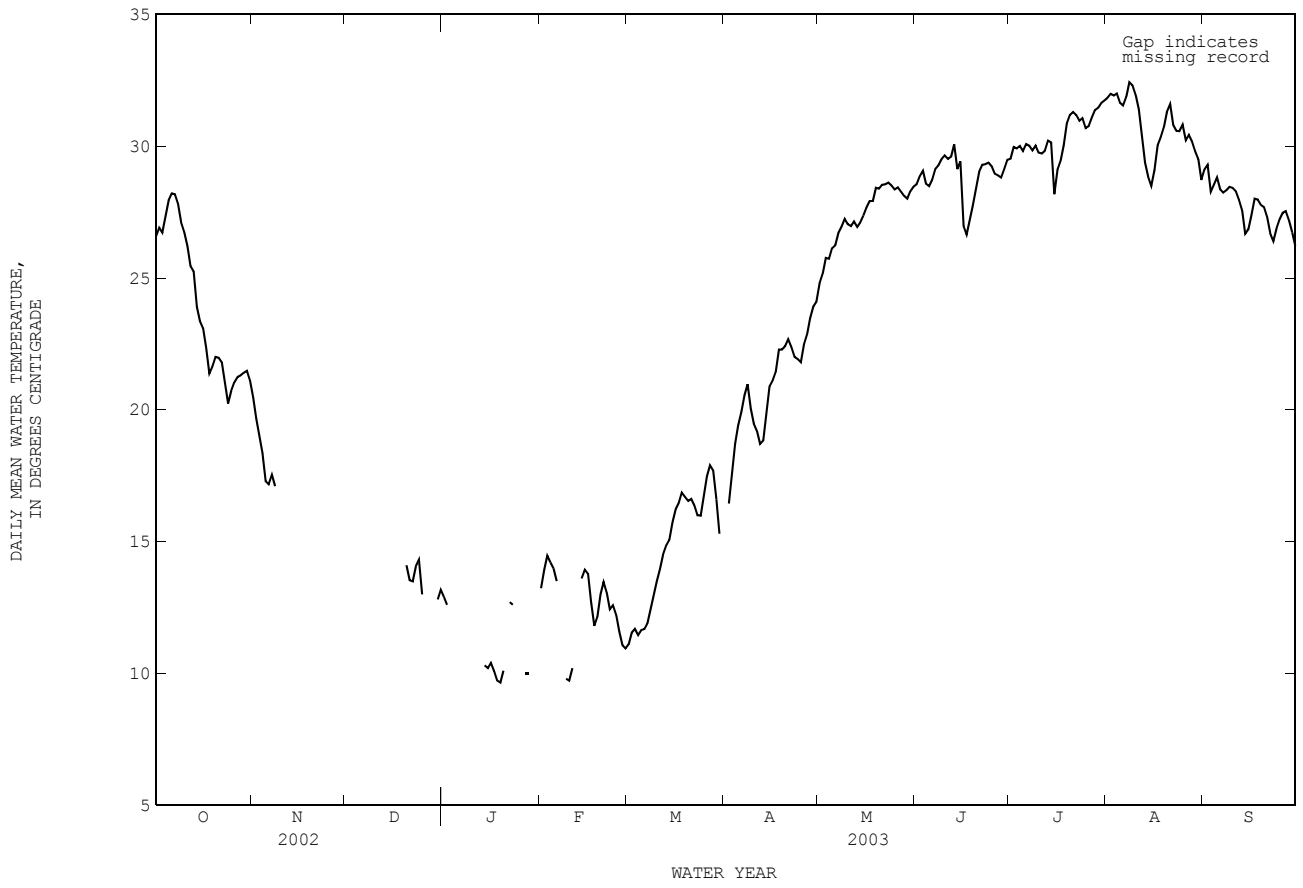
TRINITY RIVER BASIN

08067252 Trinity River at Wallisville, TX--Continued

WATER TEMPERATURE (DOWNSTREAM), IN (DEGREES C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.6	12.6	13.2	11.4	10.9	11.1	---	---	---	25.1	24.2	24.8
2	14.3	13.5	13.9	11.8	11.4	11.5	16.8	16.0	16.4	26.0	24.7	25.2
3	14.9	14.2	14.5	11.8	11.5	11.7	18.3	16.8	17.6	26.6	24.9	25.8
4	14.4	13.8	14.2	11.5	11.4	11.5	19.6	18.0	18.7	25.9	25.5	25.7
5	14.2	13.8	14.0	11.8	11.5	11.6	20.1	18.6	19.4	26.8	25.7	26.1
6	13.9	12.9	13.5	11.8	11.6	11.7	20.2	19.4	19.9	26.5	25.9	26.2
7	---	---	---	12.3	11.6	11.9	20.8	20.2	20.6	28.1	26.0	26.7
8	---	---	---	12.8	12.2	12.4	21.4	20.6	21.0	27.6	26.2	26.9
9	10.2	9.6	9.8	13.3	12.6	13.0	20.6	19.4	20.0	27.8	26.8	27.2
10	10.1	9.4	9.7	13.8	13.2	13.5	20.6	18.8	19.5	27.6	26.7	27.0
11	10.6	10.0	10.2	14.3	13.6	13.9	19.7	18.7	19.2	27.4	26.6	27.0
12	---	---	---	14.8	14.3	14.5	18.9	18.6	18.7	27.6	26.8	27.1
13	---	---	---	15.1	14.7	14.9	19.3	18.4	18.8	28.1	26.5	26.9
14	13.9	13.3	13.6	15.6	14.5	15.1	20.4	19.2	19.8	27.6	26.6	27.1
15	14.1	13.8	13.9	16.2	15.4	15.7	21.3	20.4	20.9	27.9	26.8	27.4
16	14.1	13.1	13.8	16.3	16.0	16.2	21.2	21.0	21.1	28.4	27.2	27.7
17	13.1	12.3	12.7	16.9	16.1	16.5	22.2	20.9	21.4	28.7	27.6	27.9
18	12.0	11.6	11.8	17.0	16.7	16.9	22.9	21.7	22.3	28.8	27.4	27.9
19	12.7	11.8	12.1	16.8	16.5	16.7	22.6	22.1	22.3	30.0	27.5	28.4
20	13.3	12.7	13.0	16.8	16.2	16.5	22.6	22.1	22.4	29.3	27.7	28.4
21	13.7	13.3	13.5	16.9	16.3	16.6	23.7	22.2	22.7	29.1	28.1	28.5
22	13.8	11.9	13.1	16.7	16.1	16.4	22.7	22.1	22.4	29.3	28.0	28.6
23	12.8	11.9	12.4	16.3	15.7	16.0	22.1	21.8	22.0	29.7	28.0	28.6
24	12.8	12.4	12.6	16.4	15.5	16.0	22.1	21.6	21.9	30.0	28.1	28.5
25	12.5	12.0	12.2	17.1	16.2	16.7	22.2	21.5	21.8	29.4	27.7	28.4
26	12.0	11.3	11.6	17.9	17.1	17.5	23.0	21.9	22.5	29.1	28.0	28.4
27	11.3	10.9	11.1	18.2	17.6	17.9	23.5	22.3	22.9	28.8	28.0	28.3
28	11.0	10.9	10.9	18.1	17.4	17.7	24.2	23.0	23.5	29.1	27.6	28.1
29	---	---	---	17.4	15.9	16.6	24.6	23.5	23.9	28.7	27.6	28.0
30	---	---	---	15.6	15.1	15.3	24.7	23.9	24.1	29.1	27.8	28.3
31	---	---	---	---	---	---	---	---	---	29.2	27.8	28.5
MONTH	---	---	---	---	---	---	---	---	---	30.0	24.2	27.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	29.4	27.8	28.6	29.9	29.2	29.5	33.1	31.1	31.8	29.6	28.7	29.1
2	29.9	28.2	28.9	31.0	29.4	30.0	33.2	31.4	32.0	29.7	28.6	29.3
3	31.0	28.4	29.1	30.3	29.7	29.9	33.1	31.1	31.9	28.6	28.0	28.3
4	29.5	28.4	28.6	30.7	29.6	30.0	33.4	31.3	32.0	28.8	28.3	28.5
5	29.0	28.3	28.5	30.5	29.6	29.8	32.2	31.1	31.6	29.2	28.2	28.8
6	29.8	28.2	28.7	30.5	29.7	30.1	32.0	31.1	31.5	28.6	28.0	28.4
7	30.3	28.6	29.1	30.2	29.9	30.0	32.7	31.0	31.9	28.4	28.0	28.2
8	30.4	28.7	29.3	30.3	29.6	29.8	33.5	31.8	32.4	28.7	28.1	28.3
9	31.4	28.8	29.5	31.2	29.6	30.0	33.2	31.6	32.3	29.3	28.1	28.5
10	29.9	29.3	29.6	30.0	29.5	29.8	32.5	31.5	31.9	28.6	28.2	28.4
11	30.3	28.9	29.5	30.2	29.4	29.7	32.1	30.7	31.4	29.0	28.0	28.3
12	30.3	29.1	29.6	30.4	29.4	29.8	31.7	29.8	30.4	28.1	27.8	28.0
13	31.7	28.6	30.1	32.1	29.5	30.2	30.3	28.7	29.4	28.1	26.6	27.6
14	30.2	28.1	29.1	30.6	29.8	30.1	29.7	28.3	28.8	27.4	26.2	26.7
15	29.6	29.0	29.4	30.1	27.0	28.2	28.7	28.3	28.5	27.4	26.6	26.9
16	29.0	26.0	27.0	29.9	27.3	29.1	30.6	28.5	29.1	27.9	26.8	27.4
17	27.2	26.0	26.6	30.8	28.9	29.4	32.2	29.3	30.0	28.4	27.7	28.0
18	27.5	26.9	27.2	31.5	29.2	30.0	31.4	29.9	30.3	28.2	27.9	28.0
19	28.3	27.4	27.8	32.6	30.3	30.9	32.0	30.3	30.7	28.0	27.4	27.8
20	28.8	28.0	28.4	32.7	30.6	31.2	33.4	30.6	31.3	27.9	27.6	27.7
21	29.4	28.7	29.0	32.5	30.8	31.3	34.1	30.8	31.6	27.7	27.1	27.3
22	29.6	29.0	29.3	32.2	30.6	31.2	31.4	30.4	30.8	27.1	26.4	26.7
23	29.5	29.1	29.3	31.3	30.6	31.0	32.3	30.1	30.6	26.8	26.0	26.4
24	29.9	29.0	29.4	31.8	30.6	31.1	33.0	30.0	30.6	27.2	26.6	26.9
25	29.5	29.1	29.2	31.1	30.4	30.7	32.5	30.2	30.8	27.5	26.9	27.2
26	29.1	28.8	29.0	31.6	30.1	30.8	30.6	29.8	30.2	27.6	27.3	27.5
27	29.0	28.8	28.9	32.3	30.3	31.1	30.6	30.2	30.4	27.8	27.4	27.5
28	29.2	28.4	28.8	32.1	30.9	31.4	31.1	29.6	30.2	27.6	26.8	27.2
29	29.4	28.8	29.1	32.5	31.0	31.5	30.2	29.5	29.8	27.1	26.5	26.7
30	30.5	29.2	29.5	32.5	31.2	31.6	29.8	29.4	29.5	26.6	25.8	26.2
31	---	---	---	32.4	31.3	31.7	29.4	28.2	28.7	---	---	---
MONTH	31.7	26.0	28.9	32.7	27.0	30.4	34.1	28.2	30.7	29.7	25.8	27.7

08067252 Trinity River at Wallisville, TX--Continued



THIS PAGE IS 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 2003

Station name and number	Location	Period of record	Water Year 2001 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, TX 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 [‡] 1974-84 [‡] 1985- 2003	11-26-02	6.84	--a/	09-07-62	26.90 ^{b/}	27,000

[‡] Operated as a continuous-record station.

[‡] Operated as an unpublished stage-only station.

a/ Gage Height only, discharge measurement not available.

b/ Peak of record prior to channel rectification and widening in 1964-66. Maximum stage since rectification: 13.76 ft on 05-03-90.

THIS PAGE IS INTENTIONALLY LEFT BLANK.

INDEX

	Page		Page
Bardwell Lake near Ennis	234	Mary's Creek at Benbrook	62
Bedias Creek near Madisonville	286	Menard Creek near Rye	304
Benbrook Lake near Benbrook	58	Mountain Creek, above Duncanville	106
Big Fossil Creek at Haltom City	331	at Grand Prairie	110
Big Sandy Creek near Chico	42	near Venus	88
Bridgeport Reservoir above Bridgeport	38	Mountain Creek Lake near Grand Prairie	108
Cedar Creek near Kemp	210	Navarro Mills Lake near Dawson	216
Cedar Creek Reservoir near Trinidad	212	New Terrell City Lake near Terrell	208
Chambers Creek near Rice	246		
Clear Creek near Sanger	120	Partial-record stations, crest-stage	331
Clear Fork Trinity River, at Fort Worth	64	Prairie Creek at U.S. Highway 175, Dallas	178
near Benbrook	60		
near Weatherford	56	Range Creek near Collinsville	113
CWA Canal near Dayton	310	Ray Roberts Lake near Pilot Point	118
		Richland-Chambers Reservoir near Kerens	260
Definition of terms	16	Richland Creek, near Irene	214
Denton Creek, near Grapevine	146	near Dawson	226
near Justin	130	Rowlett Creek near Sachse	186
Eagle Mountain Reservoir above Fort Worth	48	Sister Grove Creek near Blue Ridge	182
East Fork Trinity River, at McKinney	180		
near Crandall	192	Tehuacana Creek near Streetman	264
near Forney	190	Timber Creek near Collinsville	114
Elizabeth Creek at State Highway 114 near Roanoke	134	Trinity River, at Cedar Crest Boulevard, Dallas	158
Elm Fork Trinity River, at Frasier Dam, Dallas	152	at Dallas	156
at Gainesville	112	at Liberty	308
near Carrollton	150	at Romayor	306
near Lewisville	128	at Trinidad	206
		at Wallisville	318
Farmers Branch near Weatherford	52	below Dallas	172
		near Crockett	274
Grapevine Lake near Grapevine	136	near Goodrich	302
		near Oakwood	268
Halbert Lake near Corsicana	258	near Rosser	194
Houston County Lake near Crockett	272	Trinity River Basin, crest-stage partial-record stations in	331
		gaging-station records in	32-329
Joe Pool Lake near Duncanville	96		
		Upper Keechi Creek near Oakwood	270
Kickapoo Creek near Onalaska	288		
		Village Creek at Everman	70
Lake Amon G. Carter near Bowie	40		
Lake Arlington at Arlington	72	Walnut Creek, at Reno	46
Lake Charlotte near Anahuac	312	near Mansfield	92
Lake Ray Hubbard near Forney	188	Waxahachie Creek, near Bardwell	242
Lake Waxahachie near Waxahachie	230	near Waxahachie	232
Lake Weatherford near Weatherford	54	West Fork Trinity River, at Beach Street, Fort Worth	68
Lake Worth above Fort Worth	50	at Fort Worth	66
Lavon Lake near Lavon	184	at Grand Prairie	76
Lewisville Lake near Lewisville	126	near Boyd	44
Little Elm Creek near Aubrey	124	near Jacksboro	34
Livingston Reservoir near Goodrich	290	White Rock Creek at Greenville Avenue, Dallas	166
Long King Creek at Livingston	300		
Lost Creek Reservoir near Jacksboro	36		

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2							1
6	7	8	9	10	11	12	3	4	5	6	7	8	9	2	3	4	5	6	7	8
13	14	15	16	17	18	19	10	11	12	13	14	15	16	9	10	11	12	13	14	15
20	21	22	23	24	25	26	17	18	19	20	21	22	23	16	17	18	19	20	21	22
27	28	29	30	31			24	25	26	27	28	29	30	23	24	25	26	27	28	29
														30	31					

2003

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
																				31

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6			1	2	3	4								1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^0	kilometer (km)
Area		
acre	4.047×10^3	square meter (m ²)
	4.047×10^{-1}	square hectometer (hm ²)
	4.047×10^{-3}	square kilometer (km ²)
square mile (mi ²)	2.590×10^0	square kilometer (km ²)
Volume		
gallon (gal)	3.785×10^0	liter (L)
	3.785×10^{-3}	cubic meter (m ³)
	3.785×10^0	cubic decimeter (dm ³)
million gallons (Mgal)	3.785×10^3	cubic meter (m ³)
	3.785×10^{-3}	cubic hectometer (hm ³)
cubic foot (ft ³)	2.832×10^{-2}	cubic meter (m ³)
	2.832×10^1	cubic decimeter (dm ³)
cubic-foot-per-second-per-day [(ft ³ /s/d)]	2.447×10^3	cubic meter (m ³)
	2.447×10^{-3}	cubic hectometer (hm ³)
acre-foot (acre-ft)	1.223×10^3	cubic meter (m ³)
	1.223×10^{-3}	cubic hectometer (hm ³)
	1.223×10^{-6}	cubic kilometer (km ³)
Flow rate		
cubic foot per second (ft ³ /s)	2.832×10^1	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m ³ /s)
	2.832×10^1	cubic decimeter per second (dm ³ /s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m ³ /s)
	6.309×10^{-2}	cubic decimeter per second (dm ³ /s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^1	cubic decimeter per second (dm ³ /s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$